

# SCOTT DOUGLAS REDMOND'S PROJECT TRACK-RECORD

**A resume/CV documentation of Scott's ability to accurately visualize the future and then build that future for his employers and contract clients.**

Per one of his employers: *"He has dozens of issued federal patents on inventions he built (before anyone else) that billions of people use globally. He has run major domestic programs that you would instantly recognize the names of. He took on a trillion dollar entity in federal court and won, while creating new laws and legal precedents. He can solve almost any problem and fix, or build, almost anything. His ability to predict future trends and guide social developments to targeted outcomes is tier 1..."*

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# A FEW CAREER HIGHLIGHTS

## Specialties:

**Inventor/Engineer**  
**CEO**  
**Strategic Innovator**  
**Program Director**  
**Forensic Specialist**

## Employed By:

**The U.S. Government**  
**Corporate Development Depts**  
**Family Funds**  
**Community Organizations**  
**Venture Funds**

Scott enjoys solving the world's challenges; one innovation at a time. His projects share a common theme—they are uniquely innovative and they all provide global improvement via innovative human experience and engineering. They address social needs with product solutions that are, at least, a paradigm shift more advanced than any current competing solution. Every assignment from an employer or client ties into a common theme of human experience enhancement.

Scott Redmond has dedicated his career to developing technologies that help people lead better, more flexible and empowered lives, with a focus on productive technology. His inventions are so forward-thinking, some might even say he designs and builds the future. He welcomes the most challenging ideas and thrives on transforming dreams – his own or others -- into impressive reality. Over the past 20 years, his projects and inventions have led the way for major influential changes in our technology and society. Based on his track record, whatever Scott Redmond puts his mind to next will, no doubt, be some incredible disruptive solution with extraordinary results.



**DOMESTIC INNOVATION  
FOR GLOBAL SOLUTIONS**

*"There is no problem on Earth that Scott can't develop, at least, three solutions for, and produce working prototypes of, in 30 days, or less!..." - Producer, AT&T*

**He has worked 60+ hours per week, for decades, for top government, corporate and institutional stakeholders delivered these, and more, record-setting programs for Scott's employers:**

- **RESEARCH ALUMNI:** EDGE LABS INTERNATIONAL INNOVATION PROGRAMS
- **PRODUCER:** BAY TO BREAKERS FOOTSTOCK 200,000+ PERSON MEGA EVENT SERIES FEATURING RAY CHARLES LAST OUTDOOR CONCERT
- **PROGRAM DIRECTOR:** FOR NATIONAL AND GLOBAL MULTI-MILLION PARTICIPANT PROGRAMS
- **LOGISTICS DIRECTOR:** SAN FRANCISCO BLUES FESTIVAL
- **PRODUCER:** THE NOWHOUSE NATIONAL HOME-BUILDING TECHNOLOGY DEMO HOME
- **FOUNDER:** CLICKMOVIE - THE FIRST GLOBAL WEB VIDEO-ON-DEMAND BROADCASTING SERVICE
- **FOUNDER:** TECHMATE - THE FIRST WEB SOCIAL MEDIA NETWORK
- **PRODUCER:** THE FIRST VR GLASSES-FORMAT HEAD MOUNTED DISPLAY SOLD IN COMMERCE

- **AWARDEE:** WHITE HOUSE, STATE ASSEMBLY & MAYORAL COMMENDATIONS
  - **PRODUCER AND PATENT AWARDEE:** THE WORLD'S FIRST PATENTED, WORKING, **HOLODECK/CAVE** VR CHAMBER
  - **SPECIALIST RESEARCHER:** FEDERAL LAW ENFORCEMENT TASK-FORCES AND FTC, GAO, IG ADVISOR
  - **AWARDEE:** THE NATIONAL **BIG KAHUNA AWARD** FOR 3D VIDEO AS PRODUCER/DIRECTOR
  - **FOUNDER:** **TRAILER PARK** - THE FIRST ONLINE MOVIE TRAILER WEBSITE
  - **PRODUCER:** THE FIRST 360 DEGREE PC-BASED FLIGHT SIMULATOR & NATIONAL SPORTS STADIUM TOUR SHOWCASE
  - **AWARDEE:** CONGRESSIONAL CONTRACTS TO BUILD AMERICA'S ENERGY BACK-UP PLAN - IRAQ WAR BILL
  - **WINNER:** WORLD'S FIRST FEDERAL ANTI-CORRUPTION TORT JUDGMENT IN WASHINGTON DC FEDERAL COURT
  - **PRODUCER:** **FORT MASON CENTER** MAJOR EVENTS DEVELOPMENT AND PROGRAM INCEPTION
  - **PRODUCER:** **STAR RANGER** - AWARD-WINNING WORLD'S FIRST 3D ANIMATED RIDE FILM MADE ON PC'S
  - **INVENTOR:** HUNDREDS OF NOVEL PROPRIETARY PRODUCTS AND SERVICES
  - **ADVOCATE:** THE FEDERAL **USA JOBS ACT** S.E.C. CROWD-FUNDING APPROVAL BILL IN CONGRESS
  - **AWARDEE:** SEMINAL U.S. PATENTS FOR PRODUCTS USED BY MILLIONS
- ...AND HUNDREDS OF OTHER MAJOR NATIONAL PROGRAMS AND PROJECT MILESTONES...

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**CV:**

- Recipient of multiple Mayoral, White House, Corporate Client, Agency Client and Senate proclamations and credentials for innovation, public service and productivity. Has over 100 letters of reference and commendation from well-known executive and senior public officials.
- Developer, designer, patent winner, engineer of the first integrated virtual reality system including VR Glasses, Cyberchair interactive furniture, tactile shape-shifting wall and the over-all construct which was later known as “The VR Cave” and featured in the TV Show Star Trek as “The Holodeck”. Sold

multiple units and licenses. Featured in [Autodesk](#) literature, industry publications, books and retail news. (Validation: [United States](#) Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Co-founder, producer of 200,000+ person rapid deployment temporary city, delivered multiple consecutive years, built on over 1.8 million square feet of public land annually in association with major corporate sponsors and community service groups.

- Development, launch and public marketing of one of the first operating online social web GUI networks (if not the first) Google, Facebook or Yahoo with all of the functionality of Google, Facebook or Yahoo years before before Google, Facebook or Yahoo were formed.

- Operator of the first online global video broadcast consumer service in 1986 via TechMate™ and then as ClickMovie.com years before YouTube, Netflix Online or Hulu were formed.(Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Winner of “Scientists Helping America” commendation from [DARPA](#).

- Developed, patent-awarded and built multiple wireless device power transceiver systems. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Received multiple patents for building the first extrusive 3D synthetic-touch tactile surface technology for virtual, tele-present and augmented reality tactical mission simulators and remote action centers (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- In public rights lawsuits, sued Google, In-Q-Tel, Dept of Energy and other major entities for human rights abuses and public policy corruption. Created multiple new federal laws protecting the public and launched over 65 Federal investigations into their practices. Helped create and win the Silicon Valley [High-Tech Class-Action](#) Anti-Blacklist lawsuit.

- Developed, built and patented electronic propulsion technology which superseded NASA patent per the U.S. Patent Office. Now in use in orbit around Earth. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Developed multiple wireless social networking technologies now in use by industry globally. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Developer and Director of one of the first patented, lightest weight, lowest cost-to-manufacture, safest electric car technologies. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Founder of America's leading green housing venture. Featured in Dwell, Better Homes & Gardens and on Discovery Home Channel.

- Keynote speaker: [Techtextil](#) material science convention, Las Vegas.

- Associate speaker: National Education Conference- Chicago.
- Developed community major events facilities and logistics for **Fort Mason** Center's multi-million dollar rehabilitation effort in cooperation with the National Park Service across the largest public venues in San Francisco. Broke National Park Service attendance records.
- Keynote speaker: Global Summit for Project Innovation National Convention as founder of multiple start-up ventures.
- Awarded top grant by U.S. **Congress** in the Iraq War Bill Listed in the **Federal Register**. Fully completed contract with U.S. Government and assisted in federal program clean-up which set numerous national precedents.
- Developed The National Home Construction Technology Showcase building at the San Francisco Giant's Stadium. Toured by visitors from around the world and visited online by millions of the public. Built for The City of San Francisco, National Association of Home Builders, CNET and various charities. Moved by barge, later, to become the Alice Griffith Community Center. Participating consultant, and on-camera host/subject, in follow-on TV series on **Discovery** Home Channel, Produced by Better Homes & Gardens Magazine. \$2M+ home constructed in 35 days with community staff.
- Law enforcement consultant to Congressional and Task Force efforts and developer of some of the most effective anti-corruption technologies in the last decade.
- Facility manager: **Showplace Square** commercial design and architectural resources center as personal manager to founder, Henry Adams. Managed tenant activities and produced major programs with hundreds of stakeholders.
- Executive director: The Family Foundation. Benefiting child, animal, medical and social programs.
- Winner, national award for best digital Producer/Director from 3D Design Magazine for the first 3D theme park photo-real special effects action ride-film produced entirely via PC computers.
- Producer/founding coordinator: Footstock; Bay To Breakers Finale section for world's largest race 200,000+ person events including the last major outdoor stadium concert by Ray Charles.
- Logistics director: **San Francisco Blues Festival**; in association with The National Park Service for America's longest run public heritage event of its kind.
- Designer & patent-awarded winner of the first end-to-end **Fuel cell vehicle** system, now an industry standard. Built in cooperation with the U.S. Government. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).
- Developed and designed the first touring, motion-based, portable theme park, PC-based, interactive video attraction for the national stadium NFL Network Tour for MCI and FOX Sports.
- Developed, launched & patented first global low-bandwidth, DVD-quality internet broadcasting network and delivered the system and multiple working software packages prior to any other online

video system of it's kind. Web products and sites included: ClickMovie.com, Personal Producer, The Trailer Park and others. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- First to develop, patent and demo peer-to-peer and particulated [Torrent](#) file media delivery. A global standard for large file delivery as shown in United States patent filings, federal records, filed records, industry reports and other documented proofs of invention. (See Firechat, Napster, Bittorrent, Kontiki, BitChute, Vudu, MS Avalanche, etc.)(Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Patent awarded as “First Developer” of cell phone P2P Ad hoc multi-antenna/modem networking. Used in refugee and disaster relief crisis centers. Supported by Steve Jobs, The United Nations, Red Cross. Used in Japanese Tsunami disaster. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- First to develop, demo and patent mobile media device PDA form factor and architecture and to demonstrate VOD on HP IPAQ PDA. This technology beat the Apple iPhone by 3 years prior IP filings per signed NDA's and USPTO federal filings. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- First to design, build and win original-inventor patent on crash-resistant foam body, low-cost-to-manufacture, ultra-long-range electric vehicles. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Recipient of hundreds of letters of reference and acclaim (as shown in the attached links) from industry and government leaders (Multiple administrations), Mayors (multiple administrations), Fortune 1000 leaders, Government Agency heads, Community organization executives State assemblies and many more.

- First to invent, patent-file and show iPhone™ and/or smartphone wearable VR headset integrating iPhone™ into goggles as the display and position sensor. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- First to present Internet VOD to the largest film studios in Hollywood. Designed web video on demand system for one of the largest Hollywood Studios. Featured by name in contracts and studio federal patent wrappers as source of invention. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Created one of the first online “design-to-build” web technologies for modern home design and construction for consumer home building use on the internet. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Logistics director for American national public heritage events program in cooperation with [National Park Service](#).

- Developer, designer, patent winner, engineer of wireless power and [Ion thruster](#) propulsion technology, now in use globally in the aerospace industry as key satellite technology. (Validation:



Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Developer, designer, patent winner, engineer for the first VR and computer-as-wearable-glasses product and consultant for Oliver Stone's [Wild Palms](#) project. Featured as network TV spokesperson for the industry.
- Producer, designer for the world's first 360 degree multi-axis rotation full-immersion flight & movement simulator powered entirely by a PC. Sold globally.
- Developer, designer, patent winner, engineer, founder operating online social media companies with state and federal registration documentation as early as 1976. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).
- Developer, designer, patent winner, Engineer and first filing, as confirmed by federal government, for hand-held, color, touch-screen MP3 player/smartphone. Prior to any internal documentation effort by Apple on the iPhone. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).
- Producer, designer, engineer of the world's first, and largest, urban electro-optic broadcast multi-media event. Viewed by nearly 8 million participants & broadcast on radio & TV.
- Initiative sponsor and originator text-author: [the JOBS Act](#) which was signed into federal law to legally allow SEC approved "Crowd-Funding" technologies.
- Initiative sponsor for multiple national legal precedents which have improved the public law process and created new domestic legal standards in support of the public interest.
- Advisory resource to multiple [White House](#) Administrations under multiple political parties with a fully bi-partisan track-record.
- Producer, developer of multi-million person social media, publishing and information gathering networking programs for peer-to-peer and crowd-amplified productivity.
- Producer/Director for multiple rapid-construction pre-fabrication integrated structures and habitats. Advisor for disaster recovery habitation using post-event debris recovery.
- Producer/Designer of the first terrestrial visibility promotional satellite. In conjunction with Space Vector Corporation, the first commercial space venture. An inflatable mylar-type pyramid as large as a skyscraper, that unfolds in space and fits inside a standard payload bay. It reflects the sun as it spins around the Earth for a week and then self-destructs in atmospheric burn. An FM radio beacon greets every city in their regional language. Designed as a good-will project with a major corporate sponsor. (1980).
- Producer/Designer: Beacon 7, Inflatable atmospheric internet reflectors for regional peer-to-peer mesh network web deployment using patent-issued technology created in-house. Supported by radio controlled hobby-size gliders (1999). (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).

- Featured in both [Popular Mechanics](#) and [Popular Science](#) Magazines.
- Developer of first 3D VR interactive web browser with video embeds. Created prior to the deployment of VRML. Deployed on Windows 3.. Demonstrated to Apple, at Apple HQ, prior to the deployment of QuickTime VR.
- Designer, builder and Team Lead for hundreds of complex technical builds for prototypes, first-unit approval models and factory-manufacturing rolling iteration commercialization units that were industry firsts and/or set industry standards. Fully capable of running a complete CRM/CAD/CAM/Stereolith/Sintering Fab Center.
- Top standing and highly effective historical records with high metrics with the United States Patent Office. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).
- Developer of one of the most efficient satellite media distribution technologies as documented under signed NDA records and U.S. Patent Office records. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).
- Mars lander technology approach was first rejected by NASA but later turned out to be the only technology which would work and which, in fact, did successfully land the Mars Rover on Mars.
- Producer/Art Director of the first virtual reality bungee jump into the Grand Canyon created by filming HD scans of the actual Grand Canyon from a geodata-positioned helicopter hovering on a virtual column in the center of the Grand Canyon.
- Art Director for over 1000 pieces of concept art for clients. Directed artists from Marvel Comics, LucasFilm, Disney and top line-art publishers. Used the art to show clients the target content goal in order to create team-effort concept alignment.
- Developed multiple complex digital and motion-based mini theme park systems for location-based-entertainment programs.
- Consultant/Subject in the Discovery Home Channel TV series Building America's Home.
- Creator, Designer, Builder: The CyberChair. World's first interactive networked furniture. Featured on Network TV Show: "The Next Step" and National TV commercial
- Creator, Designer, Project Director of the first full-color, mobile, Glasses VR/Augmented Reality Glasses. (Validation: Federal patent Wrapper, signed NDA's, 3rd party emails, industry publications, et al).
- Designer, Project Lead for First Toyota Prius with hot-swap hydrogen energy range extension upgrade for U.S. Department of Energy project using patent-issued novel energy storage technology.
- Produced the partnership with [Nvidia](#) to build the first set-top-box-on-a-PC-Card. This PC card was

the first of it's kind, according to NVIDIA and provided the complete functionality, and more, of any other STB at the time.

(Broadcast news videos, press clippings, photo-documentation, Congressional awards, patent certificates and project photos available upon request. "**Firsts**" proven in federal court hearings, United States Patent Office records, time-stamped email records, signed NDA's, contracts and videos))

Scott is only limited by his employers imagination and project budget. His track-record has proven that *nothing-is-impossible* and that the teams of people he works with are the best in their fields.

## SCOTT'S DEDICATION TO COMMUNITY SERVICE



Scott has been assembling teams of solutions experts for many decades and delivering first-to-market solutions for clients and employers.



In his public service work for community groups and agency interest's he has partnered with task force efforts to fight back against anti-trust law, and RICO law-violating organizational bullies:

Scott was "*first*"-to-invent according to the United States Patent Office, NDA's, emails, court records, state files, witness testimony, voice-mail recordings, contracts, White House letters, Congressional records, videos, corporate documents, government records, press clips and corporate leaks.

Scott and his team invented, built, marketed and deployed the first technology that became "**Facebook**", "**YouTube**", "**Bittorrent**", "**Google**", "**Netflix**" and other major technologies before those Silicon Valley companies even existed! The government filings and records prove it beyond any argument! The Silicon Valley Cartel of oligarchs is now well documented as a secret boys club of insiders who steal technology, bribe government officials and violate anti-trust laws with impunity.

Some of these Cartel people asked to look at Scott's technologies under "NDA" in order to "partner", but they turned out to have been business spies who later created clones of his inventions and ran opposition campaigns and black-lists to keep him from competing with them.

They do not get to buy mansions and private jets using our money! We want nice things too and we earned them with our vast investments of time and money. Tech oligarchs do not get to steal our income without suffering consequences in the courts, FBI and FTC investigations and public exposure!

A group of corrupt Silicon Valley tech oligarchs have made many billions off of our inventions that they copied. They may each have a thousand lawyers to delay justice but we have a more powerful force: THE TRUTH!

The legal facts prove that each one of our products and start-ups were a great unique, and innovative, seminal technology...and that we did it first!

### **A lifetime devoted to innovation and public service**

Awarded seminal patent commendations by the federal USPTO as first-to-invent many products and services in use by millions of users around the globe

Creator of numerous public interest laws and federal precedents on behalf of the community. Awarded for the creation and support of multiple federal investigations which resulted in successful prosecutions and policy enhancements. Proving that *"you are only limited by your imagination"*, our tech team delivers directed and controlled synchronicity occurrences at the exact targeted point in the future when we promise and with the exact designated budgets contracted, or less.

Client's, partners and employers provide us with a budget and a critical solution goal (ie: "Here is one million dollars, solve this global problem, ready-set-go!...")

### **PROTECTING DOMESTIC INNOVATION**

Big tech oligarchs have spent vast amounts of money to lobby the U.S. Patent Office to shut down inventors rights because Silicon Valley billionaires spied on, and copied, so many ideas from others. Let's fix that! Visit:

<https://www.usinventor.org>

<https://www.usinventor.org/resolution>

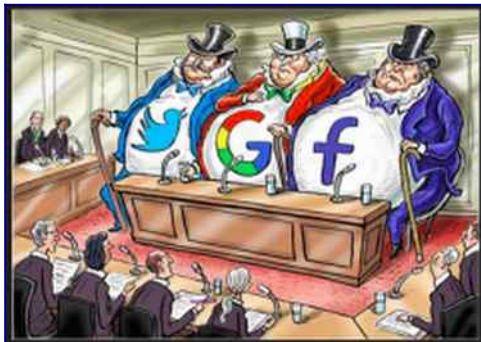
<http://claytonchristensen.com/books/the-innovators-dilemma/>

HELP END TECH CORRUPTION, BLACKLISTS & BRIBES



## **BUST THE TECH TRUST!**

END THEIR PROPERTY THEFTS AND COMPETITOR HIT-JOBS! HELP US BRING THE FBI, FTC, FEC, SEC AND CONGRESS TO THEIR FRONT DOORS!



***Read This Article: [It's Time to Bust the Online Trusts - WSJ](#)***

See the new book: "**DELETED**", The New Feature Film: "**OMERTA**", The New DOJ lawsuit against Google and the **60 Minutes** episodes...

THESE COMPANIES BROKE THE LAW, VIOLATED THE PUBLIC TRUST, LIED TO CONGRESS ABOUT WHAT THEY WERE REALLY UP TO, CAME TO OUR OFFICES AND TOOK TECHNOLOGY, PUT GLOBAL DIGITAL HIT-JOBS ON COMPETITORS, BRIBED SENATORS AND, GENERALLY, ABUSED SOCIETY!

**INVEST IN OUR LITIGATION AND CONGRESSIONAL SUPPORT AGAINST THE TECH BULLIES THAT LIED AND SPIED. THEY CHOSE TO CHEAT RATHER THAN COMPETE.**

The United States Patent And Trademark Office, and multiple other state and federal agencies, have certified that Scott invented, designed, built and operated companies and products which GOOGLE, YOUTUBE, SONY and FACEBOOK copied years later after gathering illicit industrial intelligence on those companies and technologies via '*nefarious means*'. Three of those competitors did not even exist when Scott's companies were ALREADY doing everything that Google, Youtube and Facebook based the launch of their companies on. Scott's investors have launched federal investigations on those competitors who chose to "*cheat rather than compete*"!

Regarding the news headlines:

***The founders of Google, Facebook, Netflix, Sony Vue, and Youtube knew me and went to school with me. They, and their investors, asked to look at my technologies and companies which I had engineered, launched as businesses, patented and shown them under NDA years before they copied them and started their own versions of them. The emails, NDA's, patent office files, leaks and lawsuit records prove it. They "spied and lied". They chose to "cheat rather than compete". They aimed over 16 billion dollars of lobbyists at the United States Patent Office in order to blockade the rights of small inventors like me. They hired millions of dollars of Fusion GPS-type media attackers to run hit-jobs on me, and other entrepreneurs, because they could not face the truth in a fair fight.***

This is not a matter of crying over spilled milk. Those companies and their founders ran an organized crime operation Cartel. That assertion is proven in the books: "**Brotopia**" by Emily Chang; "**Whistleblower**" by Susan Fowler, "**A Colossal Wreck**" By Alexander Cockburn, "**Emotional Intelligence**" By Daniel Goleman, "**Drain The Swamp**" By Ken Buck, "**How Political Corruption Actually Works**" By The Wiki Law-Pedia Group, "**Deleted**" By Allum Bokhari, "**The Creepy Line**" By Matthew Taylor, "**Chaos Monkeys**" By Antonio Martinez, "**Disrupted**" By Dan Lyons, "**Catch and Kill**" By Ronan Farrow, "**Permanent Record**" By Edward Snowden, "**Throw Them All Out**" By Peter Schweizer, "**The Circle**" By David Eggers, "**World Without Mind**" By Franklin Foer, "**A Journey into the Savage Heart of Silicon Valley**" By Corey Pein, and in hundreds of other books and thousands of reports from the FBI, DOJ, FEC, SEC, FTC, EU, Inspector General's and other government organizations globally. It is proven in the CBS news 60 Minutes episodes: "**The Cleantech Crash**", "**Congress Trading On Insider Information**", "**The Lobbyists Playbook**" and other segments. It is proven in the feature documentary films including: "**Too Big To Fail**", "**Inside Job**", and "**Omerta - A Corruption Story**". They are deeply connected to the likes of Harvey Weinstein, Jeffrey Epstein and other notorious folks. They buy elections with impunity.

It is proven in hundreds of lawsuits, including Silicon Valley divorce court filings for abuse, available at <http://www.pacer.gov> and it is now proven by the United States Government in the latest of a series of federal monopoly lawsuits. Per federal **Case # 1:20-cv-03010** :

“Today, millions of Americans rely on the Internet and online platforms for their daily lives. Competition in this industry is vitally important, which is why the challenge against Google — the gatekeeper of the Internet — for violating antitrust laws is a monumental case both for the Department of Justice and for the American people,” said Attorney General William Barr. “Since my confirmation, I

have prioritized the Department’s review of online market-leading platforms to ensure that our technology industries remain competitive. This lawsuit strikes at the heart of Google’s grip over the internet for millions of American consumers, advertisers, small businesses and entrepreneurs beholden to an unlawful monopolist.”

“As with its historic antitrust actions against AT&T in 1974 and Microsoft in 1998, the Department is again enforcing the Sherman Act to restore the role of competition and open the door to the next wave of innovation—this time in vital digital markets,” said Deputy Attorney General Jeffrey A. Rosen.

As one of the wealthiest companies on the planet with a market value of \$1 trillion, Google is the monopoly gatekeeper to the internet for billions of users and countless advertisers worldwide. For years, Google has accounted for almost 90 percent of all search queries in the United States and has used anti-competitive tactics to maintain and extend its monopolies in search and search advertising. Stanford University trained these people to be the worst version of criminal frat boys the world could have imagined. Now America must make things right again.

As alleged in the Complaint, Google has entered into a series of exclusionary agreements that collectively lock up the primary avenues through which users access search engines, and thus the internet, by requiring that Google be set as the preset default general search engine on billions of mobile devices and computers worldwide and, in many cases, prohibiting preinstallation of a competitor. In particular, the Complaint alleges that Google has unlawfully maintained monopolies in search and search advertising by:

- Entering into exclusivity agreements that forbid preinstallation of any competing search service.
- Entering into tying and other arrangements that force preinstallation of its search applications in prime locations on mobile devices and make them undeletable, regardless of consumer preference.
- Entering into long-term agreements with Apple that require Google to be the default – and de facto exclusive – general search engine on Apple’s popular Safari browser and other Apple search tools.
- Generally using monopoly profits to buy preferential treatment for its search engine on devices, web browsers, and other search access points, creating a continuous and self-reinforcing cycle of monopolization.

These and other anti-competitive practices harm competition and consumers, reducing the ability of innovative new companies to develop, compete, and discipline Google’s behavior.

The antitrust laws protect our free market economy and forbid monopolists from engaging in anti-competitive practices. They also empower the Department of Justice to bring cases like this one to remedy violations and restore competition, as it has done for over a century in notable cases involving monopolists over other critical industries undergirding the American economy like Standard Oil and the AT&T telephone monopoly. Decades ago the Department’s case against Microsoft recognized that the antitrust laws forbid anti-competitive agreements by high-technology monopolists to require preinstalled default status, to shut off distribution channels to rivals, and to make software undeletable. The Complaint alleges that Google is using similar agreements itself to maintain and extend its own dominance and to attack and destroy smaller companies and inventors.



The Complaint alleges that Google's anti-competitive practices have had harmful effects on competition and consumers. Google has foreclosed any meaningful search competitor from gaining vital distribution and scale, eliminating competition for a majority of search queries in the United States. By restricting competition in search, Google's conduct has harmed consumers by reducing the quality of search (including on dimensions such as privacy, data protection, and use of consumer data), lessening choice in search, and impeding innovation. By suppressing competition in advertising, Google has the power to charge advertisers more than it could in a competitive market and to reduce the quality of the services it provides them. Through filing the lawsuit, the Department seeks to stop Google's anti-competitive conduct and restore competition for American consumers, advertisers, and all companies now reliant on the internet economy.

Those who cover-up for these crooks will experience a wrath like nothing they can imagine! The payback will come from the courts, the public, the news media, the history books and a new kind of AI software forensics!

### **Scott Was The Program Lead For Many Community Service And Public-Interest Programs**



TO: HUMAN RESOURCES DIRECTOR  
 FROM: SAN FRANCISCO SUICIDE PREVENTION  
 PLEASE POST FOR EMPLOYEES!

**FEELING STRESSED BY THE GREAT QUAKE?  
 FREE 24 HR.**

**HELPLINE!**

**CALL - 415- 387-5100**

FOR HELP WITH:  
 ANXIETY  
 FEAR  
 EMOTIONAL SUPPORT  
 KID'S FEARS  
 REFERRALS TO COMMUNITY SERVICES

*PUT TOGETHER  
 ON 2/4/95.  
 MADE BY S.  
 REYNOLD FOR  
 COUNTY OF S.F.*

Provided through the cooperation of The Mayor's Office of San Francisco, San Francisco Suicide Prevention and KQED-TV.

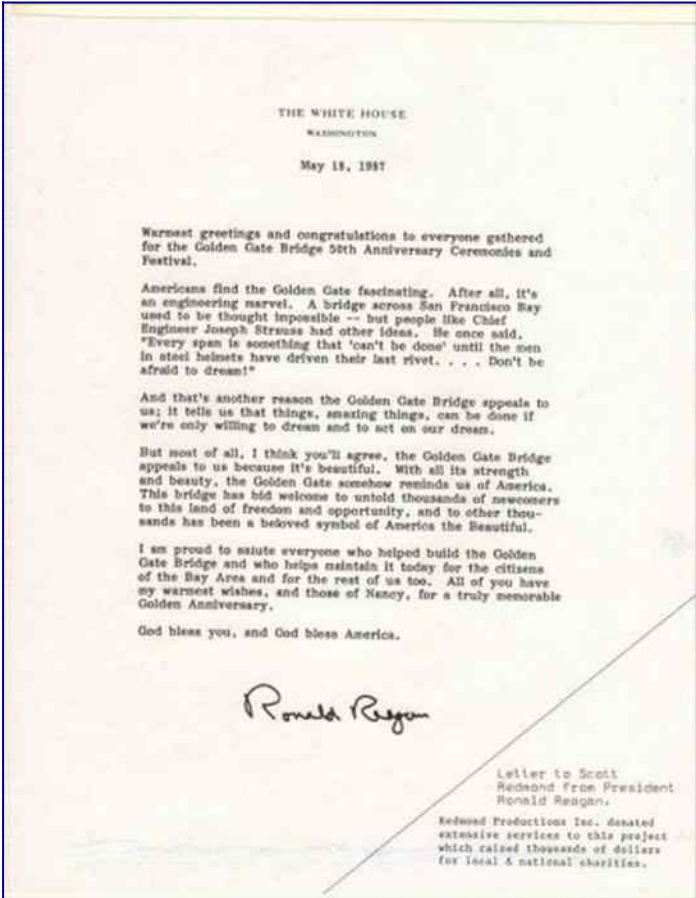
THIS LINE WILL OPERATE 24 HOURS A DAY, ALL YEAR LONG.

ADDITIONAL HELPLINES:  
 SUICIDE AND CRISIS LINE: 221-1423  
 FRIENDSHIP LINE FOR THE ELDERLY: 752-3778  
 DRUG LINE: 752-3450  
 YOUTH LINE: 752-2000  
 AIDS/HIV NIGHTLINE: 665-AIDS

FOR ADDITIONAL INFORMATION, CALL THE STAFF AT 415-752-4866, WEEKDAYS.

**He has provided decades of service to government, community and public-interest requests**







United States Department of the Interior

NATIONAL PARK SERVICE  
GOLDEN GATE NATIONAL RECREATION AREA  
FORT MASON, SAN FRANCISCO, CALIFORNIA 94123

BY ABBEY AREA 901

December 18, 1979

GOGA

To Whom It May Concern:

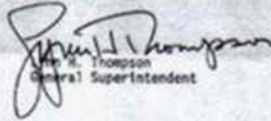
Mr. Scott Redmond has conducted a continuous working relationship with the Golden Gate National Recreation Area for the past two years.

In over a dozen different events, Scott has proven himself to be highly motivated, extremely cost conscious, efficient and pleasant person with whom to work.

The activities Scott has helped produce in the Recreation Area range from a simple afternoon jazz concert, through garage sales and San Francisco Fourth of July Festivities for which he coordinated all craft sales.

The Fort Mason Foundation, with our complete support has retained Scott as a liaison between their special operations and our special programs office. This move has proven to be a great step forward in the overall effectiveness and cooperation between our two organizations.

I commend Scott Redmond for the excellent work he has done for the National Park Service and recommend his work as a special events producer.

  
J. H. Thompson  
General Superintendent

Scott had his first office at "The Farm" and helped to support this San Francisco Urban Community Center

**The Farm:**



Historical Essay  
by Chris Carlsson

See "The Farm", a 47-minute documentary by Mike Kavanagh, MaryEllen Churchill, and Kathy Katz, produced by Jack Wickert. Video: courtesy Mike Kavanagh



The Farm huddled beneath Highway 101, Photo: Jack Wickert



The Farm's beginnings, prior to any construction of [La Raza Park](#) next door, c. 1974., Photo: Jack Wickert



City bulldozers clear area for park, but leave part of garden intact due to court order., Photo: Jack Wickert





One of the not-so-human inhabitants of The Farm, Photo: Jack Wickert

*"The Farm was an eruption of nature in the middle of the concrete jungle . . . proving that life could still exist there."* —Joan Holden, SF Mime Troupe

The [Farm](#) was a unique "autonomous zone" that lived under the freeway interchange of Highway 101, (then-)Army Street, and [Bayshore Boulevard/Potrero Avenue](#). It began in 1974 and ended in a sad eviction in 1987. It was a farm with farm animals, gardens, a theater, a school, an art gallery, communal kitchen, a punk rock club, and a challenge to the prevailing values in the city. Their effort spawned a 4.5 acre park, which became today's La Raza Park. It was a place occupied by a spontaneous, grassroots, independent, autonomous collective organization that created itself.



Jack Wickert at the Farm, c. 1975, Photo courtesy Jack Wickert



Work party at The Farm, c. 1975, Photo: Jack Wickert

[Jack Wickert](#) and Bonnie Sherk moved on the abandoned, desolate asphalt of the former factory in 1974, intending to tear up the concrete and build a model farm to environmental education for school children. They founded the Crossroads Community and inspired a community of artists to help transform the space. Ultimately an incredible mix of people shared in some part of the Farm experience: elderly, school kids, all ages, all races, wildly diverse values and expressions. Local kids were drawn into gardening by the gardeners to stop them from carelessly wrecking the gardens. They grew Swiss chard, lettuce, cabbage, tomatoes, corn, potatoes, onions, garlic, cucumbers and numerous kinds of squash.



Dance rehearsal at The Farm, c. 1976, Photo: Jack Wickert

The San Francisco Mime Troupe came to depend on it as a rehearsal space, as did a number of other performance groups. Meanwhile over 70 farm animals co-existed with special classes for K-3, kid-produced theater on the big stage, rehearsals, an art gallery, regular pageants, festivals, youth group gatherings, outdoor shows.

Rhodesa Jones: *"The farm was one of those early industrial, multi-purpose, multi-disciplinary, multi-cultural spaces in San Francisco."*

The [punk era came to The Farm](#) [go to 5th clip in Pollack interview to hear more] from 1983-86. Bands such as MDC, Tragic Mulatto, Polkacide, DOA, Descendents, and many others rattled eardrums at Farm shows.

A protracted legal struggle between Farm tenants and the landlords included a Temporary Restraining Order gotten by the Farm to prevent any damage to their gardens in September, 1981, until finally all avenues of appeal were exhausted and they were evicted on November 5, 1987. The landlords claimed they would be willing to rent to anyone at "fair market value" except the current residents of The Farm.

BLACK WOLF SOCIETY  
OF THE  
GOURD CLAN  
WELCOMES YOU  
TO ITS  
WINTER  
POW WOW



AT  
**THE FARM**

1499 POTRERO AVENUE (NEAR ARMY)

SATURDAY, DEC. 16; NOON - MIDNIGHT  
FOR INFORMATION, CALL: 826-4290

One of many events held at The Farm in the late 1970s, Image: [Neighborhood Arts Program](#), San Francisco Arts Commission

*"They had to step on it because it existed and flourished outside all official channels, it was out of control . . . The same reason we loved it and it represented life to us, they had to kill it . . . because it represented disorder, misrule, anarchy. . ."* —Joan Holden, playwright, SF Mime Troupe, in *The Farm*, a documentary film by Kathy Katz and Mike Kavanagh, produced by Jack Wickert.



Site of The Farm and [La Raza Park](#), as seen from Bernal Heights, 2009, Photo: Chris Carlsson



Potrero del Sol garden, still flourishing in 2009, more than two decades after the demise of The Farm.

**Jack Wickert (1937 – 2018)** was the organizer at The Farm that mentored Scott.



Jack was a community builder and musician, born in Wisconsin, raised in the Mission and Potrero Hill, friend to many, helper to all grassroots arts. He graduated from Mission HS and SFSU, drove school bus and taxi. Played every kind of horn but called his trumpet his ego, till Vietnam War supporter smashed it into his lip as he marched with anti-war S.F. Mime Troupe band. In 1974, helped artist Bonnie Sherk plant cardboard cows in Cesar Chavez/101 maze, found second calling. Co-founded the Farm: community garden-gallery-school- theater-social hall in elbow of Potrero exit. Youth learned gardening, kids learned plants and animals, neighbors held weddings and funerals, performing artists rehearsed. Jack was manager, host, gardener, truck driver, janitor, plumber, cook, piano player, mentor to young staff and volunteers, till 10-year lease ran out just as rents rose. Farm fought to survive but lost, 1987.

After, led varied life. Traveled, mainly to Mexico with friends in his old school bus, lent hand at SOMARTS, Bayview Boat Club, Black Bear Ranch commune, marketed produce, taught music, played with Spitters brass band, held poker nights on his Mission Creek houseboat. In 2009, life of chainsmoking sent him to ICU with CPOD. After months of rehab went back to Camels, angering faithful visitors. Knew days were numbered. Died New Year's morning.

# PROJECTS PRODUCED BY SCOTT

## THE NOWHOUSE San Francisco Giants Stadium



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## DEMOCRI-C Global Disaster Sites



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## EARTHQUAKE RECOVERY CENTER san Francisco



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## STAR RANGER - THE FILM Various Theme Parks





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**THE CRASH-RESISTANT CAR**  
**Washington, DC**



---

**TSUNAMI RECOVERY HOUSING SYSTEMS**  
**Japan**



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**THE LARGEST CITIZEN TRANSPARENCY LAWSUIT IN MODERN LEGAL HISTORY**  
**Washington, DC**



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**THE WORLD'S FIRST GLOBAL WEB TV ON-DEMAND BROADCASTING NETWORK**  
**San Francisco**



---

**ONE OF RAY CHARLES LAST OUTDOOR CONCERTS**  
**San Francisco**



---

**THE FIRST RECORD-BREAKING POLO FIELDS CONCERTS SINCE THE 1960'S**  
**San Francisco**



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**THE LONGEST RANGE CAR EVER PRODUCED AT THE TIME**  
**San Francisco**



---

**THE WORLD'S FIRST MOVIE BROADCASTING NETWORK ON A HAND-HELD DEVICE**  
**San Francisco**



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**THE FIRST CONVERSION OF FORT MASON CENTER FOR MAJOR PUBLIC EVENTS**  
**San Francisco**



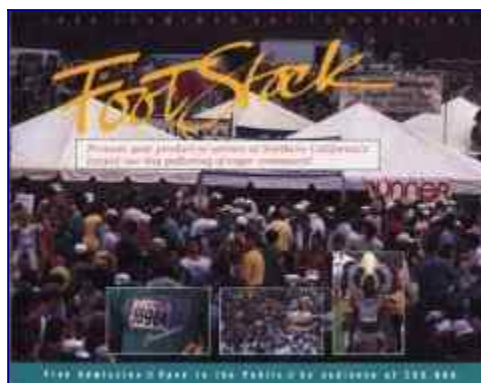
**THE FIRST EARTH VISIBLE OPTICAL IMPRESSION SATELLITE**  
**Los Angeles**



**THE FIRST VRML 3D STEREOSCOPIC VIDEO EMBEDDED WEB BROWSER FOR VR**  
**San Francisco**



**THE BAY TO BREAKERS FOOTSTOCK POST-RACE FESTIVAL**  
**San Francisco**



**THE FIRST URBAN LIGHT CONCERTS ON A CITY-WIDE SCALE**

**San Francisco**



**CO-PROMOTER OF THE CROWD-FUNDING CLAUSE, AMERICAN JOBS ACT  
Washington, DC**



**MULTIPLE R&D DEVELOPMENT LABS  
Nationwide**



**U.S. GOVERNMENT PATENT OFFICE CERTIFIED FIRST INVENTOR OF CORE SOCIAL  
NETWORKS TECHNOLOGIES AND SITES  
San Francisco**



**SF BLUES FESTIVAL - LOGISTICS OPERATIONS**  
**National Park Service**



**WORLD'S FIRST SOLD GLASSES-SIZE VR HEADSETS**  
**San Francisco**



**PULSE-PACK PROPULSION SYSTEM**  
**San Francisco**



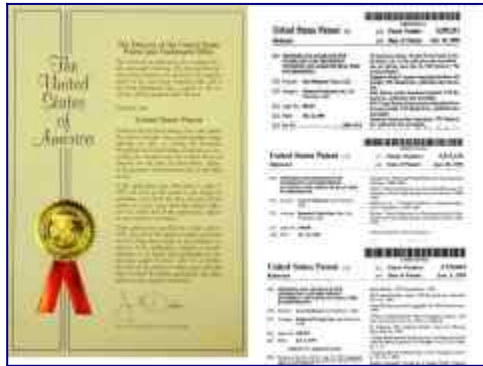
**AWARDEE - CONGRESSIONAL GRANT- IRAQ WAR BILL**  
**Washington, DC**



**VR CONTENT - NATIONAL VR TOUR  
Nationwide**



**INVENTOR OF RECORD - U.S. PATENT OFFICE  
Washington, DC**



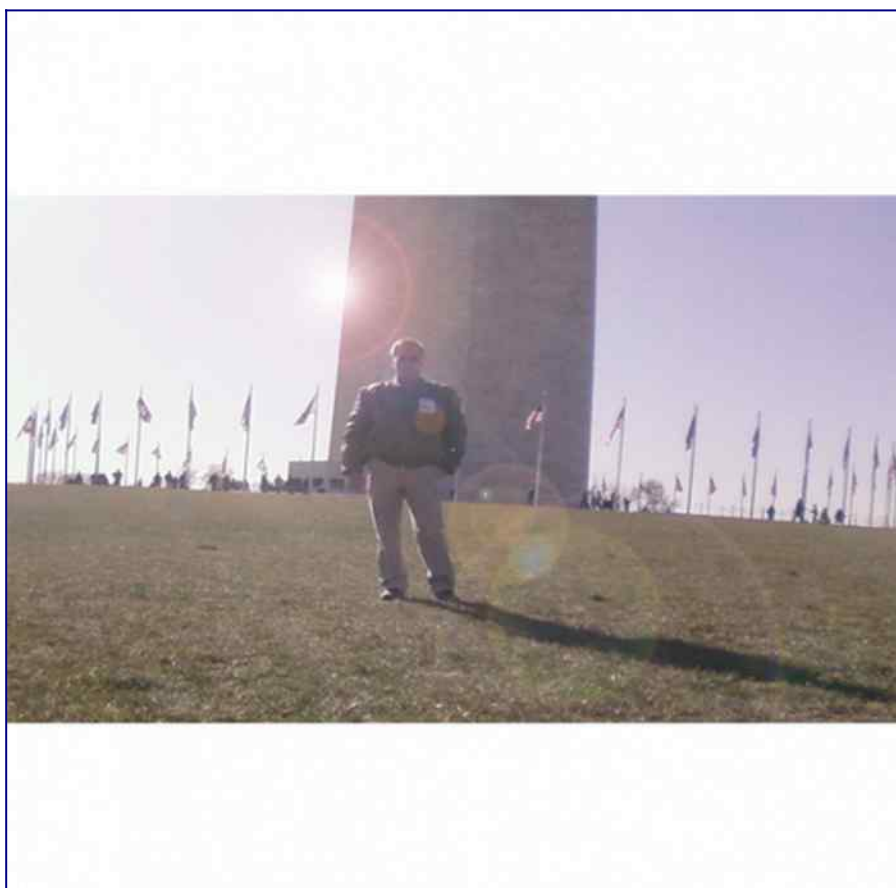
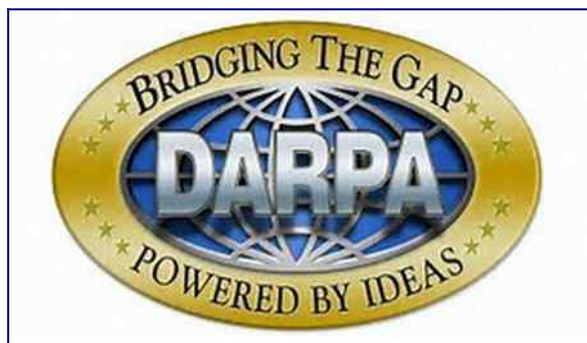
**WHITE HOUSE COMMENDED BIPARTISAN PROGRAM OPERATIONS  
Washington, DC**



AND MUCH MORE...

