

Chapter IX

Sharing Views, Information, and Cross-Enterprise Culture in the Corporate Situation Room

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ABSTRACT

A major challenge for virtual organizations is the integration of their various corporate organizational and information assets, as well as their communication infrastructures and personnel. There also remains a need for greater understanding of how such virtual enterprises will operate in a “shared data / information / knowledge environment”, through distributed working approaches and based on the paradigm of using the situation room metaphor as the core paradigm for carrying out joint operations. In this chapter, we present a methodology for modelling corporate interactions using the concept of the situation room (SR) as a supporting paradigm. Such an approach enables a way to model interactions of a virtual enterprise nature by means of a information and knowledge auction market that is concerned with the communications and interactions within a virtual enterprise (VE). This forms part of a wider research in defining a methodological framework for situation room analysis (SRA), and its deployment for complex corporate intelligence systems study.

INTRODUCTION

In this chapter, we present a methodology for modeling corporate interactions using the concept of the situation room (SR) as a supporting paradigm. Such an approach enables a way to model interactions of a virtual enterprise nature by means of a information and knowledge auction

market that is concerned with the communications and interactions within a virtual enterprise (VE). This forms part of a wider research in defining a methodological framework for situation room analysis (SRA), and its deployment for complex corporate intelligence systems study.

Using this approach we propose the use of ontologies as a powerful means to support the

implementation of multiparty collaboration and decision-making activities that build on the paradigm of a situation room (SR).

The approach is characterized as top-down in that the SR paradigm is conceptualized through three related models: the situation room model (SRM), the information management model (IMM) and the situation analysis model (SAM). The ontology-based approach includes the semantic features of the exchanged auction-related information thus offering the integration of the SRA framework with existing corporate decision-making grids (Ankolekar, Burstein, Hobbs, Lassila, Martin, & McIlraith, 2001).

From the viewpoint of the architecture of the SRA-based auction system, Web services are used as a means for organizing the interactions amongst the SR participants, and the latter may assign their tasks (e.g., look up, identify and classify, relevance check, etc.) to them.

In this respect, SRA-based auction services can be divided into three general groups:

- **Information retrieval services:** A particular Web service is designed to support its “owner” in finding data or locating documents within the corporate Intranet environment. It searches structured (e.g., auction profile) and semistructured (e.g., auction-related support documentation) data, extracts information, processes it and filters it. Such a service is expected to “know” the desires and interests of its “owner” or its “invoker”. It knows where to look for this data and needs no assistance by the user. The autonomy is the main reason why someone should use such a service.
- **Cooperation services:** These are used to solve more complex problems. The cooperation Web service interacts and cooperates therefore with other Web services, its environmental resources and the users. Generally the cooperation service is more intelligent than the information retrieval

service because the ability of collaboration demands complex algorithms and functions. (Imagine for instance an SRA-based auction for a subject that needs involvement of experts from two different disciplines; in the simple case where no cooperation services exist, no initiative for a joint action could be taken.)

- **Transaction-related services:** These are used in the distributed SRA-based auction environment and are mainly assigned responsibility of carrying out valuation transactions to / from the participating (sub)systems or applications with a defined level of security. It is easy to understand that this third level of services can be treated as a black box, without causing any loss of the generality of the provided solution.

A focus aspect is the number of VE users, that is, the SR members to populate such a system. If just a few people participate in the SRA sessions, the resulting outcome is of marginal benefit with respect to the costs related for establishing and operating the system. The appropriateness of the proposed approach therefore lends itself to the case of larger VE organizations and schemes where there is an actual need to support multiparty decision-making with use of asynchronous session-based interactions. The individual SR members would be asked then to provide their individual views and contribute to parts of a global problem or issue, and coordinate their (individual) information appropriately through an *auction process*.

For instance, it is a totally different exercise to employ a thematic relevance check procedure for an amount of 10,000 documents with an average of circa 15 separate thematic keywords in each one of them, than it is to use it for a base of 1,000 documents with a complicated (nested) average of 15 keyword items for each document. Similar limitations to the appropriateness of the solution apply for the amount of involved parties.

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