


ATHENA
Training in Interoperability



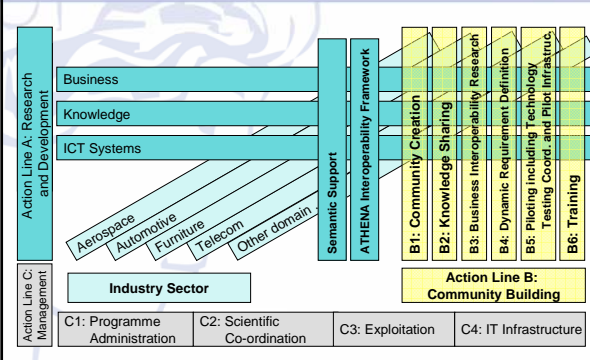
Agent Technologies in Service-Oriented Architectures for Enterprise Interoperability: Results and Perspectives

Dr. Klaus Fischer
Multiagent System Group
DFKI GmbH, Saarbrücken
Brussels, 8.2.2007

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ATHENA: Interrelation of Action Lines



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ATHENA: Structure & Domains



Business Level

Knowledge Level

Service-Oriented Architecture
Model-Driven Architecture

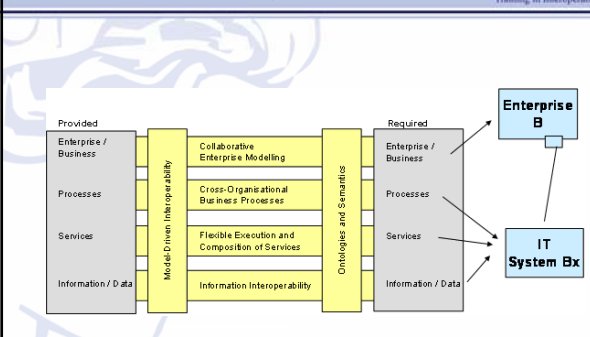
Interoperability of Business Applications

ICT Level

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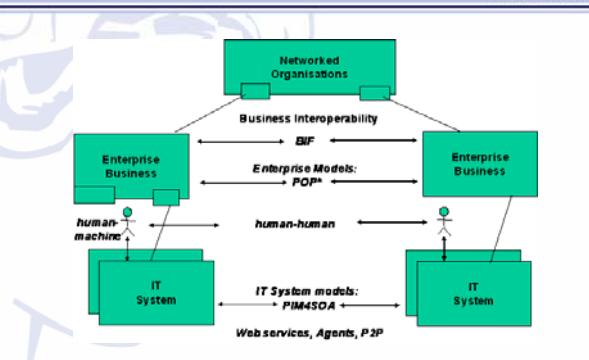
ATHENA Interoperability Framework (AIF)



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Reference Architecture Model

