

Home platforms and services: On the need for synergies between research and Standardisation

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http://www.cordis.lu/ist/directorate_d/audiovisual/index.htm

Vision of the Future - NGN@HOME workshop - 7 April 2005

Home platforms and services: User Centric – NOT location centric

- Vision results from convergence of
 - Fixed broadband and mobile network concepts
 - Introducing concepts of mobility and roaming in fixed broadband networks
 - End-user nomadism
 - Terminal nomadism
 - Consumer electronics and communication networking
 - Introducing various network and communication interfaces on all in-home electronic devices
 - In-home wired and wireless networking
 - Broadband networking
 - Mobile networking
 - Mass-market entertainment and communication
 - Ad hoc numbers of users in the home network
 - Multi-user electronic and digital entertainment
- Beautiful vision ! BUT ...

Beautiful ...but complex

- Technological complexity along several axes:
 - Home gateway:
 - interaction with the various providers (access, network, service, application, security, home automation ...)
 - Interaction with the various home devices and clusters
 - Interaction with the various users inside and outside the home
 - Home network:
 - Plug and play networking
 - Robust networking
 - High variety of technologies that that don't "talk" to each other
 - Management of home network and services
 - Nomadism: management of distributed
 - Service
 - Content
 - Subscriber

Beautiful ...but complex

- Competition between different sector actors for imposing their views and solutions
 - => “The battle for the home”
- Divergent views from various sector actors:
 - Divergent network architectures
 - Divergent technological visions
 - Divergent solutions
- Complexity of requirements from the various sectors
 - Legitimate but not always compatible
 - High variety of technologies
- Broadband, IP, Audio Visual convergence implies a radical new approach to business models of the telecom/Content/CE industries
- Markets are largely untested, and ARPU generators far from being validated today

To overcome this complexity, we need

1. Collaborative research
2. standardisation effort around large industry consensus
3. Strong links between research and standardisation

EC funded research on home networking

- Home/extended home environments are key focal points
- Partnership across traditional boundaries and complexity are two main challenges

Current EC funded research effort on home networking

- Focus on the extended home environment, with service/content portability
- Focus on the architectures and tools allowing to minimise integration complexity;
- focus on the network and service management issues allowing providers to install, manage, tailor and optimise service mix, billing, monitoring, control, and raise the ARPU...
- bundling of digital entertainment applications (e.g media streaming and distribution across different devices) with lower bandwidth applications such as home automation
- Accompany R&D with work on barriers to deployment (regulation, International reach, standards, societal barriers)
- Examples of FP6 projects addressing these different issues are:

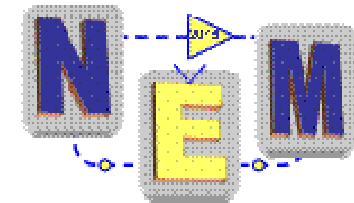


- EC coordination activities between research projects (**Concertation meetings**) on home networking
 - User requirements cross-checks
 - Roadmapping exercise (co-operation foreseen with CABA and IGRS)
 - Interoperability testing (nearly finished projects)

Future EC research

The NEM technology platform:

