REBPS'03: Motivation, Objectives and Overview
Message from the Workshop Organizers

Abstract. It is well known that it is difficult (if ever possible) to introduce business process management without having a computer system to support business processes. Requirements engineering (RE) for business process support (BPS) systems somewhat differs from RE for traditional business (information) systems in, at least, two aspects. First, a traditional data-model (conceptual model) does not give enough information for building a system, a detailed process model should be built in addition. Second, a traditional business information system is, normally, designed to support a business as is (but more effectively), while a BPS system should be designed to support a new way of running the business, the one which is not possible without the system. The latter leads to substantial requirement changes even long after the system has been deployed. This workshop is meant as a forum for discussing the problem of RE for BPS. The workshop is designed as a meeting place for both researchers and practitioners in the fields of business development, and business application software development.

1. Motivation

Business process orientation is considered to be an efficient way of increasing productivity and effectiveness of companies and organizations. This is a long process that starts with process identification and mapping and goes on through analysis and reengineering to introduction of process management and process-oriented organization. Business process management, which is constant improvement of business processes, is often considered to be the most important part of process-orientation. However, the process management is impossible to (effectively) introduce, without, first, introducing means for processes control to ensure that each process instance, as a rule, is run according to the process definition. Without process control, the whole idea of process management would not work. If we cannot ensure that the process is run according to a (maybe non-optimal) definition, what is the point to optimize it?

For many business processes, especially for those that run across the departmental boundaries and include many human participants, the only way of establishing business process control is via the introduction of a business process support (BPS) system. Such a system should help the human participants to run their processes thus encouraging them to follow a process definition by providing assistance (not by pure force). Simultaneously, the system can gather all essential information about each instance of the process, e.g., when and how started, when and how finished, all activities performed, etc., which is invaluable for process management.

2 What is special with BPS development?

Development of BPS systems differs from the traditional business (information) system development in many aspects some of which are listed in the table 1.

Table 1. Aspects of system development.

Aspect	Old generation	New generation
Organizational aspect	Support old ways of running business	Suggests new, more effective way of achieving the business objectives
Modeling	Data Modeling	Process Modeling
Data Base	Static and passive	Dynamic (history-minded) and active
User Interface	Functional (multilevel menus)	Navigational (free navigation in the space of interconnected business objects)

The differences concern all stages of application development including requirements engineering (RE). The first two aspects are of particular importance for RE as they require:

- Understanding not only the mission and goals of the system under development, but also the broader goals of the business that the system is to support. This includes so-called functional goals, e.g. "I want the goods delivered", as well as non-functional goals, e.g. "I want my customers to be happy because the goods arrive undamaged and promptly" (a possible approach to modeling both types of goals see in [1])
- Building a business process model in addition to a data (conceptual) model, and functional specifications (on insufficiency of current modeling techniques from the point of business process reengineering see in [Yu & Mylopoulos, 1994]).
- Discussing not only what the future end-users want from the system, but also what the system will require from them.
- Being prepared that requirements will undergo substantial changes even long after the system has been deployed, as at the start we have only a hypothesis that the new way of running the business is better than the old one. The hypothesis is bound to be corrected in the process when the business and the system will converge to become synchronized.

Building a business process model is a complex task that includes understanding the process goals, business environment in which the process operates, various participants of the process, etc. This is a challenging task because:

Business processes are not always clearly visible as they may go through the whole, often functionally structured organization.

Written information about business processes is often non-existing or not reliable. The only practical way to obtain reliable information for creating a model of a real business process is to rely on information received from the people engaged in the process.

3 Objectives

The current event continues the series of international workshops started in 1998, see [2,3,4]. The previous workshops were devoted to various problems of business process modeling. With this workshop we make a step in the direction of using business process models in business practice.