**Scott Was Awarded The DARPA Scientist Helping America Award**





# **INVENTIONS AND ENGINEERING DESIGN**

United States Patent Office Certified as: INVENTOR, FOUNDER and FIRST-TO-COMMERCIALIZE, technologies now in use by tens of millions of people around the world

United States Patent Office awarded as: Inventor, Founder and First-To-Commercialize, technologies now in use by tens of millions of people around the world including decade earlier companies and technologies that **Facebook, Google, Netflix, YouTube, Bittorrent** and other famous brands were copied from

Scott has, for decades, offered to stop saying he did certain things "first" if anybody proves in a court jury trial or Congressional hearing that they did any of those things first. So far, nobody has proven his claims of the few dozen "firsts" he claims, to be superseded by any earlier claims.

Why does being "*first*" matter in product creation? Because it affects who gets **billions** of dollars of profits and who gets the credit! Who *Did It First* According To The U.S. Patent Office, The Emails, The Contracts, The NDA's and The Sandhill Road Leaks?

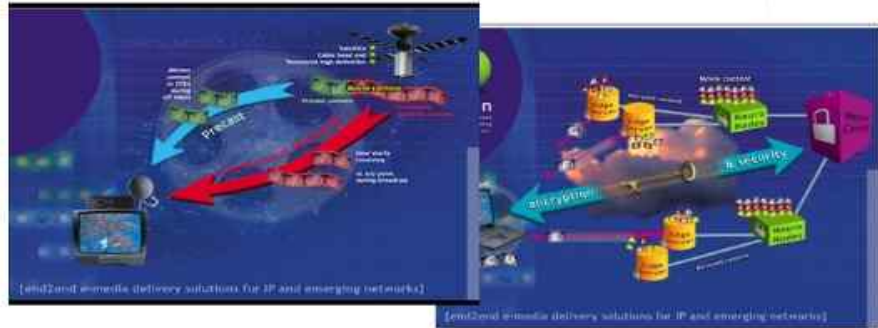
## **Who, And What Evidence, Proves That Scott Invented, Built, Deployed, Sold, Patented And Marketed Some Of Silicon Valley's Key Technologies First?**

- *The United States Patent Office records prove it!*
- *Time-stamped emails between him, his staff and the key parties prove it!*
- *Time-stamped emails between the executives and VC's who examined and copied his technology prove it!*
- *Non-disclosure agreements (NDA's) that were signed by the copy-cats prove it!*
- *Contracts that were leaked from inside the copy-cat organizations prove it!*
- *Our Trade Secret internal records, lab notes and photo-documentation prove it!*
- *Press clippings confirming who first demonstrated after filing patents prove it!*
- *Broadcast news videos, feature news articles and federal reports confirming who first demonstrated after filing patents prove it!*
- *Oliver Stone's Wild Palm's production crew testimonies prove it!*
- *Leaked documents from the Sony Pictures hack prove it!*
- *FBI, FEC and SEC records from investigations of the culprits prove it!*
- *Deposition records from other court cases prove it!*
- *Leaked internal emails and records from employees who whistle-blew on the culprits prove it!*

- *Congressional reports and other indisputable government evidence prove it!*
- *Whistle-blower lawsuit records prove it!*
- *Wikileaks postings prove it!*
- *Congressional investigations prove it!*
- *Filed lawsuit responses prove it!*

## **KEY EXAMPLES OF SCOTT’S INVENTION AND START-UP INDUSTRY “FIRSTS”:**

# The technology Bittorrent copied?



**Before Bittorrent or Napster even existed, Scott's products were doing THE FIRST Mesh Peer-to-Peer networking, disclosed the technology under dated NDA and his federal filings and signed NDA's (by famous VC's) prove it since before 1998. Scott never intended for those other companies to steal movies with the technology.**

Per USPTO, Secy. of State, signed dated NDA's, emails, press, contacts & more. © SD Redmond. All Ris. Res. We bet you will not find an earlier competing product delivery

# The First Facebook?



Date First Used in California: March 1, 1987  
 Date First Used Anywhere: March 1, 1987



**Techmate launched:**  
 March 1, 1987  
**Facebook launched:**  
 Feb. 4, 2004  
**M. Zuckerberg born:**  
 May 14, 1984

**YAHOO!**

Subj: Re: Partnership Proposal as Requested  
 Date: 98-03-09 21:18:26 EDT  
 From: diana@yhoo-inc.com (Diana Hastings)  
 To: FASTAR9@aol.com

Scott,

How about this. I would love to try a demo of your product out. Do you have a URL?

Regards,

Dan

- D. Hastings - Yahooof Bar Dev Things - Ph: 409-731-3462 - Fx: 3462 -  
 - Ready to Play? http://play.yahoo.com/ -

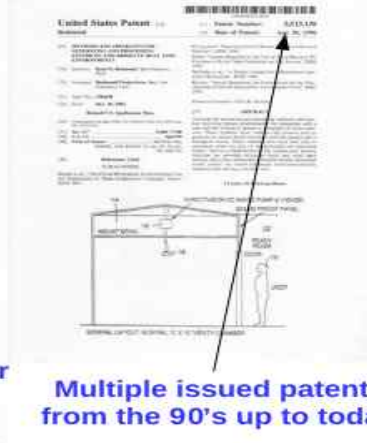
**Aug. 16, 1989, National Ads for Techmate**



**Techmate did everything that Facebook later did before Facebook even existed**

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# The First Facebook Social Media?



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# First to Design, Build & Patent Crash-Resistant Car



Issued patents, broadcast news stories and federal filings prove this claim.

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# First NASA Air Bag Lander Proposal?



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
 WASHINGTON FIELD OFFICE  
 WASHINGTON, D.C. 20546

September 13, 1967

Mr. Frank Robinson

Dear Mr. Robinson:

Your letter of August 27 to Dr. Phil Dietrich (referred to me by Dr. Dietrich) is included in attached transcript. At the present time, Dr. Dietrich is completely occupied with the scientific data returned by the Apollo 13.

I found your articles very interesting. Several years ago we did a concept study of a manned Mars mission. At that time we found we did not have enough data on the Mars atmosphere to build an efficient landing and ascent system. While we have that data in no abundance on Mars and that it is less dense than the atmosphere on Earth, we do not have an accurate measurement of its density on its hourly profile with altitude. At the present, we have no studies or plans concerning a manned Mars mission. However, we hope that the proposed Viking mission will give us more data for future studies.

The Viking Program is an unmanned Mars orbiter with a landing module. This program is being managed by the NASA Langley Research Center, Hampton, Virginia. The program is now in the design phase and will probably be launched sometime during the 1970's. The proposed landing system consists of three phases: an atmospheric braking phase using a heat shield similar to Apollo's parachute system. Once a speed of about 200 mph is achieved, velocity and finally, descent engines during the last 30 seconds of landing to cushion the spacecraft. There are no plans to launch this system from the Earth's surface.

While we share your interest in a Mars program, we are not in a position at this time to discuss a manned Mars mission. For this reason I am returning your request for information. If you wish more information on the Viking Program, may I suggest you write to the Martin Marietta Company, 10000 Northpark Drive, Dayton, Ohio. Our sales contract to the Langley Research Center to build this spacecraft had to contain the landing system.

Sincerely,

*Handwritten signature: Frank Robinson*  
 Mr. Frank Robinson

cc: Dr. P. Dietrich

*Handwritten note in red: I found the idea work... but the idea was not... did not... work... system*

Scott proposed that the Mars lander be shrouded in inflatable airbags (which would deflate after landing) in discussions with the head of the Mars lander program.

The head of the Mars lander program dismissed Scott's proposal as "unworkable" and said only rockets could work.

After extensive tests, NASA determined that Scott's proposal WAS INDEED the only way to do it.

The Mars rover landed on Mars and worked great thanks to the Airbag system!



For USPTO, Sec'y of State, signed dated NDA's, emails, press, contracts & more.. © SD Redmond, All Ris. Res. We ask you not find an earlier competing product delivery



# The First PC-based 360 Degree Flight Simulator & VR system?



**Scott developed and built the first such device and shipped it around the world.  
Shown above left at a European trade-show**

Per USPTO, Secty. of State, signed dated NDAs, emails, press, contacts & more. © SD Redmond, All Rts. Res.  
We bet you will not find an earlier competing product delivery

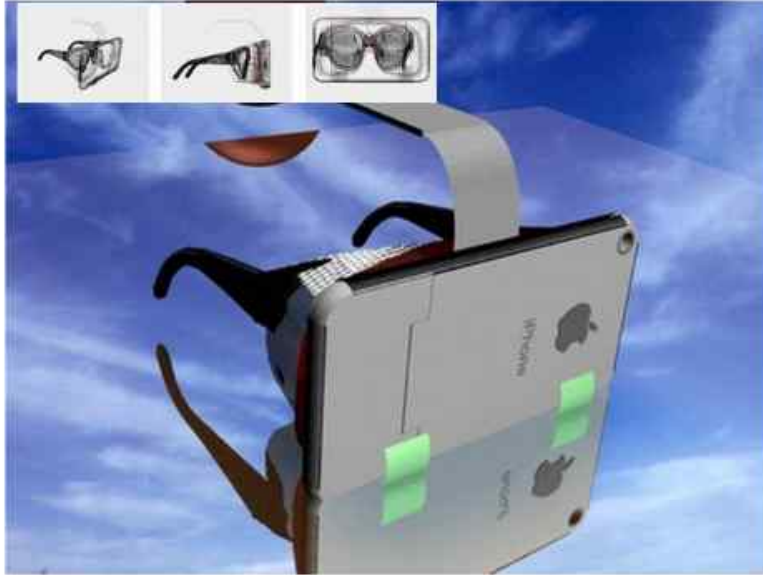
# The first PC-based Ridefilm?



Scott won the national award for the first and best "produced and directed" 3D animated ride-film

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# The first patent filing and demonstration of a smartphone as a drop-in VR display?



Patent office records,  
contract dates and demos  
prove this one



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# Producer of San Francisco's First Post-Quake Crisis Center

TO HUMAN RESOURCES DIRECTOR  
FROM SAN FRANCISCO EARTHQUAKE PREVENTION  
PLEASE PRINT FOR SARDANAS

FEELING STRESSED BY THE GREAT QUAKE?  
FREE 24 HR.

**HELPLINE!**

CALL 415-387-5100

**Post-Quake Day After  
Trauma Center  
Implemented by  
Scott Redmond on  
1/2 day notice in 48  
hours!**

EMOTIONAL SUPPORT  
KIDS PEACE  
REFERRALS TO COMMUNITY SERVICES

Provided through the cooperation of The Mayor's Office of San Francisco, San Francisco Health Prevention and  
KQED-TV.

THIS LINE WILL OPERATE 24 HOURS A DAY, ALL YEAR LONG.

NATIONAL HELPLINES  
SUICIDE AND CRISIS LINE: 800-421-4673  
TELEHOPE LINE FOR THE DEAF: 800-735-7778  
DEAF LINE: 800-448-8444  
FUTURE LINE: 800-368-6888  
WISWYV: 800-448-4444

FOR ADDITIONAL INFORMATION, CALL THE STAFF AT 415-387-5100, WEEKDAYS.

Web & Analog combined rapid-response pop-up center formed by "taking over" TV station in middle of the night tactical operation for the City of San Francisco in the Loma Prieta Earthquake disaster. Served a multi-million person venue.



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# The FIRST End-To-End Web Video Technology for Sony Pictures?

**Entertainment and the Web**  
 Variety magazine article snippet.

**SONY**  
 PlayStation®2 Web Movie Box built and demo'd for SONY board in LA.

**A FEW OF OUR CONTRACTS WITH SONY**

**WE ARE THE ONLY ENTITY MENTIONED IN THE ENTIRE PATENT FILING THAT OUR SYSTEM LEADS TO US**

**We are very proud to have been the only outside entity mentioned, acknowledged & validated, over & over, in SDNY's patent filing for Internet video set demand!**

Signed contracts, letters, videos, emails, receipts, employee statements and the reference to Scott and his team over and over as the only outside entity mentioned in Sony's federal patent records highlight the validation on this one.



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# Creator of the First Touch-Screen Smartphone?



Issued patents, working devices and media coverage pre-dates any such documentation by Samsung, Apple or any currently manufacturing party



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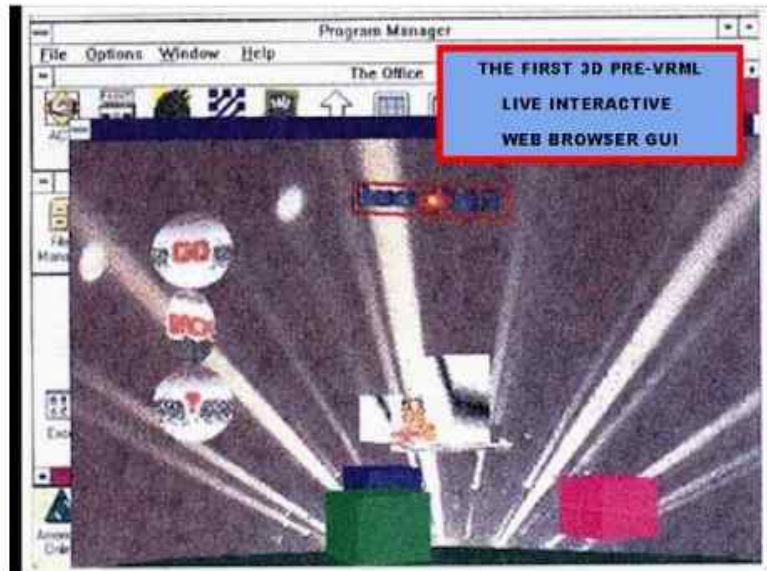
# The first "Glass" or VR Glasses product shipped?



**At least a decade before Google Glass, Sony VR, Oculus VR over 500 news, patent and TV shows prove that Scott was first. Scott was featured on the national broadcast of E! covering his role as consultant for Oliver Stones WILD PALMS VR movie.**

Per USPTO, Secty. of State, signed dated NSA's, emails, press, contracts & more. © SD Redmond, All Rts. Res. We bet you will not find an earlier competing product delivery.

# The First VR Online Software OS?



On Windows 3.1 prior to the release of VRML. Rev. 2.0 was commended in writing, by the White House



# Developer of the First Set-Top-Box VOD system on a PC Card?



**Built by NVIDIA – Developed by Scott**

Per USPTO, Secy of State, signed dated NDA's, emails, press, contracts & more... © 2004 Raymond, All Rts. Res.  
We bid, you will not find an earlier competing product delivery.

# Developer of the first hand-held mobile movie store?



**In partnership with Compaq, HP and Hollywood Studios. To date, no third party has identified an earlier delivered same-capability product**

Per USPTO, Secty. of State: signed dated NDA's, emails, press, contracts & more. © 50 Redmond, All Rts. Res. We bet you will not find an earlier competing product delivery

# The First Facebook?

800 700 0000      9000 140      42000 000 000 000

a fax message from  
**YAHOO!**

*CONFIDENTIAL*

to: 212498

from: Scott

to: 415 626 7263

company:

no. of pages: Daniel Henkin

pages: *including this cover sheet*

message: Please find our NDA attached. Please fill out and the book and I will be you a signed copy.

*D*

www.yahoo.com  
1400 central expressway suite 101  
santa clara, california 95051  
phone (408) 235-8900 • fax (408) 735-5701



U.S. Patent and Trademark records histories on multiple filings prove the precedents

Scott's Techmate, Unifree, ImagiNet and Boxfree social network system existed and operated before Facebook was even created and they did everything that Facebook does today. Facebook VC's came to look at Scott's networks before starting Facebook.

1998 NDA signed with Yahoo for Yahoo to examine Scott's social media network technology

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# The First Google?

The screenshot displays the UNIFREE website, which was a pioneer in offering free online services through a search engine interface. The page is divided into several sections:

- United States Patent and Trademark Office:** Located at the top left, featuring a logo and navigation links: Home Site Index Search FAQ Glossary Guides Contacts eBusiness eBiz alerts News Help.
- UNIFREE:** Large blue text logo at the top right.
- California Secretary of State:** A banner below the UNIFREE logo with the slogan "All people Liberty Speech" and a navigation menu: Secretary of State Main Website Business Programs Notary & Authentications Election.
- Typed Drawing:** A search result for the trademark "MOMBOT". It includes:
  - Word Mark: MOMBOT
  - Goods and Services: (CANCELLED) IC 042, US 380 001, G & S: COMPUTERIZED ON-LINE SERVICES USED IN THE FIELD OF CONSUMER SERVICE APPLICATIONS; BUSINESS TRANSACTIONS. FIRST USE: 1987(1229) FIRST USE IN COMMERCE: 1987(1229)
  - Mark Drawing Code: (1) TYPED DRAWING
  - Serial Number: 7537404
  - Filing Date: October 15, 1987
- MOMBOT:** A large black arrow points from the word mark "MOMBOT" to the "MOMBOT" text below it.
- Word Mark:** A search result for the trademark "UNIFREE". It includes:
  - Word Mark: UNIFREE
  - Goods and Services: (CANCELLED) IC 042, US 380 001, G & S: COMPUTERIZED ON-LINE SERVICES USED IN THE FIELD OF PERSONAL GIFT SELECTION FOR OTHERS AND ON-LINE PERSONAL ERWAND, DATING AND REMINDER SERVICES. FIRST USE: 1986(1211) FIRST USE IN COMMERCE: 1986(1211)
  - Mark Drawing Code: (1) TYPED DRAWING
  - Serial Number: 7503887
- Business Entity Detail:** A table showing information for UNIFREE, LLC:

Entity Name:	UNIFREE, LLC
Entity Number:	199731610116
Date Filed:	11/13/1997
- Navigation:** A yellow sidebar on the right lists: Home Entities (SIC) Online Services, E-File Statements of Information for Corporations, Business Search, Processing Times, Disclosure Search, Main Page, Service Options, Name Availability.



The first website to offer free online services via a search engine interface EXACTLY as Google later offered. Presented to Kleiner Perkins prior to the existence of Google. Unifree was online and featured on national TV and media before Google was even formed.

Per USP TO, Secty. of State, signed dated NGK's, e-mails, press, contracts & more. © SD Redmond, All Rts. Res. We bet you will not find an earlier competing product delivery.

# Creator Of The Original Streaming Netflix/YouTube – More?



**Produced dozens of the first streaming media software applications that delivered the first web-based video broadcasting features of their kind since 1978.**

Per USPTO, Sec'y of State, signed dated NDA's, emails, press, contracts & more... © SD Redmond, All Rts. Res. We bid, you will not find an earlier competing patents delivery.

# The First Virtual Reality System?



United States Patent		Patent Number	3,282,212
Referred		Date of Patent	Oct. 15, 1968
<p><b>34</b> METHOD AND APPARATUS FOR DISPLAYING AND PROCESSING VISUAL AND AUDIBLE REAL TIME ENVIRONMENTS</p> <p><b>35</b> Invention: Earl Raymond, Fresno, Cal.</p> <p><b>36</b> Assignor: Raymond Productions, Inc., Fresno, Cal.</p> <p><b>37</b> Appl. No.: 462,907</p> <p><b>38</b> Filed: Feb. 11, 1966</p> <p><b>39</b> Int. Cl.:</p>			
<p><b>40</b> SUMMARY OF THE INVENTION</p> <p>This invention relates to a method and apparatus for displaying and processing visual and audible real time environments. The method and apparatus includes a computer system which receives and processes visual and audible data and produces a real time display of the same. The display is a three-dimensional representation of the real time environment and is viewed through a pair of lenses. The display is controlled by a computer system which receives and processes visual and audible data and produces a real time display of the same. The display is a three-dimensional representation of the real time environment and is viewed through a pair of lenses. The display is controlled by a computer system which receives and processes visual and audible data and produces a real time display of the same.</p>			
United States Patent		Patent Number	5,553,130
Referred		Date of Patent	Apr. 26, 1990
<p><b>41</b> METHOD AND APPARATUS FOR DISPLAYING AND PROCESSING VISUAL AND AUDIBLE REAL TIME ENVIRONMENTS</p> <p><b>42</b> Invention: Earl S. Raymond, Fresno, Cal.</p> <p><b>43</b> Assignor: Raymond Productions, Inc., Fresno, Cal.</p> <p><b>44</b> Appl. No.: 462,907</p> <p><b>45</b> Filed: Feb. 11, 1966</p>			
<p><b>46</b> SUMMARY OF THE INVENTION</p> <p>This invention relates to a method and apparatus for displaying and processing visual and audible real time environments. The method and apparatus includes a computer system which receives and processes visual and audible data and produces a real time display of the same. The display is a three-dimensional representation of the real time environment and is viewed through a pair of lenses. The display is controlled by a computer system which receives and processes visual and audible data and produces a real time display of the same.</p>			
United States Patent		Patent Number	5,750,044
Referred		Date of Patent	Jan. 2, 1998
<p><b>47</b> METHOD AND APPARATUS FOR DISPLAYING AND PROCESSING VISUAL AND AUDIBLE REAL TIME ENVIRONMENTS</p> <p><b>48</b> Invention: Earl S. Raymond, Fresno, Cal.</p> <p><b>49</b> Assignor: Raymond Productions, Inc., Fresno, Cal.</p> <p><b>50</b> Appl. No.: 462,907</p> <p><b>51</b> Filed: Feb. 11, 1966</p>			
<p><b>52</b> SUMMARY OF THE INVENTION</p> <p>This invention relates to a method and apparatus for displaying and processing visual and audible real time environments. The method and apparatus includes a computer system which receives and processes visual and audible data and produces a real time display of the same. The display is a three-dimensional representation of the real time environment and is viewed through a pair of lenses. The display is controlled by a computer system which receives and processes visual and audible data and produces a real time display of the same.</p>			

**There isn't much of a question about this claim. The U.S. Patent Office and hundreds of news media acclaim items prove this one. Scott never claimed to have invented the Glove or the LEEP lenses but did invent the "Holodeck" & CAVE per the Patent Office**

Per USPTO, Sec'y of State, signed dated NDA's, emails, press, contracts & more... © SD Raymond, All Res. Res. We list you will not find an earlier competing product delivery.

# Creator Of The Original Streaming Netflix/YouTube?



THE VICE PRESIDENT  
WASHINGTON  
January 12, 1988

Mr. Scott Redmond  
P.O. Box 14057  
San Francisco, California 94116

Dear Mr. Redmond:

Thank you for contacting my office regarding your company's virtual reality network. I appreciate hearing from you, and I sincerely regret the delay in my reply.

America's success in the world market depends on the new ideas and innovative new products and services developed by American businesses. Companies like yours are the foundation upon which this nation's economic growth and competitiveness stand. President Clinton and I are working hard to assist American industries and businesses which create new products and keep our nation at the head of the world economy.

I certainly appreciate being informed of your company's efforts. In order to make informed decisions, President Clinton and I depend on being apprised of the latest initiatives and the development of new technologies in several industries.

Again, thank you for letting me hear from you.

Sincerely,  
  
Al Gore

White House confirmation of internet streaming media by Scott in 1994 for the VR network through ARPAnet and university systems. Over 10 of Scott's web video networks have been broadcasting on the web since 1980.



Scott met with the heads of Netflix in 1999 to try to talk them into delivering videos over the web but they said that they "didn't see a future in movies on the web".



Scott has been awarded deeply researched seminal issued patents from the U.S. Government on web video since the 90's



Scott's CLICKMOVIE.COM was operating years before YouTube and providing every function that Google/YouTube later offered

For USPTO, Sec'y of State, signed dated NDAs, emails, press, contracts & more. © SD Redmond. All Rts. Res. We bet you will not find an earlier competing product delivery

When tech oligarchs attack us, because they are ashamed for being found out, we file FBI, FEC, GAO, OSC, CFTC, SEC, FCC and Congressional cases against them, and their attack operatives, using FBI-class investigative and forensics resources. We have launched hundreds of State and Federal cases against corrupt corporations who steal technology, bribe, black-list, money-launder and engage in other related crimes!

**Scott is an inventor, CEO, Program Director and Forensic Investigator**

- He built the first fully integrated virtual reality 'Holodeck' and 'CAVE' chamber system.

**Who says so?**

The United States Patent Office, time-stamped mails between him, his staff and they key parties, NDA's, contracts, press clippings, broadcast news videos, feature news articles, federal reports, Oliver Stone's Wild Palm's crew, Congressional reports and other indisputable evidence.

- He built the first company that was later copied to become Google.

**Who says so?**

The United States Patent Office, emails between him, his staff and they key parties, NDA's, contracts, press clippings, broadcast news videos, federal reports, Congressional reports and other indisputable evidence.

- He built the first company that was later copied to become Facebook.

**Who says so?**

The United States Patent Office, emails between him, his staff and they key parties, NDA's, contracts, press clippings, broadcast news videos, federal reports, Congressional reports and other indisputable evidence.

- He built the first company that was later copied to become YouTube, Hulu and Netflix.

**Who says so?**

The United States Patent Office, emails between him his staff and they key parties, NDA's, contracts, press clippings, broadcast news videos, federal reports, Congressional reports and other indisputable evidence.

- He built the first car manufacturing company that was Tesla's biggest competitor . The United States Government financed it, it won more patents and it beat the tech Cartel's Tesla on every metric.

**Who says so?**

The Dept of Energy Documents, Congress, The United States Patent Office, emails between him, his staff, famous politicians and they key parties, NDA's, contracts, press clippings, broadcast news videos, federal reports, Congressional reports, The **Federal Lawsuits** his associates filed and won and other indisputable evidence.

- He knows and worked with President's of the United States, Vice Presidents of the United States, Senators Of The United States, Mayors of San Francisco, their financiers and their families and has shared homes with some of them.

**Who says so?**

Photos, recordings, emails between him and they key parties, White House documents, FBI reports, NDA's, contracts, press clippings, broadcast news videos, federal reports, commendations, proclamations, City reports, purchase orders, government contracts, checks, voice mails, hacks, leaks, Congressional reports and other indisputable evidence.

- Some well-known parties were the competitors, operatives, beneficiaries and public policy developers that approached Scott under the guise of 'helping' his team's efforts but they turned out to be spying on the technology and covertly operating together in violation of anti-trust laws.

**Who says so?**

The FBI, the SEC, ICIJ, photos, recordings, emails between him and they key parties, White House documents, FBI reports, NDA's, contracts, press clippings, broadcast news videos, federal reports, commendations, proclamations, City reports, purchase orders, checks, arrest warrants against those third-parties, voice mails, hacks, leaks, Congressional reports and other indisputable evidence.





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We Need Inventors. America Loves Inventors. Join Our Voice -- Help Us Enact Legislation to Restore the Rights of Inventors. We want to help restore our once-great patent system, a Constitutional system in which ideas can be protected and thus shared for the benefit of society.

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COME AND LEARN: New Trends and WHAT'S NEXT in Prototyping using 3D Printing, Injection Molding and CNC Cutting/Stamping.AND LOW-VOLUME PRODUCTION technologies. The speaker, Gus Breiland, is a Sr. Technical Sales Engineer at Protolabs - one of the premier digital manufacturing companies in the world today.

# CASE STUDIES AND PROJECT NOTES

# FIRE FIGHTING AIRCRAFT FORCE EXPANSION

2000+ Big Commercial Planes Are Just Sitting Around In The Desert. Putting Them All To Use As Water Bombers To Put Out The Massive New Forest Fires



Per Reuters, as COVID-19 grounds swaths of airline fleets, companies that profit off the dismantling and trade of aircraft parts are seeing early signs of an expected rebound in activity as carriers accelerate plane retirements. Why are those planes not already in the air fighting West Coast fires as Water Bombers? Scott has taken the initiative to match solutions with needs regions.

While companies that store, dismantle, and buy and sell used aircraft parts see opportunity in parked planes, a sudden increase in the supply of used parts risks depressing prices in the estimated \$3 billion a year industry, despite demand from airlines seeking to lower maintenance costs, executives and analysts say.

Even as aviation remains in a slump because of the pandemic, the head of U.S. commercial aerospace company GA Telesis was made aware of five airlines calling for offers to dismantle planes.

Across the border, Canada's Aerocycle is bidding to buy grounded planes for the first time to dismantle and resell for parts, instead of just recycling aircraft on consignment from carriers, its CEO said.

The fate of the world's pool of grounded planes is being closely watched by players in the market for used-serviceable material, with one report from consultants Oliver Wyman forecasting "a tsunami of demand" for such parts, as airlines seek to lower costs.

Used materials could compete with new parts and defer immediate airline demand for “aftermarket” spend, referring to the maintenance, repair and overhaul sector, now estimated by Naveo Consultancy at \$50 billion.

As a result, one industry executive said he has avoided buying parts, fearing a slump if too many planes are dismantled.

“I think we’re going to see a rapid decrease in pricing,” said the executive, speaking on condition of anonymity.

The number of planes dismantled for parts or scrap could double to 1,000 annually through 2023, up from roughly 400 to 500 planes a year since 2016, according to data firm Cirium.

Naveo estimates 60% of global passenger and cargo fleets are currently flying.

In 2020, Naveo expects 2,000 aircraft will be retired, or parked and not returned to service, up from 680 in 2019. But those planes would not all be immediately dismantled, as some carriers wait in case market conditions improve, Managing Director Richard Brown says.

Indeed, UK-based Air Salvage International, which normally dismantles between 40 and 50 aircraft a year, has parked more planes without a buyer for their parts since the COVID-19 outbreak. Founder Mark Gregory expects most will eventually be dismantled.

Before the pandemic, planes arrived at Air Salvage with a buyer, reflecting healthy demand for coveted parts like engines.

Airlines seek viable used parts from retired aircraft for their younger planes that are due for heavy maintenance. That allowed airlines to avoid costly repairs and keep their aircraft flying.

GA Telesis, which counts Tokyo Century Corp [8439.T](#) as its largest shareholder, has seen airlines use spare parts from their grounded aircraft to put off maintenance at the company's repair business, chief executive Abdol Moabery said.

The pandemic, which is expected result in a 55% drop in 2020 passenger numbers, has prompted early retirements of older planes, including the grounding of B747 jets by British Airways, some of which are headed to Air Salvage.

Fewer twin-aisle planes flying internationally means less demand for their parts, with the exception of certain aircraft used to transport cargo.

Gregory said Air Salvage was approached by an aircraft leasing company about dismantling several A380s, but with only about 5% of the jumbo jets still active according to Naveo, demand is slim for their parts.

Airlines are looking for narrowbody parts, since around 64% of that single-aisle aircraft type are active, flying domestic routes. James Benfield, a UK partner with Baird Capital, expects increased demand for disassembly services for single-aisle B737 and A320 aircraft, after the private equity company acquired a disassembler in August.

While maintenance companies and new engine producers also deal in used materials, a parts surplus could weigh on their sales.

General Electric Co's [GE.N](#) CEO said during a July earnings call that the company is "well positioned to participate" in the industry trend for used serviceable material. GE Aviation makes engines, but also uses second-hand parts.

## BARGAIN HUNTERS

Aerocycle sees opportunity in plane retirements. The small aircraft recycler has hired a new business development executive to drive demand, as it looks to buy planes, CEO Ron Haber said.

"It's a calculated risk," Haber said. "We know what type of aircraft are going to be flying and still in high demand."

Airlines have avoided selling aircraft at losses, despite pressure from certain bargain-hunters.

"There's a lot of low-balling going on," Moabery said. "But those offers aren't being accepted yet."

Companies like Florida-based International Aircraft Associates (IAA) are watching in case airlines and lessors cut their losses by year's end and convert their parked planes for parts.

"If they do that, that's when people like us want to be ready," IAA President Mitch Weinberg said.

### [NSW buys Boeing 737 large air tanker for firefighting ...](#)


 <https://australianaviation.com.au/2019/05/nsw-buys-boeing-737-large-air-tanker-for-firefighting/>

Average payload of **737** is 20,000kgs less 15150 kgs for **fire fighting** fluid. Leaves 4850kgs for 72 pax +gear (67.5 kgs per pax) Definitely one or the other but not both.

 <https://simpleflying.com/nsw-fire-fighting-boeing-737/>

The plane deploying its **fire** depressant load. Photo: Coulson Aviation. Different **fire fighting** agencies can choose what 'configuration' ratio to have, be it mostly a tanker aircraft or a full transport for **fire**-fighters. The NSW government for example, has retained the ability to transport 72 passengers whilst carrying 15,150 litres of fluid.

### [Converted Boeing 737 joins wildfire fighting effort in ...](#)

 <https://www.bizjournals.com/seattle/news/2018/11/26/boeing-737-coulson-wildfire-water-bomber-australia.html>

The Coulson Aviation **737** Fireliner, a former Southwest Airlines passenger jet converted into a firefighting aircraft in the Pacific Northwest, deployed as a **water bomber** in New South Wales on ...

### [Are bigger water bombers the answer to Australia's ...](#)

 <https://www.abc.net.au/news/2019-11-15/are-bigger-water-bombers-the-answer-to-bushfire-woes/11705502>

The biggest firefighting aircraft in Australia at the moment is a Boeing **737 water bomber**, leased by the NSW Rural **Fire** Service (RFS) and available year-round — known as 'Gaia'.

### **[Boeing 737 used to fight Newcastle bushfires in ... - ABC News](#)**

<https://www.abc.net.au/news/2018-11-23/boeing-737-deployed-in-newcastle-to-fight-bushfire-world-first/10547636>

The Gaia aircraft is a passenger **737** converted to fight **fires** It is valued at \$7.3 million and can carry more than 15,000 litres of **fire** retardant It was used to fight **fires** for the first time in ...

### **[Modified Boeing 737 used to fight wildfire for first time ...](#)**

<https://www.bbc.com/news/world-australia-46312633>

The **fire-fighting** agency has nine other **water**-bombing aircraft, including one with a 45,000-litre capacity. However, spokesman Chris Garlick said the modified **737** was a "more versatile" option.

 <https://www.coulsonaviationusa.com/fleet>

We have six **737** FireLiners, each receiving 43,000+ technician hours to become fully compliant and operational. C-130 HERCULES The C-130 Hercules is a four-engine turboprop military transport aircraft designed and built by Lockheed Martin, and has been our leading attacker in firefighting theatres all around the world.

### **[TOP Largest Firefighting Planes - Water Bombers ...](#)**

 <https://www.youtube.com/watch?v=ySjos88GVRw>


TOP Largest Firefighting Planes - **Water Bombers** Compilation Help Us Subscribe :  
[https://www.youtube.com/channel/UCdlRqGz0Niw17Xvknt3O0cg?sub\\_confirmation=1](https://www.youtube.com/channel/UCdlRqGz0Niw17Xvknt3O0cg?sub_confirmation=1) C...

### **[These 19 Firefighting Aircraft Are Taking Care Of Business ...](#)**

 <https://www.boldmethod.com/blog/lists/2016/03/19-aerial-firefighting-aircraft/>

There's a wildfire just west of our office in Boulder, CO, and we've been watching several of these aircraft and helicopters flying overhead all week. 1) CL-215 Scooper. The Scooper was the first in a line of firefighting aircraft made by Canadair (acquired by Bombardier). And, it can get rid of more than 1,000 gallons of **water** in a hurry.

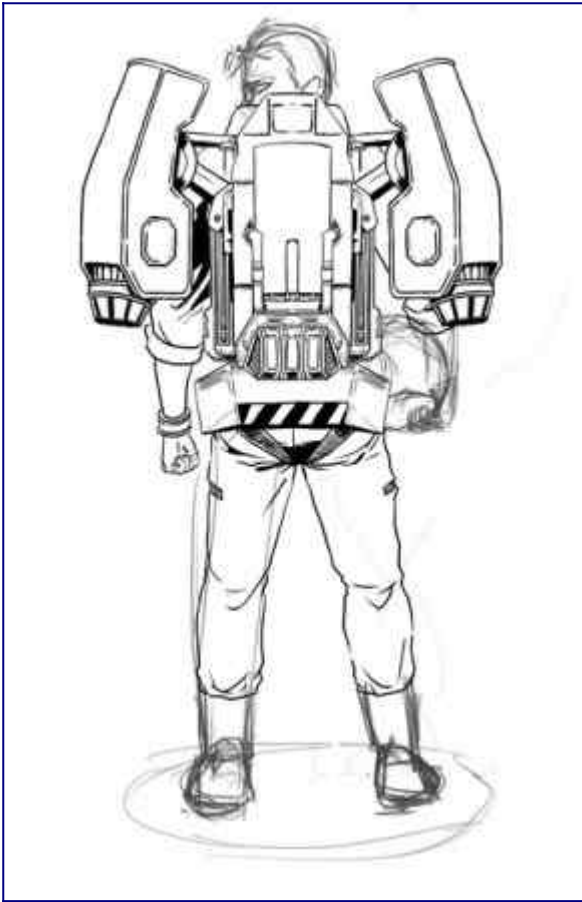
### **Aerial firefighting**

Aerial firefighting is the use of aircraft and other aerial resources to combat wildfires. The types of aircraft used include fixed-wing aircraft and helicopters. Smokejumpers and rappellers are also classified as aerial firefighters, delivered to the fire by parachute from a variety of fixed-wing aircraft, or rappelling from helicopters. Chemicals used to fight fires may include water, water enhancers such as foams and gels, and specially formulated fire retardants such as Phos-Chek.  [More at Wikipedia](#)

# THE PULSE PACK

Meet Scott's Pulse Pack (TM) Air Breathing Electrostatic Flight Pack

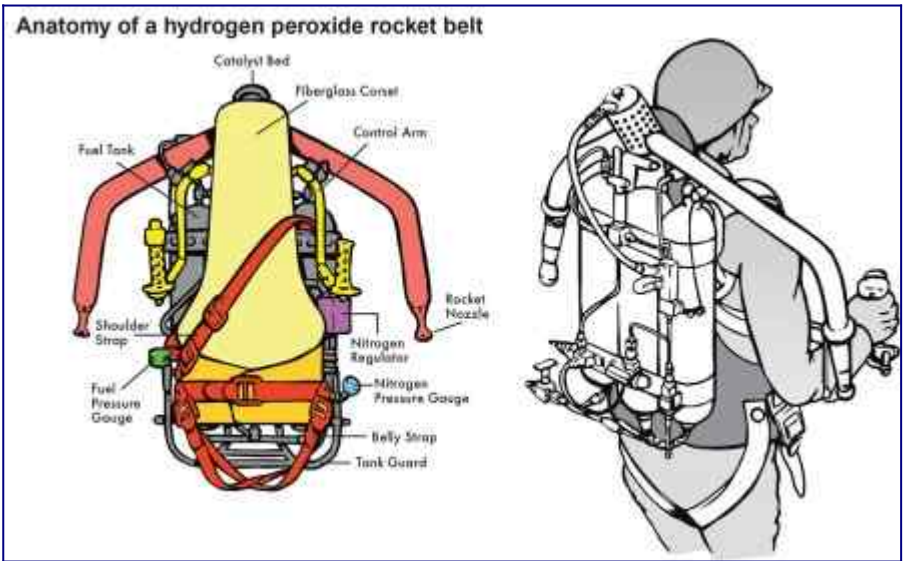









THE "OLD WAY" USED ROCKET ENGINES LIKE THIS BUT THEY ONLY RAN FOR A FEW MINUTES:



An older approach had two fatal flaws but the merits of the approach were good. Take a look:

## Jet propulsion by microwave air plasma in the atmosphere

AIP Advances **10**, 055002 (2020); <https://doi.org/10.1063/5.0005814>

[Dan Ye](#), [Jun Li](#), and  [Jau Tang<sup>a</sup>](#)

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### Abstract

We propose a prototype design of a propulsion thruster that utilizes air plasma induced by microwave ionization. Such a jet engine simply uses only air and electricity to produce high temperature and pressurized plasma for jet propulsion. We used a home-made device to measure the lifting force and jet pressure at various settings of microwave power and the air flow rate. We demonstrated that, given the same power consumption, its propulsion pressure is comparable to that of conventional airplane jet engines using fossil fuels. Therefore, such a carbon-emission free thruster could potentially be used as a jet thruster in the atmosphere.

