

**Public Written  
Comments  
Submitted to PCAST  
from, December 20, 2012 to February 24, 2012**

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## President's Council of Advisors on Science and Technology (PCAST) Webcast Question

**From:** "Margaret Walker" [REDACTED]

**Date:** Fri, January 6, 2012 10:40 am

**To:** [pcast@ostp.gov](mailto:pcast@ostp.gov)

**Cc:** "Margaret Walker" [REDACTED]

Thank you for your thoughtful consideration of the ten points. Science and technology are huge differentiators in the world. Bringing capabilities to other parts of the world have and will continue to be important for diplomatic success and I assume the ultimate goal of peace on earth. However, there is always a balance....so as I listen to the 10 points, what is the critical balance needed in sharing technology, education, all of our rich resources between sharing and maintaining/achieving competitive advantage for the US? The beliefs in other nations about what is "open" and what is "protected" is different than perhaps what is believed in US...protection of IP. How can we drive the strategy of science and technology to improve diplomatic relations, which is a good thing, but not put our leading edge, disrupted technology at risk? Thank you for your comments and particularly using the talent that women bring.

Margaret Walker  
[REDACTED]  
[REDACTED]

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, February 22, 2012 3:13 PM  
**To:** [REDACTED]  
**Subject:** FW: The Greenhouse Project NYC and PCAST

**From:** Laurie Schoeman [REDACTED]  
**Sent:** Friday, January 13, 2012 12:58 PM  
**To:** Stine, Deborah D. [REDACTED]  
**Subject:** The Greenhouse Project NYC and PCAST

Happy New Year Deborah I hope all is well! One of our goals this year to is to get engaged with the Science Council this year!

I wanted to reach out to you to tell you a bit about what we do. NY Sun Works is a non-profit organization that builds innovative science labs in urban schools. Through our Greenhouse Project Initiative we use hydroponic urban agriculture systems to educate students and teachers about the science of sustainability. We sponsor educational and curricular work as well. This Fall NYSW launched a Department of Education Professional Development Institute for NYC public school teachers entitled, "Water, Energy, and Waste: Integrating Themes of Sustainability into Your Classroom" to provide a diverse cross-section of K-8 science classroom teachers the opportunity to delve deeper into global environmental issues and to bring sustainability related curriculum into their classrooms.

Here is a nice article about our work that came out this week, written by Facebook's Senior Designer, called "Science you can Eat" <http://cowbird.com/author/ben-blumenfeld/story/4122/>

And, here is a short video about our work: <http://nyc.gov/html/nycmg/nyctvod/html/home/tsny277.html>

Do you have a network of organizations that are working on science education/curriculum/pilots that we could join? How could we engage your office around science ed policy etcera?

All the best to you!

Laurie  
Director  
New York Sun Works | [www.nysunworks.org](http://www.nysunworks.org) | [REDACTED]  
[REDACTED]

Build. Learn. Grow.

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**From:** Laurie Schoeman [REDACTED]  
**Sent:** Friday, July 01, 2011 4:02 PM  
**To:** Stine, Deborah [REDACTED]  
**Subject:** The Greenhouse Project NYC and PCAST

Good afternoon Deborah:

I apologize I was not able to make it to the last public comment session-I was held up in NYC with some schools we are working with but I DO want to attend a meeting of the PCSAT. Do you ever have meetings related to STEM education or sustainability in the schools?

I would like to introduce our organization-NY Sun Works is a 501C3 non-profit organization dedicated to improving scientific literacy among adults and youth in the New York metropolitan area by building innovative capital projects and education programming that focus on urban ecological sustainability. New York Sun Works' capital projects and educational initiatives seek to meet local needs in

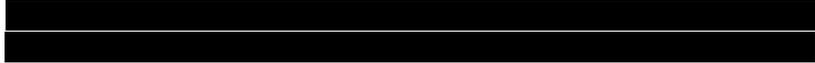
the fields of K-12 science education, urban agriculture, and sustainability by educating students about sustainability through the lens of urban agriculture.

NY Sun Works' inaugural project, the Science Barge, was built in 2007 to showcase and educate the public about a variety of sustainable power and water systems that produce food, clean water, and renewable energy in an ecologically sustainable way. Our current project is The Greenhouse Project, an initiative dedicated to improving environmental science education in NYC public schools through the construction of on-site greenhouse laboratories and the provision of a hands-on educational curriculum to provide a diverse cross-section of K-8 science teachers throughout NYC's school system with the opportunity to delve deeper into global environmental issues and bring sustainability-related curriculum into their classrooms. The Greenhouse Project presents a new paradigm for the development of agriculture within urban communities and introduces children to the critical thinking tools that will allow them to become engaged and empowered environmental stewards. Through direct, hands-on experience educators and students learn about the benefits and challenges of urban agriculture and sustainability, and experience the rewarding sense of community associated with local food production and distribution.

We are working with dozens of schools in NYC to scale this initiative and I would love to speak with you about this if you had time in the upcoming weeks and if you happen to be in NYC, give you a tour of the Sun Works Center.

All the very best to you and Happy 4th!

Laurie  
New York Sun Works



@nysunworks  
Build. Learn. Grow.

**Undergraduate STEM Education**

**From:** "Solomon Bililign" <[REDACTED]>

**Date:** Tue, January 17, 2012 6:19 am

**To:** [pcast@ostp.gov](mailto:pcast@ostp.gov)

**Cc:** "Solomon Bililign" <[REDACTED]>

**Priority:** Normal

Dear Sir/Madam

Please find attached my comments on the subject.

Thanks

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Solomon Bililign; Ph. D.

Professor of Physics

Director: NOAA-ISET Center

North Carolina A&T State University

[REDACTED]

"Talent is God-given. Be humble. Fame is man-given. Be grateful. Conceit is self-given. Be careful."

".....He gives wisdom to the wise and knowledge to the discerning. He reveals deep and hidden things; He knows what lies in darkness, and light dwells with him. I thank and praise You, O God of my fathers; You have given me wisdom and power, ...". Dan. 2: 20-23.

"When I fear God, there is no room in my heart to be afraid of men" Carl Medearis

## Undergraduate STEM Education

I listened to the PCAST Conference Call on STEM Education Report- focused on the first two years of undergraduate education. – I wanted to make some comments:

Most of us (meaning university professors and people in government, policy makers, law makers etc) probably had our first two years of college probably between 20 to 40 years ago or more, at a time when the Internet was not known and personal computers were rare if they even existed.

And yet we led the world in science, technology and innovation. The number of scientific discoveries made, problems solved led to the advance in technology we enjoy now. STEM Education following the Sputnik era was at its best in our country. Students spend several hours in the library or the laboratory, and invested their time to learn study and think critically. They spent time solving complex problems. The training was rigorous.

Now we have a very advanced technology, information is at our finger tips. Our laboratories are far more advanced, and automated. Everything including solutions to textbook problems and solutions to mathematical problems is on line. We can be more efficient, productive and learn faster in principle. We now know quite well how the brain works, how we think and process information and we are able to attend to individual need of students and help them learn better.

Yet less and less students are going to STEM, students are unprepared, the math skills are terrifying, students only know how to search and find what they need on the internet, copy, plagiarize and get by and graduate. Educators are busy trying to incorporate technology to teaching. Some advocate the use of what kids like most to promote learning- using games, and Facebook and other social media as learning tools- use entertainment for teaching. Education research has flourished, and new innovations are being introduced and promoted. I have attended several STEM Forums and conferences organized by different agencies. In all the discussions new ideas and innovations are presented.

What is the most common element in the learning process that needs to be preserved throughout generations? What is the tool used by countries who are leading in STEM?

Yes technology can enhance the learning process and make us productive, as the internet helps find needed information faster, as much as new training tools help an athlete train well. ***But nothing can replace the hard work, the rigor and the long hours needed to excel and be creative in STEM. Like the star athlete or the champion in sports STEM is a mental athletics and one has to practice and spend time and work hard.*** There is no short cut to success in life be in STEM education, in athletics or performing. In my 20 plus years of teaching the ones who succeeded in life (in terms of successfully graduating with advanced degrees in STEM areas) are the ones who put the time and the effort.

***Any recommendation to increase the numbers of students graduating in STEM fields should also try to find ways on how we can motivate encourage students to work more, to work harder. Promoting the value of hard work, the value of studying and spending more time doing math and science is critical.*** Promoting the life of accomplished scientists and engineers should counterbalance the excessive attention given to celebrities in this culture. The use of technology in teaching should never be a substitute for hard work, but rather to help students be more effective learners and help love and appreciate science and math so they can give their time to rigor needed in STEM education. Technology shouldn't be used like a performance enhancing drug to bypass the rigorous mental exercise needed to

succeed and be innovative and creative in STEM. Using games, social media or technological tools to motivate and stimulate interest in STEM should be encouraged, as long as that is the goal.

The weakness in Math as a barrier for success in STEM has been cited. That is quite true. Math is required to do well in physics, chemistry or engineering, and often we lose most of the students before they finish the first calculus course. Some have argued that since all the calculus they need is on line and students can use the on line programs to solve calculus problems, they shouldn't be held back because of it or some even go as far as not requiring calculus in engineering. To me this is like allowing athletes to use performance enhancing drugs instead of exercising.

The question should be how can math education be improved and be integrated with other STEM programs? Do we need to have the academic silos preserved so that the Math department owns the Math courses; the Physics Department owns the Physics courses etc? Or allow physics departments to teach the math needed for students in physics or the math teacher work closely with the physicists to make the math curriculum relevant to the needs of the physicist, similarly engineers teach the math they need for their students to succeed in engineering etc? Often the lack of effective communication between departments, the course structure, and the accreditation requirements that require faculty to have certain number of graduate courses in a given discipline to teach a course in that discipline makes it harder to be innovative.

While the need to work hard and to spend more time in study is a constant factor in all generations, the problems that need to be addressed and be solved change from generation to generation. So it is true that in our generation the major issues in society—energy, the environment, health, food security, and climate change—require a collective effort of different disciplines working in interdisciplinary groups. Scholarship in the twenty-first century is characterized by innovations that cross and transcend the historic disciplinary boundaries of academia. It is therefore time to abandon the rigidly sub-divided mono-disciplinary and linear science and engineering that marked several centuries of development and find ways that will enrich interdisciplinary collaborations. ***It is only when we strengthen interdisciplinary interactions that we can identify collectively the common threads and needs across disciplines to be able to improve the math curriculum and teaching of math to serve all needs.*** Then the students will find a reason to be good in math. They can see the end result of the training. They see value in the course

***It is therefore clear that any reform or recommendations to improve Math education without addressing the structural problems of rigid mono-disciplinary university and college structure will only produce very insignificant results.*** Proposal solicitations to improve and come up with innovative curriculum may not be realized under the current university structure. It a radical departure from tradition is needed for a meaningful and innovative curriculum. We cannot expect to do what we are comfortable doing and expect change.

For quite some time undergraduate research has been known to be an effective way of hooking young students to continue in STEM areas. Getting undergraduates involved in research as early as their freshman year helps them appreciate and use classroom knowledge into practice thereby motivating them to pursue careers in Science, Technologic Engineering, and Mathematics (STEM) areas. We need pursues a holistic approach that integrates class room learning with research experience.

However this assumes and requires that all teaching faculty are involved in some kind of research, which is not common in most teaching universities with heavy teaching loads and in particular at HBCU's and

MI's where the shortage of STEM graduates is most felt. If and when available the research experience should be an all year round activity and not limited to a summer time activity only. If students spend summer away from their institutions for summer research, a mechanism to continue the research during the academic year should be sought. It is also useful to extend this experience at least in the summers to high school seniors and juniors. The earlier they enjoy and appreciate STEM the better. The increase in the number of early college high school programs in colleges and universities in North Carolina is a very promising approach to catch the highly motivated high school students early and channel to STEM areas. However the majority of the students who with the right intervention and guidance could excel in STEM are left out.

**[OpenPCAST Ideas] - Today In IdeaScale**

**From:** "OpenPCAST Ideas" <openostp@gsa.gov>

**Date:** Thu, January 19, 2012 1:11 pm

**To:** [pcast@ostp.gov](mailto:pcast@ostp.gov)

Wireless Spectrum treated as currency

In much the same way there are trade imbalances between currencies of different countries have impacts on international trade and trade policy, the use of a given Nation's wireless spectrum should also be viewed as a currency--though a currency for "internal use only" (ie spectrum, and the economic value it creates, is to some extent tied to the geography in which its used)

Evaluating the "internal use" of US "spectrum currency" could be a way of making an apples to apples comparisons--or international comparisons as well--to see how we are doing with our use of our "spectrum currency" as an enabler of economic value as compared to other nation states.

This practice & process could also be the means to develop national spectrum goals and best practices for regulators and law makers as spectrum is intuitively a major contributor to the US economy. By developing both models and empirical measurements to validate a "spectrum use" to "economic value" mapping, federal agencies that manage spectrum might be able to develop a long term view of how best to guide US spectrum policy.

And, given the President's recent proposal for reorganizing a number of Federal agencies, (some of which manage US spectrum policy) the breaking down of the federal agency silos might be an enabler of this cross-disciplinary task.

Votes : 0

Posted By : dlubar

**OSTP: CAFE's Green Flight Challenge Program to be NASA's 'moonshot for aeronautics' ??**

**From:** "Brien Seeley" [REDACTED]

**Date:** Tue, January 24, 2012 12:42 am

**To:** "John P. Holdren" [REDACTED]

**Cc:** "Gera Jochum" [REDACTED]

Dear Dr. Holdren:

Your earnest interest in finding the best win-win endeavors in science and technology prompts me to send you this encouraging news.

Apparently due to interest at the OSTP, I have been invited to make a 90 minute presentation at NASA HQ at 10:00 AM on February 2, 2012, (Groundhog Day) to leaders of the ARMD and OCT in the James Webb Auditorium. My topic will be how to extend the momentous results of the Green Flight Challenge to rapidly bring forth a new generation of small emission-free, quiet and therefore useful autonomous electric ESTOL aircraft that can affordably provide anytime, anywhere air taxi service that is 3-4X faster than any other travel mode and does not need roads.

CAFE has developed a detailed, cost-efficient step-wise plan to accomplish this. We believe that it should win NASA, DOE, EPA and FAA support. The plan is a multi-year prize competition program with many similarities to the Apollo Program in terms of successive missions with a definitely game-changing end goal. Its cost is 10,000 times less than the Apollo Program yet, according to NASA's Chief Scientist Dennis Bushnell, it could open a \$1 Trillion market. It expands our current lead in drone technology with a very positive 'swords into plowshares' mission.

I would be honored and delighted if you would be present at my presentation that day to hear the proposal and to offer your critique and insight. We think the momentous success of the Green Flight Challenge, and the burgeoning interest and technology boom around electric vehicles makes this the right time for the Administration to announce and launch such a 'moonshot for aeronautics'.

I hope to see you there.

Sincerely,

Brien

Brien A. Seeley M.D., President  
CAFE Foundation  
[REDACTED]

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, February 22, 2012 3:04 PM  
**To:** [REDACTED]  
**Subject:** FW: re Future City- Chicago The results are in.....

**From:** Rbengrui [REDACTED]  
**Sent:** Saturday, February 04, 2012 11:13 AM  
**To:** pcast@ostp.gov  
**Cc:** Stine, Deborah D.  
**Subject:** re Future City- Chicago The results are in.....

Attention PCAST

**THIS IS NOT SPAM.....** You are receiving this information it because we believe it should be of interest to you, your associates, colleagues.

If this e-mail is an intrusion into your cyberspace or just simply you do not choose to receive these announcements PLEASE let us know and you will be dropped from our mailings. Still we believe the news particular might be of interest to you.

