

Inventions Nominated for Federal Assistance

Inventions nominated for federal assistance by Gary C. Vesperman, 533 Tara Court, Boulder City, NV 89005-1152, 702-435-7947 garyvesperman@yahoo.com.

One source of these inventions was Vesperman's compilation of "Advanced Technologies for Foreign Resort Project" which is in padrak.com/vesperman, <http://www.icestuff.com/~energy21/advantech.htm>, and <http://www.linux-host.org/energy/advantech.htm>.

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CATEGORY – HOMELAND SECURITY

Wireless Video Conferencing

The Wireless Video Conferencing system makes it possible to conduct fully duplexed, high-resolution video conferencing with audio, telemetry and data components using a proprietary wireless radio-frequency transceiver integration, portable computers and patented magnetic resonance antennas. This system has specific utility in applications such as municipal catastrophe management, in cases where damage is extensive and no conventional infrastructure survives. For instance, in real-time, a disaster headquarters will be able to see what a field agent is seeing, to talk with the agent over a non-telephone wireless link, and even have the GPS coordinates of the agent's current location reported.

The system is patent protected and ready for prototype construction and testing. Two US Government applications are homeland security and disaster management. One inventor is Gary Vesperman's partner David Yurth of Salt Lake City.

Dialog Language Replacement System

The Dialog Language Replacement System uses advanced software algorithms and proprietary hardware integrations to replace the words spoken in one language with idiomatically correct linguistic equivalents in other languages, while at all times retaining the attributes of the original speaker's voice. Even the mouth and face movements of a speaker are linguistically translated. In real-time applications, the latency is 1 to 3 seconds, and the linguistic accuracy is 95 to 97%.

It has been designed for use in movie production, multi-lingual broadcast and telephone applications. Two other applications of possible interest to the US Government are homeland security and translating school curriculums into other languages.

This system is ready for full development and testing. It is patent protected. One inventor is Gary Vesperman's partner David Yurth of Salt Lake City.

Torsion Field Communications

Practically unknown to Western science, several groups of Russian scientists have been developing torsion field physics and apparatus in secret for over three decades. A torsion field is a scalar product of two electromagnetic fields under special conditions. For example, a torsion field can be generated at the interface between two magnetic fields sweeping past each other. Russian astronomers have determined that torsion fields are transmitted at a speed of one billion times the speed of light. The European physics laboratory CERN has determined that torsion field information can be transmitted through 20 miles of mountain without attenuation. Physicists at Los Alamos National Laboratory have transmitted Mozart's 40th Symphony at 4.7 times the speed of light using torsion field generators and torsion field sensors.

A unique design has been developed for a counter-rotating torsion field generator based on a newly patented micro-solenoid technology, counter-rotating mono-polar magnetic plates, mono-chromatic standing wave lasers, and some scalar parallel processor technologies from the Swiss Institute of Technology in Zurich. The theoretical maximum capacity of torsion field communications is 40 billion channels of three-dimensional holographic television at one billion times the speed of light through the entire earth without attenuation. Torsion field communications is expected to eventually displace all forms of electronic communications including telephones, television, radio, fiber optic cable, and communications satellites, plus the entire Internet backbone.

Homeland security applications include secure communications completely separate from current communications channels. Gary Vesperman invented a major advance which is part of the first-ever patent application in torsion field communications. One co-inventor is David Yurth of Salt Lake City. The cost of completion of prototype development and testing is estimated to be \$500,000.

CATEGORY – MEDICINE

Electronic Frequency and Pulse Generators

“Electronic medicine” can be defined to be the process of exposing a sick or injured person, plant or animal to some kind of a harmless, electrically-generated signal with the hope of a positive outcome. One pioneer was Royal Rife who during the 1930’s experimentally tried to cure cancer and other diseases with his inventions of an ultramicroscope, the world’s most powerful optical microscope, and a manually adjustable electronic frequency generator.

Rife’s hypothesis was that each species of bacteria or virus has a unique crystalline structure. With his ultramicroscope, he would view living samples of a particular species of virus or bacteria. He would then spend hours adjusting the frequency, wave shape, and amplitude of the electromagnetic wave generator until he found the specific combination that would resonate with the critter’s crystalline structure and shatter it. With his ultramicroscope he could actually see a species of virus or bacteria dying once he found the correct frequency, etc. Reportedly he cured 16 terminally ill cancer patients in San Diego by exposing to them his frequency generator when it was tuned to a cancer-killing frequency.

There are basically two modern versions of such instruments available for purchase. One is a computer-controlled electronic frequency generator costing in the neighborhood of a thousand dollars. The resonant frequencies of the crystalline structure of various species of disease-causing organisms are stored in the computer’s memory. The computer reads out the digital code of each frequency one at a time. For some seconds or minutes other electronics generate the code’s electrical frequency which is radiated out to a person or animal via hand-held electrodes or one or two tubes filled with one or more noble gases such as argon, neon, and xenon. The computer may be programmed with selectable modes of frequency sequencing and duration.

One manufacturer’s frequency generator, the IRT-6 infrared device, can be seen at <https://hbsdesign.com/irt6b.htm>. There may be other commercially available brands of frequency generators. Gary Vesperman is credited with being the middleman whereby lucky circumstances enabled two inventors to meet at a conference in 1996 and begin their collaborative efforts in engineering the IRT-6’s predecessor Genesis frequency generator. He owns an IRT-6 which has an electromagnetic configuration as well as the infrared version.

The other version of electronic devices for generating signals for experimental medical purposes is the much less expensive pulse generator, more commonly known as the ‘parasite zapper’. Powered by a standard nine-volt battery, a parasite zapper periodically generates an extremely narrow electrical pulse. The pulse is sent by wires to a pair of copper electrodes. The electrodes can be a pair of copper tubes either hand-held or tucked under a waist band while sitting. The electrical pulses are harmless and can’t even be felt. Zapper manufacturers include Sota Instruments (see www.sota.com), huldaclarkparazapper.com, and the Dr. Clark Research Association (see www.drclark.co). Bob Beck, D.Sc., invented the zapper. See www.bobbeck.com.

Gary Vesperman for 20 years has used a \$50 zapper with convenient copper handholds made by Jane Kolar that was originally engineered to Dr. Hulda Clark’s zapper specifications. Gary Vesperman has also used for nearly 10 years a “Zapper Z4” made by Zapperguy. Their “store” at zapperguy.net shows a successor model “Zapper Z4eX” and two copper tubes.

The zapper’s medical effect, if any, is thought to be the same as the frequency generator. Fourier frequency analysis of a zapper’s pulses shows that a large number of higher sinewave frequencies are added together to make up an electrical pulse. The sharper the pulse, the higher are the frequencies needed for the pulse. The difference is that the frequency generator is programmed to generate specific tuned frequencies. The zapper’s ‘shotgun’ effect is to randomly generate numerous frequencies with the expectation that a few will sooner or later resonate with the crystalline structures of a person’s accumulation of disease organisms and kill them.

