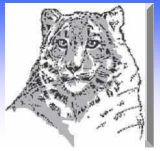




BARS-SCC



SPECTRAL CORRECTION COMPLEX

"Bars" Spectral Correction Complex (SCC) is designed for medical purposes and allows the operative object information reading and its state expert evaluation, the affected mono-spectra detection and their correction execution, and thus, to bring the human organism into the normal state. Examination and correction can be carried out in treatment-and-diagnostic centers and laboratories and in the field conditions as well, including the areas of the salvage operations execution associated with the emergency situations. "Bars" SCC allows to solve some problems concerning the human health with higher quality at less costs and during shorter time periods.

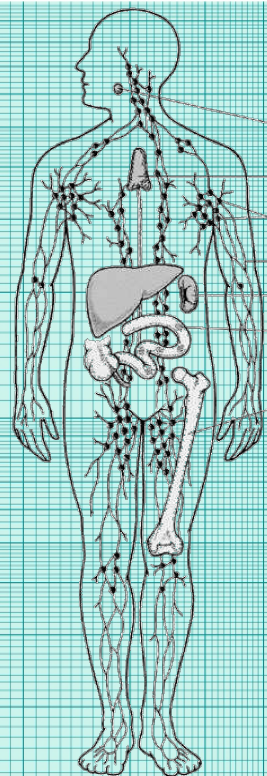
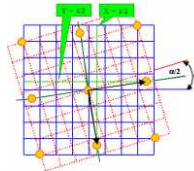
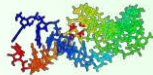
CERTIFICATE ABOUT STATE REGISTRATION 5545/2006 from 11.10.2006

During the theoretical consideration of the lower (resonance-wave) information level as the elementary particles wave and field oscillations it is found that their relationships and interactions occur in the form of the resonance-wave processes with the certain frequency characteristics and wavelengths. Interference of these processes at the next level creates the information frequencies new indexes at the same level. Integrated resonance-wave processes of the elementary particles level create the spin domains, and as the further interference result these processes determine information components of each next level. In this case the level information doesn't depend on the information substratum (material or immaterial) but is specified by the level information capacity only.

Thus, every level has its own, different of other levels, frequency of the self-excited oscillations which are form the common self-oscillation information-frequency process in organism. Information interaction of the levels results in each organ functioning in the certain frequency range. During the bottom-up information process the diffraction (frequency scattering) performs the fine self-tuning system function.

In the information theory aspect any pathogenic process occurring in organism and treatment ways can be proved from the new positions, namely – the control information attributes.

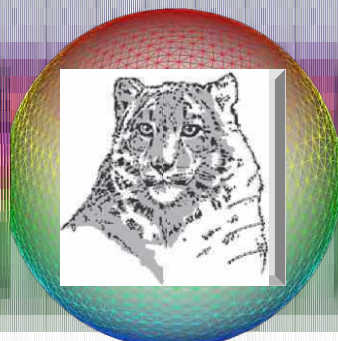
Control is the process designated for chaos elimination and entropy in order to raise the system functional properties and the system progressive development. In information meaning the control process has an anti-entropy feature: while receiving some information the living system reduces the information entropy inside itself and uses the received information to maintain its own orderliness.



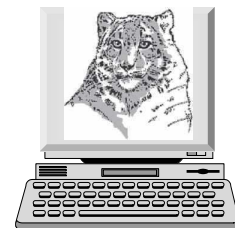
Information + Entropy = Const, where information is a measure of order and regularity, and entropy is a measure of disorder and chaos. The main condition of the information perception and saving is the receptor system ability to turn to one of the table states which are preset due to its organization. Therefore the information processes in organized systems are connected with the certain freedom degrees only. The information storage process itself should be accompanied by some energy losses in the receptor system in order to give the possibility to be stored during sufficient time period and not to be lost due to thermal fluctuations.

Namely here it is performed transformation of micro information, which the system wasn't able to save, into macro information, that the system saves and stores and can transfer to other receptor systems. As they say the entropy is a measure of multiple microstates, which the system can not memorize; and macro information is a measure of multiple states which should be remembered when the system is in these states. The important component of control in the living systems is the feedbacks existence.

Feedbacks principle is one of the main principles of self-control, self-regulation and self-organization. The self-control process is impossible without the feedbacks existence. By means of the feedbacks the object deviations from the specified state form control effect which bring the object's state into specified one. In other words the feedback is the reverse effect of the process results on its flowing. Feedback can be positive or negative. The positive feedback is such one when the process results intensify it. If the process results reduce its action the negative feedback takes place.

