European Research in E-commerce and Brokerage

Jens E. Kristensen

European Commission - ACTS programme
The Fourth Framework Programme

13.3 Billion ECU

- Life Sciences and Technologies: 13%
- Transport: 2%
- Energy: 18%
- Environment: 9%
- Industrial Materials and Technologies: 16%
- Socio-economic Research: 1%
- Dissemination of Results: 3%
- Information and Communication Technologies: 28%
- Training and Mobility of Researchers: 6%
- International Cooperation: 4%
- International Cooperation: 2%
- Life Sciences and Technologies: 13%
- Environment: 9%
Key Principles for EU RTD Programmes

- Scope outlined in a Call for Proposals
- Proposals submitted by Consortium
  Must involve at least two independent organisations in two different countries
- Proposals are evaluated by a team of Independent Experts
- Selected Projects of “shared-cost” Type
  (up to 50% of the costs are contributed by the EC)
European Framework in Telecommunications

Main driving forces
- Deregulation of market, competition
- New market place/opportunities

Key Requirements
- Shorter times in the development of new Services
- Lower costs
- Interoperability, integration, flexibility for telecommunication interfaces
- Higher bandwidth
Advanced Communication Technologies and Services

Builds on

- **RACE I** - developed the “concepts” of Integrated Broadband Communications
  - blue-print for the next generation of systems and technologies
  - consolidated technology base
  - promoted European collaboration amongst technologists and sector actors

- **RACE II** - developed the “capabilities”
  - explored new services and generic applications
  - emphasised improvement in cost / performance
  - validated specifications
ACTS Opportunity Window

- Scale of cooperation:
  - International
  - EU
  - National

- Time:
  - Too urgent
  - Possible
  - Too uncertain

Opportunity window for EU R&D cooperation
Orientation of ACTS

User Trials

Horizontal actions

Digital Image
Photonics
High Speed Networks
Mobiles
Integrated Service Engineering
Quality, Security & Safety

Enabling Technologies

Exploit new technological opportunities
## Community Funding for ACTS

<table>
<thead>
<tr>
<th>Area</th>
<th>Funding (MECU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Digital Multimedia Services</td>
<td>175</td>
</tr>
<tr>
<td>Photonic Technologies</td>
<td>112</td>
</tr>
<tr>
<td>High-Speed Networking</td>
<td>81</td>
</tr>
<tr>
<td>Mobility and Personal Communication Networks</td>
<td>124</td>
</tr>
<tr>
<td>Intelligence in Networks and Services</td>
<td>108</td>
</tr>
<tr>
<td>Quality, Security and Safety of Communication Systems and Services</td>
<td>47</td>
</tr>
<tr>
<td>Horizontal Actions</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>681</strong></td>
</tr>
</tbody>
</table>
Electronic Commerce

Generic architecture for secure commerce

Open brokerage architecture

Electronic Commerce enabling technologies
Security

- **SCAN**
  - Encryption over ATM
- **SCARAB**
  - Agent technology and smart cards for secure access
- **USECA**
  - Secure UMTS architecture

http://www.infowin.org/
Electronic Brokerage (I)

- **ABS:**
  - Design/Spec based on ODP/TINA concepts
  - Prototypes using CORBA and JAVA

- **COBRA:**
  - Enterprise and transaction model
  - Catalogue/ www-db integration/ agents
  - Demos in four distinct business cases

- **OSM:**
  - Definition of a service brokerage engine
  - Contract/commercial serv management.
  - Cataloguing, brokering and agencies
  - Visible presence of SMEs

http://www.infowin.org/
Electronic Brokerage (II)

- **MULTIMEDIATOR**
  - multimedia publishing brokerage service
  - trials across different networks (ATM/ISDN/Internet)
  - visible involvement of SMEs
  - Deliver a European-wide distributed printing network (integrating ISDN, satellite, ATM)

- **GAIA**
  - generic model applicable to distributed information supply chains and networks
  - demonstrate applicability to music, publishing and technical data
Enabling technologies

The results of a number of other projects have a direct impact on electronic commerce:

- IPR/Copyright
- Multimedia delivery chain integration
- Communications accounting
- Access to broadband comm. infrastructure
- Terminals
- Keeping in touch with SMEs and teleworkers
Cluster on security and electronic commerce

- **Electronic commerce**: security services, brokerage architecture, brokerage applications, IPR protection and management, etc.
- **Trusted Third Parties (TTPs)**: Use, legal implications, regulatory and licensing aspects, interoperability problems, etc.
- **Use of open interfaces (APIs)**.
- **Requirements on standardisation**.
- **Applications**: publishing, co-operative working and teleworking, brokerage services, usability, dependability, etc.
ACTS Guidelines

- **SIA (Service Architecture)**
  - Enterprise Models of Electronic Brokerage
- **SII (Interactive Multimedia Services)**
  - Electronic Commerce
- **GAS (Small Business Networking and Commercial Transactions)**
  - Describing SMEs
  - Access to Electronic Commerce for SME’s
  - Implementation of Electronic Commerce for SME’s

http://www.infowin.org/ACTS/ANALYSYS/CONCERTATION/glindex.htm
4. THE FUTURE - 5th Framework R&D Programme

- 1998 - 2002
- Total Budget ~ 15 Bi Ecu (?)
- Grouping “Information and Communications Technologies”

“IST” (Information Society Technologies) Programme
4. THE FUTURE - IST Contents

KA I: Systems and services for Citizen

KA II: New Methods of Work and Electronic Commerce

KA III: Multimedia Content and Tools

KA IV: Essential Technologies and Infrastructures
  • Future and Emerging technologies
  • Research Networking

Budget ~ 3.750 BiEcu (?)