A paper from the XVIII International Scientific Symposium "REORGANIZATION OF NATURAL SCIENCES AND ENERGETICS"-2009 (V.N. Shikhirin, Chairman of Organizing Committee), specially reworked for the 6-the International Scientific-Practical Conference "Tore Technologies", Irkutsk State University, 29 October, 2009.

VTORTEX, OR A "LIFE CELL", AS A SELF-SUPPORTED SUPERIOR FORM OF FLUID MEDIUM EXISTING IN NATURE OF MEGA-, MACRO-, MICRO- AND NANOWORLDS

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"This paper was written "at one go", therefore it may contain minor non-critical errors, easily correctable and described with respective comments in future deliverables of the author".

"... It should be noted that despite such changes vortex threads (including VTortex, a comment of the author) retain their uniqueness in full – they do not merge and remain altogether completely impermeable for each other, reveal apparent forces of mutual attraction, repulsion, etc., - in a word, behave as if they represent a special form of flexible matter different from the surrounding (not rotating) liquid rather than a special form of the given liquid motion..." Jacob Frenkel

"...A physical phenomenon (VTortex, the author's remark) - ... is a principle operating utterly independent of any physical medium..." Buckminster Fuller

1. VTortex, a derivative from Vortex, Torus, Tore, Tori, Toroid, Tornado, Torsion etc, is a selfsupported toroidal eversible/enveloping structure being a source of energy and information at the same time.

2. The field of physics and mathematics that studies functional features of a static torus (tore) and a selfeversible/enveloping (dynamic) torus (VTortex) is TorusmetryTM and VTortexmetryTM, respectively.

A VTortex, or a "Life Cell" is a self-supported superior form a 3-phase (the frame, the shell and the fluid medium under overpressure) [1,2] state in which fluid medium exists in Nature of mega-, macro-, microand nanoworlds; it is activated by structurization energy and information and functions independent of its environment ignoring all conventional physics laws.

The active VTortex (Tore) generates:

- **energy-producing** fields such as power, temperature , electromagnetic, torsion, color, acoustic, etc. fields;
- information-producing fields such as numbers 1, 2, 3, 4, 5, 7, ...; radicands $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$, $\sqrt{7}$, $\sqrt{10}$; Pi_{Torus}, Pi_{Sphere}, Pi_{Knot}; 7D space;
- Fibonacci numbers and the Phyllotaxis process developing according to the structure of the torus cylindrical form;
- real atoms of chemical elements (chemistry and alchemy), galaxies, tornadoes as well as their tight packs, or "molecules": interacting galaxies and tornadoes;
- so far undiscovered real (not virtual or hypothetic) elementary particles. In particular, an electron is a double torus knot structuring the VTortex-atom surface, etc.

The most prominent energy-information (information-energy) features of the *VTortex (an elastic toroid)* (*Fig. 1) are*:

- duplication of a distance covered by the central body located in the central part of a torus/toroid against a distance covered by the latter when moving by eversion/envelopnment;
- duplication of the central body motion velocity against the velocity of the torus/toroid as it moves forward by eversion/envelopment [3,4].

Figure 1 is taken from [5] and then reworked by the author with the purpose of explaining these phenomena.

As a consequence of the above processes:

- the material tension at the edges of the elastic toroid is two times less than at its periphery;
- the tense central part of the elastic toroid acts as an internal bracing which halves longitudinal loads onto the toroidal shell material caused by internal expansion of the working/fluid medium under overpressure, etc.
- *the eversibility/enveloping ability* of a thin elastic composite material of the toroidal shell with minimum energy consumption is its principal multinomial integral property described by an empirical factor, the *Shikhirin constant*, [6] that expresses a certain interrelation between:
- *elasticity* resilient tensile deformation by 150-200%;
- *flexibility* available bending deformation to a radius close to the material thickness;
- *softness* folding capability of the material functioning within resilience limits, with the minimum bending radius in a fold not more than its thickness times ten;
- rheological properties of the working/fluid medium and excessive/"normal" pressure value;
- VTortex geometrical parameters and certain proportions between them;
- the value of a force needed for initiating an eversion/envelopment process, etc.



