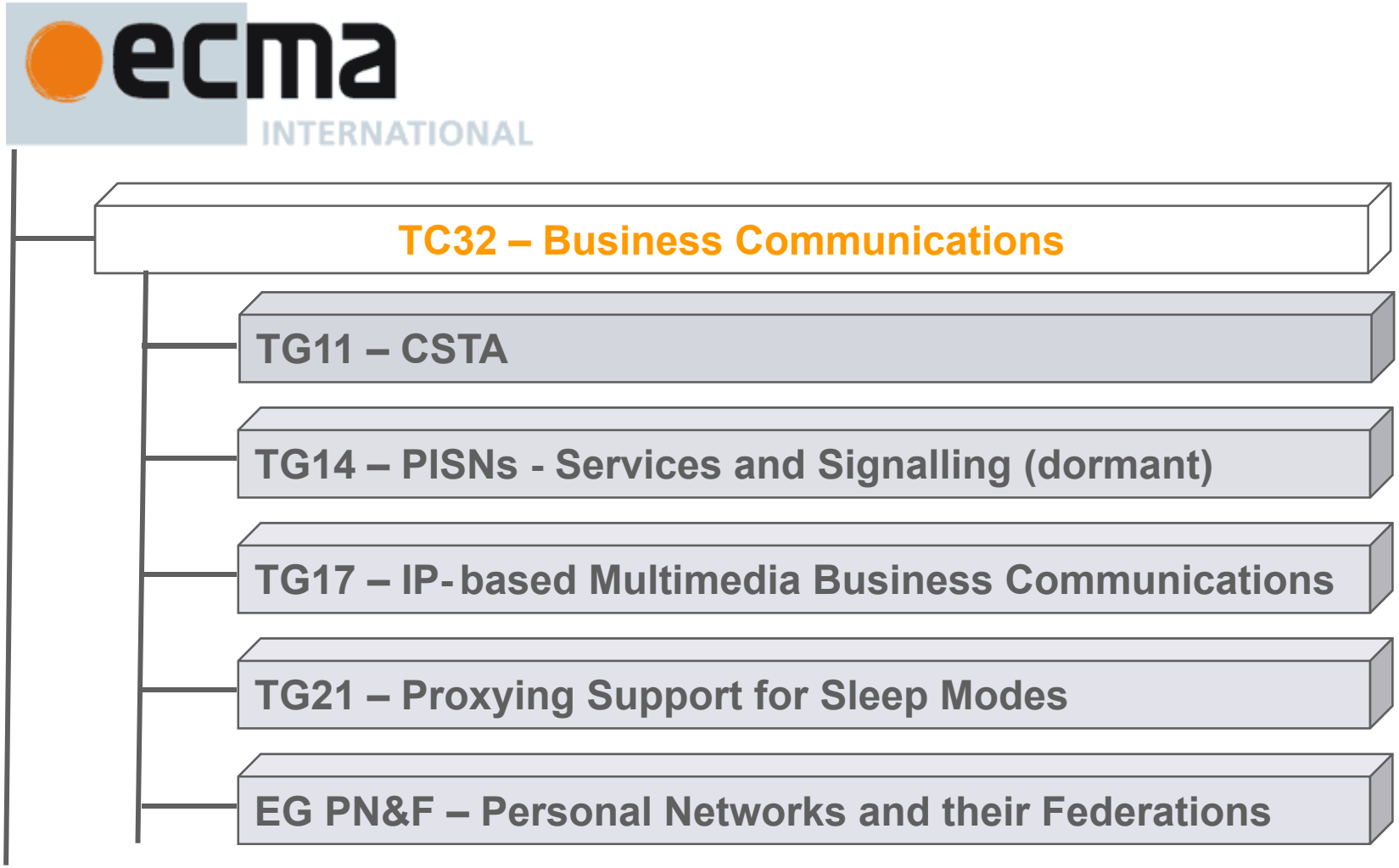
Ecma/TC32/2009/045
(Rev. 1 – 15 June 2009)