The Future City - Chicago Competition has concluded....**The results are in . and the winner is ???** SEE PRESS RELEASE

Pictures are now posted on Flickr  
Go to: <http://www.flickr.com/photos/10752828@N05/sets/72157629101671609/>

Sincerely,  
Robert B. Johnson  
% SEAOI

[REDACTED]

volunteer to: [www.futurecitychicago.org](http://www.futurecitychicago.org)

**ALSO** volunteer to: **Explore Engineering - How do they do that?**  
<http://www.chicagolandeweek.org/explore.asp>





## **FOR IMMEDIATE RELEASE:**

### **CONTACT:**

**Don Wittmer, Regional Coordinator/** [REDACTED]

**Jennifer Buglione, Sayles & Winnikoff Communications/** [REDACTED]

## **2- Peat for St. Clair Jr. High -**

**Repeats in CHICAGO REGIONAL FUTURE CITY<sup>®</sup> COMPETITION**

### **CHAMPIONSHIP TEAM NOW HEADS TO FINALS IN**

**WASHINGTON DC, FEBRUARY 18-22**

**CHICAGO, January 27, 2012 – A team of students from St. Clair Jr. High has won the Chicago Regional National Engineers Week Future City<sup>®</sup> competition. St Clair students traveled from a school located 50 miles west of St. Louis to compete in the Chicago competition. Leaving very early Friday morning to beat an impending snowstorm they arrived late Friday for the Saturday competition. They will now travel to Washington DC to compete in the 19<sup>th</sup> Annual Future City National Finals ([www.futurecity.org](http://www.futurecity.org)), scheduled for February 19-21, 2012 at the Hyatt Regency in Crystal City, VA.**

**More than 33,000 students from 1,000 middle schools in 37 regions across the country are participating in the Future City regional competitions. The grand prize is a trip to Space Camp in Alabama, provided by National Finals host Bentley Systems, Incorporated, the leading company dedicated to providing comprehensive software solutions for the infrastructure that sustains our world.**

The three winning team members are Christopher North (age 13), Emily Hansel (age 12) and Rileigh Cassimatis (age 13) and were assisted by Taylor Click (age 13). Their teacher Jennifer Hawkins and Engineer mentor Angel Ramos, Spirit of St. Louis Airport provided guidance.

A repeat for St Clair!

In 2009, a team from St. Clair came in 4<sup>th</sup> place. In 2010, a team from St Clair came in 2nd. In 2011 and now in 2012 they took away top honors! BONDIDAG COVE is a future city in the Northern Territory of Australia. The city features electric driverless buses which are guided by rails under the street. Running on wires a Maglev SkyTran transports people above the city! Bondidag Cove uses renewable energy including wave power, wind and solar. An innovative 'Energy Paint' is used on many of the buildings acting as solar panels and powering many of the buildings.

The city gets its water from desalination plants. Rainwater harvesters are incorporated into the designs of buildings. Vertical farms run by robots provide food for the residents.

With a zoo, beautiful beaches, parks and other amenities Bongidag Cove is a perfect vacation destination in the year 2226.

Chris North says, "Engineering is the future and we're all going to take part in it. We are not going to have fossil fuels in the future, so the energy in our city will be used. All of our work paid off."

Taylor Click comments, "The hard work paid off! I enjoyed learning so much about what we can do to change the future. I'm excited to compete again in Washington, D.C."

## The REAL FUTURE

"This program has been instituted by the engineering profession to bring hands-on, practical applications of mathematics and science to educate young minds as to the essential role engineers play in creating our modern technological society," replied Robert B. Johnson, retired engineer - Bowman, Barrett & Associates, a spokesman for the Chicagoland Future City Program. "The future of America is not found on the basketball courts, football grid irons, tennis courts, golf courses or baseball diamonds, but in the minds of these young dreamers."

Chicago runners up include:

- 2<sup>nd</sup> – St Paul's Lutheran School, Brookfield
- 3<sup>rd</sup> – Stone Scholastic Academy, Chicago
- 4<sup>th</sup> – Oak Lawn Hometown Middle School
- 5<sup>th</sup> – Miles Davis Magnet Academy, Chicago

## About the Competition

On January 21st students met at the University of Illinois - Chicago Circle Campus to exhibit their models. 40 professional engineers queried the teams as to the merits of their designs. Another 40 architects-engineers were involved in the special award judging. Entries were judged on creativity, city layout, and attractiveness by a variety of judges from the private and public sectors of engineering. This year was the 20<sup>th</sup> competition for what has become an annual event for Chicago's engineering community. The Chicagoland engineering community is proud of their record as the only city to host the competition since its inception in 1992.

Students create cities on computers using the *SimCity™ 4 Deluxe* software, provided by Electronic Arts, and then build three-dimensional, tabletop models to scale. To ensure a level playing field, models must use recycled materials and can cost no more than \$100 to build. Students must present and defend their designs at the competition before a panel of engineer judges who test the depth of the

teams' knowledge. Students also write a 300-500 word city narrative describing their city and a 700-1000 word essay on the topic: – *“Fuel Your Future: Imagine new ways to meet our energy needs and maintain a healthy planet.”*

**This year's final round judges in Chicago included:**

- Frank Avila, Commissioner - Water Reclamation District of Greater Chicagoland
- Arun Heer, U. S. Army Corps of Engineers
- Joseph Renn, Manager- Civil Environmental Engineering & Construction Management - City of Naperville
- John Yonan, Superintendent of Highways – Cook Country Highway Department

Special awards were present to schools for their individual accomplishments in the competition. In addition to winning the top prize, the St. Clair team received additional honors from The Illinois Association of County Engineers for their integrated highway design. Students from McClure Jr. High, Western Springs received an award from the Society of Women Engineers- Chicago Regional Section ([www.swe.org/chicago](http://www.swe.org/chicago)) for the most inclusive community promoting work-force balance.

The Institute of Transportation Engineers ([www.ilite.org](http://www.ilite.org)) presented St Paul's Lutheran School, Brookfield a special award for excellence in transportation safety and operations. Another team coming from St Paul's Lutheran received an award from the Structural Engineers Association of Illinois ([www.seaoi.org](http://www.seaoi.org)) for their most innovative structure while the Chicago Committee on High-Rise Buildings ([www.cchrb.org](http://www.cchrb.org)) presented the another team of students from St. Clair with the award for best skyscrapers.

All together 27 “Special Awards” were presented to teams. The students voted for an award too! Once again the students agreed with the engineer judges in presenting the ‘Peer Award’ to the students from St. Clair. Oak Lawn Hometown Middle School received the best presentation and City Model. The best computer model went to the team from St. Paul’s Lutheran School.

(Editors: Complete Listing of Awards @ <http://www.futurecitychicago.org/winners.htm>)

Derek Johnson, co-coordinator offers this comment, "It is a great experience for all involved -- the students have fun while learning about engineering and gaining valuable teamwork and presentation skills. Engineers, mentors, judges and volunteers always leave impressed by the students' ability and enthusiasm."

Regional chairman Don Wittmer notes, "It is exciting to see the interaction between the students and witness the enthusiasm that these students have in learning about engineering and the real life problems that are encounter everyday. Our hope is that this competition helps students consider the possibility of studying engineering when they attend college."

Rileigh Cassimatis states , “When they said we won, we realized the extra hours that we put in were more than worth it. Teamwork is what got us this far!”

All participants in the regional competition received promotional items including, participation medallions, E-Week Tee-Shirts, Future City Water Bottles and a host of other trinkets. These gifts were courtesy of HNTB, ASCE-Illinois Section and other sponsoring societies and companies. The winning teams will be feted at the Chicagoland Engineers Week Benefit, February 24th.

The National Finals grand prize is a trip to Space Camp in Alabama, provided by National Finals host Bentley Systems, Incorporated, the leading company dedicated to providing comprehensive software solutions for the infrastructure that sustains our world. The second place team receives \$5,000 from the National Society of Professional Engineers and third place wins \$2,000 from IEEE-USA for their schools’ technology programs. Shell is also a national sponsor for the competition.

The 19<sup>th</sup> Annual Future City Competition for sixth, seventh and eighth grade students is sponsored in part by the National Engineers Week Foundation, a consortium of professional and technical societies and major U.S. corporations.

## **ABOUT ENGINEERS WEEK**

The National Engineers Week Foundation, a formal coalition of more than 100 professional societies, major corporations and government agencies, is dedicated to ensuring a diverse and well-educated future engineering workforce by increasing understanding of and interest in engineering and technology careers among young students and by promoting pre-college literacy in math and science. Engineers Week (February 19-25, 2012) also raises public understanding and appreciation of engineers' contributions to society. Founded in 1951, it is among the oldest of America's professional outreach efforts. It is sponsored by the National Engineers Week Committee, a consortium of engineering associations and major U.S. industries. Co-chairs for 2012 are Battelle and ASME. For more information, visit [www.eweek.org](http://www.eweek.org).

For those wishing to compete in next year’s competition or has any questions, please contact Don Wittmer at [dwittmer@hntb.com](mailto:dwittmer@hntb.com) or (312) 930-9119 or visit the website [www.futurecitychicago.org](http://www.futurecitychicago.org).

###

SimCity 4 Deluxe™ is a trademark of Maxis, Walnut Creek, California and a wholly owned subsidiary of Electronic Arts. National Engineers Week, is a registered trademark of the National Society of Professional Engineers.

Editors note: Photographs of the students models are available upon request.  
A few are shown at the end of the piece.

Contact: Bob Johnson [REDACTED]

## Medill News Service Report *(Includes video!)*

<http://news.medill.northwestern.edu/chicago/news.aspx?id=199047>

2012 Pictures: <http://www.flickr.com/photos/10752828@N05/sets/72157629101671609/>

## Story/Pictures of the 2011 Competition:

<http://news.medill.northwestern.edu/chicago/news.aspx?id=177881>

<http://www.suntimes.com/technology/guy/3413386-452/students-competition-engineer-bond-chicago.html>

2011 Pictures: <http://www.flickr.com/photos/10752828@N05/sets/72157626018755926/>

## *Additional information*

<http://www.todaysengineer.org/2008/Mar/FCC.asp>

[http://www.tiesmagazine.org/archives/mar\\_2003/pdf/mar\\_2003\\_FutureCities.pdf](http://www.tiesmagazine.org/archives/mar_2003/pdf/mar_2003_FutureCities.pdf)

<http://www.organicgreenandnatural.com/2009/08/19/middle-school-students-to-design-affordable-housing-in-future-city-competition/>

<http://bdpa.groupsie.com/discussion/topic/show/223796>

<http://greenerfocus.blogspot.com/2010/08/building-engineers.html>

## **Additionally**

The Future City competition is one of the elements for the recognition of NATIONAL ENGINEERS WEEK<sup>®</sup>

. Since 1951, NATIONAL ENGINEERS WEEK<sup>®</sup>, has been the nationwide celebration of the engineering profession, to acknowledge the essential role which engineering has played in advancing civilization and adding quality to our lives. In Chicago, activities scheduled include engineering lectures, student outreach efforts, bridge building competitions and exhibitions of engineering achievements.

Contact: Tim Seedan - Western Society of Engineers [REDACTED]

For Engineers Week - Chicago details visit the Chicagoland EWEEK website [www.chicagolandeweek.org](http://www.chicagolandeweek.org)

# Visit the NATIONAL ENGINEERS WEEK<sup>®</sup>



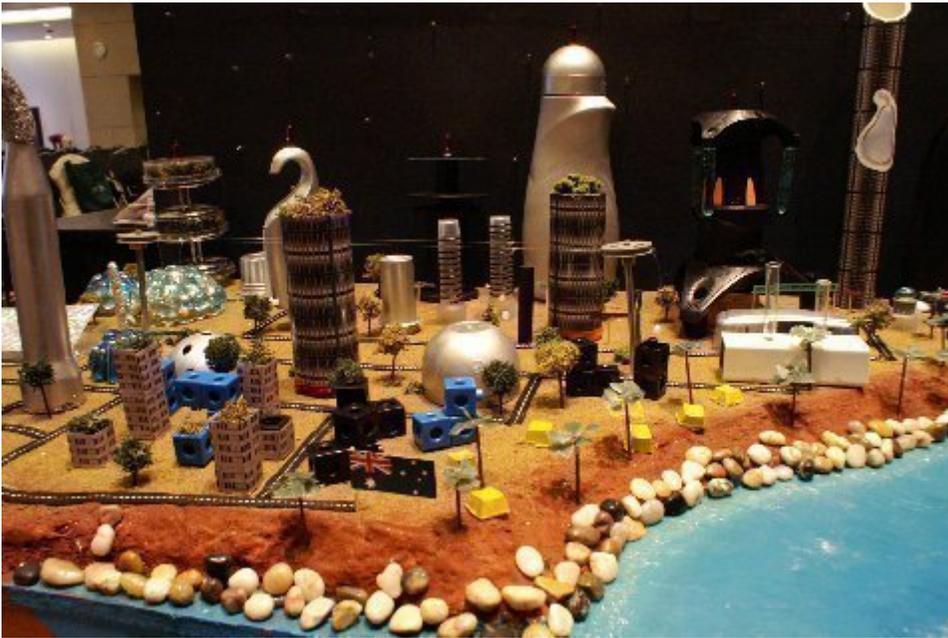
<http://www.eweek.org>

sample pictures

1st Place team: St Clair Jr. High, Missouri - Future City - "Bondidag"



Close-up of model



2nd Place Team: St Paul's Lutheran School, Brookfield , IL - Future City - "Dynamocity"



Teams get 'grilled' by a panel of



distinguished engineer judges

Every student gets something for



their participation!

Here teams pick-up their T-Shirts

**Dozens of "Special Awards" are presented to the teams**



**all together 27 "Special Awards" were presented**

**Most Energy Efficient City - Thompson Jr. High**



**Note the windmills**

**and Chicago TV (WLS-TV , WBBM-TV) reported on the program!~!!!\**



**Finalist Judges**



here (left) Joseph Renn, Manager- Civil Environmental Engineering & Construction Management - City of Naperville, Frank Avila, Commissioner - Water Reclamation District of Greater Chicagoland (right) review the "COOLVILLE" model from Oak Lawn Hometown Middle School



St Clair Jr. High "TRIANA CITY" model

Though this city did not place it captured several "Special Awards":

High Rise Building award from [www.cchrb.org](http://www.cchrb.org)

Best Future City promotion from the Society of Marketing Professional Servives (SMPS)

**Go to 2040 Plan Implementation from Chicago Metropolitan Agency for Planning (CMAP)**



**3rd Place**



**Stone Academy, Chicago team**

**Stone took home the special award for Best Futuristic City!**

**President's Council of Advisors on Science and Technology (PCAST) Webcast Question**

**From:** "Ledley, Fred" [REDACTED]

**Date:** Tue, February 7, 2012 3:15 pm

**To:** "'pcast@ostp.gov'" [pcast@ostp.gov](mailto:pcast@ostp.gov)

How would PCAST address the design of science education so that the content of curriculum is relevant to the needs of business and students have the applied focus and ancillary skills to be productive in a business environment?

This is addressed in the Professional Science Masters initiatives, but has not been addressed in the undergraduate curriculum.

Fred Ledley  
Professor and Chair  
Department of Natural and Applied Sciences  
Bentley University

[REDACTED]  
[REDACTED]  
>

**President's Council of Advisors on Science and Technology (PCAST) Webcast Question**

**From:** "Duggan, Claire" <[REDACTED]>

**Date:** Tue, February 7, 2012 4:06 pm

**To:** "pcast@ostp.gov" <[pcast@ostp.gov](mailto:pcast@ostp.gov)>

With recommendations being made to introduce research in the first two years of undergraduate education - are you also supporting programs such as Young Scholars Initiatives that provide summer research experiences for High School students?

We have been offering a six week experience for High School students - offered with a stipend for students to encourage the participation of urban/suburban/first generation and low/moderate and middle income students - for many years. This initiative was previously funded by NSF - although now recommended as an education requirement for ERC's - it is no longer a separate program.

The model also provided the foundation for our expanded REU programs (open to Community College students) Young Scholars Program (YSP) <<http://neuysp.weebly.com/>> - The Young Scholars Program offers future scientists and engineers a unique opportunity for hands-on experience while still in high school. The program is open to Boston area applicants who have completed either their sophomore or junior year in high school.

Claire J. Duggan  
Director for Programs and Operations  
The Center for STEM Education  
Northeastern University

[REDACTED]  
[REDACTED]  
>  
[REDACTED]

**Engage to Excel**

**From:** "Gall, Dolores" [REDACTED]

**Date:** Thu, February 9, 2012 2:08 pm

**To:** "'pcast@ostp.gov'" [pcast@ostp.gov](mailto:pcast@ostp.gov)

Dear Members:

I have just read your latest report on the state of STEM education in the US.