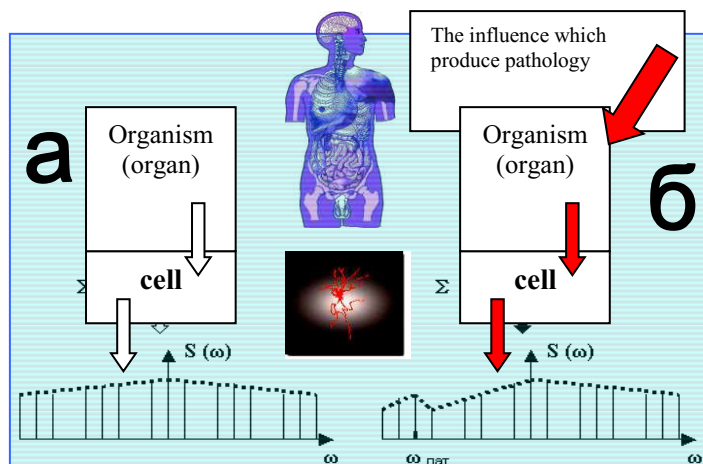


If during selection of information influence on human being with the specified purpose to include into requirements list such parameters and properties as flexibility (affect with a feedback) maximization (action in the wide amplitude and frequency range) it is possible to state that the hardware complexes with feedback on the base of the biologically active points (BAP) electric status change entirely meet these requirements.



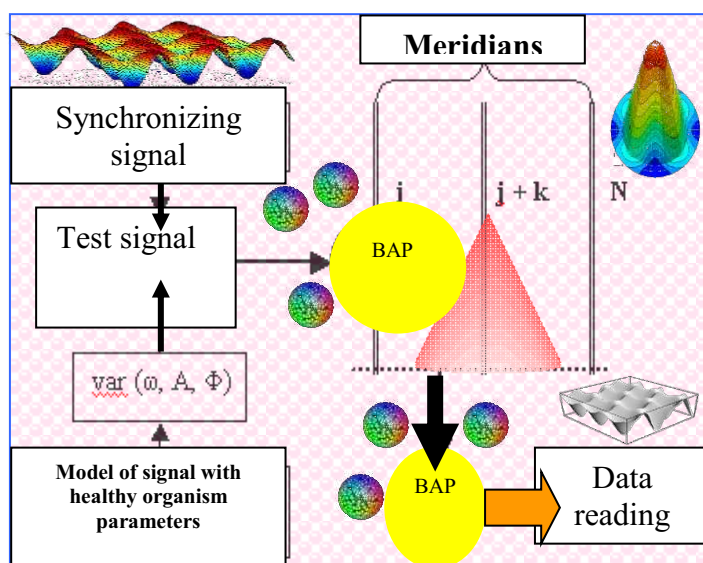
To conventional methods of the human being organism state instrumental monitoring there are can be referred electroencephalography, rontgenography, rontgenoscopy, ultrasonic diagnostics, computer-based- and MR-imaging, etc. At the same time the new advanced monitoring and research methods are developed. Stimulus to the new methods development is desire to get more effective evaluation of the homeostasis finest processes. For example, well-known fact is correlation between organism dysfunction and the individual cells pathology, particularly the blood cells, if the systemic disease is considered. Therefore any organism disease changes the metabolic processes behavior in the cells that in its turn initiates the cells functional changes and variations of the cell proper electromagnetic fields (EMF) spectra.

At the same time these points, zones and domains in electro-physical context represent the non-linear systems. It means that in case of EMF influence on the BAP or reflexogenic zone the EMF with the point, zone, domain proper EMF interaction process occurs. Such interaction results in the external EMF modulation on the BAP radiation frequency. Pick up of this frequency from the modulated reflected wave and its analysis (amplitude-frequency) allows obtaining information relating to organism state and evaluating the responses on the organism external influences, particularly the physical field influences. At the same time the cell signal power level is 10-12 W/m² [7] that considerably decreases this signal direct record by means of modern radio-measuring instruments. So to overcome these difficulties it is necessary to develop and design the new methods and apparatus.



Correlation between the organism functions abnormalities and its cells pathology: radiation spectra of cell proper EMF a) in normal limits; b) in state of pathology.

