Chapter XX

Communication Analysis as Perspective and Method for Requirements Engineering

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Abstract

In this chapter we challenge the view of perceiving information systems as systems for storing, retrieving, and organizing large amounts of data. We claim that the main purpose of information systems is to support the communication that takes place between different actors in a work practice. We describe a communication perspective on information systems and its consequences for performing requirements engineering. In this perspective business documents play a prominent role. The perspective is operationalized into a method and an example from a case study is used in order to describe the method.
Introduction

Traditionally information systems (IS) are viewed as systems for storing, retrieving, and organizing large amounts of data. The aim of implementing IS has often been to achieve increased efficiency in business administration processes. This old view of IS can be challenged since IS nowadays are an integrated part of the daily work when performing different work activities. We believe that IS are more than a support for storing and retrieving data and claim that one of the main purposes of an IS is to support the communication that takes place between different actors in a work practice.

The purpose of this chapter is to describe a communication perspective of IS and its consequences for performing requirements engineering (RE). The communication perspective is operationalized into parts of an RE-method. The proposed method is not a comprehensive method for RE. The aim is to cover some aspects of the RE process that unfortunately are too often disregarded.

A case study is used to illustrate the perspective and method. The case study concerns development of an IS to support home care service for elderly people. The conclusions are based on both existing theory and empirical findings. After this introductory section the communication perspective is discussed in the next section. In the next section the concept of document is defined. In the section following that we present communication analysis (CA) as a strategy for RE. The next section informs about how to perform CA. In the final section we end up with conclusions.

The Communication Perspective

We will argue for viewing IS as work practice communication. The theoretical bases for this view are social action theory (for example, Weber, 1978) and language action theory (Goldkuhl & Lyytinen, 1982; Habermas, 1984; Searle, 1969; Winograd & Flores, 1986) and conversation analysis (Goldkuhl, 2003; Linell, 1998; Sacks, 1992). One of the main points in Weber’s theory of social action is that such action is intentional and performed taking into account the behaviour of other persons. Social actions are performed with social grounds and with social purposes. Using a social action perspective means that it is not acceptable to view IS as a black box with some social and organizational consequences (Dietz, 2001). IS should be perceived as systems for action.

The language action theory conceives communication as one type of action. Communication is not restricted to a mere transfer of information. To communicate is to establish interpersonal relationships between the sender and the receiver. Language action theories (for example, Searle, 1969) distinguish often between the propositional contents (what is talked about) and the communicative function (what kind of interpersonal relationship is established) of a message. Such communicative relationships involve expectations and commitments between the communicators.

In this language action perspective, IS are viewed as sociotechnical systems for action. This view differs from strict representational views of information. A representational
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