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Americas Conference on Information Systems (AMCIS)

December 1999

Organizational Engineering based on the OER-paradigm - A Tutorial

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Organizational Engineering based on the OER-paradigm – A Tutorial

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Objective

To acquire an understanding of business processes in which one completely abstracts from the supporting information systems and technology as well as from organizational structures and staffing. The so-called essential model of an organization represents such an understanding. This model appears to be an ideal starting point for such activities as Business Process Re-engineering, Information Systems Strategy, Information System Development, and WorkFlow management, but also for addressing the essential issues of Virtual Organizations and Electronic Commerce.

Outline

The tutorial consists of three parts, each taking roughly one third of the time. In the first part the theoretical basis of Organizational Engineering based on the OER-paradigm will be explained. Then the high practical applicability is demonstrated, taking a recently conducted project as the leading example. In the third part, the experiences in the diverse application areas are presented and discussed.

Description

The traditional and dominant approach to improving the effectiveness (with respect to the external market) and the efficiency (with respect to the internal operation) of organizations is the one taught at Business and Management Schools. Although there has been a variety of different 'schools' within them (like e.g. Taylor, Fayol, Likart, Simon, Mintzberg, Rockart, Porter, and Senge), they all have a function/behavior-oriented way of thinking in common and a corresponding preference for black-box models. To draw a metaphor, an organization is basically viewed as a race car driver views a racecar: it is controlled by 'turning the knobs', and if you are sufficiently skilled, you can let the car do almost everything you want. However, this is only true as long as and insofar as the things 'under the hood' allow you to do what you want.

Under the name 'Organizational Engineering', a radical different approach towards the same problems is presented. Instead of being function/behavior oriented and applying black-box models, it is construction/operation oriented and applies white-box models. To proceed the metaphor, the approach reflects the view of the car mechanic; it focuses on what is 'under the hood'. Taking such an engineering position towards organizations was considered rather queer up to now, in the absence of a clear notion of the construction and operation of an organization. Such a notion has been developed in the past ten years at Delft University of Technology, and it is called the OER-paradigm[1]. This paradigm draws on three scientific sources of inspiration: Habermas' theory of Communicative Action[2], Stamper's Semiotic Ladder[3], and Bunge's Ontology[4]. The core notion in the paradigm is the OER-transaction, which is a pattern of communication and action that consists of three phases: the order phase (O), the execution phase (E) and the result phase (R). This notion serves as the prototype for the business transaction in the very successful DEMO methodology (Dynamic Essential Modeling of Organizations) for a/o Business Process Re-engineering, Information Systems Development and WorkFlow Management.

Some fifty, small and large, projects have been conducted up to now, in production industry, service industry and government. The most important success factors are invariably the appropriateness and clear definition of the basic concepts, as well as their high practical relevance. Both managers and employees appear to be able, after a one-day course, to understand the DEMO models, to recognize the modeled processes, to identify in these models their problems, and even to suggest solutions as modifications to the models.

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[1] The word "OER" is a Dutch word, meaning "primal", "original". It expresses that one seeks for the essence by abstracting from (current) realization. It is also the acronym for Organizational Engineering Roots.

[2] Habermas, J., *Theorie des Kommunikatives Handelns*, Erster Band, Suhrkamp Verlag, Frankfurt am Main, 1981

[3] Stamper, R.K., Applied Semiotics, in: *Proc. of the ICL/University of New Castle Seminar 'Information'*, New castle, 1993

[4] Bunge, M.A., *Treatise on Basic Philosophy*, vol. 3 and 4, D. Reidel Publishing Company, Dordrecht, The Netherlands, 1979

About the lecturer

Jan Dietz started his scientific career in 1980 at the Faculty of Industrial Engineering of Eindhoven University of Technology, after having worked as practitioner since 1970. In 1987 he obtained his Doctoral Degree on the subject of modeling and specifying information systems. In January 1988 he was appointed Professor of Management Information Systems at the University of Maastricht in the Faculty of Economics and Business Administration. From September 1994 on he is Professor of Information Systems at Delft University of Technology.

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