An easy, completely harmless way to demonstrate the zapper’s ability to kill a disease-causing organism is to arrange for an obese person to hold a zapper for perhaps 15 minutes twice daily for a few months while watching television, etc. The zapper apparently kills the obesity virus (https://news.wisc.edu/virus-may-be-linked-to-obesity/?fbclid=IwAR2jBSIMFpdjTGGJa7UmBIIdWN_5yIdCnJewGUbTl_-NASHPUfa_kuYuhjHw). The zapper’s inventor Robert Beck claimed to have lost 100 pounds in about six months. Gary Vesperman himself lost about 10 pounds of fat, with no change in lifestyle nor food intake, after a few months of zapping with Jane Kolar’s zapper.

Currently the Food and Drug Administration does not allow any claims of positive medical effects from using electronic frequency and pulse generators. However, there seems to be a sufficient number of positive anecdotes and testimonials to warrant a formal, scientifically irrefutable investigation of using these devices for medical purposes.

For example, the inventors of the aforementioned Genesis frequency generator, after five years or so of intensive research, had finally programmed it with the resonant frequency of the crystalline structure of each and every known disease-causing organism. The federal government should award a grant to methodically expose a number of victims of each and all diseases to frequency generators and zappers and record the results.

Once it has been irrefutably determined that a specific electronic frequency or pulse generator positively effects a specific disease, especially since it would not induce negative effects like with radiation, knives, and drugs, its manufacturer should then legally be permitted to make claims of medical effectiveness in his advertisements just like pharmaceutical manufacturers are permitted to advertise medical benefits from using their sometimes dangerous chemicals.

Killing the critters is half the solution. The toxic waste of their dead bodies must also be quickly eliminated.

A Jarisch-Herxheimer reaction is a reaction to endotoxin-like products released by the death of harmful microorganisms within the body during antibiotic treatment. Efficacious antimicrobial therapy results in lysis (destruction) of bacterial cell membranes, and in the consequent release into the bloodstream of bacterial toxins, resulting in a systemic inflammatory response.

One study suggests that excessive dosages of virus-killing silver nanoparticles could also result in Jarisch-Herxheimer reactions. See <https://www.longdom.org/open-access/use-of-silver-nanoparticles-in-hiv-treatment-protocols-a-research-proposal-2157-7439.1000127.pdf>.

Killing either viruses or harmful bacteria leaves the dead carcasses in your system and need to be flushed out immediately or they create other problems such as higher blood pressure. An even more serious problem is mass, immediate extinguishing of huge numbers of bad critters that then overworks and clogs the liver and pancreas. A worse-case scenario is to create a log jam of toxic waste in your blood stream that could trigger a stroke.

Once a zapper is acquired, it seems advisable to NOT immediately embark on steady heavy use of the zapper. For some time usage should be sporadic with allowance for rest periods and ensuring full hydration of the body by drinking lots of clean water. If suspicious symptoms of a Jarisch-Herxheimer reaction appear such as excessive fatigue or simply not feeling up to par, zapper usage should be suspended for a week or two.

Electronic Brainwave Tuners for Permanent Elimination of Substance Addiction

Addiction to alcohol and narcotic substances such as heroin and cocaine causes enormous social upheaval as well as economic and medical harm. Electronic brainwave tuners evidently can easily and permanently eliminate a patient's substance addiction in a couple of weeks. Gary Vesperman selected from his collection of brainwave tuner reports the following scientific explanation. It seems possible to tune an aforementioned electronic frequency generator for brainwave tuning for removal of substance addiction. If brainwave tuning can be irrefutably proven to eliminate substance addiction, the federal government could provide incentives for the states to vigorously implement programs to cheaply and completely eliminate substance addiction.

Alpha-theta brainwave training and beta-endorphin levels in alcoholics.

Peniston, Eugene G., and Kulkosky, Paul J.

Veterans Administration Medical Center, Fort Lyon, Colorado 81038, and
University of Southern Colorado, Pueblo, CO 81001.

An alpha-theta brainwave biofeedback training program was applied as a novel treatment technique for chronic alcoholics. Following a temperature biofeedback pretraining phase, experimental subjects completed 15 30-min sessions of alpha-theta biofeedback training. Compared to a nonalcoholic control group and a traditionally treated alcoholic control group, alcoholics receiving brainwave training showed significant increases in percentages of EEG record in alpha and theta rhythms, and increased alpha rhythm amplitudes. Alcoholics receiving brainwave tuning showed a gradual increase in alpha and theta brain rhythms across the 15 experimental sessions. These experimentally treated alcoholics showed sharp reductions in self-assessed depression (Beck's Depression Inventory) compared to the control groups. Alcoholics receiving standard medical treatment (abstinence, group psychotherapy, antidepressants) showed a significant elevation in serum beta-endorphin levels at the conclusion of the experiment. This neuropeptide is an index of stress and a stimulant of caloric (e.g., ethanol) intake.

Application of brainwave treatment, a relaxation therapy, appears to counteract the increase in circulating beta-endorphin levels seen in the control group of alcoholics. *13-month follow-up data indicate sustained prevention of relapse in alcoholics who have completed alpha-theta brainwave training.* (Italics added.)

Bio-Energetic Spheres

Bio-energetic spheres are made of a special ceramic and then kilned to an extremely high temperature. Bio-energetic spheres collect life force energy (i.e., chi, or qi) and transfer it to the water in which they are immersed. They may not at first look like much of anything to get excited about. But they apparently offer major quality of life and medical benefits.

Bio-energetic spheres can be used in three ways:

1. Bio-energized water can be made by leaving 3 or more spheres in distilled or filtered water for 24 hours, or boil the water with the spheres in a saucepan for 3 minutes. Either way, drink a recommended eight 8-ounce glasses of bio-energized water per day and use to make tea, coffee, etc. And don't forget your pets' drinking water – they'll lap it up – literally.

Bio-energized water differs in many ways from the original water:

- § Alkaline-producing when your body processes it
- § High levels of far infrared energy
- § Lower surface tension (for easier bodily absorption)
- § Left-hand atomic spin (rather than the unhealthy right-hand spin)
- § Enhanced negative ion count
- § Low level of deuterium oxide

2. Bio-energized water can be made by leaving three or more spheres in water for a month, or simmering the water with the spheres for 20 minutes. Then the bio-energized water can be sprayed on skin, the coats of pets, and the leaves of houseplants. Plants can also be beneficially watered with bio-energized water.

3. Bio-energetic spheres can be worn on the body, much like people who carry crystals in their pockets. A person wearing bio-energetic spheres reportedly will receive infrared and life-force energy benefits.

Key Benefits of Bio-Energized Water:

Most of the human body consists of water, but the water drunk from the faucet contains very low levels of life force energy and seems to actually deplete the human body's own energy level. So it is thought that the more tap water a person drinks, the weaker the person gets.

The bio-energetic spheres transfer life force energy to the water, introduce far infrared energy, lower its surface tension, and convert harmful deuterium oxide into water. All this has the following benefits:

Alkaline-producing means that the water flushes harmful acidic wastes from your body, which are contributory causes of aging, cancer, arthritis, obesity and kidney disease.

