



Agentcities Overview

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Plan

- Motivations / Context
- Introduction to the Project
- Current Status
- The moment for collaboration!

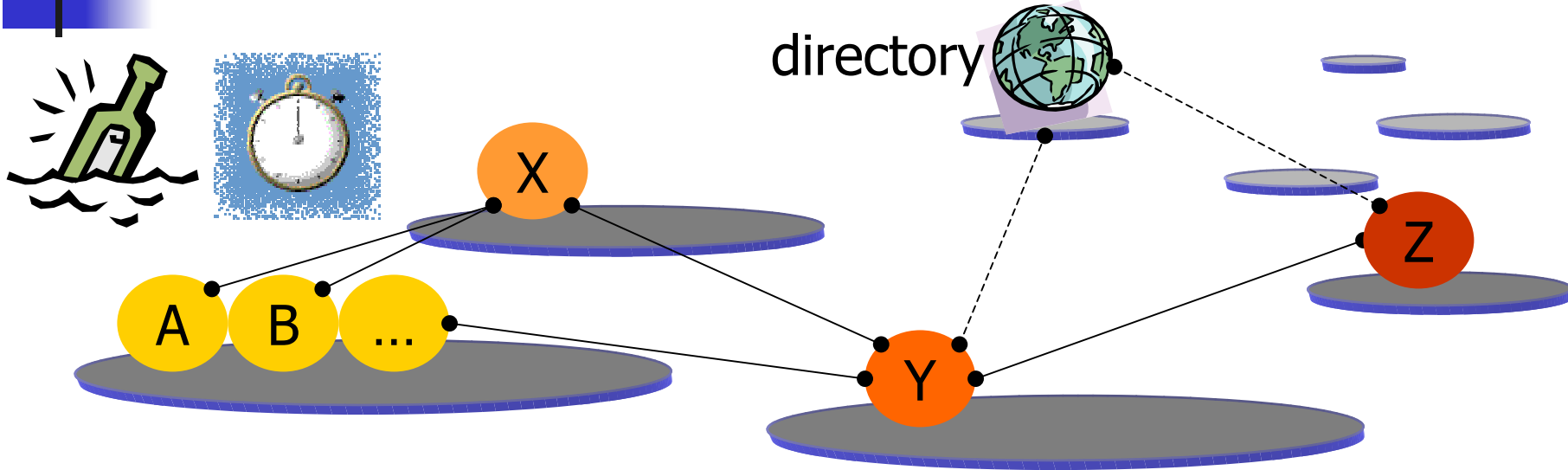


Technology Trends for On-line Environments

- Web Services
 - (*UDDI, WSDL, WSFL, ...*)
 - Discovery and usage of applications in public networks
- Semantic Web
 - (*XML/RDF, DAML+OIL, OWL, ...*)
 - Formal description of Web Content
- Peer-to-Peer Networking
 - (*Gnutella, JXTA, Groove, ...*)
 - Discovery, interactions, data sharing between end systems
- GRID Computing
 - (*Global Grid Forum*)
 - Massively parallel shared, worldwide computing resources
- E-Business Systems
 - (*ebXML, RosettaNET*)
 - Structured electronic Business-Business interactions
- “Web Programming”
 - (*Microsoft .NET / Sun ONE*)
 - Development kits for network enabled distributed application components

(some simplifications...)

Service Composition / Open Environments



- Driven by all the previous technology movements
 - Meaningful interaction: formal semantics, flexible, provable meaning despite heterogeneity
 - Automation: autonomous components,
 - Fully dynamic composition: automated contract creation, establishing first-time and long-term business relationships
 - Open: heterogeneous, large-scale



Technical Challenges

- **Semantics**

- Integrating to obtain a complete / consistent semantic stack
- Meaning in context
- Limiting complexity in a flexible way

- **Coordination**

- Applying at least basic version of many basic Agent technology techniques
- Linking in with existing eBusiness orchestration
- Linking in with human level legal systems

- **Autonomy**

- Management/Control of increasingly au

**Technology integration,
deployment,
testing, migration, management**

...

Large-scale Open Testbed for Agent Based Services

- 100+ organizations involved worldwide
 - Participating in an open test environment
 - Long term deployment, evolution and integration of technologies
 - Key technology issues
 - *Service interaction / semantics*
 - *Service composition*
 - *Automating service components*
- Concrete terms most groups work on:
 - Particular technology trials
 - Particular application focus
- This is the “*messy end*” of the research spectrum



Current Status



Agentcities Activities

- Projects
 - Running
 - EU IST Agentcities.RTD / Agentcities.NET
 - Australia, Finland, France, Hungary, Spain
 - Submitted/Planned:
 - Canada, Hungary, USA, Japan, New Zealand, Spain, Mexico, Switzerland, Italy, ...
 - FP6 activity discussion
- International Collaboration
 - <http://www.agentcities.org>
 - Agentcities Task Force

- Interest Areas (Tech)
 - Business Process Infrastructure
 - Communication
 - Network Architecture
 - Security
 - Service Description / Composition
 - Ontology
 - Web Services
 - GRID
 - Negotiation
 - ...
- Interest Areas (Apps)
 - Entertainment, Travel & Tourism
 - Healthcare
 - Rescue Coordination
 - Personal Agents and HAI
 - Market Places
 - Digital Libraries
 - Logistics and production planning
 - e-Learning
 - Mobile User Services
 -

