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Regulatory Issues for Mobile Grid Computing in the European Union

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17th European Regional ITS Conference
Amsterdam, Netherlands

August 23, 2006

Key Issues

- Trend of mobile grids
 - Next-generation grid system
 - European project Akogrimo
- New technologies and systems
 - Regulations shape legal frame
 - Revisiting of established regulations

**Determine relevant regulatory issues for
mobile grids in the EU**

→ eCommunications framework as candidate

Main Approach

Mobile Grids

- Grid Evolution
- Organization Model
- Roles and Actors

eCommunications

- Framework Organization
- Frame Directive
- Specific Directives

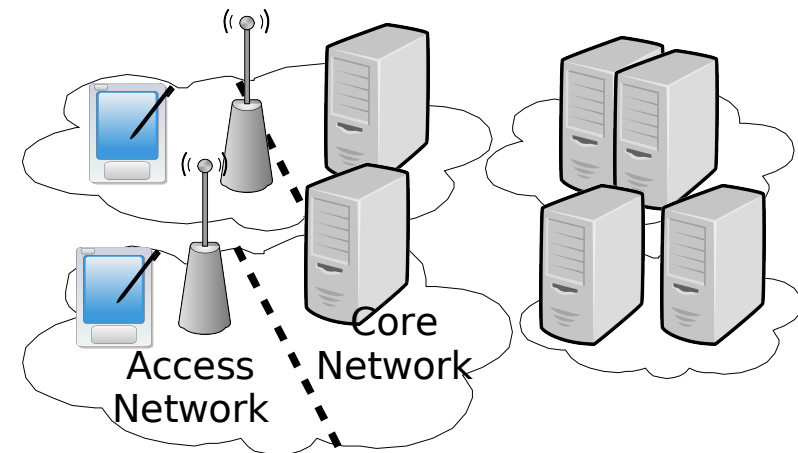
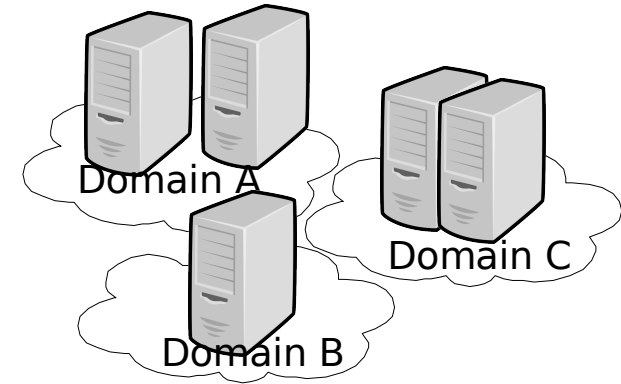
Relevance Assessment

- Three-level Grading
- Principle of Law vs. Roles

Conclusions

Mobile Grid: Grid Evolution

- Computational and Data Grids
 - High-performance computing
 - Research-oriented
- Service Grids
 - Virtualization of resources
 - Across administrative domains
- Mobile Grids
 - Commercial orientation
 - Higher-level resource coordination
 - Pervasive access

