

KLIMT - Knowledge Intermediation Technologies

Distributing and integrating multimedia content processing services

5th ITEA Symposium, 7 October 2004

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ITEA

Changes in cyber enterprise environment

Rise of integrated distributed organisations

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- Expanding activities across company boundaries
 - Development of B2B, customer/supplier relationships, and other 3rd parties (banks, TTPs)
- Sharing information among diverse company entities
 - Integration of new and legacy business processes, data exchanges between operational and horizontal departments
- A third of company IT budget is spent on integration projects



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Changes in cyber enterprise environment Demand for increased intelligence

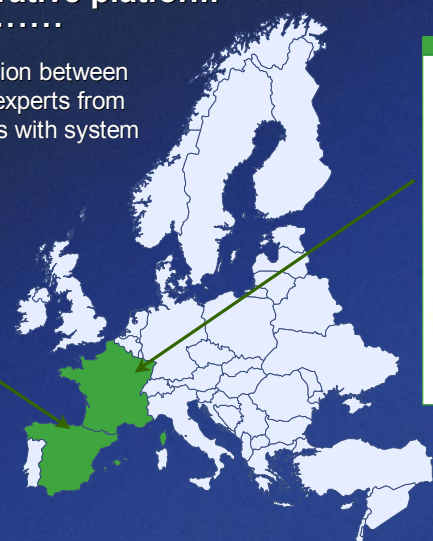
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- Users want to find the relevant heterogeneous information
 - More multimedia live content (from news services, communication businesses, ...)
 - More multimedia archiving (images from digital cameras, working documents, marketing data, ...)
- Users need to access streamlined data
 - Accomodation of user mobility
 - Continuous business processes: from mining to morphing
 - Pervasive resources: from host to clusters and grids

The KLIMT approach European cooperative platform

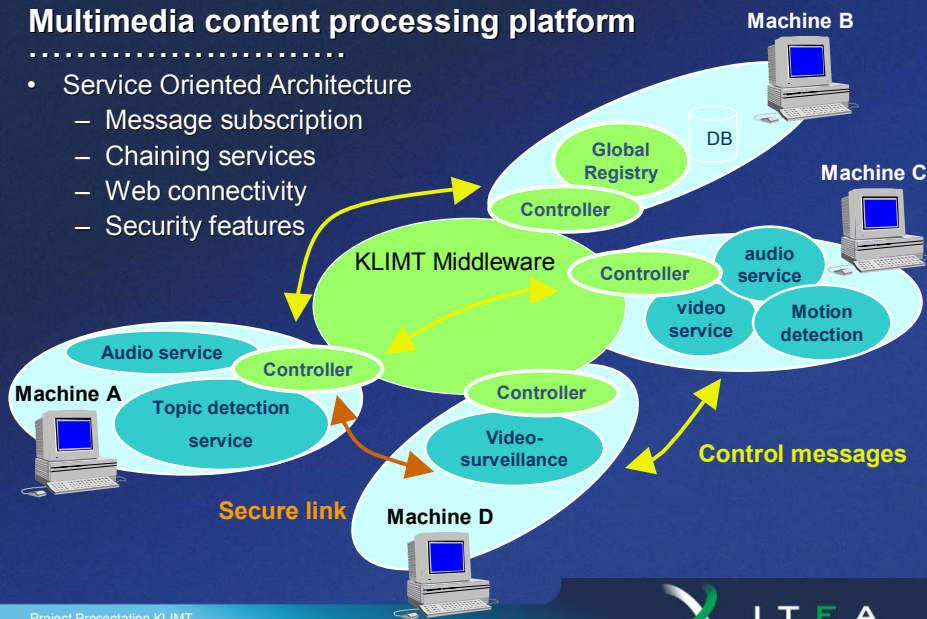
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- Supporting cooperation between content processing experts from Academia and SMEs with system integrator viewpoint



The KLIMT answer Multimedia content processing platform

- Service Oriented Architecture
 - Message subscription
 - Chaining services
 - Web connectivity
 - Security features

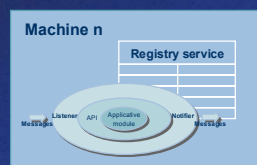
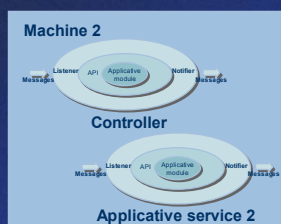
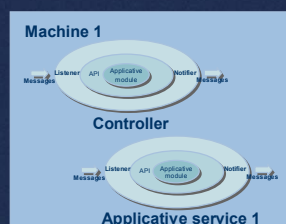


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KLIMT middleware Supporting application connectivity



- A **Global Registry** records all KLIMT services
- A **Controller** makes a machine "KLIMT enabled"
 - It may start new services
 - It registers new services on the global registry
 - It provides real addresses and protocols to send messages