Fig. 1 The most important functional natural characteristic of the VTortex

Another just as important natural functional feature of the VTortex is its ability to turn inside out, i.e. conversion of a torus into a toroid and vice versa (Fig.2).

Fig. 2 shows a simulated natural process of the toroid eversion, i.e. its conversion to an open torus (steps $1 \rightarrow 9$), and vice versa, eversion of the open torus, i.e. its conversion to a toroid (steps $9 \rightarrow 1$).

Given below is an extract from one of course papers written by Dr. Valeriy Shikhirin while he was taking a course of English at Oakton Community College, Skokie and Des Plaines, Chicago Area, August 2002 – December 2003.



Fig. 2. VTortex inversion in Nature

Types VTortexes

Fig. 3 shows:

- "free" (single) subsiding VTortexes: closed (1) and open (2);
- a "free" self-supported VTortex with torus knot lines twisted in its central part (a mill reactor for elementary parts production) and structuring its surface (3) serves, for example, as the basis of a galaxy, a tornado, an atom, etc. (<u>http://youtube.com/user/elastoneering</u>, part 3-5),
- a degenerated VTortex (4) being, for instance, the basis of an UFO driver;
- anti-degenerated VTortex (5) such as the one Schauberger's power system is based on;
- tightly packed VTortexes (6) like Benard cells on Sun's surface or Coutte-Shikhirin flows structuring Earth's atmosphere;
- "free" single VTortexes that have rolls of torus knot family lines grouped in its central part near the implosive end;
- tightly packed VTortexes having rolls of torus knot family lines grouped in its central part near the explosive edge.
- functional characteristics of natural VTortexes of nano-, micro, macro- and megaworlds are identical.



Fig. 3 Types of VTortexes

Functional Characteristics of Engineered and Natural VTortexes

As the basic component of a torus mechanism, namely a torus-like soft/elastic shell filled with fluid medium under overpressure, the VTortex transforms:

- the energy of the working fluid medium into forward or back-and-forth movement;
- rotary movement into forward movement, etc.;
- mechanical work into the internal energy of the working fluid medium, etc.
- Moreover, it possesses certain ambivalence, i.e. it can be simultaneously
- a "free" energy source secured to any surface, e.g. to the ground (to keep from flowing away), and
- the driver of a transport vehicle unsecured to the ground but secured to its mainframe/platform.

Both a single VTortex and a VTortex integrated into a tightly pack may be a "Life Cell" (Fig.4, Table 1).



Fig. 4. A Life Cell.

Table 1

Examples	Galaxy	Tornado	Atom
"Elementary	Stars, planets,	Raindrops,	Real natural elementary particles (to be
particles" as	comets	snow,	discovered)
regular and semi-		hailstones	
regular			
polyhedrons			
Double torus knot	$\rightarrow (3n_p,2)^{\rightarrow}$	$\rightarrow (3n_p,5)^{\rightarrow}$	Part of knot 2($\{n_p + [(n_p - 1)/2]\}$; $3n_q$),
	$(3n_p,2)_{\leftarrow}$	$(3n_p,5)_{\leftarrow}$	$2(2\{n_p + [(n_p - 1)/2]\}; 3n_q);$
			$2(3n_p; \{n_q + [(n_q - 1)/2]\})$
Tight pack	"molecule"	"molecule"	Molecule

Fig. 4 left shows a "photographic representation" of a process including VTortex movement and formation by its central part (acting as a rolling mill) of elementary particles (Rolling Mill Reactor). Such processes occurring in mega-, macro-, mini- and nanoworlds are strikingly identical.

In <u>http://www.cymaticsource.com/cymaticsbook.html</u> (to be clicked) or in [*Hans Jenny (1904-1972). CYMATICS*. A Study of Wave *Phenomena and Vibration, 2001*] there are pictures showing the effect of an artificial "powder" VTortex knotted by a torus knot (3.2) like in case of a galaxy.

There one can clearly see "powder" dodecahedrons formed by the VTortex central part acting as a helical rolling mill to produce elementary particles.

