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Editors

Advances in Information Systems Development

New Methods and Practice for the Networked Society

Volume 1

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Preface

This book is the outcome of the Fifteenth International Conference on Information Systems Development, ISD'2006, held in Budapest, Hungary between 31st August – 2nd September 2006. The theme of the 2006 conference was "New Methods and Practice for the Networked Society".

This theme expresses that we are living in a new era when practically all of our information resources are organized and managed in a networked environment. Information technology has reformed and restructured the workflows of companies and other organizations over the past several decades, and will continue to do so well into the future. This is particularly important now, as we see the emergence of complex networked information systems. "Being digital" by Nicholas Negroponte was the watchword at the dawn of the information society. "Being online" is now at the very heart of our everyday life. New postulates and requirements are stemming from this nature of society of today and tomorrow. The convergence of IT and infocommunication technologies has presented a challange for the ISD profession in terms of accomodating mobility, interoperability, the "always connected" state of information systems, the evolving distributed nature of information resources and the growing volume and diversity of information. IS development, both as a professional and academic discipline, has responded to this challenge through methodologies, tools and theory development. Progress in ISD comes from research as well as from practice. The aim of the Conference was to provide an international forum for the exchange of ideas and experiences between academia and industry, and to stimulate exploration of new solutions.

The ISD Conference evolved from the first Polish-Scandinavian Seminar on Current Trends in Information Systems Development Methodologies, held in Poland in 1988. It was a great honour and responsibility for us to organize the fifteenth event within this fine series of conferences.

Putting together a book of this magnitude requires the cooperation and assistance of many professionals with much expertise. We would like to express our

gratitude to all the authors and participants for contributing to the conference that we believe to have been successful and memorable. The conference call for papers attracted a great number of very high quality papers. All papers were double-blind refereed by at least two independent reviewers and an Associate Editor. They provided detailed reviews on all papers submitted. We would like to thank the IPC members for their essential work.

Many thanks are due also to the assistance in organization of ISD 2006, especially to the Scientific Association for Infocommunications (HTE) and to the Conference Secretary, Mr. Sándor Szaszkó. We are also grateful to the National Office for Research and Technology (NKTH) for the financial support of the Conference.

Gabor Magyar,
Gabor Knapp
Conference co-Chairs,
ISD 2006

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A Revised Perspective on Documentation Practices in the Modern Organisation

J. Coady, R. Pooley

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Abstract: There are a number of reasons for the use of various methodologies in the development of systems (Broady, Walters & Hartley (1994)), notably a reduction in user dissatisfaction and more effective communication between systems developers and users. These reduce the risk of a new system being presented to its users as a fait accompli. The use of an appropriate modelling paradigm can produce a better end product, improved consistency and the likelihood of improved user acceptance.

Formal methodologies may be appropriate for more technical systems where fewer human factors are involved; however, they may be too mechanistic to be effective in detailed, day-to-day organization of developers' activities. Traditional methodologies can still be valuable in IS development projects in order to maintain an image of control or to provide symbolic status (Nandhakumar & Avison (1999)).

Hard methods, such as structured and object-oriented approaches, (Bocij et al. (1999)) focus on the Computer Based Information Systems as a technical artifact, which must satisfy a set of well-defined user requirements. According to Chekland & Howell (1998), organisational change and improvement can only be successful when the organisational actors are engaged in that change. The IS is increasingly being viewed as a social artifact, and researchers such as Stapleton (2001) and Dewar et al. (2003) highlight the need for a revised perspective on ISD to deal with this development. Coady (2003) showed that, while there is a body of work which is concerned with the social aspects of creating a technical artifact, very little work has investigated documenting the IS as a social artifact.

This paper presents an empirical study; which identifies those practices that academia suggests are the current industrial standards, compares the perceived standards to current practice in the organisations involved in the research and develops conclusions suggesting better industrial practice.

1 Introduction

Early computerized information systems were typically implemented without the use of an explicit development methodology (Broady, Walters & Hartley (1994)). As a result of early era problems developers of the 60's and 70's learnt a number

of lessons, which included the use of a life cycle, consisting of documentation, control and training, and that failings could be attributed to the narrowness of perspective of the analyst and the need for a real view of the organization. These lessons led to the development of many of the current methodologies (Broady, Walters & Hartley (1994)).

A system is an organized integrated unit that serves a common purpose, formed from diverse components (Ossenbrugen (1994)). There are many modelling notations available to analysts trying to simplify systems. Systems theory generally attempts to understand the nature of systems, which are large and complex. However, systems theory suggests that whatever methodology is adopted the analyst needs to look beyond the obvious boundaries and at the system as a whole. Information systems generically have human and computer elements and both aspects are inter-related. The technical aspects are closed and predictable, whereas the human aspects are often open and non-deterministic. The technological aspects are less complex than the human aspects in information systems, because the former are predictable in nature. Many information system methodologies only stress the technological aspects. This may lead to a solution, which does not work effectively, because often methodologies underestimate the importance and complexity of the human elements (Avison & Fitzgerald (1996)). This research study examines the problems of documenting systems and reviews the frameworks used within the firms studied for best practice in the light of what is known about IS documentation.

2 The need for a revised perspective of IS documentation

The concept of the learning organisation, as presented by Argyris & Schon (1996), is defined as a means to reflect upon, and re-evaluate the knowledge that is created by individuals within the organisational context. The organisation is changed as a result of this learning process. The learning process can be viewed as an ongoing sense making activity based on the collective knowledge of the individuals (Argyris (1976)). In this way the documentation of an organisation can help in the learning and development process and create a learning organisation by continuous re-evaluation and gathering of information.

According to Chekland & Howell (1998), organisational change and improvement can only be successful when the organisational actors are engaged in that change. By implication the area of IS documentation can also be affected by this change, whereby it is a necessity that the actors in a system are involved in the documentation and modelling process in order to ensure a compatible system. 90% of Information and Communication Technology (ICT) projects fail to meet their goals due to a misalignment of goals and organisational activities (Clegg et al. (1996)). IS documentation and development is supposed to consider organisational issues but too often IS is looked upon as a subsystem external or separate from the rest of the organisation. Bednar (1999) suggests a way of improving the disparate view of IS documentation and development is to view the organisation