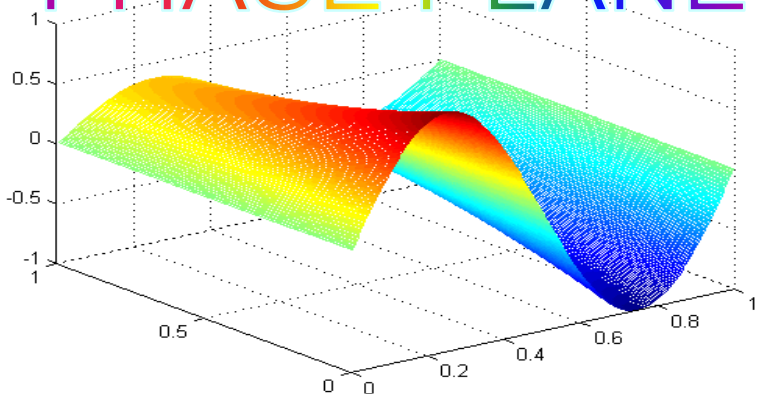
Using the biocybernetic point of view and radio-physical analogies it can be stated about the possibility of access to information concerning the processes in the human organism under the conditions of the transmission channels protection against the interferences from the measuring circuit components or therapeutic electric signals and / or the electromagnetic ones. Appropriate devices and their connection with the BAP must correspond to structural diagram shown below.

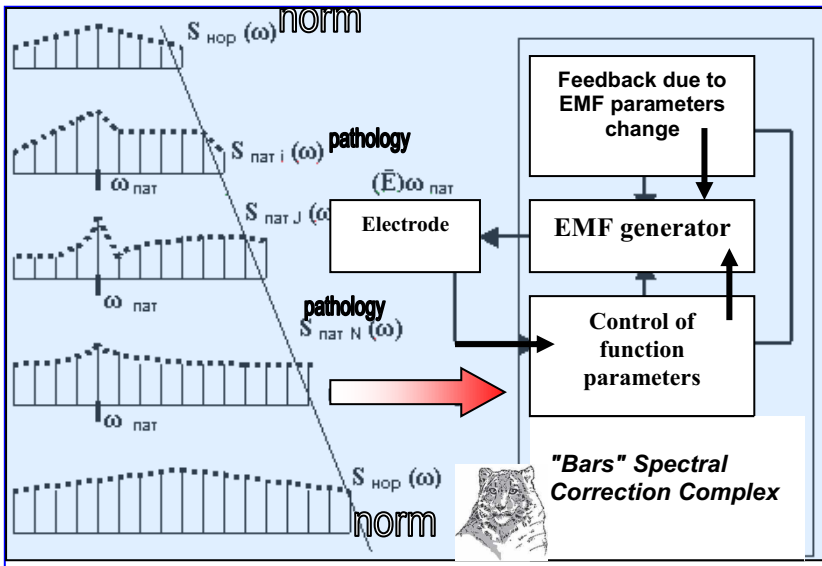


Structural diagram of the diagnostic-therapeutic equipment for receiving information concerning the processes in organism with output through the BAP.

1. Information on the proper frequencies of given system or organ allows determining the biologically effective for this organism frequencies of external medium.
2. Frequency is the information carrier.
3. The natural frequency values depend on the oscillator dimensions L (e.g. heart).
4. All the organism self-sustained oscillation systems are the systems with the hysteresis when the oscillations can rise only after some threshold amplitude.
5. The biological objects response to external medium oscillations shall appear in the near neighborhood of values $\omega_H = 2\omega_0/n$; this neighborhood width is greater when the parameter change amplitude is greater too.

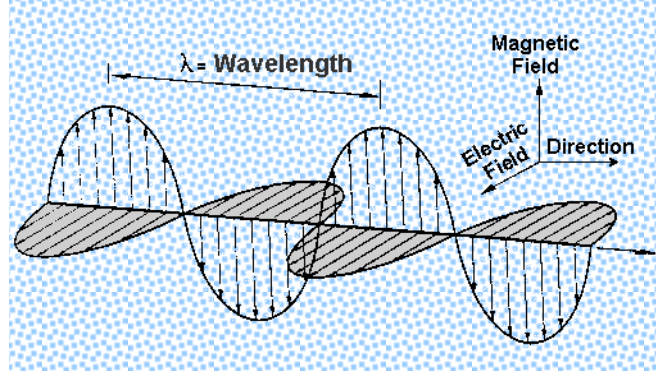
PHASE PLANE





Scheme of biocybernetic contour of treatment process using 'BARS' SCC

Therefore, for the analysis of EMF therapeutic influence, should study of spectrums of radiation cells on physical effects of their interaction with external (therapeutic) EMF. Control of influence should realize on main functional parameters of cell suspension. Advanced scheme of process indicated below.