The VTortex generates (due to structurization energy) the following energy fields (Fig. 5) [7, 8]:

- $F_{Po,To}$ Surplus Pressure Field, P_{o} , with its temperature, T_{o} , is created by a working fluid medium contained in a toroidal shell under overpressure. The field lines of force are formed beginning from the overpressure center located in the torus string (circumference) and then going along side edges of Shikhirin cells⁷ to nodes that link the bases of at least 7 (or multiple of 7) Shikhirin cells⁷ (colors) and form the torus periphery. See [9] for details.
- $F_{P,T}$ Vacuum Field, P, with its temperature, T (the torus head), is a funnel formed by sucking in the fluid medium from external space. The field force lines directed from the cone base to the cone top are generated in the form of spirals.
- $F_{P+,T+}$ High Pressure Field, P^+ , with its temperature T (the torus tail), is a funnel formed by pushingout/evacuation of the fluid medium into external space. The field force lines directed from the cone top to its base are generated in the form of spirals;
- F_E Electric (static) Field, E⁺ (the torus tail) and E⁻ (the torus head), represents the surface of this torus. The field force lines repeat the edges of the Shikhirin cells⁷ bases rotating respective their longitudinal axes.
- F_M Magnetic Field, M⁺ (the torus tail) and M⁻ (the torus head), represents the torus surface. The field force lines repeat the lines of a torus knot that structures the surface of this torus.
- F_{Tr} Torsion Field, T⁺(the torus tail) and T⁻ (the torus head), represents the surface of this torus. The field force lines repeat the lines of the torus knot structuring the torus surface, with the lines rotating respective their longitudinal axes, etc.

The VTortex head (P^{-} , T^{-} - Vacuum Cone) is directed towards the Vacuum Medium (the Aether) [10,1. Since July, 2009, these papers have been included into the «The Estate of R. Buckminster Fuller", Santa Barbara, California, by John Ferry, the Estate Keeper].

Now imagine how all these fields (the formulas are very simple) can be used to build the so-called "universal field".

Two forces mutually supporting each other are involved in the forward movement of an enveloping VTortex (rolling along an invisible virtual string - the longitudinal axis) (Fig. 4):

1-st Force, F_G , - *fall, gravitation* - is the vacuum in front of the implosive end; by this force created by the VTortex itself the latter is drawn into the vacuum medium (the Aether) surrounding it, similar to the Slippery Vermicelli Effect when a slippery vermicelli piece is drawn into the mouth;

2-nd Force, F_L - *rise*, *levitation* - squeezing the explosive end of the VTortex by the vacuum medium (Aether) at the peripheral end similar to the Plum Bonelet Effect, according to Schauberger. We may say the space "shuts up" (closes) behind the explosive end of the VTortex pushing it forward and assisting the 1-st Force.

The structurization energy, E_s , rushes from the external medium to provide support (self-support) of this standard state (i.e. VTortex) in Nature (galaxies, tornadoes).

Its forward movement (drawing in, sucking in) in the medium (Aether - Plato Channels) [1] at integral pressure P_A and temperature T_A is directed from the high pressure zone to the vacuum zone.

In other words, a VTortex moves with the enveloping end forward as if "falling in"/being drawn in/ sucked by invisible vacuum.

This natural effect has already been "deceived" by designers of UFO drivers, namely: by controlling the difference between high pressure (P^+, T^+) and vacuum (P, T) values it is possible to move in any direction.

The above type of motion is referred to as "UnSupported" or "SelfSupported" Motion.



Fig.5 The structure of energy fields formed by a VTortex. Models of Shikhirin cells⁷ were made by Tatyana Shikhirina.

Plasmoids

In the early nineties the author (as the owner of Graderika LLC, Zelenograd, Russia) headed a number of projects related to industrial promotion of technologies developed by Alexander Chernetskiy (...-1991)):

- "Fire Knife" fast "sowing" of massive metal constructions such as ships;
- welding of unwelding materials such as different metals, wood with iron, etc.;
- obtaining, for instance, the amorphous state of copper from its crystalline state;
- hydrocarbon fuel activation [under management of O. Koltun, Deputy Head of Energy and Energy Saving Department of Moscow Government; K. Rieder, Director of R&D Institute "MosGasNiiProject"; carried out mainly by P. Sergeyev of the Radio-Electronics Academy after Plekhanov; V. Skorobogatov, a "clever fingers" specialist; with V. Shikhirin as the scientific supervisor. The results were summarized in the paper "Development of Technical Means for Hydrogen Fuel Activation and Combustion Materials Treatment". 3-rd congress of HVAC, Heat Supply and Construction Thermal Physics Engineers". Proceedings, Moscow, Sept. 22-23, 1993, pp.76-77];
- "Plasmoids" and "Signatures" 'flying' over a man's head or any other object or area.

