VSI

Vagary Solutions International Inc.

Prior Intellectual Property

Last update: 23 June 2013;ge Rev 1.01.
SPECIAL NOTE: This section will be updated on routine basis until it is completed.

Introduction:

The following IP is provided as examples of the diverse technical capability and original out of the box thinking of the primary Industrial Physicist at VSI, Mr. David Kelly. The technology represents only a tiny amount of the inventions developed after 2000. There remains a much larger number still kept highly confidential.

The majority of the following IP was never pursued to the issuance of a patent because Mr. Kelly continued work made the technology obsolete or it was too far advanced to be of interest to manufacturers. However it does represent excellent proof of our inventive capability and pedigree. That is why VSI has changed its business plan such that it will only file patent applications after adequate funding is secured, with the special condition that the new IP meets the investor's negotiated preset criteria or the funds are returned.

VSI realizes that only a few investors are able to handle investments that have such significant income potential and market control!

The main website provides a list of the prior IP and links to the appropriate IP websites.

Prior Power Conversion Technologies:

Simplest Power Factor Corrected (PFC) power supply;

Developed 2000-2001

CA2306438 patent represents one of the simplest PFC AC to DC technology with limited regulation that does not require a special PFC control IC. A fully regulated version is represented by application CA2331916 with a detailed report on the technology found on the main website Prior IP page. The fully regulated version is the only converter technology that uses a single switching device in combination with a simple switch mode regulator IC with no special PFC control IC or current monitoring required.

You will find similar technology just becoming available in such parts as Linear Tech LT3798 simple AC/DC Converter with PFC.

Currently Available but not disclosed: is the latest undisclosed version with high efficiency up to 97%, with low cost and parts count, IP yet to be filed.

High Voltage To Low Bi-Direction Voltage Converter;

Developed in 2004-2005

This technology is a universal bi-directional DC to DC, AC to AC, AC to DC and DC to AC and suitable as a DC to AC inverter technology, that requires no electrolytic capacitors and is easily constructed with energy densities >150W per cubic inch. The older and obsolete version of the technology is represented by CA2513599 and PCTCA2006001316. This is a multi-functional technology with a low parts count and able to be adapted to many different functions.

The technology can be used as a base for an all-solid state AC distribution transformer with extremely low idle losses. It was developed for extremely high voltages >10 kV to low voltage conversions such as 28 Vdc for example airborne or undersea applications such as DC power transmission for undersea listening buoy arrays. The technology can be configured for low power such as 10W through to multi-phase >500 kW designs.

This technology was originally developed to convert the high voltage DC output from a proposed electro hydrodynamic generator, which was to be powered from a small steam generator. The electro hydrodynamic generator project was discontinued because it was learned that it could be restricted

technology. The design had developed a method to significantly increase the ion density by a factor >>10 over the traditional approach. The increased ion density has many applications such solid-state ion propulsion for aircraft, high pressure/power ion thruster for space transports or high energy density all solid-state steam to electric power converters.

Engineering samples of 25W and 8kW of the first generation of the power conversion technology was provided to Polarity Inc.. It was later learned from Polarity that they had adapted the technology as a power converter for EESTOR's yet to be demonstrated ESU.

Available is a 3rd generation version of the electric power conversion technology with improved performance, lower cost with higher efficiency; IP yet to be filed. The electro hydrodynamic conversion technology would only be developed by VSI as a commercial technology.

Prior Ultracapacitor & MLCC Technologies:

Failure resistant Ceramic Capacitor Technology:

Filed 13 Sept 2006 CA2560027

This is the first technology to address the ceramic capacitor problematic short-circuit failure mechanism. It is inexpensive and based on proven materials and technology taken from another application. This technology is now obsolete, replaced by VSI's next generation of superior fully self-healing MLCC (Multi-Layer Ceramic Capacitor) electrode technology. Most important the new self-healing electrode structure is 100% compatible with current ceramic capacitor manufacturing processes. This new self-healing electrode structure preserves the capacitor functionality by clearing short circuit faults thus eliminating the high leakage current generated by the older failure resistant technology. This technology represents another Industry First for VSI.

1st Generation Self-Healing Ceramic Polymer Capacitor Technology:

Filed 06 October 2006 CA2562986

This is the first high energy density self-healing ceramic polymer capacitor technology that fully optimized the dielectric constant and break down voltage of dielectrics comprising a mixture of ceramic and polymer materials. It is the only technology that provides the highest dielectric constant for a given amount of ceramic material. This is the first generation of the technology which was replaced by the second generation and even further made obsolete by the current 3rd + 4th generations of VSI's high energy density ultracapacitor technologies. To date the unique dielectric enhancement process has been verified by 3 independent organizations. This was another Industry First for the inventor.

From limited public disclosures this appears to be most likely the technology that EESTOR has used to replace its original design. This assumption is based on the high leakage currents demonstrated by the 2013 press releases. The leakage current is a unique feature of the obsolete VSI technology. It is very flattering that EESTOR appears to have abandoned their technology for VSI's! There is no expectation that they will figure out the 95% of the technology that remains undisclosed.

Two Miscellaneous Capacitor Manufacturing Technologies;

Primarily for fabrication of ceramic-polymer type of capacitors explained by CA2619954 (14-01-2008) & CA2634621 (08-06-2008)

These are secondary patent applications, which provide methods of resolving a number of material problems with the manufacture of ceramic-polymer capacitors.

