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THE APPLIED DEVELOPMENTS DIRECTION “COGNITIVE MODELING IN THE APPLIED TECHNICAL SCIENCES AND TECHNOLOGIES” (“NNT”) OF “SRI "SFA CMT" OF "RA(N)S" N. A. VENIAMINOV V.N.” (PART 2)

The developed “The applied developments direction "Cognitive modeling in the applied technical sciences and technologies"” (“NNT”) treats to the applied developments divisions of “The scientific-research institute "System and financial analysis based on cognitive modeling technology" of "RA(N)S" named after Veniaminov V.N.” (“SRI "SFA CMT" of "RA(N)S" n. a. Veniaminov V.N.” – SRI) as the first SRI in the structure of “SIO "Academy of cognitive natural sciences"” (“SIO "ACNS"”) and the add. component of the system of science and education of the modern country for the creation, distribution and use of the main and derivative scientific results of the cognitive modeling technology (CMT) (www.vetrovan.(spb.)ru) [see the applied developments directions and scientific-researches laboratories of SRI]:
1) it is executed by the principle of “administrative-economy submission”;
2) works in the several main directions, which allow to provide the development of the applied main and derivative scientific results (my second report on SRW from 2006-2008(9) y. was submitted to “SPbSETU "LETI"” and “The Government of RF” for the translation, carrying out of int. action and receiving of “The Nobel prize”);
3) includes the several various main divisions: III. “The scientific-researches laboratory "Applications of the noo-sphere knowledge and technologies: the (heavy) mechanical-engineering, instrument-making, polygraphy, reprography and photo-cinema-technics, the easy and food-processing industry, transport, architecture, construction and other branches"” (“SNZT”) (*) [***the applied developments in the area “Applications of mechanical-engineering”*** – usage of theory of machine-engineering-science and details of machines, usage of theory of mechanical-engineering materials, usage of theory of technology of mechanical-engineering, usage of theory of foundry production, usage of theory of forge-stamp manufacture, usage of theory of assembly manufacture, usage of theory of cutting of materials, usage of theory of electrical-physical-chemistry processing, usage of theory of thermal and strengthening powder materials, usage of theory of nonmetallic products manufacture, usage of theory of machine-tool-construction, usage of theory of robotics, usage of theory of tool manufacture, usage of theory of mining mechanical-engineering, usage of theory of metallurgical mechanical-engineering, usage of theory of reactor-construction, usage of theory of turbine-construction, usage of theory of special power-engineering installations, usage of theory of chemical and oil mechanical-engineering, usage of theory of locomotive-construction and carriage-building, usage of theory of engine-construction, usage of theory of motor-car-industry, usage of theory of ship-building, usage of theory of aircraft-construction, usage of theory of space technics and rocket-production, usage of theory of hoisting-transport mechanical-engineering, usage of theory of building and road mechanical-engineering, usage of theory of municipal mechanical-engineering, usage of theory of tractor and agricultural mechanical-engineering, usage of theory of mechanical-engineering for the light industry, usage of theory of polygraphic mechanical-engineering, usage of theory of mechanical-engineering for the food-processing industry, usage of theory of mechanical-engineering for the trade and public catering, usage of theory of household machines and devices, usage of theory of manufacture of weapon, usage of theory of the other branches of mechanical-engineering, usage of theory of the cognitive modeling technology in the applications of mechanical-engineering;

“The Nobel committee” (The Kingdom of Norway and The Kingdom of Sweden)
(it was submitted to “SIO "ACNS"” on the int. conf. “IQR and D in MO: CA” on the 01st-31st of October 2016 y.)

the applied developments in the area "Applications of instrument-making" – usage of theory of theoretical bases of instrument-making, usage of theory of general technology of production and equipment in instrument-making, usage of theory of designing and constructing of devices, usage of theory of devices for the measurement of electrical and magnetic sizes, usage of theory of devices for the measurement of mechanical sizes, usage of theory of devices for the measurement of time and frequency, usage of theory of devices for the measurement of structure and physical-chemical properties of substances and materials, usage of theory of devices for the heating-technical and heating-physical measurements, usage of theory of devices for the measurement of acoustic sizes and characteristics, usage of theory of devices for the measurement of optical and lighting-technical sizes and characteristics, usage of theory of devices for the measurement of ionization radiations, usage of theory of devices of non-destroying control of products and materials, usage of theory of the general structural elements, units of measuring devices, systems and means of office-equipment, usage of theory of the cognitive modeling technology in the applications of instrument-making;
the applied developments in the area "Applications of polygraphy, reprography and photo-cinema-technics" – usage of theory of polygraphy, reprography and photo-cinema-technics, usage of theory of the cognitive modeling technology in the applications of polygraphy, reprography and photo-cinema-technics;
the applied developments in the area "Applications of light industry" – usage of theory of textile industry, usage of theory of knitted industry, usage of theory of clothing industry, usage of theory of tanning industry, usage of theory of fur industry, usage of theory of industry of artificial leather and film materials, usage of theory of shoe industry, usage of theory of leather-haberdashery industry, usage of theory of bristle-brush manufacture, usage of theory of manufacture of accessories, usage of theory of the cognitive modeling technology in the applications of light industry;
the applied developments in the area "Applications of food-processing industry" – usage of theory of food raw materials and auxiliary materials, usage of theory of the processes and devices of food manufactures, usage of theory of (grain-)elevator and flour(-grinding)-sereals(croup) industry, usage of theory of mixed fodder industry, usage of theory of baking and macaroni industry, usage of theory of confectionery industry, usage of theory of sugar industry, usage of theory of starched-treacle industry, usage of theory of barmy industry, usage of theory of brewing industry, usage of theory of spirituous industry, usage of theory of the industry of high-alcohol drinks, usage of theory of wine-making (vinous) industry, usage of theory of the industry of without-alcohol (soft) drinks, usage of theory of canning, vegetable-drying and food-concentrate industry, usage of theory of food-gustatory industry, usage of theory of tobacco industry, usage of theory of meat and bird-fancier-processing industry, usage of theory of the manufacture of eggs and egg products, usage of theory of dairy (milk) industry, usage of theory of butter-fatty (creamery) industry, usage of theory of the cognitive modeling technology in the applications of food-processing industry;