The basis for the above projects was "loosening" of the material structure with the purpose of creation of an unstable short-lived phase transfer process and simultaneous introduction of another material structure elements through Plato Channels.

The last project **"Plasmoids and Signatures"** is interesting in that formation of natural plasmoids is possible only in the presence of a moving working fluid medium in which meanders and, hence, VTortexes are generated thanks to the curvilinear elastic/soft structure of channels.

The human brain is a giant accumulation of vessels/tracks/channels through which energy-information flows are moving in both the forward and reverse directions (A Bundle⁴ [1]).

As a result of intensive brain work (irrespective of a type of mental activity though "aspects" of this activity can be identified) both liquid and gas *"information-saturated*" VTortexes are formed in meanders of these flows.

Under certain conditions (lifting force, levitation) gas VTortexes get detached from the flow and begin to glide (like a soap bubble, balloon, protuberance) in the surrounding space.

With a certain backlight (by a man or an instrument), they are sometimes seen with a naked eye, become "developed", i.e. visible.

Since a plasmoid is a VTortex, it has all its functional specifics including energy-information features (self-support, torus knots, etc.).

In other words, it carries the energy and the information that it "copied" from the human brain.

Where will it fly? Who/what will it link up with? How will it communicate energy and information to other similar structures? Perhaps, according to vortex (VTortex) interaction laws [10], plasmoids can be integrated into a tight pack. What is it? Real intelligence outside a human body? Eternal information storage? It does not seem unlikely that human "soles" are a tight plasmoid pack (a molecule) integrating individual plasmoids (atoms).

Moreover, by their appearance "signatures" (mobile structures that appear during camera shooting of an object under investigation [11] in surrounding dodecahedron space) look like lightnings moving along Plato Channels (Fig. 6)

The author took part in such experiments many times.

The difference is that a lightning is sort of a "snapshot" while "signatures" refer to a serene floating state of the environment, i.e. a tight pack of "floating" dodecahedrons.

In other words, "signatures" and lightnings are natural instruments "to see" the dodecahedron structure of space around us and to use energy-information principles for Man to create a variety of technical designs under conditions of total climate changing (cooling) and anthropogenic environment pollution.

There is only one solution to the above: emigration to another planet fit for life (unfortunately, not in our Sun system) [13], which is a huge task for survival of Mankind solved once by our ancestors.



Fig. 6. Signatures (left) and lightnings (right) as identifiers of Fuller's 4D Space around us.

Double Torus Knot

The Torus Family Knots [7] have the following physical meaning:

- direction of "7 colors" formation;
- "cracks-holes⁺" along a double knot (3.5) line which are formed at the periphery near the VTortex explosive end provoke the exit of the fluid medium under overpressure into space from its shell (shell blowing-off) (Fig.7, right), hence initiating a process of subsequent disintegration of the VTortex, e.g. a tornado: (3.5)→ (3.4) → (3.3) → (3.2) → (3.1) (Fig. 8);

"cracks-holes" along a double knot (3.5) line are formed at the VTortex implosive end; through them the fluid medium is sucked in from the environment (Fig. 7, left) pumping up the VTortex shell (the Law of Bloating) [2] and thereby initiating a process of development of a VTortex structure, e.g. a tornado: $(3.1) \rightarrow (3.2) \rightarrow (3.3) \rightarrow (3.4) \rightarrow (3.5)$ (Fig. 8);

In this situation positive *knot jumps/transfers occur – an energy-information state is changed (energy and information quantity increases),* i.e. torus knot (3.1) is changed into torus knot (3.2); (3.2) into (3.3); (3.3) into (3.4); (3.4) into (3.5), respectively; a new loop around the VTortex meridian appears with seven Shikhirin cells⁷ "tied" to it.

