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REVIEW ON B. SOUCEK

“Better Life and Business: Cell, Brain, Mind and Sex Universal Laws, Bentham Science Publishers: 2013, 214 p., eISBN: 978-1-60805-494-7”

The reviewed book “Better Life and Business: Cell, Brain, Mind and Sex Universal Laws” is written for the research in the technical, biological, and social systems. The major goal of the book is to establish a new discipline BRAINLIFE BIZ that helps to develop computer models for human and animal behavior. The book contains the significant results in the area of neuroscience and machine learning in general, which will enable to solve the problems of practical importance, for the most part, in the area of big data analysis.

The book contains 30 laws and 100 equations, which describe the processes in different systems: real-time data, acquisition systems, control systems, and transaction processing systems of the brain range. Soucek has introduced the concepts of MARKETBIZ and LIFEBIZ, which describe our behavior in business and in life very realistic and in great depth. Afterwards, to confirm his theory and mathematical models, the author carried out a lot of experiments with the animals and human.

Using principles of self-organizing makes it possible to establish new understanding of neuroscience as the science about behavior and state. It is noteworthy to mention that his name SOUCEK used as an acronym will make a list of elements of self-organizing systems: Self-Organizing of Understanding, Consciousness, Emotions and Knowledge.

Soucek worked as a professor of the Computer and Brain Networks at the Universities of Zagreb, New York and Arizona as well as a researcher and consultant for the NASA, IBM, and Siemens, Schering, Brookhaven National Laboratory, Institute Rudjer Boskovic. As a result he published more than 10 books about mini and microprocessors, computers and applications in Neurobiology and Behaviour, sixth generation computer technologies and so on. Professors and students in different countries have been using ideas from Soucek books published in English and translated into Croatian, Russian and Japanese.

I have had an excellent opportunity to work under professor Soucek’s supervision for one year at Zagreb University, Rudjer Boskovic Institute and inter-university centre of postgraduate studies at Dubrovnik at 1979-1980. Furthermore, Soucek ideas



about the event-train correlation that were described in his books I am using in my research and in doctoral study of my postgraduate students.

I'd like to stress very heavily. The reviewed book reveals the results of author's 50 years of experience. Each chapter in the book was previously published in *Periodicum Biologorum* from 1998-2010 years and received very positive feedback from different researchers. This book will be really useful for both professors and students, who are interested in the brain and computer science and its applications in Life and Business.

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SCHEDULING BY CONDITIONS FOR TIME BASED REASONING

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Nowadays multi-agent technologies are being successfully applied in intelligent systems for resources scheduling and allocation. Especially good results are demonstrated in transportation logistics [1] where geographical constraints can be used for limitation of a number of iterations of agents' negotiation.

One of the main challenges in such systems is concerned with a compromise that needs to be found by a development team. From one side the agents should have freedom of interaction and no direct instructions can be given to them. From the other side the negotiation procedure should be open and comprehensible in order to make it possible for an operator to explain the results and manage the decision making process.

On of the perspective approaches of solving this contradiction is to introduce time management algorithms that are based on statistical analysis of event flows in the system. Events that happen in the system can characterize interaction with external environment (external events) or can be related to the messages that are sent between the agents (data exchange events). Both have irregular time intervals and can be described by non-equidistant time series.

Each agent as well as the operator (represented by the Center or the World agent) can analyze these time series, discover the strategies of negotiators and build its own strategy in the form of a schedule of limited data exchange. This approach intends a procedure of interaction, in which the agents don not exchange all the information that they have, but distribute it to portions, given at different time to different contractors.

In this paper we present a concept of such an approach captured in a technology of "scheduling by conditions", meaning time conditions primarily and illustrate how it can be implemented in peer-to-peer (P2P) outsourcing solution based on auctioning.

Modern integrated information space is a complex system with heterogeneous structure that includes various data bases, pieces of software, tools and systems for a