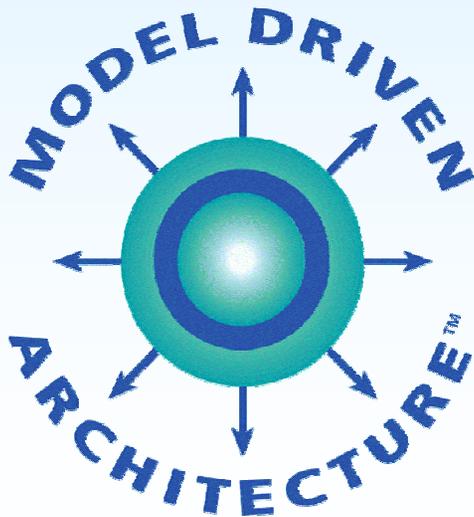
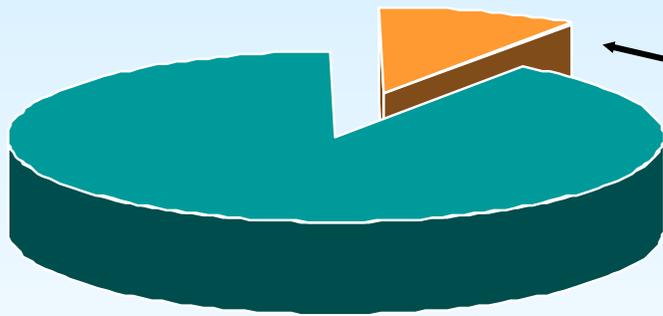


Architectural Components & Services Supporting Authenticity Requirements: Model Driven Architecture



Richard Mark Soley, Ph.D.
Chairman and CEO
Object Management Group, Inc.

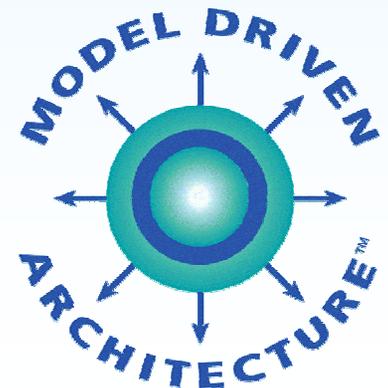
The Wrong Focus



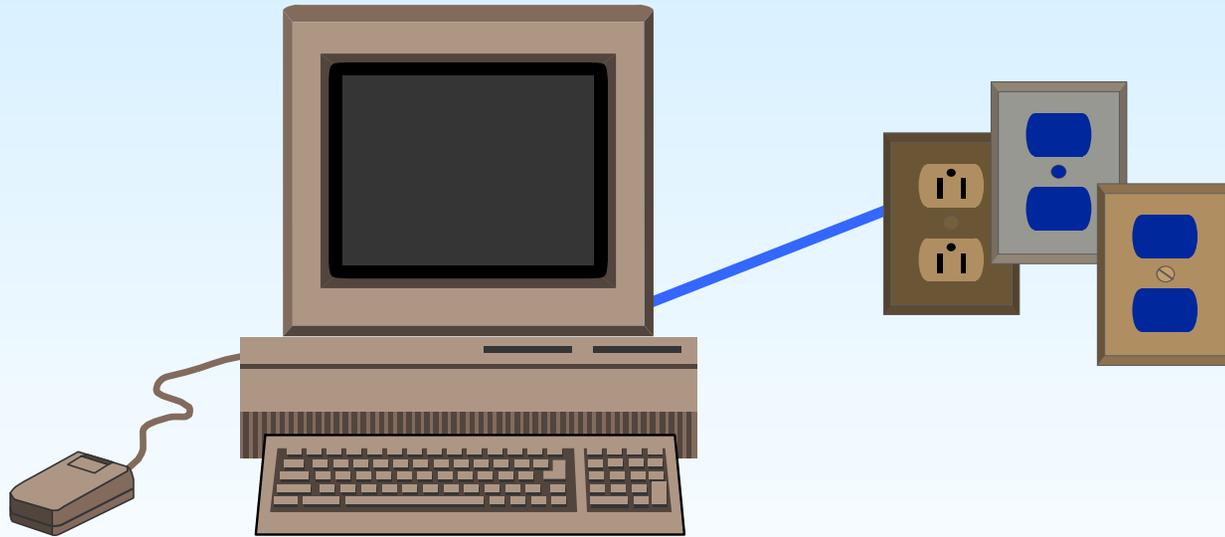
Analysis, Design, Development,
Test & Deployment: 10%

Maintenance & Integration: 90%

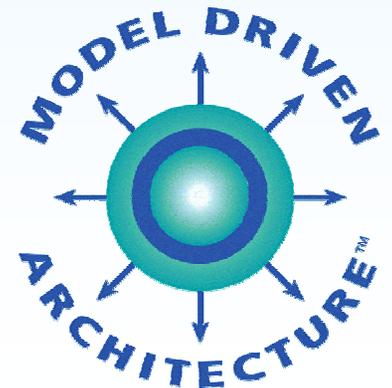
The agile support of authenticity or any other attribute of systems over time requires *initial focus*.