All of your conclusions and all of your solutions are great. We, at Anne Arundel Community College have already reached these conclusions in 2008 and started to implement them on our college campus. We have reached out to other community colleges and four year institutions to partner with, as well as businesses. Our numbers have come up. Why are you using numbers that are three years old? Why do you not have any community college representatives on your board? These are problems we are constantly faced with and we resolve. I would recommend adding a few community college representatives onto your board. I am a graduate of Johns Hopkins University. Though I received a wonderful education, students are not Hopkins' prime concern, but research. Community colleges prime concern is students and their successful education. A happy employee is a productive employee. We produce happy employees.

My supervisor, Richard Cerkovnik, is the Executive Director of the National STEM Consortium. I cannot think of another individual in the United States who has more knowledge of successful STEM education. I think you should ask him to join your group.

Sincerely and respectfully,  
Dolores Gall

Dolores Gall  
Instructional Specialist-STEM  
Science, Technology, Engineering and Math (STEM)  
Anne Arundel Community College

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

Learning is a treasure which accompanies its owner everywhere. -- Chinese proverb

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**PCAST and Risk Assessment in complex, living systems**

**From:** "Lloyd Etheredge" <[REDACTED]>

**Date:** Mon, February 13, 2012 2:39 pm

**To:** "Dr. John Holdren - [REDACTED]"

**Cc:** "Dr. Rosina Bierbaum - [REDACTED]"

Dear Drs. Holdren and Lander and Colleagues:

Concerning the federal government's risk assessment methods for complex, living systems I enclose a discussion of possible serious mistakes. The issues were recently focused by a Science article and the New York Times story on January 26, 2012 "Study Finds Virus to be Fast Learner on Infecting." The range of potential upgrades in risk analysis extends to the global financial system:

Yours truly,  
Lloyd Etheredge

Dr. Lloyd S. Etheredge, Director - Government Learning Project  
Policy Sciences Center Inc.

[REDACTED]

[REDACTED]

URL: [www.policyscience.net](http://www.policyscience.net)

[REDACTED]

[REDACTED]

[The Policy Sciences Center, Inc. is a public foundation that develops and integrates knowledge and practice to advance human dignity. It was founded by Harold Lasswell, Myres McDougal, and their associates in 1948 in New Haven, CT. Further information about the Policy Sciences Center and its projects, Society, and journal is available at [www.policysciences.org](http://www.policysciences.org).]

## AAAS Censorship, Population, Vallentyne's Day

### **A Letter from Edmonton, Ottawa and San Diego Concerning AAAS**

Colleagues and Friends in the Scientific Community:

As most of you are aware human overpopulation is a great threat to our planet, ourselves and other living things. Essentially no nation can be said to be living in a sustainable way. In all, non-renewable resources are declining and environmental degradation, from rising greenhouse gas levels to species extinctions, outpaces attempts to halt it.

Population growth is the main culprit, especially considering that for most of the world we should want the standard of living to be higher than it is now - and that requires increased per capita consumption of resources in those areas.

Unfortunately, some segments of the scientific establishment in the US and Canada feel they have the right to suppress, on ideological grounds, discussion of what should be the national population policies in their own countries. This prejudice seems pervasive and deep but normally "flies below the radar" of the busy scientists and leaves little public trace.

The three of us recently encountered such censorship when we attempted to organize an exhibitor booth on population issues for the AAAS meeting scheduled for February 2012 in Vancouver, British Columbia, first under the aegis of *Californians for Population Stabilization*, and then under the aegis of the *Population Institute of Canada*. Both attempts were denied by AAAS on the shallowest of pretexts. This mailout to thousands of scientists in the US, Canada, and elsewhere is our response.

Five new articles, with links to their pdfs, are listed below. The first recounts our battle with AAAS, and includes an appendix with all key correspondence.

The second recounts the first stage of that struggle, but also documents other instances of suppression of information by AAAS as well as by the [US] President's Council of Advisors on Science and Technology.

The last three new articles concern the ideas on population, consumption, demotechnics and censorship of the late Canadian limnologist, Jack Vallentyne, and have just come out in *Ethics in Science and Environmental Politics*. Vallentyne was thinking deeply on these issues starting in the late 1960s. He would be appalled by the behavior of the AAAS directorate and their counterparts in so many other scientific and environmental organizations.

Do pass this on to your colleagues and students; 'sunlight' will be the best cure for this disease.

With best regards,

David Schindler, University of Alberta  
[REDACTED]

Madeline Weld, Population Institute of Canada  
[REDACTED]

Stuart H. Hurlbert, San Diego State University  
[REDACTED]

**[American Association for the Advancement of Science \(On National Population Policies\) Muffles 'Obnoxious' Canadians Too](#)**

[Schindler D, Weld M, Hurlbert SH, 2012, Soc. Contract 22\(2\) :11-25.](#)

**[Is AAAS Oblivious to U.S. Overpopulation and Its Consequences? Or Is It Just Another Censor?](#)**

[Hurlbert SH, 2011, Soc. Contract 22\(1\):67-71.](#)

**[Consumption: the other side of population for development](#)**

[Mata FJ, Onisto LJ, Vallentyne JR, 2012, ESEP 12:15-20.](#)

**[Vallentyne was right: achieving sustainability requires accounting for all relevant factors](#)**

[Ryerson WN, 2012, ESEP 12:5-13.](#)

**[Tribute to an 'obnoxious' ecocatalytical demotechnician: Jack Vallentyne on population](#)**

[Hurlbert SH, 2012, ESEP 12:21-34.](#)

# The Social Contract

Vol. XXII, No. 2

Winter 2012



## AAAS American Association for the Advancement of **Silence?**

### The nation's top scientific organization suppresses debate of U.S. population policies

**Edwin S. Rubenstein** remembers Prop 187 and explains the fiscal drain of immigrant households on California's budget.

**Rick Oltman** reflects on the role of California Assemblyman Dick Mountjoy in sponsoring Prop 187.

**David Schindler, Madeline Weld, and Stuart H. Hurlbert** highlight the battle against censorship with the American Association for the Advancement of Science (AAAS).

**One hundred scientists and scholars** protest the cancellation of an exhibitor booth for Californians for Population Stabilization (CAPS) at the AAAS meeting in Vancouver.

**Leon Kolankiewicz** writes the AAAS Board of Directors on their "ill-considered" decision to deny booth space to CAPS and suppress the opportunity to contemplate the causes and consequences of unsustainable population growth.

**Peter Gemma** interviews Bob Goldsborough, a leader in the immigration reform movement and former staff investigator for the House Committee on Un-American Activities.

**William Buchanan** revisits the citizenship clause of the 14th Amendment and the catastrophic consequences of Justice Horace Gray's interpretation in the landmark Wong Kim Ark case.

**Dudley L. Poston, Jr. and Demetrea Nicole Farris** ponder which states would lose seats in the House of Representatives if Puerto Rico becomes the 51st state.

**Brenda Walker** discovers frightening analogies in the latest waves of Boat People to the *Camp of the Saints*.

**Del Erickson** reassesses the credibility of *National Geographic* for dodging the impact of overpopulation.

Reviews by **Donald A. Collins, Gerda Bikales** and **Fred Eibel**.



[www.thesocialcontract.com](http://www.thesocialcontract.com)

\*\*\*\*\*

Stuart H. Hurlbert  
Department of Biology



Email: [REDACTED]

Emeritus Professor of Biology & Director, Center for Inland Waters

CIW website: <http://www.sci.sdsu.edu/salton/>

\*\*\*\*\*

## Harrisburg University of Science and Technology

**From:** "Hector Haston" [REDACTED]

**Date:** Wed, February 15, 2012 1:04 pm

**To:** [pcast@ostp.gov](mailto:pcast@ostp.gov)

**Cc:** [dstine@ostp.eop.gov](mailto:dstine@ostp.eop.gov)

Dear members of the President's Council of Advisors on Science and Technology (PCAST),

We would like to take this opportunity to thank you for your efforts to improve STEM education, the work is necessary and worthy. We do however have some concerns about your inclusion of Harrisburg University of Science and Technology as an example of a successful STEM institution in your recent Engaged to Excel report to the President.

The institution has recently come under fire for misstating enrollment numbers and job placement claims. Your own report to the President contains some of these very claims. For example, the report states "The Harrisburg University for Science and Technology (HU), which has grown from 100 to 722 students". HU has never had an enrollment of 722. This is easily verified by checking the figures at The National Center for Education Statistics (<http://nces.ed.gov/collegenavigator/?q=harrisburg+university&s=all&id=446640>) HU's current enrollment is about 400 students, the highest figure in their short history.

The report also states HU "is helping students who leave high school without good preparation become marketable in STEM fields." In truth, HU's dedication to under-prepared students is a single remedial math class. The result is predictable; their retention rate is the lowest of any of their peers and amongst the lowest of any institution in Pennsylvania. Throughout their history, the vast majority of students do not return after the first year. In 2010, they had a retention rate of just 34%. This means 66 out of 100 students never returned after their first year. Again, this is easily verified through the The National Center for Education Statistics.

Your report also states "Of its original 100 students, 92 were hired into the fields they studied, with salaries of \$50,000 to \$60,000 per year, according to Mel Schiavelli, President of HU." The retention rate in 2006 was 36%, which tells us that 64% of the original students never returned after the first year. Only a handful of the original students even graduated from HU. How is it possible that 92 of them obtained employment in their fields with above average salaries? These are the types of questionable statements by Dr. Schiavelli that have been causing alarm in the HU community.

There are additional untruths contained in your report about HU such as "An

executive search firm helps new students define career paths" (there is no such firm).

HU is also currently under investigation by the Pennsylvania Department of Education.

We are embarrassed and ashamed of our administration's behavior and we offer our apologies.

Sincerely,  
Concerned members of The Harrisburg University Community

You can find more information about HU and our mission here:

<http://watchinghu.blogspot.com/>

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TRY FREE IM TOOLPACK at <http://www.imtoolpack.com/default.aspx?rc=if5>

Capture screenshots, upload images, edit and send them to your friends through IMs, post on Twitter®, Facebook®, MySpace™, LinkedIn® – FAST!

## Sunlight Project

**From:** Marcos Rodríguez González <marcosrodriguez@gnam.com>

**Date:** Thu, February 16, 2012 11:23 am

**To:** [pcast@ostp.gov](mailto:pcast@ostp.gov)

**Priority:** Normal

Hi,

please visit this blog and tell me your opinion

<http://sunlightproject.wordpress.com/>

Thank you.

**From:** dscepki [REDACTED]  
**Sent:** Thursday, December 29, 2011 7:10 PM  
**To:** Stine, Deborah D.  
**Subject:** Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: Russell D. Tice former NSA Intel Officer Testimony

Dorothy Szczepkowski  
[REDACTED]

December 29, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy  
Executive Office of the President  
[REDACTED]

Dear Dr. Stine:

I have been asking for your help for two years now. I have never heard anything back from you. In my August 25, 2010 email to you, I forwarded an email I sent to you on Wed, 19 Aug 2009 13:05:59 -0700, which is included within this email and your response back to me on Wed, Aug 19, 2009 5:44 pm, was "Thank you for your comments. I will provide them to the PCAST members." Dr. Stine, what were the PCAST members' thoughts? I respectfully asked you for feedback. I know the PCAST members are our government officials and country's experts.

Dr. Stine, I am now forwarding, as my first attachment, an interview with Russell D. Tice, a former NSA Intelligence Officer, who was to testify before the Senate Armed Services Committee the week of May 19, 2006, regarding NSA Conducting Electronic Warfare on Americans.

Dr. Stine, I have always said this is a renegade criminal gang. Perhaps this is an "inside job." Someone would have had access/clearance at NSA and saw a way for other criminal uses.

**After seeking help and corresponding with President Obama's Commission for the Study of Bioethical Issues, below is the response I received back dated July 27, 2011.**

**“PRESIDENTIAL COMMISSION FOR THE STUDY OF BIOETHICAL ISSUES**

**Dear Commenter:**

**We are writing to advise you on our ongoing work and plans for the next meeting of the Presidential Commission for the Study of Bioethical Issues. We appreciate the time that you have taken to engage with us.**

**We would like to clarify for your information that the Commission is not investigating or reviewing any concerns or complaints concerning claims about targeted individuals. This includes claims concerning: MK-ULTRA; COINTELPRO; electromagnetic torture or attacks; organized stalking; remove influencing; microwave harassment; covert harassment and surveillance; human tracking; psychotropic or psychotropic weapons and radio frequency or military weapons or other claims.**

**As such the Commission will not hear further testimony on these subjects. Many of these issues have been investigated in the past. The Commission is not a law enforcement, regulatory or legislative body. It does not control any federal monies. In addition, the Commission has no involvement with the public or private grants and has no power to open or undertake criminal cases.**

**As advisors to the President, we will ensure that all your concerns, information and testimony are provided to the White House. We sincerely appreciate your interest in the work of the Commission and the time you have taken to share your personal history with us.**

**Sincerely,**

**Valerie H., Bonham  
Executive Director”**

**Dr. Stine, in the third paragraph of the response, second sentence, “The Commission is not a law enforcement, regulatory or legislative body. It does not control any federal monies. In addition, the Commission has no involvement with the public or private grants and has no power to open or undertake criminal cases.” I ask you, who is the “law enforcement, regulatory or legislative body” within our government that is going “to open or undertake (these) criminal cases.”?**

**Please, Dr. Stine, could you forward all information to a legal entity of our government for investigation and prosecution.**

**Respectfully,**

**Dorothy Szczepkowski**

-----Original Message-----

From: dscepki <[REDACTED]>  
To: Deborah\_D.\_Stine <[REDACTED]>  
Sent: Mon, Oct 3, 2011 12:48 pm  
Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: U.S. Patent Number 6,587,720B2, Jul. 1, 2003, "Apparatus for Audibly Communicating Speech Using the RF Hearing Effect"

Dorothy Szczepkowski  
[REDACTED]

October 3, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy  
Executive Office of the President  
[REDACTED]  
[REDACTED]  
[REDACTED]

Dear Dr. Stine:

On August 8, 2011, I forwarded to you **U.S. Patent Number 4877027, "Microwave Technology for Making People Hear Voices in Head."** Today, I am forwarding to you **U.S. Patent Number 6, 587,729 B2, Jul. 1, 2003, "Apparatus for Audibly Communicating Speech Using the Radio Frequency Hearing Effect."**

Dr. Stine, I realize the duplication of the process/devices was done by someone who knew the processes/devices and turned criminal. I am in absolutely no way insinuating my government, knowingly, would try to harm me. I have never done anything wrong or illegal that would give them cause. But, Dr. Stine, does my government want me harmed by a gang of criminals when I am giving my government all the information to assist them in an investigation and get these deadly criminals off of our streets to make everyone safe.

Very respectfully,

Dorothy Szczepkowski

Attachment

-----Original Message-----

From: dscepki [REDACTED]  
To: Deborah\_D.\_Stine <[REDACTED]>  
Sent: Thu, Aug 25, 2011 4:54 pm  
Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: "First" Known Police Report taken Seriously by any Police Department from a Targeted Individual by the Richmond, California Police Department from Amy Lee Anderson

Dorothy Szczepkowski  
[REDACTED]  
[REDACTED]  
(888) 438-1000

August 25, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy  
Executive Office of the President  
[REDACTED]  
[REDACTED]  
[REDACTED]

Dear Dr. Stine:

I have attached a copy of the "first" known Police Report taken seriously by any Police Department from a Targeted Individual by the Richmond, California Police Department from Amy Lee Anderson.

On the attached Police Report, Under "Synopsis – M.O.," please note, **"Ms. Anderson complains of being a victim of electronic torture and harassment through electronic mind control technology. Ms. Anderson believes this technology is designed to drive a person insane because it is a silent killer using subliminal sound radio wave frequencies. Further stating, this mind control technology tunes one's brain waves like a radio station that broadcast subliminal messages to one's mind."**

Please note on Page 4 of 4 (Page number handwritten, located in lower right hand corner on the page,) in the 4<sup>th</sup> complete paragraph, “Ms Anderson said sometimes the symptoms she experience is like having her face burning on fire. **I told Ms. Anderson that the police department is limited on the resources available to investigate and provide remedies for such scientifically sophisticated matters.”**

Dr. Stine, I ask you, as a United States Citizen, always doing the right and responsible thing, who is going to step up, within our government and fine land, and do the right thing? What about our land’s laws? Are deadly criminals, now, going to start having the run of the land?