Similar to solids, liquids, and gases, plasma is a normal state of matter. Plasma naturally arises due to the ionization of molecules at high temperatures (such as in the sun) or in high electric fields (such as in lightning). In the laboratory, plasma can be generated using an electric arc, microwave cavity, laser, fire flame, or discharging high-voltage needle. Plasma has wide applications in many areas, including metal processing,<sup>1,2</sup> crystal growth,<sup>3,4</sup> medical treatment,<sup>5-7</sup> food processing,<sup>8,9</sup> energy,<sup>10,11</sup> and environmental industries.<sup>12,13</sup> Plasma jet thrusters have also been used in aerospace applications for many years.<sup>14,15</sup> The jet thruster using xenon plasma in a spacecraft exerts only a tiny propulsion force and can only be used in outer space in the absence of air friction. Even though such a plasma engine

has a very small propulsion force, after months and years of constant acceleration, the spacecraft can ultimately reach a high speed. However, this type of an engine, like that of the NASA Dawn space probe,<sup>16</sup> is not useful in the atmosphere environment.<sup>17,18</sup> Recently, a research team from MIT demonstrated a plasma-powered glider that can operate in air by using a needle-discharge array to generate air plasma to power the flight. This team demonstrated a continuous flight time of 12 s and a flight distance of 55 m. However, this Tesla type of plasma thruster has a lifting force and jet pressure of only 6 N/kW and 3 N/m<sup>2</sup>, respectively.<sup>19</sup> It is very challenging for this approach to become feasible for use as a powerful engine for actual air transportation. In this report, we consider a microwave air plasma jet thruster using high-temperature and high-pressure plasma generated by a 2.45 GHz microwave ionization chamber for injected pressurized air. We propose a simple prototype plasma jet thruster that can generate approximately 10 N of thrust at 400 W using 0.5 l/s for the airflow, corresponding to the lifting force of 28 N/kW and a jet pressure of  $2.4 \times 10^4$  N/m<sup>2</sup>. At a higher microwave power or greater airflow, propulsion forces and jet pressures comparable to those of commercial airplane jet engines can be achieved.

Our experimental setup is shown in [Fig. 1](#) and includes a magnetron with the power of 1 kW at 2.45 GHz, a circulator, a flattened waveguide, an igniter, and a quartz tube. The magnetron is the microwave source, the circulator is used to absorb reflected microwaves, and a three-stub tuner is used to optimize the power inside the air ionization chamber. The length, width, and height of the waveguide are 600 mm, 90 mm, and 50 mm, respectively. The flattened part of the waveguide has a height of 25 mm. The flat area of the waveguide is designed to increase the electric field strength. The microwave generated by the magnetron passes through the circulator and the three-stub tuner and reaches the flattened waveguide. This flat part has a circular opening for the insertion of a quartz tube with an inner diameter of 24 mm, an outer diameter of 27 mm, and a length of 600 mm. The quartz tube passes vertically through the wall of the flattened waveguide tube and the central axis of the tube located at a quarter wavelength from the short end of the waveguide.<sup>20</sup> The igniter is used to ignite and generate a plasma jet. An industrial cooler is used to cool the circulator and the magnetron. We use an air compressor and an airflow meter to generate and condition the high-pressure air into the quartz tube. Air enters the quartz tube from the side, forming a vortex that keeps the plasma jet stable in the tube.<sup>21</sup> As shown in [Fig. 2](#), variation in the microwave power affects the length of the air microwave plasma jet. Our observation indicates that the length of the flame increased with increasing power. In addition, changes in the injected airflow also affect the flame length.

FIG. 1. Schematic diagram of a prototype microwave air plasma jet thruster. A flattened waveguide was used to increase the electric field strength of air ionization inside the air ionization chamber.

- [PPT](#)
- |
- [High-resolution](#)

FIG. 2. Images of the microwave air plasma jet at different power settings (in a unit of W). The length, temperature, and brightness of the flame increase with an increase in the microwave power.

- [PPT](#)
- |
- [High-resolution](#)

The flame temperature can reach higher than 1000 °C; a general-purpose barometer will not withstand such a high temperature and could not be used. Therefore, in this experiment, we devised a simple tool to measure the jet pressure of the hot plasma. We placed a hollow steel ball (117 g, outer diameter 75.5 mm) on top of the quartz tube, as shown in [Figs. 3\(a\)](#) and [3\(b\)](#) (Multimedia view). A small hole was drilled on the top of the ball with an opening for the insertion of much smaller steel beads to change the overall ball weight. If the plasma jet is sufficiently strong, it can cause the hollow steel ball to vibrate. In order to keep the steel ball stationary, small steel beads need to be added. We define the threshold weight as the minimum total weight (including the steel ball and small steel beads) that can make the steel ball keep still. We can calculate the threshold propulsion force from this critical weight. Then, based on the known area for the quartz tube cross section, the jet pressure can be determined. The jet propulsion force  $F$  is equal to the critical total weight  $M$  times the gravitational acceleration  $g$ , which is 9.8 N/kg. In the experiments, we used 400 W, 600 W, and 800 W for the microwave power, and 0.7 m<sup>3</sup>/h, 0.85 m<sup>3</sup>/h, 1 m<sup>3</sup>/h, 1.15 m<sup>3</sup>/h, 1.3 m<sup>3</sup>/h, and 1.45 m<sup>3</sup>/h for the airflow rate. Even in the absence of microwave power, the injected compressed air can provide some propulsion to the steel ball. Therefore, when calculating the net propulsion  $F_{net}$  generated purely by the plasma jet, it is necessary to subtract the  $F_0$  propulsion contribution that is present in the absence of microwave irradiation. Thus, the net propulsion force is given by

$$F_{net} = F - F_0 = (M - M_0)g.$$

(1)

$M_0$  is the critical steel ball weight obtained in the absence of the microwave irradiation. The overall pressure  $P$  generated by the air plasma jet is equal to  $F/\pi R^2$ , where  $R$  is the inner diameter of the quartz tube. Subtracting the contribution to the pressure generated purely by air injection, the net jet propulsion pressure is obtained as

$$P_{net} = (F - F_0)/\pi R^2.$$

(2)

FIG. 3. (a) Schematic diagram of a simple homemade heat-resistant device for the propulsion pressure measurements, consisting of a hollow steel ball on top of the quartz tube. The device has a small hole at the top for inserting smaller steel beads in order to adjust the threshold weight at which the ball starts to rattle due to the effect of the plasma jet. (b) The device used in the experiment, the point at which the hollow steel ball began to vibrate (Multimedia view: <https://doi.org/10.1063/5.0005814.1>)

[Download Original Video \(.3 MB\)](#)

- [High-resolution](#)

We measured the threshold weight at which the steel ball started to rattle to measure the corresponding jet propulsion force of the plasma jet under different microwave powers and airflow rates. [Figures 4\(a\)](#) and [4\(b\)](#) show the overall jet propulsion force including the contribution from the injected air with no microwave power, where the x-axis represents the power and flow rate. These data were linearly fitted with a slope  $m$  and an intercept  $c$ , indicating a linear increase with increasing power or airflow. [Figure 5](#) shows the net pressure generated by the plasma jet at various microwave power and airflow settings based on the area of the inner quartz tube. For example, at the power and airflow rate of 600 W and  $1.15 \text{ m}^3/\text{h}$ , respectively, the net jet pressure reaches  $1.6 \times 10^4 \text{ N/m}^2$  after the subtraction of the airflow component.

FIG. 4. (a) Threshold propulsion force at various air flow settings as a function of the microwave power (in a unit of W). Linear fits were obtained with  $m$  representing the slope and  $c$  representing the y-axis intercept.  $I$  represents the air flow rate (in a unit of  $\text{m}^3/\text{h}$ ). (b) Similar to (a), but with the x-axis representing the air flow rate.

- [PPT](#)
- |
- [High-resolution](#)

FIG. 5. (a) Net jet pressure (excluding the contribution from the injected air but with no microwave power) at various air flow settings as a function of the microwave power (in a unit of W). Linear fits were obtained with  $m$  representing the slope and  $c$  representing the y-axis intercept.  $I$  represents the air flow rate (in a unit of  $\text{m}^3/\text{h}$ ). (b) Similar to (a), but with the x-axis representing the air flow rate.

- [PPT](#)
- |
- [High-resolution](#)

The above experimental results proved that the microwave power and airflow have a significant influence on the plasma jet propulsion. At a constant airflow, higher microwave power makes the electric field inside the ionization chamber much stronger, leading to a more efficient ionization of the gas molecules. At higher microwave power and airflow, the temperature and density of the plasma increase, resulting in increased jet propulsion force and pressure.

In summary, we propose a prototype device that utilizes microwave air plasma for jet propulsion as a viable engine. To measure the propulsion pressure of very hot plasma (easily over  $1000 \text{ }^\circ\text{C}$ ) at temperatures where a conventional pressure meter can be damaged, we devised a technique based on

the use of a hollow steel ball with adjustable weight. The pressure was determined according to the threshold weight at which the ball started to rattle. Based on the threshold weight data, we have determined the plasma propulsion force and pressure as a function of microwave power and the air flow rate. For example, at the microwave power and air flow rate of 400 W and 1.45 m<sup>3</sup>/h, respectively, the overall jet propulsion force was approximately 11 N or 28 N/kW. Based on the area of the quartz tube opening, we estimated the total propulsion pressure to be  $2.4 \times 10^4$  N/m<sup>2</sup>. These values are comparable to those of a conventional jet engine of an airplane and are much higher than the values obtained for the airplane powered by ionic wind. The battery pack of a Tesla Model S electric car has 416 horsepower, or 310 kW equivalent. Assuming linear extrapolation, using such a power, our jet thruster can generate a force of approximately 8500 N. Therefore, using a high-power microwave source or an array of multiple microwave sources in parallel operation, with materials resistant to high temperature and pressure, it is possible to construct a high-performance microwave air plasma jet thruster in the future to avoid carbon emissions and global warming that arise due to fossil fuel combustion. When high-power microwave is generated using microwave sources arranged in parallel, higher heat is also generated. At this time, the method of measuring the propulsive force with a steel ball is no longer applicable. How to deal with the impact of high temperature on equipment and how to evaluate the driving force are challenges that require further research.

#### **DATA AVAILABILITY**

The data that support the findings of this study are available within the article.

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#### **REFERENCES**

1. R. Bini, B. M. Colosimo, A. E. Kutlu, and M. Monno, "Experimental study of the features of the kerf generated by a 200A high tolerance plasma arc cutting system," *J. Mater. Process. Technol.* **196**, 345–355 (2008). <https://doi.org/10.1016/j.jmatprotec.2007.05.061>, [Google ScholarCrossref](#)
2. M. A. Hussein, C. Suryanarayana, and N. Al-Aqeeli, "Fabrication of nano-grained Ti–Nb–Zr biomaterials using spark plasma sintering," *Mater. Des.* **87**, 693–700 (2015). <https://doi.org/10.1016/j.matdes.2015.08.082>, [Google ScholarCrossref](#)
3. A. Kromka, O. Babchenko, T. Izak, K. Hruska, and B. Rezek, "Linear antenna microwave plasma CVD deposition of diamond films over large areas," *Vacuum* **86**, 776–779 (2012). <https://doi.org/10.1016/j.vacuum.2011.07.008>, [Google ScholarCrossref](#)
4. A. P. Bolshakov, V. G. Ralchenko, V. Y. Yurov, A. F. Popovich, I. A. Antonova, A. A. Khomich, E. E. Ashkinazi, S. G. Ryzhkov, A. V. Vlasov, and A. V. Khomich, "High-rate growth of single crystal diamond in microwave plasma in CH<sub>4</sub>/H<sub>2</sub> and CH<sub>4</sub>/H<sub>2</sub>/Ar gas mixtures in presence of intensive soot formation," *Diam. Relat. Mater.* **62**, 49–57 (2016). <https://doi.org/10.1016/j.diamond.2015.12.001>, [Google ScholarCrossref](#)

5. M. Keidar, R. Walk, A. Shashurin, P. Srinivasan, A. Sandler, S. Dasgupta, R. Ravi, R. Guerrero-Preston, and B. Trink, "Cold plasma selectivity and the possibility of a paradigm shift in cancer therapy," *Br. J. Cancer* **105**, 1295–1301 (2011). <https://doi.org/10.1038/bjc.2011.386>, [Google ScholarCrossref](#)
6. G. Isbary, G. Morfill, H. U. Schmidt, M. Georgi, K. Ramrath, J. Heinlin, S. Karrer, M. Landthaler, T. Shimizu, B. Steffes, W. Bunk, R. Monetti, J. L. Zimmermann, R. Pompl, and W. Stolz, "A first prospective randomized controlled trial to decrease bacterial load using cold atmospheric argon plasma on chronic wounds in patients," *Br. J. Dermatol.* **163**, 78–82 (2010). <https://doi.org/10.1111/j.1365-2133.2010.09744.x>, [Google ScholarCrossref](#)
7. T. Shimizu, B. Steffes, R. Pompl, F. Jamitzky, W. Bunk, K. Ramrath, M. Georgi, W. Stolz, H.-U. Schmidt, T. Urayama, S. Fujii, and G. E. Morfill, "Characterization of microwave plasma torch for decontamination," *Plasma Process Polym.* **5**, 577–582 (2008). <https://doi.org/10.1002/ppap.200800021>, [Google ScholarCrossref](#)
8. N. N. Misra, S. Patil, T. Moiseev, P. Bourke, J. P. Mosnier, K. M. Keener, and P. J. Cullen, "In-package atmospheric pressure cold plasma treatment of strawberries," *J. Food Eng.* **125**, 131–138 (2014). <https://doi.org/10.1016/j.jfoodeng.2013.10.023>, [Google ScholarCrossref](#)
9. P. Basaran, N. Basaran-Akgul, and L. Oksuz, "Elimination of *Aspergillus parasiticus* from nut surface with low pressure cold plasma (LPCP) treatment," *Food Microbiol.* **25**, 626–632 (2008). <https://doi.org/10.1016/j.fm.2007.12.005>, [Google ScholarCrossref](#)
10. S. Nomura, H. Toyota, M. Tawara, H. Yamashita, and K. Matsumoto, "Fuel gas production by microwave plasma in liquid," *Appl. Phys. Lett.* **88**, 231502 (2006). <https://doi.org/10.1063/1.2210448>, [Google ScholarScitation](#), [ISI](#)
11. R. Miotk, B. Hrycak, D. Czyilkowski, M. Dors, M. Jasinski, and J. Mizeraczyk, "Liquid fuel reforming using microwave plasma at atmospheric pressure," *Plasma Sources Sci. Technol.* **25**, 035022 (2016). <https://doi.org/10.1088/0963-0252/25/3/035022>, [Google ScholarCrossref](#)
12. M. Tichonovas, E. Krugly, V. Racys, R. Hippler, V. Kauneliene, I. Stasiulaitiene, and D. Martuzevicius, "Degradation of various textile dyes as wastewater pollutants under dielectric barrier discharge plasma treatment," *Chem. Eng. J.* **229**, 9–19 (2013). <https://doi.org/10.1016/j.cej.2013.05.095>, [Google ScholarCrossref](#)
13. M. Hlina, M. Hrabovsky, T. Kavka, and M. Konrad, "Production of high quality syngas from argon/water plasma gasification of biomass and waste," *Waste Manag.* **34**, 63–66 (2014). <https://doi.org/10.1016/j.wasman.2013.09.018>, [Google ScholarCrossref](#)
14. R. L. Burton and P. J. Turchi, "Pulsed plasma thruster," *J. Propuls. Power* **14**, 716–735 (1998). <https://doi.org/10.2514/2.5334>, [Google ScholarCrossref](#)
15. O. V. Batishchev, "Minihelicon plasma thruster," *IEEE Trans. Plasma Sci.* **37**, 1563–1571 (2009). <https://doi.org/10.1109/tps.2009.2023990>, [Google ScholarCrossref](#)
16. J. R. Brophy, M. G. Marcucci, G. B. Ganapathial, C. E. Garner, M. D. Henry, B. Nakazono, and D. Noon, "The ion propulsion system for Dawn," in *AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit*, 2003. [Google Scholar](#)

- 17.17. N. Monrolin, F. Plouraboué, and O. Praud, “Electrohydrodynamic thrust for in-atmosphere propulsion,” *AIAA J.* **55**, 4296–4305 (2017). <https://doi.org/10.2514/1.j055928>, [Google ScholarCrossref](#)
- 18.18. C. K. Gilmore and S. R. H. Barrett, “Electrohydrodynamic thrust density using positive corona-induced ionic winds for in-atmosphere propulsion,” *Proc. Math. Phys. Eng. Sci.* **471**, 20140912 (2015). <https://doi.org/10.1098/rspa.2014.0912>, [Google ScholarCrossref](#)
- 19.19. H. Xu, Y. He, K. L. Strobel, C. K. Gilmore, S. P. Kelley, C. C. Hennick, T. Sebastian, M. R. Woolston, D. J. Perreault, and S. R. H. Barrett, “Flight of an aeroplane with solid-state propulsion,” *Nature* **563**, 532–535 (2018). <https://doi.org/10.1038/s41586-018-0707-9>, [Google ScholarCrossref](#)
- 20.20. H. S. Uhm, Y. C. Hong, and D. H. Shin, “A microwave plasma torch and its applications,” *Plasma Sources Sci. Technol.* **15**, S26–S34 (2006). <https://doi.org/10.1088/0963-0252/15/2/s04>, [Google ScholarCrossref](#)
- 21.21. H. S. Uhm, J. H. Kim, and Y. C. Hong, “Disintegration of water molecules in a steam-plasma torch powered by microwaves,” *Phys. Plasmas* **14**, 073502 (2007). <https://doi.org/10.1063/1.2749225>, [Google ScholarScitation](#), [ISI](#)
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# CYBERCHAIR INTERACTIVE DIGITAL FURNITURE



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**CYBERCHAIR - MAXIMUM.** The best current VR system on Earth without wearing cumbersome crap.

**Features:**

- 8K monitor
- Motion chair
- Infinite field-of-view
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- Like looking out of a real cockpit with 100% perfect resolution.

Play in a black-out room OR add an Interior cockpit wall projected on your wall, or screen, behind the seat so you have surround set effect using digital sets available from UNITY and UNREAL today! 100% suspension-of-disbelief. 100% vertigo inducing. Prices start at \$14,400.00 and increase per features added on a build-to-order basis.

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Also available: A strut-kit to build a DIY mini-version at home similar to these:

[SimXperience's universal seat kit](#) and [150mm SCN5 actuators](#). The base is 2100mm x 780mm and all in [40 series profile](#).

Old rig: <http://www.isrtv.com/forums/topic/14202-8020-rig/>

The final result uses numerous ideas from various other rig designs on this forum and others.

- Robert Reidel of [www.konsolentracer.de](http://www.konsolentracer.de)
- Henning Piez/Ensonic that created [this amazing rig](#)
- Tino Goergens and [his rig](#).
- Faro06's [rig](#).
- [Anonymous rig](#)

Scott's original CyberChair. A Worlds First. Scott received the first issued patents, in history, on this system. Scott was the creator Of The First Interactive Virtual Reality Furniture As Seen On The National TV Show "THE NEXT STEP" and in Merrill Lynch's network TV commercial.





## MESH P2P NETWORKING

You Wanted A New Internet? We Built You A New One. What Are You Going To Do With It?

At sites like: <http://p2p-internet.weebly.com> and thousands more, you can see that many groups have built you a new non-spying, non-evil, non-commercial non-Facebook/Google-controlled internet. But you aren't using it?

Why not!?

Here are the reasons why:

1. You don't know you can and other people don't know they can. Mainstream media refuses to cover alternative internet solutions because mainstream media bosses want all information under their control.
2. Congress won't fund or promote it.
3. Government agencies won't fund or support it and regulate against it because political campaign financiers tell them to blockade it.
4. Mainstream retail outlets won't carry the products to do your ow internet because it conflicts with mainstream media interests.
5. Every ISP hates them because they elimnate the need for ISP's.

There is already a new internet. It works perfectly and offers far less problems than the current internet.

You don't need to wait for somebody to build it, or tell you when you can use it. It is here.

Forbes reports on [ThreeFold](#), an ambitious new "long-term project to rewire the internet in the image of its first incarnation: decentralized, unowned, accessible, free." *"We have [18,000 CPU cores and 90 million gigabytes](#), which is a lot of capacity," founder Kristof de Spiegeleer told me recently on the [TechFirst podcast](#). "It's probably between five and ten times more than all of the capacity of all the blockchain projects together..."*

*"It's a movement," de Spiegeleer says about ThreeFold. "It's where we invite a lot of people to...basically help us to build a new internet. Now it sounds a little bit weird building a new internet. We're not trying to replace the cables... what we need help with is that we get more compute and storage capacity close to us." That would be a fundamentally different kind of internet: one we all*

*collectively own rather than just one we all just use.*

*It requires a lot of different technology for backups and storage, for which ThreeFold is building a variety of related technologies: peer-to-peer technology to create the grid in the first place; storage, compute, and network technologies to enable distributed applications; and a self-healing layer bridging people and applications. Oh, and yes. There is a blockchain component: smart contracts for utilizing the grid and keeping a record of activities. "Farmers" (read: all of us) provide capacity and get micropayments for usage.*

*So instead of a Bitcoin scenario where some of the fastest computers in the world waste country-scale amounts of electricity doing arcane math to create an imaginary currency with dubious value (apologies, are my biases showing?) you have people providing actual tangible services for others in exchange for some degree of cryptocurrency reward. Which, in my (very) humble opinion, offers a lot more social utility...*

*ThreeFold and partners have invested more than \$40 million in make it happen, de Spiegeleer says, and there are more than 30 partners working on the project or onboarding shortly. "So it's happening," he says.*

In [the interview](#), de Spiegeleer points out 80% of current internet capacity is owned by less than 20 companies, arguing on the podcast that "[It really needs to be something like electricity](#)."

"It needs to be everywhere and everyone needs to have access to it. It needs to be cost effective, it needs to be reliable, it needs to be independent..."

The Promise of a New Internet

It's not too late to rebuild this thing for the people.

[Adrienne LaFrance](#)

People tend to talk about the Internet the way they talk about democracy—optimistically, and in terms that describe how it ought to be rather than how it actually is.

This idealism is what buoys much of the network neutrality debate, and yet many of what are considered to be the core issues at stake—like payment for tiered access, for instance—have [already been decided](#). For years, Internet advocates have been asking what regulatory measures might help save the open, innovation-friendly Internet.

But increasingly, another question comes up: What if there were a technical solution instead of a regulatory one? What if the core architecture of how people connect could make an end run on the centralization of services that has come to define the modern net?

It's a question that reflects some of the Internet's deepest cultural values, and the idea that this network—this place where you are right now—should distribute power to people. In the post-NSA, post-

Internet-access-oligopoly world, more and more people are thinking this way, and many of them are actually doing something about it.

Among them, there is a technology that's become a kind of shorthand code for a whole set of beliefs about the future of the Internet: "mesh networking." These words have become a way to say that you believe in a different, freer Internet.

Mesh networks promise the things we already expect but don't always get from the Internet: they're fast, reliable, and relatively inexpensive. But before we get into the particulars of what this alternate Internet might look like, a quick refresher on how the one we have works:

Your computer is connected to an Internet service provider like Comcast, which sends packets of your data (the binary stuff of emails, tweets, Facebook status updates, web addresses, etc.) back and forth across the network. The packets that move across the Internet encounter a series of checkpoints including routers and servers along the paths your data travels. You can't control these paths or these checkpoints, so your data is subject to all kinds of security threats like hackers and snooping NSA agents.

So the idea behind mesh networking is to skip those checkpoints and cut out the middleman service provider whenever possible. This can work when each device in a network connects to the other devices, rather than each device connecting to the ISP.

It helps to visualize it. The image on the left shows a network built around a centralized hub, like the Internet as we know it. The image on the right is what a mesh network looks like:

### [Commotion](#)

Think of it this way: With a mesh network, each device is like a mini cell phone tower. So instead of having multiple devices rely on a single, centralized hub; multiple devices rely on one another. And with information ricocheting across the network more unpredictably between those devices, the network as a whole is harder to take out.

"You end up with a network that is much harder to disrupt," said Stanislav Shalunov, co-founder of Open Garden, a startup that develops peer-to-peer and mesh networking apps. "There is no single point where you can unplug and expect that there will be a large impact."

Plus, a mesh network forms itself based on an algorithm—which again reduces opportunities for disruption. "There is no human intervention involved, even from the users of the devices and certainly not from any administrative entity that needs to arrange the topology of this network or how people are connected or how the network is used," Shalunov told me. "It is entirely up to the people participating and the software that runs this network to make everything work."

Your regular old smartphone already has the power to connect to other smartphones without being hooked up to the Internet through a traditional carrier. All you need is the radio frequency of your phone's bluetooth connection, and you can send and receive data over a mesh network from anyone in



relatively close proximity—say, a person in the same neighborhood or office building. (Mesh networks can also be built around cheap wireless routers or roof antennae.)

"If you are trying to communicate between people who are nearby, you may be entirely off-grid and build a mesh of connections, say, within a stadium or a city square," Shalunov said. "In the same way that packets on the Internet go from node to node and reach its ultimate destination, it's the same thing but on a smaller scale. Instead, our packets go through other people's devices and reach their destination."

For now, there's no nationwide device-to-device mesh network. So if you want to communicate with someone across the country, someone—but not everyone—in the mesh network will need to be connected to the Internet through a traditional provider. That's true locally, too, if you want the mesh network hooked up to the rest of the Internet. Mesh networks are more reliable in a crowd because devices can rely on one another—rather than each device trying to ping the same overburdened cell phone tower. "The important thing is we can use any of the Internet connections that anybody in that mesh network is connected to," Shalunov said. "So maybe you are connected to AT&T and I am connected to Comcast and my phone is on Verizon and there is a Sprint subscriber nearby. If *any* of these will let the traffic through, all of it will get through."

\* \* \*

Mesh networks have been around, at least theoretically, for at least as long as the Internet has existed.

"The original vision of the Internet was in fact a mesh," said [Michael Liebhold](#), a fellow at the Institute for the Future. "Unfortunately, what has happened over the 20 or 30 years we've been working on the Internet, all the traffic ends up handled by a very small number of network carriers or cloud or service operators. There's a very small number of connection points... but they're highly vulnerable and they're being attacked from all directions now."

For Liebhold, who uses a mesh network to connect to the Internet at home, mesh networking isn't a way to "reinvent the web," but the [natural next step](#) toward reclaiming the kind of Internet people want. It's a way of "connecting everybody in the world and bypassing the original Internet, which is struggling in governance, cyber crime, data mining, pervasive passive surveillance, and massive hacks."

And with smartphone ownership climbing—more than half of Americans now have smartphones, [according to Pew Research Center's latest numbers](#)—these kinds of networks are easier than ever to roll out. One of the world's best known mesh networks is in Athens, where some 2,000 residents are connected via a mesh of rooftop antennae called the [Athens Wireless Metropolitan Network](#). (It's faster than your typical speedy home internet connection in the United States, delivering about 150 Mbs of data per second, [according to Mother Jones](#).)

[A mesh network in Brooklyn](#) got national attention when it remained functional during Hurricane Sandy, which knocked out regular Internet and cell service in the area. Kansas City has the KC Freedom Network. Detroit has DetroitCONNECTED.

It makes sense that mesh networking seems to be eking its way into the mainstream in the United States at a time when the enormous scope of data mining and government surveillance is becoming more clear. Many advocates for mesh networking talk about an Internet that's by and for the people, and the importance of being able to go online without being followed. There's some irony in the timing of all of this, too. The United States government has spent millions of dollars on the creation of shadow mesh networks—which are as easy to set up as distributing cheap wireless routers—to help people in other countries get around the Internet infrastructure of their repressive governments, [according to \*The New York Times\*](#).

In other words, while the NSA collects information about American citizens, the State Department is helping citizens in other countries evade surveillance by their governments. Here's how Ben Scott, a former State Department official, put it in [a conversation with \*The New York Times\*](#) earlier this year: “It is in my mind one of the great, unreported ironies of the first Obama administration.”

Back in the States, mesh networking is emerging as something of a novelty. In most places, such networks are seen more as experiments than necessary infrastructure. The app Firechat, for instance, is a chat client that runs on a combination of mesh networking and wifi. It's marketed as a way stay in touch with people in close proximity when you don't have cell service—like communicating with a friend two tents over while you're on a camping trip.

Chats are open to anyone nearby, though when I connect to Firechat in Washington, D.C., there's not much going on. (Along with topics-based threads like "Football," and "Video Games," there is also an "Everyone" chat which connects you to people using Firechat all over the world.) Here's an example of the kind of conversation going on in Firechat's football thread:

It has the feeling of early AOL chatrooms from the mid-1990s—a bit haphazard, anonymous, random. That's not a bad thing—the opportunity to chat with strangers is what appeals to some Firechat users, they told me—but it's a good reminder that mesh networking has a long, long way to go if it is indeed to become a viable alternative for the current infrastructure of the Internet. Even many of the people who understand mesh networking see it as a diversion, a complement to the "real Internet." And that's the thing about mesh networks: They're really only as good as the people who are willing to join them. And you need people for the network to function.

This is why groups like Commotion and The Free Network Foundation distribute software and information to teach people about mesh networking. [From the foundation's website](#): "This is not going to happen overnight: it will be gradual, and from the inside. It is already happening, and we view its continuation and evolution as inevitable."

Elsewhere, people are trying to incentivize the switch to mesh. The mesh networking protocol Open Libernet says it was inspired by Bitcoin to figure out a way to make people feel like they get something in exchange for using the network. "The concept is simple," Open Libernet [explains on its site](#), "the more traffic you help route efficiently, the more traffic you earn for your own consumption. This serves to limit abuse, encourage the community to actively expand and maintain the network, and persuade

people to join... And naturally, traffic can be earned, transferred, donated or sold, making it a valuable commodity, akin to a currency."

Advocates for mesh networking maintain it's only a matter of time before mesh infrastructure expands beyond niche communities. "They are inevitable, unstoppable, unbreakable," Shalunov told me. "We all have the power to change the future of the Internet. It is happening now."

Mesh networks also reflect the idea that maybe the next big Internet revolution won't be one thing. The infrastructure of a mesh network is, in a sense, a physical manifestation of the fragmented nature of the Internet as we know it.

"This idea of this great unifying internet is a little bit of an early miss because I think it's going to continue to fragment in many, many ways," said the Institute for the Future's Liebholt. "The actual governance of the Internet is in wild turmoil right now. There's turmoil over who should govern then Internet and how—the chaotic management of this thing. So, meanwhile, let's pass messages around the classroom without the teacher getting them."

### **[Goodbye to the Old Internet: Interference by Governments Is ...](https://israelpalestineneews.org/goodbye-to-the-internet-interference-by-governments-is-already-here/)**

**<https://israelpalestineneews.org/goodbye-to-the-internet-interference-by-governments-is-already-here/>**

**The** annual Transparency Report reveals that government requests to remove information from Google have increased enormously, with the Israeli and the United States governments "leading the pack." In the wake of the **New** Zealand massacre and other serious incidents, some are calling for more policing of the **internet**. Philip Girdali argues that US media is **already** over-regulated, and the ...

### **[Why Mesh Networks Are the Future of Free Internet Access ...](https://fee.org/articles/why-mesh-networks-are-the-future-of-free-internet-access/)**

**<https://fee.org/articles/why-mesh-networks-are-the-future-of-free-internet-access/>**

Unlike the "normal" **internet**, which is dependent on a select few carriers like Verizon and AT&T for access, **mesh networks** do not rely on a single access point to relay an **internet** connection. Instead, **mesh networks** are the culmination of hundreds (or even thousands) of individual nodes that directly connect with each other.

### **[The Best Wi-Fi Mesh Network Systems](https://www.pcmag.com/picks/the-best-wi-fi-mesh-network-systems)**

**<https://www.pcmag.com/picks/the-best-wi-fi-mesh-network-systems>**

The Best Wi-Fi **Mesh Network** Systems for 2020. Now that working from home is just as important as gaming and streaming, defeating Wi-Fi dead zones is more important than ever.

### **[How to Set Up a Wi-Fi Mesh Network | PCMag](https://www.pcmag.com/how-to/how-to-set-up-a-wi-fi-mesh-network)**

**<https://www.pcmag.com/how-to/how-to-set-up-a-wi-fi-mesh-network>**

How to Set Up a Wi-Fi **Mesh Network**. ... These systems usually come with **free** mobile apps that make it easy to install and manage the **network** using a phone or tablet, and since all of the nodes use ...

### [What's a 'mesh network' and how do they work?](#)

<https://mashable.com/2018/01/09/mesh-networks-provide-alternative-internet-connection/>

The repeal of Obama-era net neutrality laws has folks looking for ways to connect to the **internet** other than relying on the nation's powerful service providers.. One of these options is "**mesh networks**

### [8 Best Wi-Fi Mesh Network System for Insane Speed](#)

<https://www.omnicoreagency.com/best-wifi-mesh-network-systems/>

Best Wi-Fi **Mesh Network** System Under \$200 1. TP-Link Deco M5 Whole-Home Wi-Fi System. It's always nice to have multiple options to fit your budget, and the TP-Link Deco M5 Wi-Fi System provides an alternative to Luma Home WiFi for a comparable price. The Deco M5 Wi-Fi System can help you say goodbye to buffering and put an end to those nasty dead zones.

### [The 8 Best Mesh Wi-Fi Network Systems](#)

<https://www.lifewire.com/best-mesh-wi-fi-network-systems-4139748>

**Mesh** Wi-Fi systems tend to be a bit pricier than more traditional long-range routers, but you're getting what you pay for in most cases; the higher price tag is easily justified by the fact that you'll get unrivaled performance without the need to fiddle with the kind of settings that require advanced experience with computer networking. Many of the best **mesh** Wi-Fi **network** systems can have ...

### [Build Your Own Internet with Mobile Mesh Networking | MIT ...](#)

<https://www.technologyreview.com/2013/07/09/15717/build-your-own-internet-with-mobile-mesh-networking/>

The **networks** offer **free Internet** access by extending the reach of **free** connections offered by community centers; they also provide Web services and apps that function only within the local **mesh**.

### [6 Apps To Chat And Text With No Internet Connection Via ...](#)

<https://www.geckoandfly.com/22562/chat-without-internet-connection-mesh-network/>

The WiFi **mesh** mode requires root and isn't guaranteed to work, works best in AP mode (both connected to the same WiFi **network**, no **internet** connection required or even acknowledged) or if your device is already connected to an existing **mesh network** by another means.

### [What Are Mesh Wi-Fi Systems, and How Do They Work?](#)

<https://www.howtogeek.com/290418/what-are-mesh-wi-fi-systems-and-how-do-they-work/>

However, a **mesh** Wi-Fi **network** still acts as a single **network**, so your devices will switch between **mesh** units automatically. That said, some Wi-Fi extenders can do this as well (like the D-Link DAP-

1520 linked above), but they still have a glaring downside: Since they use Wi-Fi to communicate with your router and your devices, it adds more ...

### [Why Mesh Networks Are the Future of Free Internet Access ...](#)

<https://tennesseestar.com/2018/10/13/why-mesh-networks-are-the-future-of-free-internet-access/>

**Mesh networks** do not rely on a single access point to relay an **internet** connection. One need look no further than the **internet** outages caused by hurricanes Sandy and Harvey or the national **internet** shutdown in Egypt for a vivid illustration of the dangers that come from a **network** with a single point of failure.

### [The Best Wi-Fi Mesh Network Systems](#)

<https://uk.pcmag.com/wireless-networking/87178/the-best-wi-fi-mesh-network-systems>

Not all Wi-Fi systems use **mesh** networking, however; some use a dedicated radio band to communicate with the router and with each other. As with **mesh**, the dedicated band **frees** up the standard-use 2 ...

### [5 Best Mesh WiFi Systems](#)

<https://bestreviews.com/best-mesh-wifi-systems>

**Mesh** networking technology takes a more flexible approach to WiFi: each **mesh** WiFi system includes multiple identical nodes that you place in key locations, with one attached to your modem. Then, when you connect to the **internet**, the nodes work together to send the data to the one you're closest to.

### [NYC Mesh](#)

<https://www.nycmesh.net>

You can help by joining our community **network** to get online, volunteering to connect neighbors or grow the **network**, and donating to improve our community infrastructure and ensure access for all. NYC **Mesh** is a neutral **network** and we do not monitor, collect, store or block any user data or content.

### [Best Mesh Wi-Fi: Mesh Routers for the Strongest ... - IGN](#)

<https://www.ign.com/articles/the-best-mesh-wi-fi-systems>

Wi-Fi Technology: Dual-Band IEEE 802.11ac (Wi-Fi 5) Frequency: 2.4GHz, 5GHz Signal Rate: 300Mbps (2.4GHz), 867Mbps (5GHz) Consumer **mesh** is somewhat new, but multi-point Wi-Fi **networks** have been ...

### [Wireless mesh networks explained | PCWorld](#)

<https://www.pcworld.com/article/3212444/mesh-network-explained.html>

**Mesh networks** have become the best way to set up a new **network** that spans more than a single, standalone Wi-Fi gateway can manage—or to overhaul an existing inadequate or outdated one.

## [7 Best Offline Messaging Apps for Android and iPhone](#)

<https://beebom.com/best-offline-messaging-apps-run-without-internet/>

7 best offline messaging apps that run without **internet** using Bluetooth and WiFi peer-to-peer **mesh network** to send text, image, and audio messages.

## [What Are Mesh Networks and Are They a Viable Internet ...](#)

<https://highspeedexperts.com/techie-corner/what-are-mesh-networks/>

**Mesh networks** essentially connect devices in an **Internet**-like fashion without the need for local "trunk" connections from the likes of Comcast and AT&T. Think of it as a "local **Internet**." Image via the Community Technology Field guide

## [Best Wi-Fi Mesh-Networking Kits](#)

<https://www.nytimes.com/wirecutter/reviews/best-wi-fi-mesh-networking-kits/>

It connects your **mesh network** to your home's **Internet** (via an Ethernet connection to a cable modem or the gateway router). In a **mesh** kit, the router or base unit may look identical to the other ...

## [Mesh networking - Wikipedia](#)

[https://en.wikipedia.org/wiki/Mesh\\_networking](https://en.wikipedia.org/wiki/Mesh_networking)

A **mesh network** (or simply meshnet) is a local **network** topology in which the infrastructure nodes (i.e. bridges, switches, and other infrastructure devices) connect directly, dynamically and non-hierarchically to as many other nodes as possible and cooperate with one another to efficiently route data from/to clients. This lack of dependency on one node allows for every node to participate in ...

## [How Community-Owned Wi-Fi Changes the Game ... - NationSwell](#)

<https://nationswell.com/wi-fi-connects-poor-neighborhoods/>

According to a report released last year, over 1.6 million households in New York City lack basic broadband **internet**. The only costs for accessing the **internet** via a **mesh network** is the equipment — a rooftop router ranges from \$60 to \$100 — and upkeep, which is done by volunteers in some cases.