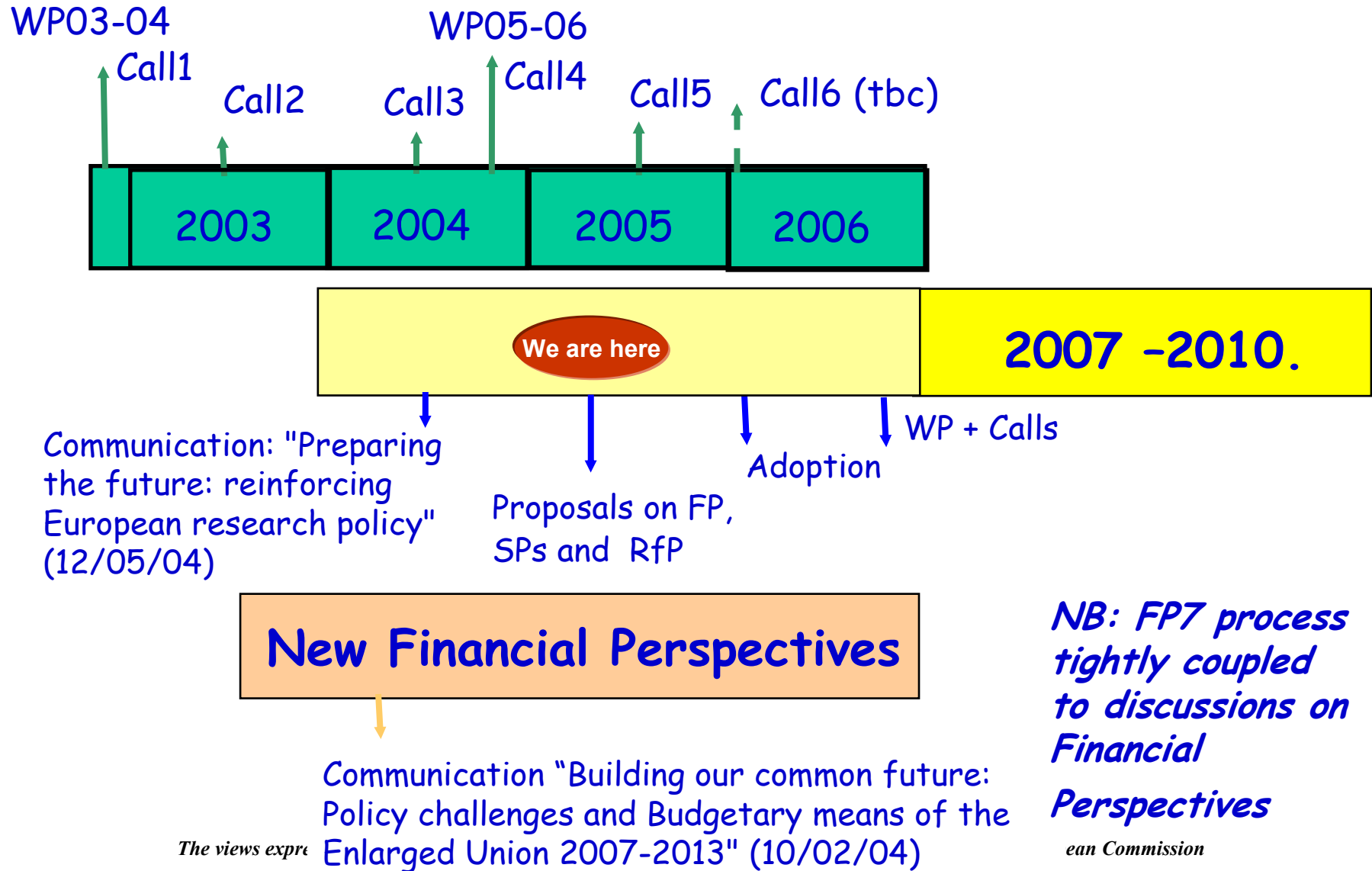
- Networked & Electronic Media technology platform (NEM - www.nem-initiative.org)
 - An industrial initiative at the heart of convergence
 - Offer a better structuring of research to address a.o. complexity in the home and extended home environment
- NEM is an industrial initiative of main stakeholders in this area (Consumer electronics, network equipment manufacturers, broadcasters, network and service providers, content providers, academia and research centres) to federate around a Strategic Research Agenda
 - Increasing impact of European research in NEM domain
 - Articulate input to regulation and policy