Please help me, us.

Respectfully,

Dorothy Szczepkowski

Attachment: Police Report

-----Original Message-----

From: dscepki [REDACTED]  
To: Deborah\_D.\_Stine [REDACTED]  
Sent: Tue, Aug 9, 2011 4:36 pm  
Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: President Obama's 2nd Bioethics Committee Conference, May 18, 2011

Dorothy Szczepkowski  
[REDACTED]

August 8, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy  
Executive Office of the President  
[REDACTED]  
[REDACTED]

[REDACTED]

Dear Dr. Stine:

I am forwarding to you, in my first attachment, U.S. Patent Number 4877027, "Microwave Technology for Making People Hear Voices in Head." Dr. Stine, if you are unfamiliar with this Patent, after reading it, surely it will give validity to what I have been writing to you over the last two (2) years. Dr. Stine, I am asking you to please have the appropriate federal law enforcement agency start an investigation into the torture of U.S. citizens, of which I am one, who endure daily, life threatening torture and assaults on and to our bodies on a 24 hour basis. These assaults and torture are speeding up the natural process for our deaths. These assaults are destroying our bodies. If the appropriate branch of our government in our great country is not willing to take the responsibility for these atrocities, is this and will this be the "modern day" Holocaust.

With sincere respect,

Dorothy Szczepkowski

Attachments (5)

-----Original Message-----

From: dscepki [REDACTED]  
To: Deborah\_D.\_Stine <[REDACTED]>  
Sent: Tue, Jul 12, 2011 4:14 pm  
Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: President Obama's 2nd Bioethics Committee Conference, May 18, 2011

Dorothy Szczepkowski  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

July 12, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Dear Dr. Stine:

I am sending you an Internet link of a recording, June 14, 2011, of the program "Technology -To Serve or to Be Served," hosted by Ms. Johnnette Benkovic, "Women of Grace" with and interviewing Father Joseph Esper, St. Edward on the Lake Parish, Lakeport, Michigan, Roman Catholic Archdiocese of Detroit, Michigan. It is 26 minutes long.

<http://www.womenofgrace.com/tv-shows/10249-Technology-To-Serve-or-to-Be-Served.html>

In these 26 minutes, Father Esper is talking about present day, the real world, constant surveillance, rfid chips and mind control by the government. (In the crimes being committed against me, it is a gang of criminals.) It is so hard to believe that a Catholic priest, whose life is devoted to God, could be so knowledgeable about what is happening. Father Esper is factual, to the point, accurate and no nonsense. **In Father Esper's holy world, he has so much knowledge and facts about what is happening in our society from a standpoint of 24 hour surveillance, monitoring and all of the (deadly) consequences and there is no one in my government, village, state and federal that is willing to investigate and acknowledge that I and innocent Americans are being targeted in their own homes too, with deadly devices and no one is taking any action.** Please have a staff member take the time to listen to the Internet link with Father Esper and assign a staff member to investigate all of these deadly crimes. The **Microwave Hearing Effect transmissions** that are being used on me is shortening my life, threatening my health and life.

**These are crimes of treason and espionage that is now taking place in our great land; an extreme violation of our country's principles. My government burying their heads in the sand on these crimes will not make them go away, it will only worsen them.....the more time to perpetrate. This type of criminal 24/7/365 surveillance is what our country will have to contend with in the future. Thank you.**

Respectfully,

Dorothy Szczepkowski

-----Original Message-----

From: dscepki <[REDACTED]>  
To: Deborah\_D.\_Stine <[REDACTED]>  
Sent: Tue, May 31, 2011 2:44 pm  
Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: President Obama's 2nd Bioethics Committee Conference, May 18, 2011

Dorothy Szczepkowski  
[REDACTED]

[REDACTED]

May 31, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy

[REDACTED]

[REDACTED]

[REDACTED]

Dear Dr. Stine:

Following are emails/letters I sent to you on Fri., April 15, 2011, 11:44AM; Mon. March 7, 2011, 2:03PM, in this correspondence I included the first **President Obama's Commission for the Study of Bioethical Issues Conference in Washington, D.C. February 28 through March 1, 2011, Internet link, <http://www.tvworldwide.com/events/bioethics/110228/default.cfm?id=13288&type=flv&test=0&live=0>, of Targeted Individuals, like myself, who were able to express concerns and their deadly experiences due to the widespread use of electromagnetic tracking devices and Microwave Hearing Effect transmissions; Wed. August 25, 2010, 8:12PM; and Wed., August 19, 2009, 13:05:59.**

Dr. Stine, I am now sending you more proof of the ongoing torture of Targeted Individuals from the second **President Obama's Commission for the Study of Bioethical Issues Conference in New York, NY, May 18, 2011.** Below are five (5) Internet links, 10 minutes each, in which 20 Targeted Individuals, like myself, were able to give a 2 minute expressions of concern during the Public Comments Session, detailing their daily torture and begging and pleading for help. 300 Targeted Individuals requested floor time. The time allotted only permitted for 20. 300 Targeted Individuals were willing to take time off of work and incur, to them, a sizeable expense to tell of their torture and get help. Dr. Stine, **these are cells of murder mills on our American soil. Americans are being Targeted for torture, resulting in death, from criminals here in America without anyone in our great land investigating the accusations of many?** Dr. Stine, it is only a matter of time, before these crimes are carried and publicized through news stations and the media. There is more and more information, and out crying over

the Internet. **More and more good, law abiding citizens are complaining and crying out about these deadly, unbearable crimes;** would they target another criminal.

<http://www.youtube.com/watch?v=vmhdsQ8fPSc&feature=related>

<http://www.youtube.com/watch?v=nKMgHd-gn1M&feature=related>

<http://www.youtube.com/watch?v=DenV-MTVo80&feature=related>

<http://www.youtube.com/watch?v=ZwNgM0RCY0&feature=related>

<http://www.youtube.com/watch?v=GmBOWSeXxjA&feature=related>

**"There are a thousand hacking at the branches of evil to the one who is striking at the root." -- Henry D. Thoreau. Please find the appropriate government agency to help us.**

Sincerely,

Dorothy Szczepkowski  
[REDACTED]

-----Original Message-----

From: dsceпки [REDACTED]  
To: Deborah\_D.\_Stine <[REDACTED]>  
Sent: Fri, Apr 15, 2011 11:44 am  
Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: Follow Up to your August 19, 2009 Email to me. SUB: New Criminal Advanced Technology Being Used in the United States; Enables 24/7/365 Stalking, both Physical and Remote, Endless Crimes, and Premeditated Attempted Murder

Dear Dr. Stine,

**The organized criminal gang is killing me, in my own home.** Their sleep deprivation tactics/murder attempt has escalated to zero (0) minutes per night of sleep. Is anyone in our government helping me? **Is it OK to our government to lose a few citizens here and there to murderers?**

Very respectfully,

Dorothy Szczepkowski  
[REDACTED]

-----Original Message-----

From: [REDACTED]  
To: [REDACTED]  
Cc: wpress <[wpress@outlook.com](mailto:wpress@outlook.com)>, zewail <[zewail@outlook.com](mailto:zewail@outlook.com)>  
Sent: Mon, Mar 7, 2011 2:03 pm

Subject: Fwd: From: Dorothy Szczepkowski, Streamwood, IL. RE: Follow Up to your August 19, 2009 Email to me. SUB: New Criminal Advanced Technology Being Used in the United States; Enables 24/7/365 Stalking, both Physical and Remote, Endless Crimes, and Premeditated Attempted Murder

Dorothy Szczepkowski



March 7, 2011

Dr. Deborah D. Stine, Ph.D.  
Executive Director  
President's Council of Advisors on Science and Technology Policy  
Office of Science and Technology Policy



Dear Dr. Stine:

In follow up to my email/letter I sent to you Wed, Aug 25, 2010 8:12 pm, (“original message” following below as forwarded,) and as my email/letter, also, forwarded below, to Dr. William H. Press, Ph.D. and Dr. Ahmed H. Zewail, Ph.D. dated Wed, 19 Aug 2009 13:05:59 -0700, I want you to know President Obama's Commission for the Study of Bioethical Issues held a Conference in Washington, D.C. February 28 through March 1, 2011. If you click on the link below I provided, you will be brought straight through to where The Commission opened a session up to the public and 17 Targeted Individuals, like me, were able to give a brief 2 to 3 minute expressions of concern. The 17 Targeted Individuals were from throughout the United States. All, expressed to The Commission what I expressed to you below in my emails/letters that I am forwarding as a reference, and through the 1-1/2 year period I have written your office. None of us know each other, but the expressions of the crimes being committed are the same. To quote Deborah Dupre, Human Rights Examiner.com, as I have written to you before, **“You will find too many technological common denominators to simply ignore and there are too many credible victims that cannot simply be categorized as delusional.”** This type of criminal 24/7/365 surveillance and threat to an individual's health and life is what our country will have to contend with in the future.

**This deadly criminal gang takes and uses techniques straight out of an Interrogation Manual.** Most of their interrogation tactics are done "tongue-in-cheek." It appears they think this torture is amusing, a game. At night, after I lie down, my bed and bedroom becomes a

torture chamber for the criminals' use. During some of the worst nights by these criminal-terrorists, I have often thought that lying on a bed made of nails would be of less torture. **They use the device that produces the Voice-to-Skull transmissions as a weapon. They use all kinds of interrogation torture techniques**, including calling my first name to get my immediate attention and then proceed with non-stop Voice-to-Skull transmissions, consisting of preselected repetitions. I am positive our President Obama would take swift action if he was aware of what was happening, in America, to innocent Americans.

Please, Dr. Stine, take the time out of your very busy day to look at and listen to the link below my last sentence. It is about 50 minutes long. I am requesting you to provide this new information to your PCAST members and to please get back to me with your outcome. These criminals need to be investigated and arrested for my safety and for society's.

<http://www.tvworldwide.com/events/bioethics/110228/default.cfm?id=13288&type=flv&test=0&live=0>

Thank you.

Respectfully,

Dorothy Szczepkowski

-----Original Message-----

From: dscepki [REDACTED]

To: Deborah\_D.\_Stine <[REDACTED]>

Sent: Wed, Aug 25, 2010 8:12 pm

Subject: Re: From: Dorothy Szczepkowski, Streamwood, IL. Follow Up to your August 19, 2009 Email to me. RE: New Criminal Advanced Technology Being Used in the United States; Enables 24/7/365 Stalking, both Physical and Remote, Endless Crimes, and Premeditated Attempted Murder

Dorothy Szczepkowski

[REDACTED]

August 25, 2010

Dr. Deborah D. Stine, Ph.D.

Executive Director

President's Council of Advisors on Science and Technology Policy

[REDACTED]

[REDACTED]

Dear Dr. Stine:

The email below was forwarded to you on Wed, 19 Aug 2009 13:05:59 -0700. Your response back to me was Wed, Aug 19, 2009 5:44 pm, "Thank you for your comments. I will provide them to the PCAST members."

Dr. Stine, I am in need of your action, feedback and resolution from our great country's government officials and experts. The deadly surveillance technology and the tactics used by the criminals in my attached story/summary are killing me. The stress that is put on my heart on a daily basis is taking its toll. My heart rate is never "at rest" from the constant Voice to Skull attacks and the intense aggression used by the criminals 24/7. If the criminals' technology and tactics don't kill me by heart attack, I am afraid it will produce a stroke. As a result of their 24/7 badgering, their constant disruption of my sleep and their intentional sleep deprivation Voice to Skull tactics used on me nightly and disruption of every meal, no exceptions, I am often dizzy, most days and nights my head hurts and throbs, all my bones ache, my nerves feel raw, I feel run down and weak, my throat hurts and I frequently have pains in my stomach. These criminals are murders and they will not stop or back off until they kill me. I need you to know these criminals are able to kill innocent human beings and not be charged with murder, at this point, because no one in government has devoted time to solving this horrific crime. I am not alone. **There are hundreds of us being tortured to death in our own homes every day and night, here in our United States.**

Deborah Dupre, Human Rights Examiner.com, has written many articles over the years on the atrocity. Following are sections from more than several articles she has written on the subject:

Ms. Dupre writes of Mr. James Walbert, a Targeted Individual himself. "There needs to be Congressional Hearings where the thousands of non terrorist ordinary Americans who are getting attacked daily by directed energy weapons and organized gang stalked as well as targeted with numerous other COINTELPRO tactics get a chance to come forward and describe how their lives have been ruined **and how they have been tortured in their own homes...**"

"Walbert now unofficially represents thousands of American Targeted Individuals, innocent children, women and men covertly persecuted in the United States - **in their own homes and communities - by one of, if not the single most sophisticated organized criminal systems to hit the planet.**"

"Rudimentary data about targeted individuals plus anecdotal reports indicate that **since 2001, an influx of innocent, injured citizens have been lodging complaints with law enforcement; national and international human rights organizations; elected officials; and media about their experiencing covert, cruel and inhumane treatment.**"

“In sheer desperation for survival, at least some of these TIs resort to online self-help groups. A look at content of their messages in these groups reveals their disturbing accounts: **typically death threats, rapes, physical assaults and assassination attempts.**” These reports consistently meet criteria of torture.

**“TIs claim being covertly tortured in their homes and communities.” “TIs pleas for advocacy are consistently denied by medical doctors, psychiatrists, psychologists, organizations of these professionals, **police, elected officials,** and media.” **“Instead of considering possibilities of advanced technology;** widespread use of “interrogation” treatment; or non-consensual human experimentation; psychologists, as others, appear to re-victimize TIs with labels before conducting a thorough investigation.” **“Scientific research publicly available about this phenomenon is almost non-existent according to a report by Peter Phillips, Lew Brown and Bridget Thornton.”****

Another T.I., Richard Centeno, wrote requesting hearings on Capitol Hill. “There is also significant evidence that the weapons transmit extra low frequency signals that connect to human neural frequencies thus creating sounds and “voices in the head.” “I implore you and your staff to spend a few minutes browsing the internet where you will find hundreds of credible victim accounts and a body of scientific evidence that corroborate that there is a widespread, pervasive secret war being waged by a rogue element against unsuspecting citizens nationwide.”

**“You will find too many technological common denominators to simply ignore and there are too many credible victims that cannot simply be categorized as delusional.”**

Please, Dr. Stine, read my story/summary very carefully. Thank you.

Respectfully,  
Dorothy Szczepkowski

Attachments

-----Original Message-----

From: Stine, Deborah D. [REDACTED]

To: dscepki <[REDACTED]>

Sent: Wed, Aug 19, 2009 5:44 pm

Subject: FW: From: Dorothy Szczepkowski, Streamwood, IL. RE: New Criminal Advanced Technology Being Used in the United States; Enables 24/7/365 Stalking, both Physical and Remote, Endless Crimes, and Premeditated Attempted Murder

Ms. Szczepkowski,

Thank you for your comments. I will provide them to the PCAST members.