2nd Generation Self-Healing Ceramic Polymer Capacitor Manufacturing Technology:

Filed 11-09-2008 and represented by US Provisional Application 61/096,531, CA2639524, PCT/CA2009/001263 and US National Phase Application12919727 and India 2412-CHENP-2011
This is the next generation of technology that increases the energy density by up to two times, and decreased the cost of manufacture through development of large scale transfer printing process. It uses a multi layer self-healing electrode structure and can be fabricated using dielectrics made from a ceramic-

polymer or polymer-polymer. This 2nd generation technology has been made obsolete by VSI's 3rd and 4th generation of the technology (at this time kept highly confidential). These later 2 technologies were developed to significantly increase the manufacturing throughput and represents the lowest, high energy density materials.

Independent 3rd party verification of aspects of the technology was done in 2008 by unauthorized research by Vladimir Kristic @ Queen's University, Kingston, Ontario, Canada,; Professional Testing in Round Rock Texas, and it appears that EESTOR may have changed from its capacitor technology to that used by VSI.

Samples:

Two Companies were provided samples of the ceramic-polymer ultracapacitor technology. The first was e Siemens Venture Capital Group in Germany who was sent one in response to my enquiry to them with an information package in the spring of 2008. The second was provided to a Russian company that ONEXIM Group referred 1st Lighten the Load Inc. to. A sample of the ultracapacitor technology that included a demonstration of the large format transfer printing process was provided to Mr. Vladimir Tumanov, a leading Russian ultracapacitor expert.

Other Technologies:

Transmission Line Storage System: Filed 02-01-2008 CA2615401

This technology presented the method wherein high energy density high voltage ultra capacitors are used to store and deliver energy directly to a DC power transmission system. Since the patent was filed similar systems have been attempted in local low voltage distribution using lithium batteries by Saft in Europe.

UPED (Universal Personal Electronic Device);

Developed 20 November 2008 CA2645642

This IP demonstrates the type of electronic products that could be manufactured with a significant variation of the new printing technology developed for the manufacture of the ceramic-polymer capacitor (CA2639524). The resultant electronic products would be a fraction of their current size and approximately 30% less expensive and nearly eliminate the large amount of manual labor used by current manufacturing process. The IP only discloses a very small amount of the technology with the vast majority still remains as closely guarded secret.

The IP was filed late in 2008 well before the Apple IPhone became popular and represents as an excellent guide to the market trend in the electronics industry. Currently there are 3 organizations working on what I term sub products of the technology. This supports the claim that VSI's technology is leading and some of the most copied. The most noted is the disclosure of Black Berry developing the next commercial product that would obsolete the IPad. It will be necessary to wait to see their next product is based on the smart phone and a separate linked flat display as disclosed in the UPED application.

A second technology of note now in trial testing stage is Goggle Glasses. Though the UPED IP was publicly disclosed at the time of its application and I had met with Goggle in their California headquarters it remains to be seen how their product will develop. Goggle had been approached on 2 occasions the first was with the new printed electronics manufacturing technology, which was the original basis of the UPED patent application. The second communication and visit to Goggle's California head office was for the new energy storage technology.

Finally I read recently that a company was completing the development of an earpiece with similar capabilities to one described in the UPED disclosure. I am looking in my files for the company's press release.

The UPED type of printed electronics manufacturing technology is COMPLETELY different from that or more traditional approaches. The UPED printed electronics technology is based on that developed for the manufacture of the high energy density ultracapacitor. The UPED application is only a very small

disclosure and represents a major technological leap. The manufacturing technology was developed over the last 7 years and involved the development of a large number of unique trade secrets and break troughs. Though a number of companies are working on their own version it is very unlikely they will be able to complete it. The reality as all competent investors and management team knows, is that a good technical group can be able to copy a completed technology but it is impossible for such a team to complete a partially disclosed technology. They are good at being copycats making small improvements but not capable of technological break thorough or technological leaps. If they were then they would not be copying the competition or other inventors but leading the industry.

It remains to be seen how much impact VSI's UPED disclosure has on the strength of the IP protecting products developed later by other companies. This means it has to be taken into consideration to similar IP filed after it. This applied even though it was abandoned. As another note: a number of cell phone manufacturing companies were made aware of the technology shortly after the application. In time it will be learned whether their not acquiring our technology was a significant mistake.

In summary VSI remains open to any group that wishes to put together a joint venture to complete the unique manufacturing technology.

Smart B-Directional Electric Energy Storage And Multifunction Power Conversion System

Filed 21 February 2011 CA2732592 with corrections filed 31 March 2011 CA2736219.

The patent application is currently active in Canada. The application only represents part of the technology and may represent as a work around to a large number of home and industry energy management patents. Still remaining secret is the advanced power conversion technology and methodology for making the technology able to provide grid support nearly 100% hacker proof. There is an additional piece of secret IP that is capable of providing electric Utilities free stabilization of the electric grid demand. This later IP, yet to be filed is viewed as critical to the long-term stability of the electric grid.

Failure resistant Electric Power Storage And Distribution

Filed 01 April 2011 CA2736630

This pending patent application discloses the best and safest method of distribution and storing high voltage DC power. The application further discloses how to safely interconnect electrical storage systems of various voltages and how such systems would be safely applied to for example commercial vehicles. The disclosure only represents a portion of the VSI technology with the remaining part a closely guarded secret

Management Assistance Program To Resolve Stress, Sleep And Fatigue Based Presenteeism:

Developed 2007-2008 CA2578855 (15-02-2007) & CA2621318 (14-02-2008).

It was originally planned to protect this technology with a combination of patents and Copyrights. It was decided to change the protection to copyright only and the patent applications serve as an overview of the copyrighted material.

The product is based on the life's work of Donna Lee Kelly BHEC; MA; RCC; Cert Con Res; and adapted to the business world. It is the first product that solves the worker presenteeism, often referred to as employee engagement issue, worker stress, Psychologically Healthy Workplace etc.. The product is protected by a number of trade secrets and copyrights. It is a simple and easy program to implement. It improves worker productivity and produces a positive work environment. It improves employee communication skills and anger issues.