And, oppositely, VTortex destructuring gives rise to *negative jumps/transfers* - *the energy-information state is changed (energy and information quantity decreases);* in other words, torus knot (3.5) is changed into torus knot (3.4), etc., - one loop around the VTortex meridian with seven Shikhirin cells⁷ "tied" to it is gone.

The knot line of torus knots (3.1), (3.2), (3.4), (3.5) is a continuous line, whereas torus knot (3.3) consists of three independent torus knot rings (1.1).

To put it in another way, any torus knot that has a multiple of three number of "branches/rolls" "consists" of independent torus knots (1.1). For instance, if the number of "branches/rolls" is 900, i.e. this is torus knot (3.900), then such a torus knot exists as 900X3 = 2700 torus knots/rings (1.1).

Anyway, every time a new loop or a new ring appears or disappears the torus knot line **is broken** to initiate the torus knot's transformation into a new energy-information state. This process is characteristic of the mega-, macro-, micro- and nano-world VTortex,

Incidentally, the sum of 2 numbers between multiples of 3 is always a multiple of 3, e.g. 1+2, 4+5, 7+8, 10+11 ... or n-the sum = 3(2n-1).

- energy-information interaction of VTortexes (atoms) in the tight pack is necessary for creation of a more stable energy-information group state (a molecule), etc.



Fig. 7. To the right is a tornado's footprint on the earth, which shows the tornado's head sucking external fluid medium together with debris into its shell; the middle view shows the principle of ejection by the tornado's tail of the fluid medium into space out of its shell. The picture was taken from [12] and reworked by the author.



Fig. 8. Tornado structurization and destructuring

Physical meaning and basic functional features of the double torus knot. In his earlier papers, e.g. in [1], the author analyzed only one group of torus knots, i.e. half of the **Torus Knot Family** involved into the torus surface structuring.

In [9] the author filled in the gap and obtained thereby a full picture of the Torus Knot Family, namely the **Double Torus Knot family**.

Here we are considering the functional specifics of a **double torus knot** in terms of its natural properties, namely: any torus knot that structures the surface of a torus is a double torus knot (Fig. 9) having a specific appearance – a double logarithmic spiral (*<u>http://youtube.com/user/elastoneering</u>, part 6,7*)

Moreover, in the author's opinion, it is a real natural electron (Fig.10), which is not yet discovered but declared (pegged, fixed) by the author today.



Fig. 9. A double torus knot and a double logarithmic spiral by an example of the knot 3.1 (top); and a torus knot and a logarithmic spiral by an example of the knot 3.2 (bottom). The difference is significant.



Fig. 10. The electron as a double torus knot. An example of a closed torus knotted by the knot (3.1)

The upper left part of Fig. 10 shows:

- formation and effect of Pi_{Torus} , Pi_{Sphere} Pi_{Knot} ;
- double torus knot, namely: 1-st (2-nd) and 2-nd (1-st);
- natural hexagon honeycomb cell ABCDEF split into triangles ABC, FDE and quadrangle ACDF.

Functional features of a hexagon honeycomb cell:

- the triangles ABC and FDE are identical, their total area is *ah*,
- the area of the quadrangle is also *ah*,

- the total area of the hexagon honeycomb cell is 2ah,
- the total torus area is $7 \cdot 2ah = 4ah$.

h is the shortest distance of the 1-st (2-nd) and 2-nd (1-st) torus knot.

Since the basic formula for the torus area is $4Pi^2r^2$, then

 $4Pi^2r^2=14ah.$

Using this formula the following expression may be obtained:

$$a = 2Pt^{2}r^{2}/7h$$
, $h = 2Pt^{2}r^{2}/7a$, $Pt^{2} = Pt_{Torus} \cdot Pt_{Sphere}$
and the most important new formula for calculation of the accurate value of Pt_{Torus} , that is
 $Pt_{Torus} = (\sqrt{14ah})/2r$,

where Pi_{Torus} is a toric Pi.

Such a combination, namely, two triangles (4 edges AB, BC, FE, ED of the honeycomb cell) are adjacent to the quadrangle (2 edges AF, CD of the honeycomb cell) and vice versa, creates conditions for *eversibility/envelopment capability* with minimum energy consumption, i.e. hardness, flexibility, elasticity and softness of the torus simultaneously, and protects it from disintegration or flattening (folding).