*“...my work on with United Nations-related global democracy-effort refugee support programs led to one novel networking system. I designed and managed the program known as “**DEMOCRI-C**” (tm), which was first distributed by Apple Computer™ and the first community App ever "process-accelerated" by Apple. I was originally called upon to design the effort for the Japanese Tsunami disaster, it has become one of the key tools of the so-called "Arab Spring", "Russian Spring", "African Spring" and related major refugee movements. Steve Jobs, who contacted me by phone, personally, intervened in helping to accelerate and approve the project (in the fastest App cycle in the history of Apple Computer) so that lives could be saved as soon as possible. The App was available on the Apple App Store for the general public and is bulk shipped to verified groups in crisis regions at no charge with various special modules.*

*I ran the design, produced the patents, directed the build, and managed the delivery and the post-delivery optimizations of all of the crisis and emergency multiple unique voice, media and data delivery software. The U.S. patent office has issued me multiple patents, and I hold decades-old time-stamped filings by myself, on peer-to-peer mesh communications. There are White House letters, on White House letterhead, posted from Vice President Al Gore commending me on the effort and acknowledging the early mesh and peer-to-peer network created by me and my team*

*My efforts in community building have always been part of my career but were accelerated when I provided support and rescue resources for the Dec. 26, 2004 Asian Tsunami as it caused me to become more deeply aligned with UN, UNESCO & Red Cross resources. I was featured in a TV segment relative to my promotion of rapid-deployment housing and communications for the disaster.*

*In August of 2005, Hurricane Katrina devastated New Orleans and I was asked to support pet rescues in the aftermath. In that effort, I experienced the fact that the first resource to be destroyed and the resource most needed was still: communications. This caused me to increase my efforts towards optimized emergency peer-to-peer mesh network systems. When the Mar. 11, 2011 Japanese Tsunami struck, I was called into service again, by numerous coalitions and community groups and delivered the software, which was already being deployed in Tunisia, to create instant communications resources where the Tsunami had destroyed communications.*

*At the same time as the Japanese Tsunami crisis, the evolving democratic revolution in Tunisia went into full swing. I had been asked by numerous coalitions and community groups to deliver the program as a solution for the public safety when the phone systems were cut off in a number of countries. Middle East countries followed Tunisia on the road to democracy and the trend continues globally.*

*The software, a major version of which is now shipped as the App: DEMOCRI-C, was passed, by numerous coalitions and community groups, from country to country and crisis-region to crisis-region. The team I was leading focused on the mission of providing a global effort to deploy mesh Internet and mobile phone systems that the coalitions of any community can use to counter repression and emergency situations that may silence them by censoring or shutting down telecommunications networks.*

*I used coalition input to design the Democri-C project to be quickly set up to allow wireless communication over a wide area with a link to the global Internet. The Democri-C Team technology ranges in scale, cost and sophistication; to create an independent cell phone network, globally, using towers, or devices, inside every country which was intended to offset "the bad-guys" ability to shut down the official services, seemingly at will.*

*In 2011, the State Department announced funding for a clone project, to develop technology to lower barriers for building distributed communications networks after The Democri-C team showcased the technology to interested parties. Over \$100M has been invested in this regime change communications technology and this technology is now moving to the general public in the new Apple and Android phones and their software. Multiple democratic governments are now working at a feverish pace to deliver this peer-to-peer mesh public network to every country on Earth. This effort has now been reported in numerous mainstream media.*

*Near the beginning of this effort, I was presented in a photograph with a "Thumbs-up" hug with the chief financial advisor to the White House, a former senior Pentagon executive and the Secretary of State.*

*As a result of my leadership: Many lives were saved. A vast number of organizations and individuals have signed on to networked social democracy programs. Equipment was able to be deployed to locations that might not have been known of as need-zones. The technology has been emulated by many governments and is now one of the most extensive covert networks in the world with over \$400 million of investment, and rising. One of the applications I produced is now one of the leading applications for disaster and crisis communications, in the world, on the Apple App store and in direct distribution. The program was commended with a Microsoft Windows Phone Development Partnership, An Apple App Developership, a Microsoft BizSpark grant, An Google Android Developer agreement.”*



# STATE-OF-THE-ART CONSTRUCTION TECHNOLOGIES

Scott was the creator and founder of many modern construction programs such as: “Clever Homes” and “Green Hill Program” as City, State, Federal, WHOIS, NDA, contract and other filings show. After spending years of research developing the concept, Scott interviewed architects, engineers and suppliers to source the proper mix of skills for low-cost, high-quality panelized and pre-fab modern low-energy, low toxicity housing construction.

Scott hired the architects, staffing and suppliers, and created partnerships with Dwell Magazine, City agencies, Better Homes And Gardens, Discovery Channel and created the NOWHOUSE and GREEN HILL HOME productions.

## Scott Was Producer, Creator Of The 'NOWHOUSE' National Technology Demonstration Showcase Home



The **NOWHOUSE** was created when Scott Douglas-Redmond was talking to the head one of the San Francisco Departments. Scott mentioned to the official that he thought they had a great lobby display but that their agency office was in such an obscure location that the public never got to see the display. Scott suggested "*...moving the display to The San Francisco Giant's Stadium*"... where more of the public might see the exhibit. A few days later Scott got a call from the same official, who told Scott:

*"I talked to the Mayor and we got you the San Francisco Giant's Stadium. When can you start building...?"*

Scott only meant that they should move their small display over there...but... he immediately saw the potential of creating a full size structure with a guaranteed audience flow and large available parking resources.

Scott said: "OK, Let's do it!" , and set out to pull together the engineers, contractors, associations, agencies, community members and suppliers to pull it off. The result was: **THE NOWHOUSE**



At the end of the showcase-phase of the project (When the SF Giant's needed their parking lot back) Scott and the Team donated the house to Gavin Newsom And The City Of San Francisco. The NowHouse was moved from the AT&T Downtown Ball Park to The community center by Candlestick Park:





...But how do you move a huge two-story home across a huge city? By Barge! It was "sailed" from one side of San Francisco to the other by moving it across San Francisco Bay with the help of expert house-movers, barge captains and crane operators:



Scott Douglas-Redmond discusses some of the construction technology:

The **NOWHOUSE** was featured in global media coverage:



The Nowhouse was built with Union labor donations, community donations and community residents who were interested in learning careers:



The NOWHOUSE was the CES Smart Home of the year:

CNET provided home electronics that made THE NOWHOUSE a technological wonder:



After it was constructed at the San Francisco Giant's Stadium. It was moved to a permanent foundation to become the Alice Griffith Community Center:



The **NOWHOUSE** received many community awards:

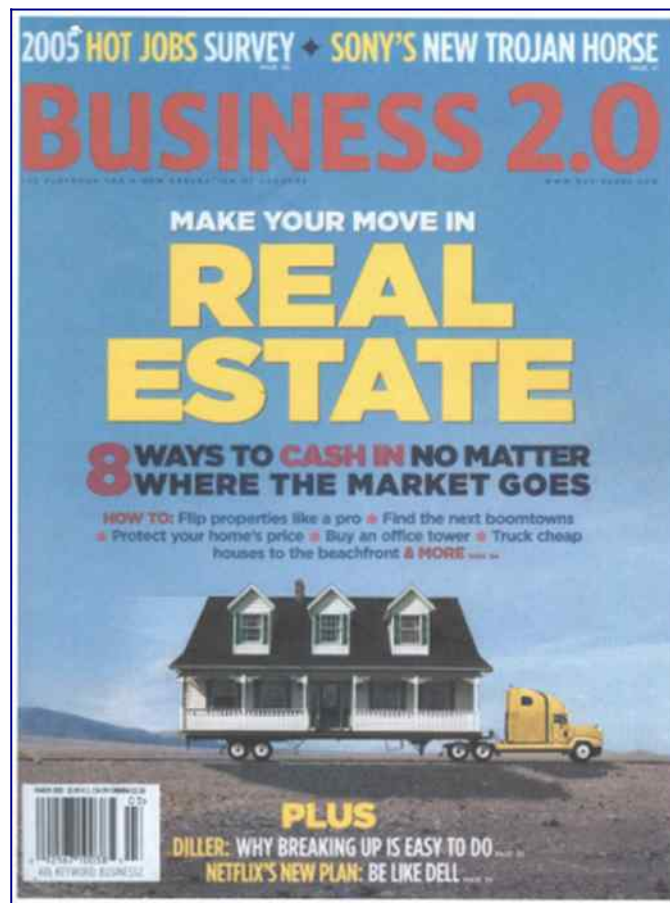


Congressional, City and United Nation's officials participated in the opening and promotion of the project:



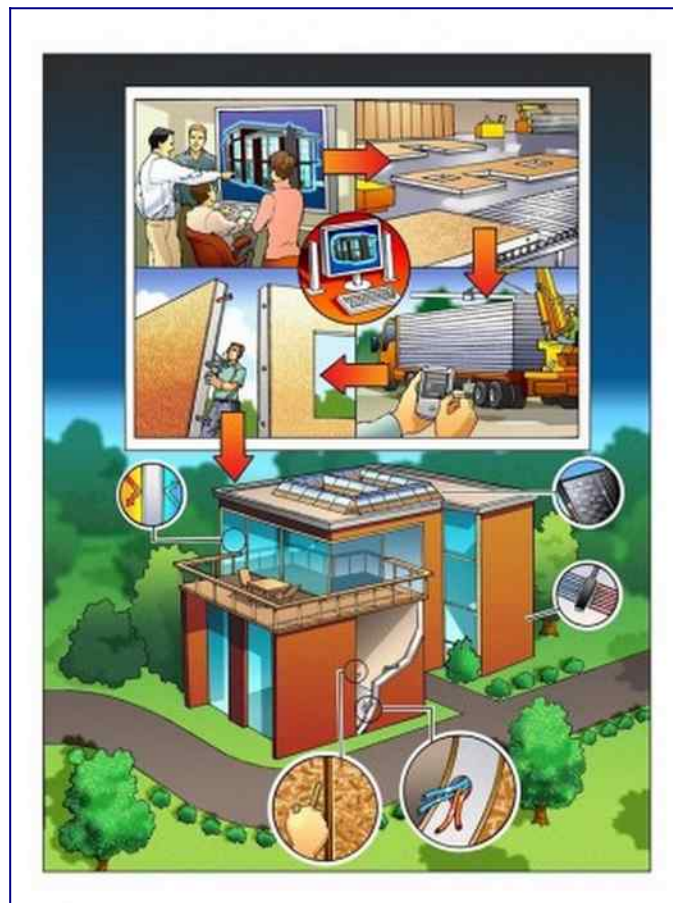
Scott discusses the project on-site:

There has never been a multi-million dollar home construction in modern San Francisco that was finished in 28 days from bare ground to finish... EXCEPT THE NOWHOUSE:



Part of the NOWHOUSE project demonstrated ways to help the Japanese Tsunami victims and other weather disaster regions:





THE NOWHOUSE TOOK ONLY 28 DAYS TO ERECT IN SAN FRANCISCO. THIS WAS A RECORD FOR A 2000+ SQUARE FOOT, TWO STORY \$2M+ RETAIL-VALUE HOME. IT ALSO BROKE THE SAN FRANCISCO RECORD FOR FASTEST BUILDING PERMIT EVER KNOWN TO BE ISSUED FOR A HIGH-VALUE HOME IN SAN FRANCISCO. HERE IS A TIME LAPSE MOVIE OF THE CONSTRUCTION.

Green Building Revolution- NowHouse, at SBC Park, points the way to a more affordable, eco-friendly housing industry

[by Carol Lloyd](#)

For decades, San Francisco has been a hub of high-tech innovation and the spinning wheel of lifestyle mania. (Unabashed Foodie-ism? Sexual liberation? Cultural creativity? We've got it all.) Given this plethora of "living styles" and our abundance of engineerial spirit, you would think Bay Area would be a center of housing inventiveness.

But it isn't. On the edges of the Bay Area, suburban sprawl is replicating with the same generic monotony as in San Fernando Valley. In the inner cities, the citizenry has generally opposed new housing ideas in an attempt to preserve the historicity of old neighborhoods. The result is that while there are a few eco-friendly developments with solar roofs, and an occasional architectural wonder, our built environment doesn't generally reflect the Bay Area's reputation for visionary thinking.

But if the NowHouse, a high-tech, green and affordable demonstration home that opens today in an SBC Park parking lot, offers any indication, the Bay Area may be finally growing a residential-design and -construction movement worthy of its utopian denizens.

The brainchild of technology wunderkind Scott Redmond, the NowHouse brings together more than a hundred corporate sponsors and several government agencies eager to educate the public and the construction industry about a safer and greener -- and, yes, cheaper -- way of building new homes. Redmond, a graduate of San Francisco State University in sociology and cultural anthropology, has been kicking around the Bay Area for decades, tinkering in everything from material science to avionics, from electromechanics to broadcast technologies. Among his many patents is a virtual-reality product, a consumer hydrogen-based energy system and some of the first wearable computers. But he turned his attention to home building when he finally felt the nesting urge himself.

"I wanted to build a house," said the whiz kid, whose life as a tenant stretched to more than a quarter century while, he admitted, he was "waiting for the market to drop."

Over the years, he ferreted away ideas he wanted to incorporate into what he called the "ultimate house." When he heard Allison Arieff, editor of San Francisco-based Dwell magazine, speak at the Yerba Buena Center for the Arts on the need for a system to create an affordable green home-building industry, he decided this would be his next project. So, in 2002, with partners Kirk McAfee and Toby Long, he founded CleverHomes -- a home-design/construction-systems company that delivers eco-friendly, modernist homes precut and ready for assemblage.

After running an ad in Dwell, the young company was besieged with calls and began catering to wealthy clients with custom-designed homes that ran more than \$600,000, minus the land. But insofar as its initial impetus was concerned, the company had not yet succeeded. Redmond himself could not afford these prices.

"The only way to bring the price down was to fix the floor plan," he explained one bright morning on the construction site last week. "Then we asked all the manufacturers to price their products as if they were selling 1,000 homes."

The result is the NowHouse, an elegant, modernist, 2,400-square-foot eco-invention designed by Long, an architect, with two stories, new-growth bamboo floors, solar panels, wind energy, cork floors and, as Redmond puts it, "150 cool, neat or amazing things."

Co-sponsored with CNET, which has furnished the home with enough high-tech gizmos and gadgets to babysit Bill Gates on speed, the NowHouse is also a quintessential smart house, in which all the digital appliances and computers and media are wired into an integrated system. It is also an "open home," in the sense that Redmond hopes to sell the NowHouse and 999 clones for \$116,000 for the core kit or \$200,000 including all interior finishes. (Neither price includes labor.)

But the most novel feature of the NowHouse is its designed flexibility. It can be "grown" in stages, following the needs of the residents. A small single-story house can be later turned into a two-story dwelling with a loft-ceiled living room using the reattachable roof and moveable walls. (To watch a

virtual simulation, go to <http://www.nowhouse.org/>.) "You can order the second story and go away to Europe for a week and a half and come back and have this," Redmond said, walking through the spacious upper level, with its loft family room and master suite.

Redmond managed this versatility through the use of factory-built walls made of recycled wood and eco-friendly steam-expanded foam insulation. According to Redmond, the insulated panels (precut by enormous robots) are strong enough to withstand 160-mile-an-hour winds and far more fire and earthquake resistant than stick-frame buildings. Requiring no drywall and no expert carpentry crew, they offer a quicker, greener and cheaper solution to traditional building.

Redmond's promotion of the NowHouse as an affordable option, however, doesn't so much elide the truth as bend it. If one were to go out and build this home from scratch and add his rather high-quality interior finishes (with fine bamboo cabinets and KitchenAid appliances), the end result would be affordable only for the very affluent. Through quantity discounts, a fixed floor plan and Redmond's patent-pending wall system, though, the NowHouse brings the price of this higher-quality home within the reach of a more middle-class home buyer. Whereas most new construction in the Bay Area begins at about \$200 per square foot, the equivalent price for a NowHouse is about \$150. If home buyers are willing to buy cheaper appliances and finishes or to do some of the assemblage themselves (a prospect Redmond says is possible because of the wall system), they can bring the price down even farther.

Even at these prices, though, building a new home on a piece of land is a daunting task that usually requires three kinds of loans and a lot of financial gymnastics. To alleviate these woes, McAfee, the company's CFO, created CleverFinance, which offers all-in-one loans that include preconstruction and construction financing and mortgage loans for a new NowHouse construction.

In a sense, the multifarious NowHouse is trying to be all things to all people. For the luxury builder or customer, the home is thoroughly smart, wired throughout for security and digital systems. For the impassioned environmentalist, the house will provide all the components of a pioneering eco-friendly living. For the modernist aesthete, it will sate the appetite for open rooms and sleek lines. Even the social activist can admire it: in coordination with San Francisco's Program for Environmental Justice, the house was built as part of a job-training program for low-income residents, and proceeds (from the entrance fee) will benefit Friends of the Urban Forest, which is landscaping the site.

But for middle-class tenants who yearn to make their first home fulfill their creative and political ideals while still not breaking their bank, the NowHouse may be more of a NotQuiteNowHouse. Why? The thing that makes housing so outrageous in the Bay Area is the price of land, not of buildings. To illustrate the point, there's a century-old garage -- no plumbing, no electricity -- for sale a block away from my home for \$395,000. Yes, that's the price of a very small lot in Bernal Heights.

Even so, there is still a lot about the NowHouse that is in synch with the larger vision of San Francisco becoming a breeding ground for visionary building. Just this week, the San Francisco Department of the Environment announced the City's commitment that all municipal buildings consisting of more than 5,000 square feet of floor space incorporate renewable energy, water conservation and green building materials. According to Mark Palmer, the city's Green Building coordinator, Treasure Island is shaping

up to become a green model city, with 2,800 residential units (934 of them slated to be affordable). And plans are afoot to build 1,600 homes with solar panels in Hunters Point.

If the NowHouse is more like a NeverlandHouse for most of us, so be it. Its power will be to catch the city technocrats' imagination, to push the average home remodeler to reconsider his or her sprinkler system and to challenge the suburban builder to learn that old-growth lumber and toxic carpets are not the only path to profit. And for those of you who can manage to buy a NowHouse now, keep me on your invite list. The place will make the biggest cocktail-party conversation piece ever invented.

## **Scott Was The Site Producer For The Fort Mason Center Conversion And Development For The First Major Events There**

Scott was tasked with helping to develop Fort Mason Center into a major events venue and the production of the first record-brfeaking major public events there.

**The Coca-Cola "Great Get-Together" Mega Event which re-constructed Fort Mason Center and began the major events program on San Francisco Piers where he managed major events with Fort Mason and the National Park Service**



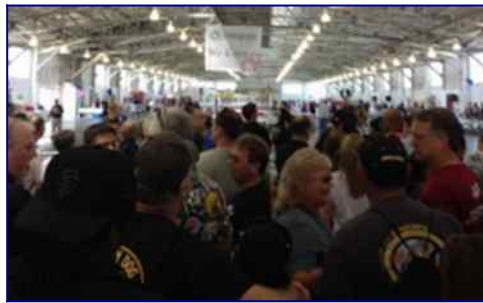
**Scott Worked On Changing Fort Mason from this:**





**To This:**





**Fort Mason**, once known as **San Francisco Port of Embarkation, US Army**, in [San Francisco, California](#), is a former [United States Army](#) post located in the northern [Marina District](#), alongside [San Francisco Bay](#). Fort Mason served as an Army post for more than 100 years, initially as a [coastal defense](#) site[3] and subsequently as a military port facility. During [World War II](#), it was the principal port for the Pacific campaign.[2]

Today it is part of the [Golden Gate National Recreation Area](#) and the site of several cultural facilities. The entire fort area is listed as a [historic district](#) on the [National Register of Historic Places](#),[2] with 49 buildings of historic significance, spread over 1,200 acres (490 ha).[4][5] while the lower port area is a [National Historic Landmark District](#), designated for its role in World War II.



Fort Mason Center (foreground) with Oakland and Russian Hill (on the right) in the distance.

Fort Mason can be split into two distinct areas. The upper area, sometimes called Fort Mason, is situated on a headland and was the site of the original coastal fortifications. The lower area, Fort Mason Center, is situated close to water level to the west of Upper Fort Mason, and is the site of the former military port, with its piers and warehouses. The [Marina Green](#) lies to the west of Fort Mason, while [Aquatic Park](#) is to the east.

The nucleus of Fort Mason was a private property owned by [John C. Frémont](#), the explorer of the western U.S., who also spearheaded the conquest of California from Mexico, and ran as the first presidential nominee of the extant Republican Party in 1856. As alleged in a 1968 federal lawsuit<sup>[6]</sup> filed by his descendants over the 70-acre parcel then at issue, Frémont bought a 13.5-acre property in the mid-1850s for \$42,000, and then improved it by about \$40,000.

Appointed a major general in the Union army at the start of the [Civil War](#), Frémont's repeated serious conflicts with President [Lincoln](#) led him to resign by late 1862. In 1863, the government seized the property without payment, by executive order of Lincoln, on the grounds it was needed for the war effort. Frémont would again contest the US presidency in 1864, running as the candidate of [Radical Democracy Party](#), only resigning the effort when Lincoln fired a political enemy in his cabinet as a concession.

The 1868 lawsuit was perhaps the last shot of a century-long legal struggle<sup>[7]</sup> to obtain compensation for the seized realty. In 1870, the government returned property to 49 parties in the vicinity, but not to Frémont and a few others. At that time, Frémont was still very preoccupied with enough of the vast fortune he had made through gold-mining before the Civil War that the matter was unlikely of concern to him; but by 1872<sup>[8]</sup> he was in grave financial trouble he would never escape before his death in 1890. Over the years, at least 24 Congressional committees would vote to compensate Frémont, and finally in February 1898 President [William McKinley](#) signed a bill directing that the court of claims fix the compensation due. But in 1968 the Frémont heirs complained it had failed to carry out this direction, with John Frémont then recently dead and his widow Jessie over 70 years old.

The [Civil War](#) prompted the construction of several coastal defense batteries located inside the [Golden Gate](#). Initially these defenses were built as temporary wartime structures rather than permanent fortifications and one of these was constructed in 1864 at **Point San Jose**, as the location of Upper Fort Mason was then known. A breast-high wall of brick and mounts for six 10-inch (250 mm) [Rodman cannons](#) and six 42-pounder guns were built on the site. Excavation in the early 1980s uncovered the

well-preserved remains of the western-half of the temporary battery, and it has now been restored to its condition during the Civil War.[9]

The fort was named Fort Mason in 1882, after [Richard Barnes Mason](#), a former [military governor of California](#). [10]

[President Grover Cleveland](#) established the [Endicott Board](#) in 1885 for the purpose of modernizing the nation's coastal fortifications. Chaired by [Secretary of War William Endicott](#), the board recommended new defenses at 22 U.S. seaports, deeming San Francisco Harbor second only to that of [New York](#) in strategic importance. As a result, an extensive series of forts, batteries, and guns were built on the harbor, including Fort Mason. [11]

The [piers](#) and sheds of Lower Fort Mason were originally built from 1912 to warehouse army supplies and provide docking space for army transport ships. By this time, the US Army began to build new posts in [Hawaii](#), the [Philippines](#), and various other Pacific islands. Most of the [materiel](#) for those posts was shipped through San Francisco. By 1915, the three piers together with their associated warehouse had been completed, and [Fort Mason Tunnel](#) driven under Upper Fort Mason to connect with the [railroad](#) network along the [Embarcadero](#).

With these new facilities, Fort Mason was transformed from a harbor defense post into a logistical and transport hub for American military operations in the Pacific. [12] The Army ferry [USAT General Frank M. Coxe](#) provided scheduled transportation from Fort Mason to the processing center at Fort McDowell on Angel Island up to eight times per day during the war. [USAT Meigs](#) was used to transport cavalry horses from Fort Mason's pier to [Fort Mills](#).



The [SS Jeremiah O'Brien](#) is a World War II era [Liberty ship](#). Built in 57 days, the ship is an example of the United States rapid response to sealift demands of the war.

Table, page 15, "The Transportation Corps: Responsibilities, Organization, and Operations" (October, 1945)

Port	Number of Passengers	Measurements Tons of Cargo
All Ports	2,293,354	126,787,875
Boston Port of Embarkation	193,205	8,937,263
Sanport Cargo Port	-	470,584
New York Port of Embarkation	3,372,728	37,789,966
Philadelphia Cargo Port	-	5,893,199
Hampden Roads Port of Embarkation	725,880	12,521,888
Schroon Cargo Port	-	6,506,029
Charleston Port of Embarkation	33,485	3,215,514
New Orleans Port of Embarkation	186,856	7,246,887
Los Angeles Port of Embarkation	186,325	8,614,847
San Francisco Port of Embarkation	1,857,500	22,733,244
Seattle Port of Embarkation	525,260	10,379,780
Portland Subject	51,227	1,689,075
Prince Rupert Subject	30,858	966,272

Army Ports: Passengers and tons of cargo embarked during the period December 1941 – August 1945.



During World War II, Fort Mason became the headquarters of the *San Francisco Port of Embarkation*, controlling a network of shipping facilities that spread across the Bay Area. Over the years of the war, 1,647,174 passengers and 23,589,472 measured tons moved from the port into the Pacific. This total represents two-thirds of all troops sent into the Pacific and more than one-half of all Army cargo moved through West Coast ports. The highest passenger count was logged in August 1945 when 93,986 outbound passengers were loaded.[\[12\]](#)

The [Korean War](#) in the 1950s also kept the post busy, and in 1955 the *San Francisco Port of Embarkation* was renamed the *U.S. Army Transportation Terminal Command Pacific*. The embarkation operations continued through the early sixties. In 1965 the headquarters of the US Army Transportation Terminal Command were transferred to the [Oakland Army Terminal](#), and most of Fort Mason's embarkation facilities fell into disuse. The Army continues to use and maintain the old officer housing. The [National Park Service](#) took over the administration of the site in the 1970s as a part of the Golden Gate National Recreation Area. In 1976 lower Fort Mason became the Fort Mason Center, a non profit organization that provides a destination for programs, events and organizations that support and reflect the evolving cultural fabric of San Francisco and the Bay Area. (GGNRA).[\[13\]](#)[\[14\]](#)



GGNRA headquarters building in Upper Fort Mason

Some of the old officer housing remains in use by the Army, while some is rented to the public. One of the larger buildings has been converted into a [youth hostel](#), operated by [Hostelling International](#) USA. [\[15\]](#)

As a whole, the former post is now a mix of parks and gardens and late nineteenth and early twentieth century buildings that are still in use. A path follows the harbor edge, rising along the headland and offering views north past [Alcatraz](#) and west to the [Golden Gate Bridge](#).

[Museo ItaloAmericano](#), [Flax art & design](#), [California Lawyers for the Arts](#) and other organizations connected to arts and culture.[16] The newest space is Gallery 308, whose inaugural exhibition was [Janet Cardiff's The Forty Part Motet](#) (November 14, 2015 – January 18, 2016), followed by [Sophie Calle's Missing](#) (June 22, 2017 – August 20, 2017). In the fall of 2017, the [San Francisco Art Institute](#) opened a graduate program campus, housed in FMCAC's historic Herbst Pavilion.

The National Park Service headquarters for both the Golden Gate National Recreation Area and the [San Francisco Maritime National Historical Park](#) are located in Fort Mason.[17][18]

Operations for the [United States Park Police](#) are located in the fort, providing police services for the Golden Gate National Recreation Area in San Francisco and Marin County.

Every Friday since 2010 from March through October, an [Off the Grid](#) gathering of food trucks occurs and draws large crowds.

*“...During my efforts in advanced technology sustainable building promotions with various city organizations in the San Francisco Bay Area, I often interacted with the San Francisco Department of the Environment. In an assessment of the lobby display at the San Francisco Department of the Environment, I noted that the display area was small and the physical location of the building was located in an area where few members of the public were seeing it. Thus, the messaging for sustainable living was being lost. I suggested that the small lobby display should be moved to a corridor in the San Francisco Giant’s stadium where tens of thousands of people might see it. Shortly thereafter I received a call from the Mayor’s office: “The Mayor says you can have the San Francisco Giant’s stadium to build a green demonstration home.”, I was told. “Hmmm”, I first thought, “I only meant they should move their little display over there... but, wait a minute, it isn’t often you get the baseball stadium offered to you to build a house in...” I accepted the challenge on the spot.*

*I recruited approximately 40 volunteers and staff, many from impoverished, under-served, minority communities, and educated them in the areas of clean building production and planning. I sourced over 300 supplier partners to showcase their modern building products. The team was committed to serving their community and to meeting the Mayor's high expectations for improving the quality of homes in San Francisco. I led the effort in a program to source all of the suppliers, sponsors and participants. I marketed the idea by talking to citizens groups and local politicians, describing the benefits of an attractive demonstration project in a highly visible venue and better access to tangible examples of new technologies than that which currently existed. These efforts were covered by local and national TV and radio stations, which helped to spread our message.*

*In this program, citizens came and visited and each said that they learned something new. The additional money raised through donations at the door was used to establish additional parks, urban gardens, and support recreational facilities.*

*I have a proven track record of getting results in the City, State and Federal sector as well, through careful planning that includes anticipating all potential problems and their contingency options. After advising the City of San Francisco that the project was a “GO”, I was immediately faced with implementing the entire program before the start of the San Francisco Giant’s baseball season, this cut*

*the anticipated timeframe in half. To reach this goal, I knew we would have to make major compression in the schedule, particularly the physical construction phase. The cuts would be made at a time when suppliers and sponsors had already committed to a longer timeframe*

*I instantly re-organized tasks for functions, deliveries, crews and media releases and assigned optimized specific priorities to each group. Over the next 2 months, these groups developed various options to accommodate the timeframe reductions, taking into consideration the interests of our contractors, crew trainers, media schedules and shipping companies who we needed to rely on to work as one body. Under my leadership, the task groups prepared several different plans for making the timeframe compressions and I supervised the deployment of those plans.*

*At the same time, I developed and maintained computerized internet accessible databases that allowed all managers to immediately see the impact of their program efforts. Later, we used this system and related processes to continually adjust the reduction targets as cost savings information was refined, allowing almost instantaneous mid-course corrections to the list of timeframe reduction targets and multi-group activity over-lay.*

*The result of my specific work was the following: I demonstrated a fully functional construction system which could be rapidly erected anywhere in the world and built out of common parts and which would reduce the toxicity of modern living by up to 75%. The NowHouse™ program was a modern, affordable, green and digitally integrated demo home. "The NowHouse was conceived to give consumers, United Nations representatives, the media, schools, other agencies, and builders alike, a fully functional example of the advances that have taken place in home construction. The program showed over 200 such examples to tens of thousands live and online. I was able to showcase the City of San Francisco as a technology leader by producing international press coverage of the program with consistent messaging. The stylish, modern, high-tech home was designed from safe advanced green and sustainable materials in a highly integrated manner and featured the best digital accoutrements. The first demo was built in the San Francisco Giants Stadium in 2004 and donated to Mayor Gavin Newsom for use by the San Francisco community. The two-story, 2400 square foot structure has since been lifted onto wheels, pushed onto a barge, sailed down the bay to Candlestick Park, hauled across its very own bridge and mounted on a permanent foundation to become the Alice Griffith community center. The project received State Assembly and Mayoral commendations and was featured as a solution for the Asian Tsunami reconstruction. I most proud of the fact that we were able to take impoverished community members and teach them a construction trade, giving them hope and a career, not just a job. Because this project was so successful, the Editor in Chief of Better Homes and Gardens flew to see me and asked me to help co-develop the **Better Homes & Gardens "America's Home"** project which was then featured as a reality TV series on the nationally broadcast Discovery Home Channel."*

# ENERGY STORAGE AND PRODUCTION TECHNOLOGY

Scott's federal patent-awarded technologies creates energy-on-demand solutions for Toyota, Honda, Hyundai And BMW Fuel Cell Vehicles

The European Commission announced its EU Hydrogen Strategy and its Energy Systems Integration Strategy. A Clean Hydrogen Alliance between industry, hydrogen companies and governments will also be launched. The Commission's use of the term 'clean hydrogen' refers to renewable hydrogen, which is defined as hydrogen production through water electrolysis.

The announcement states:

*“The priority is to develop renewable hydrogen, produced using mainly wind and solar energy”.*

- *From 2020 to 2024, we will support the installation of at least 6 gigawatts of renewable hydrogen electrolyzers in the EU, and the production of up to one million tonnes of renewable hydrogen.*
- *From 2025 to 2030, hydrogen needs to become an intrinsic part of our integrated energy system, with at least 40 gigawatts of renewable hydrogen electrolyzers and the production of up to ten million tonnes of renewable hydrogen in the EU.*
- *From 2030 to 2050, renewable hydrogen technologies should reach maturity and be deployed at large scale across all hard-to-decarbonise sectors.*

*“To help deliver on this Strategy, the Commission is launching today the European Clean Hydrogen Alliance with industry leaders, civil society, national and regional ministers and the European Investment Bank. The Alliance will build up an investment pipeline for scaled-up production and will support demand for clean hydrogen in the EU.”*

The full documents are available at: [https://ec.europa.eu/energy/sites/ener/files/hydrogen\\_strategy.pdf](https://ec.europa.eu/energy/sites/ener/files/hydrogen_strategy.pdf)  
[https://ec.europa.eu/energy/sites/ener/files/energy\\_system\\_integration\\_strategy .pdf](https://ec.europa.eu/energy/sites/ener/files/energy_system_integration_strategy.pdf)

The EC's target of at least 40GW of green electrolysis by 2030, which complements the earlier commitments by the governments of Germany, the Netherlands and Portugal for a total of 10GW, means green hydrogen will take centre stage in the world's drive to decarbonise.

## **The Carmel city fleet to use our patented technology that creates hydrogen energy on demand**

Millenium Cell, JADOO, Bluebird, Brunton, Powerball, Ergenics, ECD and other companies came later but our patents and NDA's show that Scott was first to create “fuel cassettes”

Hydrogen fuel technology burns with zero emissions and is considered by many to be on the cutting edge of sustainable energy. The science is still somewhat new but expanding — Indiana-based engine company [Cummins Inc. unveiled](#) a heavy-duty truck powered by battery and hydrogen last year, and the world's first bus system powered by hydrogen technology [debuted in France](#) in December.

With the design and synthesis of a type of a metal-organic framework (MOF) that can store more hydrogen and methane than conventional adsorbent materials at much safer pressures and at much lower costs.

### **Nanocage aims to trap and release hydrogen on demand**

“We’ve developed a better onboard storage method for hydrogen and methane gas for next-generation clean energy vehicles,” said Omar K. Farha, who led the research. “To do this, we used chemical principles to design porous materials with precise atomic arrangement, thereby achieving ultrahigh porosity.”

Thanks to its nanoscopic pores, a one-gram sample of the Northwestern material has a surface area that would cover 1.3 American football fields.

The new materials could be a breakthrough for the gas storage industry at large, Farha said in a statement, because many industries and applications require the use of compressed gases such as oxygen, hydrogen, methane and others. The study, combining experiment and molecular simulation, is published in [Science](#).

Hydrogen- and methane-powered vehicles currently require high-pressure compression to operate with the pressure of a hydrogen tank 300 times greater than the pressure in car tyres. Because of hydrogen’s low density, it is expensive to accomplish this pressure.

Developing new adsorbent materials that can store hydrogen and methane gas onboard vehicles at much lower pressures can help scientists and engineers reach US Department of Energy targets for developing the next generation of clean energy cars.

To meet these goals, the size and weight of the onboard fuel tank need to be optimised. The highly porous metal-organic framework materials in this study are claimed to balance the volumetric and gravimetric deliverable capacities of hydrogen and methane, bringing researchers one step closer to attaining these targets.

“We can store tremendous amounts of hydrogen and methane within the pores of the MOFs and deliver them to the engine of the vehicle at lower pressures than needed for current fuel cell vehicles,” Farha said.

### **Scott Is The Winner Of Issued Federal Energy Patents For Powering All Electric Vehicles With No New Infrastructure Required**



DRIVE THE FUTURE with the technology that beat every other energy storage system in Department of Defense tests

**Patents:**  Multiple issued seminal patents. Large Portfolio Pending.

**People:** Senior Scientists, Chemists & Engineers from Top University & Federal Labs.

**Partners:** Federal, University, Fortune 500, Private Research Organizations.

**Customers:** Inquiries From Over 200+ Qualified Leads with \$300K+ Budgets Each.

**Prototypes:** Over 15 Prototypes Constructed. 

**Contracts:** Multiple MOU's for over \$45M of Opportunity. DOE Contracted Fully Executed.

**Awards/Commendations:** Congress, DARPA. 

**Research Data:** Over 200+ Technical Research Documents & 15+ Years of Research.

**Know How:** Over 22000+ Manhours of Development. PROVEN First-To-Market Track-record.

**Market Data:** Over 100+ Documents of Industry Study. 

**Trademarks:** FuelSell (R), Hydrogen-Direct(R), Fuel-Cassette(R) & Pending Trademarks.

**Process:** Creators of Multiple Novel Systems & Processes & Proven Record of Innovation.

**Facilities:** Constructed Lab In-House. Access to Federal Labs. 

The mission of our energy engineering team is to develop and deliver leading energy production and storage technology which is the most efficient, cost-effective and common-connection compliant available in the world. Our systems are designed to enable us to return the maximum value to customers and shareholders. We are committed to providing energy independence for each user of our products. Our patents, trade secrets, experience and know-how are unique in the world.

A key patented product is a single box which makes, stores, releases, processes and transports energy for home or work with minimal, if any, tasking of the grid. It achieved a commanding leadership market position, in a better way than any related solution, because of our engineering, nanotechnology breakthroughs and our patent barricades. This device is like the 'Cuisinart of Energy.' We have built and demonstrated multiple working versions of the system for Congress, National labs, and major partners.

There are a few ways to store energy: 1) pressurized gas, 2) freezing liquid, 3) inert solid in a non-pressurized state. The global national government energy agencies, the global auto and insurance industry, and key industry segments have decreed that inert solid in a non-pressurized state is *the* clearly preferred method.

We hold issued patents and exclusive engineering designs on many key embodiment configurations of this preferred solid-state energy solution. Due to a number of breakthroughs in the last two years, contrary to previous presumptions, energy can now be made from the water, sun and wind at your home or work for less cost, greater efficiency, less toxicity and less challenge to the grid than any other energy carrier. Our products combine energy production, storage, transport and distribution in one system so that the entire energy solution is contained and cannot be blockaded by competitors. Our products optimize efficiency and provide a rapid time-to-market as they require no new infrastructure build-outs.



It is essential to appreciate that a review of this technology is not a review of one technology over another because our system is chemistry-agnostic and can use ANY energy storage compound and still be covered by our patents. The aerospace and defense industry has demonstrated that this IS the chosen technology for the those seeking energy independence, green energy and sustainable energy. There are tens of thousands of third party technical papers by the most prestigious universities, government researchers and industry technologists, that can be easily accessed online, to describe this technology as it is so seminal. In addition to the IP stronghold on the technology, to date, hundreds of millions of dollars has been expended on optimization by government and industry development organizations.







Our team has identified a shortlist of chemical compounds which could break the energy deployment log-jam for energy storage for volume markets.

One of our key designs systems enables organic-fuel-powered applications such as, backup generators, hybrid vehicles and portable electronics to overcome the current lack of infrastructure and in turn accelerate market adoption. Our technology is able to support existing distribution models or provide it's own disruptive distribution model much like "Netflix™ did for the video industry.

Our team was the first to introduce a standardized platform that links these types of applications to the existing supply infrastructure in a scalable, cost effective manner. We executed on a contract for The United States Government which was direct funding from the U.S. Department of Energy to support research on storage technologies and built multiple working prototypes.

We have patent coverage to use various chemistries (e.g., metal hydrides, slurries or liquids) to absorb gas, much like a sponge absorbs water. During this 'absorption' process, the gas is condensed, becomes inert and can be safely transported within our devices. Our fuel cassettes, using any known chemistry, are designed to be exchanged when empty, similar to changing a battery. It is rechargeable and can store many times the energy contained in a standard lead-acid battery or pressurized gas cylinder. This exchangeable methodology ensures broad adoption due to its ease of use and provides developers with a readily available solution to supplying fuel to mobile systems. In addition, the flexibility to use different chemistries within the cassette supports its adoption across multiple applications having different performance requirements such storage capacity, size and weight. The system incorporates the production of energy on-board, the storage of energy in a solid state, the release of energy and the production of that storage media into electricity, all in one system which is modular and scalable. Energy production from water can now be delivered efficiently due to nano technology optimization of traditional production components.

**FOR SALE: ISSUED FEDERAL ENERGY PATENTS AND TRADE SECRETS FOR POWERING TOYOTA MIRAI, HONDA CLARITY, BMW FUEL CELL CARS THAT ARE ON-THE-ROAD TODAY! ENGINEERING PAPERS AND DESIGN FOR MANUFACTURING AVAILABLE. READ THE PATENTS AT THE UNITED STATES PATENT OFFICE LINKS, BELOW:**

- 10 [8,932,184](#)  [Hydrogen storage, distribution, and recovery system](#)
- 26 [8,066,946](#)  [Hydrogen storage, distribution, and recovery system](#)
- 34 [7,399,325](#)  [Method and apparatus for a hydrogen fuel cassette distribution and recovery system](#)
- 36 [7,279,222](#)  [Solid-state hydrogen storage systems](#)
- 38 [7,169,489](#)  [Hydrogen storage, distribution, and recovery system](#)
- 39 [7,011,768](#)  [Methods for hydrogen storage using doped alanate compositions](#)

Additional patents and intellectual property available. Please read the patents at the U.S. Patent Office website at <http://www.uspto.gov>

ENGINEERING PROVEN BY MULTIPLE MANUFACTURERS:

[IT WORKS!](#)

Installed in a Toyota Prius:



Not only did Scott's chemistry COMPOUNDS BEAT EVERY COMPETITOR AT THE TIME but his patents cover EVERY chemistry that a competitor might use in fuel cassettes and hot-swap refuel containers

His ENERGY STORAGE BEAT THE RANGE AND STORAGE CAPACITY OF EVERY OTHER COMPETING BATTERY SOLUTION!

