Radiation and Environmental Surveys

The Planetary Association for Clean Energy, Inc.
La Société planétaire pour l'assainissement de l'énergie, inc.
100 Bronson Avenue / Suite 1001, OTTAWA, Ontario K1R 6G8
(613) 236-6265 fax: (613) 235-5876

paceincnet@gmail.com http://pacenet.homestead.com

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OPINION

ASSESSMENT:

2018 Research & Development Reports:

Calculation of the strength and intensity of the electromagnetic field in the interaction of electromagnetic radiation at a frequency of 6 GHz (WiFi 5G) with an Aires C20S5G resonator (microprocessor), which is used in the Aires Crystal (2019 model)

Calculation of the strength and intensity of the electromagnetic field in the interaction of electromagnetic radiation at a frequency of 28 GHz (WiFi 5G) with an Aires C20S5G resonator (microprocessor), which is used in the Aires Crystal (2019 model)

Project manager:
I. Serov
Responsible researcher:
K. Korshunov
Researchers:
I. Soltovskaya
T. Shamko
Consultants:
Prof. Dr. of Technical Sciences A. Kopyltsov
Prof. Department of Physics Dr. A. Jukna

Prepared for the submitters:

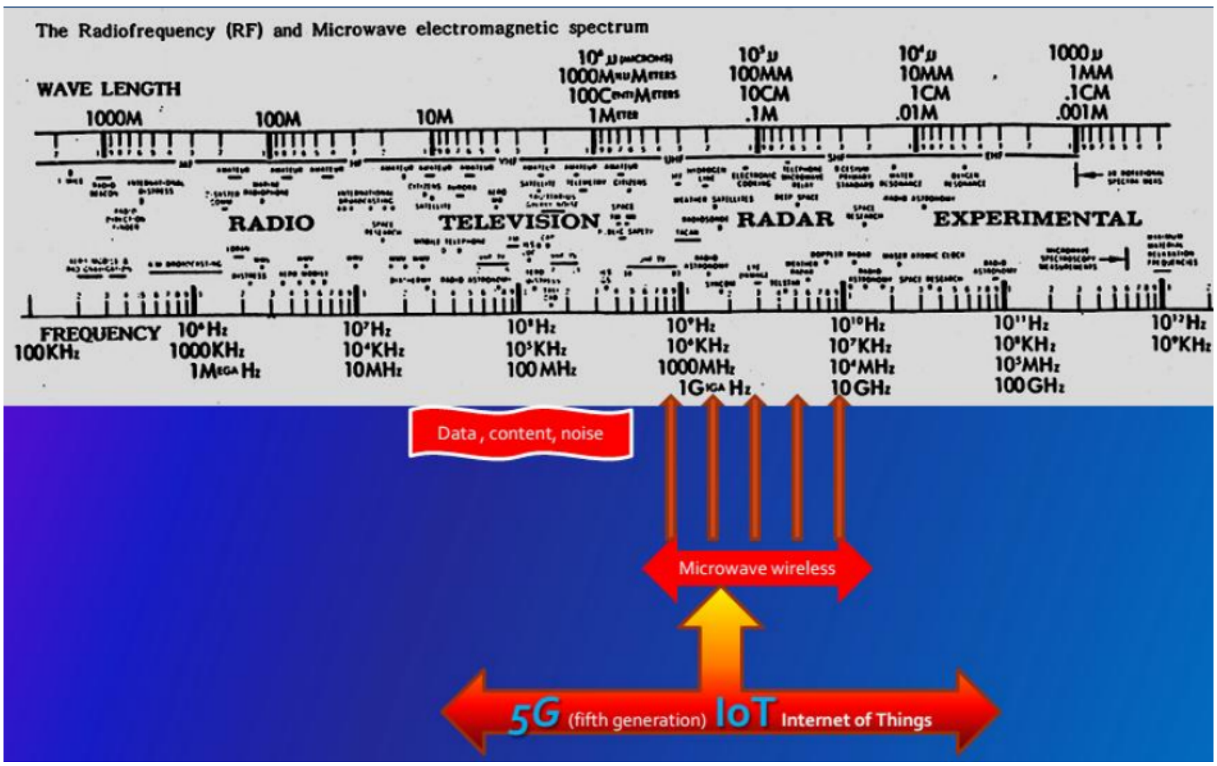
American Aires, Inc.
400 Applewood Crescent, Unit 100, Vaughan, Ontario, Canada L4K 0C3

Web: www.AiresTech.com / Email: info@airestech.com

The purpose of these two 2018 research and development reports, managed by **Igor Serov**, is to apply advanced and inclusive-factoring modeling techniques to understand coupling associated with a version of the micro-electro-mechanical systems (MEMS) technology ***Aires Crystal C20S5G*** microprocessor resonator intended to perform within the **5G *(Fifth Generation)*** microwave wireless signaling environment.