The right side of Fig. 11 and Table 2 show options of color fixation\linking by the 1-st (2-nd) and the 2-nd (1-st) knots of the double torus knot.

The \mathbf{J} sign means or prompts that sounds (the acoustic field) as well as the color (the color field) are formed by a **VTortex** only.

The descriptions of this processes will be provided by the author in his future deliverables.

Different torus types (Fig. 3) have different interrelations between *a*, *and h* ensuring formation of *Pi*_{Torus}.

Double torus knot

Table 2

						Dou														
1-st (2-nd)	toru	s kn	ot					2-nd (1-st) torus knot												
"Colors"/fixation (linking) options	1	2	3	<mark>4</mark>	5	6	7	"Colors"/fixation (linking) options	1	2	3	<mark>4</mark>	5	6	7					
1, 2, 3	<mark>۲</mark>	5	5					2, 3, 4		5	5	<mark>1</mark>								
1, 4, 7	<mark>ک</mark>			<mark>٦</mark>			ſ	3, 5, 6			5		ſ	5						
3, 4, 6			5	<mark>٦</mark>		ſ		4, 6, 7				<mark>٦</mark>		5	S					
1, 5, 6	<mark>٦</mark>				5	ſ		1, 3, 7	<mark>٦</mark>		5				5					
2, 6, 7		5				ſ	5	1, 2, 6	<mark>٦</mark>	5				5						
3, 5, 7			5		5		5	2, 5, 7		2			5		5					
2, 4, 5		5		<mark>٦</mark>	5			1, 4, 5	<mark>٦</mark>			<mark>.</mark>	5							

- 1-st (2-nd) μ 2-nd (1-st) torus knots in a double torus knot are fully identical, each of which being the first and the second at the same time with no priority.

- Each "color/honeycomb cell" (totally 7) is strictly fixed (linked) with two other ones three times on the 1-st (2-nd) and the 2-nd (1-st) torus knots, i.e. six times in total on the double torus knot (Fig. 11, Table 2). The number of fixation (linking) options is 14 (7+7).
- A double torus knot fixes/links up minimum seven (or a number multiple of 7) colors-honeycomb cells involved in structuring the surface of a torus or VTortex.
- A double torus knot is a real natural DNA structure self-closed through a double torus knot structuring the VTortex surface. The "real" DNA spiral, or the so-called spiraled "ladder" is just the central part of a VTortex that "hangs in the air" with ends dangling in space, etc.
- It is the basis of the Phyllotaxis process for the vegetable and animal worlds, which develops following the cylindrical form of the torus, etc.

- An interesting option is structuring (knotting) a torus with the simplest torus knots (1.0), (0.1), (1.1, right) and (1.1, left) (Fig. 11).

The author believes that the two lines of a double torus knot physically act as the electron in an atom of any chemical element in Chemistry and Alchemy, with Chemistry being only a minor part of Alchemy



Fig. 11. The torus surface structured (knotted) by "simplest" torus knots (1.0), (0.1), (1.1, right) and (1.1, left)

The above figure shows a torus surface structured (knotted) in different ways:

- individually with torus knots (1.0), (0.1), (1.1, right) and (1.1, left); in each case the torus is split into two equal parts;
- individually with torus knots (1.0), (0.1), (1.1, right) and (1.1, left) against the background of the "Devil's Square", i.e. in all cases the torus is split into four equal parts;
- Against the background of the "Devil's Square" together or at concurrent structuring with these knots, i.e. at 64 options, in which case the torus is split into 64 parts, respectively.

A Paradox of Cylindrical Eversible Tore and Non-Eversible Torus (Fig. 12)

A non-eversible cylindrical Torus is a static non-eversible body such as a wheel inner tube, a ring-buoy, a doughnut, etc. The Torus cannot turn inside out.

The Torus internal diameter D_{Torus}^{Sphere} is always smaller than its external diameter D_{Torus}^{Torus} . By cutting a Torus lengthwise we will not be able to obtain its cylindrical form.

An eversible cylindrical Tore.

