A Mobile Peer to Peer Access Grid with SORCER

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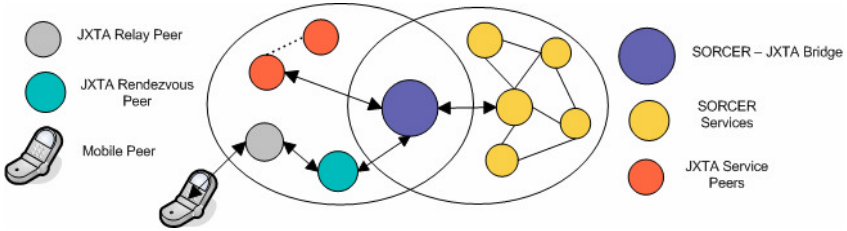
THESIS DESCRIPTION

- JXTA (Juxtapose) services are protocol based whereas SORCER (Service Oriented Computing Environment) services are object oriented
- A seamless integration framework is needed to make them function as a single service-oriented computing grid and complement each other
- With exponential growth of mobile devices there is an increased need for making grid services available to mobile clients



- A seamlessly integrated grid of SORCER and JXTA virtual services is needed
- A user friendly agent for mobile peers to access these virtual services is needed

OBJECTIVES / APPROACH

- Analyze the requirements for seamless integration of JXTA and SORCER computing environments
- Analyze the requirements for accessing services from mobile peers
- Develop the SORCER/JXTA bridge enabling a shared grid computing environment
- Develop the user agent for JXTA mobile peers (JXME) to access JXTA and SORCER services transparently
- Execute Service-Oriented programs in the SORCER/JXTA Environment
- Access JXTA peer services by SORCER providers

SCHEDULE

Proposal Presentation	11/11/04
Analysis of JXTA and SORCER network protocols and interoperability	01/10/05
Requirements and use cases	01/31/05
Design of SORCE/JXTA bridge	02/15/05
Design of mobile user agents	02/25/05
Implementation	03/25/05
Validation of the use cases	04/15/05
Thesis Defense	04/22/05

MISCELLANEOUS SUPPORTING DATA

Benefits

- Transparent availability of JXTA/SORCER virtual services across the integrated computing grid
- Protocol independence of SORCER virtual services
- Protocol neutrality of JXTA virtual services
- Availability of transparently aggregated virtual services to mobile requestors
- Easy submission of tasks to the service oriented grid with friendly agent for mobile requestors