Higher levels of far infrared energy increases oxygen levels in your body, warms fats and toxins so that they can be more easily eliminated, and reduces the body's acidity.

Lower surface tension means that the water can be more readily absorbed by bodily tissues, which better hydrates muscles, organs and skin. This leads to better muscle tone, so muscular strength increases, eyesight may improve, and organs simply work better.

In matter with less than 6,500 Bovis units of life force energy, atoms have a right spin. Bio-energized water has up to a million units and a left spin, which it imparts to toxins, thus rendering them harmless. It also ensures that all body tissues have a left spin.

Unhealthy environments such as offices with many computers running abound with positive ions. Healthy environments, such as beside the ocean abound with negative ions, and usually people live in a balance. In bio-energized water, that ion balance is tipped towards negative ions, which is much better for human body chemistry since it runs on 'negative electricity.'

Contact with the ceramic spheres removes harmful deuterium oxide. Ordinary tap water contains one deuterium oxide molecule per 6,000 water molecules. Deuterium oxide inhibits cell mitosis or division, which causes aging and the abnormal growth found in cancers.

Currently the Food and Drug Administration does not allow any claims of positive medical effects from using bio-energetic spheres. However, there seems to be a sufficient number of positive anecdotes and testimonials to warrant a formal, scientifically irrefutable investigation of using bio-energetic spheres for medical purposes.

The federal government should award a grant to methodically treat a number of victims of each and all diseases with bio-energetic spheres and bio-energized water and record the results. Once it has been determined that bio-energetic spheres and/or bio-energized water positively effects a specific disease, especially since they would not induce negative effects like with radiation, knives, and drugs, a manufacturer or marketing company should then legally be permitted to make claims of medical effectiveness in its advertisements just like pharmaceutical manufacturers are permitted to advertise medical benefits from using their sometimes dangerous chemicals.

If and when positive medical effects are proven beyond doubt, bio-energetic spheres should be provided to all federal employees and clients such as veterans and prisoners in order to significantly reduce medical insurance claims.

Electrolyzed Oxidizing Water

Electrolyzed oxidizing water is a versatile disinfectant. This special form of *water* kills bacteria, fungi, viruses, molds and mildews with absolutely no harmful side effects. It will not even injure eyes nor mucus membranes. When sprayed on as a topical skin or plant surface treatment and disinfectant, electrolyzed oxidizing water has been proven to also simultaneously enhance the natural healing process in humans, animals and even plants.

Electrolyzed oxidizing water is water that has been processed by equipment that at least triples water's energizing electric potential, reduces the pH factor to less than 2.7 pH, and compresses water molecules which enables much easier transfer through body tissue and cell walls. A very mild saline (salt) solution is used to aid the electrolysis process. *No other chemicals are added.*

Is electrolyzed oxidizing water a new product? No. Electrolyzed oxidizing water products have been marketed in Japan and China for over ten years. It has been extensively researched, lengthy scientific reports have been presented at symposiums, clinically tested, and found to be highly effective and totally safe. Products made with electrolyzed oxidizing water are used by doctors and hospitals throughout Asia for the treatment of all types of skin conditions and the general sterilization of wounds, cuts and abrasions.

Asian-produced electrolyzed oxidizing water remains stable and effective for only up to 19 hours. RPA Biotech, Inc., which is no longer in business, had patented a stabilizing process which produces equally effective electrolyzed oxidizing water which can be conveniently packaged with a shelf life after purchase of approximately nine months. RPA Biotech, Inc., was one of the first companies to bring electrolyzed oxidizing water products into the US and Canadian markets.

RPA Biotech's primary markets were in animal healthcare, personal healthcare, agriculture, and the restaurant and food preparation industries. RPA Biotech, Inc., made and packaged its electrolyzed oxidizing water in several different convenient products. They contained no caustic, toxic or other ingredients that are harmful to humans, animals, plants or the environment. All of its products were all-natural, totally safe to use, non-toxic, bio-degradable, and safe for the environment. Testimonial to electrolyzed oxidizing water's safety and effectiveness resulted in a 97% reorder rate.

RPA Biotech, Inc., arranged for other companies to take over its marketing efforts. Its principle officers have passed on.

Currently the Food and Drug Administration does not allow any claims of positive medical effects from using electrolyzed oxidizing water. However, there seems to be a sufficient number of positive anecdotes and testimonials to warrant a formal, scientifically irrefutable investigation of using electrolyzed oxidizing water for medical purposes.

The federal government should award a grant to methodically treat a number of victims of each and all diseases with electrolyzed oxidizing water and record the results. Once it has been determined that electrolyzed oxidizing water positively effects a specific disease, especially since the water would not induce negative effects like with radiation, knives, and drugs, a manufacturer or marketing company should then legally be permitted to make claims of medical effectiveness in its advertisements just like pharmaceutical manufacturers are permitted to advertise medical benefits from using their sometimes dangerous chemicals.

If and when positive medical effects are proven beyond doubt, electrolyzed oxidizing water should be provided to all federal employees and clients such as veterans and prisoners in order to significantly reduce medical insurance claims.

CATEGORY – ENERGY

Electronically Shaded Photo-Voltaic Glass

By laminating a specially designed layer of liquid crystal material between panes of either clear glass or clear polycarbonate materials, which have been coated with an ITO or transparent metallic conductive film, a window transparency control system has been created which enables the viewer to darken the window pane [or other application] electronically, without the aid of shutters, blinds or curtains.

The panel also rotates polarity up to 90 degrees from the vertical and substantially reduces infrared transmissivity. Buildings with windows made of electronically shaded photo-voltaic glass should have significantly lower air conditioning loads because they offer full blockage of infrared radiation. Buildings should additionally have lower net electrical power consumption because windows facing the sun will be able to generate usable photo-voltaic electricity.

CRL Opto had built and was testing the initial proof-of-concept prototypes. This application is ready for production and is patent protected. One inventor is Gary Vesperman's partner David Yurth of Salt Lake City.

Collective Ion Acceleration Treatment of Radioactive Waste Materials

The Collective Ion Accelerator has been designed, developed to the point of bench testing in the laboratory, completely documented, submitted to DOE, and is ready for full laboratory testing, prototype construction and testing. Radioactive waste treatment would eliminate the need for geological storage of radioactive waste inside Yucca Mountain. One inventor is Chinese plasma physicist Shang Xian Jin, Ph.D. Gary Vesperman has met Dr. Jin several times. Gary Vesperman's partner David Yurth of Salt Lake City works closely with Dr. Jin. Development phases II and III each needs \$2.5 million. Phase IV would involve on-site field testing of a transportable system suitable for remediation of radioactive emissions in both liquid and solid wastes.

Pulsed Abnormal Glow Discharge Reactor

The Pulsed Abnormal Glow Discharge (PAGD) Reactor is an over-sized glass vacuum tube constructed and electrically driven within a narrow range of DC voltage so that it operates with negative resistance. Because of the reactor's negative resistance, other components with positive resistance such as light bulbs, batteries, and motors can be inserted in the circuit without drawing energy from the DC power source, up to the PAGD reactor's maximum amount of negative resistance.