Technical Committee 32
Business Communications

TC32 chair

TC32
has several Task Groups



TC32 is different to other TCs because…

- **TC32's scope covers a number of modern communication technologies (IT, IP-based telecommunication)**
  - *Based on* small focused task groups
  - *Extensive use of* networking with other standardization groups
- **Ecma TC32 work is published by multiple SDOs**
  - *Ecma International*
  - *ETSI (via cooperation agreement)*
  - *ISO/IEC (via JTC 1 Fast Track procedure)*
  - *IETF (via Internet-Drafts)*
- **Ecma TC32 standards are tightly coupled to market needs in terms of subject and timely delivery**

Meetings

- *TC32 meets on demand for 1 day, at least once a year*
- *TG11 meets at least quarterly for one week, with frequent interim teleconferences, meeting locations in Europe, USA and Asia*
- *TG14 meets on demand*
- *TG17 typically meets quarterly for 2–3 days, with frequent interim teleconferences, meeting locations in Europe*
- *TG21 has weekly teleconferences and meets frequently, meeting locations in USA*
- *TC32 task groups hold joint meetings with each other and with working groups of other SDOs on demand*

Electronic working

- *Audio conferences used on demand*
- *Extensive use of email*
- *Paperless meetings*
- *Voting by email*

TG11 is developing standards related to Computer Supported Telecommunication Applications (CSTA), a standardized interface that provides "third party" interactions between computer applications and a telecommunication network.

TG11 is cooperating with ISO / IEC JTC 1 SC6, W3C and ETSI

Technical overview: CSTA

- **Abstraction Layer for telecommunication applications:**
  - *Independent of underlying signaling protocols*
    - **H.323, SIP, Analog, T1, ISDN, etc.**
  - *Independent of devices*
    - **intelligent endpoints, low-function/stimulus devices, SIP Signaling models - 3PCC vs. Peer/Peer**
- **Operates equally well in different environments:**
  - *3rd party call control*
  - *1st party call control*
- **Basic call model standardized in 1992 – continually refined and enhanced based upon significant industry implementation experiences, new protocols, etc.**
- **Design goal to enhance application portability across CSTA implementations:**
  - *Specifies normalized call model and behavior*
  - *Complete functional definition of each service*
  - *Specific conformance criteria*

Advancement of CSTA Technology

- **Work on CSTA object model in UML for new standard**
  'Object-Based Programming Interface for CSTA'
- **Final draft ECMA-323 5th edition**
  'XML Protocol for Computer Supported Telecommunications Applications (CSTA) Phase III'
- **Final draft ECMA-269 8th edition**
  'Services for Computer Supported Telecommunications Applications (CSTA) Phase III'
- **Final draft ECMA-348 4th edition**
  'Web Services Description Language (WSDL) for CSTA Phase III'
- **Final draft ECMA TR/82 2nd edition**
  'Scenarios for Computer Supported Telecommunications Applications (CSTA) Phase III'

TC32-TG11
Publications

- *Services for Computer Supported Telecommunications Applications (CSTA) Phase III:* ECMA-269
- *XML Protocol for Computer Supported Telecommunications Applications (CSTA) Phase III:* ECMA-323
- *Application Session Services:* ECMA-354
- *WS-Session - Web Services for Application Session Services:* ECMA-366
- *Using ECMA-323 (CSTA XML) in a Voice Browser Environment:* ECMA TR/85
- *Using CSTA for SIP Phone User Agents (uaCSTA):* ECMA TR/87
- *Designing an Object Model for ECMA-269 (CSTA)* ECMA TR/88
- *Session Management, Event Notification, and Computing Function Services - Amendments for ECMA-348* ECMA TR/90

TC32-TG14 Private Integrated Services Networks (PISNs)

PISNs have formed the basis of voice communication in the enterprise environment since the mid 1980s. Based on ISDN technology, a PISN provides circuit-switched connectivity at rates based on 64 Kbit/s in support of voice, fax, data, low-speed video, etc. A PISN comprises inter-connected Private Integrated services Network eXchanges (PINXs) (e.g., PBXs).