The objective of the workshop is to discuss the main issues of RE for BPS. The following topics are considered to be of particular interest:

- Process models suitable for building computerized support (executable process models)
- Techniques for building such models based on communication with experts in the field in question
- Functional and nonfunctional requirements for BPS systems
- Problems of introduction of BPS systems in operational practice
- Methods of system development that can ensure (relatively) easy adaptation of the system to changing requirements in the process of initial deployment of the system

4 Overview

The workshop is structured in three parts: introduction, presentations and brainstorming. In the introductory note, Gil Regev and Alain Wegmann discuss what the industry expects to get from introduction of a BPS System. According to the authors, the main expectation is to achieve the right combination of specialization and generalization; the one that would allow an organization to survive (and grow) in an ever faster changing business world.

The presentation part consists of 5 position papers that discuss various problems connected to RE for BPS. In the paper "Eliciting Stakeholders' Knowledge of Goals and Processes to Derive IT Support", Stewart Green describes an experience of extracting knowledge from experts for building a process model, and reengineering the process before developing a computer system to support it. A combination of questionaires, private interviews, and direct external and internal observations were used for this end. The experience concerns creating a system for Help Desk.

In the paper "The Focus of Requirements Engineering in Workflow Application Development", Niko Kleiner analyses a 7-year long project of the introduction of a process-support system in the auto-design business. The project went through three iterations two of which were unsuccessful. Based on the theory of "technologies-in-practice", the paper analyzes the experience from the project and gives some conclusions that require shifting the focus of the requirements engineering job. The requirements engineering is to be extended to the enactment of new releases of emerging support systems.

In the paper "The S3 (Strategy-Service-Support) Framework for Business Process Modelling", Peri Loucopoulos suggests a framework for business process modeling that could be appropriate for the requirements engineering job. The following arguments are listed in defense of the new framework. Its modeling notation (language) is understandable for all interested parties involved (stakeholders),

therefore any proposition can be analyzed and subjected to critique by everybody. The framework allows to view the process from various perspectives: on the level of the process instance (e.g., flow of activities), as well as on the level of the whole process (accumulators). It allows a quantitative analysis of alternative definitions of the process prior to the process implementation in practice.

In the paper "Planning Business Processes in Product Development Organizations", David Wynn, Claudia Eckert, P John Clarkson raise an important question on supporting dynamic planning for product design processes. The paper argues that process support tools for product design should suggest routes through a process rather than prescribe them.

In the paper "Identifying Types of Extra-Functional Requirements in the Context of Business Support Systems", Elke Hochmüller and Michael Dobrovnik discuss what kind of extra-functional requirements are the most important for BPS system development. While some topics raised in this paper intersect with those addressed by others, the paper addresses also a range of technical issues like scalability, durability, security.

The brainstorming session is aimed at discussing the most important questions related to RE for BPS, some of which are not touched by the presentations. To speed up the brainstorming session, two documents were prepared. In the paper "Are there Requirements for BPS?", Ian Alexander casts doubt if there is something special in RE for BPS. He critically overviews the current practice of "business process industry" and suggests to use standard recommendation from RE theory and practice when developing BPS systems.

In the paper "Business Process Support - From Initial Analysis to Introduction into Operational Practice. Obstacles to overcome", Ilia Bider lists the problems that are particular for BPS. The list is based on a number of hypothesis that concern BPS objectives and currents state of organizational practice.

After the workshop, a reportage on the event will be written and placed on the workshop site : http://www.ibissoft.se/REBPS03/REBPS03.htm.

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Ian Alexander
Ilia Bider
Gil Regev
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References

1. Yu, E., Mylopoulos, J., Towards modelling Strategic Actor Relationships for Information Systems Development - with Examples from Business Process Reengineering? *Proceedings of the 4th Workshop on Information Technologies and Systems WITTS'94*, Vancouver B.C., Canada December 17-18, 1994.
2. Workshop on Object-Oriented Business Process Modeling (OOBPM'98). Attached to ECOOP'98. http://www.ibissoft.se/ooworkshop.htm, 1998.
3. Workshop on Practical Business Process Modeling (PBPM*00). Attached to CAiSE*00. http://www.ibissoft.se/pbpm/pbpm00.htm, 2000.
4. Workshop on Goal-Oriented Business Process Modeling (GBPM*02). Attached to HCI'02. http://www.ibissoft.se/gbpm02/gbpm02.htm, 2002.