Deborah D. Stine, PhD

Executive Director, President's Council of Advisors on Science and Technology Policy (PCAST)

[REDACTED]  
[REDACTED]  
[REDACTED]  
Office of Science and Technology Policy  
Executive Office of the President  
[REDACTED]

Webpage: [www.ostp.gov/cs/pcast](http://www.ostp.gov/cs/pcast)

----- Forwarded Message

**From:** [REDACTED]  
**Date:** Wed, 19 Aug 2009 13:05:59 -0700  
**To:** William Press <[wpress@ostp.eop.gov](mailto:wpress@ostp.eop.gov)>, "Zewail, Ahmed H" <[ahz@ostp.eop.gov](mailto:ahz@ostp.eop.gov)>  
**Subject:** From: Dorothy Szczepkowski, Streamwood, IL. RE: New Criminal Advanced Technology Being Used in the United States; Enables 24/7/365 Stalking, both Physical and Remote, Endless Crimes, and Premeditated Attempted Murder

Dorothy Szczepkowski

[REDACTED]

August 19, 2009

Dr. William H. Press, Ph.D.  
President Obama's Council of Advisors for Science and Technology  
Professor  
Computer Sciences  
Institute for Computational Engineering and Sciences

[REDACTED]  
[REDACTED]  
[REDACTED]

Dr. Ahmed H. Zewail, Ph.D.  
President Obama's Council of Advisors for Science and Technology  
Linus Pauling Chair  
Professor of Chemistry  
Professor of Physics

[REDACTED]  
[REDACTED]

California Institute of Technology  
Arthur Amos Noyes Laboratory of Chemical Physics

Dear Dr. Press and Dr. Zewail:

I need you and our government to know the following facts about the type of deadly crime that is being perpetrated by criminals in Streamwood, Illinois and surrounding areas, just outside of Chicago. I need you and our government to know of the new criminal advanced technology that is being used on me. This is truly a matter of life and death for me and a national security issue. I need you and our government to know if these criminal gangs can do this crime to me, they can do it to absolutely anyone. No one will be safe; no one will have identity security, any security or our precious Constitutional Rights. Please take the time out of your very busy day to read my story. Thank you.

Respectfully,

Dorothy Szczepkowski

Attachment

----- End of Forwarded Message

## Russell D. Tice, a former NSA Intelligence Officer speaks out... Is the NSA Conducting Electronic Warfare on Americans?



Is the NSA Conducting Electronic Warfare On Americans?

*Jonas Holmes May 19, 2006*

*CHRONICLE ARTICLE*

Russ Tice, former NSA intelligence officer and current Whistleblower, was to testify before the Senate Armed Services Committee this week. Apparently the testimony, Mr. Tice wanted to give, makes General Hayden's phone surveillance program look like very small potatoes. Mr. Tice's testimony is expected to reveal further illegal activity overseen by General Michael Hayden which even loyal and patriotic NSA employees view as unlawful. **I think the people I talk to next week are going to be shocked when I tell them what I have to tell them. IT'S PRETTY HARD TO BELIEVE, Tice said.** I hope that they'll clean up the abuses and have some oversight into these programs, which doesn't exist right now. According to Mr. Tice, what has been disclosed so far is only the **tip of the iceberg**. What in the world could Russ Tice be talking about! **To figure it out let us take a look at Russ Tice's work at the NSA. According to the Washington Times and numerous other sources, Mr. Tice worked on special access programs related to electronic intelligence gathering while working for the NSA and DIA, where he took part in space systems communications, non-communications signals, electronic warfare, satellite control, telemetry, sensors, and special capability systems. Special Access Programs or SAPs refer to Black Budgets or Black Operations. Black means that they are covert and hidden from everyone except the participants.** Feasibly there would be no arena with a greater potential for abuse and misuse than Special Access Programs. **Even now Congress and the Justice Department are being denied the ability to investigate these programs because they don't have clearance.** To put it in CNN's Jack Cafferty's words a **top secret** government agency, the NSA, the largest of its kind in the world, is **denying** oversight or investigation by the American people because investigators lack clearance. **To add a layer of irony to the Black Ops cake this travesty is occurring in America, the supposed bastion of Freedom and Democracy,** which we are currently trying to export to Iraq.

It just gets scarier. The Black Ops that Mr. Tice was involved in related to electronic intelligence gathering via space systems communications, non-communications signals, electronic warfare, satellite control, telemetry, sensors, and special capability systems. For greater insight as to the impact of these programs readers should review decades old FOIA authenticated programs such as MKULTRA, BLUEBIRD, COINTELPRO and ARTICHOKE. Radar based Telemetry involves the ability to see through walls without thermal imaging. Electronic Warfare is even scarier if we take a look at the science. NSA Signals Intelligence Use of EMF Brain Stimulation. NSA Signals Intelligence uses EMF Brain Stimulation for Remote Neural Monitoring (RNM) and Electronic Brain Link (EBL). EMF Brain Stimulation has been in development since the MKUltra program of the early 1950's, which included neurological research into "radiation" (non-ionizing EMF) and bioelectric research and development.

The resulting secret technology is categorized at the National Security Archives as "Radiation Intelligence," defined as "information from unintentionally emanated electromagnetic waves in the environment, not including radioactivity or nuclear detonation." Signals Intelligence implemented and kept this technology secret in the same manner as other electronic warfare programs of the U.S. government. The NSA monitors available information about this technology and withholds scientific research from the public.

There are also international intelligence agency agreements to keep this technology secret. The NSA has proprietary electronic equipment that analyzes electrical activity in humans from a distance. NSA computer-generated brain mapping can continuously monitor all the electrical activity in the brain continuously. The NSA records and decodes individual brain maps (of hundreds of thousands of persons) for national security purposes. EMF Brain Stimulation is also secretly used by the military for Brain-to-computer link. (In military fighter aircraft, for example.) For electronic surveillance purposes electrical activity in the speech center of the brain can be translated into the subject's verbal thoughts. RNM can send encoded signals to the brain's auditory cortex thus allowing audio communication direct to the brain (bypassing the ears). NSA operatives can use this to covertly debilitate subjects by simulating auditory hallucinations characteristic of paranoid schizophrenia. Without any contact with the subject, Remote Neural Monitoring can map out electrical activity from the visual cortex of a subject's brain and show images from the subject's

brain on a video monitor. NSA operatives see what the surveillance subject's eyes are seeing. Visual memory can also be seen. RNM can send images direct to the visual cortex, bypassing the eyes and optic nerves. NSA operatives can use this to surreptitiously put images in a surveillance subject's brain while they are in R.E.M. sleep for brain-programming purposes. Individual citizens occasionally targeted for surveillance by independently operating NSA personnel NSA personnel can control the lives of hundreds of thousands of individuals in the U.S. by using the NSA's domestic intelligence network and cover businesses. The operations independently run by them can sometimes go beyond the bounds of law. Long-term control and sabotage of tens of thousands of unwitting citizens by NSA operatives is likely to happen. NSA Domint has the ability to covertly assassinate U.S. citizens or run covert

psychological control operations to cause subjects to be diagnosed with ill mental health. National Security Agency Signals Intelligence Electronic Brain Link Technology NSA SigInt can remotely detect, identify and monitor a person's bioelectric fields. The NSA's Signals Intelligence has the proprietary ability to remotely and non-invasively monitor information in the human brain by digitally decoding the evoked potentials in the 30-50 hz,.5 milliwatt electro-magnetic emissions from the brain. Neuronal activity in the brain creates a shifting electrical pattern that has a shifting magnetic flux. This magnetic flux puts out a constant 30-50 hz, .5 milliwatt electromagnetic (EMF) wave. Contained in the electromagnetic emission from the brain are spikes and patterns called "evoked potentials." Every thought, reaction, motor command, auditory event, and visual image in the brain has a corresponding "evoked potential" or set of "evoked potentials." The EMF emission from the brain can be decoded into the current thoughts, images and sounds in the subject's brain. NSA SigInt uses EMF-transmitted Brain Stimulation as a communications system to transmit information (as well as nervous system messages) to intelligence agents and also to transmit to the brains of covert operations subjects (on a non-perceptible level). EMF Brain Stimulation works by sending a complexly coded and pulsed electromagnetic signal to trigger evoked potentials (events) in the brain, thereby forming sound and visual images in the brain's neural circuits. EMF Brain Stimulation can also change a person's brain-states and affect motor control. Two-way Electronic Brain-Link is done by remotely monitoring neural audio-visual information while transmitting sound to the auditory cortex (bypassing the ears)and transmitting faint images to the visual cortex (bypassing the optic nerves and eyes, the images appear as floating 2-D screens in the brain).

Two-Way Electronic Brain Link has become the ultimate communications system for CIA/NSA personnel. Remote Neural Monitoring (RNM, remotely monitoring bioelectric information in the human brain) has become the ultimate surveillance system. It is used by a limited number of agents in the U.S. Intelligence Community. RNM requires decoding the resonance frequency of each specific brain area. That frequency is then modulated in order to impose information in That specific brain area. The frequency to which the various brain areas respond varies from 3 Hz to 50 Hz. Only NSA Signals Intelligence modulates signals in this frequency band.

An example of EMF Brain Stimulation:

Brain Area Bioelectric ResonanceFrequency

Information Induced Through Modulation

Motor Control Cortex	10 HZ Motor Impulse Co-ordination
Auditory Cortex	15 HZ Sound which bypasses the ears
Visual Cortex	25 HZ Images in the brain, bypassing the eyes
Somatosensory Cortex	09 HZ Phantom Touch Sense

**This modulated information can be put into the brain at varying intensities from subliminal to perceptible.** Each person's brain has a unique set of bioelectric resonance/entrainment frequencies. Sending audio information to a person's brain at the frequency of another person's auditory cortex would result in that audio information not **being perceived**. Additionally, **A 1994 congressional hearing reported that nearly half a million Americans were subjected to some kind of cold war era tests, often without being informed and without their consent.** In addition, experimentation law is well grounded in constitutional and international law. **It is an under-reported fact that two major reports on human rights and torture in the U.S. recently listed illegal radiation experiments.** Many more facts are documented below. Therefore, human research subject protections should be a high priority and are just as significant as current issues of torture and illegal wiretapping. **It is time for America to wake up.** It is time for America to protect its Whistleblowers who are our last line of **defense against dictatorship and despotism.** **It is time for America to take responsibility** for oversight of its tax dollars and elect leaders who will assume such responsibility now. Yes, the war on terrorism is important. It is even more important and fearful if **the terrorism is from within and unknowingly funded** by hard working American citizens. There is no Special Access Program beyond the oversight of political leaders elected by the people and for the people. If these political leaders jeopardize national security then that shall be handled in a court of law. But to tell America, **to tell the American people, to tell the political leaders elected by the American people** that America does not deserve to know what happening in the NSA's dark, black rooms, with billions of dollars, behind closed doors, when we know that privilege has already been abused; that is the true definition of terrorism. That is the true definition of Communism and a Police State, no oversight. So fellow Americans, you may hem and haw in the face of truth but know that one day you will realize that **your country has been usurped** from the very principles upon which it was founded.

**Godspeed, Russ Tice, the Patriots are with you.**

**Former NSA intelligence agent Russell Tice condemns reports that the Agency has been engaged in eavesdropping on U.S. citizens without court warrants.** Tice has volunteered to testify before Congress about illegal black ops programs at the NSA. Tice said, "The freedom of the American people cannot be protected when our constitutional liberties are ignored and our nation has decayed into a police state." [includes rush transcript]...Congress has been briefed. A program that is in my judgment necessary to win this war and to protect the American people."

Meanwhile, the Washington Post is reporting that the NSA passed on records of intercepted email and phone calls to other government agencies including the FBI, the Defense Intelligence Agency, the CIA and the Department of Homeland Security. This news come on the heels of several other reports that the FBI's Joint Terrorism Task Force, military intelligence and local police departments have all been engaged in monitoring peaceful groups including Greenpeace, PETA—the People for the Ethical Treatment of Animals, Catholic Worker, anti-war groups and even **bicyclists** in New York City. During the 1960s and 1970s, the military used **NSA**

**intercepts** to maintain files on U.S. peace activists. It was this domestic surveillance that led Congress to intervene and pass Foreign Intelligence Surveillance Act of 1978 in order to prevent future such abuses. The statute permits domestic intelligence surveillance with the approval of a court order from the FISA court. In 1975, Senator Frank Church, a Democrat from Idaho, said, “We have a particular obligation to examine the NSA, in light of its tremendous potential for abuse. . . . **The interception of international** communications signals sent through the air is the job of NSA; and, thanks to modern technological developments, it does its job very well. The danger lies in the ability of the NSA to turn its awesome technology against domestic communications.” . . . Congress is now considering holding a new round of hearings on Bush’s domestic spying program. A bipartisan group of senators have already issued their public support, including several top Republicans, including Senator Dick Lugar of Indiana, Lindsey Graham of South Carolina, and Arlen Specter of Pennsylvania. This is Democratic Senator Patrick Leahy of Vermont.

SEN. PATRICK LEAHY: This warrant-less eavesdropping program is not authorized by the PATRIOT Act, it’s not authorized by any act of Congress, and it’s not overseen by any court. According to the reports it’s being conducted under a secret presidential order, based on secret legal opinions by the same Justice Department, lawyers, the same ones who argued secretly that the President could order the use of torture. Mr. President, it is time to have some checks and balances in this country. We are a democracy. We are a democracy. Let’s have checks and balances, not secret orders and secret courts and secret torture, and on and on.

AMY GOODMAN: That was Vermont Senator Patrick Leahy. Two weeks ago, a former N.S.A. intelligence officer publicly announced he wants to testify before Congress. His name is

D.I.A. has a few elements of it, and everybody gets together and does a little mind meld to try to figure out what’s going on. So it’s not **unusual for the intelligence community to share information. But when we’re talking about information on the American public, which is a violation of the FISA law, then I think it’s even something more to be concerned about.**

AMY GOODMAN: Were you ever asked to engage in this?

RUSSELL TICE: No, no, and if I did so, I did so unwittingly, which I have a feeling would be the case for many of the people involved in this.

RUSSELL TICE: If that was done and, you know, I use a big “if” here, and, **remember, I can’t tell you what I know of how N.S.A. does its business, but I can use the wiggly words like “if”** and scenarios that don’t incorporate specifics, but nonetheless, if U.S. gateways and junction points in the United States were used to siphon off information, I would think that the corporate executives of these companies need to be held accountable, as well, because they would certainly also know that what they’re doing is wrong and illegal.

**AMY GOODMAN: Do you expect you are being monitored, surveilled, wiretapped right now?**

**WILLIAM J. LAMACK**



RYAN OLDHAM, [REDACTED]



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**October 30, 2008 - Picture from the Internet.**

Bhaskara Gara, [REDACTED]





US006587729B2

(12) **United States Patent**  
**O'Loughlin et al.**

(10) **Patent No.:** **US 6,587,729 B2**  
(45) **Date of Patent:** **Jul. 1, 2003**

(54) **APPARATUS FOR AUDIBLY COMMUNICATING SPEECH USING THE RADIO FREQUENCY HEARING EFFECT**

(58) **Field of Search** ..... 332/167; 381/151; 607/56, 55; 340/384.1; 600/559, 23, 586; 128/897, 898

(75) **Inventors:** **James P. O'Loughlin**, Placitas, NM (US); **Diana L. Loree**, Albuquerque, NM (US)

(56) **References Cited**

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5,450,044 A \* 9/1995 Hulick ..... 332/103

(73) **Assignee:** **The United States of America as represented by the Secretary of the Air Force**, Washington, DC (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

\* cited by examiner

*Primary Examiner*—Kennedy Schaeztle

(74) *Attorney, Agent, or Firm*—James M. Skorich

(21) **Appl. No.:** **10/131,626**

(22) **Filed:** **Apr. 24, 2002**

(57) **ABSTRACT**

(65) **Prior Publication Data**

US 2002/0123775 A1 Sep. 5, 2002

**Related U.S. Application Data**

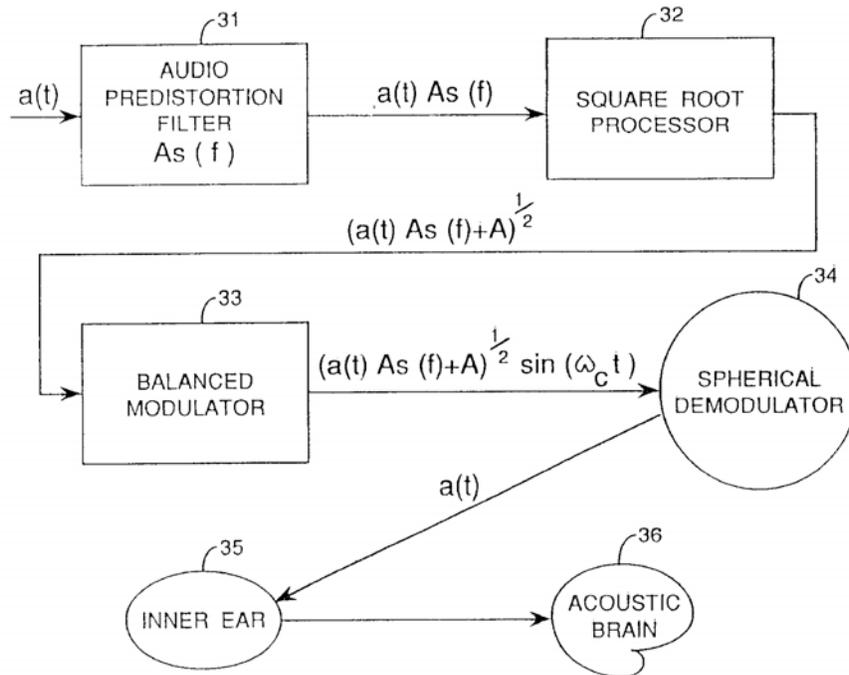
(62) Division of application No. 08/766,687, filed on Dec. 13, 1996, now Pat. No. 6,470,214.