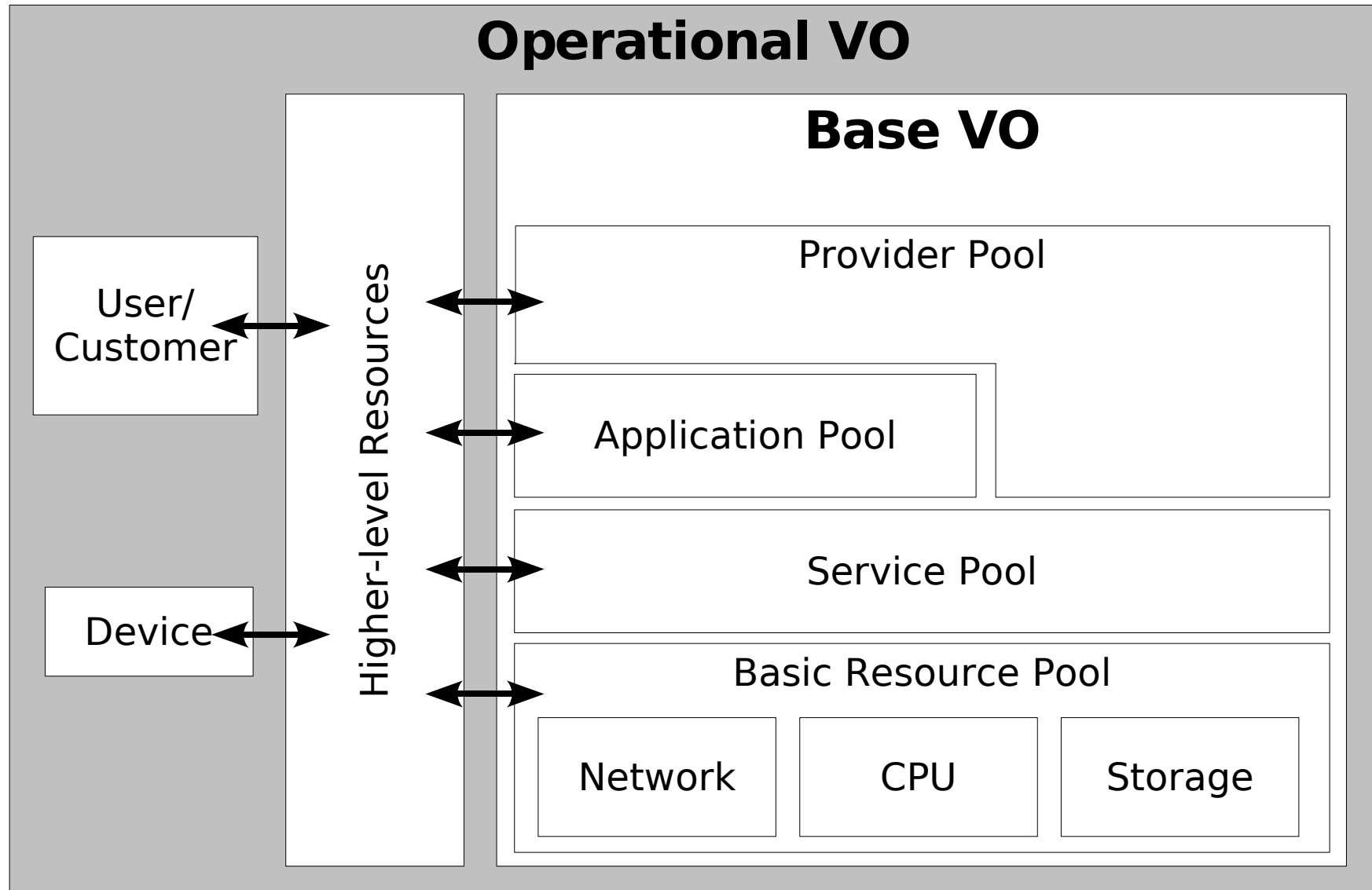


Mobile Grid: Organization Model (1)

- Service grid as basis
 - Virtual Organization (VO)
 - Multi-domain service provisioning
- Mobility drives dynamics
 - Mobility support (device, user, session)
 - Context (device, user)
 - Adaptive business processes
 - Dynamic organizational composition

Mobile Dynamic Virtual Organization (MDVO)

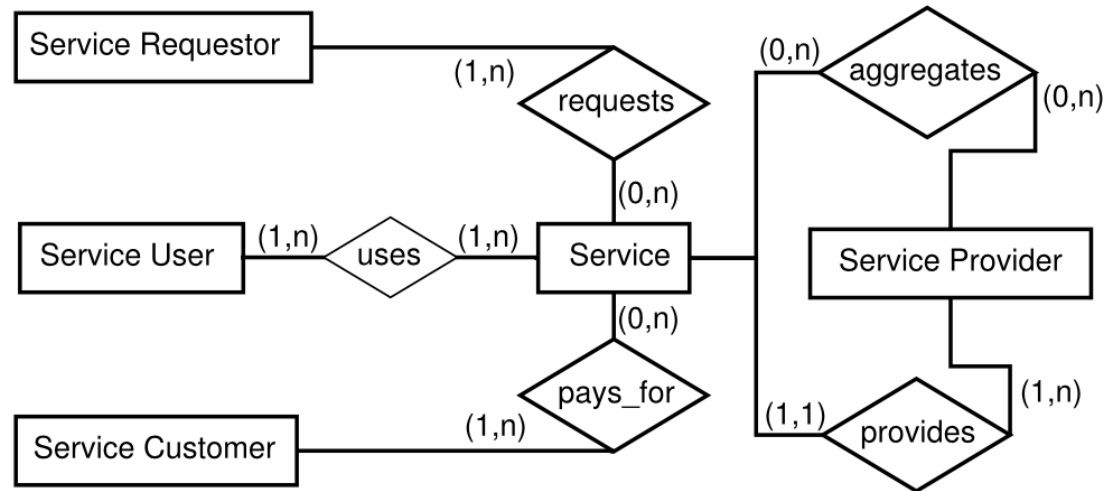
Mobile Grid: Organizational Model (2)