**CREATOR - INVENTOR - PROJECT LEAD: CONGRESSIONALLY AWARDED WORLD'S FIRST FUEL CELL HOT SWAP POWER STORAGE DESIGNS, PRODUCTS, PATENTS AND SYSTEMS**

### AMERICA'S FREEDOM CAR PROGRAM

**Hydrogen powered drone flight using solid state fuel cassettes first created and patented by our efforts and backed by the U.S. Congress in the Iraq War Bill and Energy Dept contracts**

- We were awarded the Congressional contract and a historical suite of seminal patents by the U.S. Government, in the Iraq War Bill. Here, the technology is again proven in yet another example of commercial use.

- We worked with Gary D. Conley, founder of the original H2GO, to bring this exact technology to market. We executed NDA's with Protonex, Ballard and their associates to show them our technology.

H2GO Power has revealed it has completed the world's first successful test flight of a 3D-printed hydrogen-powered drone with Ballard Power Systems, Inc.



*Courtesy H2GO Power*

The Unmanned Aerial Vehicle (UAV) pilot took place in Boston in late August as part of a partnership

with Ballard Unmanned Systems Inc. – the UAV arm of Ballard Power Systems.

Headquartered in the UK, H2GO Power is developing and delivering solid-state hydrogen energy storage for zero-emission, reliable and safe power supply. The company’s drone application solution can **increase the flight time of a battery by up to 90 minutes, compared with less than 25 minutes for typical Lithium-ion battery systems.**

The advanced design allows for up to 15% of total drone weight reduction and volume control - achieved by the 3D printed lightweight metal - as well as creating internal structures that optimise heat management into and out of the power system. This enables UAVs to travel three to five times further and carry heavier payloads.

The pilot is a testament to the company’s unique, solid-state hydrogen storage technology which allows for clean, reliable and scalable energy storage for UAVs/ Drones as well as a wide range of commercial, industrial and residential applications including Plug & Play Storage Units, eVTOLs and commercial aircraft.



With extensive scope in its commercial application in the developing and developed world, H2GO Power’s energy solution can be used for the faster delivery of medicines, quicker deployment of critical equipment, residential delivery, agriculture and environment monitoring. Solid-state hydrogen storage innovation that operates at such low pressures (1% of the pressures demonstrated in similar applications) significantly removes safety concerns of compressed hydrogen use.

Commenting on the pilot flight, Dr Enass Abo-Hamed, founder and CEO of H2GO Power said: “This is a hugely exciting development for our unique technology and brings us a step closer to delivering clean and sustainable energy delivery. The successful pilot flight demonstrates an innovative solution for the future of drones and its multiple commercial applications.

“With safety at the forefront of our decision-making process, our power system enables lightweight, scalable, clean energy storage that creates significant cost savings and is up to five times more efficient than existing alternatives.

“We’re excited that our solid-state hydrogen solution will unlock commercial opportunities through its efficiency and safety.”

Phil Robinson, Vice President and General Manager of Ballard Unmanned Systems, added: “We’re excited to work with the H2GO Power team to demonstrate its innovative technology in real-world flight. It is through partnerships like this that we will achieve our vision of delivering fuel cell power for a sustainable planet.”

*“... several years ago during the Iraq War we made a decision to spend additional money on time on Congressional outreach to let elected officials know about our revolutionary technology and to reduce funding for lower priority R&D such as testing some of the more exotic configurations of our technology. Before making this decision, I met with staff members to review upcoming expenditures and how this budgeting shift would impact various development budgets. In previous years, the company had been criticized for not responding quickly and appropriately to federal funding options.*

*As a result of our decision, My team and I received a commendation from the United States Congress in the Iraq War Bill and a request from Congress to the U.S. Department of Energy to engage in a contract with us for testing and development.*

*I have designed budget strategies to support departmental priorities. These strategies include coordinating with other executive agencies and outside stakeholders, and targeting Federal legislators as patrons. When key interest groups oppose the focus of legislation, I negotiate with them to achieve consensus, where possible.*

*As a result of my work, my project received a Congressional Commendation in the Iraq War Bill and Congress commended the Department of Energy to award a grant to me. I executed on the grant contract and received a Notice of Completion from the Government. I received multiple seminal issued patents for the system. I received a DARPA acknowledgement as a “Scientist Helping America”. I built a state-of-the art research laboratory. I was asked by the Senate Committee drafting legislation for new energy incentives for The White House to draft language for multiple bills. The technology and products I developed in this effort are now being sold by multiple companies world-wide, in use as a key defense technology and, as referenced in the Iraq War bill, assist America in maintaining energy independence.”*

# VEHICLE DESIGN AND ENGINEERING

Scott Developed An Air Drop Emergency Rescue Tactical Vehicle For CIA, DoD, DOJ And Special Services Missions



Meet The Pressure Membrane, Collapsible, Air Drop Emergency Tactical Vehicles. Proof That Air Pressure Membrane Structures Are Tough, Lightweight, Safe And Transportable!

## **The CIA-B is a low-weight, ballistic membrane Car-In-A-Bag:**

- The system can be air dropped from a helicopter, small airplane or drone for emergency, rescue and tactical operations
- It gets the best MPG of any vehicle because of it's low weight, ballistic fabric membrane structure and minimal drive components
- The United States Government issued a U.S. Federal Patent on this seminal technology:



US008297686B2

(12) **United States Patent**  
**Redmond**

(10) **Patent No.:** **US 8,297,686 B2**  
(45) **Date of Patent:** **Oct. 30, 2012**

(54) **INFLATABLE ELECTRIC AND HYBRID VEHICLE SYSTEM**

(56) **References Cited**

(70) **Inventor:** **Scott Douglas Redmond**, San Francisco, CA (US)

**U.S. PATENT DOCUMENTS**

6,386,929 B1 *	5/2002	Baker	440/123
7,607,489 B2 *	10/2009	Egami	180/03,267
7,789,180 B2 *	9/2010	Boag et al.	180/09.1

(\* ) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1120 days.

\* cited by examiner

*Primary Examiner* — John Walters

*Assistant Examiner* — James Triggs

(74) *Attorney, Agent, or Firm* — Stephen E. Zweig

(21) **Appl. No.:** **12/187,119**

(22) **Filed:** **Aug. 6, 2008**

(65) **Prior Publication Data**

US 2009/0043438 A1 Feb. 12, 2009

**Related U.S. Application Data**

(60) Provisional application No. 60/954,035, filed on Aug. 6, 2007.

(57) **ABSTRACT**

An inflatable electric and hybrid vehicle system, that has the features and accoutrements of traditional automotive vehicles, that is extremely safe, lightweight, inexpensive, compact and energy efficient. The system designed to be shipped by common carrier and then reassembled in a few hours with a minimal amount of tools or effort. The vehicle has either an inflatable body or membrane skin with a hybrid-type or electric motor drive train as well as heating and cooling system and inflatable seats. The battery power supply utilizes banks of commonly available batteries charged by a mobile onboard charger, configured to be easily removed with automatic software and hardware to manage the power source. They are also networked via wireless communication to various base stations to allow for monitoring and exchange of battery banks quickly and efficiently.

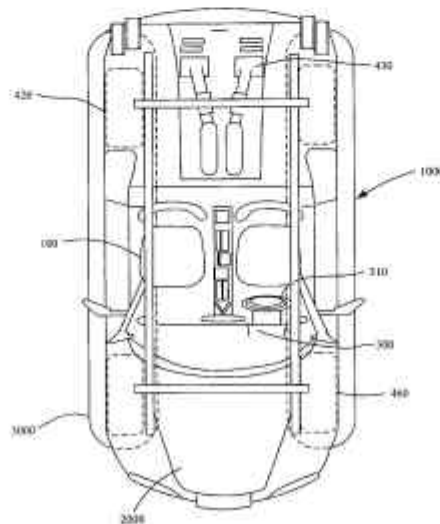
(51) **Int. Cl.**  
**B60K 7/00** (2006.01)

(52) **U.S. Cl.** **296/187.02; 296/187.03**

(58) **Field of Classification Search** **296/187.03; 296/187.02, 107**

See application file for complete search history.

**19 Claims, 16 Drawing Sheets**



The vehicles were built and can be deployed by any size aircraft:



Our lightest weight version of the vehicle could be carried by one person when packed:



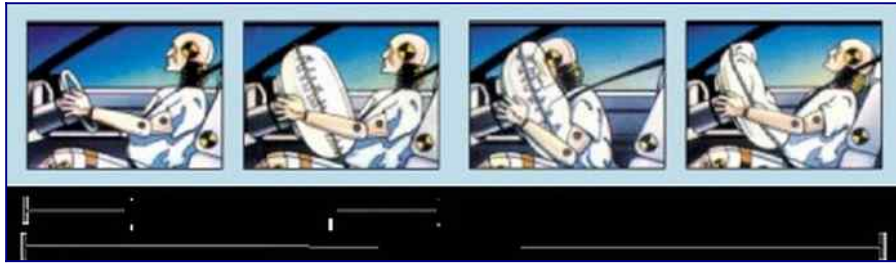
Medium-lift drones can even deliver the packed vehicle to a battle-field or rescue site:



A key part of our proprietary invention involves using rigid foam, with a plastic coating, like you now find in a modern bumper, for safety rigidity and weight reduction:

Airbag technology, proven in aircraft and consumer cars, was used to reduce weight:





Do you think air can't be tough? Here is a military test with a simple tube of air holding up a real all-metal SUV:



Even FORD MOTORS copied our technology and sent one of their staff into our project to conduct industrial surveillance:

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 114°  
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 WATCH LIVE

WHITE HOUSE PRESS SECRETARY JAY CARNEY ON POISON RICH FOUND ON LETTER TO OBAMA AND BOSTON BOMBING

The Signature Series  
 X739  
 See the story behind the paint.

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Is Ford building an inflatable car?

Automotive April 28, 2013 · FoxNews.com



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Classified under "vehicles, apparatus for locomotion by land, air or water," there's little more information about what it could be.

The outlet that first discovered the applications, [Ford Inside News](#) ([link](#)), suggests that they could be intended for use on some sort of small, collapsible personal urban transportation device, rather than a traditional car, but Ford isn't saying. A spokesperson tells FoxNews.com that the company regularly trademarks various names and won't comment on any speculation surrounding these.

RELATED VIDEO



The Inflatable Car

Mercedes-Benz has [shown a prototype vehicle](#) filled with inflatable steel beams in its doors that expands in the event of a crash to absorb energy, while a San Francisco startup company called [X739](#) has proposed a car made from flexible panels filled with lightweight expandable foam.

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## Ford to introduce inflatable seat belts

The automaker says the belts will be more effective in limiting injuries during a crash.

By Ben Rooney, CNNMoney.com staff reporter  
Last Updated: November 5, 2009 3:15 PM ET

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NEW YORK (CNNMoney.com) -- Ford Motor Co. said Thursday that it will begin equipping certain vehicles with inflatable seat belts that the company says will help prevent injuries in auto accidents.

The inflatable rear seat belts will be available on the next generation Ford Explorer and will become more widespread over time, the company said in a press release.

The belts contain an accordion-folded bag that fills with air in the event of a collision, much like a traditional car air bag.

Ford said the belt's increased diameter helps spread the force of an impact across a wider area of the passenger's body, which dampens the pressure and reduces the risk of injury. It also helps limit head, neck and chest injuries by keeping passengers in the appropriate seating position.

\*Ford is pioneering inflatable seat belt technology to help

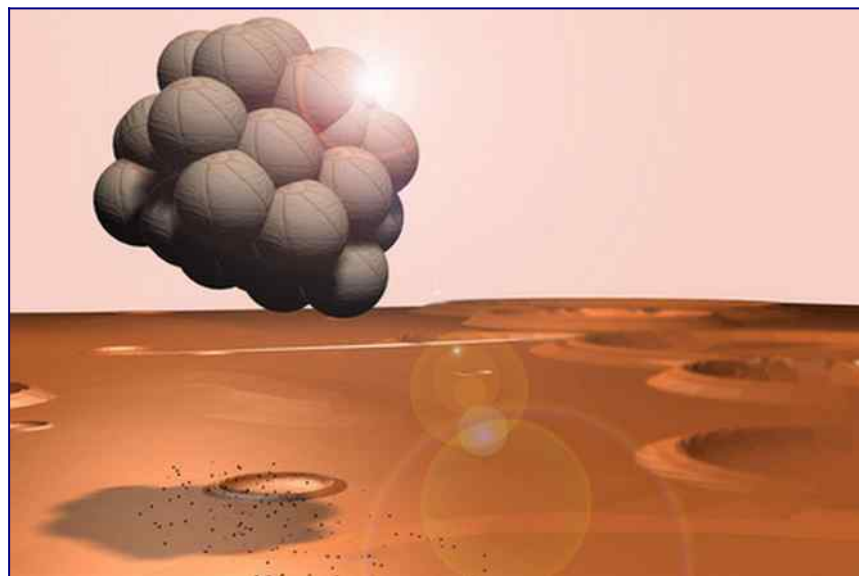


Like air bags, the new belts inflate on impact and are designed to reduce risk of injury to the passenger.

### Safest hybrid cars



Scott proposed the air-bag landing system for the Mars Lander:





These engineers are walking on the wing of an airplane that is made out of air and membrane! That is how tough a properly engineered air pressure membrane can be:



Pressure membranes worked on mars, under the sea, in white water rapids, on the battle-field, in orbit around the Earth and on our highways:

With support from the Federal Government, major industry partners and an incredible engineering team, Scott invented, developed, designed and engineered a car, and chassis system, that:

- Slow-Damps crashes so that the occupant is safer than in a crash in any other vehicles
- Can drive from San Francisco to Washington, DC without stopping to refuel via fuel cassettes
- Has the best torque/body weight/efficiency ratio
- Costs less to sell, buy, manufacture, upkeep and repair than any other vehicle
- Costs less to fuel than any other vehicle

- Had military and civic fleet configurations for specialized markets
- Had a version that could be air-dropped, via small plane, for emergency rescue situations

Scott was awarded Congressional commendations, industry acclaim, federal funds. The car received the largest number of customer orders and inquiries of any new electric vehicle company at the time.





# MEDIA PRODUCTION AND DIGITAL BROADCAST TECHNOLOGIES

Inventor, Developer, Program Lead For Sony Pictures Vue



What proves that Scott created the first products and technologies that Sony Pictures deployed for online web media for Sony Vue, Sony Movielink, Sony VR, and Sony Playstation?

- The patents
- The patent filings held by the United States Patent Office
- The patent sale communications between Sony Pictures and AT&T/DirecTV for the sale of IP
- The emails
- The voicemails
- The signed NDA's
- The Sony marketing boss's statements at the movie industry events (recorded)
- The hack of Sony Pictures by North Korea
- Other lawsuit data against Sony as seen on <http://www.pacer.gov>
- Surveillance data
- The contracts between Sony & Scott
- The materials with Sony VP fingerprints and DNA on it
- The recording of the all-hands board meeting at Sony HQ that Scott presented at
- The statements of Sony contractors and employees
- The leaked internal emails of Sony Pictures



- and more...



**Scott Was Founder, Inventor, Project Lead: 'CLICKMOVIE', 'TRAILER PARK' and 'PERSONAL PRODUCER' - The First Full Screen HD Online Web Broadcasting Companies**

CREATOR OF THE ORIGINAL "YOUTUBE"!



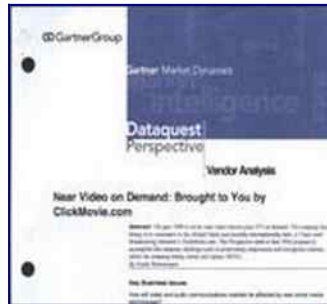
**CLICKMOVIE, TRAILER PARK and PERSONAL PRODUCER Are Documented As "World's Firsts" In Web Broadcasting!**

**The first company in the world to deliver 4K, high-definition, full-color, full-screen video by internet without lagging, stuttering, pixelated, boxy, jaggy playback. If you think there was anyone else that did it first, let us know! The courts, Patent Office, contracts, NDA's, emails and internal leaks from competitors has proved we were the originators!**

**Scott has been broadcasting on the web since before 1978, as proven by federal records, signed NDA's, emails, news reports, marketing and contract filings...**

We were honored to receive one of the top reviews and value-confirming deep study analyses reports and business intelligence investigations from from the venture capital industry's top publications:

**Gartner. Gartner Group only covers the most prestigious and profound new technologies.**



**Gartner, Inc**, officially known as **Gartner**, is a global research and advisory firm providing information, advice, and tools for leaders in IT, finance, HR, customer service and support, communications, legal and compliance, marketing, sales, and supply chain functions.[3] Its headquarters are in [Stamford, Connecticut](#), United States. The firm changed its name from **Gartner Group, Inc** to Gartner in 2000.[4] It is a member of the S&P 500.[5]

Research provided by Gartner has historically targeted [CIOs](#), senior IT, marketing, and supply chain managers. The acquisition of [CEB, Inc.](#) has expanded its range and breadth of offerings to support every business function in every industry and enterprise size.[6][3] Gartner clients include large corporations, government agencies, technology companies, and the investment community. Its client base consists of over 15,000 organizations in over 100 countries.[3] The company's products and services include Research, Executive Programs, Consulting, and Conferences. Founded in 1979, Gartner has over 15,000 employees located in 100+ offices worldwide.[7]

The company was founded in 1979 by [Gideon Gartner](#). Originally a private company, the Gartner Group was launched publicly the first time in the 1980s, then acquired by [Saatchi & Saatchi](#), a London-based advertising agency, and then acquired in 1990 by some of its executives, with funding from [Bain Capital](#) and [Dun & Bradstreet](#). [8] The company went public again in 1993.[9] In 2000 the name was simplified to Gartner.[10]

Gene Hall has been the [CEO](#) of the company since August 2004.

In the course of its growth, Gartner has acquired numerous companies providing related services, including Real Decisions—which became Gartner Measurement, now part of Gartner's consulting division—and [Gartner Dataquest](#), a market research firm. It has also acquired a number of direct competitors, including NewScience in the late 1990s, [Meta Group](#) in 2005, [AMR Research](#) and Burton Group in early 2010, and [Ideas International](#) in 2012.

Scott's technology and business model was copied by *YouTube, Vudu, Hulu, Bittorent, Napster, Netflix Streaming, Sony Vue* and other web broadcasters even though the U.S. Patent Office, contracts, non-disclosure agreements, emails, and other evidence proved that Scott and his team built and commercialized it first.

Ever since 1998, Scott has offered one million dollars for proof by any other company that they built and delivered a global, full-screen, full-color, high-volume user, video-on-demand, e-commerce internet broadcasting service prior to the services designed, engineered, patented, marketing and delivered globally by Scott. As of 2020, no party has been able to stand-up to the bet!

### CLICKMOVIE, TRAILER PARK and PERSONAL PRODUCER

### CLICKMOVIE: THE FIRST FULL-SCREEN HD GLOBAL WEB BROADCASTING COMPANY



**CLICK IT - GET IT! ANYWHERE IN THE WORLD**

One of the many novel patented industry "firsts" of **ClickMovie** was the ability of the technology to use **Peer-To-Peer (P2P) Mesh Network** broadcasting, just like **BitChute**, and others, do today. This was long before **Napster** or **Bittorrent** even existed! This allowed ClickMovie to reach the same number of viewers as **Comcast, CBS, NBC and ABC, COMBINED**, with an infrastructure cost that was 80 times lower.

Before Youtube, Hulu, Netflix Streaming, Prime Video, Vudu and all the rest even existed...there was  
**CLICKMOVIE!**

Scott Douglas Redmond's team created the internet video-on-demand company that existed years before **YouTube, Vudu, Hulu, Bittorent, Napster, Netflix Streaming, Sony Vue** (and all known dominant web-VOD players) even existed. Its patents pre-date the formation of YouTube by many years. A half hour broadcast television show on the TV series Silicon Valley Business Report and the vast number of articles, Consumer Electronic Show (CES) presentations and letters documents **CLICKMOVIE** as the 'first-ever' Youtube/Netflix-type company. It was the world's first public full-screen video store, online media channel and self-media distribution outlet. It is fair to say that The team's idea of delivering all media over the internet has been verified as a workable idea by every company that touches the internet including Akamai, Netflix, Bittorrent, Vudu, Hulu, and tens of thousands of others. As hundreds of documents prove, Sony Pictures engaged in extensive contracts, public announcements, meetings, deployments, letters, emails, airplane flights, board and corporate meetings with The team (even mentioning The team by name, as their source of inspiration, in Sony's Federal patent filings, which were sold to Dish Network by Sony) to have its first internet video-on-demand hardware and software developed by The team. "Clickmovie" and the movie trailer site "Trailer Park" and dozens of App's produced by The team were the first of their kind in the market.

ClickMovie, and it's technology, has been often copied but will always hold it's place in history as:  
**FIRST-TO-MARKET!**

**Bruce Conner: Scott's Mentor, Film Instructor And Sound Producer**



### **Bruce Conner: My Film Instructor And Sound Producer**

Bruce mentored Scott in College and played music on his film productions

**Bruce Conner** (November 18, 1933 – July 7, 2008) was an [American artist](#) who worked with [assemblage](#), [film](#), [drawing](#), [sculpture](#), [painting](#), [collage](#), and [photography](#).

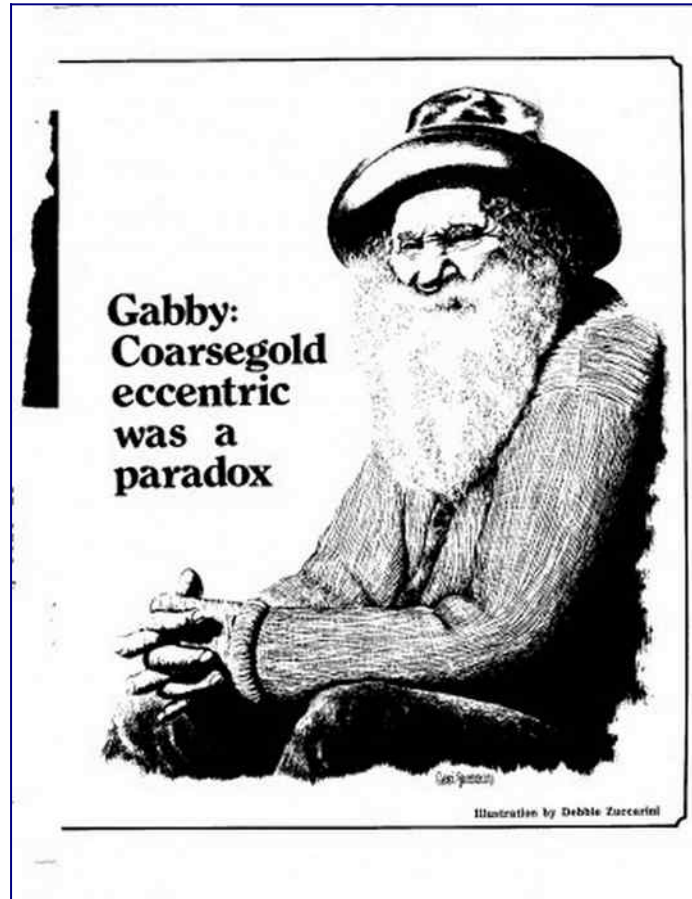
- [External links](#)

Conner worked in a variety of media from an early age. His first solo gallery show in New York City took place in 1956 and featured paintings. His first solo shows in San Francisco, in 1958 and 1959, featured paintings, drawings, prints, collages, assemblages, and sculpture. The Designer's Gallery in San Francisco held Bruce's third solo show. The gallery featured black panels which set off his drawings. One of his paintings, "Venus" was displayed in the gallery window. The painting showed a nude inside a form representing a clam shell. A local policeman confronted the gallery owners to get it removed, "as children in the neighborhood might see the painting." The [American Civil Liberties Union](#) stood behind the gallery's right to display it, and the matter never became an issue.

Conner first attracted widespread attention with his moody, nylon-shrouded [assemblages](#), complex amalgams of found objects such as women's stockings, bicycle wheels, broken dolls, fur, fringe, costume jewelry, and candles, often combined with collaged or painted surfaces. Erotically charged and tinged with echoes of both the [Surrealist](#) tradition and of San Francisco's [Victorian](#) past, these works established Conner as a leading figure within the international assemblage "movement." Generally, these works do not have precise meanings, but some of them suggest what Conner saw as the discarded beauty of modern America, the deforming impact of society on the individual, [violence against women](#),

and [consumerism](#). Social commentary and dissension remained a common theme among his later works.

**Scott Was The Producer Of The Documentary - 'Gabby, An American Eclectic'**



By Marlene Sossak

"It's probably the Grandfather a lot of people never had or wished they had. If they would have had him, they'd all know his son. He was an elfman."

Woody Laughman on Gabby

More than Gabby since his death in July of 1965. His life was characterized by a respect of society, its comforts and its rules. Yet Gabby died in a state unlike that of his cousin Lee Woody Laughman, a Fresno Bee columnist and friend of Gabby's remembrance with his cousin's last days spent in a Fresno hospital.

"It grieved me that the doctors at the hospital knew he was going to die yet they shaved his goddamn beard off," Laughman says. "You've got to make sure you're in the hospital."

Gabby's non-conformist days were spent in a cave, a broken-down bus, a shed and a trailer alternately on Highway 41 between Coarsegold and Oakhurst. He was separated by choice from relatives just 30 miles away.

Yet Gabby wasn't a hermit. He just didn't give a damn about society.

Gabby didn't live by society's rules; he didn't live by an ancestor's rules. He chose instead to live by his own rules which changed whenever he pleased.

LILL BROWER lived the Coarsegold Market and Supply a few years ago. Gabby would visit her almost daily to spin dreams and argue. She remembers that he was a "premeditated" health nut.

"He was very, fancy about his food," she said. "He didn't believe in coffee. He believed in tea and, pure beef steaks. He had every label on every can, and on with brands he wanted to make sure there were no preservatives."

"Drinking water was extremely important to him, but he was also a firm believer that tap water cured all," said Mrs. Brower.

Tequila and milk were Gabby's main foods, and he'd mix them or drink them straight—each food area neatly divided in a "mouth out" diet.

"Gabby never ate right. He never slept right. He never lived right," said Woody Laughman. "How he lived to that age of 60 defied every law of sanitation that I ever heard of."

Gabby's stepdaughter, Peggy Nelson, frequently made three 10-mile round trips weekly to the old man. She said he lived as long as he did because he lived the kind of life he wanted without regard to outside pressures.

"He did what he wanted to do, not what people told him to do or what he had to do," said Peggy. "He did what he believed in and he survived the way he did because he wanted to."

When Gabby died, he left 12 survivors. Most of them live in the Fresno area.

He was born in 1890 and married in the early 1900's. According to Peggy, he had a son and daughter from his first

marriage who "sort of divorced him because he divorced their mother at an early age."

Gabby married Peggy's mother, Mattie Irene, in 1917 who had 13 children.

A lady school teacher's friend introduced them and they just fell in love," Peggy said. "They went to Greyhound bus to Tijuana and got married. I've got pictures. They wore like kids standing beside a doorknob with tag hats."

Being a husband to two women wasn't Gabby's sole accomplishment. According to Peggy, he was in college pictures, with Clark Gable, Tex Ritter, Clark Gable and Gabby Hayes. He was a baseball player for the White Sox and a morning pitcher for the Chicago Cubs. He was a cattle rancher, a dog trainer, a veterinarian and a photographer, and he rode the rodeo circuit for years.

Gabby also was a dreamer. He could open dreams that seemed impossible to everyone except himself. He told Laughman he had a dream spring on his land that could mean all elements of the fact and also provide agricultural value. He planned to build a rest house there where people could be self-sufficient and renew their lives with the aid of his spring water.

To prove his spring water claims, Gabby told Laughman that one day two elderly women stopped by, and one of them had laryngitis. Gabby persuaded her to put her face into the mud surrounding the spring.

"A miraculous cure," Gabby is remembered as saying. "She never came back. She's free today, wherever she is."

Laughman said that as Gabby described his rest house plan of greenhouses and gardens, "I think that had to be in his pocket, but he saw things there and dreamt for a while I thought he was going to do it. I didn't know how."

At first place, Gabby appeared to be a self-sufficient, rugged old man, reaching the money vision. Actually, he was adept at playing "Aunt" and would frequently call his stepdaughter, Peggy, to come see him at 11 or 12 at night, revealing he was a dying man.

"But you could never be too sure," Peggy said. "Matt usually... he drank too much tequila that day and he was incoherent."

Gabby's rugged abode was skillfully wired for electricity by Peggy who also installed means to maintain 75 degrees there day and night. Peggy arranged mattresses so that if Gabby were laid or drunk, he would have mattresses as the floor on which to sleep, and ropes to pull himself out of bed once morning came.

Peggy installed lights and a refrigerator for Gabby's comfort. But Gabby couldn't always figure out how things worked.

"He wouldn't use the heater, he'd use light bulbs," Laughman said. "Peggy got him a refrigerator but somehow, Gabby put everything in the freezer, beer cans, soups, everything and he couldn't figure out why they'd explode. Then he'd get real and explain it and everything would open. Peggy could never explain to him, and he'd have a thing say if he didn't know how to use it."

continued

## Movers Haul Away Gabby's Monument



By Woody Laughman

**COARSEGOLD** — The last vestiges of legendary Gabby Bradburn, who died last summer, have all but disappeared from his diggings along Highway 41 between here and Oakhurst.

The monument, an old yellow Los Angeles bus which he acquired in 1945, was hauled away last week. Over the years it had been Gabby's home, until it became so full of clutter he had to move into a cave and later a mobile home.

For a time in the early 1950s, he sold popcorn, sno cones, peanuts and fresh orange juice from the bus to passersby along Highway 41, entertaining them with his ventriloquist dummy and winning yards of his movie, baseball and rodeo days.

The bus has been sold to Joseph Curtis of Irwindale who restores buses for use in period movies, parades, and for use by special tours and private parties.

**CORBIN** was able to dig up quite a bit of history on the bus, which was built in 1936, the last of the rear-door-only models.

It was Pacific Electric Railroad Bus No. 3720, running between Los Angeles, Long Beach and San Diego and doing some tour and charter service. A small kitchen was built in the rear to serve passengers snacks. On a charter trip to San Francisco in 1943, the engine threw a rod south of Fresno and the owners decided to sell it. Gabby bought it for \$1,600 and had it towed to his place on Highway 41.

Stepdaughter Peggy Nelson of Loma Star, who inherited the diggings and some 14 acres of land, sold the bus for \$1,500, but had to pay \$700 to have it hauled to Irwindale, in the Los Angeles area.

Since it is made of cast alumi-

num, about 13,000 pounds, she could have got a little more selling it as scrap, but the cost of cutting and cleaning made it unfeasible.

**SHE REMINISCED** the other day, as she supervised the tearing down of the two small frame buildings and the hauling away of all Gabby's junk treasures, how she first came to this place.

Gabby in 1943 married her mother, Mattie Irene Cox, a woman with 12 children, six of them grown and gone. The new-lyweds and the other seven children proceeded to set up housekeeping. Gabby and Mattie slept in the bus and the children, Jerry, 17; Mary Ethel, 16; Peggy, 15; Ruth, 14; Sonja, 13; and Evans, Paul and Paula, 9, in a tent.

"Us kids used to squeeze oranges and lemons for the juice Gabby sold to the tourists," Peggy said. And she recalled how her brothers and sisters run through the countryside like wild geese.

"That was in 1950, the spring and summer. And then when cold weather came, mom and us

kids went down the hill because there was no running water or heat on cold days. I'm the only one who ever came back to stay any length of time, living there and working in the Coarsegold store."

**SOON EVERYTHING** out there that Gabby lagged in for some 30 years will be gone, only the stone castle he once began and the spring up the hill which he dreamed of turning into a fountain of youth remanent.

Peggy Nelson has not decided what future use will be made of the site, only that she does not intend to sell it.

**ACTUALLY**, what I was thinking, standing out there and reflecting on life and the green hills of springtime, was that if a fellow could, say, buy an old motor coach pretty cheap, park it alongside the road and make a living selling orange juice and sno cones and stuff like that and in the meantime clean out the spring and maybe charge \$2 or \$3 for people to come out and take baths to rejuvenate themselves and...

**Highway 41 'Landmark'**

**'Gabby' Dies At 85**

Edward Bradford, better known as "Gabby" to the thousands of people who passed by his Highway 41 roadside, died Thursday in a Fresno hospital after a short illness. He was 85.

Bradford, who attained his nickname because of his resemblance to former Hollywood western star Gabby Hayes, was a roadside institution for thousands of San Joaquin Valley residents and tourists who passed by his ramshackle tent-shack on Highway 41 above Coarsegold.

There Bradford accumulated some of the most interesting junk imaginable in 40 years of collecting.

Bradford's Walter Mitty life encompassed the full gamut of what other people only dream about. He was a former Hollywood actor (in the silent era), a dog trainer, veterinarian, wrangler, photographer, stamper, rancher and baseball player.

His 14 football acres, once the object of a rival action for litigation, was the home for numerous friends, a goose, chickens, roosters and three dogs.

In his latter years, Gabby talked a lot about ecological how he was going to clean up the land, all the while adding to the three-foot high stack of dog food cans at the side of his wheelless old Los Angeles City bus and one-hole outhouse.

One of his last projects was a plan to dig a well that would put his place and his name on the map. He envisioned heating up water with geothermal

qualities, a fountain of youth, of sorts.

That project was abandoned in 1953 when Gabby seemed to sense the years closing in and moved on to something else—going off into the hills to find some "biggies" with magical talent and form a "hippie band" to perform skills along side the road in front of his place.

That dream faded, but was quickly replaced with another—an old people's place where "they could take take care of themselves and put in their own garden." He also talked of building a greenhouse by some dead oaks, and, up the ravine, a spa where there is supposedly healing water and mud — another fountain of youth.

Gabby will be buried in Sanger where funeral services are pending.



Edward Bradford — A roadside institution. Doc Photo

**Scott Was The Production Associate For ABC TV's Award Winning Documentary - 'THE ANGELS OF SERRA CENTER'**





Scott Redmond  
San Francisco, CA 94114

Dear Scott:

I want to thank you for your invaluable help as production assistant to me on the filming of the story we did last month at the Serra Center for the Adult Mentally Retarded in Fremont.

I can't recall when I've had such good support by anyone as I did thru your efforts for us every day and night of our extremely demanding production schedule. I know our crew feels the same way about you.

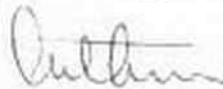
The film we're now editing for our May broadcast date is everything I'd hoped it would be.

Our documentary will be aired on the network on the DIRECTIONS program on Sunday, May 22nd. I'll send you the ABC release sometime next month, and I hope you will see it in San Francisco.

Please call on me if I can ever be of assistance to you; you may be sure I'll be calling on you in the future.

With best personal regards,

Sincerely,



Arthur Zegart  
Producer  
DIRECTIONS





"THE ANGELS OF SERRA CENTER," A PROGRAM WHICH SHOWS HOW MENTALLY RETARDED ADULTS ARE LEARNING TO LIVE FULL LIVES, WILL AIR ON "DIRECTIONS," MAY 22

*"These are the children who never grow up. They are called adult mentally retarded. They need love. They have a lot to give. When this exchange takes place, wonderful things happen."*  
— Coshi Van Deusen, Teacher, Serra Residential Center

There are nearly three million mentally retarded adults. Many live in situations where their capacities as human beings are being wasted.

But the Serra Residential Center in Fremont, Calif., is demonstrating what can be done and the ABC News "Directions" series shows how the retarded adults are learning to live full lives in "The Angels of Serra Center," airing **SUNDAY, MAY 22** (12:30-1:00 p.m., EDT), on the ABC Television Network.

The program is produced by Arthur Zegart, whose honors include the Albert Lasker Medical Television Journalism Award for "The Wastek Story," the first documentary on network television ever done about the mentally retarded in a state institution.

The Serra Residential Center was founded two years ago by a group of parents of retarded adults and the National Benevolent Association of the Christian Church (Disciples of Christ). Support also comes from state and federal funds.

A parent explains about his son: "We find ourselves getting older and our youngster getting older . . . What's going to happen to him when we're gone? What all of the parents . . . wanted was a home for the rest of their (the children's) lives . . . where they would be loved and . . . know that after we are gone, they're going to have a place to live."

"The Angels of Serra Center" shows the residents responding intellectually, emotionally and socially to the understanding, professional guidance and love they receive at the center.

The program, filmed during three weeks at the center, reveals the retarded adults' sense of discovery as they learn to share the world, to experience it and enjoy it, in a way other people take for granted. Viewers see the men and women of the center learning how to do a job and get a paycheck for it, developing an understanding in an independent living class of the meaning of safety signs, giving their total effort in trials for the Special Olympics for the Retarded, and making friendships outside the center with neighborhood people that enlarge the world of the retarded as well as that of the neighbors.

"There is nothing we do here," explains teacher Coshi Van Deusen, "that can't be done in any community. All it takes is understanding and love."

"The Angels of Serra Center" was written and directed as well as produced by Arthur Zegart.

The program was produced in cooperation with the Broadcasting and Film Division of the National Council of Churches. Sid Danon, Manager of ABC News Cultural Affairs, is executive producer. "Directions," the ABC news religious-cultural series, is a presentation of ABC News Public Affairs.

\*\*\*\*\*



**ABC TV'S AWARD WINNING "THE ANGELS OF SERRA CENTER"**

In 1975, Serra Residential Center was founded as a service unit of the National Benevolent Association, the health and human services arm of the Christian Church (Disciples of Christ). The agency, designed as a model peer living center aimed at integrating adults with developmental disabilities into the community, opened its doors on an exclusive 3 acre campus with a private drive located in the foothills of Mission San Jose in Fremont. Initially, the services provided were Community Care Residential Facilities housing 12 individuals, along with an on-site Day Time Activity

Center, DTAC, which promoted educational and employment development. Recognizing that there were few choices in service options for the vast developmentally disabled population, in 1983 Serra Center became vendorized with the Regional Center of the East Bay to provide community based Independent Living Services. With the trend for services in California moving away from large facility based care towards small, individualized supported living arrangements, in 1992 Serra Center began providing Supported Living Services, as well as working toward the conversion of our large residential care facilities to smaller Intermediate Care Homes. Licensed by the California Department of Health Services, the conversion of these facilities offered an opportunity for individuals who require 24-hour, intensive care, to receive this care in a residential based, versus a facility based environment. By 1996, Serra Center had fulfilled its destiny. With the sale of the exclusive property that once housed our residential care facilities, the agency became fully inclusive to the community by relocating our residential care facilities to residential homes throughout Fremont, focusing on providing services that integrated adults with developmental disabilities into the community.

For over 42 years, Serra Center has been committed to providing compassionate care for individuals with developmental disabilities. We currently serve more than 80 men and women in our community-based Residential Care Homes, Independent and Supported Living Services. The individuals served live in more than 65 traditional and accessible homes and apartments in residential neighborhoods throughout Alameda County.

Looking toward the future, Serra Center continues to strive for greater levels of independence and choice for people with developmental disabilities.

# LAB RESEARCH

Inside The Secret Government Laboratories We Work In: Dangers and Miracles

Some of Scott's lab projects, (below):

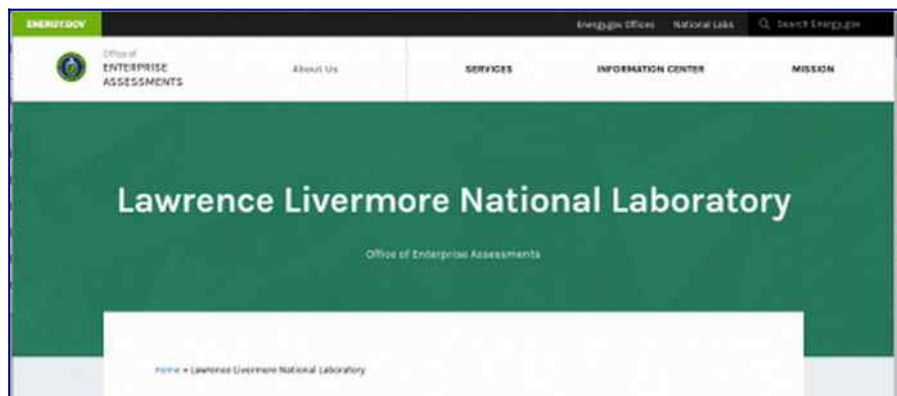


The toxic exposure from radioactive materials, micro-fine chemical powders, high-frequency energy generators and skin induction chemistry components is one of the tricky parts of 'building the future'.





(Note: Information below is sourced from publicly available news sources and does not disclose Q-Sensitive data)



**Lawrence Livermore National Laboratory (LLNL)** is a federal research facility in [Livermore, California, United States](#), founded by the [University of California, Berkeley](#) in 1952. It is controlled by the **United States Department of Energy** and funded by taxpayer funds via various funding buckets. The Secretary of Energy of The United States Department of Energy was the Head of the Lawrence Livermore Labs. The most exotic terrestrial and space-sourced energy and weapons technologies in the world are developed and experimented on in these facilities. Originally a branch of the [Lawrence Berkeley National Laboratory](#), the Lawrence Livermore laboratory became autonomous in 1971 and was designated a national laboratory in 1981.<sup>[1]</sup>

***A Federally Funded Research and Development Center (FFRDC), Lawrence Livermore lab is primarily funded by the U.S. Department of Energy (DOE)*** and managed and operated by Lawrence Livermore National Security, LLC (LLNS), a partnership of the University of California, [Bechtel](#), [BWX Technologies](#), [AECOM](#), and [Battelle Memorial Institute](#) in affiliation with the [Texas A&M University System](#).<sup>[2]</sup> In 2012, the laboratory had the synthetic chemical element [livermorium](#) (element 116) named after it.



