



“Networked and Electronic Media” NEM – the birth of new sector

**2nd EU-Japan Cooperation Forum
Brussels July, 2nd 2009**

<http://www.nem-initiative.org>

NEM Technology Platform

NEM Activities

The Strategic Research Agenda

International cooperation

EU-Japan cooperation in the NEM sector

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NEM Mission



“The NEM Technology Platform is an industry-led initiative aiming at accelerating the pace of innovation to make the convergence between the audiovisual sector and the telecom sector happen and to place the European industry at the forefront of the information era.”

NEM 2015 Vision



- **A leading European networked and electronic media industry**
 - competitive with other business regions in the world
- **A regulatory environment favouring the deployment of NEM technologies**
 - to improve the quality of life and maximize economic growth and skilled employment in Europe
- **Open business models across the value network**
 - novel revenue generating models

NEM European Technology Platform

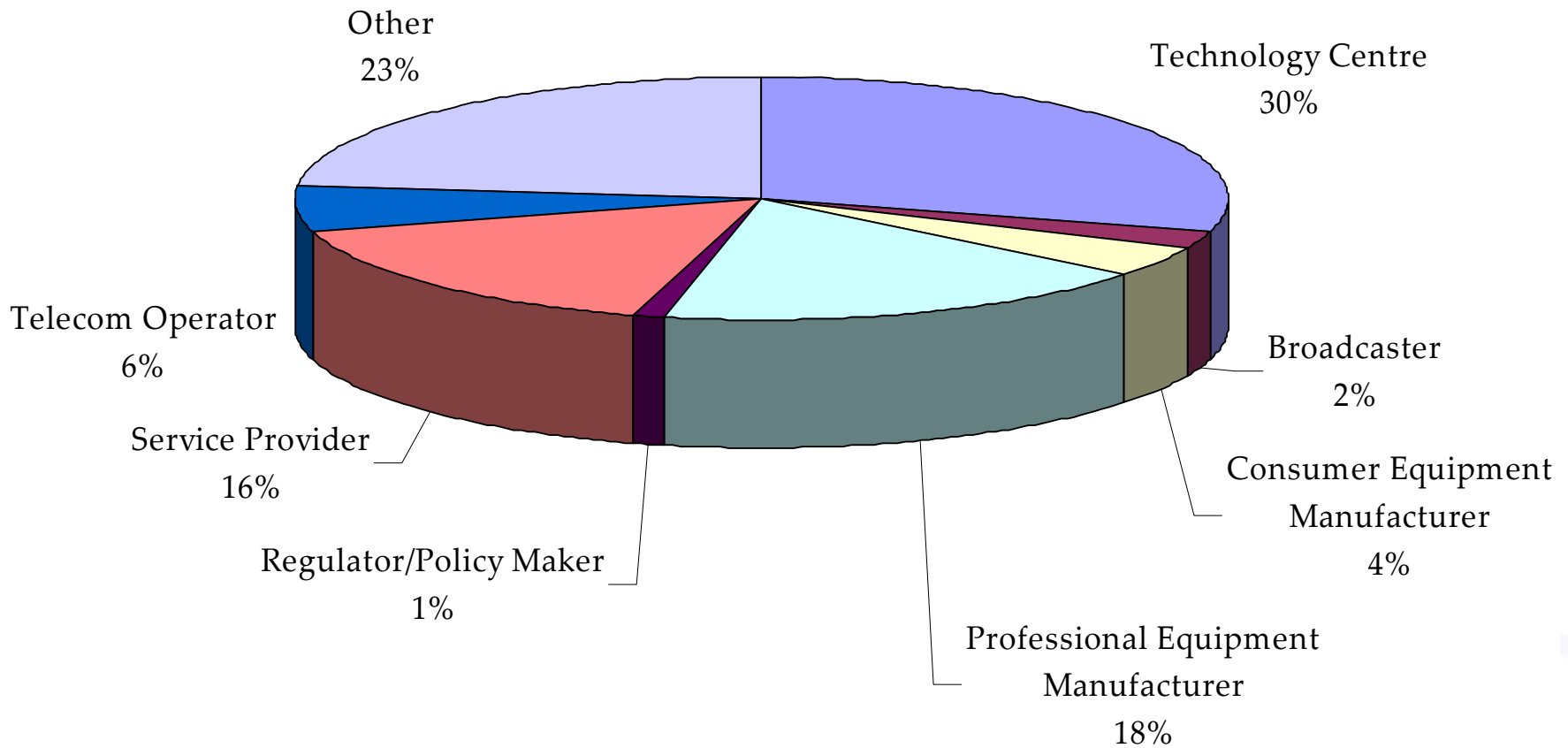
Who are we?