Current work

- *Maintenance of PISN standards*

Previous work

- *TG14 has covered the following fields*
  - ***architecture;***
  - ***scenarios for the interconnection of PINXs;***
  - ***numbering and addressing in PISNs;***
  - ***services in PISNs;***
  - ***inter-PINX signalling - "QSIG";***
  - ***signalling for PISN access - "SSIG".***

QSIG

- *Establishment and release of calls (basic services) between PBXs and for the control of a large number of features (supplementary services).*
- *independent of its own transport and independent of the means of transporting speech or other media in calls established by QSIG.*
- *QSIG can be deployed in IP-networks, either tunneled directly over a transport protocol or over some other signalling protocol such as H.323 or SIP.*

TG17 investigates issues relating to Next Generation Corporate Networks (NGCN), the term used to describe enterprise networks that use transport infrastructures based on the Internet Protocol (IP) and provide session level capabilities (e.g., audio, video) based on the Session Initiation Protocol (SIP). The special needs of NGCNs, in contrast to public networks, are documented in a series of Technical Reports, which are used to initialize Ecma Standards and as input to other standards bodies working in relevant technical fields.

TC32-TG17
Current Work Items

TR/NGCN - Security

- Security of session level communications
- Signalling and media security
- Requirements, recommendations, standardisation gaps

TR/NGCN - Emergency Calls

- Technical aspects of emergency calls in enterprise networks
- Considerations for roaming mobile and nomadic users
- Requirements and standardisation gaps

TR/92 2nd edition (Enterprise Mobility)

- Taxonomy
- Use cases & requirements

TC32-TG17
Recent Publications

- Tunnelling of QSIG over SIP: ECMA-355, 3rd edition (2008)
- Next Generation Corporate Networks (NGCN) - General: ECMA TR/95 (2008)
  - **General information on Next Generation Corporate Networks (NGCN)**
  - **Architectural concepts**
  - **Communication scenarios**
- Next Generation Corporate Networks (NGCN) - Identification and Routing: ECMA TR/96 (2008)
  - **Session level user identification**
  - **Routing issues**

TC32-TG17 deliverables above have been published in parallel by ETSI and ISO/IEC

Co-operations with other SDOs

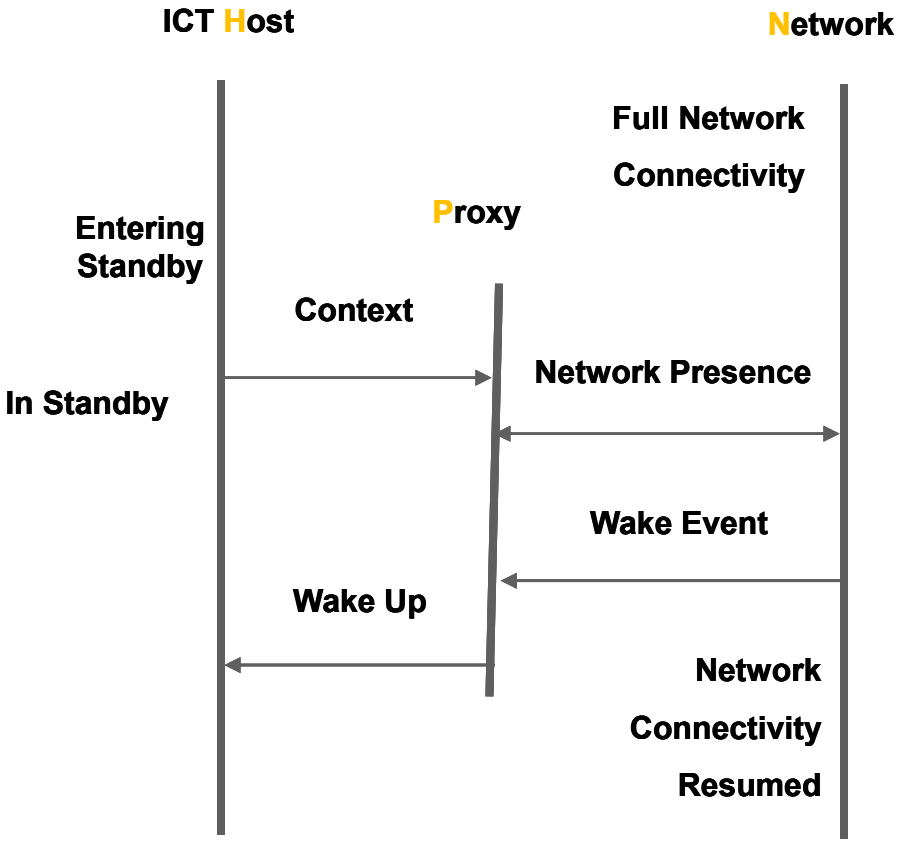
- **Liaison statement exchange with ETSI TISPAN** on enterprise issues in NGN
- **Contributions to ETSI TISPAN NGN work items** with relevance to NGN-NGCN interconnection & interworking:
  - **WI 03195 NGCN-NGN Interface Implementation Guide**
- **Joint meetings and teleconferences** with ETSI TISPAN
- **Liaison with ITU-T SG13** on requirements for NGN-NGCN interconnections
- **IETF contributions** by TC32-TG17 members, leading to
  - **RFC 4916 'Connected Identity in the Session Initiation Protocol (SIP)'**
  - **RFC 4497 'Interworking between the Session Initiation Protocol (SIP) and QSIG'**
- **Publication of TG17 deliverables by ISO/IEC** via Fast Track Procedure