Aerial view of Lawrence Livermore National Laboratory

LLNL is self-described as a "premier research and development institution for science and technology applied to national security."<sup>[3]</sup> Its principal responsibility is ensuring the safety, security and reliability of the [nation's nuclear weapons](#) through the application of advanced science, engineering, and technology. The laboratory also applies its special expertise and multidisciplinary capabilities towards preventing the proliferation and use of [weapons of mass destruction](#), bolstering homeland security, and solving other nationally important problems, including energy and environmental needs, scientific research and outreach, and economic competitiveness.

The laboratory is located on a 1 sq. mi.(2.6 km<sup>2</sup>) site at the eastern edge of [Livermore](#). It also operates a 7,000 acres (28 km<sup>2</sup>) remote experimental test site known as Site 300, situated about 15 miles (24 km) southeast of the main lab site. LLNL has an annual budget of about \$1.5 billion and a staff of roughly 8,000 employees.

History

Origins

LLNL was established in 1952 as the **University of California Radiation Laboratory at Livermore**, an offshoot of the existing [UC Radiation Laboratory at Berkeley](#). It was intended to spur innovation and provide competition to the nuclear weapon design laboratory at [Los Alamos](#) in [New Mexico](#), home of the [Manhattan Project](#) that developed the first [atomic weapons](#). [Edward Teller](#) and [Ernest Lawrence](#),

director of the Radiation Laboratory at Berkeley, are regarded as the co-founders of the Livermore facility.[4]

The new laboratory was sited at a former [naval air station](#) of [World War II](#). It was already home to several UC Radiation Laboratory projects that were too large for its location in the [Berkeley Hills](#) above the UC campus, including one of the first experiments in the magnetic approach to confined thermonuclear reactions (i.e. fusion). About half an hour southeast of Berkeley, the Livermore site provided much greater security for classified projects than an urban university campus.

Lawrence tapped his former graduate student [Herbert York](#), age 32, to run Livermore. Under York, the Lab had four main programs: [Project Sherwood](#) (the magnetic-fusion program), Project Whitney (the weapons-design program), diagnostic weapon experiments (both for the Los Alamos and Livermore laboratories), and a basic physics program. York and the new lab embraced the Lawrence "big science" approach, tackling challenging projects with physicists, chemists, engineers, and computational scientists working together in multidisciplinary teams. Lawrence died in August 1958 and shortly after, the university's board of regents named both laboratories for him, as the **Lawrence Radiation Laboratory**.

Historically, the Berkeley and Livermore laboratories have had very close relationships on research projects, business operations, and staff. The Livermore Lab was established initially as a branch of the Berkeley laboratory. The Livermore lab was not officially severed administratively from the Berkeley lab until 1971. To this day, in official planning documents and records, [Lawrence Berkeley National Laboratory](#) is designated as Site 100, Lawrence Livermore National Lab as Site 200, and LLNL's remote test location as Site 300.[5]

### Renaming

The laboratory was renamed **Lawrence Livermore Laboratory (LLL)** in 1971. On October 1, 2007 LLNS assumed management of LLNL from the University of California, which had exclusively managed and operated the Laboratory since its inception 55 years before. The laboratory was honored in 2012 by having the synthetic chemical element [livermorium](#) named after it. The LLNS takeover of the laboratory has been controversial. In May 2013, an Alameda County jury awarded over \$2.7 million to five former laboratory employees who were among 430 employees LLNS laid off during 2008.[6] The jury found that LLNS breached a contractual obligation to terminate the employees only for "reasonable cause." [7] The five plaintiffs also have pending age discrimination claims against LLNS, which will be heard by a different jury in a separate trial.[8] There are 125 co-plaintiffs awaiting trial on similar claims against LLNS.[9] The May 2008 layoff was the first layoff at the laboratory in nearly 40 years.[8]

On March 14, 2011, the City of Livermore officially expanded the city's boundaries to annex LLNL and move it within the city limits. The unanimous vote by the Livermore city council expanded Livermore's southeastern boundaries to cover 15 land parcels covering 1,057 acres (4.28 km<sup>2</sup>) that comprise the LLNL site. The site was formerly an unincorporated area of Alameda County. The LLNL campus continues to be owned by the federal government.

## Major projects

### Nuclear weapons

From its inception, Livermore focused on new weapon design concepts; as a result, its first three [nuclear tests](#) were unsuccessful. The lab persevered and its subsequent designs proved increasingly successful. In 1957, the Livermore Lab was selected to develop the warhead for the Navy's [Polaris missile](#). This warhead required numerous innovations to fit a nuclear warhead into the relatively small confines of the missile nosecone.[\[10\]](#)

During the [Cold War](#), many Livermore-designed [warheads](#) entered service. These were used in missiles ranging in size from the [Lance](#) surface-to-surface tactical missile to the megaton-class [Spartan antiballistic missile](#). Over the years, LLNL designed the following warheads: [W27](#) (Regulus cruise missile; 1955; joint with Los Alamos), [W38](#) (Atlas/Titan ICBM; 1959), [B41](#) (B52 bomb; 1957), [W45](#) (Little John/Terrier missiles; 1956), [W47](#) (Polaris SLBM; 1957), [W48](#) (155-mm howitzer; 1957), [W55](#) (submarine rocket; 1959), [W56](#) (Minuteman ICBM; 1960), [W58](#) (Polaris SLBM; 1960), [W62](#) (Minuteman ICBM; 1964), [W68](#) (Poseidon SLBM; 1966), [W70](#) (Lance missile; 1969), [W71](#) (Spartan missile; 1968), [W79](#) (8-in. artillery gun; 1975), [W82](#) (155-mm howitzer; 1978), [B83](#) (modern strategic bomb; 1979), and [W87](#) (LGM-118 Peacekeeper/MX ICBM; 1982). The W87 and the B83 are the only LLNL designs still in the U.S. nuclear stockpile.[\[11\]\[12\]\[13\]](#)

With the collapse of the [Soviet Union](#) in 1991 and the end of the [Cold War](#), the United States began a moratorium on nuclear testing and development of new nuclear weapon designs. To sustain existing warheads for the indefinite future, a science-based [Stockpile Stewardship Program \(SSP\)](#) was defined that emphasized the development and application of greatly improved technical capabilities to assess the safety, security, and reliability of existing nuclear warheads without the use of nuclear testing. Confidence in the performance of weapons, without nuclear testing, is maintained through an ongoing process of stockpile surveillance, assessment and certification, and refurbishment or weapon replacement.[\[citation needed\]](#)

With no new designs of nuclear weapons, the warheads in the U.S. stockpile must continue to function far past their original expected lifetimes. As components and materials age, problems can arise. Stockpile Life Extension Programs can extend system lifetimes, but they also can introduce performance uncertainties and require maintenance of outdated technologies and materials. Because there is concern that it will become increasingly difficult to maintain high confidence in the current warheads for the long term, the Department of Energy/National Nuclear Security Administration initiated the [Reliable Replacement Warhead \(RRW\)](#) Program. RRW designs could reduce uncertainties, ease maintenance demands, and enhance safety and security. In March 2007, the LLNL design was chosen for the Reliable Replacement Warhead.[\[14\]](#) Since that time, Congress has not allocated funding for any further development of the RRW.

### Plutonium research

LLNL conducts research into the properties and behavior of [plutonium](#) to learn how plutonium performs as it ages and how it behaves under high pressure (e.g., with the impact of high explosives).



Plutonium has seven temperature-dependent solid [allotropes](#). Each possesses a different density and [crystal structure](#). Alloys of plutonium are even more complex; multiple phases can be present in a sample at any given time. Experiments are being conducted at LLNL and elsewhere to measure the structural, electrical and chemical properties of plutonium and its alloys and to determine how these materials change over time. Such measurements will enable scientists to better model and predict plutonium's long-term behavior in the aging stockpile.[\[15\]](#)

The Lab's plutonium research is conducted in a specially designed facility called the SuperBlock, with emphasis on safety and security. Work with highly enriched uranium is also conducted here. In March 2008, the [National Nuclear Security Administration](#) (NNSA) presented its preferred alternative for the transformation of the nation's nuclear weapons complex. Under this plan, LLNL would be a center of excellence for nuclear design and engineering, a center of excellence for high explosive research and development, and a science magnet in high-energy-density (i.e., laser) [physics](#). In addition, most of its special nuclear material would be removed and consolidated at a more central, yet-to-be-named site.[\[16\]](#)

On September 30, 2009, the NNSA announced that about two thirds of the special nuclear material (e.g., plutonium) at LLNL requiring the highest level of security protection had been removed from LLNL. The move was part of NNSA's efforts initiated in October 2006 to consolidate special nuclear material at five sites by 2012, with significantly reduced square footage at those sites by 2017. The federally mandated project intends to improve security and reduce security costs, and is part of NNSA's overall effort to transform the Cold War era "nuclear weapons" enterprise into a 21st-century "nuclear security" enterprise. The original date to remove all high-security nuclear material from LLNL, based on equipment capability and capacity, was 2014. NNSA and LLNL developed a timeline to remove this material as early as possible, accelerating the target completion date to 2012.[\[17\]](#)

### Global security program

The Lab's work in global security aims to reduce and mitigate the dangers posed by the spread or use of weapons of mass destruction and by threats to energy and environmental security. Livermore has been working on global security and homeland security for decades, predating both the collapse of the Soviet Union in 1991 and the September 11, 2001, terrorist attacks. LLNL staff have been heavily involved in the cooperative nonproliferation programs with Russia to secure at-risk weapons materials and assist former weapons workers in developing peaceful applications and self-sustaining job opportunities for their expertise and technologies.[\[18\]](#) In the mid-1990s, Lab scientists began efforts to devise improved biodetection capabilities, leading to miniaturized and autonomous instruments that can detect biothreat agents in a few minutes instead of the days to weeks previously required for DNA analysis.[\[19\]\[20\]](#)

Today, Livermore researchers address a spectrum of threats – radiological/nuclear, chemical, biological, explosives, and cyber. They combine physical and life sciences, engineering, computations, and analysis to develop technologies that solve real-world problems.

LLNL's principal sponsor is the [Department of Energy/National Nuclear Security Administration](#) (DOE/NNSA) Office of Defense Programs, which supports its [stockpile stewardship](#) and advanced

scientific computing programs. Funding to support LLNL's [global security](#) and [homeland security](#) work comes from the DOE/NNSA Office of Defense Nuclear Nonproliferation, as well as the [Department of Homeland Security](#). LLNL also receives funding from DOE's [Office of Science](#), Office of Civilian Radioactive Waste Management, and [Office of Nuclear Energy](#). In addition, LLNL conducts work-for-others research and development for various [Defense Department](#) sponsors, other federal agencies, including [NASA](#), [Nuclear Regulatory Commission](#) (NRC), [National Institutes of Health](#), and [Environmental Protection Agency](#), a number of California State agencies, and private industry.[[citation needed](#)]

## Budget

For Fiscal Year 2009 LLNL spent \$1.497 billion[37] on research and laboratory operations activities:

### Research/Science Budget:

- [National Ignition Facility](#) – \$301.1 million
- Nuclear Weapon Deterrent (Safety/Security/Reliability) – \$227.2 million
- Advance Simulation and Computing – \$221.9 million
- Nonproliferation – \$152.2 million
- Department of Defense – \$125.9 million
- Basic and Applied Science – \$86.6 million
- Homeland Security – \$83.9 million
- Energy – \$22.4 million

### Site Management/Operations Budget:

- Safeguards/Security – \$126.5 million
- Facility Operations – \$118.2 million
- Environmental Restoration – \$27.3 million

## Directors

The LLNL Director is appointed by the board of governors of Lawrence Livermore National Security, LLC (LLNS) and reports to the board. The laboratory director also serves as the president of LLNS. Over the course of its history, the following scientists have served as LLNL director:

The University of California is entitled to appoint three Governors to the Executive Committee, including the Chair. Bechtel is also entitled to appoint three Governors to the Executive Committee, including the Vice Chair. One of the Bechtel Governors must be a representative of Babcock & Wilcox (B&W) or the Washington Division of URS Corporation (URS), who is nominated jointly by B&W and URS each year, and who must be approved and appointed by Bechtel. The Executive Committee has a seventh Governor who is appointed by Battelle; they are non-voting and advisory to the Executive

Committee. The remaining Board positions are known as Independent Governors (also referred to as Outside Governors), and are selected from among individuals, preferably of national stature, and can not be employees or officers of the partner companies.

The University of California-appointed Chair has tie-breaking authority over most decisions of the Executive Committee. The Board of Governors is the ultimate governing body of LLNS and is charged with overseeing the affairs of LLNS in its operations and management of LLNL.

LLNS managers and employees who work at LLNL, up to and including the President/Laboratory Director, are generally referred to as Laboratory Employees. All Laboratory Employees report directly or indirectly to the LLNS President. While most of the work performed by LLNL is funded by the federal government, Laboratory employees are paid by LLNS which is responsible for all aspects of their employment including providing health care benefits and retirement programs.

Within the Board of Governors, authority resides in the Executive Committee to exercise all rights, powers, and authorities of LLNS, excepting only certain decisions that are reserved to the parent companies. The LLNS Executive Committee is free to appoint officers or other managers of LLNS and LLNL, and may delegate its authorities as it deems appropriate to such officers, employees, or other representatives of LLNS/LLNL. The Executive Committee may also retain auditors, attorneys, or other professionals as necessary. For the most part the Executive Committee has appointed senior managers at LLNL as the primary officers of LLNS. As a practical matter most operational decisions are delegated to the President of LLNS, who is also the Laboratory Director. The positions of President/Laboratory Director and Deputy Laboratory Director are filled by joint action of the Chair and Vice Chair of the Executive Committee, with the University of California nominating the President/Laboratory Director and Bechtel nominating the Deputy Laboratory Director.[\[42\]](#)

The current LLNS Chairman is [Norman J. Pattiz](#), founder and chairman of [Westwood One](#), America's largest radio network, who also currently serves on the Board of Regents of the University of California. The Vice Chairman is J. Scott Ogilvie, president of Bechtel Systems & Infrastructure, Inc., who also serves on the Board of Directors of Bechtel Group, Inc. (BGI) and on the BGI Audit Committee.[\[43\]](#)

- *Egelko, Bob (May 13, 2013). "[Livermore lab jury awards \\$2.7 million](#)". [San Francisco Chronicle](#).*
- *Jacobson, Todd (May 17, 2013). "Five Former Livermore Workers Receive \$2.7 Million in Layoff Case". [Nuclear Weapons & Materials Monitor](#). [ExchangeMonitor Publications](#).*
- *Pike, John (April 27, 2005). "[Weapons of Mass Destruction: Miniaturization](#)". [Global Security](#). Retrieved June 3, 2008.*
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## Lab history



One of Sandia's first permanent buildings (Building 800) was completed in 1949

Sandia National Laboratories' roots go back to [World War II](#) and the [Manhattan Project](#). Prior to the United States formally entering the war, the [U.S. Army](#) leased land near an Albuquerque, New Mexico airport known as Oxnard Field, to service transient Army and [U.S. Navy](#) aircraft. In January 1941 construction began on the Albuquerque Army Air Base, leading to establishment of the *Bombardier School-Army Advanced Flying School* near the end of the year. Soon thereafter it was renamed Kirtland Field, after early Army military pilot Colonel [Roy C. Kirtland](#), and in mid-1942 the Army acquired Oxnard Field. During the war years facilities were expanded further and [Kirtland Field](#) served as a major Army Air Forces training installation.

In the many months leading up to successful detonation of the first [atomic bomb](#), the [Trinity](#) test, and delivery of the first airborne atomic weapon, [Project Alberta](#), [J. Robert Oppenheimer](#), Director of [Los Alamos Laboratory](#), and his technical advisor, Hartly Rowe, began looking for a new site convenient to Los Alamos for the continuation of weapons development – especially its non-nuclear aspects. They felt a separate division would be best to perform these functions. Kirtland had fulfilled Los Alamos' transportation needs for both the Trinity and Alberta projects, thus, Oxnard Field was transferred from the jurisdiction of the Army Air Corps to the U.S. Army Service Forces Chief of Engineer District, and thereafter, assigned to the Manhattan Engineer District. In July 1945, the forerunner of Sandia Laboratory, known as "Z" Division, was established at Oxnard Field to handle future weapons development, testing, and bomb assembly for the Manhattan Engineer District. The District-directive calling for establishing a secure area and construction of "Z" Division facilities referred to this as "[Sandia Base](#)", after the nearby [Sandia Mountains](#) — apparently the first official recognition of the "Sandia" name.

Sandia Laboratory was operated by the [University of California](#) until 1949, when President [Harry S. Truman](#) asked [Western Electric](#), a subsidiary of [American Telephone and Telegraph](#) (AT&T), to assume the operation as an "opportunity to render an exceptional service in the national interest." Sandia Corporation, a wholly owned subsidiary of Western Electric, was formed on October 5, 1949, and, on November 1, 1949, took over management of the Laboratory.<sup>[19]</sup> The [United States Congress](#) designated Sandia Laboratories as a National laboratory in 1979. In October 1993, Sandia National Laboratories (SNL) was managed and operated by **Sandia Corporation**, a wholly owned subsidiary of

[Lockheed Martin](#). As of May 2017, management of Sandia National Laboratory transitioned to **National Technology and Engineering Solutions of Sandia**, a wholly owned subsidiary of [Honeywell International](#),<sup>[6][7][8][3][20]</sup> covering government-owned facilities in [Albuquerque, New Mexico](#) (SNL/NM); [Livermore, California](#) (SNL/CA); [Tonopah, Nevada](#); [Shoreview, Minnesota](#); and [Kauai, Hawaii](#). SNL/NM is headquarters and the largest laboratory, employing more than 6,600 employees, while SNL/CA is a smaller laboratory, with about 850 employees. Tonopah and Kauai are occupied on a "campaign" basis, as test schedules dictate.

Sandia led a project that studied how to decontaminate a subway system in the event of a biological weapons attack (such as [anthrax](#)). As of September 2017, the process to decontaminate subways in such an event is "virtually ready to implement," said a lead Sandia engineer.<sup>[21]</sup>

#### Legal issues

On February 13, 2007, a New Mexico State Court found Sandia Corporation liable for \$4.7 million in damages for the firing of a former network security analyst, [Shawn Carpenter](#), who had reported to his supervisors that hundreds of military installations and defense contractors' networks were compromised and sensitive information was being stolen – including hundreds of sensitive [Lockheed](#) documents on the [Mars Reconnaissance Orbiter](#) project. When his supervisors told him to drop the investigation and do nothing with the information, he went to intelligence officials in the [United States Army](#) and later the [Federal Bureau of Investigation](#) to address the national security breaches. When Sandia managers discovered his actions months later, they revoked his [security clearance](#) and fired him.<sup>[22]</sup>

In 2014 an investigation determined Sandia Corp. used lab operations funds to pay for lobbying related to the renewal of its \$2 billion contract to operate the lab. Sandia Corp. and its parent company, Lockheed Martin, agreed to pay a \$4.8 million fine.<sup>[23]</sup>

SNL/NM consists of five technical areas (TA) and several additional test areas. Each TA has its own distinctive operations; however, the operations of some groups at Sandia may span more than one TA, with one part of a team working on a problem from one angle, and another subset of the same team located in a different building or area working with other specialized equipment. A description of each area is given below.

TA-I operations are dedicated primarily to three activities – the design, research, and development of [weapon](#) systems; limited production of weapon system components; and energy programs. TA-I facilities include the main [library](#) and offices, [laboratories](#), and shops used by administrative and technical staff.

TA-II is a 45-acre (180,000 m<sup>2</sup>) facility that was established in 1948 for the assembly of chemical [high explosive](#) main [charges](#) for [nuclear weapons](#) and later for production scale assembly of nuclear weapons. Activities in TA-II include the [decontamination](#), [decommissioning](#), and [remediation](#) of facilities and [landfills](#) used in past research and development activities. Remediation of the Classified Waste Landfill which started in March 1998, neared completion in FY2000. A testing facility, the Explosive Component Facility, integrates many of the previous TA-II test activities as well as some

testing activities previously performed in other remote test areas. The Access Delay Technology Test Facility is also located in TA-II.

TA-III is adjacent to and south of TA-V [both are approximately seven miles (11 km) south of TA-I]. TA-III facilities include extensive design-test facilities such as [rocket sled](#) tracks, [centrifuges](#) and a radiant [heat](#) facility. Other facilities in TA-III include a paper destructor, the Melting and Solidification Laboratory and the Radioactive and Mixed Waste Management Facility (RMWMF). RMWMF serves as central processing facility for packaging and storage of low-level and mixed waste. The remediation of the Chemical Waste Landfill, which started in September 1998, is an ongoing activity in TA-III.

TA-IV, located approximately 1/2 mile (1 km) south of TA-I, consists of several inertial-confinement [fusion](#) research and pulsed power research facilities, including the High Energy Radiation Megavolt Electron Source (Hermes-III), the [Z Facility](#), the Short Pulsed High Intensity Nanosecond X-Radiator (SPHINX) Facility, and the Saturn Accelerator. TA-IV also hosts some computer science and cognition research.

TA-V contains two research [reactor](#) facilities, an intense [gamma](#) irradiation facility (using [cobalt-60](#) and [caesium-137](#) sources), and the [Hot Cell](#) Facility.

SNL/NM also has test areas outside of the five technical areas listed above. These test areas, collectively known as Coyote Test Field, are located southeast of TA-III and/or in the canyons on the west side of the Manzanita Mountains. Facilities in the Coyote Canyon Test Field include the Solar Tower Facility (34.9623 N, 106.5097 W), the Lurance Canyon Burn Site and the Aerial Cable Facility.

#### Open-source software

In the 1970s, the Sandia, Los Alamos, Air Force Weapons Laboratory Technical Exchange Committee initiated the development of the [SLATEC](#) library of mathematical and statistical routines, written in [FORTRAN 77](#).

Today, Sandia National Laboratories is home to several [open-source](#) software projects:

- FCLib (Feature Characterization Library) is a library for the identification and manipulation of coherent regions or structures from spatio-temporal data.[\[24\]](#) FCLib focuses on providing data structures that are "feature-aware" and support feature-based analysis.[\[24\]](#) It is written in C and developed under a "[BSD-like](#)" license.[\[25\]](#)
- [LAMMPS](#) (Large-scale Atomic/Molecular Massively Parallel Simulator) is a molecular dynamics library that can be used to model parallel atomic/subatomic processes at large scale. [\[26\]](#) It is produced under the [GNU General Public License](#) (GPL) and distributed on the Sandia National Laboratories website as well as [SourceForge](#).[\[26\]](#)
- LibVMI is a library for simplifying the reading and writing of memory in running virtual machines, a technique known as virtual machine introspection.[\[27\]](#) It is licensed under the [GNU Lesser General Public License](#).[\[27\]](#)

- MapReduce-MPI Library is an implementation of [MapReduce](#) for distributed-memory parallel machines, utilizing the [Message Passing Interface](#) (MPI) for communication. It is developed under a modified [Berkeley Software Distribution license](#).[\[28\]](#)
- MultiThreaded Graph Library (MTGL) is a collection of graph-based algorithms designed to take advantage of parallel, shared-memory architectures such as the Cray XMT, Symmetric Multiprocessor (SMP) machines, and multi-core workstations.[\[29\]\[30\]](#) It is developed under a BSD License.[\[29\]](#)
- [ParaView](#) is a cross-platform application for performing data analysis and visualization.[\[31\]](#) It is a collaborative effort, developed by Sandia National Laboratories, Los Alamos National Laboratories, and the [United States Army Research Laboratory](#), and funded by the [Advanced Simulation and Computing Program](#).[\[31\]](#) It is developed under a BSD license.[\[31\]](#)
- [Pyomo](#) is a python-based optimisation [Mathematical Programming Language](#) with drivers with most commercial and open-source solver engines
- Soccoro, a collaborative effort with [Wake Forest](#) and [Vanderbilt](#) Universities, is [object-oriented](#) software for performing electronic-structure calculations based on density-functional theory. [\[32\]](#) It utilizes libraries such as MPI, [BLAS](#), and [LAPACK](#) and is developed under the GNU General Public License.[\[32\]](#)
- Titan Informatics Toolkit is a collection of cross-platform libraries for ingesting, analyzing, and displaying scientific and informatics data.[\[33\]\[34\]](#) It is a collaborative effort with [Kitware, Inc.](#), and uses various open-source components such as the [Boost Graph Library](#).[\[33\]](#) It is developed under a [New BSD license](#).[\[33\]](#)
- [Trilinos](#) is an object-oriented library for building scalable scientific and engineering applications, with a focus on linear algebra techniques.[\[35\]](#) Most Trilinos packages are licensed under a [Modified BSD License](#).[\[35\]](#)
- Xyce is an open source, [SPICE](#)-compatible, high-performance analog circuit simulator, capable of solving extremely large circuit problems.[\[36\]](#)

In addition, Sandia National Laboratories collaborates with Kitware, Inc. in developing the [Visualization Toolkit](#) (VTK), a cross-platform graphics and visualization software suite.[\[37\]](#) This collaboration has focused on enhancing the information visualization capabilities of VTK and has in turn fed back into other projects such as ParaView and Titan.[\[31\]\[33\]\[37\]](#)

#### Self-guided bullet

On January 30, 2012, Sandia announced that it successfully test-fired a self-guided [dart](#) that can hit targets at 2,000 m (2,187 yd). The dart is 4 in (100 mm) long, has its center of gravity at the nose, and is made to be fired from a small-caliber [smoothbore](#) gun. It is kept straight in flight by four [electromagnetically](#) actuated fins encased in a plastic puller [sabot](#) that fall off when the dart leaves the bore. The dart cannot be fired from conventional [rifled](#) barrels because the gyroscopic stability

provided by rifling grooves for regular bullets would prevent the self-guided bullet from reliably turning towards a target when in flight, so fins are responsible for stabilizing rather than spinning. A [laser](#) designator marks a target, which is tracked by the dart's optical sensor and 8-bit [CPU](#). The guided projectile is kept cheap because it does not need an [inertial measurement unit](#), since its small size allows it to make the fast corrections necessary without the aid of an IMU. The natural body frequency of the bullet is about 30 [hertz](#), so corrections can be made 30 times per second in flight. Muzzle velocity with commercial gunpowder is 2,400 ft/s (730 m/s) (Mach 2.1), but military customized gunpowder can increase its speed and range. Computer modeling shows that a standard bullet would miss a target at 1,000 m (1,094 yd) by 9.8 yd (9 m), while an equivalent guided bullet would hit within 8 in (20 cm). Accuracy increases as distances get longer, since the bullet's motions settle more the longer it is in flight.[\[38\]](#)[\[39\]](#)[\[40\]](#)

### [Research Universities: A Dirty Little Secret](#)



[www.thecollegesolution.com/research-universities-a-dirty-little-secret/](http://www.thecollegesolution.com/research-universities-a-dirty-little-secret/)

Mar 27, 2015 Realities of Undergrads at a **Research** University Who teaches undergrads. At **research** universities, undergraduates are the third priority after professor **research** and educating the next crop of PhDs. While producing graduate students is labor intensive, it's much cheaper to teach undergrads because they can be largely taught in lecture halls.

[How to create \*\*private\*\* or public groups in researchgate?](#)



[https://www.researchgate.net/post/How\\_to\\_create\\_private\\_or\\_public\\_groups\\_in\\_researchgate](https://www.researchgate.net/post/How_to_create_private_or_public_groups_in_researchgate)

How to create **private** or public groups in researchgate? ... you can create a **Research Lab** in RG. According to RG, a **lab** is a group of scientists, led by a senior researcher, who conduct ...

### [Research Laboratory | WBDG - Whole Building Design Guide](#)



<https://www.wbdg.org/building-types/research-facilities/research-laboratory>

Academic **labs** are primarily teaching facilities but also include some **research labs** that engage in public interest or profit generating **research**. Government **labs** include those run by federal agencies and those operated by state government do **research** in the public interest. Design of **labs** for the **private** sector, run by corporations, is usually driven by the need to enhance the **research** operation's profit making potential. G. Example Design and Construction Criteria

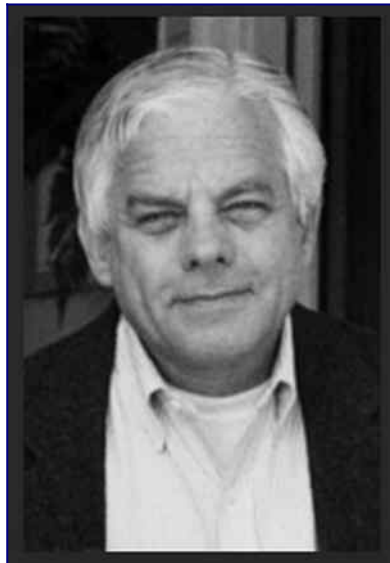
## **Scott Worked With Visionary Henry Dakin At His Washington Street Research Labs**



*"I loved all of the "Ghostbuster's gear that Henry had in the basement of the Washington Street Research Center. His 'Faraday Room' was off-the-hook...Henry called me one night and made me come down to the lab to pick up a bunch of fax machines. He said he would pay the phone bill for me if I stay up all night faxing some papers to numbers in Europe. The next day I found out that a Russian democracy revolution had started the previous night and Henry was using all his satellites, videophones, telephones and faxes to relay the information to regions outside of Moscow so that the people could carry the news back inside of Russia from the borders. The news of the revolution had been blocked by insiders in Moscow, it seemed. Did Henry help launch a Russian Revolution? ...maybe..."*

### **Henry Dakin - The Stuffed Toy Millionaire That Became The Secret Behind-The-Scenes Benign Godfather of VR**

Our Friend Henry!



**Henry Saltonstall Dakin 1936 - 2010**

### **Henry Dakin - The Stuffed Toy Millionaire That Became The Secret Behind-The-Scenes Benign Godfather of VR**

Henry Dakin died peacefully at home surrounded by family in Ukiah, California on August 25th at age 73. A fourth generation Californian, Henry helped creative individuals realize their uncommon dreams by sharing his skills and resources to support their innovative for-profit and not-for-profit organizations. His boundless curiosity, indefatigable industry and selfless service inspired countless people. He leaves a prodigious and enduring legacy of visionary philanthropy, humility, kindness, and immense generosity. Henry grew up in Pasadena, California, and graduated from [Harvard University](#) in 1958. During the 1960's, he did research in health physics at Lawrence Berkeley Laboratory and designed a pocket radiation detector that is still in use today. Devastating tragedy befell him in 1966 when he lost seven family members in a plane crash, among them his father Richard and brother Roger, who founded the Dakin Toy Company.

During the 1970s, Henry's protean interests in consciousness, parapsychology, virtual reality, computer technology, and environmental conservation generated leading-edge projects at his Washington Street offices in Pacific Heights in San Francisco. His love of printing led him to explore early innovations in desktop publishing and many other publishing ventures: he wrote a book on Kirlian photography, published religious documents smuggled from Soviet political prisons in the "Samizdat Bulletin" and a major guide to doing business in Moscow. Many of us helped Henry organize the latest "Russian Revolution" by helping him fax documents in and out of Russia and relay video via his "SpaceBridge" so that all of the Russians knew that an uprising was afoot.

Mondo 2000's RU Sirius described him as "technology's ultimate philanthropist".

Henry had the first, fully-equipped, modern "Ghostbusters" lab in the basement of his Washington Street Research Center, rigged out with a full Faraday Cage and NASA thermal imaging systems to capture paranormal and high-level human experiences. Some of us ran tests, like Ghostbusters, before there was a "Ghostbusters" movie. Some people think that Ivan Reitman got the idea for "Ghostbusters" by basing the main character off of Dakin. The Washington Street Research Center was around the corner from his transformed auto-body shop/Atelier which was at 3220 Sacramento Street.

Henry mentored and helped Jaron Lanier, Linda Jacobson, *The Well* text posting site, Scott Douglas-Redmond, RU Sirius, Howard Reingold, et al, move their efforts to the next stages. Henry had a deep relationship with NASA, CIA and State Department connections. His parties on the top floor of 3220 Sacramento Street were legendary, and usually had some of the most famous authors and technologists in the world in attendance.

Henry's deep concern over the escalating arms race grew in the 1980s, and resulted in his increasing support to many activist groups that were pioneering novel forms of citizen diplomacy such as Esalen's Soviet-American Exchange Program. Ever-expanding activities required more space, so Henry transformed an auto-body shop at 3220 Sacramento Street into a unique office complex, multi-media and cultural networking center for citizen activists to hold public and private events.

Over the decades, Henry incubated an astonishing number and variety of fledgling non-profit groups, providing them with technical support, funding, and office and living space. Some are now well-established groups such as Internews, United Nations Association of San Francisco, Institute for Global Communications, Presidio Alliance, San Francisco Global Business Council, Association for Space Explorers, Link TV, and Bioneers. Self-effacing, Henry shunned publicity, yet was a truly remarkable cultural ambassador, peacemaker, and global communications pioneer.

In 1988 the New York Times featured two of the many groups he fostered: Center for Citizen Initiatives, which exchanged business delegations of thousands of Americans and Soviets, and the San Francisco/Moscow Teleport, which introduced e-mail to the Soviet Union and later became a global telecom company. Henry and his wife Vergilia helped Bay Area parents establish the San Francisco Waldorf School, based on the teachings of Rudolf Steiner. The school now operates classes from pre-kindergarten through 12th grade, and is the largest Waldorf school in North America.

This loving husband, father, brother, and compassionate friend of humanity and the Earth was a 40-year resident of Pacific Heights in San Francisco, more recently of Mill Valley in Marin County, and finally Ukiah. He is survived by his wife Vergilia Paasche Dakin; daughters Adriana Dakin, Rose Dakin, and Julia Dakin Frech; son David Platford; grandchildren Iola Dakin Gravois and Gwendolyn Dakin Johnson; sisters Susanna Dakin and Mira Sadgopal (Mary Dakin); nephew Samuel Dakin and his children; and a vast network of friends and grateful recipients of his generosity.

A memorial celebration for Henry Dakin was held in San Francisco at The Presidio Golden Gate Club on November 14, 2010 at 2:00pm. The most interesting people in the world attended that event.

Gifts in Henry's name may be made to: San Francisco Waldorf School, Earth Island Institute, RSF Social Finance, and Mendocino Environmental Center.

Henry will be missed and never forgotten.

Thanks to his support of VR and "Ghostbusting", he may not be entirely "gone"... Some say his spirit still hangs out at the old lab on Washington Street! ;-)

# AEROSPACE SYSTEMS

**Scott Was Program Lead, Director of Strategic Innovation For Various Aerospace Projects**



Up to 1971, Scott had been working with a design effort to place a rover robotic lander on Mars. Scott proposed an airbag landing system but NASA rejected airbags ... ***AT FIRST:***



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
MANNED SPACECRAFT CENTER  
HOUSTON, TEXAS 77058

REPLY TO  
ATTN OF: EAU

September 13, 1971

Mr. Scott Redmond

Dear Mr. Redmond:


Your letter of August 27 to Dr. Paul Gast was forwarded to me by Dr. Gast since it involves an advanced concept. At the present time, Dr. Gast is completely involved with the scientific data returned by the Apollo 15.

I found your sketches very interesting. Several years ago we did a concept study of a manned Mars mission. At that time we found we did not have enough data on the Mars atmosphere to define an efficient landing and ascent system. While we know that there is an atmosphere on Mars and that it is less dense than the atmosphere on Earth, we do not have an accurate measurement of its density or its density profile with altitude. At the present, we have no studies or plans concerning a manned Mars mission. However, we hope that the proposed Viking mission will give us more data for future studies.

The Viking Program is an unmanned Mars orbiter with a landing module. This program is being managed by the NASA Langley Research Center, Hampton, Virginia. The program is now in the design stages and will probably be launched sometime during the mid-1970's. The proposed landing system consists of three phases: an aerodynamic braking phase using a heat shield similar to Apollo; a parachute system from a speed of mach = 2 down to a subsonic velocity; and finally, small descent engines during the last 60 seconds of landing to further slow down the spacecraft. There are no plans to launch this spacecraft from the Martian surface.

While we share your interest in a Mars Program, we conclude that it is premature at this time to define a landing and take off system. For this reason I am returning your sketches with our thanks. If you wish more information on the Viking Program, may I suggest you write to the Martin Marietta Corporation, Denver, Colorado. They are under contract to the Langley Research Center to build this spacecraft and to design the landing system.

Sincerely,

  
M. Eggleston  
Encl  
cc: Dr. P. Gast

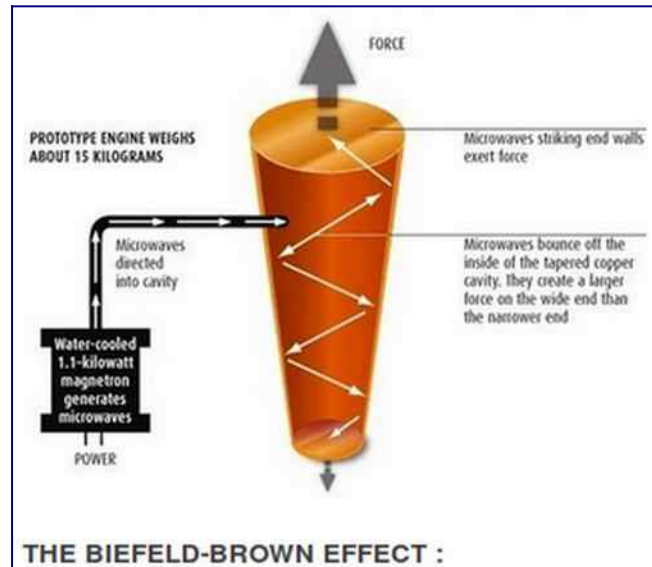
*turns out this WAS the way NASA finally chose to land the first vehicle on Mars I DID specify the right design way back when!*

BUT.. After extensive engineering review, it turns out that Scott's approach was the only way that could work and, in fact, that is how humans first landed the Pathfinder robotic explorer on mars!



(C) Scott Douglas Redmond, Design And Rendering by SDR





In another ironic NASA development, Scott won a U.S. Patent which over-rode an older NASA patent, which proved that vehicles can fly using only electronic beams of energy. NASA later confirmed that such electronic propulsion was possible after Scott built a working, 100% solid-state, aircraft and flew it domestically, in Silicon Valley, to prove to the U.S. Patent Office that the technology was functional

Here are some later reports on this technology:

[\*SDR It s Official NASA s Peer-Reviewed EM Drive Paper Has Finally Been Published .pdf\*](#)

If you think that electronic solid-state propulsion is "too far out" take a look at the latest news about all of the recent UFO sightings which seem to indicate that such sightings have nothing to do with aliens:

If you think that electronic solid-state propulsion is "too far out" take a look at the latest news about all of the recent UFO sightings which seem to indicate that such sightings have nothing to do with aliens:

### **Here's a believable explanation of those 'TIC-TAC' UFO videos released by the Navy – They May Have Been Air Force Electronic Propulsion Drones**

[Jurica Dujmovic](#) says a military patent could explain mysterious objects caught on video by a jet-fighter pilot



#### *The Stars Academy of Arts & Science*

Last month the U.S. Navy confirmed that three videos of unidentified aerial phenomena (UAP) taken by airplane pilots a few years ago are indeed authentic. (Notice we're not saying "unidentified flying object," or UFO.) This means the videos went through the U.S. military, so it can be assumed they have not been computer-generated or altered. Three clips dubbed "[FLIR1](#)," "[Gimbal](#)" and "[Go Fast](#)" show two encounters between Navy aircraft and UAP. The object was tracked by the aircraft's Raytheon [RTN, +0.03% AN/ASQ-228 Advanced Targeting Forward-Looking Infrared \(ATFLIR\) Pod](#), and in all three videos, it performed maneuvers that cannot be executed using current aviation technology.

Commander David Fravor, who flew one of the fighters in the video ("Gimbal"), [describes](#) the object as "Tic Tac"-shaped, 40-feet long, with no wings, exhaust or discernible propulsion. After some maneuvering, the object ended up hovering above the water. Moments later, it rapidly ascended to 12,000 feet and finally accelerated away at a speed the commander suggested was "well above supersonic."

#### Unsustainable G-forces

When asked if a human pilot could survive such an acceleration in a modern aircraft, Fravor responded with a resounding "no." Acceleration of that magnitude would wreak havoc on the human body: broken bones, shifting of organs, burst blood vessels and even death would occur as the body was crushed with G-forces it could not withstand.



But let's consider for a second that the mysterious object in question was manned by a human pilot. In that case, the vehicle would have to be equipped with the technology capable of reducing the inertial mass of the object by generating gravity waves to reduce G-forces during acceleration.

#### Navy patent

Perhaps this could be achieved if the outer shell of the craft were turned into a cavity wall filled with gas, which would vibrate thanks to microwave emitters. This description was taken from a [patent](#) the U.S. Navy applied for in 2016, which says such a peculiar craft could move with great ease through air, space or water by being enclosed in a vacuum plasma bubble or sheath.