Who are the NEM members?

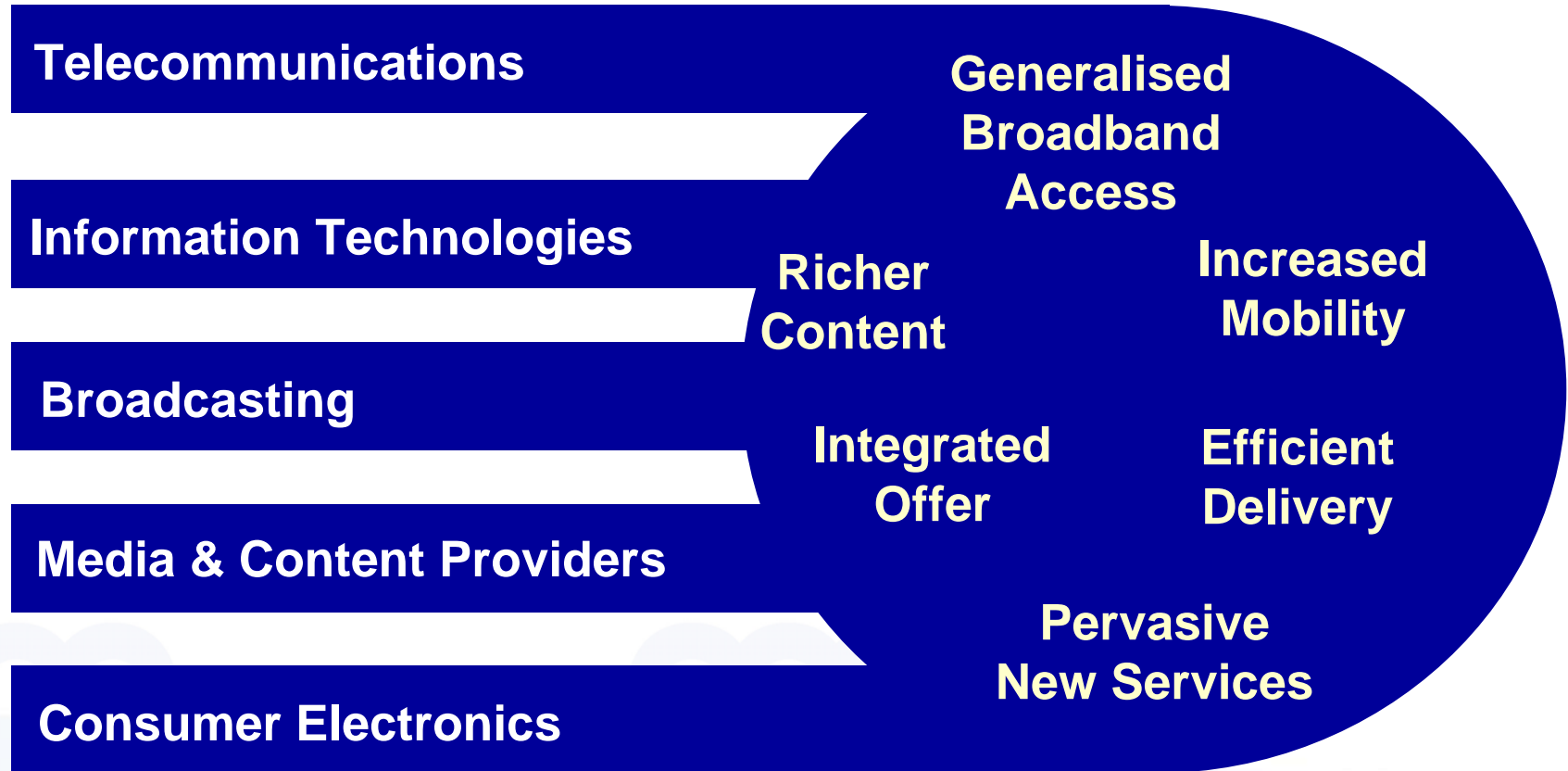


- **More than 700 organisations,** from more than **30 countries** committed to 5 key challenges:
 - To create interoperable network infrastructures for seamless multimedia networking
 - To empower end-users by putting the user first
 - To promote “Electronic content from all to all”
 - To converge the various media and content formats
 - To develop new middleware for media applications

