Techies are very comfortable with the term infrastructure, and merrily extend the usage of the term infrastructure — irrespectively — whether semantics (or meaning) and syntax (formal properties of signs and symbols), like or dislike and such inclusiveness. This rule of inclusion comprehends everything that comes close to the area of technologies, and is freely incorporated under the rubric of IT (e.g., hardware, software and middleware, such as taxonomy, metadata, classification, indexing, programming language, fibre optics, analog and digital medium, etc.).

In raising an issue about the terminology, the reviewer has no prejudice, and let this be cleared at the outset. What matters is the book in hand, which uses many different phrases, terms and so forth, all probably, as interchangeable and synonymous in the mindset of the authors, for example, information infrastructure (p. 23-38), semantic technology (p. 67-68) or establish new communications without programming (p. xxv).

From the point-of-view of using an appropriate functional title, let us look outside the box. Some circles in IT use a related but more accurate term, viz., infostructure. Infostructure, as a term, is the \textit{summum-bonum} of this book. That is, the term fully and truly manifests whatever text, context and content is involved, and so also in the information handling process as dealt with in this book. The focus of this book is exclusively on info-structure (some may like to still call it middleware, and whatever is other than hardware, software, etc.). It deals with models of information, process, service interfaces and knowledge (tacit, explicit and culture-based) involved in semantically integrated Web-based work in organizations. And moreover, infostructure in this book is also about ontology, metadata, taxonomy, knowledge capturing and software tools that facilitate semantic interoperability. This is all about the naming — with malice towards none.
Back to the book in hand, Pollock and Hodgson share their business insights of what, when, how, where and which of the infostructure that will sustain not only the information industry, but also the corporate world. Interestingly, while there are many books on infrastructure as well as tools and technologies, there are hardly any on infostructure of the semantic interoperability in relation to Web work in organizations. This book is therefore a significant attempt to fill the void in the world of infostructure in relation to semantic Web practices.

Furthermore, *Adaptive Information* is a creative visualization of the missing bridge in business communication — a world before reading this book, wherein each machine and each human randomly talked and randomly understood each other. More about this random access will be dealt with later. The book, in short, facilitates reducing the barriers in effective communication. It demonstrates various methods of disseminating the message (that would be otherwise lost in the medium), including, figures, charts, mind-maps and so forth.

In this matter of attempting to enhance interoperability, Pollock and Hodgson get a high mark for covering, in a very unique way, experiences of the workplace, under the caption “Insider Insight.” And these, II’s, are spread all over the book, indicating the thorough approach of the authors in handling many unusual areas of semantic interoperability. This is how it is explained in the Preface: “These are ‘guest spots’ where industry luminaries voice their thoughts about an important topic of interest. The sidebars are inserted throughout the text wherever an ‘insight’ overlaps with the content being discussed in the main text. In this way, the reader should enjoy a diversity of ideas surrounding many topic of interest in the book” (p. xxix).

Since the subject of semantic interoperability and integrated communication is rarely dealt at length, it is worth reproducing some information from the book:

*As many traditional integration technologies prove inadequate to the tasks for which they were designed, it has become clear that any effective EAI (Enterprise Application Integration) solution requires a new approach to thinking about enterprise infrastructures. Adaptive Information provides that new approach. This groundbreaking guide introduces a revolutionary new framework for the infrastructure of the future: semantically aware; driven by models of information, process, and service interfaces; and able to learn new behavior; find patterns, and rebuild itself for different platforms. (Book Cover)*

Content-wise, *Adaptive Information* has a lot of information, all compressed in a single book:


Overall, *Adaptive Information* has special reference to visualize how the Web works using semantic and integrated environment in any enterprise. This book, in short, easily helps in visualizing what it means to organize and plan a semantic interoperability using grid computing, as well as, an integration of the business and technology domains.

The strength of *Adaptive Information* lies, then, in the illustrations (albeit, printed, not audiovisuals) of how semantic interoperability facilitates the following: (a) new capabilities,
The book describes how metadata, ontology and software tools must be adapted. Interestingly, as documented in each chapter these best practices are already integrated in some businesses to provide a semantic interoperability in Web work.

Conceptually speaking, the book educates (p. xxvi) its readers in four ways, namely, first, how to design a semantic interoperability system, second, make informed decisions about the required middleware, third, opt for the most appropriate architectural strategies, and fourth (as well as foremost), apply new capabilities in improving business communication channels, all within the framework of synchronizing Web semantic operations. Synchronizing the applications is the bottom line in this book; whereas asynchronous strategies abound anyways.

What is fascinating, and makes Adaptive Information readable, is the extensive details about the role of metadata, illustrated hierarchically in six layers (pp. 130-135), namely, instance data (essentially raw data), syntactic metadata (needed to process data), structural metadata (which gives form and structure to units of data), referent metadata (to provide linkages between different data models), domain metadata (forms a conceptual domain ontology to provide a reference point on which all metadata can be understood), and rules (which constrain the semantics of metadata specifications).

The book also has another interesting window for the middleware practitioners, that is, ontology types (pp. 149-153). Adaptive Information has four different types of ontology, namely interface (models essentially the API), process (applying to time-dependent processes), information (specification of a collection of concepts for a given scope), and policy (specification of rules of usage). Of particular interest in their discussion is that of the transformation of ontology’s, which allows the moving of data from one model to another.

For some advanced practitioners, all of the above minor details may sound boring. Contrary to this, it is also a fact that the book has too little information that is directly useful, for any single group of users. In trying to be holistic and too detailed, the book might fail to appeal any single category of readership. For instance, while a student who uses Adaptive Information needs one level, and a practitioner needs this very information at another level. From the knowledge workers point of view areas such as indexing, archiving the tacit communications and so forth are not dealt in this book. One has to look elsewhere.

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Adaptive Information is, nevertheless, an essential textbook for the course participants at Cerebra University, where Jeff Pollock is a faculty member. Furthermore, because this book speaks the language of standards, such as the W3C, OWL and so forth, it is definitely a useful tool for Semantic Web developers and practitioners, as well as CIOs, CTOs, managers and infostructure specialists.
ENDNOTES
1 Taher, Mohamed, Infostructure in National Development Perspectives [comparing the use of infostructure and infrastructure] www.geocities.com/drmtaher/infostructure.htm

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