



Model Semantics at Every Level

Since almost the beginning of the computing world, the hardest problem has always been integration. The first programs were self-contained small, and well-defined; they were typically descriptions of mathematical algorithms, cast into the new language of computing (for the first decades, assembly language, specific to specific computing architectures). As soon as those programs were written, the first legacy systems were in place, and the first integration problems appeared.

Integration of existing application code is critical to the construction of large software systems, the same way that systems engineering is about the integration of engineering disciplines; it makes more sense, in the abstract, to paste together existing codes to make larger ones than to start from scratch. That requires, however, the full understanding of the codes that already exist, or at least the interfaces at the edges of those codes and the meaning of those interfaces. Building the world's best password vault is useless if programmers that need to use that vault can't understand how to unlock it.

Every system ever built and used is a legacy system that at some point has to be integrated with other systems. In order to make that possible, those legacies must be understood. They've been built to different requirements, with different intended purposes, different architectures and most

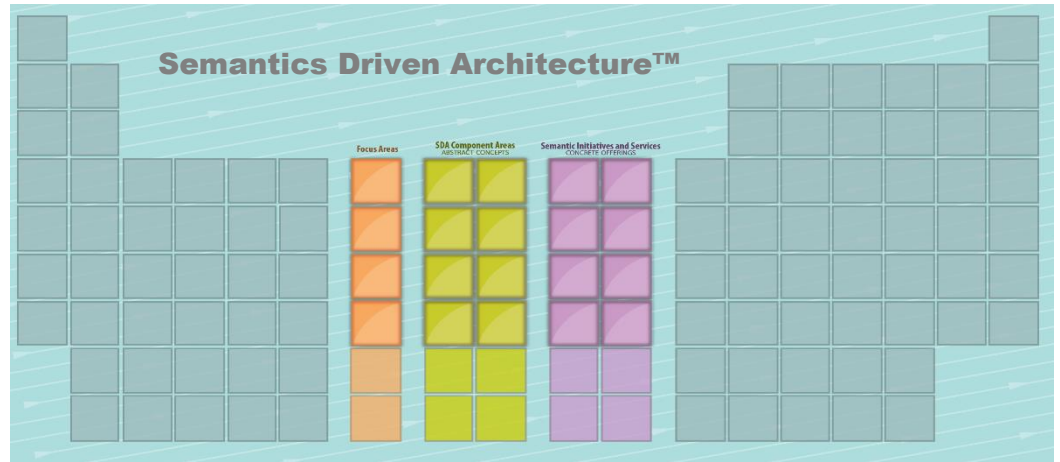
importantly typically by different designers, and those different designers had different semantics in mind.

The Object Management Group has approached this problem for more than twenty years with an approach called Model Driven Architecture, an approach that focused on capturing as many details as possible about the "edges" between systems--relationships, parameters, interfaces. But we need more; we need to share the meanings of words, and not just the words. We need Semantics Driven Architecture™.

Since 2000, the OMG Ontology Platform Special Interest Group, Business Modeling and Integration Task Force, and other working groups have developed a scaffolding of standards and technologies in the semantics space. Some of these, such as the Semantics of Business Vocabulary and Business Rules specification, are focused primarily on modeling the terminology and linguistics aspects of semantics, while others, such as the Ontology Definition Metamodel, Distributed Ontology, Modeling, and Specification Language, Decision Model and Notation, and Production Rule Representation are designed to support formal knowledge representation and reasoning applications.

Shared Semantics

Elemental to achieving interoperability is establishment and accurate conveyance of a shared meaning across organizations and the systems that support them.

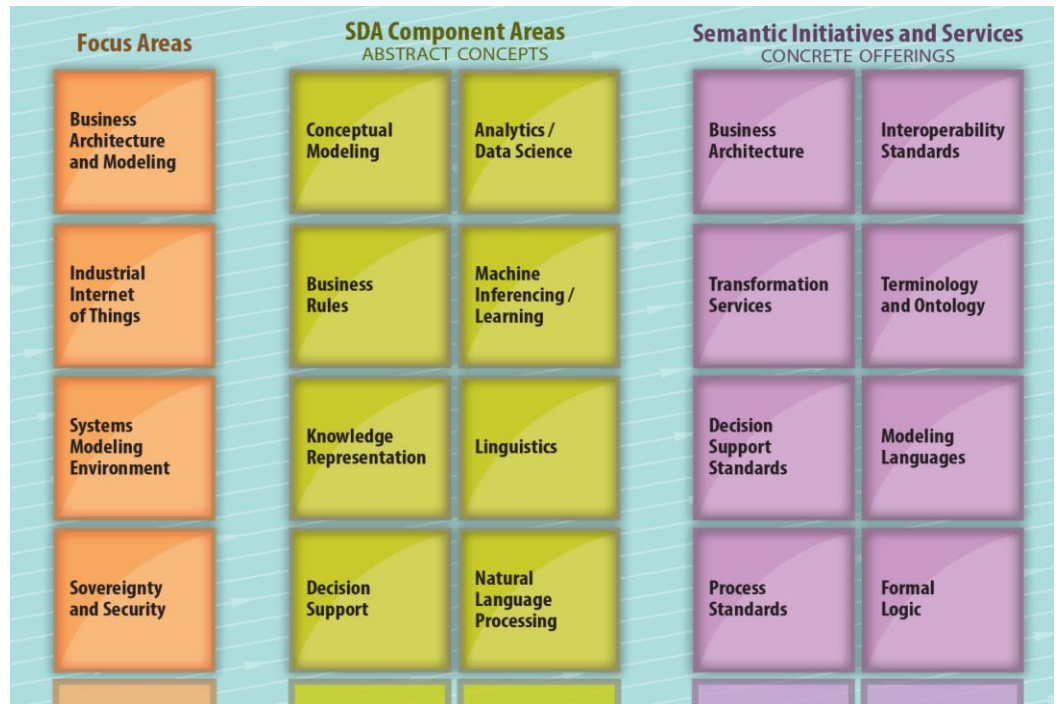


Join the Conversation

Creating such a rich, semantically enabled fabric of standards doesn't happen in a vacuum. The biggest breakthroughs in the last 50+ years have been cross-technology, cross-domain, and cross industry, and it takes a community of people that are the best at what they do in their individual companies and domains, coming together to brainstorm on how to cross the chasm to create them

We are happy to discuss how OMG membership will benefit your organization. Please explore our website at www.omg.org and when you are ready, contact us at bd-team@omg.org or call +1-781-444-0404.

This semantic infrastructure is the basis of the Semantics Driven Architecture™, and the basis of everything OMG does--and frankly, the basis for integration projects worldwide, just as the Model Driven Architecture and model-based development in general swept the world since it was first introduced by OMG in 1999.



The Object Management Group® (OMG®) is an international, open membership, not-for-profit computer industry standards consortium. OMG Task Forces develop enterprise integration standards for a wide range of technologies and an even wider range of industries. OMG's modeling standards enable powerful visual design, execution and maintenance of software and other processes. www.omg.org