The PAGD reactor's function is based upon heretofore unknown spontaneous emission properties of certain metals in vacuum and involves an anomalous cathode reaction force. The PAGD reactor may be conceived of as a portable vacuum battery made active only when needed.

The technology employs cold-cathode vacuum discharge plasma reactors to set up self-exciting oscillations, in the form of pulsed abnormal glow discharges triggered by auto-electronic emissions, in order to produce power. The circuit is driven from a direct current source of impedance sufficient to prevent establishment of a sustained vacuum arc discharge.

In combination with a special circuit, electrical power, in excess of the input power needed for operation, can be extracted. The system, therefore, may also be referred to as an over-unity system where net energy output greatly exceeds net energy input.

The experimental data show numerous tests involving the discharge of a source bank of 12-volt cells as the powered apparatus recharges an output bank of cells and/or runs an electric motor. In one typical test run, within 20 minutes, 0.988 kilowatt-hour of energy is generated for an input of 0.258 kilowatt-hours. Power conversion gain performance efficiencies are clearly shown in the figures by data plots on a scale that runs to 1000%. One power conversion gain efficiency cited was 483%.

It seems that the PAGD reactor's inventors have conquered the problem of electrode over-heating after long duration running of many devices built using different electrode configurations, shapes and materials. The PAGD reactor's development is now at the point where predictably 40 megawatt-hours of energy can be delivered from something of light-weight construction that one can hold in one hand.

Imagine holding something that can deliver 2 kilowatts of electrical power output and keep going for 20,000 hours. Then ask yourself when we can expect to see self-powered electrical vehicles on our roads using somewhat larger versions of PAGD reactor tubes.

Unlike the chemically-assisted nuclear reaction process, which outputs low-grade heat, the PAGD reactor directly generates electricity at power voltage levels, without any utilization of cold or thermonuclear fusion principles. Another important feature of the apparatus is that it employs no radioactive compounds and generates no nuclear radiation or radioisotopes. The energy system is entirely pollution-free, self-contained and composed of readily recyclable materials. Storage of the power produced may be carried out by traditional means, be these mechanical or electrical.

At least three patents have so far been issued. One of the patents involves an associated motor drive which provides for direct electromechanical transformation of the energy accumulated within the reactor. Additional patents covering various aspects and applications of the PAGD reactor are being sought.

Energy conversion system applications for electric vehicles, stand-alone power supplies and autonomous housing had been under development. The inventors had hoped that by making vehicles self-sufficient in terms of energy, the PAGD reactor will offer the possibility of bypassing massive infrastructure expansions in order to make the electric vehicle a feasible reality while solving the problem of range which currently detracts from its appeal. Other potential applications include pulsed lasers, inverters, transformer and motor circuits.

Gary Vesperman has attended a lecture by the inventors Paulo N. and Alexandra N. Correa, a married couple, on their PAGD reactor. Due to lack of financial support, the inventors reportedly were forced to stop their development efforts April 2002. They hold US Patent 5,416,391 for Electromechanical Transduction of Plasma Pulses, US Patent 5,449,989 for Energy Conversion System, and US Patent 5,502,354 for Direct Current Energized Pulse Generator Utilizing Autogenous Cyclical Pulsed Abnormal Glow Discharges.

Hutchison Self-Charged Battery

The Self-Charged Battery generates a perpetual Direct Current (DC) voltage without external recharging. By stacking enough self-charged batteries into a single DC generator, the generator's DC voltage can be converted to regulated Alternating Current (AC) electricity and thereby silently electrify a house without fuel nor emission of pollutants. The DC voltage could also power an electric vehicle's DC motor. The inventor is John Hutchison.

Casimer-effect self-charging batteries are also separately being researched by Mike Windell and Nevada inventor Matt Schadeck. Gary Vesperman has documented several of Mr. Schadeck's inventions. David Yurth of Salt Lake City works closely with Matt Schadeck.

WIN Zero Point Electrical Energy Converter

The WIN Zero Point Electrical Energy Converter extracts AC current with an output power greater than input power. It generates electricity by collecting electrons between E-dam cermet in a vacuum. A charge of electrons is oscillated in a tank circuit, and energy is collected or added to that charge from the vacuum. The mechanism is believed to be the Casimer effect. Solid-state with no moving parts and no size restrictions, individual units can be built to power a 15-kilowatt home or a 20-megawatt arc furnace without outside energy input. 12 sizes of generators are currently being built – one of which would be a 1500-watt unit to generate useful heat and electricity. The inventor is Wingate A. Lambertson, Ph.D. His proposed first-year budget is \$1.25 million.

Converter of Zero-Point Electromagnetic Radiation Energy to Electrical Energy

The Converter of Zero-Point Electromagnetic Radiation Energy to Electrical Energy utilizes the special characteristics of the zero-point electromagnetic radiation of having a virtually infinite energy density and that it is omnipresent even in outer space. However, the high energy densities only exist at very high frequencies. These large energies can be collected with small antenna-like structures (frequency is inversely proportional to size). But the frequencies are so high that they are unusable for practical energy applications.

With two antennas of very slightly different sizes, the converter collects zero-point electromagnetic radiation of two very slightly different frequencies. The converter then superimposes the two frequencies which results in a far lower beat frequency. The energy contained in the beat frequency is then transformed to practical electrical power which can be made available in any location on earth or in space. Applications include transportation, heating, cooling as well as many others. Franklin B. Mead, Jr., Lancaster, California and Jack Nachamkin, Poway, California hold US Patent 5,590,031 for System for Converting Electromagnetic Radiation Energy to Electrical Energy.

Borrowdale's Motor/Generator

The Borrowdale's Motor/Generator incorporates permanent magnets which provide the drive torque by pulling rotor and stator poles together with an electromagnetic opposed excitation input pulsation used to weaken that magnetic pull to allow the poles to separate. Its power output is claimed to be 3 times power input. Gary Vesperman and Las Vegas businessman Gary Davis have seen this invention in operation but not performance tested. Inventor is Brian Borrowdale.

Conversion of Aluminum Internal Combustion V-8 Engine to Magnetic Motor

The Conversion of Aluminum Internal Combustion V-8 Engine to Magnetic Motor has its heads replaced with magnet arrangement so that the vehicle doesn't need fuel nor battery recharging. Two-inch square Chinese super-magnets are embedded in the piston heads. Same-size magnets are embedded on outside of disks mounted on a shaft, one magnet to each cylinder. A toothed gearwheel mounted on the front end of the shaft is linked by a chain drive to a gearwheel on the crankshaft. An electric motor is mounted on the block to turn the crankshaft. As the crankshaft rotates, when each piston is up closest to top of the cylinder, its matching magnet is also at its angular point closest to the head. The two opposing south poles repel each other with 1,000 lb. of force. (This compares with the approximately 250 lb. of force on the piston head in a gasoline engine.)