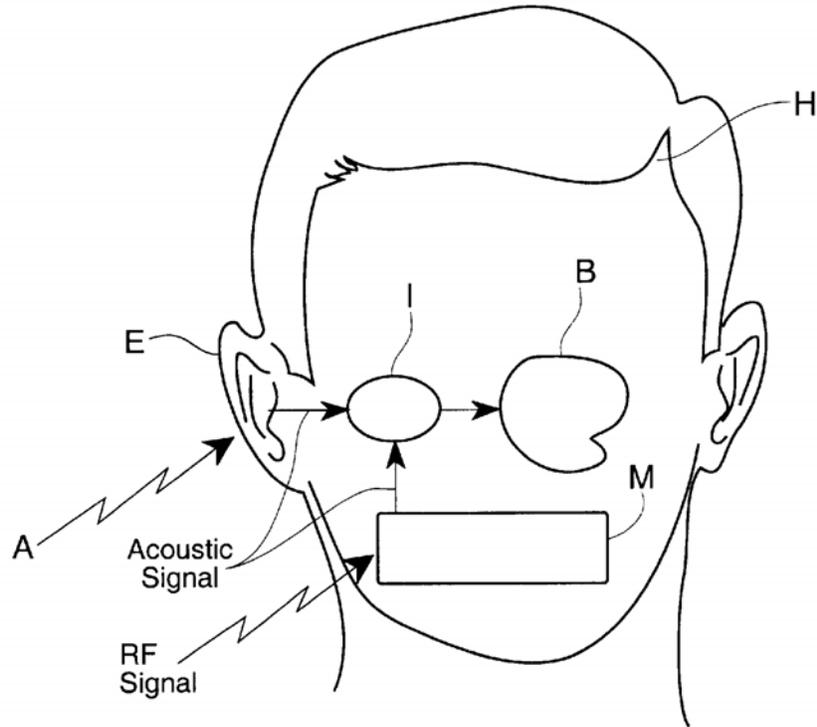
(51) **Int. Cl.**<sup>7</sup> ..... **H03C 1/54**

(52) **U.S. Cl.** ..... **607/55; 128/897; 332/167; 381/151; 600/586**

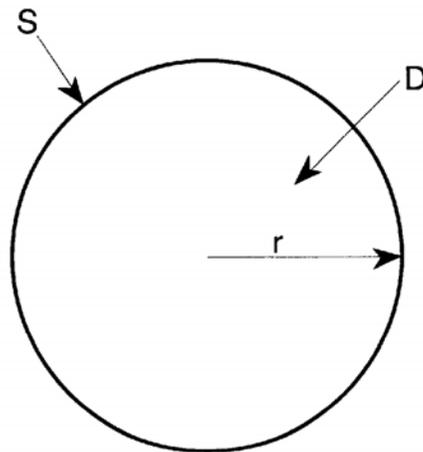
A modulation process with a fully suppressed carrier and input preprocessor filtering to produce an encoded output; for amplitude modulation (AM) and audio speech preprocessor filtering, intelligible subjective sound is produced when the encoded signal is demodulated using the RF Hearing Effect. Suitable forms of carrier suppressed modulation include single sideband (SSB) and carrier suppressed amplitude modulation (CSAM), with both sidebands present.

**11 Claims, 3 Drawing Sheets**





*Fig. 1*



*Fig. 2*

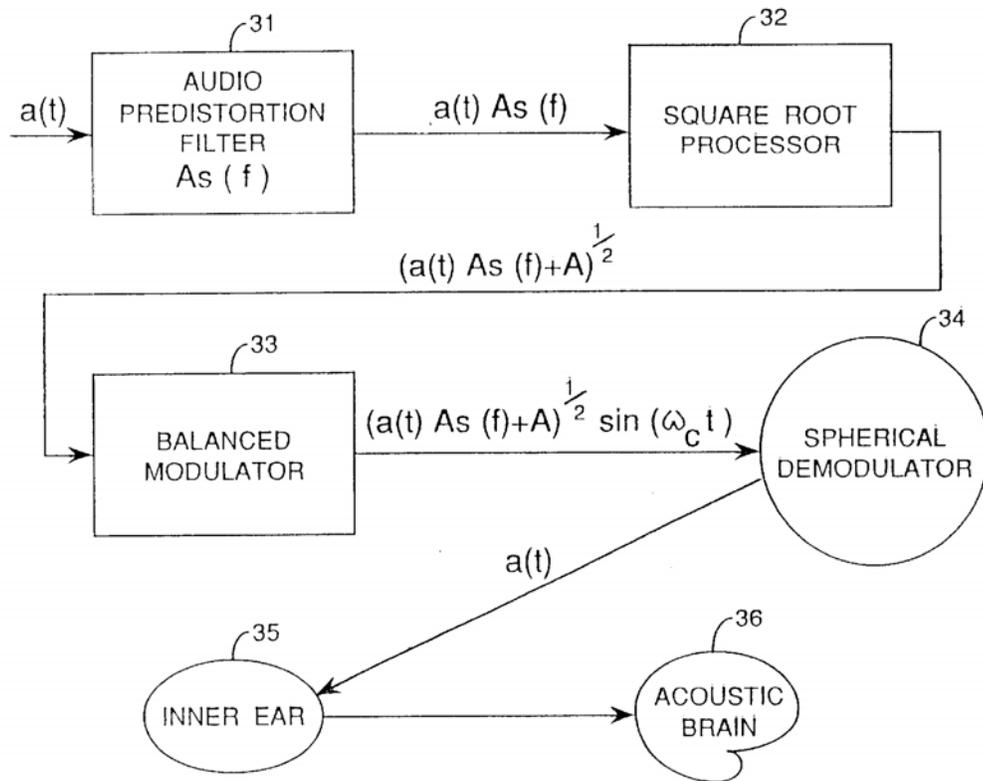


FIG. 3

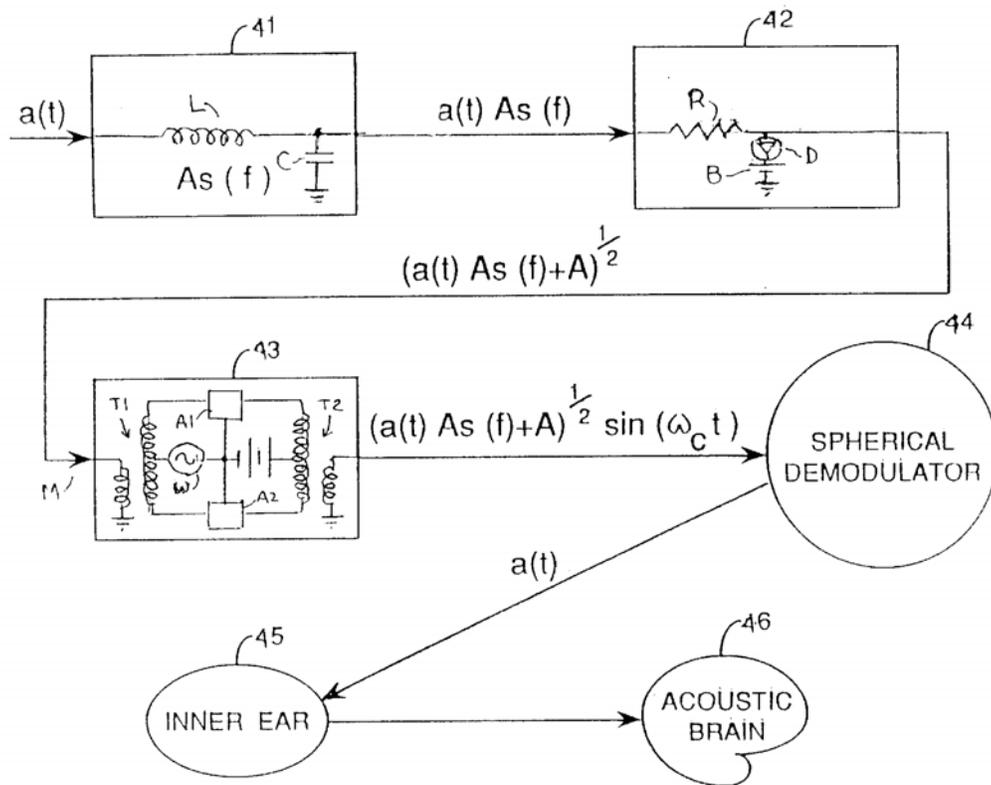


FIG. 4

1

**APPARATUS FOR AUDIBLY  
COMMUNICATING SPEECH USING THE  
RADIO FREQUENCY HEARING EFFECT**

This application is a division of U.S. patent application Ser. No. 08/766,687 filed on Dec. 13, 1996, now U.S. Pat. No. 6,470,214, and claims the benefit of the foregoing filing date.

The invention described herein may be manufactured and used by or for the Government for governmental purposes without the payment of any royalty thereon.

**BACKGROUND OF THE INVENTION**

This invention relates to the modulating of signals on carriers, which are transmitted and the signals intelligibly recovered, and more particularly, to the modulation of speech on a carrier and the intelligible recover of the speech by means of the Radio Frequency Hearing Effect.

The Radio Frequency ("RF") Hearing Effect was first noticed during World War II as a subjective "click" produced by a pulsed radar signal when the transmitted power is above a "threshold" level. Below the threshold level, the click cannot be heard.

The discovery of the Radio Frequency Hearing Effect suggested that a pulsed RF carrier could be encoded with an amplitude modulated ("AM") envelope. In one approach to pulsed carrier modulation, it was assumed that the "click" of the pulsed carrier was similar to a data sample and could be used to synthesize both simple and complex tones such as speech. Although pulsed carrier modulation can induce a subjective sensation for simple tones, it severely distorts the complex waveforms of speech, as has been confirmed experimentally.

The presence of this kind of distortion has prevented the click process for the encoding of intelligible speech. An example is provided by AM sampled data modulation

Upon demodulation the perceived speech signal has some of the envelope characteristics of an audio signal. Consequently a message can be recognized as speech when a listener is pre-advised that speech has been sent. However, if the listener does not know the content of the message, the audio signal is unintelligible.

The attempt to use the click process to encode speech has been based on the assumption that if simple tones can be encoded, speech can be encoded as well, but this is not so. A simple tone can contain several distortions and still be perceived as a tone whereas the same degree of distortion applied to speech renders it unintelligible.

**SUMMARY OF THE INVENTION**

In accomplishing the foregoing and related object the invention uses a modulation process with a fully suppressed carrier and pre-processor filtering of the input to produce an encoded output. Where amplitude modulation (AM) is employed and the pre-processor filtering is of audio speech input, intelligible subjective sound is produced when the encoded signal is demodulated by means of the RF Hearing Effect. Suitable forms of carrier suppressed modulation include single sideband (SSB) and carrier suppressed amplitude modulation (CSAM), with both sidebands present.

The invention further provides for analysis of the RE hearing phenomena based on an RF to acoustic transducer model. Analysis of the model suggests a new modulation process which permits the RF Hearing Effect to be used following the transmission of encoded speech.

2

In accordance with one aspect of the invention the pre-processing of an input speech signal takes place with a filter that de-emphasizes the high frequency content of the input speech signal. The de-emphasis can provide a signal reduction of about 40 dB (decibels) per decade. Further processing of the speech signal then takes place by adding a bias level and taking a root of the predistorted waveform. The resultant signal is used to modulated an RF carrier in the AM fully suppressed carrier mode, with single or double sidebands.

The modulated RF signal is demodulated by an RF to acoustic demodulator that produces an intelligible acoustic replication of the original input speech.

The RF Hearing Effect is explained and analyzed as a thermal to acoustic demodulating process. Energy absorption in a medium, such as the head, causes mechanical expansion and contraction, and thus an acoustic signal.

When the expansion and contraction take place in the head of an animal, the acoustic signal is passed by conduction to the inner ear where it is further processed as if it were an acoustic signal from the outer ear.

The RF to Acoustic Demodulator thus has characteristics which permit the conversion of the RF energy input to an acoustic output.

Accordingly, it is an object of the invention to provide a novel technique for the intelligible encoding of signals. A related object is to provide for the intelligible encoding of speech.

Another object of the invention is to make use of the Radio Frequency ("RF") Hearing Effect in the intelligible demodulation of encoded signals, including speech.

Still another object of the invention is to suitably encode a pulsed RF carrier with an amplitude modulated ("AM") envelope such that the modulation will be intelligibly demodulated by means of the RF Hearing Effect. A related object is to permit a message to be identified and understood as speech when a listener does not know beforehand that the message is speech.

Other aspects of the invention will be come apparent after considering several illustrative embodiments, taken in conjunction with the drawings.

**DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a block diagram model of RF to Acoustic Demodulation Process making use of the Radio Frequency ("RF") Hearing Effect;

FIG. 2 is a spherical demodulator and radiator having a specific acoustic impedance for demodulation using the RF Hearing Effect;

FIG. 3 is a diagram illustrating the overall process and constituents of the invention; and

FIG. 4 is an illustrative circuit and wiring diagram for the components of FIG. 3.

**DETAILED DESCRIPTION OF THE  
PREFERRED EMBODIMENT**

With reference to the drawings, FIG. 1 illustrates the RF to acoustic demodulation process of the invention. Ordinarily an acoustic signal A reaches the outer ear E of the head H and traverses first to the inner ear I and then to the acoustic receptors of the brain B. A modulated RF signal, however, enters a demodulator D, which is illustratively provided by the mass M of the brain, and is approximated, as shown in FIG. 2, by a sphere S of radius r in the head H. The radius

3

r of the sphere S is about 7 cm to make the sphere S equivalent to about the volume of the brain B. It will be appreciated that where the demodulator D, which can be an external component, is not employed with the acoustic receptors of the brain B, it can have other forms.

The sphere S, or its equivalent ellipsoid or similar solid, absorbs RF power which causes an increase in temperature that in turn causes an expansion and contraction which results in an acoustic wave. As a first approximation, it is assumed that the RF power is absorbed uniformly in the brain. Where the demodulator D is external to the brain B, the medium and/or RF carrier frequency can be selected to assure sufficiently uniform absorption.

For the modulated RF signal of FIG. 1, the power absorbed in the sphere S is proportional to the power waveform of the modulated RF signal. The absorption rate is characterized quantitatively in terms of the SAR (Specific Absorption Rate) in the units of absorbed watts per kilogram per incident watt per square centimeter.

The temperature of the sphere S is taken as following the integrated heat input from the power waveform, i.e. the process is approximated as being adiabatic, at least for short term intervals on the order of a few minutes.

The radial expansion of the sphere follows temperature and is converted to sound pressure, p(t), determined by the radial velocity (U<sub>r</sub>) multiplied by the real part of the specific acoustic impedance (Z<sub>s</sub>) of the sphere, as indicated in equation (1), below.

$$Z_s = \rho_o c (jkr) / (1 + jkr) = \rho_o c j f f_c / (1 + j f f_c) \quad (1)$$

Where:

- ρ<sub>o</sub> = density, 1000 kg/m<sup>3</sup> for water
- c = speed of sound, 1560 m/s, in water @ 37° C.
- k = wave number, 2π/wavelength
- r = sphere radius, in meters (m)
- f = audio frequency
- f<sub>c</sub> = lower cutoff break frequency, = c/(2πr)
- j = the 90 degree phase-shift operator

The specific acoustic impedance for a sphere of 7 cm radius, on the order of the size of the brain, has a lower cut-off break frequency of about 3,547 Hertz (Hz) for the parameters given for equation (1). The essential frequency range of speech is about 300 to 3000 Hz, i.e., below the cut-off frequency. It is therefore the Real part (R<sub>s</sub>) of Z<sub>s</sub> times the radial particle velocity (U<sub>r</sub>) which determines the sound pressure, p(t). The real part of Z<sub>s</sub> is given by equation (1a), below:

$$R_s(Z_s) = \rho_o c (f f_c)^2 / (1 + (f f_c)^2) \quad (1a)$$

In the speech spectrum, which is below the brain cut-off frequency, the sphere S is an acoustic filter which "rolls off", i.e. decreases in amplitude at -40 dB per decade with decreasing frequency. In addition to any other demodulation processes to be analyzed below, the filter characteristics of the sphere will modify the acoustic signal with a 40 dB per decade slope in favor of the high frequencies.