That could be the UAP that Fravor saw during his documented flight. Gravity manipulating tech at play could explain how the craft was able to effortlessly perform certain maneuvers such as suddenly turning sideways without losing altitude (aka knife-edge flight) in the FLIR1 video, or rapidly changing in-flight direction without visible inertia.

While the patent for the mysterious craft was approved last year, there is no indication that it was built or tested. Then again, it's hard to imagine that a military aircraft equipped with this kind of technology would get any publicity.

#### Accidental release

If it indeed was this craft in the video, it was built and tested prior to the patent application. However, it could be that the cat got out of the bag. That could be why the Navy reluctantly acknowledged the authenticity of the footage, while also outlining that it wasn't cleared for public release. So far, the pieces of the puzzle seem to be falling into place. Then again, at about the [1:17 mark](#) in the video above, one pilot says: "There's a whole fleet of them. Look on the ASA." ASA is most likely AESA, the APG-79 radar's "[search while track](#)" feature that enables it to follow multiple targets without degradation to its search capability. Having one experimental craft exposed during a mission is a likely event, but what about a whole fleet?

#### Two explanations

We have two possibilities: First, there was more than one mysterious aircraft at the location, but it's unlikely any of them was our patented vehicle.

Another explanation could be that because of the vacuum sheath or another type of stealth technology surrounding the UAP, radar erroneously reported multiple bogies, where in fact there was only one.

That would also explain why the pilot had a hard time locking on to the target in "FLIR1" and "Go Fast" videos. The speed must have played a role as well. Clinicians have a saying: Common things are common. If it looks like a duck, swims like a duck and quacks like a duck, then it probably *is* a duck.

So what do you think is more likely? A Navy experimental aircraft, inadvertently uncovered by pilots, or an alien UFO? My bet is on the latest Navy patent, but I'm open to suggestions. Please share them in the comment section below. You can take your tinfoil hat off now.

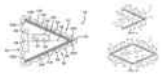
*Jurica Dujmovic is a MarketWatch columnist.*

Craft using an inertial mass reduction device

#### Abstract

A craft using an inertial mass reduction device comprises of an inner resonant cavity wall, an outer resonant cavity, and microwave emitters. The electrically charged outer resonant cavity wall and the electrically insulated inner resonant cavity wall form a resonant cavity. The microwave emitters create high frequency electromagnetic waves throughout the resonant cavity causing the resonant cavity to vibrate in an accelerated mode and create a local polarized vacuum outside the outer resonant cavity wall.

Images (2)



#### Classifications

[B64G1/409](#) Unconventional spacecraft propulsion systems

US10144532B2

United States

[Download PDF](#) [Find Prior Art](#) [Similar](#)

#### Inventor

[Salvatore Cezar Pais](#)

#### Current Assignee

US Secretary of Navy

Worldwide applications

2016 [US](#)

Application US15/141,270 events

2016-04-28

[Application filed by US Secretary of Navy](#)

2016-04-28

[Priority to US15/141,270](#)

2016-04-28

[Assigned to DEPARTMENT OF THE NAVY](#)

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Application granted

2018-12-04

[Publication of US10144532B2](#)

2019-10-15

Application status is Active

2036-09-28

#### Description

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without payment of any royalties thereon or therefor.

There are four known fundamental forces which control matter and, therefore, control energy. The four known forces are strong nuclear forces, weak nuclear forces, electromagnetic force, and gravitational force. In this hierarchy of forces, the electromagnetic force is perfectly positioned to be able to manipulate the other three. A stationary electric charge gives rise to an electric (electrostatic) field, while a moving charge generates both an electric and a magnetic field (hence the electromagnetic field). Additionally, an accelerating charge induces electromagnetic radiation in the form of transverse waves, namely light. Mathematically, as well as physically, electromagnetic field intensity can be represented as the product of electric field strength and magnetic field strength. Electromagnetic fields act as carriers for both energy and momentum, thus interacting with physical entities at the most fundamental level.

Artificially generated high energy electromagnetic fields, such as those generated with a high energy electromagnetic field generator (HEEMFG), interact strongly with the vacuum energy state. The vacuum energy state can be described as an aggregate/collective state, comprised of the superposition of all quantum fields' fluctuations permeating the entire fabric of spacetime. High energy interaction with the vacuum energy state can give rise to emergent physical phenomena, such as force and matter fields' unification. According to quantum field theory, this strong interaction between the fields is based on the mechanism of transfer of vibrational energy between the fields. The transfer of vibrational energy further induces local fluctuations in adjacent quantum fields which permeate spacetime (these

fields may or may not be electromagnetic in nature). Matter, energy, and spacetime are all emergent constructs which arise out of the fundamental framework that is the vacuum energy state.

Everything that surrounds us, ourselves included, can be described as macroscopic collections of fluctuations, vibrations, and oscillations in quantum mechanical fields. Matter is confined energy, bound within fields, frozen in a quantum of time. Therefore, under certain conditions (such as the coupling of hyper-frequency axial spin with hyper-frequency vibrations of electrically charged systems) the rules and special effects of quantum field behavior also apply to macroscopic physical entities (macroscopic quantum phenomena).

Moreover, the coupling of hyper-frequency gyrational (axial rotation) and hyper-frequency vibrational electrodynamics is conducive to a possible physical breakthrough in the utilization of the macroscopic quantum fluctuations vacuum plasma field (quantum vacuum plasma) as an energy source (or sink), which is an induced physical phenomenon.

The quantum vacuum plasma (QVP) is the electric glue of our plasma universe. The Casimir Effect, the Lamb Shift, and Spontaneous Emission, are specific confirmations of the existence of QVP.

It is important to note that in region(s) where the electromagnetic fields are strongest, the more potent the interactions with the QVP, therefore, the higher the induced energy density of the QVP particles which spring into existence (the Dirac Sea of electrons and positrons). These QVP particles may augment the obtained energy levels of the HEEMFG system, in that energy flux amplification may be induced.

It is possible to reduce the inertial mass and hence the gravitational mass, of a system/object in motion, by an abrupt perturbation of the non-linear background of local spacetime (the local vacuum energy state), equivalent to an accelerated excursion far from thermodynamic equilibrium (analogous with symmetry-breaking induced by abrupt changes of state/phase transitions). The physical mechanism which drives this diminution in inertial mass is based on the negative pressure (hence repulsive gravity) exhibited by the polarized local vacuum energy state (local vacuum polarization being achieved by a coupling of accelerated high frequency vibration with accelerated high frequency axial rotation of an electrically charged system/object) in the close proximity of the system/object in question. In other words, inertial mass reduction can be achieved via manipulation of quantum field fluctuations in the local vacuum energy state, in the immediate proximity of the object/system. Therefore it is possible to reduce a craft's inertia, that is, its resistance to motion/acceleration by polarizing the vacuum in the close proximity of the moving craft.

Polarization of the local vacuum is analogous to manipulation/modification of the local space time topological lattice energy density. As a result, extreme speeds can be achieved.

If we can engineer the structure of the local quantum vacuum state, we can engineer the fabric of our reality at the most fundamental level (thus affecting a physical system's inertial and gravitational properties). This realization would greatly advance the fields of aerospace propulsion and power generation.

The physical equation which describes the maximum intensity achieved by the high energy electromagnetic field generator (HEEMFG) system is described by the magnitude of the Poynting vector, which in non-relativistic for (accounting for all three modes of motion) can be written as:

$$S_{\max} = fG(\sigma^2/\epsilon_0) [R r \omega + R v v + v R] \quad (\text{Equation 1}),$$

where  $fG$  is the HEEMFG system geometric shape factor (equal to 1 for a disc configuration),  $\sigma$  is the surface charge density (total electric charge divided by surface area of the HEEMFG system),  $\epsilon_0$  is the electrical permittivity of free space,  $R_r$  is the radius of rotation (disc radius),  $\omega$  is the angular frequency of rotation in rad/s,  $R_v$  is the vibration (harmonic oscillation) amplitude,  $v$  is the angular frequency of vibration in Hertz, and the term  $vR$  is the curvilinear translation speed (acquired via a propulsive unit of either chemical, nuclear or magneto-plasma-dynamic (VASIMR) type attached to the HEEMFG system—the integrated unit being the craft).

Therefore, if we consider only rotation, given a disc configuration, with  $\sigma=50,000$  Coulombs/m<sup>2</sup>, a disc (spinning/axially rotating) radius of 2 m and an angular speed of 30,000 RPM, an generate an electromagnetic (EM) field intensity ( $S_{\max}$  is the rate of energy flow per unit area, or energy flux) value on the order of 1024 Watts/m<sup>2</sup> (this value does not account for any QVP interactions).

Furthermore, if we couple the high frequency of rotation with high vibration (harmonic oscillation) frequencies in the range of 10<sup>9</sup> to 10<sup>18</sup> Hertz (and above) we can obtain  $S_{\max}$  intensity values in the range 1024 to 1028 Watts/m<sup>2</sup> (and beyond). These extremely high EM field intensity values emphasize the novelty of this concept, especially suited for the design of energy generation machinery with power output levels much higher than those currently achievable.

For the case of an accelerating angular frequency of vibration ( $a_{\max}=Rvv^2$ ), neglecting rotation and curvilinear translation, Equation 1 becomes (note intrinsic significance of acceleration):

$$S_{\max} = fG(\sigma^2/\epsilon_0) [(R v v^2) t_{op}] \quad (\text{Equation 2}),$$

where  $t_{op}$  is the operational time for which the charged electrical system is accelerating in its vibration.

Close inspection of Equation 2 results in an important realization, namely: strong local interaction with the high energetics of the quantum vacuum fields' fluctuations superposition (macroscopic vacuum energy state) is possible in a laboratory environment, by application of high frequency gyration (axial spin) and/or high frequency vibration of minimally charged objects (order of unity surface charge density), in an acceleration mode. In this manner, a high degree of local vacuum energy polarization can be achieved.

To illustrate this fact, considering a high end microwave frequency on the order of 10<sup>11</sup> Hertz, a surface charge density on the order of 1 C/m<sup>2</sup> and an operational time on the order of the inverse of the vibrational amplitude, we obtain an energy flux value of 10<sup>33</sup> W/m<sup>2</sup>. This exceptionally high power intensity induces a pair production avalanche, thereby ensuring complete polarization of the local vacuum state.

Local polarization of the vacuum in the close proximity of a craft equipped with an HEEMFG system would have the effect of cohering the highly energetic and random quantum vacuum fields' fluctuations, which virtually block the path of an accelerating craft, in such a manner that the resulting

negative pressure of the polarized vacuum allows less labored motion through it (as noted by H. David Fröning).

Spontaneous electron-positron pair production out of the vacuum is a strong indicator of vacuum polarization being achieved. Julian Schwinger (Nobel prize winning physicist) gives a value of the electric field (E) on the order of  $10^{18}$  V/m, for this phenomenon to take place. The mass production rate  $(dm/dt)_{pp}$  of particle/anti-particle pairs can be expressed in terms of  $S_{max}$  (energy flux), namely:

$$2\gamma(dm/dt)_{pp} c^2 = S_{max} A S \quad (\text{Equation 3}),$$

where  $AS$  is the surface area from which the energy flux emanates,  $c$  is the speed of light in free space, and  $\gamma$  is the relativistic stretch factor  $[1-(v^2/c^2)]^{-1/2}$ . Note that the pair production rate increases with increasing energy flux from the craft's generated electromagnetic field. Therefore, the level, to which the vacuum is polarized, thus allowing less labored motion through it, strictly depends on the artificially generated electromagnetic energy flux.

If we consider the boundary condition in the close proximity of the craft where the energy density of the artificially generated electromagnetic (EM) field equals the local energy density of the polarized vacuum (caused in part by the local zero-point vacuum fluctuations on the order of  $10^{-15}$  Joules/cm<sup>3</sup> and in part by the artificial EM field interacting with the local vacuum energy state) we can write the approximate equivalence:

$$(S_{max}/c) = [(h^* \nu^4)/8\pi^2 c^3] \quad (\text{Equation 4}),$$

where  $c$  is the speed of light in free space,  $(h^*)$  is Planck's constant divided by  $(2\pi)$  and  $(\nu)$  is the frequency of quantum fluctuations in the vacuum (modeled as harmonic oscillators). Furthermore, given that the left side of Equation 4 is on the order of  $(\epsilon_0 E^2)$  where  $E$  is the artificially generated electric field (strength), considering the Schwinger value of  $(E)$  for the onset of spontaneous pair production, we obtain a  $(\nu)$  value on the order of 1022 Hertz, which matches our expectations, since the Dirac virtual pair production, results in total annihilation, yielding gamma rays, which occupy the electromagnetic frequency spectrum of 1019 Hertz and above.

A recent paper, by the inventor, published in the International Journal of Space Science and Engineering (Pais, S. C., Vol. 3, No. 1, 2015) considers the conditional possibility of superluminal craft propulsion in a Special Relativity framework. It is observed that under certain physical conditions, the singularity expressed by the relativistic stretch factor 'gamma' as the craft's speed ( $v$ ) approaches the speed of light ( $c$ ), is no longer present in the physical picture. This involves the instantaneous removal of energy-mass from the system (craft) when the craft's speed reaches  $(v=c/2)$ . The author discusses the possibility of using exotic matter (negative mass/negative energy density) to bring about this effect. This may not have to be the only alternative. The artificial generation of gravity waves in the locality of the craft, can result in energy-mass removal (gravity waves are propagating fluctuations in gravitational fields, whose amplitude and frequency are a function of the motion of the masses involved).

Moreover, it is feasible to remove energy-mass from the system by enabling vacuum polarization, as discussed by Harold Puthoff; in that diminution of inertial (and thus gravitational) mass can be achieved via manipulation of quantum field fluctuations in the vacuum. In other words, it is possible to

reduce a craft's inertia, that is, its resistance to motion/acceleration by polarizing the vacuum in the close proximity of the moving craft. As a result, extreme speeds can be achieved.

Vacuum energy state can be thought of as a chaotic system comprised of random, highly energetic fluctuations in the collective quantum fields which define it. Considering Ilya Prigogine's Nobel Prize work on far from equilibrium thermodynamics (the Prigogine effect), a chaotic system can self-organize if subjected to three conditions, namely: the system must be non-linear, it must experience an abrupt excursion far from thermodynamic equilibrium, and it must be subjected to an energy flux (order from chaos).

An artificially generated high energy/high frequency electromagnetic field (such as the fields an HEEMFG can produce) can fulfill all three conditions simultaneously (especially in an accelerated vibration/rotation mode), when strongly interacting with the local vacuum energy state. These interactions are induced by the coupling of hyper-frequency axial rotation (spin) and hyper-frequency vibration (harmonic oscillations/abrupt pulsations) of electrically charged systems (high energy electromagnetic field generators), placed on the outside of the craft in strategic locations.

In this manner, local vacuum polarization, namely the coherence of vacuum fluctuations within the immediate proximity of the craft's surface (outside vacuum boundary) is achieved, allowing for 'smooth sailing' through the negative pressure (repulsive gravity) of the 'void' (the void within the vacuum). It may be stated that the void 'sucks in' the craft.

It is of extreme importance that the craft has the ability to control the accelerated modes of vibration and spin of the electrically charged surfaces, in particular the rapid rates of change of accelerated-decelerated-accelerated vibration and/or accelerated-decelerated-accelerated gyration (axial spin) of the electrified surfaces. In this manner we can delay the onset of relaxation to thermodynamic equilibrium, thus generating a physical mechanism which may induce anomalous effects (such as inertial or gravitational mass reduction). Furthermore, it is possible to enable the Gertsenshtein Effect, namely the production of high frequency gravitational waves by high frequency electromagnetic radiation, in this manner modifying the gravitational fields in close proximity to the craft, resulting in its propulsion.

For the mathematical formalism of inertial (and thus gravitational) mass reduction consider that in a published Physical Review Letter (December 1989), Hayasaka and Takeuchi report the anomalous weight reduction of gyroscopes for right rotations only. At the time, the authors could not elucidate the physics behind these anomalous results. Several null result experiments followed (a recent one as well) which declared the Hayasaka et al. results null and void, or at least questionable—however all these experiments were flawed in their ability to entirely duplicate the Hayasaka et al. experimental procedure and set-up (especially the high vacuum chamber the test section was mounted inside).

Closer attention to the non-zero intercept of the Hayasaka et al. expression relating the gyro's weight diminution with respect to its mass, its angular rotational frequency and its effective rotor radius, yields the possibility of a local quantum vacuum effect, namely a negative pressure (repulsive gravity) condition being present. This is due to the non-zero intercept being of the same order of magnitude

with the Fokker-Planck electron-proton thermal equilibration rate ( $f_{ep}$ ), given an approximate Hydrogen atom number density of 40 atoms/m<sup>3</sup>, commensurate with the local quantum vacuum state.

Consider the Hayasaka et al. expression for gyro-weight reduction, written in SI units as:

$$\Delta W R(\omega) = -2 \times 10^{-10} M r_{eq} \omega \text{ kg m s}^{-2} \quad (\text{Equation 5}),$$

where  $\Delta WR$  is the reduction in weight,  $M$  is the mass of the rotor (in kg),  $\omega$  is the angular frequency of rotation (in rad/s), and  $r_{eq}$  is the equivalent gyro-radius (in m).

From this relationship we see that the units of the non-zero intercept ( $2 \times 10^{-10}$ ) are (1/s). This non-zero intercept is endemic of the physics of gyro-rotational acceleration, in particular, the physical mechanism of abrupt excursion far from thermodynamic equilibrium.

We can further hypothesize that if the gyro-rotor was to vibrate uniformly (instead of rotating), and its vibration (harmonic oscillation) was to accelerate in frequency (thus inducing a state of abrupt departure far from thermodynamic equilibrium), it is possible that the resulting physics would be similar to that describing the rotational acceleration, thus we may write (using a simple dimensional analysis):

$$\Delta W R(\nu) = -f_{ep} M A \nu \text{ kg m s}^{-2} \quad (\text{Equation 6}),$$

where  $f_{ep}$  is the Fokker-Planck electron-proton thermal equilibration rate,  $A \nu$  is the vibration amplitude and  $\nu$  is frequency of vibration (in 1/s).

The present invention is directed to a craft using an inertial mass reduction device. The craft includes an inner resonant cavity wall, an outer resonant cavity, and microwave emitters. The outer resonant cavity wall and the inner resonant cavity wall form a resonant cavity. The microwave emitters create high frequency electromagnetic waves throughout the resonant cavity causing the outer resonant cavity wall to vibrate in an accelerated mode and create a local polarized vacuum outside the outer resonant cavity wall.

It is a feature of the present invention to provide a craft, using an inertial mass reduction device, that can travel at extreme speeds.

These and other features, aspects and advantages of the present invention will become better understood with reference to the following description and appended claims, and accompanying drawings wherein:

is an embodiment of the craft using an inertial mass reduction device; and

is another embodiment of the craft using an inertial mass reduction device.

The preferred embodiments of the present invention are illustrated by way of example below and in . As shown in , the craft **10** using an inertial mass reduction device comprises of an outer resonant cavity wall **100**, an inner resonant cavity **200**, and microwave emitters **300**. The outer resonant cavity wall **100** and the inner resonant cavity wall **200** form a resonant cavity **150**. The microwave emitters **300** create high frequency electromagnetic waves **50** throughout the resonant cavity **150** causing the outer resonant cavity wall **100** to vibrate in an accelerated mode and create a local polarized vacuum **60** outside the outer resonant cavity wall **100**.



In the description of the present invention, the invention will be discussed in a space, sea, air, or terrestrial environment; however, this invention can be utilized for any type of application that requires use of an inertial mass reduction device or use of a craft.

In the preferred embodiment, the resonant cavity **150** is filled with a noble gas **155**. The gas xenon may be used; however, any noble gas **155** or the equivalent can be utilized. The gas is used for the plasma phase transition aspect of symmetry-breaking for amplification of the Prigogine effect. In addition, the resonant cavity **150** may be an annular duct. As shown in , the resonant cavity **150** may also surround a crew compartment **55**, a power plant system **56**, a cargo bay **57**, or any other type of compartment. The crew compartment **55**, power plant system **56**, cargo bay **57**, and the like can be guarded in a Faraday-type cage **58**, against all EM radiation effects.

The craft **10**, particularly the outer resonant cavity wall **100**, may be electrically charged. In addition, the inner resonant cavity wall **200** may be electrically insulated, in order for the inner resonant cavity wall **200** not to vibrate. The craft **10** includes a main body **20** with a leading portion **21** and a trailing portion **22**. Additionally, the craft **10** may include a frustum **25** or cone on its leading portion **21** of its main body **20**. In one of the embodiments, the frustum **25** is rotatable about its own axis **26** or has the ability to rotate.

The microwave emitter(s) **300** may be an electromagnetic field generator. The preferred electromagnetic generator is the one described in U.S. patent application Ser. No. 14/807,943, entitled "Electromagnetic Field Generator and Method to Generate an Electromagnetic Field," filed on Jul. 24, 2015. The application is herein incorporated by reference, and has the same inventor. However, the microwave emitters **300** may be any type of microwave emitter or radio frequency emitter that is practicable.

As shown in , the craft **10** has a plurality of microwave emitters **300**. The microwave emitters **300** are arranged within the resonant cavity **150**, and may be antennas (high radio frequency emitter sources) in the electromagnetic (EM) spectrum range of 300 Megahertz to 300 Gigahertz. The plurality of microwave emitters **300** are arranged within the resonant cavity **150** such that the required electrical charge is present through the resonant cavity **150** in order to cause the outer resonant cavity wall **100** to vibrate in an accelerated mode.

As described, in one of its embodiments, the craft **10** utilizes microwave-induced vibration within a resonant annular cavity (the resonant cavity **150**). The manner and effectiveness with which the microwave energy couples with the outer resonant cavity wall **100** is called the cavity Q-factor (the inner resonant cavity wall **200** is electrically insulated and does not vibrate). This parameter can be written as the (energy stored/energy lost) ratio and is in the range of  $10^4$  to  $10^9$  (and beyond), depending on whether ordinary metal (Aluminum or Copper at room temperature) or cryogenically cooled superconducting material (Yttrium Barium Copper Oxide or Niobium) is used for the outer resonant cavity wall **100** and outside mold line skin of the craft. One must realize that the high energy/high frequency electromagnetic field generator responsible for the inertial mass diminution effect would generate a repulsive EM energy field while in earth's atmosphere, thereby repelling air

molecules in its path of ascent/flight. Consequently, once in orbital space, by local vacuum polarization (quantum field fluctuations' modification/coherence), a repulsive gravity effect (recall the negative pressure of the polarized vacuum) would permit swift movement of the craft **10** (which can be, but without limitation, a cone or lenticular triangle/delta wing configuration).

It is possible to envision a hybrid aerospace/undersea craft (HAUC), which due to the physical mechanisms enabled with the inertial mass reduction device, can function as a submersible craft capable of extreme underwater speeds (lack of water-skin friction) and enhanced stealth capabilities (non-linear scattering of RF and sonar signals). This hybrid craft would move with great ease through the air/space/water mediums, by being enclosed in a vacuum plasma bubble/sheath, due to the coupled effects of EM field-induced air/water particles repulsion and vacuum energy polarization.

As shown in , in another embodiment of the invention, the trailing portion **22** of the craft **10** is a mirror age of the leading portion **21**. This includes all working components internal to the craft. As shown in , the leading portion **21** includes a top leading edge portion **121** and a bottom leading edge portion **123**, while the trailing portion **22** includes top trailing edge portion **222** and a bottom trailing edge portion **223**. Both the trailing portions **22** and leading portions **21** include an outer resonant cavity wall **100** and an inner resonant cavity wall **200** forming a resonant cavity **150**, such the resonant cavity **150** shrouds, envelopes, or encapsulates the craft **10**. The outer resonant cavity wall **100**, inner resonant cavity wall **200**, and resonant cavity **150** that completely surrounds the craft **10** can be referred to as a resonant cavity shroud **156**. The microwave emitters **300** create high frequency electromagnetic waves throughout the entire resonant cavity shroud **156** causing the outer resonant cavity wall **100** (or a portion of the outer resonant cavity wall **100**) to vibrate and create a local polarized vacuum **60** outside the outer resonant cavity wall **100**.

In operation, in the preferred embodiment, the craft **10** may be powered to move in different directions by causing different sections of the resonant cavity shroud **156** to vibrate. For instance, to move upwards the top portion **156** (top leading edge portion **121** and top trailing edge portion **222**) of the resonant cavity shroud **156** is vibrated, thereby, causing the polarized vacuum field **60** to move the craft upward.

When introducing elements of the present invention or the preferred embodiment(s) thereof, the articles "a," "an," "the," and "said" are intended to mean there are one or more of the elements. The terms "comprising," "including," and "having" are intended to be inclusive and mean that there may be additional elements other than the listed elements.

Although the present invention has been described in considerable detail with reference to certain preferred embodiments thereof, other embodiments are possible. Therefore, the spirit and scope of the appended claims should not be limited to the description of the preferred embodiment(s) contained herein.

## Claims (4)

### Hide Dependent

1. A craft using an inertial mass reduction device comprising:

an inner resonant cavity wall;

an outer resonant cavity wall, the inner resonant cavity wall and the outer resonant cavity wall forming a resonant cavity; and,

microwave emitters such that the microwave emitters create high frequency electromagnetic waves throughout the resonant cavity causing the outer resonant cavity wall to vibrate in an accelerated mode and create a local polarized vacuum outside the outer resonant cavity wall.

2. The craft of , wherein the resonant cavity is filled with a noble gas.

3. The craft of , wherein the outer resonant cavity wall is electrically charged.

4. The craft of , wherein the resonant cavity is axially rotated in an accelerated mode.

## Non-Patent Citations (6)

### Title

Froning, H. David, Quantum Vacuum Engineering for Power and Propulsion from the Energetics of Space, Third International Conference on Future Energy, Oct. 9-10, 2009, Washington, DC, US.

Hayasaka, Hideo and Takeuchi, Sakae, Anomalous Weight Reduction on a Gyroscope's Right Rotations around the Vertical Axis on the Earth, The American Physical Society, Physical Review Letters, Dec. 18, 1989, vol. 63, No. 25, Japan.

Pais, Salvatore, Conditional Possibility of Spacecraft Propulsion at Superluminal Speeds, Intl. J. Space Science and Engineering, 2015, vol. 3, No. 1, Inderscience Enterprises Ltd.

Pais, Salvatore, The High Energy Electromagnetic Field Generator, Int. J. Space Science and Engineering, 2015, vol. 3, No. 4, Inderscience Enterprises, Ltd.

Prigogine, Ilya, Time, Structure and Fluctuations, Nobel Lecture, Dec. 8, 1977, Brussels, Belgium and Austin, Texas.

Puthoff, H.E., Polarizable-Vacuum (PV) Approach to General Relativity, Foundations of Physics, Jun. 2002, vol. 32, No. 6.

# SOCIAL NETWORKS

## United States Patent Office Hearing Rules That Scott Invented The Core Element That Makes Web Social Media Business Work



In a major federal hearing, The United States Patent office examined the evidence and prior art of Yahoo, Facebook (including that of Mark Zuckerberg, personally), and other claims, and ruled that Scott's 1976, and forward, companies predated the creation of Facebook and other social media companies.

It was proven that Scott had designed, built, engineered, placed online, marketed, organized as companies; three different social media companies that had invented what is now known as device-based social media that provides commerce via location and web-like computerized interaction. The U.S. Patent office had multiple examiners review and rule in an extraordinary case and they found that the evidence proved that Scott's invention was the first; it was novel; it was unique!

An investor is now sought to commercialize this opportunity. The investment amount would be paid directly to law firms who will prosecute this intellectual property in exchange for a percentage of the sale of this intellectual property.

### DID THE IRS JUST SAY SCOTT'S PATENT IS WORTH "BILLIONS OF DOLLARS"?

#### [IRS says Facebook's valuation of IP transfer to Ireland ...](#)

<https://mnetax.com/us-irs-says-facebooks-valuation-ip-transfer-ireland-may-understated-billions-dollars-16104>

The Department of Justice is seeking enforcement of six summonses issued by the **IRS** to **Facebook** that relate to a 2010 transaction where **Facebook** transferred to its Irish subsidiary **intellectual property** rights associated with **Facebook's** business in locations except for in the US and Canada.

#### [Facebook tells IRS it won't pay billions over Irish tax ...](#)

<https://arstechnica.com/tech-policy/2016/10/facebook-fights-irs-claim-it-owes-billions-for-overseas-tax-maneuver/>

**Facebook** tells **IRS** it won't pay **billions** over Irish tax maneuver ... subsequent years—an amount that **Facebook** says could reach **billions**. ... **intellectual property**, **Facebook** assumed a value of ...

[Facebook sued for \\$9 billion in unpaid taxes by US IRS ...](#)

 <https://www.hindustantimes.com/tech/facebook-sued-for-9-billion-in-unpaid-taxes-by-us-irs/story-ELnXoaOy2KXDfj5f4U7GxJ.html>

**Facebook** sued for \$9 **billion** in unpaid taxes by US **IRS** The US Internal Revenue Service (**IRS**) has sued **Facebook** alleging that the social networking giant undervalued the **intellectual property** it ...

[US IRS sues Facebook for USD 9 billion in unpaid taxes #27279](#)

 <https://www.newkerala.com/news/2020/27279.htm>

San Francisco, Feb 20 : The US Internal Revenue Service (**IRS**) has sued **Facebook** for USD 9 **billion** in unpaid taxes, alleging that the social networking giant undervalued the **intellectual property** ...

[The US takes Facebook to court over \\$9 billion in ...](#)

 <https://thenextweb.com/hardfork/2020/02/19/facebook-irs-9-billion-taxes-unpaid-transfer-pricing-ireland-dublin-corporate/>

The **IRS** says **Facebook** intentionally undervalued **intellectual property** it transferred to an Irish subsidiary in order to avoid paying taxes. ... Buffett dumps \$800M **worth** of Apple stock, invests in ...

[The IRS Is Investigating Facebook | Investing | US News](#)

 <https://money.usnews.com/investing/articles/2016-07-08/the-irs-is-investigating-facebook>


The **IRS** Is Investigating **Facebook**. ... saying the company may have understated the value of **intellectual property** it transferred to Ireland by **billions** ... The **IRS** says this problem started in ...

[Facebook hit with IRS suit over billions in unpaid taxes](#)

 <https://www.inputmag.com/culture/facebook-hit-with-tax-court-trial-by-the-irs>

The Internal Revenue Service (**IRS**) is challenging **Facebook** to a tax trial in San Francisco, according to Reuters. The **IRS** has accused the world's biggest social network of purposefully downplaying the monetary value of its **intellectual property** in an offshore Ireland deal originally made in 2010. The **IRS** says that **Facebook** allegedly understated the value to avoid paying taxes in the United States.

[Facebook admits it could owe \\$5bn if IRS proves they have ...](#)

 <https://www.dailymail.co.uk/news/article-3716616/It-s-complicated-Facebook-admits-owe-Uncle-Sam-5billion-IRS-investigation-proves-company-avoiding-taxes-2010-Ireland-transfer.html>

A new filing **Facebook**, Inc. says it could owe the **IRS** anywhere from \$3billion to \$5billion plus interest ... make a value of **Facebook's intellectual property**, but **IRS** claims it may have been ...

## Investors Or Law Firms Can Partivcipate In These Infringement And Anti-Trust Cases



**SCOTT'S TEAM PROTECTS THEIR INVESTORS, AND PUBLIC CITIZENS, WITH EPIC LITIGATION CASES DESIGNED TO "DO THE RIGHT THING"!**

His investigators, forensic researchers and records officers are some of the best assets in the IC, investigative journalism, Congressional and academic realms

LITIGATION FINANCING CAN BE VERY LUCRATIVE:

### **Investing In Lawsuits, Part III: Here Come The Banks and Hedge Funds**

On Sunday, the New York Times returned to third-party funding of lawsuits with "[Investors Put Money on Lawsuits to Get Payouts](#):"

Large banks, hedge funds and private investors hungry for new and lucrative opportunities are bankrolling other people's lawsuits, pumping hundreds of millions of dollars into medical malpractice claims, divorce battles and class actions against corporations — all in the hope of sharing in the potential winnings.

...


Total investments in lawsuits at any given time now exceed \$1 billion, several industry participants estimated. Although no figures are available on the number of lawsuits supported by lenders, public records from one state, New York, show that over the last decade, more than 250 law firms borrowed on pending cases, often repeatedly.

The rise of lending to plaintiffs and their lawyers is a result of the high cost of litigation. Pursuing a civil action in federal court costs an average of \$15,000, the Federal Judicial Center [reported last year](#).

**SCOTT, AND HIS PEERS, ARE SEEKING SKILLED CONTINGENCY LAW FIRMS FOR FORTUNE 500 CASES, OR FINANCING FOR SUCH CASES, IN EXCHANGE FOR A**

**PERCENTAGE OF THE JURY AWARDS. CONTACT US IF QUALIFIED FOR LARGE IP, TOXIC-EXPOSURE, ANTI-TRUST AND RICO ACTIONS.**

[Legalist, a lawsuit \*\*financing\*\* startup, uses algorithms to ...](#)

 <https://slate.com/technology/2016/08/legalist-a-lawsuit-financing-startup-uses-algorithms-to-spot-promising-cases.html>

This Lawsuit-**Financing** Startup Uses Algorithms to Find Cases That Could Earn **Big Bucks**. By ... Schubarth writes that the new Legalist follows other **litigation financing** startups such as Trial ...

[Legal Funding and \*\*Big\*\* Dollars for Plaintiffs' Attorneys ...](#)

 <https://rapidfunds.com/small-cases-can-still-mean-big-bucks-from-legal-funders/>

Many post-settlement funding companies only provide funding against large cases with **big** settlement amounts. That approach leaves a lot of small law firms with no opportunity to get cash to run their business. Fortunately, not all funding companies reject law firms with small cases. That's why attorneys need to carefully research their **financing** options and look for companies who will work ...

[\*\*Litigation Financing\*\* | Above the Law](#)

 <https://abovethelaw.com/tag/litigation-financing/>

\* Somewhere along the line, obvious puffery turned into false advertising suits and it's costing some companies **big bucks**. [Corporate Counsel] \* The latest in **litigation financing**: crowdfunding ...

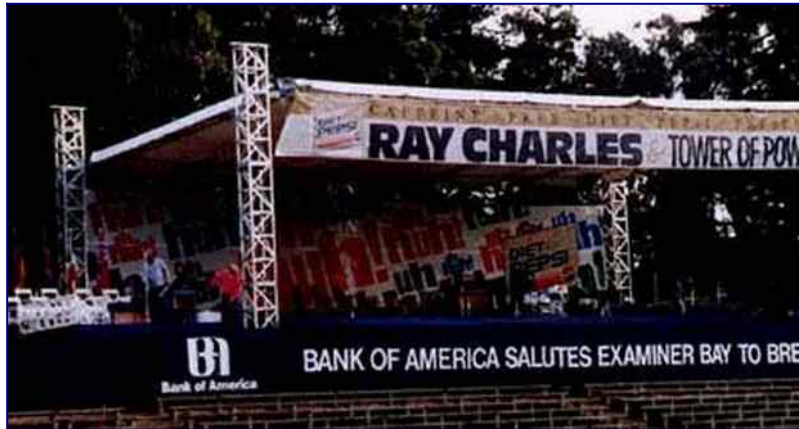
[\*\*Litigation Finance: The Next Hot Trend?\*\* | Above the Law](#)

 <https://abovethelaw.com/2013/04/litigation-finance-the-next-hot-trend/>

**Big-Time Bonus Bucks** For Associates. ... **Litigation Finance: The Next Hot Trend?** ... Loyal readers of Above the Law may recall Travis Lenkner from the pages of Legal Eagle Wedding Watch.

# FOOTSTOCK ANNUAL PUBLIC SUPER EVENT

**Producer Of The Bay To Breakers Footstock Festival And Polo Field Events Super Concerts**



Bay To Breakers Footstock Festival And Polo Events Super Concerts

200,000 attendees at peak audience



Multi-year annual mega-event.

Hundreds of thousands of dollars of savings for clients.

Millions of dollars raised for charity.

Rapid deployment, operation and de-construction of a fully functional portable "City".





*“...I led the creation of one of the largest live annual public programs in regional history. In undertaking this task I designed, built, operated and de-evolved a rapid-erection city for 200,000+ people. The change that I was to lead required that I create a new urban program, that had never existed before, across millions of square feet of space to be managed for mass human logistics. In the years before my appointment, a high-profile program initiative had resulted in a large public draw for an existing project. However, at the end of each project, the public were left wandering in an inhospitable environment with no added deployment of the already assembled masses. This created a health issue for the public, a brand value loss for the sponsors, difficult logistics and loss of messaging opportunity. I was asked to serve as the producing Senior Executive because I had a reputation as a manager who could achieve results in challenging large-scale projects where those results were on-time, under-budget and delivered “against-all-odds”.*

*The agency's priorities included strengthening the impact of the program, giving the large numbers of public participants a reason to move from a dangerous environment and improving branding opportunities many fold. These priorities had major ramifications because they helped to raise awareness and millions of dollars in funds for a large number of important charities, affect the actions of hundreds of thousands of people and enhance the public perception of national brands and agencies.*

*I designed, designated and requested and received additional resources to hire staff and secure volunteers to build a rapid-erection city for up to 250,000 people deployed across a 2.5 million square*

*foot area and to personally train those individuals to implement the deployment strategies. The White House, Congress, The State Government and the City Government had stated that charities and community service organizations had to source new, creative, ways to acquire non-governmental funding due to anticipated budget constraints and they expected the program to demonstrate results in alternative charity funding within the fiscal year. The recruitment, logistics, and training of staff had to be accomplished expeditiously without sacrificing quality in the production process while deploying a program that would move over 250,000 people to a safer location while concurrently raising nearly a million dollars in a few days to fund over 20 important charities. Due to the Government cutbacks in charity support, many charities were in critical financial states. In one respect this was similar to a disaster management deployment.*

*At that time, there was no staff or volunteer acquisition, training or tasking system. I led a comprehensive review of the process potentials and identified systemic solutions: Notification to the population of the opportunity; software tracked intake; systemized screening; and on-site pre-printed training materials and “copy-this” task examples. I created an effective low-cost staff and volunteer system acquisition and roll-out system which has been used and mirrored for over a decade.*

*To address the building of a rapid-erection city for hundreds of thousands of people, I sourced safety systems, first aid resources, power resources, tenting, staging and structural systems, signage, crowd control, security, communications and related resources required to keep approximately 250,000 people safe, organized and optimized.*

*I worked with almost every city agency to coordinate the massive logistics for this undertaking and to automate the files and production data, which eliminated an average of 2.5 months from the development process. Further, the system I created gave our program a continuously improving process which could be tuned at any moment and provided a documented process which could be replicated each year. The layout and logistics system I created have been reviewed by later, new, contractors but are still replicated, just as I designed them, because each new program lead found that the way I laid it out was the best way to make it work.*

*Via my leadership, which earned the full cooperation and support of my sponsors, suppliers, volunteers and staff. I encouraged everyone to share my vision of a broadly effective community effort which would benefit corporations, community, individuals, charity and government. All of my team joined the effort and we formed a truly effective collaboration. Working together, we implemented a new large-scale program which became annual, gained the respect and trust of employees within our associated organizations and throughout the community.*

*As a result of my efforts, over 500 part-time employees were hired. At-risk weather exposure-time for public participants was reduced from one hour to 7 minutes, on average. This streamlined process made it possible to raise extensive amounts of money for multiple charities in a matter of days. I received numerous letters of commendation from my supervisors, managed millions of people’s logistics safely, transported millions of people to and from the location, helped raise tens of millions of dollars for charity for over a decade and created a clone-able system which has remained infinitely repeatable for annual replication by later staff. This program had never been done before and I created, managed and deployed it. In creating and managing this program, one of the leave-behinds was a power and communications network that I arranged to have pulled in via automated underground tunneling technology, which provides for an emergency power and communications resource for hundreds of thousands of people in the event of a future disaster. The location in which I*

*was left this stand-by communications and power system was the Polo Fields in San Francisco's Golden Gate Park, where the refugees from 1906 earthquake disaster assembled. Overall, I was able to save the event almost 45% on their budget over outside supplier options because I know the actual costs of almost every supplier and the sourcing system used by most of them."*

# SAN FRANCISCO BLUES FESTIVAL

Scott Was The Logistics Director For The Annual San Francisco Blues Festival In Cooperation With The National Park Service



Logistics Director: Annual San Francisco Blues Festival In Cooperation With The National Park Service. Produced by Tom Mazzolini.



# LAW TECHNOLOGIES

Law Enforcement And Intelligence Technologies Contractor



If you have read Edward Snowden's book: **PERMANENT RECORD** or Luke Bencie's book: **AMONG ENEMIES**, you will know how hard things are out in the world. From self-operating, AI-driven, search arrays that can hunt down every bribe by every tech oligarch via every stock market account to AI-powered tax evasion screening grids and more...