The engine would still need oil changes every 50,000 to 80,000 miles. Because it runs cool, the block could be made of hard plastic which ought to be of cheaper material and easier to mold and machine than aluminum. A constant-speed motor, it would require a continuously variable transmission in order to power a vehicle or rotating electrical generator. If the electric motor is replaced with a Muller magnetic motor, the combined conversion gain of output power over input power is projected to be about 300.

Gary Vesperman and Las Vegas businessman Gary Davis have seen a partially built prototype. One side of four cylinders had a crankshaft with four super-magnets mounted on it. The inventor is Brian Borrowdale who has since passed on.

Richardson Generator

Two pairs of electromagnets warp a permanent magnet's magnetic fields back and forth across output field coils to induce a DC output voltage. The faster the switching speed, the higher is the DC output voltage, up to the point of magnetic saturation, which is then converted to an AC voltage. Some of the output power is fed back to provide input power for the switching electromagnets and associated signal generator and switching transistors. When the entire circuit is optimally tuned by adjusting variable capacitors to achieve resonance, more output power is generated than is needed for the input power, as claimed by inventor Frank Richardson. A Richardson generator less than the size of a garbage can could generate enough electricity for an average-sized residence with no noise, no fuel, and no emission of pollutants.

Frank Richardson died some years ago. However, Gary Vesperman himself had done some engineering work on Richardson's generator. Vesperman and some Las Vegas inventors have talked about resurrecting the Richardson generator with the help of engineering documents inherited by Mr. Richardson's son who lives in St. George, Utah. Frank Richardson held US Patent No. 4,077,001 for Electromagnetic Convertor with Stationary Variable-Reluctance Members.

Las Vegas businessman Gary Davis owns the rights to the Richardson generator. Davis owned and managed Natural Environmental Solutions, Inc., a Nevada corporation. Gary Vesperman researched and wrote most of the company's Small Corporate Offering Registration for \$500,000 of stock to be publicly sold to investors in 1994(?).

Hawking's Generator

The Hawking's Generator results from feeding high voltages oscillating at optimally 150,000 hertz to two 4-inch fluorescent lights. Each fluorescent tube has a strong permanent magnet attached to its center – north pole on one side, and south pole on the other side. The magnetic field between the two poles deflects the electrons in the tube off to one side. The tube is now no longer capable of generating hot electricity. Instead only *cold* electricity is extracted from the zero point energy field by the tube. The cold electricity comes from the other end of the tubes which are each wired to a brass electrode. A 6 to 8-inch white spark of cold electricity 4 inches in diameter is produced between the two brass balls.

Cold electricity can not be measured with ordinary voltmeters and ammeters since there are no electrons. However, cold electricity can power lamps, etc. Totally different applications could result from the observation that materials inserted in a spark of cold electricity sometimes change to elements of higher density.

Gary Vesperman has a video of an earlier version of the Hawking's generator where the dazzling white spark of cold electricity is only about the size of a peanut due to a much lower frequency being used. A weird "singing" noise heard in the video indicates that energy is being extracted from the omnipresent zero point energy field. Even Nicola Tesla himself long ago observed the same connection of singing noise to energy extraction.

The Hawking's generator, although fairly simple and can completely be made with commonly available components, is still in its earliest stages of development. Gary Vesperman's friend Henry Curtis was the one who brought the Hawking's generator to Vesperman's attention and provided him with a video. Curtis has been investigating and attending conferences on new energy technologies for over 15 years. Curtis thinks the Hawking's generator is the most exciting fuel-less energy source he has ever seen. Vesperman has talked with some Las Vegas engineers about building their own prototype for testing.

Frankly, 'cold electricity' is still very much a huge mystery. Gary Vesperman has a BS degree in electrical engineering from University of Wisconsin-Madison and has become familiar with all sorts of weird devices. Even he has no idea as to how mathematical formulas could be written describing the most fascinating phenomenon of cold electricity. Hot fusion has received billions of research dollars with no hope of a practical electricity generator for decades to come. Surely studies and development of cold electricity and new energy devices such as the Hawking's generator are equally deserving of massive funding by the US government, if not more so than hot fusion.

CATEGORY – ADVANCED SELF-POWERED ELECTRIC VEHICLES

In Sept 8-9, 2000 for the Institute of New Energy Symposium, Salt Lake City, Utah, Gary Vesperman lectured on his "Advanced Self-Powered Electric Vehicle Concept". His paper was later published in Proceedings of INE-2000, Vol. 5, No. 2 of Journal of New Energy, P.O. Box 58639, Salt Lake City, Utah 84158-0639. Its abstract is as follows:

“Candidate technologies were originally combined into an advanced self-powered electric vehicle concept in 1993. The power train of the concept’s current version includes a modern version of Edison’s nickel-iron battery or one of four super or ultra-capacitors, a closed-cycle blade-less Tesla-type steam turbine or one of several over-unity magnetic motors, and one of several possible types of on-board battery chargers. Miscellaneous innovations include computerized shock absorbers and air ride suspensions, lightweight basalt/carbon fiber foam for body/frame, parts non-destructively coated with diamond or titanium nitride, and compressed air-driven air conditioner/heater.”

By combining these superb new technologies into an advanced self-powered electric car that would be superior to any other car even commonly envisioned, it evidently should not be very difficult to sell a reasonably priced car featuring:

- Powerful but quiet and emission-free electric motor, possibly with over-unity power conversion gain.
- Only a few maintenance-free lifetime environmentally benign batteries.
- Never requires refueling nor electricity recharging due to on-board battery charger.
- Continuous climate control with compressed air-driven air conditioning/heating, even while parked.
- Computer-controlled luxurious but economical ride with sports-car control and automatic leveling even while parked.
- Much less bothersome and costly maintenance including no oil changes, no tune-ups, no radiator, no refrigerant-based air conditioner, and no fuel tank.
- Numerous parts non-destructively coated with diamond or titanium nitride for increased durability and safety.
- Exceptionally tough, crash-resistant basalt/carbon fiber foam body/frame, lighter than fiberglass, for increased safety with lower weight.

Las Vegas, Nevada is uniquely blessed with an active electric car club with at least a half-dozen members who have actually built electric cars. They could design and build engineering prototypes of advanced self-charged electric vehicles as well as kits for converting existing vehicles to self-charged electric. Alvin Snaper, who is the prolific inventor of an advantageous new nickel-iron battery, compressed air-driven air conditioner/heater, and low-temperature process for coating automotive parts, tools, etc with diamond or titanium nitride for greatly increased durability, even lives and works in Las Vegas.

To minimize initial capital outlays, advanced self-charged electric car features would be introduced in phases rather than simultaneously at great up-front cost. The profits earned from each phase would help finance the next follow-on phase. For example, at the beginning existing golf carts could be fitted with on-board battery chargers, and propane generators in RVs replaced with fuel-less battery chargers. Somewhat later, existing cars and trucks could have their engines, radiators, and fuel tanks replaced with electric motors, a few batteries, and fuel-less on-board battery chargers. Standalone businesses selling auxiliary technologies, especially low-temperature coating of parts, tools, etc with diamond or titanium nitride, could be very profitable, fast-growing ventures.

