



ServiceGlobe: Distributing E-Services Across the Internet

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What is ServiceGlobe?

- Platform for mobile e-services/Web services
- Implemented in Java Release 2
- Based on standards (XML, SOAP, UDDI,...)
- Features:
 - Services are mobile code
 - Dynamic deployment of services
 - Supports development of flexible and reliable services
 - Security system
 - Transaction system



Basic Components of ServiceGlobe

- **Service Host:** standard Internet server additionally running the ServiceGlobe runtime engine
- **Code Repository:** storage for executables of services which are loaded on demand
- **Adaptor:** service used to integrate existing services or applications into ServiceGlobe
- **Simple Service:** service not using any other service
- **Composite Service:** higher-value service assembled from other services (called basis services)
- **UDDI Server:** used to store metadata about services
- **External/Internal Service:** Service not provided/provided by ServiceGlobe itself



Demonstrated Features

■ Dynamic Service Selection

- Runtime selection of services using UDDI's notion of a tModel → 'calling tModels' instead of 'calling services'
- Several modes: one/some/all
- Modes are customizable using constraints
- Flexible and reliable service execution

■ Runtime Service Loading

- Dynamic distribution of services to service hosts at runtime
- Runtime security system to deal with security issues of mobile code
- Enables load balancing and parallelization
- Flexible and reliable service execution

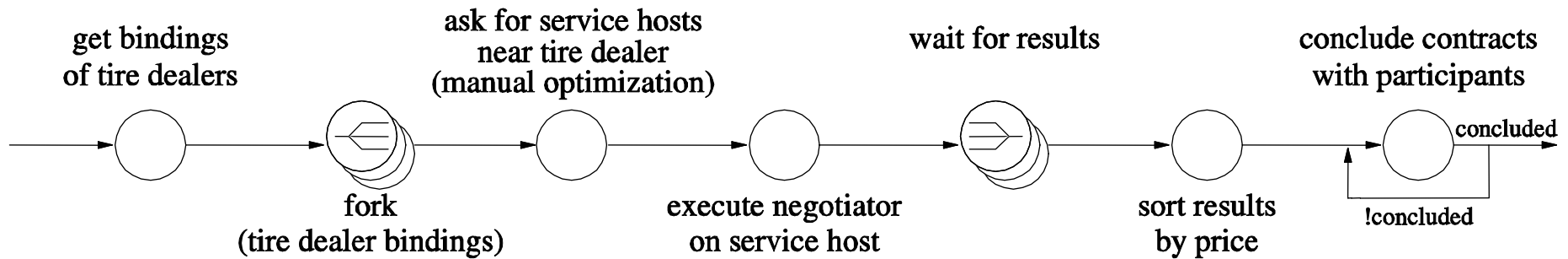


The E-Procurement Scenario

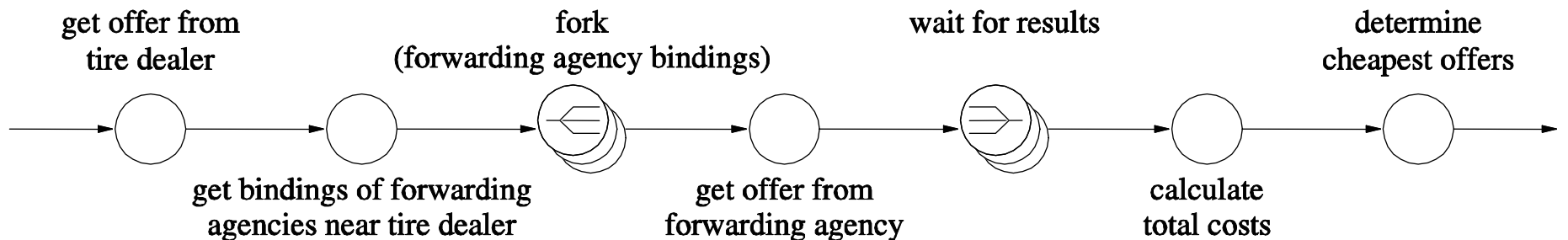
- Usage of a restricted tire dealer scenario to ease the understanding of the demonstration
- Task: purchase tires and employ a forwarding agency for delivery
- Details:
 - Invite offers from available tire dealers
 - Invite offers for the delivery of tires
 - Calculate cheapest combined offer
 - Place purchase orders
- Task is split into two services:
 - tire purchasing service
 - negotiator service
 - pushing negotiator services to service hosts close to tire dealers
 - all negotiator services are executed in parallel