The "Bars" Spectral Correction Complex main advantage is radio-physical dedication that gives the essential possibilities to use the specific properties of biologically active points (BAP) on the human skin, reflexogenic zones and domains. These points and zones represent the radiofrequency radiation in subsonic ($f < 1$ Hz) and low-frequency ($f < 2$ kHz) ranges, as well as in SHF and SW ranges. Formers of mentioned ranges take place due to organism physiological rhythms, while the high-frequency radiations – the organism cells proper EMF.

At the same time as it was mentioned above that the cell signal power level equals 10^{-12} W/m² and this evidence sufficiently reduces this signal direct recording possibilities by means of the modern radio-physical measurements equipment; furthermore it is necessary to take into consideration that the most effective therapeutic levels are power levels within 10^{-14} – 10^{-10} W/m². Nevertheless for BAP the signals of such power are significant due to membrane cell amplification of signal, nuclear magnetic resonances, etc. One of the most important BAP morphofunctional formations are the mast cells containing up to 80% of water and with considerably higher density than in the skin "inactive" zones.

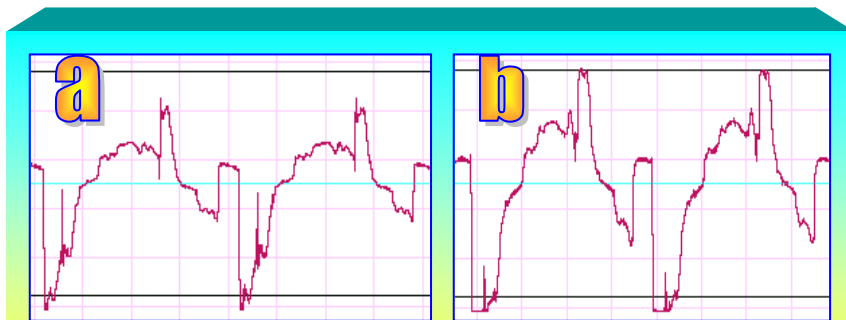
At the same time the water state in the BAP cell structures can essentially influence on the cell signals amplifying or attenuation. The cell aqueous solution represents the system which is able for uniform integration of the various physical and chemical effects including the magnetic, eclectic and electromagnetic fields influence. According to carried out by the authors research the information signal transmission, reading and deleting is ensured due to so called "small metrics" (intercellular structure) consisting of the low-molecular alicoproteins, for example adhelon ГПЯ-12 in concentration $\sim 10^{-8}$ M and water.



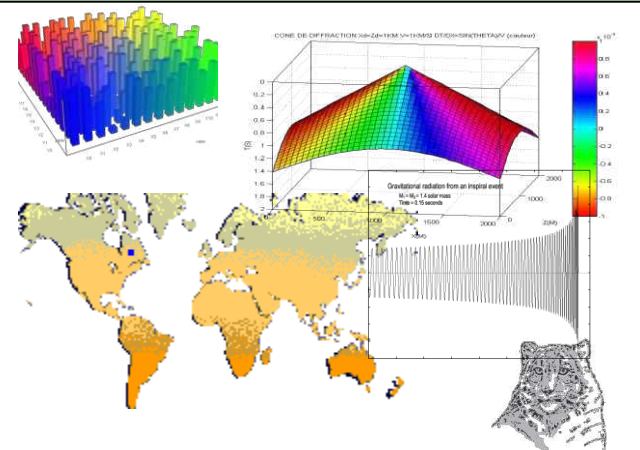
In this connection the particular interest represent coherent (resonance) water state in the cellular constructions.

The main idea is that the BAP cells coherency determines the new factor (phase) which controls the cells state. Changing phase (by means of the control pulse delay with the generating one) it is possible to manipulate by the cell signal power without any change of energy or angular momentum.

During the "Bars" Spectral Correction Complex increase of its resolution power was obtained due to conversion of the BAP water cells into coherent state. This state is achieved due to carrier frequency 50.3 Hz influence on the BAP EMRI.