Currently in California, every electric vehicle sold that meets requirements earns 4 EV credits that can be resold to the major automobile makers for \$20,000. Even if the company only breaks even on its cars, the total profit on each car sold in California would still be \$20,000. So therefore, nearly all new self-charged electric vehicles, not existing vehicles converted to self-charged electric, would be sold in California – a huge market. Other states are considering similar EV credits.

For the first 10,000 self-powered vehicles sold nationwide, the federal government should provide an additional credit of \$10,000 specifically for each vehicle proven to be self-powered or self-charged with no external fuel nor electricity needed and zero emissions.

The last chapter of Gary Vesperman's aforementioned compilation of "Advanced Technologies for Foreign Resort Project" in <http://www.fortunecity.com/greenfield/bp/16/advantech.htm> is titled "Advanced Self-Powered Electric Vehicle Concept".

Gary Vesperman has written a 15-page preliminary business plan for a startup company which has the mission to lead to the eventual design, manufacture, and sale of advanced self-charged electric vehicles.

The following are descriptions of electric vehicle inventions. All of them by themselves appear to be deserving of federal aid as part of an overall effort to develop prototype advanced self-powered vehicles for demonstration. See the Energy Category above for additional candidate fuel-less emission-free vehicle power sources.

Quantum High Energy Density Storage or Retrieval Device

Essentially a very thin battery, the solid-state Quantum High Energy Density Storage or Retrieval (QUENSOR™) device has an energy density of about 1-15 kilowatt-hours/kilogram, which is comparable to gasoline, or more. A fundamentally new principle and a new method of manufacture is employed. If the upper limit of 15 kilowatt-hours per kilogram is assumed, a 60-pound QUENSOR device can supply an electric car, in round numbers, 20 horsepower of electric power at 50 miles per hour for 30 hours, or a total of 1500 miles on a single charge.

Electric energy is stored or retrieved from quantum dipole electric fields throughout the volume of the QUENSOR™ film. Electric energy is stored in the QUENSOR™ film by charging the dipole electric fields from an electric energy source. Electric energy is retrieved from a QUENSOR™ film by discharging the dipole electric fields and supplying the energy to a load. Electric breakdown in the film is avoided because positive and negative electric charges in the film are balanced everywhere. Busbars attached to metal layers are connected to terminals for charging or discharging the QUENSOR™ film.

Nickel-Iron and New Lead-Acid Battery

Prolific Las Vegas inventor Alvin Snaper (600 patents, etc) has developed and patented a modern version of the century-old Edison nickel-iron battery through his Las Vegas company Power Technology, Inc. (See http://www.powerptwc.com/business_of_issuer.htm.) His new nickel-iron battery will have none of the drawbacks of all other types of batteries such as temperature sensitivity. Increasing the surface area of the electroplates by up to 1000 times greatly increases current output and allows much quicker charge/discharge rates. Different chemistry reduces the weight of the battery by 50%, reduces cost, and is much more environmentally benign than lead.

During an August 2002 visit, one of Snaper's researchers told Gary Vesperman that their lead-acid battery already has the world's highest energy density, and they hope to increase it even higher. It uses some of the components of the nickel-iron battery which has been delayed.

Alvin Snaper holds US Patent No. 6,060,198 for Electrochemical Battery Structure and Method. He may already have obtained one or more additional battery patents.

Ukrainian Capacitor-Like Battery

The I. N. Frantsevich Institute for Problems of Materials Science, Kiev, Ukraine, has invented an entirely new type of battery. Emtech LTD., Mississauga, Ontario is commercializing the battery and has applied for 11 patents. A set of conventional lead-acid batteries can propel a small electric car for 100 miles or so, require several hours to recharge, and weigh 1000 lb. An equivalent set of Ukrainian batteries is expected to weigh approximately 200 lb., provide a much greater range of up to possibly 200-300 miles, require 15 to 30 minutes to recharge, and maintain full voltage until 94% discharge. The Ukrainian battery operates well in the temperature range of -40 to +60 degrees centigrade. A side benefit of the Ukrainian batteries is that they are made only of proprietary materials which are environmentally friendly, plentiful, and inexpensive.

(These performance claims are dated 1993 and currently are not considered credible without an updated report. Emtech LTD, which had the commercialization license, went bankrupt. Nu Omnicomm Technologies, Inc., of Salt Lake City, which has close ties to the I. N. Frantsevich Institute for Problems of Materials Science, may be able to revive the Ukrainian capacitor-like battery.)

A Ukrainian battery stores the charges in crystalline layers of a sheet-like material similar in appearance to mica. Due to nonlinear quantum mechanic effects, the electrical characteristic of each crystalline layer is that of a capacitor as thin as one molecule. Since capacitance is inversely proportional to thickness of the separation between layers, the practical consequence of the Ukrainian battery is to electrically function in a manner similar to that of a giant capacitor.

Gary Vesperman's partner David Yurth of Salt Lake City has personally worked with the IPMS on their Ukrainian super-capacitor battery. Famous Indy 500 race car driver Rodger Ward's American Electric Car Company had planned to use these batteries. Unfortunately, the IPMS was unable to keep its battery prototype delivery commitments. Gary Vesperman researched and wrote most of the company's Small Corporate Offering Registration for \$1,000,000 of stock to be publicly sold to investors in 1993(?).

Blade-Less Tesla-Type Steam Turbine

A powerful blade-less Tesla-type steam turbine was developed by Frank Richardson. This turbine has a closed-loop cycle which he claimed is far more efficient than the electric motor in terms of converting electrical energy into rotational energy for application to a vehicle's drive wheels. The water is heated with radio frequencies like a microwave oven into steam which is then forced through two disks in sequence. The two disks are perforated in such a manner as to prevent cavitation (bubbles) even at high rotational velocity. Since steam offers a 1,000-to-1 expansion ratio compared with gasoline's expansion ratio of approximately 300 to 1, the turbine is extremely powerful. An 18-inch diameter prototype's output power was measured at approximately 1,000 horsepower.

By combining his turbine with the aforementioned Richardson electrical generator, Richardson had built a self-powered modified beetle-shaped Volkswagen automobile which he had operated during the early 1970's.

Closed-Cycle Freon/Rotary Turbine

DiMatt Industries's DiMatt Wankel Generator integrates a Freon-based wankel engine and generator system. The system relies on the extremely high expansion coefficient demonstrated by certain Freon formulations to drive the internal rotary piston system embodied by the Wankel. This system has been shown to produce 40-80 brake horsepower (as tested on a fully instrumented dynamometer) without consuming fuel or producing any exhaust. The engineering design specifications, patent application and underlying component patents have been developed for the construction and testing of a transportation platform which relies on a closed-cycle Freon/rotary turbine design to supply power to electric motors with no consumption of fuel and no emissions. Its efficiency is lower in colder temperatures.