Profile of NEM members



NEM is about Convergence



Now

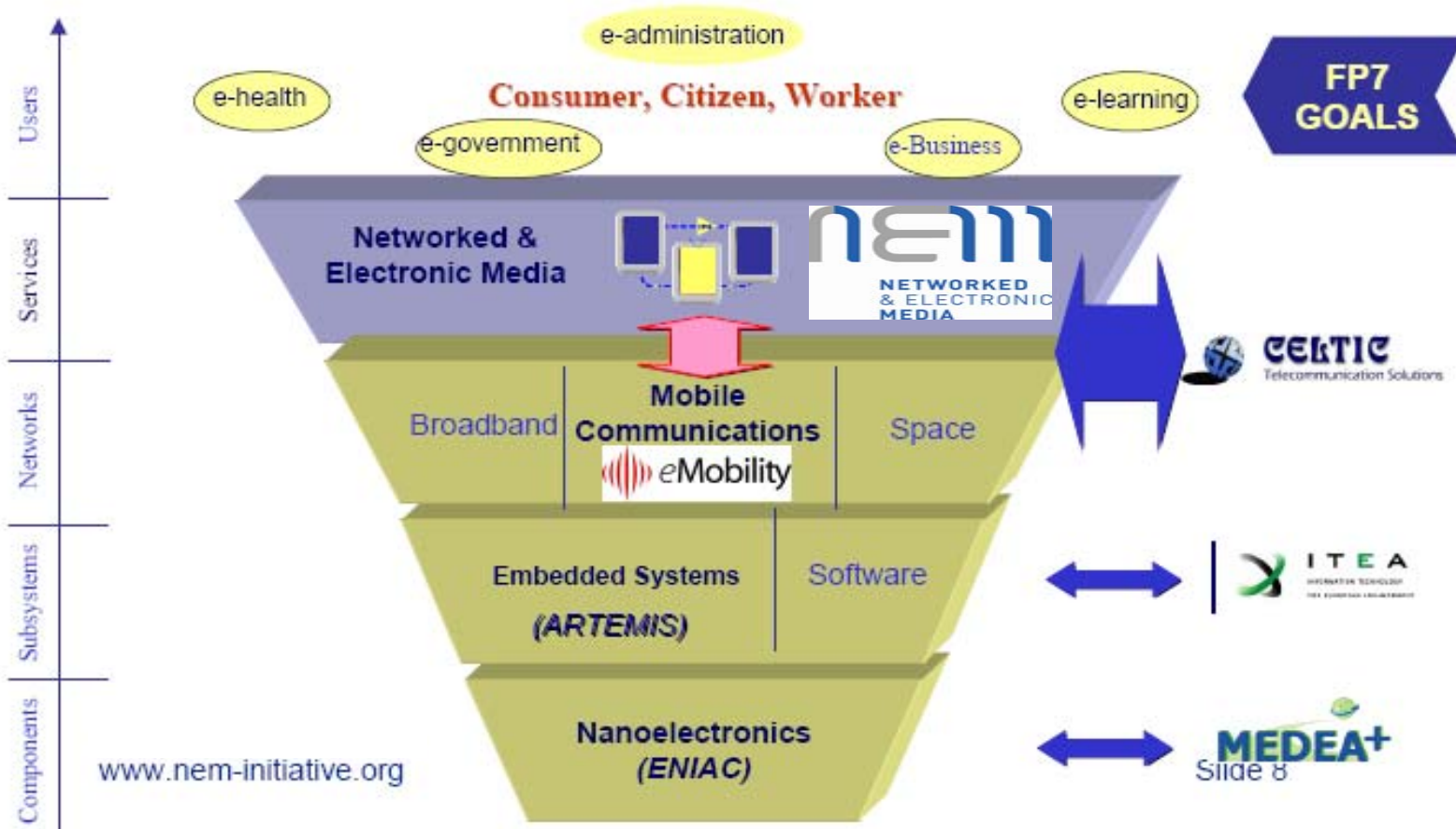


The NEM Future

NEM European Technology Platform

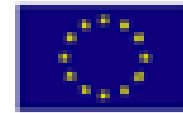
How we work together?

NEM "Position & Liaisons"



Challenges and Opportunities: Relationships between Programs

neon
NETWORKED
& ELECTRONIC
MEDIA



FP7



*NEM SRA
NEM Vision*

*NEM SRA
NEM Vision*

*FP7/ICT
Work Programme*

CELTIC
Telecommunication Solutions

*Revised CELTIC
Purple Book*

neon
NETWORKED
& ELECTRONIC
