Telecommunications and Information Exchange Between Systems

ISO/IEC JTC 1/SC 6

Document Number:	N13969
Date:	2009-05-22
Replaces:	
Document Type:	Liaison Organisation Contribution
Document Title:	Ecma International's report to the SC6 Tokyo meeting on Proxying, VL-NFC, Personal Networks and TV WS
Document Source:	Ecma International
Project Number:	
Document Status:	For report to the SC 6 Tokyo meeting.
Action ID:	FYI
Due Date:	
No. of Pages:	14

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Ecma/GA/2009/0xx

Liaison Report on New work to SC 06, Tokyo, 3 June Proxying, VL-NFC, Personal Networks and TV WS

Ecma International

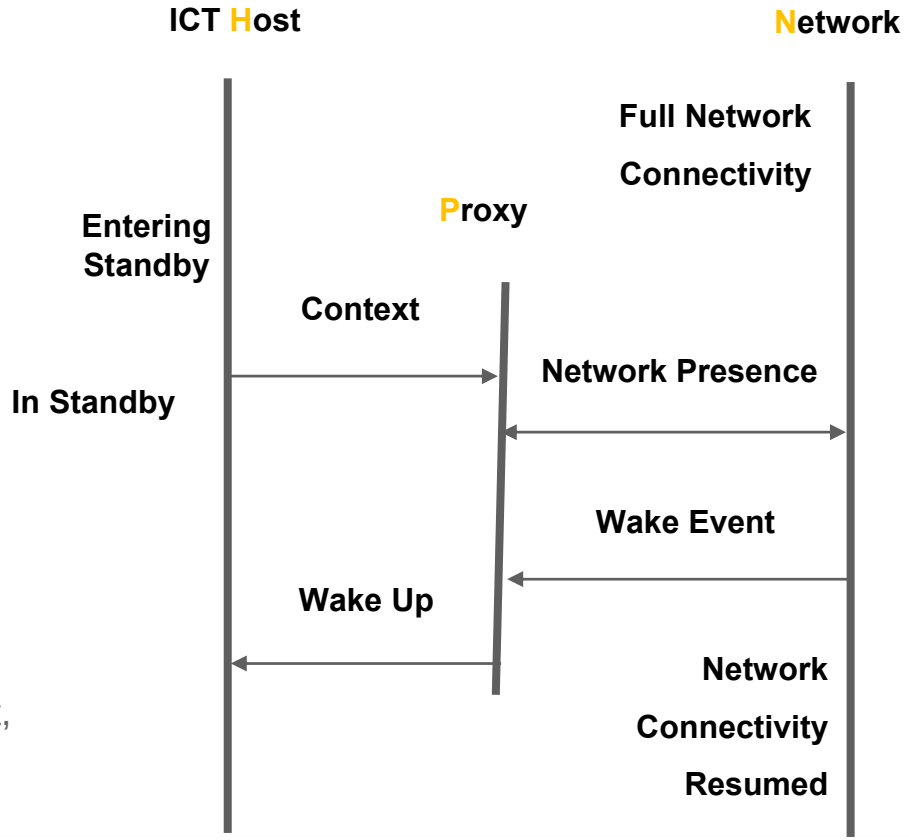
TC32-TG21 Network Proxy Goals

Proxies maintain Network presence so sleeping, higher powered, ICT Hosts reduce energy consumption:

Goals:

- Specify Proxy behavior in Ecma/ISO/IEC Worldwide standard
- Adoption by US Energy Star (Computers) v06 in 2010/11
- EU Lot 26 Sleep State Regulations

Experts from Terra Novum (Chair), LBNL (Vice Chair), Intel (Editor), AMD, Microsoft, Sony, Realtek, Apple, Oce, Lexmark….