One inventor is Nevada inventor Matt Schadeck. Gary Vesperman has documented several of Mr. Schadeck's inventions. Gary Vesperman's partner David Yurth of Salt Lake City works closely with Matt Schadeck.

Gary Vesperman has a videotape and drawings of deceased Las Vegas inventor Robert Stewart's low-temperature phase-change engine which relies on the same basic principle but seems to be a different design.

Compressed Air-Driven Air Conditioner/Heater

The compressed air-driven air conditioner/heater relies on the principle of a vortex tube. Air whirled in a vortex tube separates with the cold air molecules collecting in one portion of the tube, and the warm air molecules collecting in another portion of the tube. The cold air is expelled from one end of the tube, and the warm air is expelled from the other end. It can be switched between providing 90% cold air and 10% warm air, or 10% cold air and 90% warm air.

The metal tube is about a foot long and a half-inch in diameter with a two-inch long compressed air intake tube perpendicularly attached about three inches from one end. The intake compressed air requirement specifications are 7 cubic feet per minute at a pressure of 40 pounds per square inch. The volume of air expelled is twice that of a refrigerant-type automobile air conditioner while requiring only one-fourth the horsepower. Also, no warm-up period is required as with conventional air conditioners or heaters. Its laboratory-certified efficiency is nearly 30%. Gary Vesperman has seen during demonstrations conducted in inventor Snaper's garage on a hot Las Vegas summer day temperature measurements of the air blowing out of the cold end at around 0 degrees Fahrenheit.

While the patent on the compressed air-driven air conditioner/heater has recently expired, it is still available for commercialization. Combined with an on-board battery charger, the advanced self-powered electric vehicle would have the exceptionally nice feature of continuous climate control, even while parked! Parked on a cold winter day, the interior of the vehicle would always be toasty warm. On a hot summer day, the vehicle's interior would always be refreshingly cool. Alvin Snaper holds US Patent No. 4,407,134 for Air Conditioning System.

Inventor Alvin Snaper in August 2002 showed Gary Vesperman a Chevy S-10 pickup truck he had bought without air conditioning. He has a budget of \$550,000 maximum to do "sweat engineering" of a complete prototype air conditioning system to be installed in the S-10. Alvin is still looking for a more nearly ideal air compressor.

Monocoque (Unibody) Basalt/Carbon Fiber Foam Body/Frame

Developed by the I. N. Frantsevich Institute for Problems of Materials Science, Kiev, Ukraine, basalt/carbon fiber foam is extremely strong yet lighter than fiberglass. A test vehicle made with basalt/carbon fiber foam parts was reportedly the only vehicle ever tested that can cut through a cast-iron London taxicab in a collision.

Dave Yurth's Sept 3, 2002 email to Gary Vesperman is as follows:

From : dyurth <dyurth@xmission.com>
To : "Gary Vesperman" <yman@skylink.net>
Subject : Re: Basalt/carbon fiber foam for EV
Date : Tue, 03 Sep 2002 09:36:14 -0600

Hi Gary:

Thanks for the note...Matt and I have also been working on a variation on a theme for an EV...we've found a digital variable reluctance motor which marries the best of torque characteristics and energy utilization efficiency in a single unit – no windings at all. The shaft is married directly to the motive element – in the current use, it is used to drive a wood lathe. In our design, it would connect directly to the wheel and, on the other side, to a brake/energy conversion device which converts momentum into recharging current like the BART system.

The basalt fiber material is manufactured by the Institute for Problems of Materials Science (IPMS) in Kiev, Ukraine. If you are interested in utilizing this technology to create an automobile enclosure, three technologies are needed:

1. The basalt fiber technology can only be found at the IPMS. I believe there may still exist some spools of the stuff in or around Kiev, but it has been ten years since I worked with them so we'll have to re-establish contact. The principal value of the material is that it has a softening temperature of 805 degrees centigrade.
2. The Russians used powdered metallurgy to alloy their strategic metals – the ideal mix of metal powders would be aluminum and magnesium, since both can be found in finely particulated powders and when mixed together in the right ratios, these two metals form a material which is utterly resistive to corrosion and which has excellent tensile strength.
3. The powdered metals are mixed in a chamber like dry cake mix and then applied using a third technology – in IPMS documents, this technology is referred to as a "High-Temperature Gas Plasma Detonator". The metal powder is poured into a ceramic container, which funnels it into a specially designed high temperature containment vessel which is also surrounded by super magnets, arranged in a very precise order to create a compressive effect.

When the powdered metal is brought into the chamber, high voltage, high pressure and extreme magnetic fields reduce the metal powder to a plasma, which is then expelled through a nozzle and onto a target – in this case, the woven basalt fiber which creates the shape of the vehicle.

When the metallic plasma collides with the basalt fiber material, it has a temperature of about 1600 degrees centigrade. This causes the basalt fibers to soften and partially melt – but the cooling gradient for this material is so steep that it cools almost immediately below 800 degrees centigrade, at which point the fibers reconstitute. This creates a basalt fiber reinforced metal alloyed shell which is extremely strong, very light weight and can be polished to a high sheen.

This is the technology the Russians have used for 25 years to create fuel cells for their huge rocket boosters – and it is the reason their boosters are so light, have no gaskets or seams and can be reused over and over again.

Dave”

Advanced Computer-Controlled Suspension Systems

Computer-controlled hydraulic shock absorbers as well as the computer-controlled air ride suspension system would be supplied by Aimrite Systems International, Inc., which owns the patents. Aimrite's Computer-Optimized Adaptive Suspension Technology (COAST) system replaces a vehicle's conventional shock absorbers with specially designed hydraulic shock absorbers. The COAST system utilizes a sophisticated computer and position sensors to monitor the vehicle's level at each corner. The computer's microprocessor checks the sensors 240 times per second and optimally regulates the damping on all four shocks based on this input. The firmware used in the microprocessor is patented and represents the most important element in the COAST system. It controls nine dynamic and static parameters of motion (roll, pitch, sprung natural frequency, unsprung natural frequency, pumping down, stored energy, topping out, bottoming out, and height).

The COAST system is not only totally automatic, but it monitors and controls the vehicle's ride performance on a continuous basis providing soft and stable ride characteristics at all times as needed. The ride is comparable to active systems without the need for pumps nor expensive high-speed servo-valves.

Each shock absorber is actually a complementary pair of shock absorbers mounted in opposing vertical compression/rebound modes. The computer sends signals to valves to release pressure as required. Aimrite considers its shock absorbers more durable and react faster than competing computer-controlled shock absorbers which apply pressure when needed. A built-in safety factor is that if the computer fails, the result is conventional damper operation, and failure of an individual damper is equivalent to failure of a conventional shock absorber.

Aimrite's air ride suspension system replaces a vehicle's front coil springs and rear leaf springs. The air suspension comprises of a high-quality control subsystem that includes the aforementioned dual redundant air compressors, air dryers and filters, position sensors, computer-controlled solenoid valves, and a dashboard-mounted control to ensure proper operation and a long and reliable life of the air suspension in all weather and driving conditions.