MEDIA

*Mirror group
Exchange research priorities*

*Joint Mirror Group
Inter-platforms actions*

Stack of purple boxes representing technology platforms:

- eMobility
- ARTEMIS
- Other Technology Platforms
- ISI
- NESSI
- niac

Stack of yellow boxes representing national R&D programmes:

- media & networks
- eNEM
- National R&D Programmes
- AN (Agence Nationale de la Recherche)
- bmb+f
- IMI

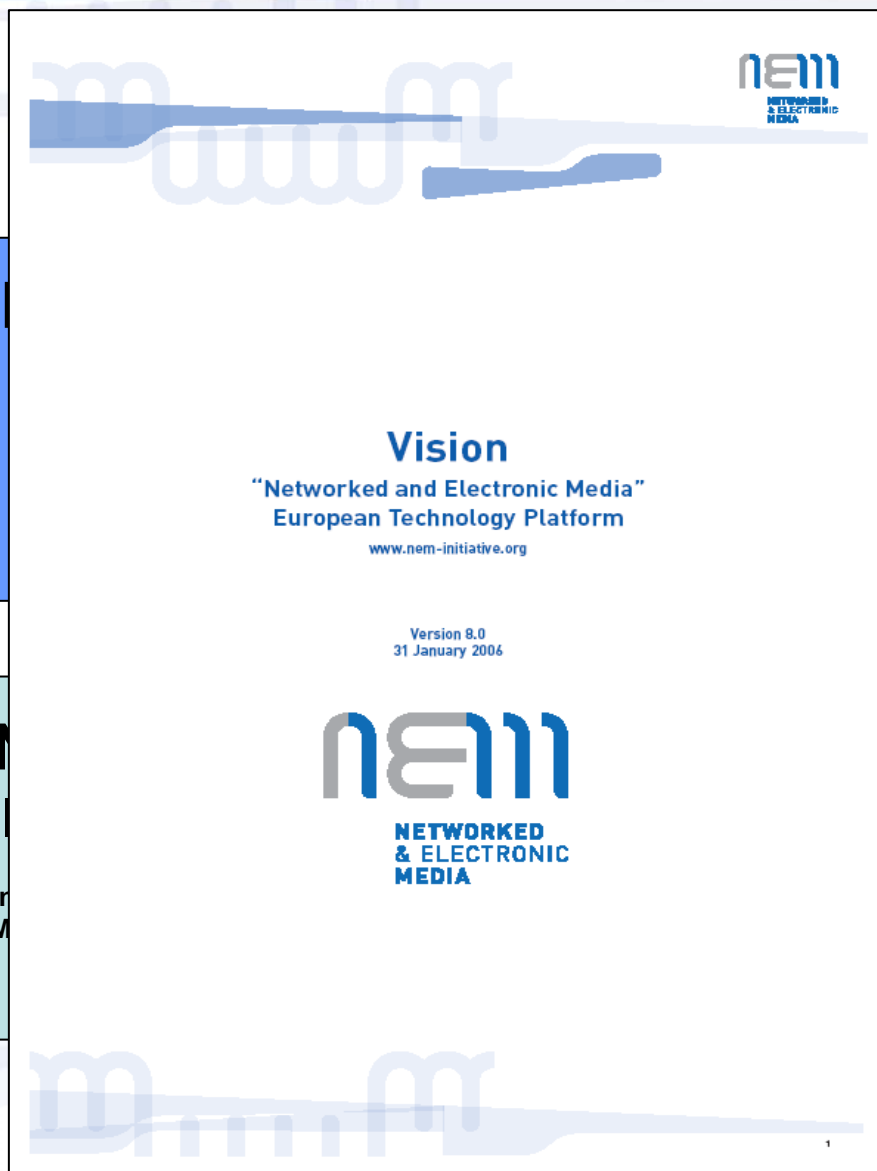
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NEM WG3
Regulatory