Example Services

Hotel Service

Restaurant Review

Restaurant Booking

Theatre Recommender

GIS Service

Restaurant Finder

Auction House

Transport Info Service

Ontology Service

Trade House

Agent Directory

Payment Service

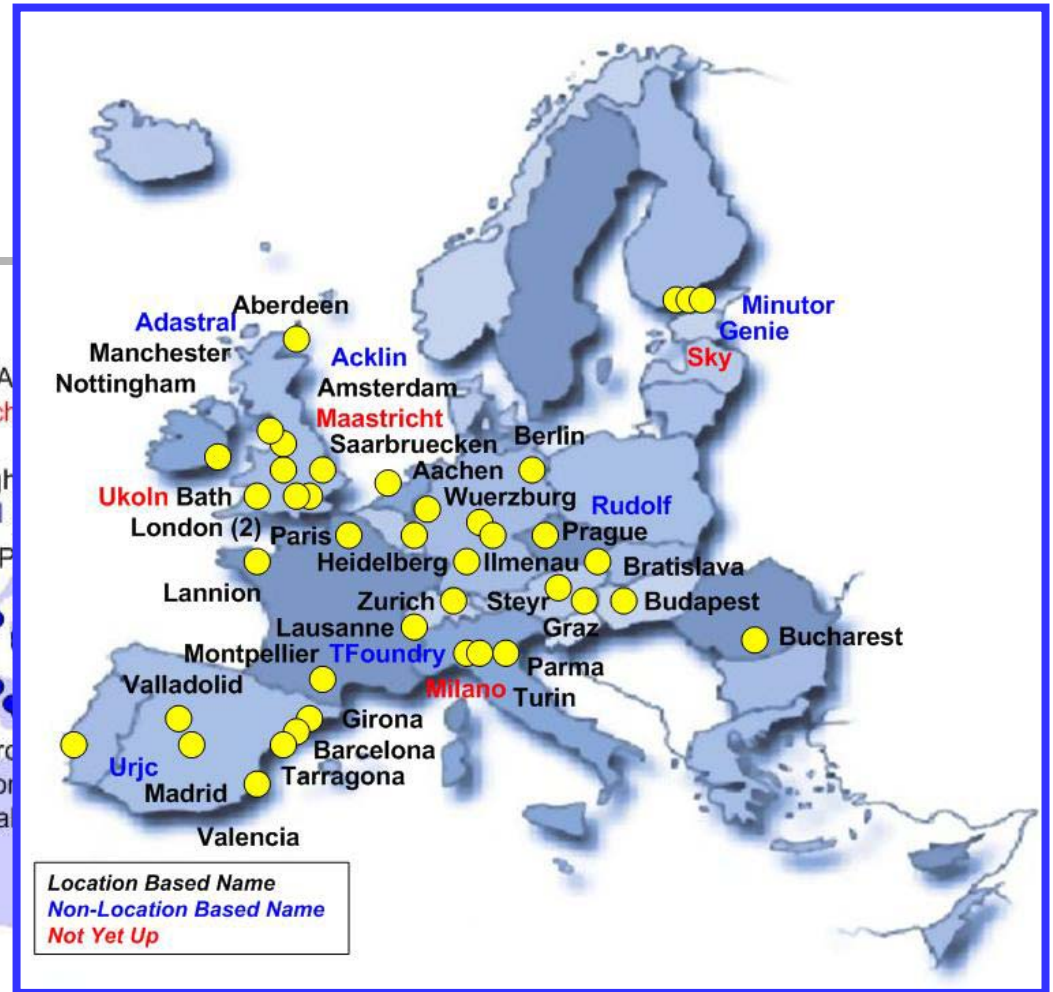
Security Service

Platform Directory

SMEAccess Service

Service Directory

Agencities Network





What is the point of doing this?

- This is another tool in the tool box
 - Stepping stone to mature systems
 - Real open system problems
- This nuts and bolts level is rarely tackled in Agent research
- Technology evolution rather than revolution
- Playing “catch up” with industry?



What's Happening Right Now...



Systems & Deployment

- 80 organisations have actively deployed systems
 - A lot of simple prototypes
 - A few more complex applications
- Demonstrations and Presentations at iD3 (thu-sat this week)



Consolidation/Future Planning

- **New Project Activities**
 - European Commission Framework IV – “openNet”
 - Partner projects being considered in many other places
- **Generating the work program**
 - Expressions of interest being sought
 - Sub-projects being defined
- **Consolidation**
 - Projects are likely to run to end of October / end of 2003
 - Presenting the results and encouraging network growth



Challenges going forward

- Network stability / growth
 - Ease of use, improving tool maturity and integration
- Increasing technology diversity & heterogeneity
 - Move to WS/GRID/OWL/ebXML/RosettaNet
- Technology user and provider relationships
- Increasing Knowledge from deployment
 - Services
 - Technologies



More Information

- <http://www.agentcities.org>
- <http://www.agentcities.org/openNet/>
- info@agentcities.org
- discussion@agentcities.org