The two selected frequency band sources for modeling are 6 and 28 Gigahertz (GHz). These are appropriate sampling of the additions for the 5G inter-operability system, as is indicated in the graph below, which describes the world-wide "agreed frequency ranges to study"

Note that the 5G "Internet of Things" encompasses inter-operability ranging from about 40 Megahertz to about 90 GHz, in which 6 GHz is a Wi-Fi bandwidth of considerable public personal-use significance:



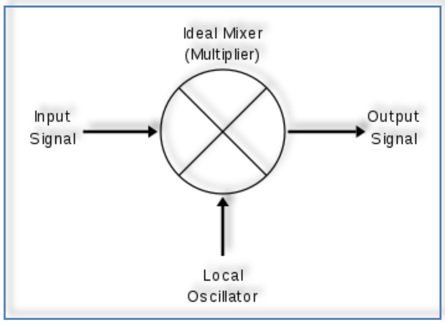
The inclusion of additional factors of hyper-complexity, in describing factors such as the time domain, heterodyne (electric and power coupling with lower frequency bands), bi-phasic (counter-resonance) response, superposition, radial fractalization steps in topological circuitry, maximum potential (voltage), and power (amplitude) is not only descriptive but a requirement in order to appreciate the "how and why" this technology has the numerous biological effects observed by scientists when such ***Aires*** designs are exposed to external (ambient) microwave emissions. It also allow the determination of the highest potential resulting from 5G affects.

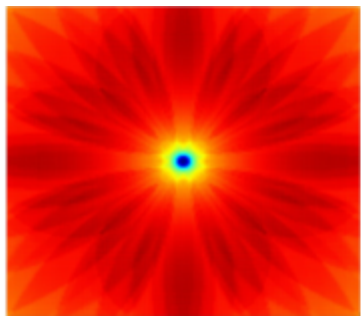
The end-result computer simulation, using US federally-supported ***MathLab*** *R2015b* software, illustrates the dynamic interaction of this microprocessor with a 28 GHz router signal, in time, see: https://yadi.sk/i/9C-9TmISzu87bQ.

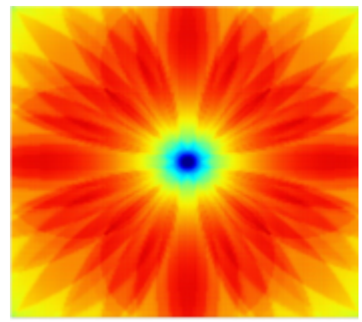
The physical model upon which the research reports are based is sound and consistent with the based available understanding of superposition in order to describe kinematics of amplitudes of different possibilities and many changes (even infinite) over time, using ***Hamiltonian*** equation. Remarkably, such analysis leads, as is the case of the Aires design, to diffusion, with a certain "tuning fork, side-way (longitudinal) rate of change, as is clearly described in the above *YouTube* link. This is truly a superposition principle from microscopic into real-world, macroscopic things.[1]

Another 6 GHz study was able to reach a similar effect for a "quantum microphone" in 2010, by **Aaron O'Connell**, at the **University of California**, **Santa Barbara**[2] in which transverse waves developed into longitudinal ones (and thereby, with pickup, as audio noise that was interpreted as quantum mechanical vibration become larger scale).

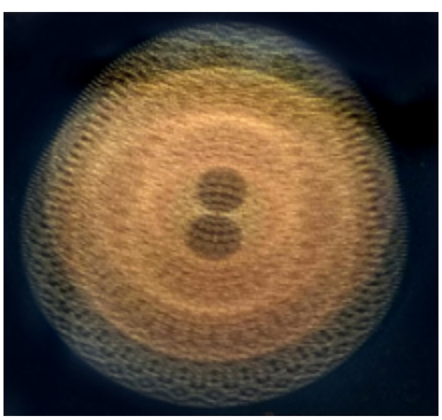
The principle of the Aires devices is like a heterodyne signal processing frequency mixer (first indicated by the Canadian engineer, **Reginald Fessenden**), whereby external energy enters into a resonant circuit and then "rings" at desired, or some pre-determined transmission frequency (left). In the case of ***Aires*** design, a series of encircled radial fractal antennas "ring" as in the 2 coloured modeling images (right). Such ringing decays into a very wide band of emissions (sometimes considered as "noise" that inherently carries information). In the case of ***Aires*** technology, the output is higher-level symmetrically harmonized, and coherency-seeking.

