Chapter 18

Equipping the Enterprise Interoperability Problem Solver

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ABSTRACT

The maturity of the enterprise interoperability field does not match the importance attached to it by many, both in the public as well as the private community. A host of models, paradigms, designs, standards, methods, and instruments seems to be available, but many of them are only used in rather small circles. Also, they constitute a poorly structured field, divided along disciplinary boundaries and filled with competition and incompatibilities, which is therefore difficult to set foot in by enterprise interoperability problem owners. This chapter proposes a scope and structure of an enterprise interoperability profession by taking the enterprise interface as the pivotal concept. It then defines four perspectives on such interfaces: design, transaction, implementation, and suprastructure. These four perspectives each house a range of issues, which can be tackled by the enterprise interoperability professional by using models and instruments. This chapter identifies and classifies such models and instruments and sketches how a collection of these can be implemented and used.

INTRODUCTION

Enterprise interoperability is the ability of two or more organisations to (electronically) share enterprise information in a meaningful and valuable manner. With the term enterprise information, we refer to any information that has direct meaning to the operational business of the organisations involved.

As a business issue — whether in private business or in government — enterprise interoperability has been around almost as long as enterprise information systems have been used in business processes. Nevertheless, where management and design of enterprise information systems enjoys the status of a recognized profession, exercised by recognized professionals, for quite some time now, enterprise interoperability today can hardly been seen as a recognized profession, with agreed-
upon methodologies and widely recognized professionals.

This does not mean that important components of such a profession are not available, whether it be in standardisation communities, software engineering circles, or elsewhere. At best though, these constitute so far only a scattered image of what might be called a mature enterprise interoperability profession. At best, enterprise interoperability is in its adolescence. Important indicators of this state are:

- the overwhelming amount of suggested and competing frameworks and architectures;
- a lack of explicit and extensive testing of the majority of these;
- a lack of a generally recognized terminology and toolset;
- the predominance of standardization as the paradigm for achieving interoperability, where a more variegated range of models and instruments would do justice to the complexity and variety of the business issue.

Several circumstances play a part in explaining this situation. Obviously, many types of issues meet in enterprise interoperability: technological issues, operational, tactic and strategic business issues, and legal issues. Where inside organisations, such issues are often conveniently organized and mutually hidden responsibilities, the inter-organisational character of enterprise interoperability cuts through all these aspects in a single stroke. The same character also makes that many interoperability problems do not have clear problem owners, which is a major setback for an adequate and timely solution. In other words, enterprise interoperability often falls between two stools, both in a disciplinary sense, as well as in the sense of problem ownership.

We argue though that, with the steady growth of e-Business and e-Government, the need for a more mature enterprise interoperability field is rising. With this chapter, we intend to provide a sketch of such a field. This sketch builds on a four-perspective model of what is taken as the pivotal concept of the profession: the enterprise interface. Each of these four perspectives involves a set of issues. For each of such specific issues to be solved, a stakeholder requires a specific combination of models and instruments. Near the end of this chapter, we provide a first investigation into such a set of models and instruments.

We stress that the goal of this chapter is to span and structure the enterprise interoperability field, from a professional and instrumental perspective. Within the boundaries of a single chapter, this implies that it can address the many issues involved only briefly, and be no more than a stepping stone for positioning and elaborating the models and instruments addressed at the end of the chapter. Also, literature references serve no other goal than to illustrate such issues and trigger further reading. The list of references therefore does not constitute a complete bibliography.

**EQUIPPING THE ENTERPRISE INTEROPERABILITY PROBLEM SOLVER**

Enterprise interoperability problem solvers, by the diverse nature of the enterprise interoperability problem itself, may be professionals of many types. They may be business managers deciding on investments in electronic information exchange; they may be contract managers designing and monitoring service contracts; they may be professionals designing inter-enterprise business processes; they may be information analysts, they may be software engineers; they may be strategists deciding on whether or not to engage in information exchange with partners or competitors. What they share however, is that they are all involved in what may be called the enterprise interface, where multiple organizational entities meet and interact.
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