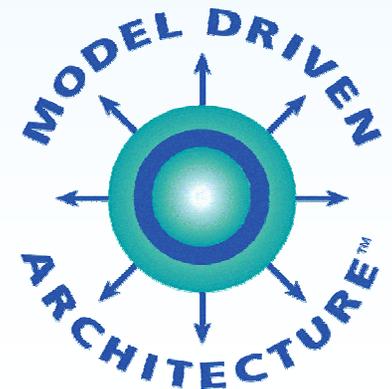
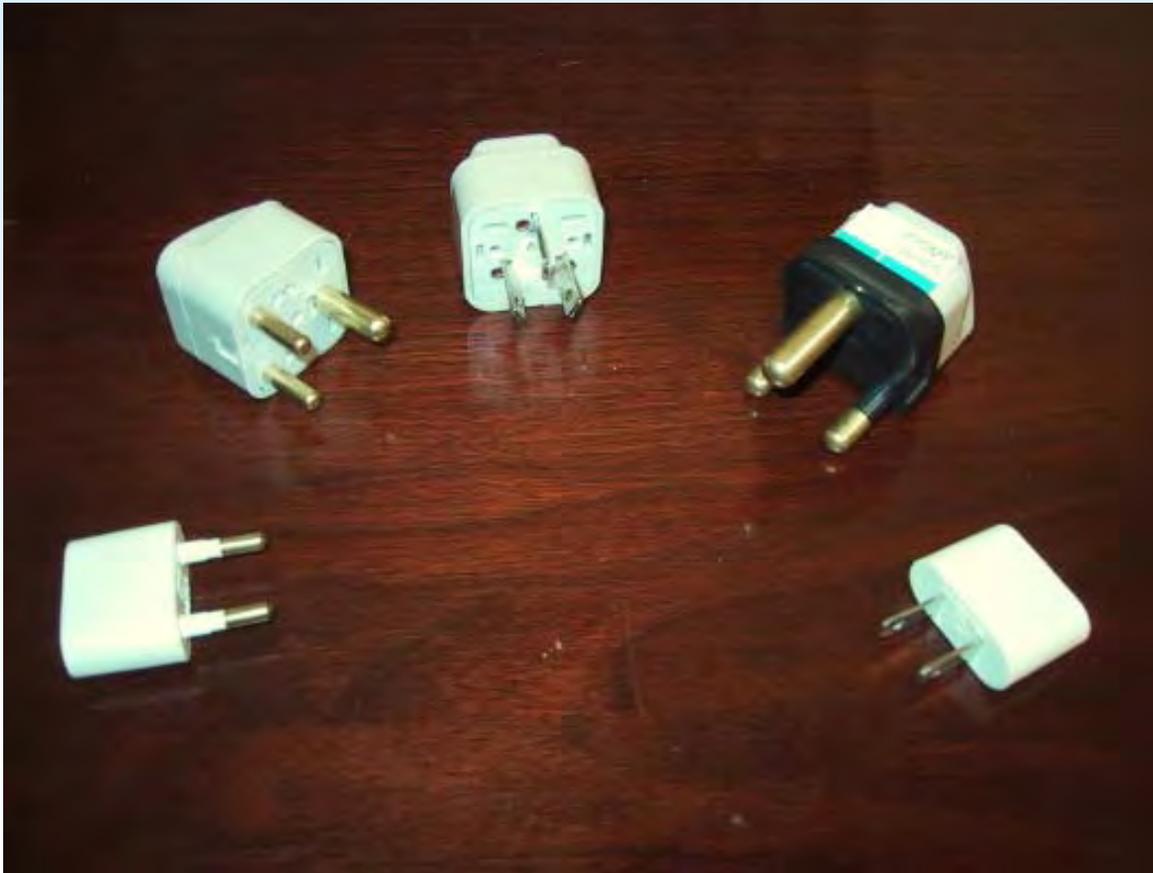
Deep Background



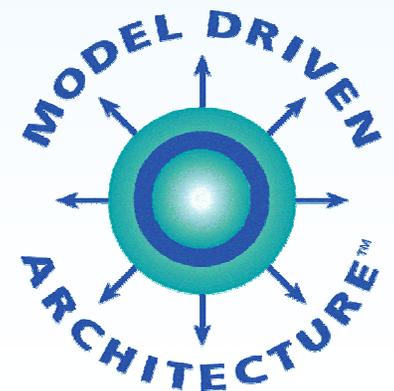
The Global Information Appliance



Not too bad for electrical power

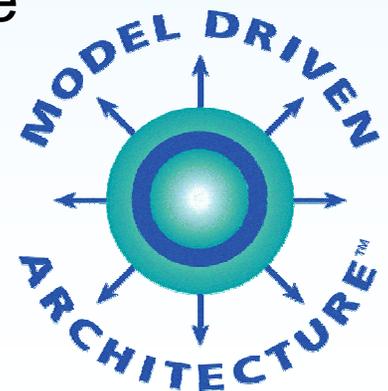


...but a mess for telephony!