What does modern IC involve? To get the answer, let's look at it from a historical perspective: Modern tactics of espionage and dedicated government intelligence agencies developed over the course of the late-[19th century](#). A key background to this development was [The Great Game](#) - the strategic rivalry and conflict between the British Empire and the Russian Empire throughout [Central Asia](#) between 1830 and 1895. To counter Russian ambitions in the region and the potential threat it posed to the British position in [India](#), the [Indian Civil Service](#) built up a system of surveillance, intelligence and counterintelligence. The existence of this shadowy conflict was popularized in [Rudyard Kipling's](#) famous [spy book](#), [Kim](#) (1901), where he portrayed the Great Game (a phrase Kipling popularized) as an espionage and intelligence conflict that "never ceases, day or night".[\[3\]](#)

The establishment of dedicated intelligence and counterintelligence organizations had much to do with the colonial rivalries between the major European powers and to the accelerating development of military technology. As espionage became more widely used, it became imperative to expand the role of existing police and internal security forces into a role of detecting and countering foreign spies. The [Evidenzbureau](#) (founded in the [Austrian Empire](#) in 1850) had the role from the late-19th century of countering the actions of the [Pan-Slavist movement](#) operating out of [Serbia](#).

After the fallout from the [Dreyfus Affair](#) of 1894-1906 in France, responsibility for French military counter-espionage passed in 1899 to the [Sûreté générale](#)—an agency originally responsible for order enforcement and public safety—and overseen by the [Ministry of the Interior](#).[\[4\]](#)

The [Okhrana](#)<sup>[5]</sup> initially formed in 1880 to combat political terrorism and left-wing revolutionary activity throughout the [Russian Empire](#), was also tasked with countering enemy espionage.<sup>[6]</sup> Its main concern was the activities of revolutionaries, who often worked and plotted subversive actions from abroad. It set up a branch in [Paris](#), run by [Pyotr Rachkovsky](#), to monitor their activities. The agency used many methods to achieve its goals, including [covert operations](#), [undercover agents](#), and "perlustration"—the interception and reading of private correspondence. The Okhrana became notorious for its use of [agents provocateurs](#), who often succeeded in penetrating the activities of revolutionary groups - including the [Bolsheviks](#).<sup>[7]</sup>

Integrated counterintelligence agencies run directly by governments were also established. The British government founded the [Secret Service Bureau](#) in 1909 as the first independent and interdepartmental agency fully in control over all government counterintelligence activities.

Due to intense lobbying from [William Melville](#) and after he obtained German mobilization plans and proof of their financial support to the [Boers](#), the British government authorized the formation of a new intelligence section in the [War Office](#), MO3 (subsequently redesignated M05) headed by Melville, in 1903. Working under-cover from a flat in London, Melville ran both counterintelligence and foreign intelligence operations, capitalizing on the knowledge and foreign contacts he had accumulated during his years running [Special Branch](#).

Due to its success, the Government Committee on Intelligence, with support from [Richard Haldane](#) and [Winston Churchill](#), established the Secret Service Bureau in 1909 as a joint initiative of the [Admiralty](#), the [War Office](#) and the [Foreign Office](#) to control secret intelligence operations in the UK and overseas, particularly concentrating on the activities of the [Imperial German](#) government. Its first director was [Captain Sir George Mansfield Smith-Cumming](#) alias "C".<sup>[8]</sup> The [Secret Service Bureau](#) was split into a foreign and counter-intelligence domestic service in 1910. The latter, headed by Sir [Vernon Kell](#), originally aimed at calming public fears of large-scale German espionage.<sup>[9]</sup> As the Service was not authorized with police powers, Kell liaised extensively with the [Special Branch](#) of [Scotland Yard](#) (headed by [Basil Thomson](#)), and succeeded in disrupting the work of Indian revolutionaries collaborating with the Germans during the war. Instead of a system whereby rival departments and military services would work on their own priorities with little to no consultation or cooperation with each other, the newly established [Secret Intelligence Service](#) was interdepartmental, and submitted its intelligence reports to all relevant government departments.<sup>[10]</sup>

For the first time, governments had access to peacetime, centralized independent intelligence and counterintelligence bureaucracy with indexed registries and defined procedures, as opposed to the more *ad hoc* methods used previously.

# LUMIASCAPES URBAN PRESENTATIONS

Scott Was The Producer Of The World's First 'Lumiascape' Urban Electro-Optical Programs



Viewed and experienced by millions of people...



Major audio-visual presentations with broadcast sound and web connectivity designed to be visible to millions of people

**Producer, Creator Of The Largest Light Concert In History At The Time**

The City Of San Francisco gave Scott a mountain, called "Twin Peaks" in the middle of San Francisco, for a week.

Everybody in the Bay Area could experience this event.

**THE U.S. CENSUS BUREAU SAYS THAT THE VIEWERSHIP WAS OVER FOUR MILLION PEOPLE!**

**If you can see Sutro Tower on top of Twin peaks you could see the event. If you had a radio or a computer, you could hear and participate in the event.**

Scott had control of the whole top of the mountain for a week.

His army of hundreds of technicians, '*Symphony Light Orchestra*' public volunteers, public groups including Wavy Gravy and the Hog Farm, Haight Ashbury Medical Group, Electrical Union staff, SFPD and others, brought the brightest display system, ever deployed, to the middle of San Francisco for all to experience along with a simulcast soundtrack and interactive public control of some of the lights!





# VR AND AUGMENTED REALITY

Scott Was Producer And Program Lead For Top VR, Flight Simulators And The Original 'The Cave' 'Holodeck' VR Chamber

What you saw in Natalie Wood's film: "*Brainstorm*", Scott actually built:



**Producer, Program Lead, Director of Strategic Innovation: VR, Flight Simulators And 'The Cave' 'Holodeck' Virtual Reality Walk-In Chamber**



US005513130A

**United States Patent** [19]

[11] **Patent Number:** 5,513,130

**Redmond**

[45] **Date of Patent:** Apr. 30, 1996

[54] **METHODS AND APPARATUS FOR GENERATING AND PROCESSING SYNTHETIC AND ABSOLUTE REAL TIME ENVIRONMENTS**

[75] **Inventor:** Scott D. Redmond, San Francisco, Calif.

[73] **Assignee:** Redmond Productions, Inc., San Francisco, Calif.

[21] **Appl. No.:** 138,658

[22] **Filed:** Oct. 18, 1993

**Related U.S. Application Data**

[63] **Continuation-in-part of Ser. No. 483,547, Feb. 22, 1990, Pat. No. 5,255,211.**

[51] **Int. Cl.<sup>5</sup>** ..... G06F 17/00

[52] **U.S. Cl.** ..... 364/578

[58] **Field of Search** ..... 364/578, 400, 364/401, 419; 434/38, 43, 44, 45, 55, 61, 69; 395/154

[56] **References Cited PUBLICATIONS**

Bryson et al.; "The Virtual Windtunnel: An Environment for the Exploration of Three-Dimensional Unsteady Flows" IEEE 1991.

Chung et al.; "Exploring Virtual Worlds with Head Mounted Displays"; SPIE 1989.

Huber "Current Research in the Use of Head Mounted TV Cameras to Study Depth Perception on Flat Screens" IEEE 1992.

McCarty et al.; "A Virtual Cockpit for a Distributed Interactive Simulation", IEEE 1994.

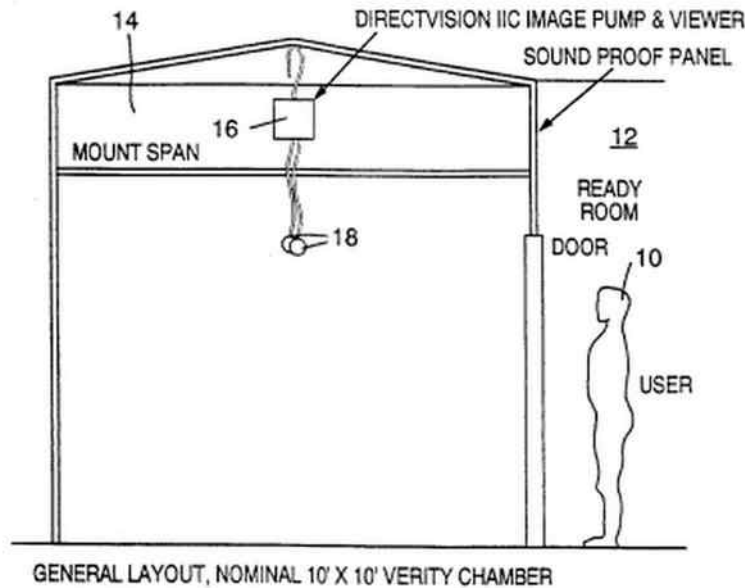
Bryson; "Virtual Spacetime; An Environment for the Visualization of Curved Spacetimes via Geodesic Flows" IEEE 1992.

*Primary Examiner*—Ellis B. Ramirez

[57] **ABSTRACT**

A system for generating and processing synthetic and absolute real time remote environments for interaction with a user and her biological senses is comprised of seven modules. These modules store, retrieve and process data to generate an output which interfaces with the system user's biological senses. These modules also track user data to accurately place the user in the generated and processed model. Various embodiments of the system user sensory interface are provided including visual and aural input devices and a three dimensional chamber having interactive tactile output via matrix-addressed, electromechanically operated rods driving a flexible skin.

1 Claim, 16 Drawing Sheets



Scott's design and engineering was first-to-market:

## TECHWATCH

operated a few "All these scenarios could take place in the same environment, using the same kinds of equipment." The system is designed to provide "a representative capability that is available in a typical studio, gym, and public viewing situation," says Redmond.

While games for design, Redmond's approach is complex and highly interactive. The system includes a six-degree-of-freedom motion system with a virtual environment with visual, audio, and tactile outputs. The different modules store and retrieve data, receive user position and movement, model the virtual environment, and allow the user to interact with the virtual environment. Redmond's system has two basic operating modes.

One mode is used for a single user to view and interact with the virtual environment. The user can interact with the virtual environment in a variety of ways, such as an outdoor adventure. In some cases, synthetic and real-world images would be merged, allowing users to see, for example, some transparent computer graphics floating around or interacting with the real world. Users would see the contents of the virtual environment by means of a screen, which the system employs to track user movements so that the virtual environment can make appropriate adjustments.

"The procedure I addressed was how to provide interactivity with an interactive media system without users having to learn a lot of cumbersome computer language," says Redmond. "You talk, gesture, move around, and interact objects with your hands and like in the real world." (See more on hand gesture technology on Tech Watch, November 1996, Computer Graphics World.)

He adds that his design can accommodate a wide range of users and technology configurations—there are optional items for a single portable unit. However, the games designed for the system are for six to six-foot chambers that he calls the "body rooms." In his opinion, a system could first show a teacher that provides visual, audio, and tactile information that could be a checklist or a 3-D object. They could help the teacher present or teach a complex topic, rather than just being a printed page or a slide of text and audio. The system could also offer a driving simulator and a walk-and-ride display.

While the chamber is open to private users with self-contained operation, Redmond has designed the system so that different users could be linked via networks for virtual collaboration or exploration. For example, he sees an educator could present a design for a new building to clients in several different cities. All the participants at the meeting would be ready to interact and could explore the same virtual structure from the comfort of their own homes.

Redmond predicts that soon, 3D computers in households will allow VR experiences such as this to be shipped over the Internet. "The main goal of the system is that it is designed to operate over any telecommunication network and, ideally, to be connected to internet such systems, or just directly, to meet whatever need" he explains.



Interactive technology Scott Redmond has designed a work space for interactive applications that would allow users to experience a variety of activities and work experiences, all in the same virtual space, and in the virtual room, allowing the user to interact with the virtual environment.

Despite virtual reality's potential for use in business and industrial applications such as virtual reality and architectural design, the main impetus to date for developing interactive VR programs has been the desire of game players for more exciting computer-generated environments. This has where there is a market for large screen games, according to Redmond.

One of the reasons for the slow acceptance of VR has been its high price. A decade ago, the cost of developing interactive virtual reality systems was prohibitively high. Redmond says that he never expected a low-cost VR technology to become commercially viable in his lifetime. But at this point, he believes that the required technology has been reached to where a low-cost portable VR system including a computer, gloves, foot pads, and wireless connection to the internet could be built for under \$1000 (assuming a production cost of 200,000 units). A high-end workstation system could be developed for \$10,000 to \$20,000 to meet many manufacturers.

### A Game Plan for Virtual Reality

It was supposed to be the year of the real world, but today's technology is still a year away from VR. The technology required to build a portable VR system is still in the development stage. The system's developers build commercial virtual reality applications that are usually restricted to so-called "VR" scenarios, in which 3D scenes appear on standard computer screens.

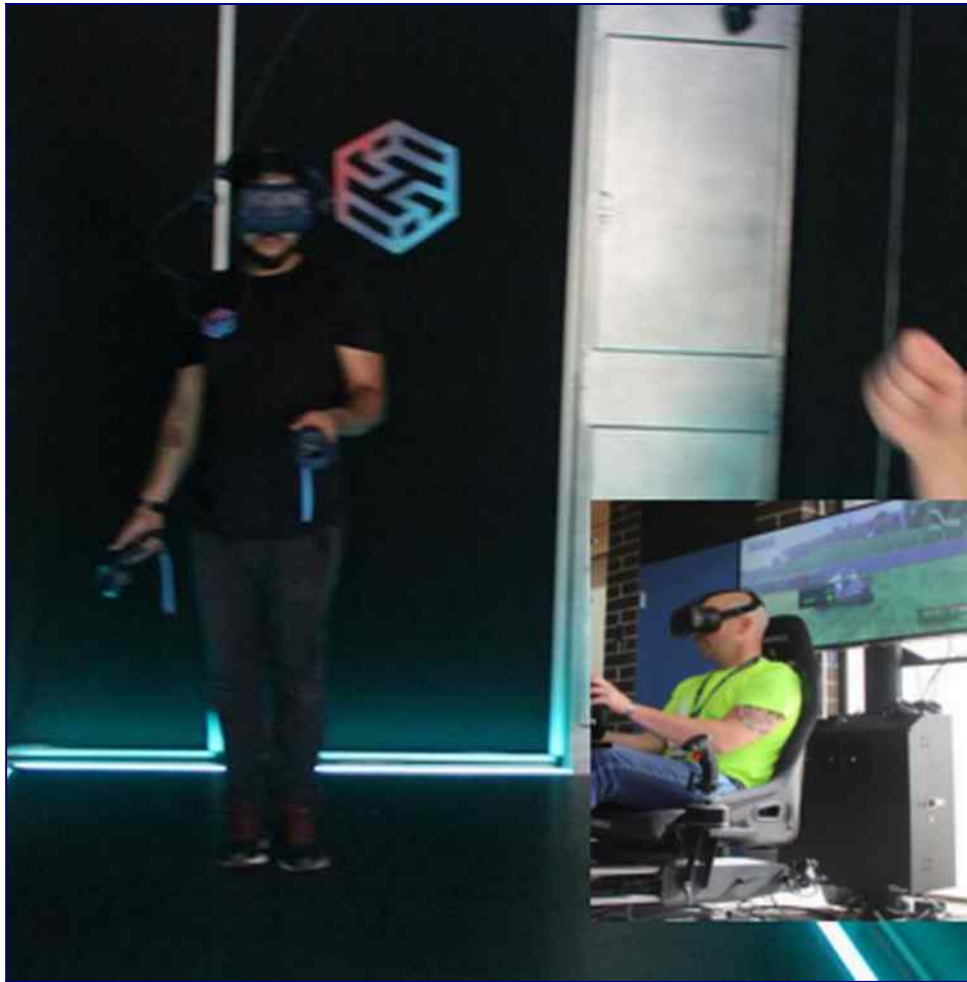
Now, however, more users will be able to see the interactive VR experience. Thanks to the rapid evolution of affordable computing and display technologies, there is a growing interest in developing systems that can be used in a variety of settings to make the technology more popular.

The real test for the VR industry is the ability to create a virtual world that is as immersive as the real world. The challenge has been met by California-based technology firm Redmond (www.redmond.com). In the past few decades, Redmond has developed interactive products for clients including the National Aeronautics and Space Administration (NASA), the U.S. Army, and the U.S. Navy. Last year, he received the Best in a Series of Interrelated VR prizes for the design of a virtual reality system. Redmond's objective is not a particular application or piece of hardware such as a headset or a new computer system, but a set of strategies for putting together all the VR software and hardware that make it so hard to create in the real world.

He plans to provide detailed diagrams and instructions for building a system that would be a variety of different VR experiences such as a VR room simulator. The system shows how to develop real-time VR applications for entertainment, education, simulation, or job training. For example, "You could walk through the Texas or go around the world. Experience it all in a virtual world."

# COMPUTER GRAPHICS WORLD

**SCOTT'S VR SYSTEMS WERE, PATENTED, BUILT AND FULLY FUNCTIONAL IN THE REAL WORLD YEARS BEFORE THESE COPYCAT SYSTEMS EXISTED:**





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**Multiple federal issued patents confirm who invented what first:**





# San Francisco Chronicle

THE LARGEST DAILY CIRCULATION IN NORTHERN CALIFORNIA

WEDNESDAY, AUGUST 23, 1995

## BUSINESS

### Virtual Reality Coming to PCs

#### Tiny S.F. company unveils impressive but pricey system

By John Richardson  
Chronicle Staff Writer

It's a earth-poker's dream. Instead of having to travel to one of the world's few virtual reality centers — which have proven the hottest draw in entertainment since the opening of Disney's Epcot — anybody with a computer and modem now may enter a virtual reality game world from home.

"The first time we turned on the system, between three, five and 10 minutes, our engineers got so excited you would have thought they invented the telephone," said Henry Hefner, president of BT's Advanced Technology Group, a tiny San Francisco company that has been testing the new VR network it calls Immersion.

Wearing 3D stereoscopic glasses equipped with special speakers and hooked to their personal computers and telephone lines, players feel as if they are



The Director of the United States Patent and Trademark Office

*The United States of America*

*This certifies an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of invention years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 121, 122 or 365(c), the term of this patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

*J. W. D. [Signature]*

Director of the United States Patent and Trademark Office

**United States Patent** [46] **Patent Number:** 5,255,211  
**Referred** [41] **Date of Patent:** Oct. 10, 1993

[42] **INTEGRAL AND APPARATUS FOR GENERATING AND PROCESSING SYNTHETIC AND ANALOGUE REAL TIME ENVIRONMENTS**  
 [71] **Inventor:** Scott R. Belmont, San Francisco, Calif.  
 [72] **Assignee:** Belmont Productions, Inc., San Francisco, Calif.  
 [51] **Appl. No.:** 08/020  
 [52] **Filed:** Feb. 23, 1993  
 [53] **Int. Cl.:** G06F 03/00

**United States Patent** [46] **Patent Number:** 5,513,130  
**Referred** [41] **Date of Patent:** Apr. 30, 1996

[42] **INTEGRAL AND APPARATUS FOR GENERATING AND PROCESSING SYNTHETIC AND ANALOGUE REAL TIME ENVIRONMENTS**  
 [71] **Inventor:** Scott R. Belmont, San Francisco, Calif.  
 [72] **Assignee:** Belmont Productions, Inc., San Francisco, Calif.  
 [51] **Appl. No.:** 08/020  
 [52] **Filed:** Feb. 23, 1993

**United States Patent** [46] **Patent Number:** 5,239,044  
**Referred** [41] **Date of Patent:** Jan. 2, 1998

[42] **INTEGRAL AND APPARATUS FOR GENERATING AND PROCESSING SYNTHETIC AND ANALOGUE REAL TIME ENVIRONMENTS**  
 [71] **Inventor:** Scott R. Belmont, San Francisco, Calif.  
 [72] **Assignee:** Belmont Productions, Inc., San Francisco, Calif.  
 [51] **Appl. No.:** 08/020  
 [52] **Filed:** Feb. 23, 1993



**OUR PATENTS - 1990**

**OUR PATENTS - 2009**





Linda Jacobson

# GARAGE VERTICAL REALITY

The Affordable Way to Explore Virtual Worlds

Perfect For PC  
Macintosh  
& Amiga Users

Included  
Full Period  
Versions of  
Virtual  
Reality  
World  
Over 170  
Hours

game developers. Don't believe that the price will stop dramatically more useful products from being developed, VRU sales in Europe by VRU developers will be in the millions and other products of VR programming.

Asking for a smaller target is far. However, companies like Johnson's 'The Garage' is making an VR network. 'The Garage' is a network of computers that can be used to play VR on which means a faster network, you can use your computer network as a networked game with existing VR software. Johnson's 'The Garage' is a networked game with a networked game with existing VR software. Johnson's 'The Garage' is a networked game with a networked game with existing VR software.

When information developers will appear in the near. Working with game companies, VRU operators, and computer data networks. Don't believe that the price will stop dramatically more useful products from being developed, VRU sales in Europe by VRU developers will be in the millions and other products of VR programming.

# REFERENCES AND CREDENTIALS



**References From Past Clients, Industry Reviewers and Partners. Original letters and broadcast news videos on file**

**What did his employers say about his work?:**

*"Everything was just terrific. Needless to say, without your help we wouldn't have had an event at all. My sincere thanks for a great job."*

**- The Public Relations Bank**

*"...highly motivated, extremely cost conscious, efficient and ...pleasant ...I commend ...the excellent work ...done for the National Park Service and recommend ..."*

**- General Superintendent, United States Department of the Interior  
National Park Service**

*"You have accomplished something incredible..."*

**- NPR Radio Interview**

*"Thanks again for your valuable participation in our Lasers for Live Performance workshop. Your insights truly rounded out the program and gave our members interested in management and design another perspective on which to base their performance decisions."*

**- Northern California Association for Theater Techniques**

*"Well planned and coordinated ... cooperative and highly reliable. ...met every condition imposed by the city agencies and delivered ... exactly as planned."*

**- Recreation and Park Department, City and County of San Francisco**

*"Please be assured that your views will be considered fully as I work with the President on this (electronic superhighways) issue."*

**- Vice President Al Gore on White House letterhead**

*"As Mayor of San Francisco, I am pleased to have this opportunity to acknowledge the artistic efforts ..., and to congratulate ..."*

**- Mayor, San Francisco**

*"It was a pleasure working with you.. You knew exactly what had to be done...and you did it. Your work crew was marvelous too...from all of us, our sincere appreciation for all of your hard work."*

**- KNBR Radio**

*"I can't recall when I've had such good support by anyone as I did through your efforts for us every day and night of our extremely demanding production schedule...The film we're now editing for our May broadcast is everything I'd hoped it would be."*

**- DIRECTIONS TV series, ABC Television Network**

*"...creative, dedicated and has pride in ...ventures. ...would do ...utmost to produce future events of even greater proportions and do them well."*

**- American Zoetrope**

*"It is always difficult to express hard work, hours and hours of exhaustive work, aching backs, in one letter. KYA Radio wishes to express their gratitude for your work, and your efforts that surpassed excellence."*

**- KYA Radio**

*"I think it's fantastic how you are able to pull off things that the rest of us could only dream of doing."*

**- Hyatt Regency**

*"Just wanted to drop you a note of thanks for all your help... It was a pleasure to work with you."*

**- American Fairs Inc.**

*"I particularly appreciate your sticking to the time schedule and staying within the budget."*

**- K-101 Radio**

*"We are very appreciative for the excellent job you performed as show coordinator and for your technical assistance."*

**- AINAF**

*"We are particularly pleased with his ability to draw together diverse elements of this City's many communities including public officials and neighborhood associations."*

**- Fort Mason Foundation**

*"Just to let you know-I'm ecstatic that I discovered your existence."*

**- Serramonte Center**

*"I just wanted to officially thank you and tell you how nice its been to work with you."*

**- San Francisco Giants**

*"Your expertise in production and your ability to foresee many of the potential problems helped us to avoid any unpleasant situations. We want to let you know that everyone commented on what a pleasure it was to work with you."*

**- Planetree Health Resource Center**

*"It is always refreshing to be exposed to real talent and imagination. It is even more rewarding to be able to utilize this resource."*

**- AT&T Network Systems**

*"You and your team are terrific. We are proud of the results of your efforts and thank you for your dependability and know-how."*

**- Ramada Renaissance**

*"God bless you, and God bless America."*

**- President, United States of America**

*"Many thanks for all the energy, time and sheer hard work ...put into the visit...of her Majesty Queen Elizabeth II."*

**- Protocol Office, San Francisco**

*"I found your sketches very interesting.."*

**- Project Director, NASA Manned Spacecraft Center, Mars Landing Module System**

*"Just a note to "Thank You" for the magical effects you and your staff created...you were probably too busy to take notice of the "ooh's" and "ah's" from below!"*

**- CH Associates**

*"San Francisco values greatly your record of many contributions to the public expressions of our vitality and our sense of fun, as well as the highly organized skills and creative techniques you have developed..."*

**- Mayor, San Francisco**

*"We are receiving letters from schools and letters from the teachers and community expressing the delight..."*

**- Sonoma County Office of Education**

*"You really outdid yourself and made this the greatest...ever"*

**- YTL Associates**

*"..my congratulations...He can rest assured that all his hard work was evident in the finished product."*

**- City Sports**

*"This is a belated but enthusiastic "thank you"."*

**- AIA**

*"Your promotional materials describe (you) as the "link between the possible and the impossible"...I must say, you do live up to your reputation."*

**- Liberty House**

*"As the sponsor, please be assured that we are thrilled with your work and enthusiasm."*

**- Security Pacific National Bank**

*"I want to thank you very much for your excellent leadership and professionalism."*

**- San Francisco Blues Festival**

*"I'd like to extend my sincere appreciation for your direction, time, and logistical know-how...you are an invaluable asset."*

**-Tracy-Locke**

*"Congratulations on a job well done!"*

**-San Francisco Examiner**

*"In spite of several last minute changes you were able to "pull-through" with polish and style...(it) was quite successful for Sprint".*

**-Sprint**

*"...delivered the "Micro" version of its Head Mount Sensory Interface (HMSI) for simulation, visualization, and immersive interactive media applications. ..."*

**- Real Time Graphics**

*"...can enable users to do "remote-traveling" by using their telephone lines or satellite dishes to retrieve video that visually transports them to another place Such systems could be used to simulate riding in a submarine, flying in a jet fighter, or orbiting the Earth."*

**- Robb Report**

*"... zip about the galaxy in comfortable style-aside from "additional sensory effects" like explosion thumps, cold jets of air, hot flushes and low frequency rumble."*

**- Mondo 2000**

*"The United States Army is scheduled to award...(the Team)..a contract this month to develop a hybrid virtual reality interface that will allow individual infantrymen to directly participate in large-scale simulation exercises".*

**- Silicon Graphics World**

*"...regarding your company's virtual reality network. I appreciated hearing from you, and I sincerely regret the delay in my reply...Companies like yours are the foundation upon which this nation's economic growth and competitiveness rests."*

**- Vice President Al Gore on White House letterhead**

*"...a major step towards the future of consumer access to virtual reality, by demonstrating and shipping a family of computer based systems which allow users to work or play together inside synthetic digital worlds, even while physically located in different locations."*

**- C3i News**

*"...will initially be used in military applications, the companies expect it will provide a foundation for entertainment, medical, and scientific applications, including a new generation of "virtual laser tag" arcade games."*

**- Computer Graphics World**

*"...enjoy the flexibility of the Autodesk CDK finding that hardware performance and configuration issues of the past are no longer a significant consideration for potential immersive visualization users. (the Team) has configured numerous systems providing great performance, running CDK with standard hardware and software utilities."*

**- Autodesk corporate 4-color national marketing brochure**

*"...the first consumer network offering multi-users the ability to see true 3-D stereoscopic imagery, turn their heads to look around the digital world, view photo-realistic texture maps, and interact other users simultaneously."*

**- Virtual Reality Report**

*"...a Personal Simulator component for supplying sensory information and accepting voice commands. The HMSI is ergonomically designed as a light weight, non-intrusive, information input/output device for standard video, audio, voice, and 6-D position tracking systems. The design accommodates a range of sophistication including full-D stereoscopic visuals, 360 degree audio, voice command user interface, facial muscle transponders, and optional 6-D head tracking interface. The HMSI may also be operated in a wireless mode and/or in a multi user configuration with other HMSI devices."*

**- Real Time Graphics**

*"The HMSI can run wireless, as power is generated by a battery pack, with the installed option to link directly to normal AC power. The HMSI enables the user to view computer-generated images in stereoscopic 3D form. Interaction can be achieved via mouse, gesture sensor, head-tracking system, or voice commands relayed by an installed voice-command unit."*

**- AI Expert**

*"You peer through the goggles, seeing a town far below. Then with a quick twist of the wrist, you're diving toward Main Street, swooping and banking through the sleepy village. It's like a dream of flying but with complete control. Stepping back from the viewer in the local office of Silicon Graphics Inc. is disorienting. So that's what they mean by "virtual reality." It's a stunning experience. But equally astonishing is the idea that fantastic voyages formerly reserved for high-tech researchers will soon be possible in the local mall, or even your living room. "The hype is over and the real applications are coming in the very immediate future..."*

**- The Baltimore Sun**

*"...The Reality Port will be marketed to theme parks and arcades. It uses parallel 486's with Windows (moving to NT and Pentium), or Silicon Graphics Onyx workstations with a DOS shell. (the Team) is ready to license and ship versions for theme parks (\$500,000) and arcades (\$50,000)..."*

**- PC WEEK**

*"...The unit looks like black wrap-around sunglasses and provides stereoscopic color images, spatial sound, position sensing, voice command, biofeedback, and other computer/human factor solutions in one integral package, company officials said.'*

**- Silicon Graphics World**

*"...a supplier of some of the most advanced computer assisted interactive visualization systems. The visualization industry incorporates elements of multimedia, simulation, virtual reality, 3-D computing and telecommunications. The intuitive nature of (the Team)'s products allow the integration of the computer application and the user, with the goal of responding to the sociological need to become emotionally involved with the working environment. (the Team) has a number of unique selling positions that provide the Company with one-of-a-kind potential."*

**- Virtual Reality News**

*"..Instead of dropping a coin into an arcade you will drop into virtual worlds"*

**- Richard Hart, The Next Step, Discovery Network, Television**

*"This kind of technology gives you emotional contact with your work..."*

**- E! Entertainment Network, International E! News Daily, Television**

*"...hardware's impressive. Put on their 3D head mounted stereoscopic glasses equipped with speakers, then hook a special game unit into your telephone line..."*

**- Gamepro Magazine**

*"If you liked VR.5, you'll love Fox's Virtual Reality Tour..."*

**- Fox Network, Nationwide prime-time series of television ads featuring Entertainment Rides and Software**

**Additional Letters of reference, press clippings and audio-visual documentation on-file.**





## Recommendations

### Project Lead & Technical Lead SR1 Consulting

1 new recommendation for this position: [Edit](#)

"Scott Redmond is one of the most creative minds I know. He has a keen ability to transcend typical solutions and do the impossible." August 7, 2008

[Denise Klarquist](#), VP, Marketing, Cheskin Added Value worked with Scott Douglas

### Operations & Technical Lead CH

3 visible recommendations, 1 new recommendation for this position: [Edit](#)

"I loved doing business with Scott. He has tons of great ideas but remains bottom-line oriented at all time. That duality is a gift!" May 3, 2010

[Marc-Antoine Alet](#), officer, Bank of America was a consultant or contractor to Scott Douglas

"Scott Redmond has the capacity to create more excitement and more energy around projects than nearly anyone I have encountered in my career. His passion for his projects—especially those that provide unique solutions—is contagious. Scott can make things happen...his personal energy often carries the day." September 19, 2007

[Ken Hawkins](#), Division Manager, Premier Building Systems was with another company when working with Scott Douglas

"Scott is a without a doubt the best team builder I have ever worked with and a true visionary." January 7, 2007

[Ray Brown](#), Reliability Engineer Hydrogen Gas Systems, Praxair worked indirectly for Scott Douglas


"Scott is a true visionary and a natural leader. Working with Scott is always a pleasure and something I look forward to." July 5, 2005

[Jason Deadrich](#), Owner, Black Pants Productions reported to Scott Douglas

**in** Search for people, jobs, companies, and more

Recommendations Received (23) Given (43) Manage


**Project Lead, CTO, COO, Launch CEO**  
Contract Development Projects for Fortune 500

 **Karin Carros**  
Social Media Manager at General Forge and Foundry

“ Mr. Redmond has an amazing gift for problem solving and seeing through challenges. He is an expert at conceptual blockbusting and finding the best options, from among many. He can lead a flexible team through to fruition on even the most problematic and first-ever types of opportunities. I greatly enjoyed his energy and dedication.


March 19, 2014, Karin was with another company when working with Scott Douglas at Contract Development Projects for Fortune 500

**Project Lead, Director of Strategy**  
Clever Industries LLC

 **Junko Dohn**  
Search Engine Optimizer at Carrys Candles

“ Scott Douglas Redmond is a great leader, a top innovator and an evangelist with great gifts of insight and overview.


March 19, 2014, Junko was with another company when working with Scott Douglas at Clever Industries LLC

 **Zulkarnain Hamson**  
Direktur Utama PT. TATA FINAPEDIA

“ Scott Douglas Redmond, Multiple Sr. Level Roles. at Clever Industries LLC. I believe you have a good credibility to your business.

April 18, 2013, Zulkarnain was Scott Douglas's client


in Search for people, jobs, companies, and more...

 **Carolyn D. Cowen**  
Educator & Social Entrepreneur

“ Scott Redmond is a visionary, innovator, and leader with the ability to transform novel ideas into game-changing realities. From developing and patenting powerful technologies to championing and supporting important social issues, Scott leaves an indelible mark.


I know Scott in the context of his work in literacy and dyslexia, more specifically as co-members on... [more](#)

July 24, 2012, Carolyn D. was with another company when working with Scott Douglas at Clever Industries LLC

 **Hallie Shealy**  
Director, Talent Acquisition at Stafftopia Inc.


“ Scott Douglas is a detailed oriented manager with a professional acumen to boot. I highly recommend Scott for any business endeavor that you encounter with him. He possesses rare attributes of high-integrity and a gritty-down-to-earth attitude. I like that!

July 10, 2012, Hallie was with another company when working with Scott Douglas at Clever Industries LLC

 **Ken Morris CA-AM**  
Business Development. IT Services. Non-Profit Management.

“ I have worked closely with Scott in promoting his cleantech inventions to prospective clients and investors. As a technologist he has deep insights into every aspect of the product and its environment. A soft spoken person, he is meticulous in his approach, is a stickler for detail and makes every effort to come up with a simple cost-effective solution or product. As an... [more](#)


July 3, 2012, Ken reported to Scott Douglas at Clever Industries LLC

 **B K**  
Business Development

“ Scott use Creativity, managing diverse teams, running impossible projects and dedication to diplomatic outcomes in conflict for me. great to work with and looking forward to work in future.


July 1, 2012, B was Scott Douglas's client

in Search for people, jobs, companies, and more...

 **Larry Martinez** 415-258-1591  
Vice President of Mortgage Lending at Guaranteed Rate


“ When it comes to product development or management, Scott Redmond is second to none. He is extremely efficient and brings projects in under budget and on time. He is definitely top in his industry.  
Larry Martinez

June 28, 2012. Larry was with another company when working with Scott Douglas at Clever Industries LLC

 **John Harris**  
Senior Project Manager at City and County of San Francisco


“ Scott Douglas Redmond has been very active in community green building programs, clean energy programs and cleantech ventures in, and around, San Francisco. His donation of his time and materials to complete the green, low-energy community building at the Alice Griffith Community Center and his dedication to community service is appreciated by those in the area. I can... more

June 27, 2012. John was with another company when working with Scott Douglas at Clever Industries LLC

 **Philip Page**  
Product Marketing leader, IBM

“ I worked with Scott at Fordela, when he was VP Marketing and Business Development. Fordela is an IBM Business Partner, and I found Scott an innovative thinker, a knowledgeable and dynamic individual. Scott proved an ideal member of our partnership team, helping us jointly develop and launch our integrated video management and distribution solution.

June 27, 2012. Philip was with another company when working with Scott Douglas at Clever Industries LLC


 **Lee Aubry**  
Mortgage Advisor at Citibank

“ It is always a pleasure working with Scott. He is one of the smartest, most capable people I know. Add integrity and generosity to the mix and you get one incredibly extraordinary person! In addition to our professional association, Scott is helping me develop a website on financial literacy. I couldn't be more grateful. Lee Aubry

June 21, 2012. Lee was with another company when working with Scott Douglas at Clever Industries LLC


in Search for people, jobs, companies, and more...

Clever Industries LLC

 **Bruce Wecker**  
Of Counsel at Hausfeld LLP


“ I worked with Scott on a number of his patented inventions. Very creative individual with enthusiasm and drive to motivate others and make his vision come alive.

June 19, 2012, Bruce was with another company when working with Scott Douglas at Clever Industries LLC

 **Steve Barretto**  
Principal at Barretto-Co.


“ Scott hired my creative agency to help work with CleverHomes on marketing and brand communications. In the short time that we worked together I found Scott to be a well organized, strategically oriented and a good communicator.

June 17, 2012, Steve was a consultant or contractor to Scott Douglas at Clever Industries LLC

 **Lisa Barry**  
Enrollment Director at San Francisco Waldorf High School

“ Scott is one of the smartest men I know. He is sharp, creative and very dedicated to his work. Whether you are trying to find large picture innovations or small technical solutions, Scott will be an asset to your team.

June 14, 2012, Lisa was with another company when working with Scott Douglas at Clever Industries LLC

 **Bob Archer**  
senior editor at CE Pro magazine

“ In working with Scott in the past I found him to be knowledgeable, passionate and dedicated.

Those traits can be hard to find at times with the jaded nature of some who work within the consumer electronics/high technology fields and Scott possess these attributes along with the drive to be successful.

June 11, 2012, Bob was with another company when working with Scott Douglas at Clever Industries LLC



Search for people, jobs, companies, and more...



**Lori Boatright**

Partner, Blakely Sokoloff Taylor & Zafman LLP

“ I worked with Scott at a prior position in providing him trademark law assistance - he was very bright and easily understood the concepts. His business sense was impressive, and he was a pleasure to work with.

June 8, 2012, Lori was with another company when working with Scott Douglas at Clever Industries LLC

**Campaign Director: Tactical Deployment**

Various Campaigns



**Wade Davis**

Search Engine Optimizer at Blammo

“ Scott has great diplomatic skills and can really step into the shoes of each party at the table. He observes nuance and detail that others miss and stays calm in a crisis while still coming up with novel options to loop around road-blocks and challenges. He is the “Go-To” guy in a campaign, the Fixer. He works hard, can juggle many cats at once and can see a variety of... more

March 19, 2014, Wade was with another company when working with Scott Douglas at Various Campaigns



**Logan Vaughn**

Graphic Artist at Zevo Toys Studio

“ Scott can see the big picture on a very large scale and plan for the contingencies that will occur. Those contingencies always come up and Scott always seems to have a plan and process for each one, on a moment's notice. Scott knows how to pivot.

March 19, 2014, Logan was with another company when working with Scott Douglas at Various Campaigns

in Search for people, jobs, companies, and more...


### Director of Strategy, Project Director

CHP

 **Toby James**  
Owner at Toby James International Photography

“ Scott Redmond has a fine collection of personal skills. His sense of detail and keen perception, his ability to see the synergies between have earned him some of the highest ratings in the country. Scott Redmond has proven that he has laser focus and ability to figure things out from the inside-out. He has great intuition, energy and commitment to his goal. He excels in ... [more](#)

March 19, 2014, Toby was Scott Douglas's client

 **Marc-Antoine Alet**  
Vice-President at Merrill Lynch/Bank of America

“ I loved doing business with Scott. He has tons of great ideas but remains bottom-line oriented at all time. That duality is a gift!

May 3, 2010, Marc-Antoine was a consultant or contractor to Scott Douglas at CHP


 **Jason Deadrich**  
CEO at Fordela Cloud Video

“ Scott is a true visionary and a natural leader. Working with Scott is always a pleasure and something I look forward to.

July 5, 2005, Jason reported to Scott Douglas at CHP

### Founder, Project Lead

NowHouse Program

 **Carl Madden**  
Search Engine Marketing Consultant at Osato Tree


“ I saw and experienced this project at the San Francisco Giant's Stadium. It was really quite cool. How he made a multi-story, huge, ultra-modern house appear in less than a month, accommodate so many visitors, disappear and then re-appear down the Bay at the Candlestick Park Stadium is pure magic and a tribute to his design, management and logistics skills.

March 19, 2014, Carl was with another company when working with Scott Douglas at NowHouse Program

in Search for people, jobs, companies, and more...

### Founder, Project Lead

NowHouse Program


 **Carl Madden**  
Search Engine Marketing Consultant at Osato Tree

“ I saw and experienced this project at the San Francisco Giant’s Stadium. It was really quite cool. How he made a multi-story, huge, ultra-modern house appear in less than a month, accommodate so many visitors, disappear and then re-appear down the Bay at the Candlestick Park Stadium is pure magic and a tribute to his design, management and logistics skills.

March 19, 2014, Carl was with another company when working with Scott Douglas at NowHouse Program

### Product and Project Management

various start-ups

 **Bessie Catherine Barnes**  
Online Researcher/ Librarian at Beche Group, IP Services

“ Scott is a consummate and prolific professional in a variety of fields and industries. I value his opinion and assistance in navigating the tech world. I look forward to working together in the future.

June 18, 2012, Bessie Catherine was with another company when working with Scott Douglas at various start-ups

^ See Less ^



Stay tuned for the next revision of this document...