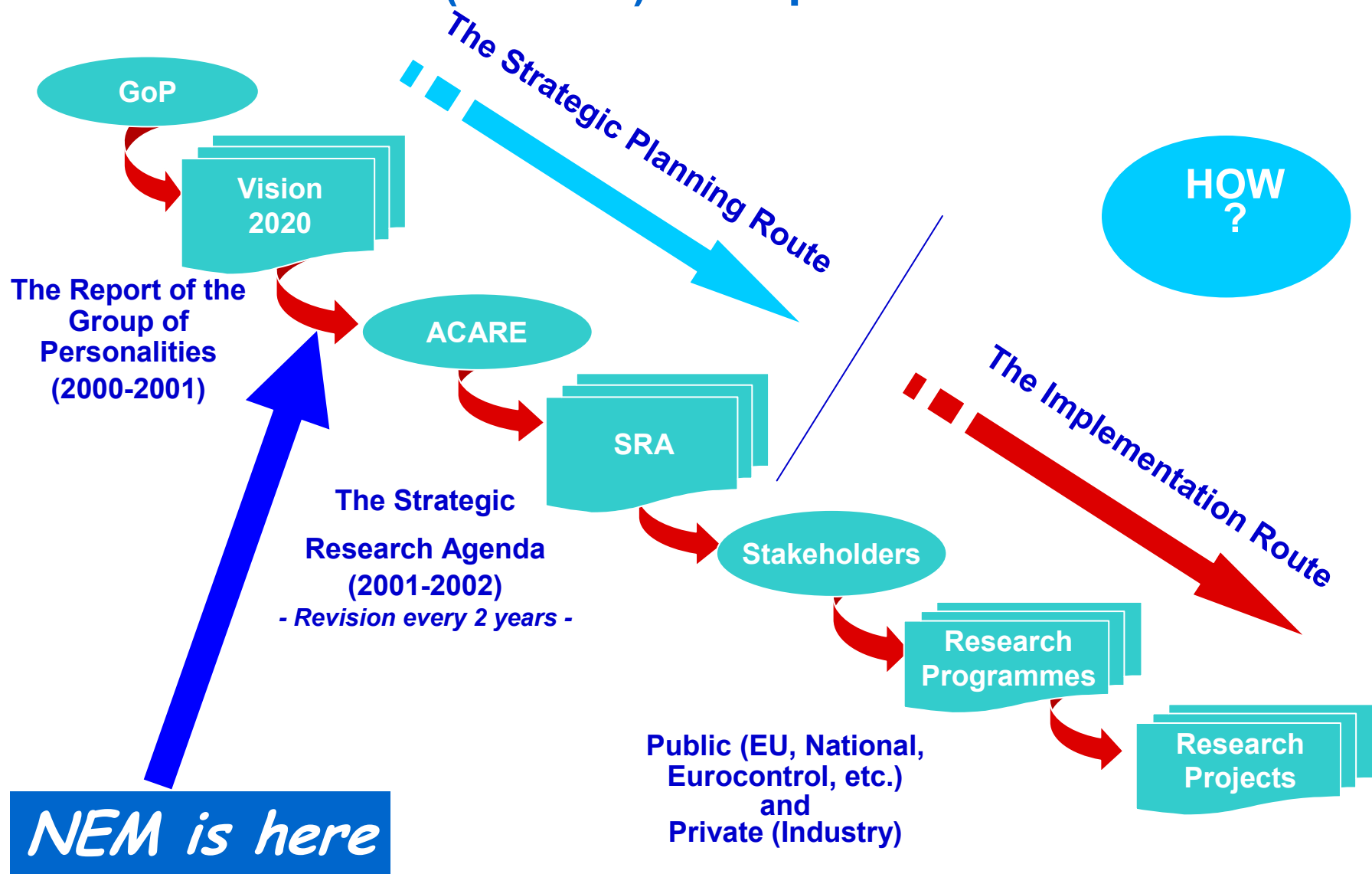
The EC 7th Framework Program for research:

- The home environment and the personal environment remain key research areas in IST.
 - Commission communication to be published soon:
<http://www.cordis.lu/era/fp7.htm>

FP 7 TIMELINE



Technology Platform: Typical process, the Aeronautic (ACARE) example



Standardisation in the home networking

- Many initiatives, especially fora
 - Most of them are sectorial approaches
 - Tackle at least (or only) one of the complexity axes but not yet a converged approach:
 - Home gateway
 - In-home networking, services and service discovery
 - Home gateway management
- One more integrated approach: Smart House
 - Low commitment
 - Failed to attract key stakeholders?
 - Too focused on home automation even if theoretically broader?
- Active fora (DLNA, IGRS, UOPF, Echonet, HNF, DSLF,...) are driven by non-European companies
 - Strong pressure from Asia with the MoU signed between IGRS (China), Echonet (Japan) and HNF (Korea)
- *What is the European answer? How will we achieve the large industry consensus needed in a converged environment?*