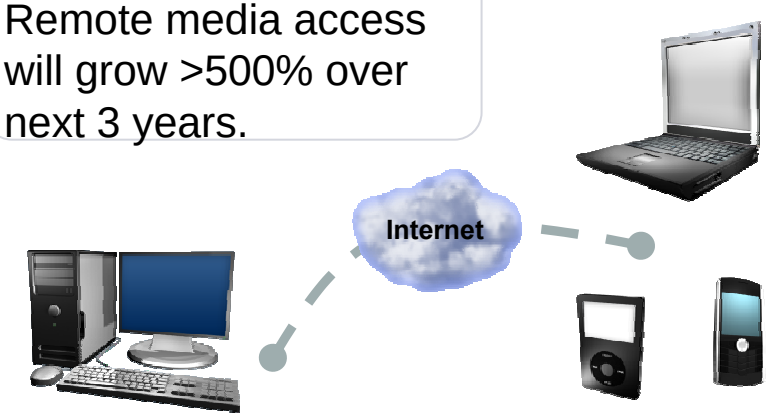
TC32-TG21 Proxy Extensive scope

Hosts	Usages / Functional
PC Desktops / Laptops	Remote Desktop, Consumer Manageability, File / Media Sharing
Printers	On-Demand Print
Media PCs, TV, Game Consoles	Wake-On User Trigger On-demand downloads
Application and Services	Distributed Apps (SIP, Teredo, Bonjour)

Demand for 24/7 Access to ICT

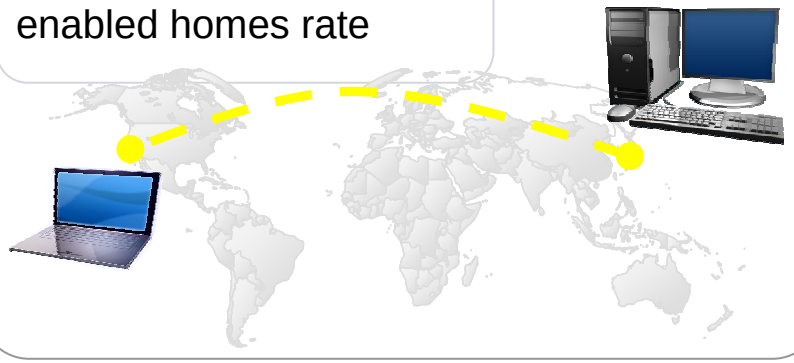
Remote Media Access

Remote media access will grow >500% over next 3 years.



Consumer Manageability

Client based services grow with broadband enabled homes rate



The Energy Challenge

Energy consumption has become key worldwide while desktop PCs waste nearly half their energy[1)]

Broadband connected PCs are left in an active state 25% more, increasing energy use by 417% since 2001[2)]

TC32-TG21 Proxy Annualised Energy Saving

ICT / Desktop	Annual Energy
"Always On" in S0 24 X 7 Responsive	430-610 kWh*
S0 + 70% in S3 24 X 7 Responsive	150-210 kWh
Annual Energy Savings	400 kWh ($40)**
150+ Million PCs*	60+ TWh Generating Cap ($6B)
PLUS Millions of "Networked Devices" (Printers, Game Consoles, TVs, etc.)	Huge Energy savings potential using Network Proxy

* Source: Energy Star Computer System Data ** Assuming 10c per kWh

Personal Area Network (PAN)