NEM WG4
Financial

NEM WG7
Governance

NEM WG8
NEM Label

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Institu
European
International
Mirror and M
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Other p

Strategic Research Agenda
“Networked and Electronic Media”
European Technology Platform
www.nem-initiative.org

Version 4.0
August 2006

nem
NETWORKED
& ELECTRONIC
MEDIA

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NEM WG4
Financial

NEM WG8
NEM Label

**NEM WG1
Vision**



**NEM WG2
SRA**



**NEM WG3
Regulatory**

**NEM WG4
Financial**

**NEM WG5
Institutional**

European Parliament
International Cooperation
Mirror and Member States
Celtic
Other platforms

**NEM WG6
Public Com.**

**NEM WG7
Governance**

**NEM WG8
NEM Label**

NEM Activities

- **NEM International MSc**
 - Establish a common diploma throughout Europe
- **Future Internet**
 - Creation of a common European vision on the Future Internet
- **GlobalNEM**
 - International cooperation. NEM beyond Europe
- **Regulatory Affairs**
 - Promote active interaction between NEM and regulatory bodies
- **Content**
 - Identify technological barriers to the advancement Content production in Europe
- **SMEs**
 - Pursue the active involvement of SMEs in R&D activities

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NEM SRA: Main areas

**Content
creation**

Delivery

**Media
presentation**

Underlying enabling technologies

Media applications and business models

NEM SRA: Content creation

- New forms of content – to drive take-up of new services and to adapt networked media technologies to wider purposes
- Representation of content – file formats for content that are the active constituents of services
- Tools for content creation and manipulation – Considering content in a wide understanding (not just audio and video, but other human senses as well);
- Automated semantic annotation – automatic metadata generation using semantic techniques.
- Human language technologies – allow all citizens to become e-included in the information society.

NEM SRA: Networking and Delivery infrastructure



- Intelligent delivery – to allow users to access interactive services of all kinds, regardless of the underlying network infrastructure and enabling dynamic handover of services;
- Quality of service – to guarantee quality of service appropriate to the content being carried and expressed in terms users can understand, across heterogeneous networks;
- Network architecture – to devise new network architectures appropriate to multi-provisioning of services based on wired and wireless hybrid heterogeneous networks for broadband, broadcast and mobile; they must be scalable to cope with the enormous increases in traffic that are expected;
- Home and extended home networks – to ensure that new network technologies extend into this specialized domain.

NEM SRA: Media presentation and content access



- Authentic, true-to-original media reproduction – displays to offer realistic and immersive video reproduction, including energy-efficient and wearable displays, and new methods of immersive sound reproduction;
- Virtual reality – interactive technology for business applications such as remote action and entertainment applications including games;
- Dynamic federation of distributed interface devices – ad hoc federations of devices self-assemble on demand on the basis of essential components distributed in the near environment; ‘mobile augmented reality’ is a possible early application;
- User-system interaction – multimodal user interfaces aiming at mimicking human communication skills that use several modes of communication could offer a natural and transparent way to deal with the complexities of interaction while hiding them from the user.