the applied developments in the area "Applications of architecture and construction" (*) – usage of theory of engineering-theoretical bases of architecture and construction, usage of theory of building materials and products, usage of theory of building constructions, usage of theory of technology of construction-installation works, usage of theory of technology of production of building materials and products, machines, mechanisms, equipment and tool, used in the construction and industry of building materials, usage of theory of engineering researches in construction, usage of theory of architectural-building designing, usage of theory of regional (district) lay-out, usage of theory of town-planning, usage of theory of objects of construction and engineering support of objects of construction, usage of theory of tendencies, dependences and laws in architecture and construction, usage of theory of the cognitive modeling technology with dynamic cloning, verification and subverification, usage of theory of the iterative cycle and the technique of use of the cognitive modeling technology, usage of theory of the parametrical cognitive models block for architecture and construction (the buildings and constructions based on the cognitive circle, cognitive disc, cognitive cylinder, cognitive cone and cognitive sphere), usage of theory of the ways of representation of the structure of the cognitive models and difficult problem environments: the formal classical of the 0^{th} generation (the logical and production models), the nonformal classical of the 0^{th} generation (the semantic network, the frame network and ontology), the formal new of the 0^{th} generation (the calculus of theory of sets and corteges on domains and the innovative calculus of theory of sets and graphs), the nonformal new of the 0^{th} generation (the multi-level structural scheme and multi-level encapsulated pyramids combining theory of graphs and theory of sets), the flat of the 1^{st} generation (the cognitive circle and the cognitive disc), the volumetric of the 1^{st} generation (the cognitive cylinder, the cognitive cone and the cognitive sphere), the flat and volumetric of the 2^{nd} generation (the one-, two-, three-, four-, five- and more cognitive circle, cognitive disc, cognitive cylinder, cognitive cone and cognitive sphere), the hybrid of the 3^{rd} generation (the combinations of the existing cognitive models), usage of theory of the algorithm of formation of the cognitive model structure, usage of theory of the technique of research of the cognitive model parameters, usage of theory of the algorithm of analysis of a posteriori results of research, usage of theory of the adaptive automation means of architecture and construction (the automation means of formation and research based on the cognitive circle, cognitive disc, cognitive cylinder, cognitive cone, cognitive sphere, one-, two-, three-, four-, five- and more cognitive sphere and others), usage of theory of the statistical substantiation of practical use of the received results, usage of theory of the factors influencing to the efficiency of construction of the buildings and constructions, usage of theory of organization and plan of carrying out of the experiment, usage of theory of the research of parameters of the parametrical cognitive models block, usage of theory of preliminary processing of a posteriori results of diagnostics, usage of theory of choice of the statistical analysis methods of the generated data sets, usage of theory of the analysis of dynamics of the resultativity of construction, usage of theory of the dispersion, regression, discriminant, cluster analysis, multivariate scale, factor analysis and bibliographic lists;

the applied developments in the ar„ea "Applications of transport" – usage of theory of railway transport, usage of theory of motor-car transport, usage of theory of sea transport, usage of theory of air transport, usage of theory of pipeline transport, usage of theory of industrial transport, usage of theory of municipal transport, usage of theory of interaction of the different kinds (types) of transport, usage of theory of mixed transportations, usage of theory of the other kinds (types) of transport, usage of theory of the cognitive modeling technology in the applications of transport].

IV. “The scientific-researches laboratory "Applications of the scientific problems of agro-industrial complex"” (“SNPAK”) [***the applied developments in the area “Applications of agriculture and hunting economy”*** – usage of theory of agricultural biology, usage of theory of soil-science, usage of theory of agriculture, usage of theory of agricultural melioration, usage of theory of agro-chemistry, usage of theory of plant-growing, usage of theory of protection of agricultural plants, usage of theory of animal-industry, usage of theory of veterinary-science, usage of theory of preparation of production of agriculture, usage of theory of hunting and hunting economy, usage of theory of forestry economy, usage of theory of economics and organization of agriculture, usage of theory of mechanization and electrification of agriculture, usage of theory of the cognitive modeling technology in the applications of agriculture and hunting economy; ***the applied developments in the area “Applications of fish economy and aqua-culture”*** – usage of theory of biological resources of The World ocean and internal reservoirs, usage of theory of aqua-culture, usage of theory of fish-breeding, usage of theory of industrial fishery, usage of theory of technical operation of fleet of fishing industry, usage of theory of technical operation of fish seaports, usage of theory of technology of processing of raw materials of water origin, usage of theory of equipment for the fish-processing industry, usage of theory of the cognitive modeling technology in the applications of fish economy and aqua-culture; ***the applied developments in the area “Applications of water economy”*** – usage of theory of scientific bases of water economy, usage of theory of water-economy construction, usage of theory of hydro-technical and hydro-ameliorative constructions, usage of theory of irrigating and water supply, usage of theory of irrigating systems, usage of theory of drying systems, usage of theory of sewage waters, their clearing and use, usage of theory of quality of water, usage of theory of test, measurement and control in the water economy, usage of theory of mechanization and automation in the water economy, usage of theory of complex use of water resources, usage of theory of the cognitive modeling technology in the applications of water economy].

The applied developments directions and scientific-researches laboratories of SRI allow to develop the main and derivative scientific results of CMT.