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

Goals:

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

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

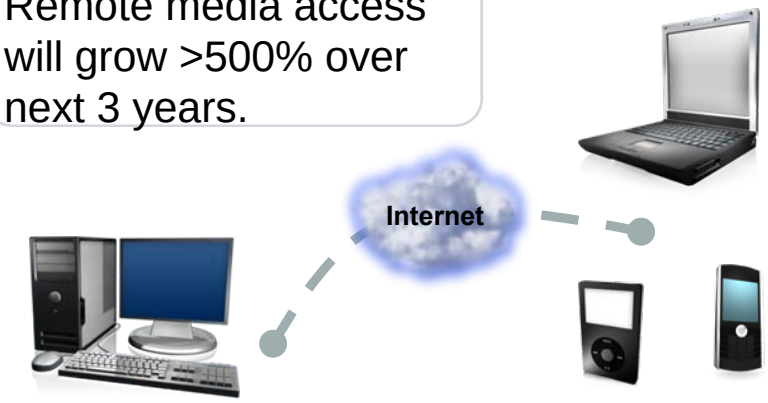


Hosts	Usages / Functional
PC Desktops / Laptops	Remote Desktop, Consumer Manageability, File / Media Sharing
Printers	On-Demand Print
Media PCs, TV, Game Consoles	Wake-On User Trigger On-demand downloads
Application and Services	Distributed Apps (SIP, Teredo, Bonjour)

Demand for 24/7 Access to ICT

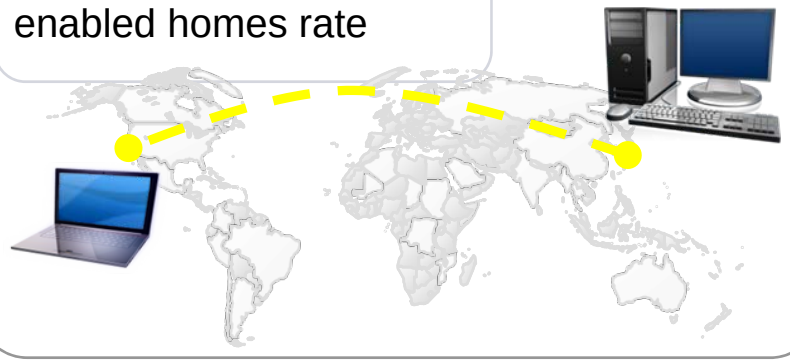
Remote Media Access

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

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

TC32-TG21
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

From PANs to PNs

Personal Area Network (PAN)