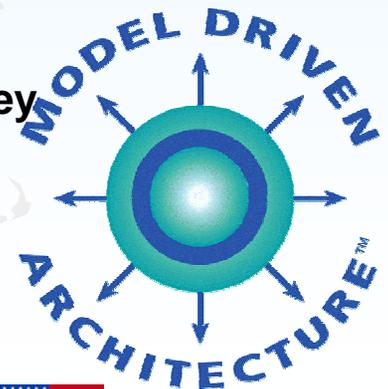
OMG's Mission Since 1989

- Develop an architecture, using appropriate technology, for distributed application integration, guaranteeing:
 - reusability of components
 - interoperability & portability
 - basis in commercially available software
- Specifications *freely available*
- Implementations exist
- Member-controlled not-for-profit



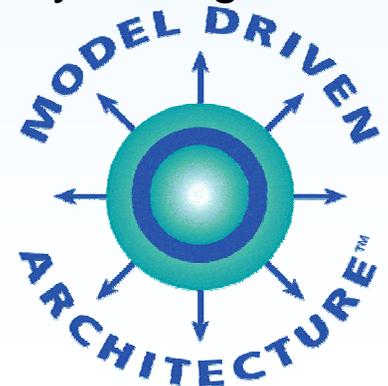
Who Are OMG?

Alcatel	Eurocontrol	NARA	Schlumberger
AT&T	Fujitsu	NASA	Sun Microsystems
BEA	Hewlett Packard	NATO	SWIFT
Borland	Hitachi	NEC	Technologic
Boeing	IBM	NTT DoCoMo	THALES
Cape Clear	IONA	NUWC	Tokyo U.
Codagen	Kennedy Carter	Oracle	Unisys
DaimlerChrysler	Lockheed Martin	OSD	UT Sydney
DENSO	MedicAlert	Sandia Labs	Visa
EDS	MITRE	SAP	W3C



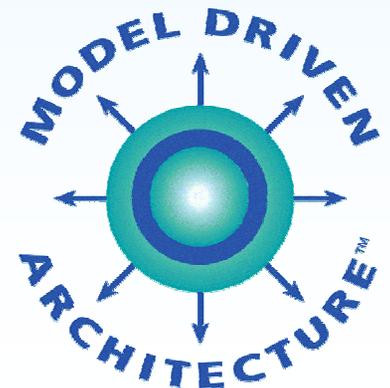
The Model Driven Architecture

- **Model Driven Architecture** precisely at the problem of integrating heterogeneous systems in the face of constantly changing requirements & infrastructure
- You have an opportunity to increase your bottom line by *integrating your assets*
- Industry standards support that goal by future-proofing your application design
- The MDA will help you integrate the mix you have today, and give you an architecture to support the unexpected
- Focus on integrating legacy applications
- Ensure smooth integration of COTS applications
- Models are *testable* and *simulatable*
- The aim: *a 20-year software architecture*