The internal diameter D_{Tore}^{Sphere} of a Tore turned inside out by 180° is equal to its external diameter D_{Tore}^{Torus} , and vice versa, the external diameter D_{Tore}^{Torus} when the Tore is turned 180° inside out is equal to the internal diameter D_{Tore}^{Sphere} .

It should be noted that the Tore cylindrical form is actually its pre-form.



Fig. 12. A paradox of a cylindrical eversible Tore and a non-eversible Torus. A model of an eversible Tore is made from silicon by Tatyana Shikhirina

Angular Tores and VTortexes

Tores and VTortexes circular by the longitude and meridian may be transformed into Tores and VTortexes angular by the longitude and meridian (Fig.13). The number of longitudinal and meridian faces may be equal or different.

This property is used in Nature of mega-, macro-, micro- and nano-worlds for construction of their tight packs.

In human activity this property may be used in art, architecture and construction (TorArt - bionic structures under conditions of Earth, other planets and Space) (see Fig.15 and <u>http://youtube.com/user/elastoneering</u>, part 7).

It is interesting and **important** to note that an angular torus, 4-faceted by the longitude and meridian, is just the "Devil's/Magic" hypercube with 384 "Devil's/Magic" squares [13].

Moreover, the author found that digits 1 through 16 represent only one of the versions of the "Devil's/Magic" square. If any number in the $+\infty$ to $-\infty$ range is added to any of these digits the "Hyper-Devil's/Magic" square will be "functioning" too (Fig. 14)



Fig. 13. Transformation of a "circular" torus into a 4-angle "Devil's/Magic" torus

1	2		3		4						1	6		2			3		1	3
5	6		7		8	' <u>0"</u>	square				5			1		10		8	, # 0	
9	10		11		12		Devil S Crea				9			7		6			2	
13	14		15		16						4			14		15			1	
-14	0		-1	-	-11 Samples							14		0)	1			1	1
-3	-9		-8		-6						3			9)		8		6	
-7	-5		-4	-	# (10	-/) 					7			5			4		1	1 <mark># /</mark> 0
-2	-1 2	-	13		+1						2	•		1	2	1	3		-1	
Square Number #	10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
Numbers	-17:-2	-16:-1	-15:0	-14:1	-13:2	-12:3	-11:4	-10:5	-9:6	-8:7	-7; 8	-6;9	-5:10	-4:11	-3:12	-2:13	-1:14	0:15	1-16	2;17
Square	38	34	-30	26	-22	-18	-14	-10	-6	-2	2	6	10	14	18	22	26	30	34	38
Σ	$\sum_{n=1}^{\infty} \sum_{n=1}^{\infty} 2[2(-n) + 1]$											$\sum_{n=2}^{\infty} 2(2 n - 1)$								

Fig.14. "Hyper-Devil's/Magic" square



Fig.15. Angular and circular tores in art, architecture and construction - TorArt

Phyllotaxis Process

Phyllotaxis remains the Phyllotaxis everywhere, even in Space Author

Phyllotaxis or phyllotaxy is ARRANGEMENT OF THE LEAVES on the stem of a plant (from Greek phyllo-, leaf; -taxis, motion/orientation) (Wilipedia)

The Phyllotaxis process is distinguished by the following functional features (Fig. 16)

- toroidal motion during the plant's growth;
- spiral position of leaves on a plant's stem, branches on a tree, etc.;
- coincidence of leaf origination points (m) on the stem after a certain number of turns (n), respective the spiral symmetry axis a leaf cycle;
- m/n fractions, i.e. 1/2, 1/3, 2/5, 3/8, 5/13, 8/21, 13/34, etc, are Fibonacci number ratios taken as every other one the Phyllotaxis law.

Important!

- numerators in Fibonacci fractions, i.e. 1, 1, 2, 3, 5, 8, 13,, correspond to the number of *m* turns around the torus-VTortex longitude, whereas the number of *n* turns around the torus-VTortex meridian correspond to denominators of Fibonacci numbers.

In other words, the basis for the Phyllotaxis is a plant's growth in accordance with torus knots (m.n) or (1.2), (1.3), (2.5), (3.8), (5.13), (8.21), (13.34), etc., rather than due to a special "arrangement of leaves to ensure maximum inflow of solar energy to a plant". The latter is a factor of minor importance. For instance, torus knot (1.2) is peculiar to cereals, a birch-tree, grapes; torus knot (1.3) to sedge, a tulip, an alder-tree; torus knot (1.3) to a pear-tree, a currant, a plum-tree; torus knot (3.8) to cabbage, radish, linen; torus knot (5.13) to a fir-tree, jasmine, etc.