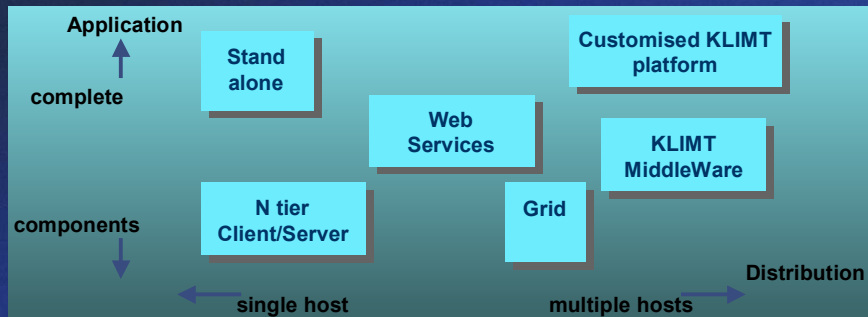
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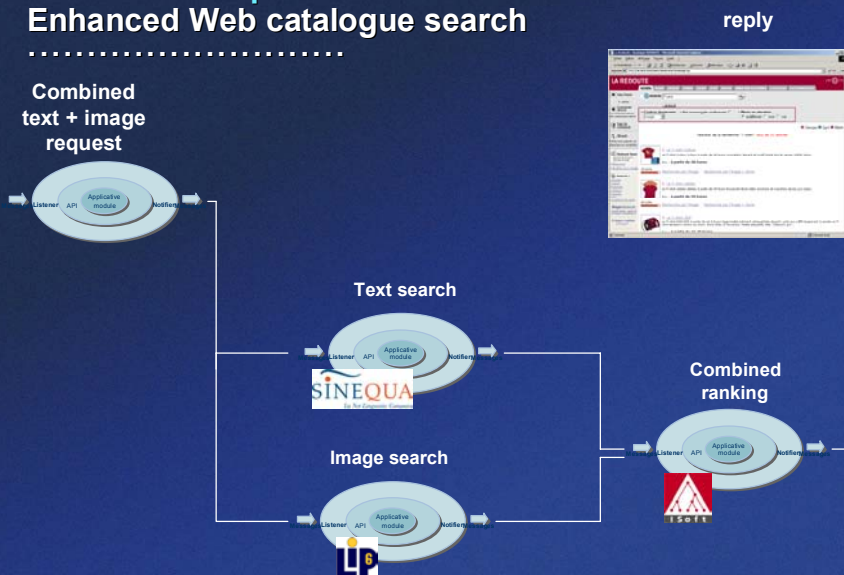


KLIMT architecture Offering seamless distribution of services

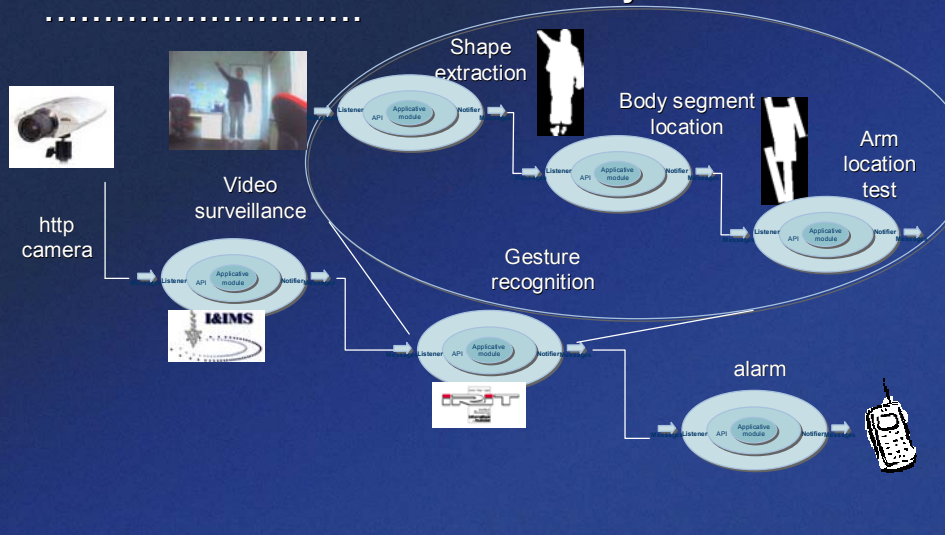
- Scripting for chaining and combining services
- Scalable complexity through recursive definition of services
- Business logic services independent of protocols (RMI, SOAP, ...)
- Light weight deployment on all network topologies



Services example 1 Enhanced Web catalogue search



Services example 2Video surveillance enhanced alarm system

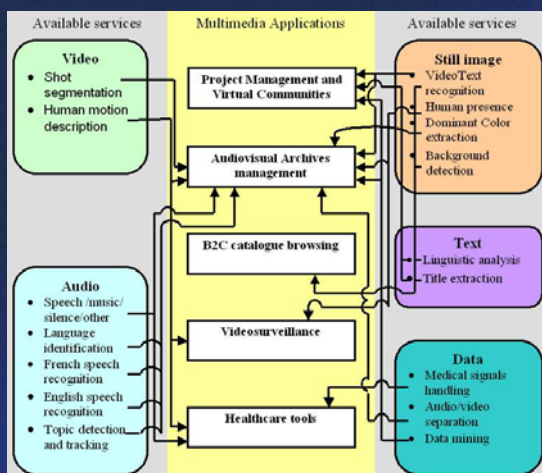


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KLIMT results Platform and applications



- Intelligent **search tools** benefiting from combined **image and text** search
- Access to **video archives**, with combined **voice and image** indexing
- Virtual Community management, through professional **web portals** targeted to professionals
- Video surveillance, proposing distributed **management tools** to this growing market
- Medical imaging is enhanced with **remote access** to images and patient data.

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Conclusion

KLIMT achievements

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- Development of Service Oriented Architecture (SOA)
 - Distributed SOA Middleware
 - Service enabled content processing modules
- Delivery of Multimedia content processing platform
 - including data, text, audio, image, video services
 - demonstrated at the symposium on 4 scenarios (Virtual community, Web catalogue browsing, video-surveillance, data processing)
- Enhancements of applications in:
 - video-surveillance, health care, data mining, security, textual search, web communities



Come and visit the KLIMT booth !

Thank you for your attention

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The technical challenges From client/server to Services

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- Standalone applications (desktop)
 - Evolution requires programming skills
 - Not scalable
- Client / server – N-tier
 - Uni-directional
 - Mix processing and data
 - Predefined communication capabilities
- Services
 - API : list of programming functions
 - Network is transparent
 - Messages : list of declarative external orders