Results for an AM Modulated Single Tone

An RF carrier with amplitude A<sub>c</sub> at frequency ω<sub>c</sub> is AM modulated 100 percent with a single tone audio signal at frequency ω<sub>1</sub>. The voltage (time) equation of this modulated signal is given by equation (2), below:

$$V(t) = A_c \sin(\omega_c t) (1 + \sin(\omega_1 t)) \quad (2)$$

4

The power signal is V(t)<sup>2</sup> as given by equation (3), below:

$$P(t) = A_c^2 [1/4 + \sin(\omega_1 t) - 1/4 \cos(2\omega_1 t) - 1/4 \cos(2\omega_c t) - \cos(2\omega_c t) \sin(\omega_1 t) + 1/4 \cos(2\omega_c t) \cos(2\omega_1 t)] \quad (3)$$

To find the energy absorbed in the sphere, the time integral of equation (3) is taken times absorption coefficient, K. The result is divided by the specific heat, SH to obtain the temperature of the sphere and then multiplied by the volume expansion coefficient, Mv to obtain the change in volume. The change in volume is related to the change in radius by equation (4), below:

$$dV/V = 3dr/r \quad (4)$$

To obtain the amplitude of the radius change, there is multiplication by the radius and division by three. The rms radial surface velocity, U<sub>r</sub>, is determined by multiplying the time derivative by r and dividing by 2<sup>1/2</sup>. The result, U<sub>r</sub>, is proportional to the power function, P(t) in equation (5), below.

$$U_r = 0.3535 P(t) r K M_v / (3SH) \quad (5)$$

The acoustic pressure, p(t), is given in equation (6), below, as the result of multiplying equation (5) by the Real part of the specific acoustic impedance, R<sub>s</sub> (1).

$$p(t) = R_s(Z_s U_r) = R_s(Z_s) U_r \quad (6)$$

The SPL (Sound Pressure Level), in acoustic dB, is approximated as 20 log[p(t)/2E-5]. The standard acoustic reference level of 2E-5 Newtons per square meter is based on a signal in air; however, the head has a water-like consistency. Therefore, the subjective level in acoustic dB is only approximate, but sufficient for first order accuracy.

In a single tone case the incident RF power, P(t), from equation (3) has two terms as shown in equation (7), below, which are in the hearing range.

$$\sin(\omega_1 t) - 1/4 \cos(2\omega_1 t) \quad (7)$$

This is converted to the acoustic pressure wave, p(t), by multiplying by the specific acoustic impedance calculated at the two frequencies. Therefore, the resulting pressure wave as indicated in equation (8), below, becomes

$$p(t) = C [Z_s(\omega_1) \sin(\omega_1 t) - 1/4 Z_s(2\omega_1) \cos(2\omega_1 t)] \quad (8)$$

The result is an audio frequency and a second harmonic at about 1/4 amplitude. Thus using an RF carrier, AM modulated by a single tone, the pressure wave audio signal will consist of the audio tone and a second harmonic at about -6 dB, if the specific acoustic impedances at the two frequencies are the same. However, from equation (1) the break frequency of a model 7 cm sphere is 3,547 Hz. Most of the speech spectrum is below this frequency therefore the specific acoustic impedance is reactive and the real component is given by equation (8a), below:

$$R_s(Z_s(f)) = \rho_o c (f f_c)^2 / (1 + (f f_c)^2) \quad (8a)$$

Below the cutoff frequency the real part of the impedance varies as the square of the frequency or gives a boost of 40 dB per decade. Therefore, if the input modulation signal is 1 kHz, the second harmonic will have a boost of about 4 times in amplitude, or 12 dB, due to the variation of the real part of the specific acoustic impedance with frequency. So the second harmonic pressure term in equation (8) is actually four times the power or 6 dB higher than the fundamental

term. If the second harmonic falls above the cutoff frequency then the boost begins to fall back to 0 dB. However, for most of the speech spectrum there is a sever distortion and strong boost of the high frequency distortion components.

Results for Two Tone AM Modulation Analysis

Because of the distortion attending single tone modulation, predistortion of the modulation could be attempted such that the resulting demodulated pressure wave will not contain harmonic distortion. This will not work, however, because of the non-linear cross-products of two-tone modulation are quite different from single tone modulation as shown below.

Nevertheless, two-tone modulation distortion provides an insight for the design of a corrective process for a complex modulation signal such as speech. The nature of the distortion is defined in terms of relative amplitudes and frequencies.

Equation (8b) is that of an AM modulated carrier for the two-tone case where  $\omega_{a1}$  and  $\omega_{a2}$  are of equal amplitude and together modulate the carrier to a maximum peak value of 100 percent. The total modulated RF signal is given by equation (8b), below:

$$V(t) = A_c \sin(\omega_c t) [1 + \frac{1}{2} \sin(\omega_{a1} t) + \frac{1}{2} \sin(\omega_{a2} t)]$$

The square of (8b) is the power signal, which has the same form as the particle velocity,  $U_r(t)$ , of equation (9), below.

From the square of (8b) the following frequencies and relative amplitudes are obtained for the particle velocity wave,  $U_r(t)$ , which are in the audio range;

$$U_r(t) = C [\sin(\omega_{a1} t) + \sin(\omega_{a2} t) + \frac{1}{4} \cos((\omega_{a1} - \omega_{a2}) t) - \frac{1}{4} \cos((\omega_{a1} + \omega_{a2}) t) - \frac{1}{8} \cos(2\omega_{a1} t) - \frac{1}{8} \cos(2\omega_{a2} t)] \quad (9)$$

If the frequencies in equation (9) are below the cut-off frequency, the impedance boost correction will result in a pressure wave with relative amplitudes given in equation (9a), below:

$$p(t) = C [\sin(\omega_{a1} t) + b^2 \sin(\omega_{a2} t) + (1 - b^2)^{1/4} \cos((\omega_{a1} - \omega_{a2}) t) + (1 + b^2)^{1/4} \cos((\omega_{a1} + \omega_{a2}) t) - \frac{1}{2} \cos(2\omega_{a1} t) - \frac{1}{2} \cos(2\omega_{a2} t)] \quad (9a)$$

where:  $b = \omega_{a2} / \omega_{a1}$  and  $\omega_{a2} > \omega_{a1}$

Equation (9a) contains a correction factor, b, for the specific acoustic impedance variation with frequency. The first two terms of (9a) are the two tones of the input modulation with the relative amplitudes modified by the impedance correction factor. The other terms are the distortion cross products which are quite different from the single tone distortion case. In addition to the second harmonics, there are sum and difference frequencies. From this two-tone analysis it is obvious that more complex multiple tone modulations, such as speech, will be severely distorted with even more complicated cross-product and sum and difference components. This is not unexpected since the process which creates the distortion is nonlinear. This leads to the conclusion that a simple passive predistortion filter will not work on a speech signal modulated on an RF carrier by a conventional AM process, because the distortion is a function of the signal by a nonlinear process.

However, the serious distortion problem can be overcome by means of the invention which exploits the characteristics of a different type of RF modulation process in addition to special signal processing.

AM Modulation With Fully Suppressed Carrier for the Intelligible Encoding of Speech by the Invention for Compatibility With the RF Hearing Phenomena

The equation for AM modulation with a fully suppressed carrier is given by equation (10), below:

$$V(t) = a(t) \sin(\omega_c t) \quad (10)$$

This modulation is commonly accomplished in hardware by means of a circuit known as a balanced modulator, as disclosed, for example in "Radio Engineering", Frederick E. Terman, p.481-3, McGraw-Hill, 1947.

The power signal has the same form as the particle velocity signal which is obtained from the square of equation (10) as shown in equation (11), below:

$$P(t) = C U_r = a(t)^2 / 2 - (a(t)^2 / 2) \cos(2\omega_c t) \quad (11)$$

From inspection of equations (10) and (11) it is seen that, if the input audio signal, a(t), is pre-processed by taking the square root and then modulating the carrier, the audio term in the particle velocity equation will be an exact, undistorted, replication of the input audio signal. Since the audio signal from a microphone is bipolar, it must be modified by adding a very low frequency (essential d.c.) bias term, A, such that the resultant sum,  $[a(t) + A] > 0.0$ , is always positive. This is necessary in order to insure a real square root. The use of a custom digital speech processor implements the addition of the term A, i.e. as shown in equation (10\*), below:

$$V(t) = (a(t) + A)^{1/2} \sin(\omega_c t) \quad (10^*)$$

The pressure wave is given by equation (11\*), below:

$$p(t) = C U_r = A/2 + a(t)/2 - (a(t)/2) \cos(2\omega_c t) - (A/2) \cos(2\omega_c t) \quad (11^*)$$

When the second term of the pressure wave of equation (11\*) is processed through the specific acoustic impedance it will result in the replication of the input audio signal but will be modified by the filter characteristics of the Real part of the specific acoustic impedance,  $R_e \{Z_c(f)\}$ , as given in equation (8a). The first term of equation (11\*) is the d.c. bias, which is added to obtain a real square root; it will not be audible or cause distortion. The third and fourth terms of (11\*) are a.c. terms at twice the carrier frequency and therefore will not distort or interfere with the audio range signal, a(t).

Since the filter characteristic of equation (7) is a linear process in amplitude, the audio input can be predistorted before the modulation is applied to the carrier and then the pressure or sound wave audio signal, which is the result of the velocity wave times the impedance function,  $R_e \{Z_c(f)\}$ , will be the true replication of the original input audio signal.

A diagram illustrating the overall system 30 and process of the invention is shown in FIG. 3. Then input signal a(t) is applied to an Audio Predistortion Filter 31 with a filter function  $As(f)$  to produce a signal  $a(t)As(f)$ , which is applied to a Square Root Processor 32, providing an output  $=(a(t)As(f) + A)^{1/2}$ , which goes to a balanced modulator 33. The modulation process known as suppressed carrier, produces a double sideband output  $=(a(t)As(f) + A)^{1/2} \sin(\omega_c t)$ , where  $\omega_c$  is the carrier frequency. If one of the sidebands and the carrier are suppressed (not shown) the result is single sideband (SSB) modulation and will function in the same manner discussed above for the purposes of implementing the invention. However, the AM double sideband suppressed carrier as described is more easily implemented.

The output of the balanced modulator is applied to a spherical demodulator 34, which recovers the input signal a(t) that is applied to the inner ear 35 and then to the acoustic receptors in the brain 36.

The various components 31-33 of FIG. 3 are easily implemented as shown, for example by the corresponding components 41-42 in FIG. 4, where the Filter 41 can take

the form of a low pass filter, such as a constant-K filter formed by series inductor L and a shunt capacitor C. Other low-pass filters are shown, for example, in the ITT Federal Handbook, 4th Ed., 1949. As a result the filter output is  $AS(f)$  a  $1/f^2$ . The Root Processor **42** can be implemented by any square-law device, such as the diode D biased by a battery B and in series with a large impedance (resistance) R, so that the voltage developed across the diode D is proportional to the square root of the input voltage  $a(t)As(f)$ . The balanced modulator **43**, as discussed in Terman, op.cit., has symmetrical diodes A1 and A2 with the modulating voltage M applied in opposite phase to the diodes A1 and A2 through an input transformer T1, with the carrier, O, applied commonly to the diodes in the same phase, while the modulating signal is applied to the diodes in opposite phase so that the carrier cancels in the primary of the output transformer T2 and the secondary output is the desired double side band output.

Finally the Spherical Demodulator **45** is the brain as discussed above, or an equivalent mass that provides uniform expansion and contraction due to thermal effects of RF energy.

The invention provides a new and useful encoding for speech on an RF carrier such that the speech will be intelligible to a human subject by means of the RF hearing demodulation phenomena. Features of the invention include the use of AM fully suppressed carrier modulation, the preprocessing of an input speech signal by a compensation filter to de-emphasize the high frequency content by 40 dB per decade and the further processing of the audio signal by adding a bias terms to permit the taking of the square root of the signal before the AM suppressed carrier modulation process.

The invention may also be implemented using the same audio signal processing and Single Sideband (SSB) modulation in place of AM suppressed carrier modulation. The same signal processing may also be used on Conventional AM modulation contains both sideband and the carrier; however, there is a serious disadvantage. The carrier is always present with AM modulation, even when there is no signal. The carrier power does not contain any information but contributes substantially to the heating of the thermal-acoustic demodulator, i.e. the brain, which is undesirable. The degree of this extraneous heating is more than twice the heating caused by the signal or information power in the RF signal. Therefore conventional AM modulation is an inefficient and poor choice compared to the double side-band suppressed carrier and the SSB types of transmissions.

The invention further may be implemented using various degrees of speech compression commonly used with all types of AM modulation. Speech compression is implemented by raising the level of the low amplitude portions of the speech waveform and limiting or compressing the high peak amplitudes of the speech waveform. Speech compression increases the average power content of the waveform and thus loudness. Speech compression introduces some distortion, so that a balance must be made between the increase in distortion and the increase in loudness to obtain the optimum result.

Another implementation is by digital signal processing of the input signal through to the modulation of the RF carrier.

What is claimed is:

1. An apparatus for communicating an audio signal  $a(t)$ , comprising:

an audio predistortion filter having a filter function  $As(f)$  for producing a first output signal  $a(t)As(t)$  from the audio signal  $a(t)$ ;

means for adding a bias A to the first output signal, to produce a second output signal  $a(t)As(f)+A$ ;

a square root processor for producing a third output signal  $(a(t)As(f)+A)^{1/2}$  responsive to the second output signal; and

a modulator for producing a double sideband output signal responsive to the third output signal, having a carrier frequency of  $\omega_c$ , and being mathematically described by  $(a(t)As(f)+A)^{1/2} \sin(\omega_c t)$ ; and

transmitting the double sideband output signal to a demodulator, whereby the audio signal  $a(t)$  is recovered from the double sideband output signal.

2. The communication apparatus defined in claim 1 wherein:

the double sideband output signal has RF power; and

the demodulator is for converting the RF power into acoustic pressure waves.

3. The communication apparatus defined in claim 2 wherein:

the demodulator converts the RF power into the acoustic pressure waves by means of thermal expansion and contraction, whereby

the acoustic pressure waves approximate the audio signal  $a(t)$ .

4. The communication apparatus defined in claim 2 wherein the demodulator includes a mass that expands and contracts responsive to the RF power of the double sideband output signal.

5. The communication apparatus defined in claim 4 wherein the mass is approximately spherical.

6. The communication apparatus defined in claim 1 wherein:

the double sideband output signal is comprised of a first sideband component and a second sideband component; and

means for suppressing the second sideband component, whereby

the demodulator recovers the audio signal  $a(t)$  solely from the first sideband component.

7. The communication apparatus defined in claim 1 wherein the audio predistortion filter is a low-pass filter.

8. The communication apparatus defined in claim 7 wherein the audio predistortion filter is a digital processor.

9. The communication apparatus defined in claim 1 wherein:

the square root processor is a diode biased by a voltage source, in series with a resistance, whereby

a voltage across the diode is proportional to a square root of the second output signal  $a(t)As(f)+A$ .

10. The communication apparatus defined in claim 1 wherein the modulator is a balanced modulator.

11. The communication apparatus defined in claim 1 wherein:

the audio signal  $a(t)$  includes a high frequency component; and

the audio predistortion filter de-emphasizes the high frequency component by approximately 40 dB per decade.