Standardisation in the home networking

- Will NGN@Home and HGI take up the lead?
 - Build upon one of European strength = telecom
 - Forum boosts standardisation body (NGN@home and Smart House) mechanism?
 - What is the relationship/cooperation mechanism?
- Convergence: Invite others to join?
 - consumer electronics manufacturers,
 - application & content providers
 - Broadcasters

Creating stronger links between standardisation and EC research

- With current research projects:
 - Invitation of ETSI NGN@home & HGI members to our concertation meetings on home networks
 - 24-25 May 2005 in Brussels (<http://www.ist-bip.org/>)
 - Around 22 September 2005: Home gateway workshop together with Broadband For All research projects
 - Invitation to participate to the unit consultation and workshops on FP7 research (including home and extended home environments)
 - Consultation: May-June 2005
 - Workshop: September-October 2005
 - Organisation of technical workshops? “standardisation meets research” days?
- *i2010* – A European Information Society for growth and employment :
 - Follow-up of e-Europe, “umbrella” initiative for IST activities
 - Stimulation of standardisation and interoperability
 - Ensuring the results of research contribute to standards developments
 - Offering mechanisms to benchmark national deployment programmes

Agenda for the Concertation meeting

24 May – 2pm to 6 pm in Brussels

- **Presentation of the AMIGO Project** 15'
- *By Maddy Janse, Philips, Access & Interaction Systems Media Interaction*
- **Presentation of the B@HOME Project** 15'
- *By Jack Verhoosel, TNO, Senior Business Consultant*
- **Introduction to the NGN@Home Initiative** 15'
- *By Milan Erbes, ETSI, NGN@Home Chairman*
- **Contribution on Standardisation Perspectives** 15'
- *By Philippe Calvet, France Telecom, Standardisation Manager (TBC)*
- **Status of the concertation on “home platforms”** 15'
- *By representatives from MediaNet, TEAHA & ePerSpace*
- **Coordination of “Users and Trials”** 15'
- *By Christos Georgopoulos, InAccess Networks, CEO*
- **Open discussion on the “2nd EU-China workshop on home networks and platforms”**
- (and on the market research to be launched) 30'
- **Open discussion on the “roadmap initiative”** (a world summit in the next months?) 30'

Creating stronger links between standardisation and EC research

- In future research programs:
 - *IST call 6:*
 - ESO: Create awareness and dissemination of European standards through international cooperation proposals
 - Ambient Assisted Living: research, standardisation and deployment projects targeting the assistive technology for the elderly
 - *Framework Programme 7:*
 - Re-enforcing the link between research and standardisation through the technology platforms:
 - Strategic Research Agenda should consider the need for anticipative action to influence and shape standards relevant to new technologies ahead of their availability for commercialisation.
 - Technology platforms may request the cooperation of European Standardisation Organisations for this exercise (Mandate Procedure)
 - ESO should seize the opportunity to create close links with the NEM
 - *NEM launching event: May 18, 2005 in Brussels (www.nem-initiative.org)*

Other European Commission initiatives

- Commission communication, 18 October 2004, “on the role of European standardisation in the framework of European policies and legislation”
 - Action plan for standardisation: implement recommendations of the communication
 - links between standardisation and research
 - the international promotion of European standards
 - Study to be launched end 2005 on standards in ICT to help defining future policy of Commission in terms of standards
 - Council conclusions on European standardisations adopted 21-22 December 2004
- http://europa.eu.int/comm/enterprise/standards_policy/role_of_standardisation/
- Revision of the standards part of the Directive 98/34 EC
 - Enlarge from product standard to service standard
 - Essentially related to internal market standards
 - End 2005 - beginning 2006

Conclusions

- Home environment and extended home environment are key research themes for EC collaborations
- Standardisation in this area is essential
 - BUT current efforts are very fragmented
 - Strong initiatives are taken outside Europe
- All elements for a European federated standardisation action in the home and extended home environment do exist
 - Expertise (with particular European strength in telecom)
 - Possibilities for large collaborative research projects in these areas
 - The NEM technology platform
 - The i2010 initiative
- A renewed opportunity for standards and research, it is up to industry, ESO and R&D players to seize it.