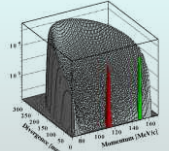
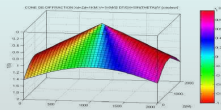
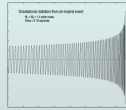
a) without the synchronous scales program unit applying
b) with the synchronous scales program unit applying



Execution of the spectral correction by means of the "Bars" Complex:

1. In diagnostic mode the information reading from the BAPs is performed after the pulse (0.5 s) influence on them by the EMR with the frequency of 50.3 GHz and power up to 10 μW/cm².
2. In correction mode influence on the BAPs is performed by the EMR with the carrier frequency of 50.3 GHz and applying the following low-frequency modulation:
 - a) for organs or tissues – the modulation frequency is determined in accordance with formula $\omega_H = 2\omega_0/n$ [10], where ω_0 is the oscillator natural frequency, n is integer;
 - b) for cellular constructions – the modulation frequency is determined in accordance with formula

$$\omega_0 = U \left(\frac{\pi^2 n^2 \rho M^2}{l^2 \rho_0 h (1 - M^2)} \right)^{1/3}, \quad n = 1, 2, \dots$$



where U is the near membrane fluid flow; M is Mach number; a is the acoustic waves propagation velocity in the cell membrane; l is membrane thickness and length, respectively; ρ is the fluid flow density; ρ_0 is the membrane lipid layer density.

In the "Bars" Spectral Correction Complex computer memory there are stored the spectral characteristics of each organ and each cell having their own specific frequencies which can be output on display in the form of certain spectrum reflected the conditions of the organ (tissues) information exchange with the external medium.

As any pathologic process has its own individual spectrum, the computer memory contains a fair quantity of the pathologic processes taking into account the evidence degree, age, sex and other variations. After the organ frequency characteristics reading he diagnostic apparatus can compare them in the spectral similarity value with standard processes (healthy tissues, tissues with pathologic changes, infection agents) and detect the most close pathologic process or tendency to its occurrence. In case of combining processes the spectral diagnostic mode allows executing a differential diagnostics of each process.

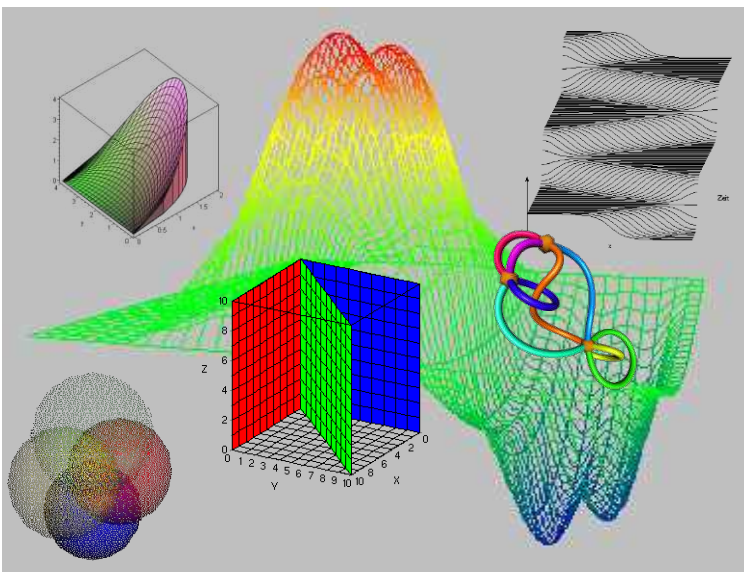
In correction mode the "Bars" Spectral Correction Complex performs drug test. Diagnostic system records the frequency characteristic of any drug and carries out computer-based frequency characteristics comparison simultaneously for all stored in the computer memory drugs with the pathologic process characteristics, thus detecting the most effective medicine remedy.

"Bars" Spectral Correction Complex consisting of reverse sensor for signals reception, audio processor, functional units of the signal wavelet converting, comparison and analysis of the wavelet-converted signal with the reference database, synchronous scales, visualization, organism correction and therapy, resultant signal, feedback and reference database, and differing from the other devices due to that the functional units are made in a form complex computer program located on the computer hard disk.

"Bars" Spectral Correction Complex differing from the other devices due to that the complex computer program includes the synchronous scales program unit.

"Bars" Spectral Correction Complex differing from the other devices due to that the spectral signals, incoming from the reverse sensor, conversion from the analog form into the digital one and the resultant signal generation in the analog form, coming to reverse sensor, is performed by means of the audio processor.

<http://www.gmmcc.com.ua>

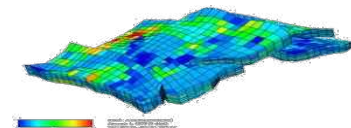


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Invention relates to medicine and medical techniques. Suggested method can be used for direct and remote detection of functional and organic changes in pre-pathologic and pathologic processes and their causes with particular localization during the pre-clinical and clinical stages, as well as for treatment dynamics monitoring.



'BARS' COMPLECTATION



WELCOME TO THE COOPERATION

