SAINT'05 Panel on: Service Oriented Applications

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(Web) Services are:

- Autonomous platform-independent computational elements
- that can be published, discovered, and composed
- using standard protocols for the purpose of
- building networks of collaborating business applications
- distributed within and across organizational boundaries

[CFP of the 3rd International Conference on Service-Oriented Computing, Amsterdam, the Netherlands, 12-16 December 2005 (ICSOC'05)

Why Service Oriented Applications?

- IT technology has managed to rise the level of abstraction of software development in several domains, e.g.,
  - Interfaces (“presentation layer”)
  - Data management (“database layer”)

- IT technology has still to provide similar solutions for the development of
  - “business” processes (““business” layer”)
  - especially for “network – web – enabled applications”

- Services provide a universal basis for the development and integration of business processes that are distributed within and across organizations

The Services Challenge: Vision 1

- encapsulate information, software or other resources
- make them available over the network
- via standards (interfaces and protocols)

[“S. Graham et al., Building Web Services with Java: making sense of XML, SOAP, WSDL, UDDI”]

The Services Challenge: Vision 2

- enable interactions between heterogeneous applications distributed over the Web,
- in which no single party has complete control
- providing online access to their functionality
- that can be accessed and reused by both users and other applications

[S. Weerawarana et al., IBM T.J. Watson Research Center Report]

The Service Challenge: Vision 2 (cont.)

- Services can be composed to perform new functionalities by interacting with published services
- Third-party aggregation of existing services into compositions that may subsequently be offered as services themselves
- Some kinds of applications: services that are available
  - within the same organization (Enterprise Application Integration - EAI)
  - across organizational borders (Business Process Integration - BPI)

The Service Challenge: Vision 2 (cont)

- Some compelling requirements for Web Services:
  - Loose-coupling of interacting services
  - On-demand interactions
  - Quick adaptation to frequent change
  - Lack of control over the platform
  - Lack of control over the implementation of services being used
  - Lack of control over their “business logic”

Panel Topic

Service Oriented Applications and their relation with

- *E-business*
- *Virtual Enterprises*
- *Distributed Business Processes*
- *Grids*

Table for Discussion

- *Which are the key and critical factors, the potentialities and the barriers for the industrial taking off of service oriented applications?*
- *Which support is required for a cost effective development and maintenance of service oriented applications?*
- *Which are the strengths and weaknesses of current standards for the modeling and execution of distributed business processes, for describing their capabilities, the choreography, and orchestration of services?*
- *Grids and Service Oriented Applications. Which are the relations, the similarities and the differences?*

Standards ...

SOAP
WS-Federation
WS-ReliableMessaging
WSDL
WS-Policy*
RDF
WS-Addressing
WS-Coordination
CPP/CPA
DAIS
BPEL4WS
WSDM

OGSI
WS-SLA
UDDI
WS-Inspection
WS-Interoperability
OIL
RDFS
WSDL*
WS-Transaction
WS-Security*
WS-Trust
XML Schema
...

Expect more ...

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Panelists:

- Bernd J. Kraemer (FernUniversitaet Hagen)
- Dimitrios Georgakopoulos (Telcordia Technologies)
- Ioannis Fikouras (BIBA)
- Schahram Dustdar (TU Vienna)