NEM SRA: Enabling technologies



- Security, privacy, and trust
- Rights management
- Federated services
- Middleware
- User number measurement and behaviour logging
- Effective recommendation systems
- Power management and energy saving
- Spectrum economy

NEM SRA: Media-related applications and business models



- Value chains – to understand how value is created, and how can it be protected;
- Social networking and media sharing – to see how social networking can have a positive impact on the content industry;
- User satisfaction and quality of experience – to develop methods of measuring quality of experience which could replace quality of service metrics.

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- Many of the research challenges described in the Strategic Research Agenda can best be achieved (and have greater market impact) if faced from an international perspective, involving researchers from countries beyond Europe, BUT...
- “If everything is a priority, then nothing is a priority”
- Priorization in the international cooperation field is important, and NEM addresses this prioritization in its SRA version 7 (currently in production)

Main objectives

- Identify consistent strategic objectives at European level.
 - This objective is to be achieved through higher cooperation among stakeholders in the EU and this will be implemented through NEM technology platform itself, its mirror group, the European Commission committees, the Eureka-Celtic programme and a number of supporting projects running under the Eureka and FP7 flags.
- Harmonize national programmes aiding R&D efforts,
 - Make them more efficient by exploiting synergies, with particular focus on those national R+D programmes specialized on the Media technologies: networked, audiovisual, electronics, etc.
- Extend this European cooperation at worldwide level,
 - Aiming at enlarging the markets where R&D results could be exploited. In order to make this goal happen, it is fundamental that stakeholders and R&D communities from key areas around the world start cooperating with NEM community and relevant European projects.

NEM SRA: The international dimension

- China
- Latin America
- Brazil
- India
- Mediterranean area
- Africa sub-Saharan
- South-Asia
- Korea
- Russia
- USA
- Japan

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Past EU-Japan cooperation

- **Open Grid services for improving medical knowledge discovery**
- **Common Awareness and Knowledge Platform for Studying and Enabling Independent Living**
- **Modelling and analysis of evolutionary structures for distributed services**
- **Distant Early Warning System**
- **Effective Multilingual Interaction in Mobile Environments**
- **Fiber Optic Networks for Distributed, Extendible Heterogeneous Radio Architecture and Service Provisioning**
- **The Global RFID Interoperability Forum for Standards**
- **Integration and Transfer of Action and Language Knowledge in robots**
- **Knowledge Yielding Ontologies for Transition-based Organisation**
- **Advanced robotic systems in future collaborative working environments**
- **Large-scale International Ipv6 Testbed**

Potential areas for future cooperation

- **Content creation**
 - Representation of content
- **Networking and delivery infrastructure**
 - Quality of service
 - Network architecture
- **Media presentation and content access**
 - Authentic, true-to-original media reproduction
 - Virtual reality
 - Dynamic federation of distributed interface devices
 - User-system interaction
- **Enabling technologies**
 - Security, privacy, and trust
 - Rights management
- **Media-related applications and business models**
 - User satisfaction and quality of experience

Potential areas for future cooperation

- Cooperation in the definition of Future Internet shall be one of the main drivers of EU-Japan future common projects
- Some key fields could be:
 - Optical networks
 - Security, privacy and trust
 - Information-driven routing (e.g. semantic routing)
 - Internet of things and its integration in the network
 - Robotics
 - Human language
 - Search Engines
 - 3D Communication
 - Virtual environment
 - Network virtualisation

Future cooperation is still to be written

- Continuous cooperation between Europe and Japan is key for both
- Suggestions for cooperation fields may come from European NEM Community through NEM SRA but the first success would be to establish early-stage cooperation in the definition of common priorities for cooperation
- Projects like COJAK are an excellent way to pave the way for establishing a sustainable cooperation between Europe and Japan
- NEM Community is open to cooperation with Japanese researchers
- GlobalNEM is willing to cooperate with you in the definition of areas of common interest for future concrete cooperation

**Thank you very much for your
attention**

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