Graphical Representation of the Services

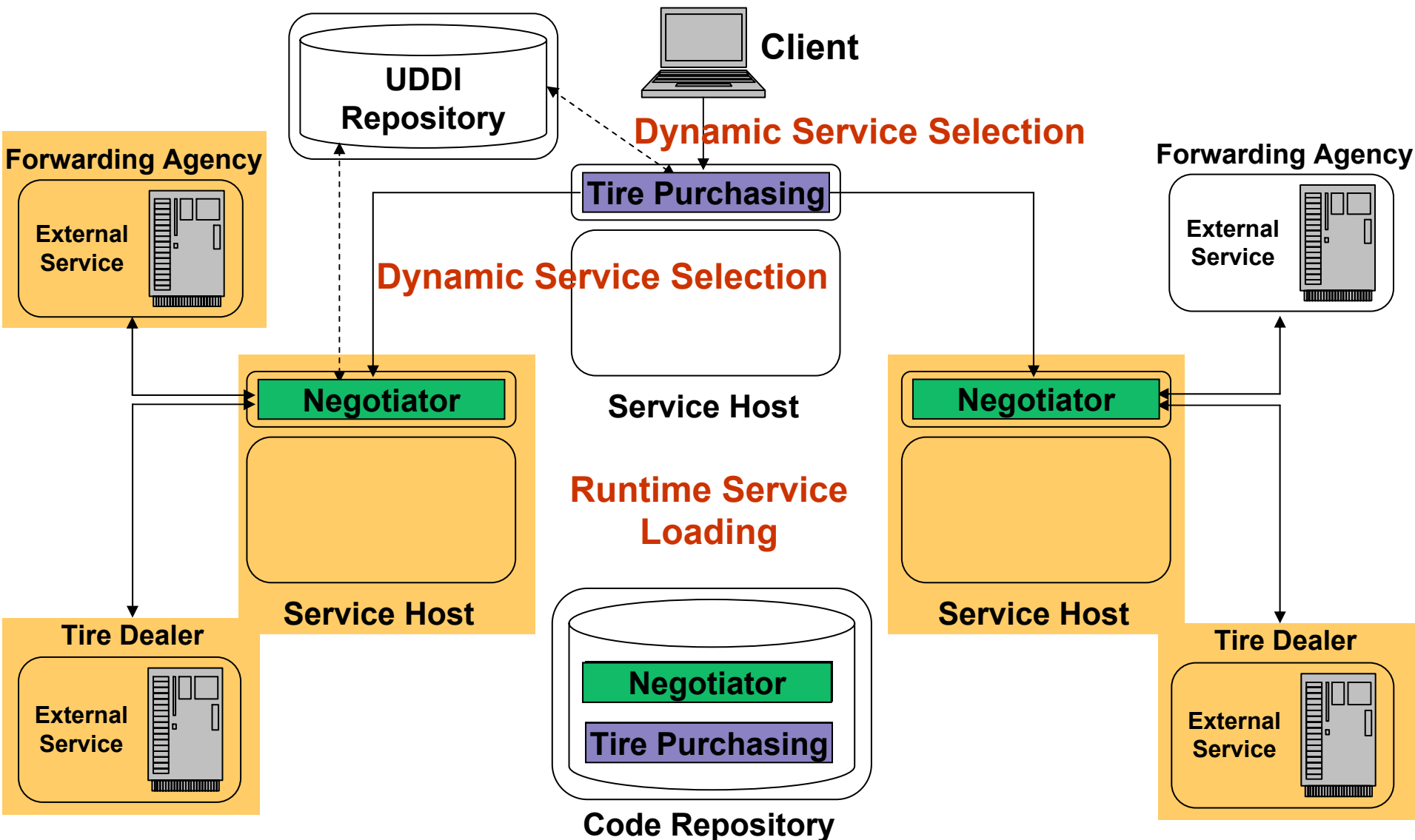
Tire Purchasing Service:



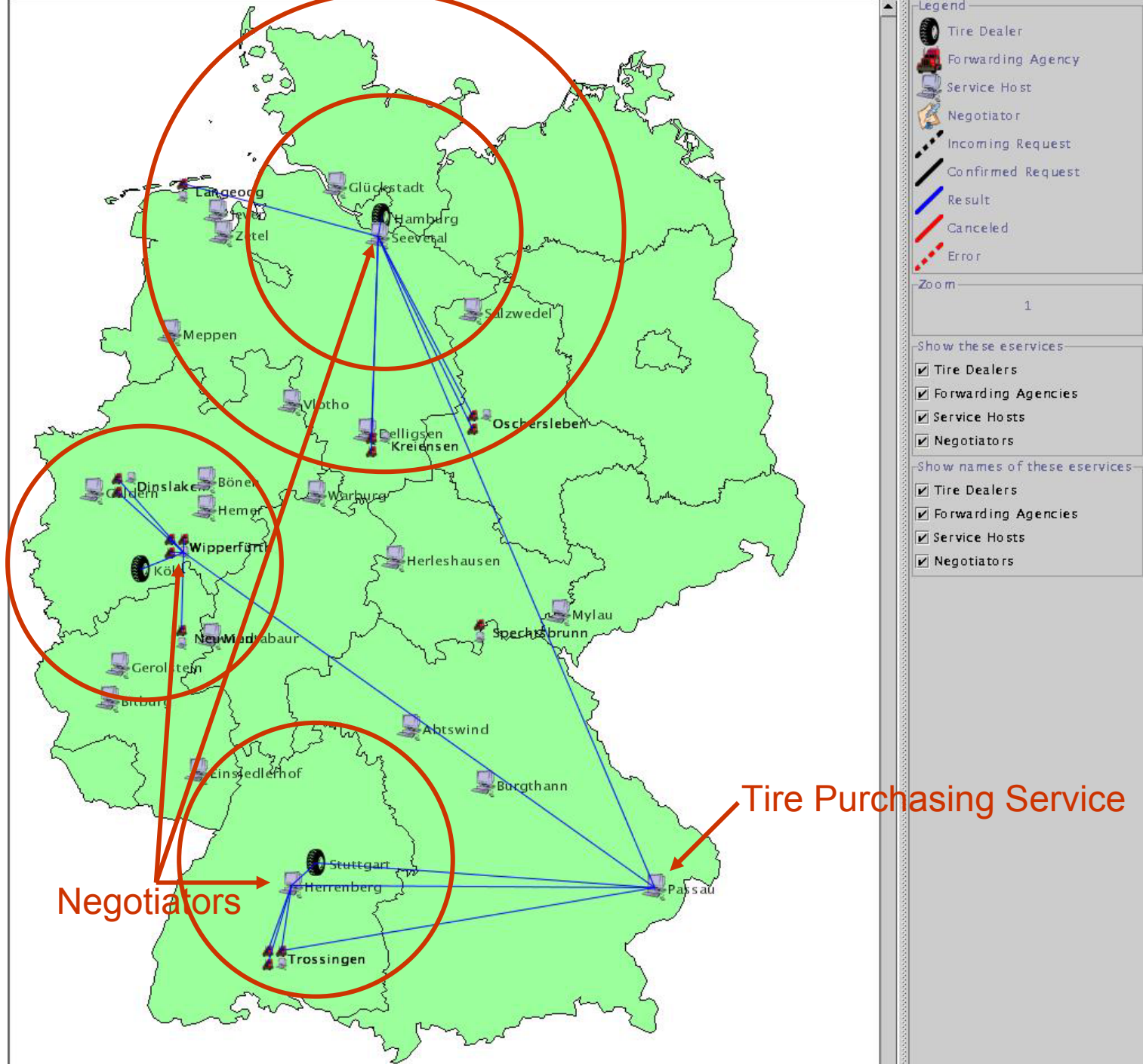
Negotiator Service:



Execution of the Services



Trace of Service Execution





Thank you for your Attention!