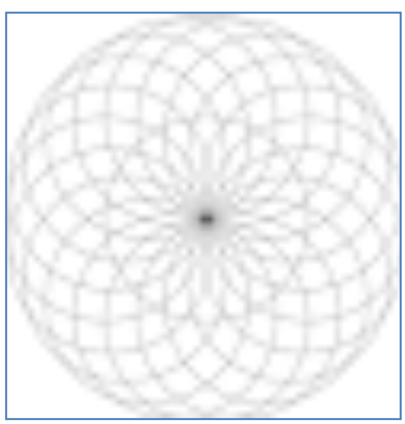


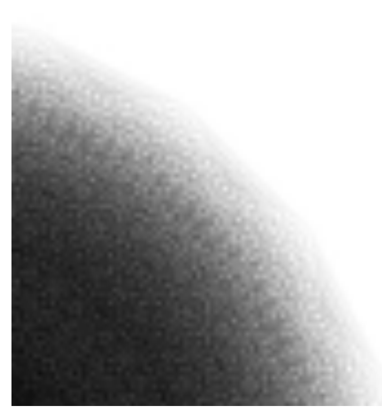




Specifically, the ***Aires*** micro-processor interactive mixing with EMF pollution dynamics results in a hyper-spherical diffusion, as predicted by classical physics, (shown in this hologram photo of a surface wave effect, left). With a topology of 20 fractalization axes, 5 fractalization levels the basic module is depicted (centre). For the C20S5G design, over 4 million (0.2 *micro*meter wide, 0.6 *micro*meter deep) slit resonators are responsible for boundary-layer / laminar dynamics. Note arc fragment of this Aires wafer's re-organizing pattern (right).

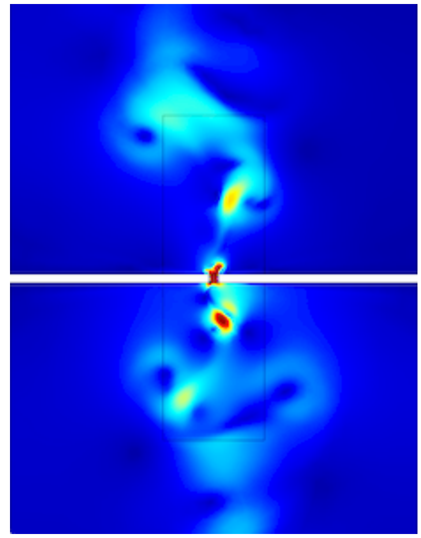






[1] Leggett, A. J.. **The superposition principle in macroscopic systems**. pp. 28–40. ***Quantum Concepts of Space and Time***. Edited by R. Penrose and C.J. Isham. 1986.
[2] Castelvecchi, Davide. **Macro-Weirdness:"Quantum Microphone" Puts Naked-Eye Object in 2 Places at Once: A new device tests the limits of Schrödinger's cat**. ***Scientific American***. 2010. http://www.scientificamerican.com/article/quantum-microphone/

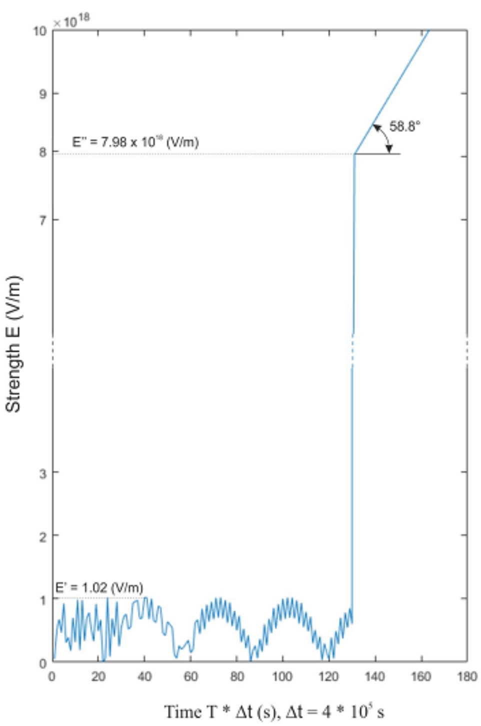
Such mechanical-like longitudinal wave diffusion, in distinction with ordinarily emitted electromagnetic waves has strong penetration capability into living tissue; it should be even powerful enough to affect weak hydrogen bonds. Noticeably, the stable diffusion includes swirls, which have supplementary physical properties of great interest scientifically as well as for potentially advanced technological applications. Some of the documented harmonizing effects have been already reported in our statements of opinion.