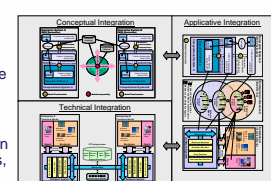


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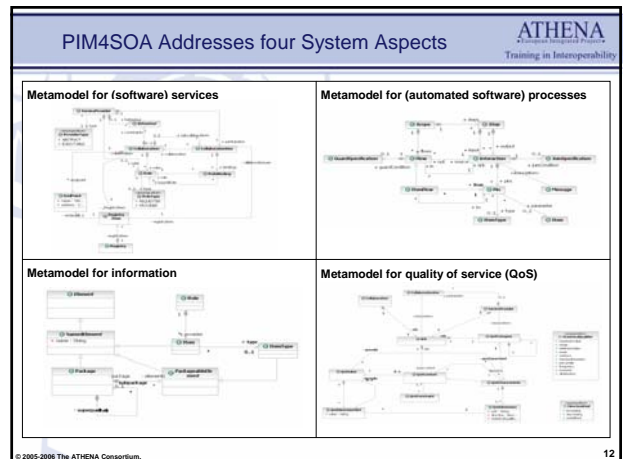
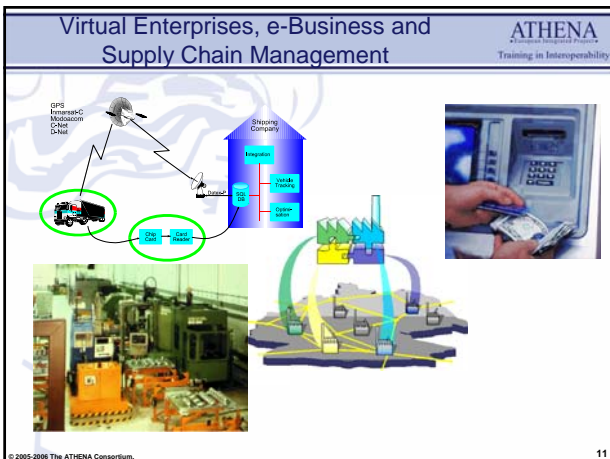
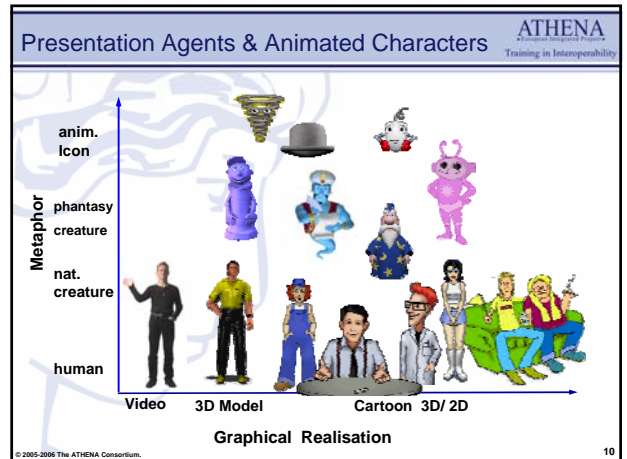
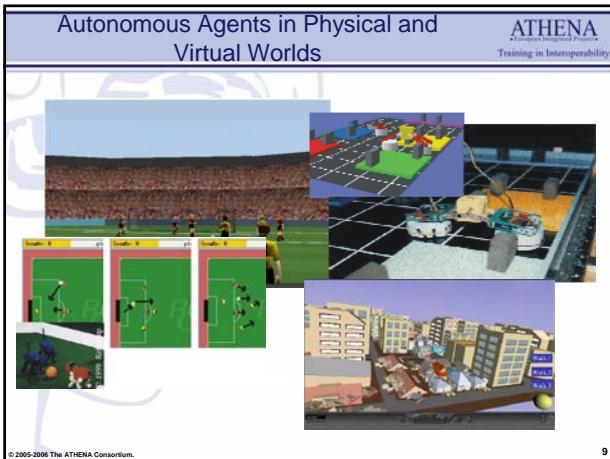
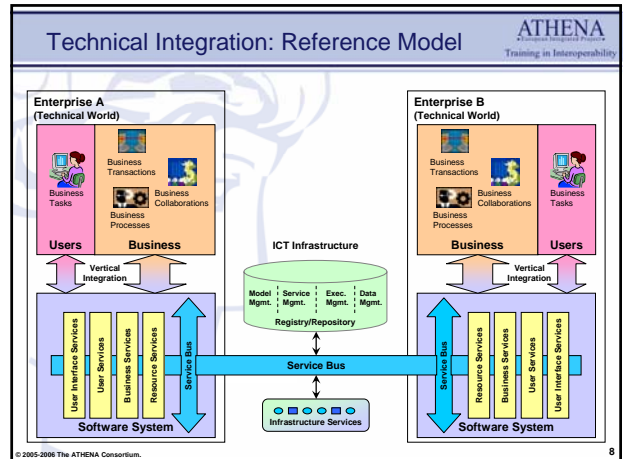
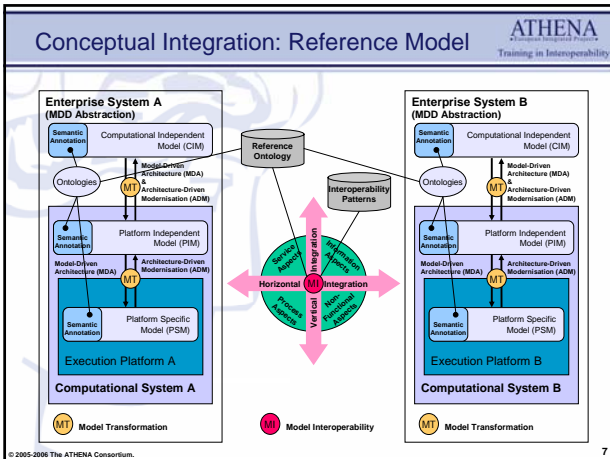
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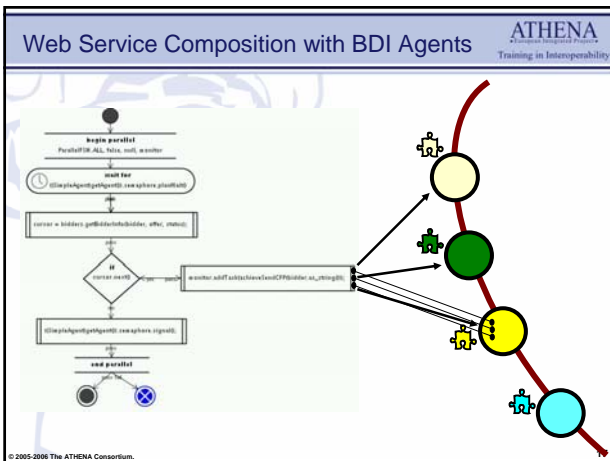
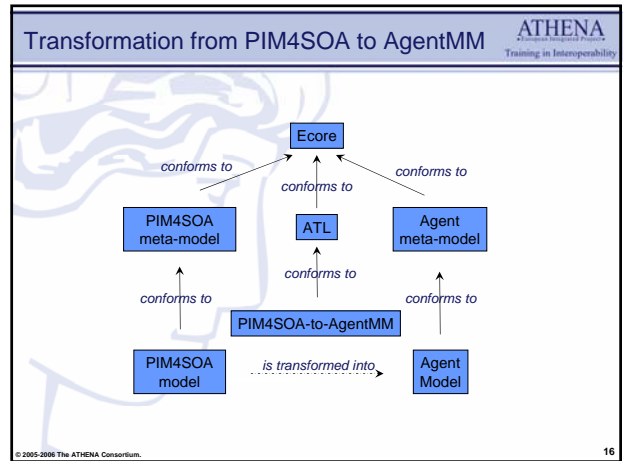
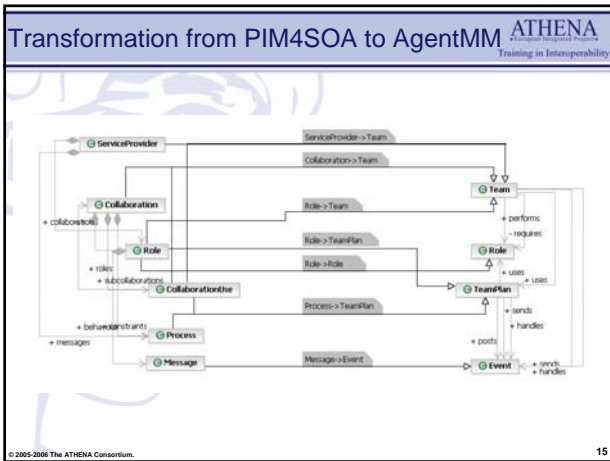
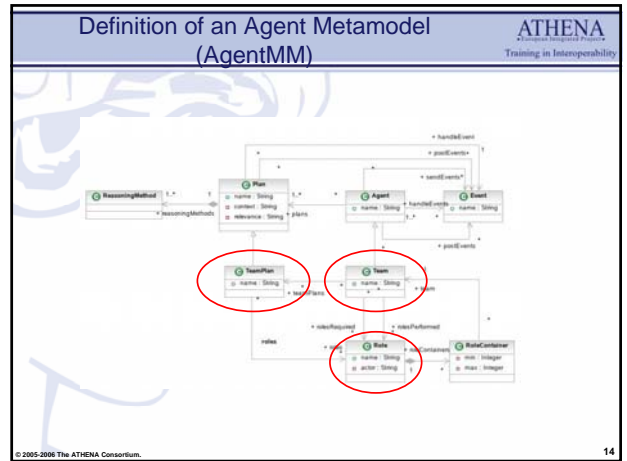
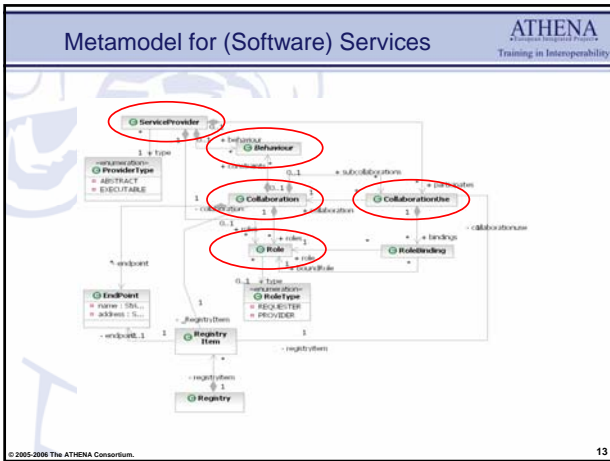
AIF's Integration Areas

- ATHENA's interoperability framework is structured according to three main integration areas defined in :
 - Conceptual integration** focuses on concepts, meta-models, languages and model relationships to systemise software model interoperability.
 - Technical integration** focuses on the software development and execution environments.
 - Applicative integration** focuses on methodologies, standards and domain models. It provides us with guidelines, principles and patterns that can be used to solve software interoperability issues.
- For each of these three areas a reference model to describe and support the application of model-driven development of software systems is specified.



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- ### Conclusions
- ATHENA
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- Results
 - Metamodels for service-oriented architectures
 - Metamodels for agent architectures
 - Model transformations
 - Integration of SOA and agents
 - Perspectives
 - Specification of a platform independent metamodel for agents
 - Investigation of the semantics of the concepts involved
 - Mapping of concepts to concrete execution platforms
 - Enhanced tools for modelling and model transformations
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