**DATA ENTRY**  
**RICHMOND POLICE DEPARTMENT**

1707 PREGASITA BLVD  
RICHMOND, CA 94804  
RECORDS JUN 28 2011  
SERIAL # 419

Face Page  
 Supplement  
 Continuation

Case # 11-50361	District/Beat Pick District From List	Pick Beat
Domestic Violence <input type="checkbox"/>	Sexual Assault <input type="checkbox"/>	Elder Abuse <input type="checkbox"/>
Armed <input type="checkbox"/>	Juvenile <input type="checkbox"/>	Gang Related <input type="checkbox"/>
L.E.O./K.A. <input type="checkbox"/>	Hair Color <input type="checkbox"/>	Weapon Used <input type="checkbox"/>

Date, Day and Time of Occurrence (from and to time if applicable)  
July 2009, Unknown, 12:00 hours

Date, Day and Time Reported  
June 14, 2011, Tuesday, 11:14 hours

Code Section (Primary) N/A	Crime Type Miscellaneous	Classification MCR-4	Type of Premises or Location Residential/Company
Code Section (92)	Crime Type (92)	Classification	Stolen Property Total Amount \$
Location of Occurrence (Business Name and Address, City, and Zip Code) 425 29th Street, Richmond, CA			Damaged Property Total Amount \$

**NAMES** NAME TYPES: V - Victim R - R/P W - Witness O - Other (Use PERSONS SUPPLEMENTAL for additional subjects)

Inv Type V	[REDACTED]										Phone (Home)
DOB 02/02/69	Age 42	Race B	Sex F	Hair Blk	Eye Brn	Hgt 5'	Wgt 150 lbs	Employment/Address N/A Disabled	Phone		
Moniker/AKA Burgundy Chaffon	DL A1242372 Describe in Detail Other Physical Characteristics, S/M/T, Clothing, Jewelry, Other Subject Information										
Inv Type W	[REDACTED]										Phone (Home)
DOB 07/20/62	Age 48	Race H	Sex F	Hair Brn	Eye Brn	Hgt 5' 11"	Wgt [REDACTED]	Employment/Address	Phone		
Moniker/AKA	DL Describe in Detail Other Physical Characteristics, S/M/T, Clothing, Jewelry, Other Subject Information										
Inv Type W	[REDACTED]										Phone (Home)
DOB 06/18/53	Age 57	Race B	Sex M	Hair Brn	Eye Brn	Hgt 5' 11"	Wgt 190 lbs	Employment/Address Freedom From Covert Harassment & Surveillance	Phone (513) 568-1635		
Moniker/AKA	DL Describe in Detail Other Physical Characteristics, S/M/T, Clothing, Jewelry, Other Subject Information										

**Synopsis - M.O.** MOODS OPERANDI (M.O. - DESCRIBE BRIEFLY THE ELEMENTS OF THE CRIME AND HOW THE OFFENSE WAS COMMITTED)

Ms. Anderson complains of being a victim of electronic torture and harassment through electronic mind control technology. Ms. Anderson believes this technology is designed to drive a person insane because it is a silent killer using subliminal sound radio wave frequencies. Further stating, this mind control technology tunes ones brain waves like a radio station that broadcast subliminal messages to ones mind.

Ms Anderson said her former employer, inter-Con Security Systems, hired her for brain experimentation.

**VEHICLES** VEHICLE INFORMATION:  SUSPECT  VICTIM  OTHER (Use VEHICLE SUPPLEMENTAL for additional vehicles)

Year	Make	Model	Body Style	Color	License or V.I.N.	State	License Year
Special Identifying Characteristics							
Registered Owner (Last, First, Middle)				Address		Phone (Home)	

**ARRESTEES/SUSPECTS** ARRESTEE/SUSPECT INFORMATION: A - Adult Arrested J - Juvenile Arrested S - Suspect Not Arrested (Use PERSONS SUPPLEMENTAL for additional subjects)

Inv Type	Arrestee/Suspect #1 Name (Last, First, Middle)										Residence Address	Phone (Home)
DOB	Age	Race	Sex	Hair	Eye	Hgt	Wgt	Employment Address	Phone			
Moniker/AKA	S/M/T											
Describe in Detail Other Physical Characteristics, Clothing Worn, Jewelry, Cell # or Other Subject Information												
Inv Type	Arrestee/Suspect #2 Name (Last, First, Middle)										Residence Address	Phone (Home)
DOB	Age	Race	Sex	Hair	Eye	Hgt	Wgt	Employment Address	Phone			
Moniker/AKA	S/M/T											
Describe in Detail Other Physical Characteristics, Clothing Worn, Jewelry, Cell # or Other Subject Information												

DC/TSBE	PSJRA	HCM	TRIP	Additional Routing	Cross Reference
DC/PB	CODEN	ROBE	STATE		
CAPT/N	CRIM PR	DSVU	ANALYSIS		
CAPT/C	SRO	PCU	FILE 1		
			TOTAL 3		
Reporting Officer T. ELLIS				Serial # 1189	Date/Time Written
Reviewing Supervisor [Signature]				Serial # 1319	Date/Time 6/28/11 1 of 4

11-50361

70. CODE SECTION	71. CRIME	72. CLASSIFICATION
N/A	Miscellaneous	MCR-4
73. VICTIMS NAME - LAST, FIRST, MIDDLE (FAM P. BUSINESS)		
[REDACTED]		
74. ADDRESS (R. RESIDENCE (F. BUSINESS)		
[REDACTED]		
75. PHONE		
[REDACTED]		

On June 8, 2011, Lieutenant Sappal assigned me this case for follow-up investigation. I was provided with a five-page document dated, June 6, 2011, which was listed "Sinew Amy Lee Anderson" as the closing.

On June 9, 2011, I telephoned Amy Anderson at [REDACTED] and scheduled an appointment to meet with her on Tuesday, June 14, 2011 at 11:00 hours at Richmond PD to take a police report.

On June 14, 2011, I met Ms. Anderson at RPD lobby and escorted her to the lobby interview room. During our meeting, Ms. Anderson provided me with five additional documents which she wished to submit as evidence of her claim of on-going issues of mind control and harassment from her former employer, Inter-Con Security Systems. Ms. Anderson had worked as a security officer for Inter-Con Security Systems at the Richmond Marina location, 850 Marina Way South. The documents were marked 1189-1 through 1189-5, and are listed as follows:

- 1189-1, Two-page letter, dated June 14, 2011, closing Amy Lee Anderson.
- 1189-2, "The Crime of Torture in California Law", seven pages.
- 1189-3, Three pages containing 13 topics related to freedom from covert harassment.
- 1189-4, Two pages containing quotes from Andrija and Dr. Robert Beck.
- 1189-5, "Nikola Tesla Invention. Tesla Coil Inventor."

Ms. Anderson believes she was targeted because she was a whistle blower of "hacking activities" by a co-worker while working at the Department of Health Services Laboratory, Richmond, CA as a contract employee through Inter-Con Security Systems. Ms. Anderson said she experienced her employer using mind control devices such as "psychotronic, acoustic silent sound wave, sonic, micro wave hearing effects, laser beams activating my (the) central nervous system etc. and all other types of military weapons that are used for crowd control deterring hostile crowds."

Ms. Anderson said she was required to see a psychiatrist to determine if she was fit for her job; however, she was forced to "remove herself" (resign) from her job after she experienced unbearable attacks of silent subliminal sound waves through an electronic remote on her mind.

Ms. Anderson has spoken with the FBI and a police commissioner about these problems. Although she did not specify, Ms. Anderson believes the mind altering technology had something to do with a man's death and that is the reason her former employer is trying to secretly drive her insane.

Ms. Anderson complained of being a victim of electronic torture and harassment through electronic mind control technology. Ms. Anderson believes this technology is designed to drive a person insane because it is a silent killer using subliminal sound radio wave frequencies. Further stating, this mind control technology tunes ones brain waves like a

radio station that broadcast subliminal messages to ones mind. Ms Anderson said her former employer, Inter-Con Security Systems, hired her for brain experimentation.

Ms. Anderson said she wants Richmond PD to investigate and provide protection for her and others who are suffering similarly. The technology is such that one can be monitored in the same way as wearing an ankle bracelet, but instead ones brain can be tracked through mapping.

Ms. Anderson has been seeing a Psychiatrist, Dr. Damian Castle-Jones and is willing to release her medical records as proof of her condition. Ms. Anderson did not have her medical records with her but stated she would go by her psychiatrist office today and have her records released.

Ms. Anderson is also working with Muslim Mosque located at 37<sup>th</sup> Street and MacDonald Avenue. She spoke with Brother Fred Muhammad, 925-238-5671, in an effort to reach Nation of Islam leader, Minister Farrakhan. She has also been in communication with Miriam Snyder, 347-697-7586, of NY, NY. Ms. Anderson believes the perpetrator of her on-going harassment is a rock musician who lives in San Francisco.

Ms. Anderson also requested that I research whether an ordinance can be passed which limits how much electronic waves can be passed through ones body. She wants to pursue efforts making it illegal for companies or persons to operate in this area of silent torture. Ms. Anderson said sometimes the symptoms she experience is like having her face burning on fire. I told Ms. Anderson that the police department is limited on the resources available to investigate and provide remedies for such scientifically sophisticated matters. Ms. Anderson said she understands, but requested a police report in order to contact the appropriate agency, perhaps in the federal government for further assistance.

#### **Phone Interview with Miriam Snyder:**

At 11:40 hours, while speaking with Ms. Anderson, she received a telephone call on her cell phone from Ms. Snyder. I took a statement from Ms. Snyder and she stated the following in summary: Ms. Snyder is also a victim of brain wave torture. Ms. Snyder believes a lot of the torture is directed at the underclass population of this country and thus, is not taken seriously nor is it investigated properly. Ms. Snyder has submitted information to the Presidential Commission of Bio-Ethics in hopes of receiving assistance.

The interview was concluded at 11:49 hours.

Prior to concluding the interview with Ms. Anderson, she mentioned the work of Scientist Jose Delgado, who is a pioneer in this area of study. Scientist Delgado successfully hacked inside a bull's brain and controlled him by remote control.

#### **Phone Interview with Derrick Robinson:**

On June 14, 2011 at 12:12 hours, I received a phone call from Derrick Robinson of Freedom from Covert Harassment and Surveillance. Mr. Robinson is well-versed and is considered an expert in this field of study. Mr. Robinson said he could provide additional information, evidence or victims who have been targeted by radio frequency through micro waves. Mr. Robinson said the types of attacks on the brains can also cause heart attacks.

The interview was concluded at 12:21 hours.

This report was taken for documentation.

REPORTING OFFICER <b>Sgt. T. Ellis</b>		SERIAL NUMBER <b>1189</b>		DATE AND TIME		ROUTED BY	
FURTHER <input type="checkbox"/> YES ACTION <input type="checkbox"/> NO	Chief	Adm. Cpt.	ROBS.	Code Ent.	City Atty	REVIEWED BY	
	D/Chief	ISD Lt.	FSJ	SRG	CA		
	No. Cpt.	SG	PHDP.	TRAFF.	TOTAL		
	So. Cpt.	PSJAA	Analysis	Job. Prob.	ASSIGNED	DATE	
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Richmond Police Department  
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JUN 05 2011

June 6, 2011

My

Inter-  
Richmond, California

Dear Lt. Sappal: I Amy Anderson (AKA) Burgundy Chaffon am very pleased with your efforts in stopping electronic torture and harassment comes to a ceased activity upon me. On May 30, 2011 was the first step after, you acknowledged mind control technology exist and that; I am not the only victim reported this invisible crime. I realized you informed me about waiting to contact a FBI agency and finding out what is going on with these military crowd control weapons being used by radar circuitry.

It is an invisible crime because you can not see it with the naked eye, only by it attacking your central nervous system which is a painful and vicious attack upon a person. This technology is designed to drive a person insane because it is a silent killer using subliminal sound radio wave frequencies. This mind control technology tunes into your brain waves like a radio station that broadcast subliminal messages to victim's minds. You and I know it is real because these sites would not exist with describing them.

People like this man made it possible for today's American citizens become victims... like me. I was pleased that you took out time in speaking with my advocate Derrick Robinson who is an executive director for freedom from covert electronic harassment. He appreciates in speaking with you while: I was on the phone line. We thank you for your effort and cooperation in answering our questions concerning this technology and not violating Dept. of Justice privacy act policy and procedures. It is my concern as a victim in getting it stopped being used upon me. Lt. Sappal you had asked me who is using this technology upon me.

I informed you that I discovered Jonah Matranga identity over a hacked cell phone. I have given you his photo and a female ally who both are spying on me as I write and continue attacking me for revealing their photo identities to everyone that; I could in stopping them from sending electrical voltage shock radio waves to my central nervous system attacking and torturing me. The two are from San Francisco, CA. They are opposing as Rock band Musician's.

The two with others are traveling around the Bay Area victimizing innocent people with electronic radar circuitry. They are using radio micro wave frequencies in channeling into my brain waves. The two are sub operating my central nervous system with radiation of directed energy. These two are operating under the instructions of my former employer Inter- Con Security Systems. They only hired me for brain experimentation. When I discovered Jonah Matranga hacking activities he performed at Dept. of Health Service state laboratory located in Richmond, CA. Inter-Con Security Systems had I instantly removed as a cover up.

I experienced them using mind control devices such as psychotronic, acoustic silent sound wave, sonic, micro wave hearing effects, laser beams activating my central nervous system etc. all other types of military weapons that are used for crowd control deterring hostile crowds. Prior to this experience they kept me going to see a psychiatrist to see if I was fit for work each time I was fit in doing my job. The day I experienced these horrific attacks was the day that I decided to remove myself of their job site after; hearing that a state employee had waited until he came to work and killed himself. I feared that they had used this technology upon him and fled the job site.

I truly believe they had something to do with the mans death because they are trying to secretly drive me insane while; using directed energy crowd control weapons upon me and tracking me down like a lost dog. They are violating my human rights and breaking the law by abusing me with mind control, crowd control weapons and satellite surveillance technology. I need an appointment or a letter from you that you are trying to assist me with process by contacting the FBI and finding out why this technology is being used upon innocent civilians. I also spoke to police Commissioner about this man and these crimes he is committing against me. I advised him to collaborate with you and help me come up with a logical and realistic method in stopping these types of crimes be used upon Richmond, Ca community citizen's. I do not have the resource in blocking these silent subliminal sound waves attacking me by electronically remote.

**RUSSELL TICE: Yes, I do. As a matter of fact, and I'm certainly hoping that the President has been misled in what's going on here and that the true crux of this problem is in the leadership of the intelligence community.**

AMY GOODMAN: You're saying in the leadership of your own agency, the National Security Agency?

RUSSELL TICE: That's correct, yeah, because certainly General Alexander and General Hayden and Bill Black knew that this was illegal. Because of terrorism, you know, it's the same argument that we used with communism years ago: take away your civil liberties, but use some threat that's, you know, been out there for a long time. Terrorism has been there for—certainly before 9/11 we had terrorism problems, and I have a feeling it's going to be around for quite some time after whatever we deem is a victory in what we're doing now in the Middle East. **But, you know, it's just something that has to be addressed.** We just can't continue to see our civil liberties degraded. Ultimately, as Ben Franklin, I think, had said, you know, those who would give up their essential liberties for a little freedom deserve neither liberty or freedom, and I tend to agree with Ben Franklin.

AMY GOODMAN: And your colleagues at the N.S.A. right now, their feelings, the National Security Agency?

RUSSELL TICE: Boy, I think most folks at N.S.A. right **now are just running scared.** They have the security office hanging over their head, which has always been a bunch of vicious folks, and now they've got, you know, this potential witch hunt going on with the Attorney General. **People in the intelligence community are afraid.** They know that you can't come forward. You have no protections as a whistleblower. These things need to be addressed.

AMY GOODMAN: What do you mean you have no protection?

RUSSELL TICE: Well, like I said before, as a whistleblower, you're not protected by the whistleblower laws that are out there. The intelligence community is exempt from the whistleblower protection laws.

(<http://blombladivinden.wordpress.com/2011/06/07/russel-tice-former-nsa-intelligence-officer-speaks-out-is-the-nsa-conducting-electronic-warfare/> )