A plant grows thanks to chemical (alchemical) elements inflowing from the environment via Plato-Shikhirin Channels. "Sun, air and water" only contribute to creation of favorable conditions for this process development. This is also a factor of secondary importance.

- the stem of a plant is an energy-information channel, or the central part of a torus-VTortex; it may be also said it is a "cylindrical pre-form" of a torus-VTortex.
- the root of a plant with fruitage, e.g. potatoes, is the implosive centripetal radial energy-information sink (to the stem, downwards, gravitation) with the appropriate pressure (P) and temperature (T) cone in its area. Potatoes are the result of concentration of vegetable substance due to the gravitation process.
- the top of a plant with flowers and fruitage is the explosive centrifugal energy-information (from the stem, upwards, levitation) source with appropriate (P^+) and temperature (T^+) cone in its area. P^+ (levitation process) in this case > P^- (gravitation process), and $T^+ > T$.
- Рост растения обуславливается разностью давлений (P⁺-P⁻).
 Поскольку P⁺>P⁻, то происходит левитационный процесс с учетом вычета веса растения, а не «тяга к солнцу».
 - the plant growth is determined by the pressure (P^+-P^-) difference.
 - Since $P^+ > P^-$, the levitation process is predominant (we must deduct the plant's weight) rather than the "thirst for Sun".

This process is similar to tornado motion [10], namely:

- if its weight exceeds the P⁺ and P⁻ pressure difference the tornado "grows" on the earth trying to "get rooted" (gravitate) in it.
- if its weight is less than the P^+/P^- pressure difference the tornado flows away (levitates) into Earth's atmosphere;
- the plant's stem, top and root collectively represent a toroid-VTortex with all its functional specifics;
- in the northern hemisphere the Phyllotaxis process runs counter-clockwise and in the southern hemisphere clockwise, respectively. It is interesting to study the Phyllotaxis process at the interface of the northern and southern hemispheres of Earth;
- it is not unlikely that the appearance of "left-handers" and "right-handers" is explained by the fact that their ancestors were born in the southern or northern hemispheres, respectively.



Fig. 16. Phyllotaxis process

Now we may be quite confident that:

Phyllotaxis is a VTortex process, or a natural (structurization energy and information) order of arrangement of leaves, flowers, fruits, roots, root vegetables on the plant's stem in accordance with torus knots (m,n), where m is the number of turns around the longitude of a torus-VTortex, and n is the number of turns around the torus-VTortex meridian.

The m/n ratio, i.e. 1/2, 1/3, 2/5, 3/8, 5/13, 8/21, 13/34, etc., means Fibonnacci number ratios taken in "every other" manner, with their numerical values matching torus knots (1.2), (1.3), (2.5), (3.8), (5.13), (8.21), (13.34), etc. The Phyllotaxis is only one of manifestations of the structurization energy and information effect in Nature, namely in the vegetable and animal world being a part of the nano-, micro-, macro and mega-worlds (e.g. atoms, ball lightnings, tornadoes, galaxies) in the Universe as the place for "phyllotactic" "dead" processes.

Conclusions

A VTortex is a self-supported natural system of mega-, macro-, micro- and nanoworlds which generates free energy and information needed by Mankind so much nowadays.

Moreover, effects naturally produced by both a natural and a man-made VTortex (directed from its tail toward its head) may be used as the basis for development of home and industrial generators [14] of:

- "live" energy for, e.g. illness treatment;
- heat for heating a home, cooking meals, water heating;
- high pressure air stream (in a hair-drier);
- microenvironment;
- electromagnetic energy;
- vacuum (e.g. for a vacuum-cleaner);
- (e.g. for a refrigerator)
- "dead energy", e.g. for targeted insect killing, etc.

Instant pictures of tori (Figs. 4, 5, 8, 9) were made by Nikolay Shikhirin from his animations presented in http://youtube.com/user/elastoneering, Parts 3-5,7,8,...

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