Mobile Grid: Roles and Actors

- Basic VO role model

- Service user roles
 - User (SU)
 - Customer (SC)
 - Requestor (SR)
- Service provider

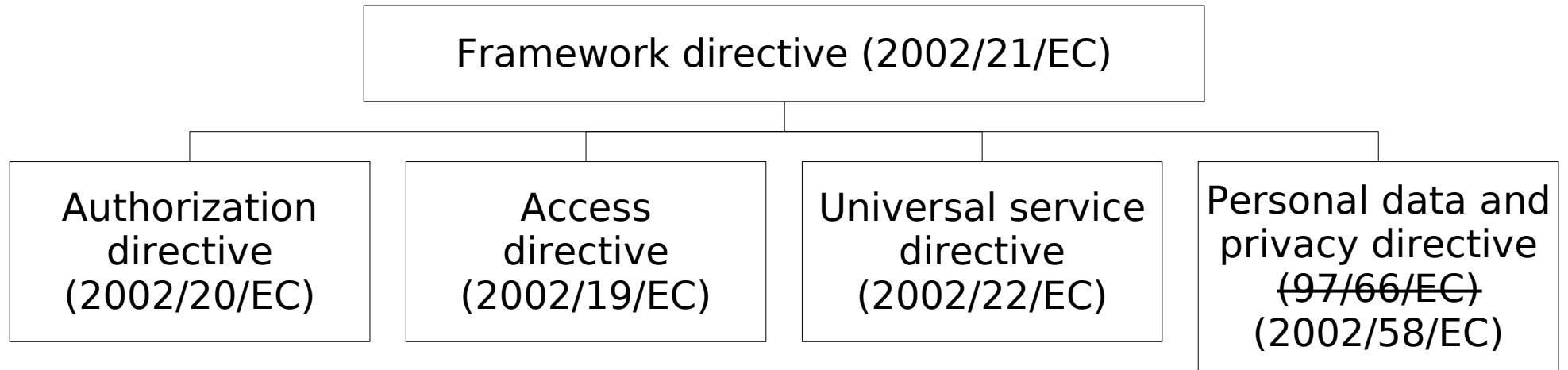


- MDVO provider roles

- Network service provider (NSP)
- Grid service provider (GSP)
- Application provider (AP)

Role	Person		
	Natural	Legal	Commercial
SU		✓(B2B)	✓/x
SC	✓(B2C)	✓(B2B)	✓
SR		✓(B2B)	✓/x
NSP	x	✓	✓
GSP	✓	✓	✓
AP	x	✓	✓

eCommunications: Framework Organization



- Effective 2002
 - Enacted afterwards by national legislations
- Regular reviews
 - First review started 2005
 - Proposals expected 4th quarter 2006

eCommunications: The Directives (1)

- Framework directive
 - Convergence of telecommunications, media, IT
 - Harmonized legal frame
 - **Electronic communications networks and services**
 - Separation of transmission and content
 - Relationship national regulatory authorities (NRA) and providers
- Authorization directive
 - Conditions for receiving authorizations
 - **General authorization**
 - Limit conditions to minimum

eCommunications: The Directives (2)

- Access directive
 - Interoperability and sustainable competition
 - **Access and interconnection** between providers
- Universal service directive
 - **Universal service**
 - Single narrowband connection
 - Quality-of-service and affordable prices
- Personal data and privacy directive
 - Fundamental rights
 - Processing of personal data
 - **Value-added services** covered

Relevance Assessment

Principle of Law	SU	SC	SR	NSP	GSP	AP
Appeal and Consultation				✓		
Reporting		x		✓		x
Harmonization				(✓)		
Competition			✓			x
Resource Allocation		x		✓		x
Significant Market Power		x		✓		x
Standardization		x		✓		x
Disputes		x		✓		x
General Authorizations		x		✓		x
Access and Interconnection		x		✓		x
Universal Service		(✓)		✓		x
Personal Data and Privacy				✓		
Security				✓		

Conclusions (1)

- Network service provider
 - **Highly** relevant
 - Focus on communications networks and services
- Grid service provider & application provider
 - Affected at **minimum level**
 - All-IP environment
 - Information Society services uncovered
- Service user roles
 - **Partly** affected
 - B2C context

Conclusions (2)



① Limited relevance only

② Integrative view on communications and Information Society services needed

③ Lose set of European regulations instead of consistent legal framework

→ Determines future work

Thank you

for your attention!