Slit (and perforation) resonators have applications acoustics as mufflers, noise suppression in jet engines, in grilles and meshes in front of, for example, miniature speakers in cellphones, three-dimensional, multi-functioning ***through-silicon-vias*** (TSV) integration in emerging 5G communications systems and highly efficient and stable micro-strip 5G antennas.

The image to the right indicates a typical dispersion pattern associated with a slit resonator. Note the lack of symmetry compared to the ***Aires*** technique – due to the vortex shedding during coupling, rather than correlation and coherence with the ***C20S5G*** unit.

The ***Aires*** technology stands aside as unique and advanced in this domain. The research indicates remarkable advances in efficiency and stability.



The reported simulation results demonstrate a significant property: a remarkable increase in voltage simulated from the centre of the module in successive stages.

The ***Aires*** resonator simulated incident ***5G*** waves' reflection special response (in voltage) - with several phases over time - results in a 10-fold magnification (see graph, left). It builds-up successively more and more coherent and less random oscillations. Such intensification is a factor in conveying meaningful information to living systems after being processed through the slit resonator's fractal pattern. The higher the frequency emitted by ***5G***, the stronger is the ***Aires*** harmonizing response[3].

This effect is consistent with superposition. It is also confirms observations by **Nikola Tesla** of special effects with his extra tertiary coil placed on top of ***Tesla Coil*** – and in his other patented innovations [4].

Such physical outcomes can result in "immaterial" spherical, linearly cylindrical waves whereby the electrical component heterodynes multi-dimensionally with "zero-point-energy"[5] as described by Nobelists **Albert Einstein**, **Otto Stern**. Further work along this phenomenon has been made by **Hendrik Casimir**, leading to application in ***Micro electromechanical systems*** *(MEMS)* as well as the **Aires** resonator technology.

[3] **Max Planck**'s formula: energy = (h) frequency. As the frequency of 5G emissions increases, so does proportionally it's power.
[4]**Nikola Tesla** stated, "Electricity and rotation are related as cause and consequence". As the frequency changes from the superposition and heterodyne results in an exchange of angular momentum between 2 waves, hence it can be argued that multi-dimensional tapping increases the electrical component.
[5] Every cubic centimeter of space contains 3.8 kWh of hidden energy.

If this argument holds, the ***Aires*** technology is effectively tapping multi-dimensional resources.

Note that the 2sub-wave result from the ***Aires*** C20S5G resonator interactions overlap into the 62.5 GHz and 50 GHz, which propel into other frequency ranges – thus fully compensating for the breadth of 5G IoT (Internet of Things) spectrum reach.

The authors of the research raise the question whether the resonator, due to known superposition physics, might self-regulate as it processes external electromagnetic signals to the point of modifying its structure on a quantum level. This is an interesting consideration, and we submit that such hypothesis merits further X-ray structural analysis of the module.

Of interest is that the ***Aires technology*** may have interesting optical and computing applications due to its fast pattern interactions and standing wave – signaling - excitation in real-time conditions.

It should be observed that for the purposes of this simulation exercise, the incident radiation was 50 V/m (with a conversion equivalence of about 666 $\mu W/cm^2$), as may expected at near field of certain devices. However, the level of usual human exposure levels in Canada ranges from 0.6 to about 6 V/m (or 1 to 10 to $\mu W/cm^2$), and the ***European Council Resolution 1812 [2011***] recommends 0.1 $\mu W/cm^2$. It may be worthwhile to verify if the simulation of the resonator's performance at the lower incident power ranges still exhibits the desirable superposition leading to harmonizing characteristics. It cannot be ignored that *in vivo* experiences with Aires resonator modules in other research reports has indicated such processing, but it may be interesting to examine whether further enhancement of the module's slitting might produce superior reflection patterns even for lower and typical ambient 5G levels, which may be at about 5 – 10 V/m.

We recognize that the simulation described in the reports is credible and its mathematical factoring is in line with classical superposition physics.

It indicates the exceptional efficiency of the ***Aires Crystal C20S5G*** microprocessor resonator interaction with **5G** technology emissions. The interaction results in coherent, harmonizing signaling and certain configurations associated with classical superposition. These account the reported causality of biological benefits. They also suggest extraordinary opportunities in optics and computing.

Dr. A. Michrowski