While stopped or driving, the control subsystem allows the operator to easily maintain the correct ride height under all loading conditions. For example, the chassis can be raised for a bumpy ride and lowered for stable highway driving. The vehicle body is automatically leveled at all four corners, even when parked on an uneven surface.

Aimrite's suspension provides a full air suspension ride, with increased comfort and control. Built-in safety capabilities are provided that virtually eliminate traditional problems associated with air ride suspension systems.

Combining Aimrite's two computer-controlled adaptive suspension systems would offer a luxurious ride with sports-car control and additional features at a reasonable price.

The air conditioner/heater as well as the air-ride suspension both require compressed air. There has been some talk of using compressed air also for other vehicle applications such as stiffening tubular frame members, windshield wiper motors, etc.

US Patent No. 5,056,811 for Actively Controlled Automotive Suspension System with Adjustable Rolling-Stability and/or Pitching-Stability. US Patent No. 5,735,372 for Variable Constant Force Hydraulic Components and Systems. US Patent No. 4,634,142 for Computer Optimized Adaptive Suspension System. US Patent No. 4,722,548 for Computer Optimized Adaptive Suspension System having Combined Shock Absorber/Air Spring Unit. US Patent No. 4,468,739 for Computer Optimized Adaptive Suspension System having Combined Shock Absorber/Air Spring Unit. US Patent No. 4,468,050 for Computer Optimized Adaptive Suspension System. US Patent No. 5,529,152 for Variable Constant Force Hydraulic Components and Systems. All invented by James M. Hamilton, Solana Beach, California and Lonnie K. Woods, Jacumba, California. US Patent No. 4,651,838 for Air Spring Control System and Method. US Patent 4,783,089 for Air Spring Control System and Method. All invented by James M. Hamilton, Solana Beach, California, Lonnie K. Woods, Jacumba, California, and Michael W. Godwin, San Diego, California.

Gary Vesperman researched and wrote most of Aimrite's Small Corporate Offering Registration for \$1,000,000 of stock to be publicly sold to investors in 1993(?).

Low-Temperature Diamond or Titanium Nitride Coating of Vehicle Parts

Durability would be enhanced by nondestructively coating numerous parts such as shock absorbers with diamond or titanium nitride using Alvin Snaper's new low-temperature coating process. A multiple gun plasma arc deposition system allows controlled deposition of diamond and other diamond-like materials such as titanium nitride on a substrate. Deposition is controlled by controlling the time duration of pulses to a main gun, an acceptor gun and donor gun in a vacuum chamber that may contain a small amount of hydrogen. The deposition process is also enhanced with microwave temperature control and substrate dithering with a transducer.

The potential market for coating vehicle parts, machinery parts, tools, drill bits, etc seems to be enormous. Alvin Snaper holds US Patent No. 5,254,237 for Plasma Arc Apparatus for Producing Diamond Semiconductor Devices. About ten years ago, the business plan for Snaper's company Stratum Corporation had an estimate of \$3,500,000 to build a pair of coating chambers and working capital of \$1,000,000. While one chamber is coating objects placed inside it with diamond or titanium nitride, the other chamber would be emptied and reloaded with a fresh batch of objects to be coated.

CATEGORY – DIAMOND SEMICONDUCTOR DEVICES

The diamond deposition system and process can even be used to manufacture semiconductor devices made with diamond instead of silicon – another new industry for Las Vegas with possibly multi-billion-dollar potential.

CATEGORY – EDUCATION

Computerized Fiber Optic School Network

One dozen to four dozen junior and senior high schools in each large metropolitan area were to be linked with fiber-optic cables into a single huge network with an average cost of \$100,000,000. The recent advent of the Internet and even torsion field communications possibly offers significant cost reductions.

The network's three-layer computer system would comprise of a network coordinating and scheduling computer as the top layer, an administrative computer in each school as the middle layer, and personal computers as the bottom layer. The network's customized software would include network management and coordinating functions for the system manager, two layers of software for the teachers to support 100 different functions, and 25 different functions for the students, only one of which is computer-assisted instruction. Each personal computer would have a monitor capable of also displaying telecast or recorded classes.

The typically huge scale of a school network would economically justify the simultaneous teaching in parallel of all week-long segments of each course year round with no seasonal constraints. Segmented courses would still include the standard features of conventional courses such as classes, graded examinations, and academic load standards. Short quizzes on each segment with pass/fail grading would provide quality control.

Other nonstandard features of segmented courses include modified versions of the project management tools PERT and CPM, unique statistical techniques for selecting series of two or three local/televised classes for weekly scheduling, nearly unlimited self-pacing, student interest groups, and optimum utilization of the superlearning technique.

The computerized fiber optic school network is Gary Vesperman's own design.

During the winter of 1992, with the backing of the Clark County School District (Las Vegas, Nevada area), Gary Vesperman submitted to the New American Schools Development Corporation (NASDC) an application for a grant of \$11,897,400 to develop a prototype small version of a fiber-optic network of computer-based segmented courses. The NASDC was an off-shoot of President Bush's America 2000 program. Funded mainly by donations from large corporations, the NASDC was a private company chartered to fund the development of radically different schools.

They did not win a contract. There were 685 other competitors for 11 awards. Afterwards they received short descriptions of the winning proposals. None of them appeared to be anywhere as advanced as Gary Vesperman's design. Sometime afterwards, the Las Vegas Review-Journal newspaper had an article that raised the suspicion that one reason for their not winning was that Nevada was not important to President Bush's re-election!

Yet Vesperman has been authoritatively told more than once, although not recently, that no other design is close to his, and may be the only one that has a genuine chance to break the organizational logjam hampering our schools. All the other designs he has ever come across have flaws that his design doesn't have.

In fact a few years ago Vesperman came across an article claiming that educational computer experts have come to a dead end trying to make computers more useful in the schools. The basic systems engineering obstacle, which he believes he has surmounted, is that the answer lies in a completely different, complicated system which can not be arrived at in piecemeal fashion. His conclusion is that there is much more that could be done than just throwing a bunch of PCs into a school and then expect teachers to do some intelligent systems engineering with them.

The proposal (about 180 pages) included a development schedule which was tailored to the requirements as set forth by the NASDC. But Vesperman felt uncomfortable with their schedule. It was just too fast. It would have skipped first spending a year or so doing a few preliminary research projects which would examine the design from different angles. His intention was that since building a full-scale network for a metropolitan area would cost in the neighborhood of \$100,000,000, once the small projects were finished, we would all then have a better understanding of the costs, capabilities, and limitations of the design.

Assuming that equipment costs continued to come down, and that the pilot program worked well, the next step was to expand the pilot network into a prototype full-scale version. The engineering was to be done during the third year of the pilot program. It would then take at least a year to build, and another two years to fully make the conversion from the conventional system in all networked schools.

A cadre of experts would have eventually been built up in the Las Vegas area well-versed in all aspects of engineering and using school networks. A potentially multibillion-dollar business could then be spun off to market, configure, install, and maintain school networks around the world, each network averaging \$100 million.