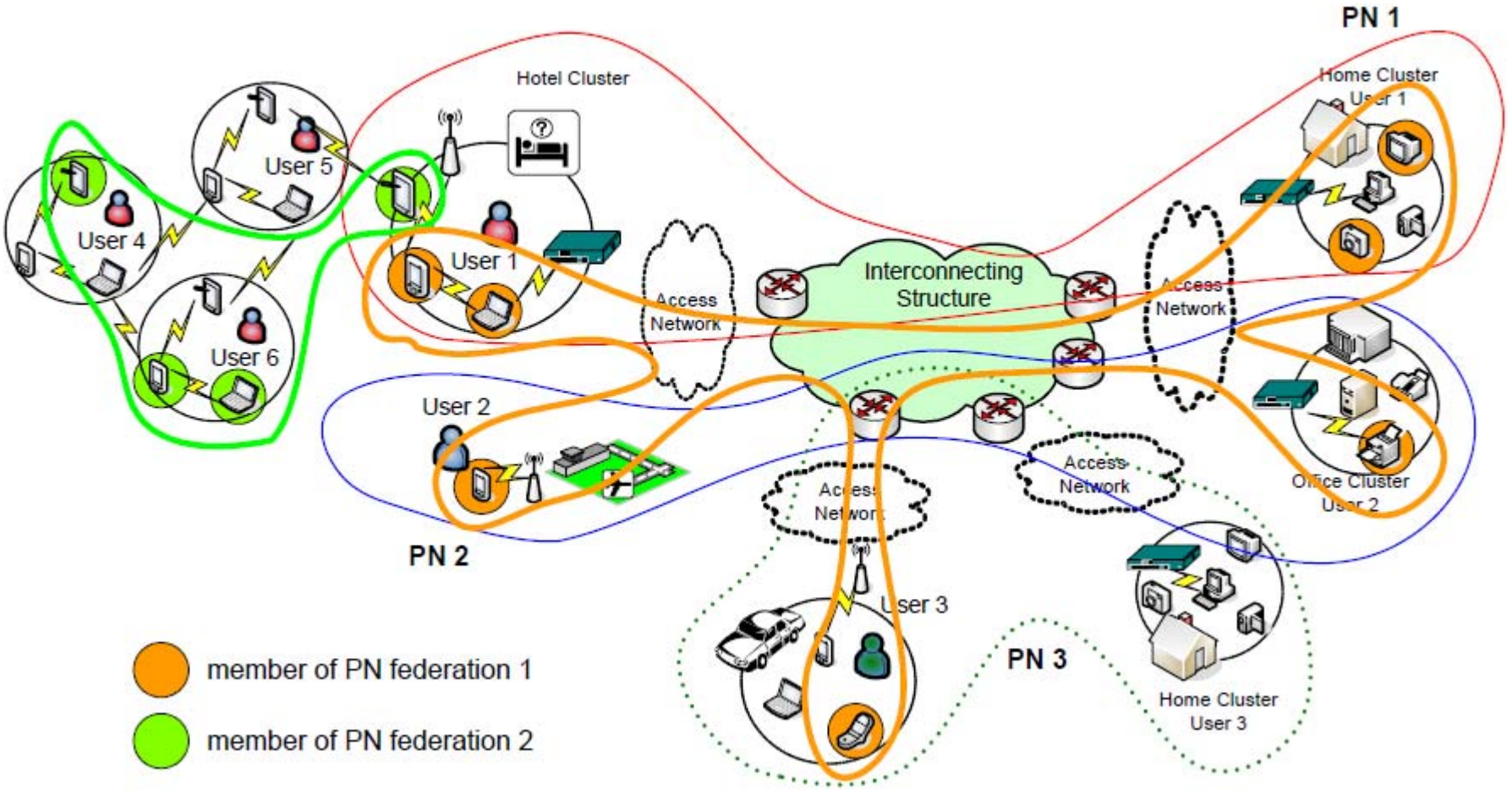
Network connecting devices in the close vicinity of a person/personal entity →> **local scope**

Personal Network (PN)

Overlay network on network infrastructure in reach connecting information & communication resources of a person/private entity independent of their location

- **User centred**
- **Secure and trustworthy**
- **Virtual vicinity** of local and remote resources
- **Self-organisation** of network connections
- **Heterogeneity** of technologies

Example: PNs & their federations



TC32 established Editor Group on 'Personal Networks (PN) and their Federations (PNF)' in August 2008

Develop Technical Reports that analyse standardization needs:

- *Umbrella TR (Architecture, terms, scenarios, regaps,)*
- *Networking TR (addressing & routing, interfaces, trust)*
- *Enabling Services TR (Identity/access mgnt, service discovery)*
- *Federations TR (PN/Service interworking)*

Collaboration with TC32-TG17 (IP-based Communications)

Involved companies/organisations:

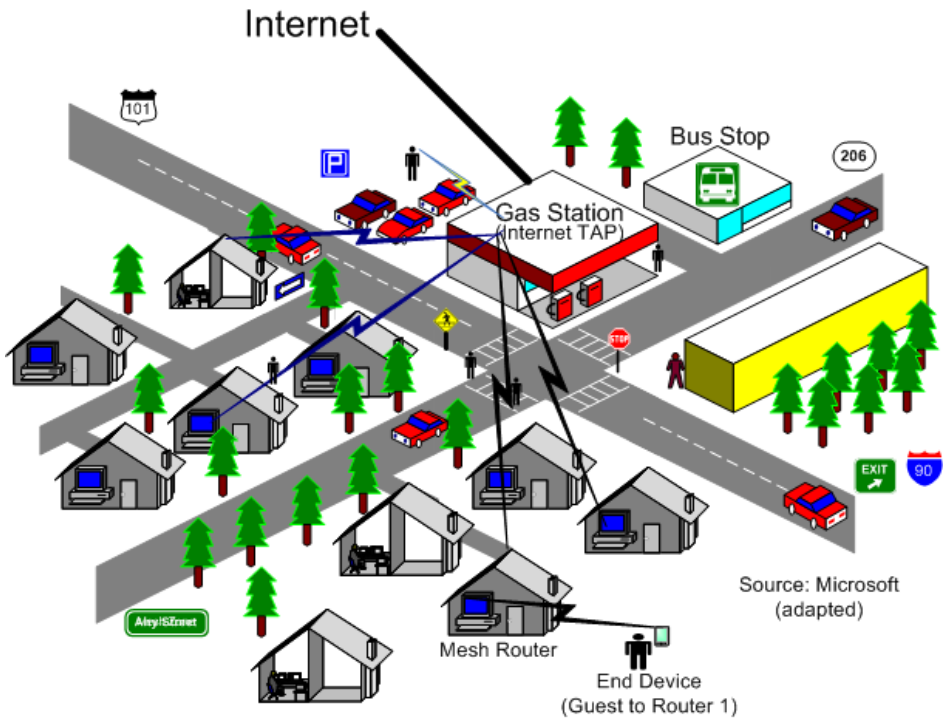
- *TU Delft, IBBT, CSEM, TNO, SEN*

Objective: TG or TC to specify standards on PNs

Ecma TC48-TG1
TV White Spaces Standard

- *Is a high-speed wireless networking standard for use in the Television White Spaces: broadcast television spectrum not being used by licensed services at a given location;*
- *takes advantage of the superior propagation characteristics of the UHF-TV bands;*
- *Delivers more robust wireless connectivity, extend the coverage range and result in cost effective networking solutions, both indoors and outdoors.*
- *Complies with personal/portable device FCC rules to allow unlicensed radio transmitters to operate in spectrum white spaces. Others, e.g. OFCOM in the UK, are working on similar regulations;*
- *Uses cognitive radio technology to avoid interference with licensed services and other incumbent users; and*
- *Is based on the contribution from Cognitive Networking Alliance (CogNeA) that promotes white space devices in a collaborative and complementary fashion with Ecma's standard development.*

- Television white spaces will provide more widely available and cost effective access to the internet in underserved markets.
- The superior propagation characteristics provide much greater coverage range than existing unlicensed technologies.



- Television white spaces will enable wireless distribution of high-quality high-definition television for whole home, vastly improving the DTV experience.
- The new standard will provide reliable and robust coverage anywhere in a home, while consuming much lower power.