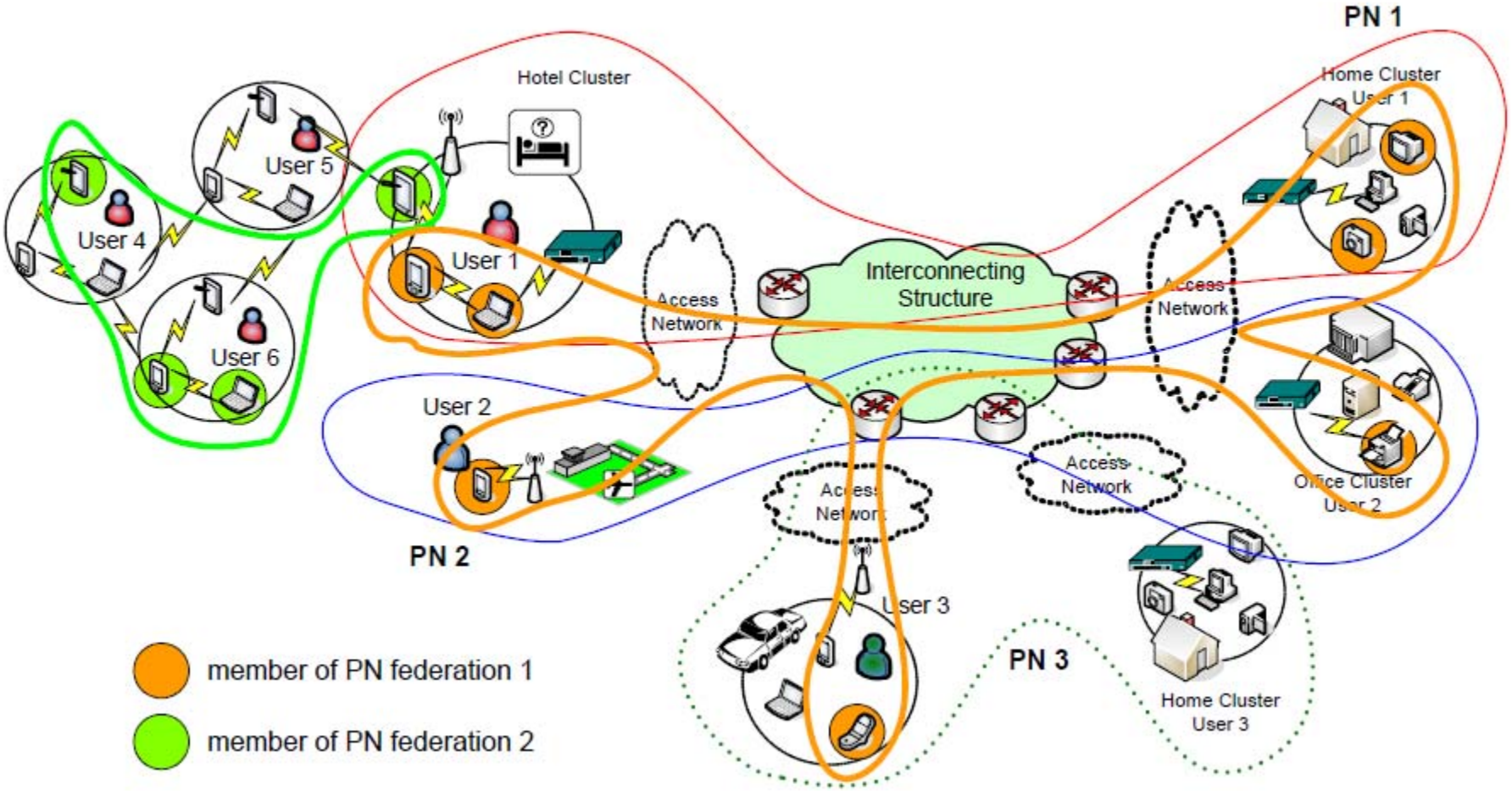
Network connecting devices in the close vicinity of a person/personal entity →> **local scope**

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 & federations



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

- **Scope:** Develop Technical Reports (TR) to identify standardization needs:
  - *Umbrella TR (Architecture, terms, scenarios, regaps,)*
  - *Networking TR (addressing & routing, interfaces, trust)*
  - *Enabling Services TR (Identity/access management, service discovery)*
  - *Federations TR (PN/Service interworking)*
- **Collaboration with TC32-TG17** (IP-based Communications)
- **Involved companies/organisations:**
  - *TU Delft, IBBT, CSEM, TNO, SEN*
- **Objectives:** Establishment of a TC32 Task Group or a Technical Committee to specify standards on PNs

Thank you for your attention

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