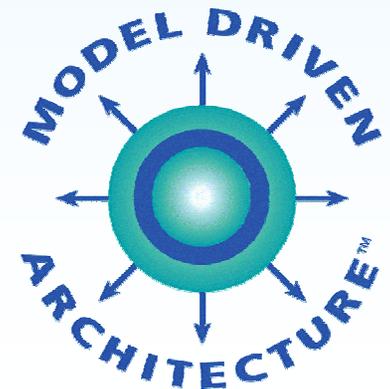
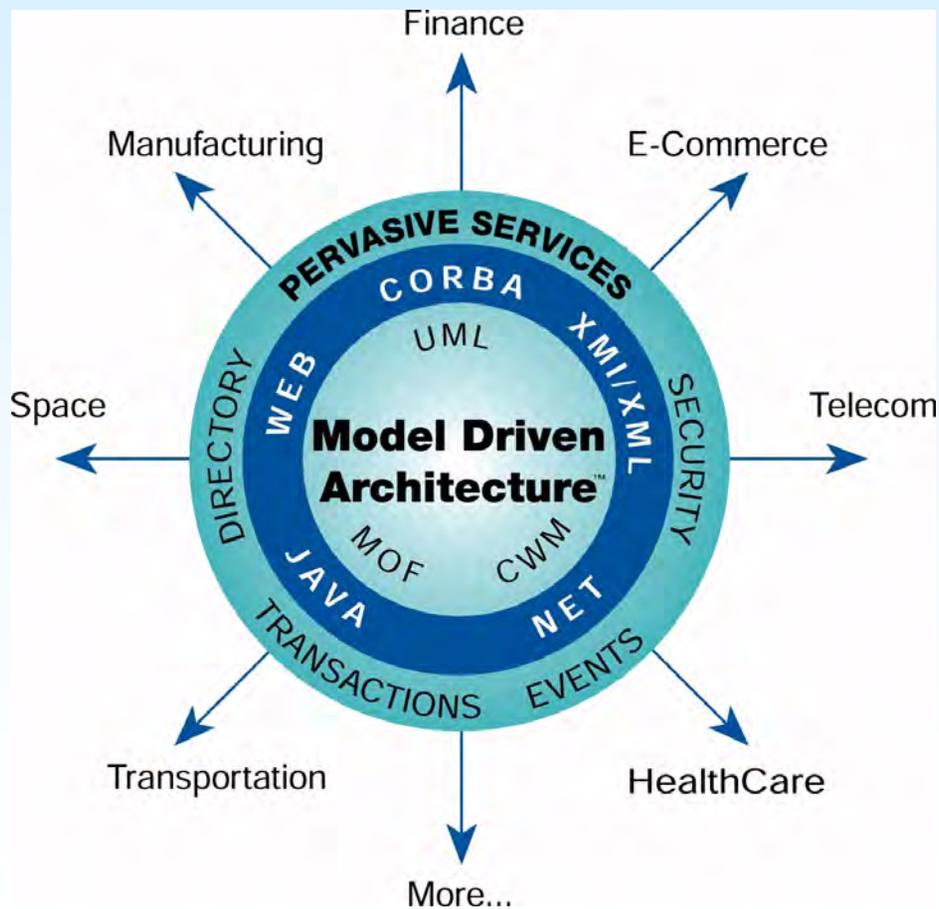


Model Driven Architecture

- An *initiative* of the Object Management Group (OMG)
- A *brand* for tools based on OMG's UML and MOF open standards
- A *set of specifications* defined by OMG's open, worldwide process.

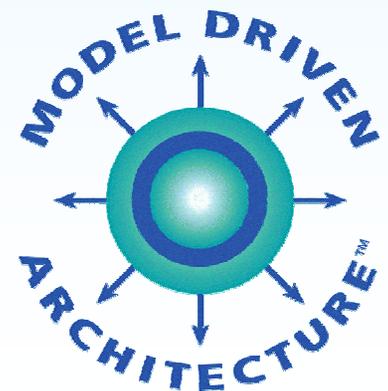


Model Driven Architecture



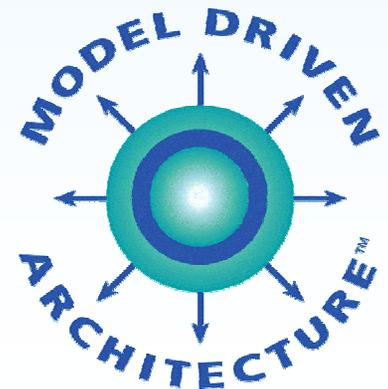
Leveraging UML is Critical

- The Unified Modeling Language is the successor to the dozens of OO A&D notations of the early '90s.
- Result of an OMG adoption begun in '96 and completed in '97
- Complemented with repository (MOF) and XML Metadata specs (XMI) for interoperability
- Standardization primed the market
 - Over 200 books, in many languages
 - Endorsed, recognized certification available
 - Dozens of commercial tools
 - Widely available training, consulting
- Supported by an open process
 - UML 2.0 & MOF 2.0 developed openly



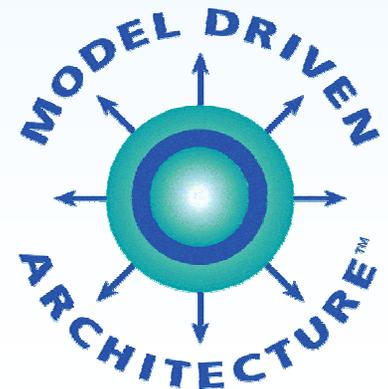
The MDA Pattern

- There is a general pattern to MDA:
 - *Discover* multiple syntaxes for a single semantic
 - *Derive & design* a model which underlies that semantic
 - *Develop* transformations between those models



Relating to Our Topic

- The problem isn't just supporting authenticity requirements...
- ...it's *supporting authenticity requirements while the requirements above and the infrastructure below are constantly changing.*
- Agile process require agile systems



To Get More Information

- MDA Information Page
 - <http://www.omg.org/mda/>
- OMG General Information
 - <http://www.omg.org/>
- Contact the Author
 - soley@omg.org

<http://www.omg.org/~soley/mdanara.ppt>

