3GPP Core IMS standardisation
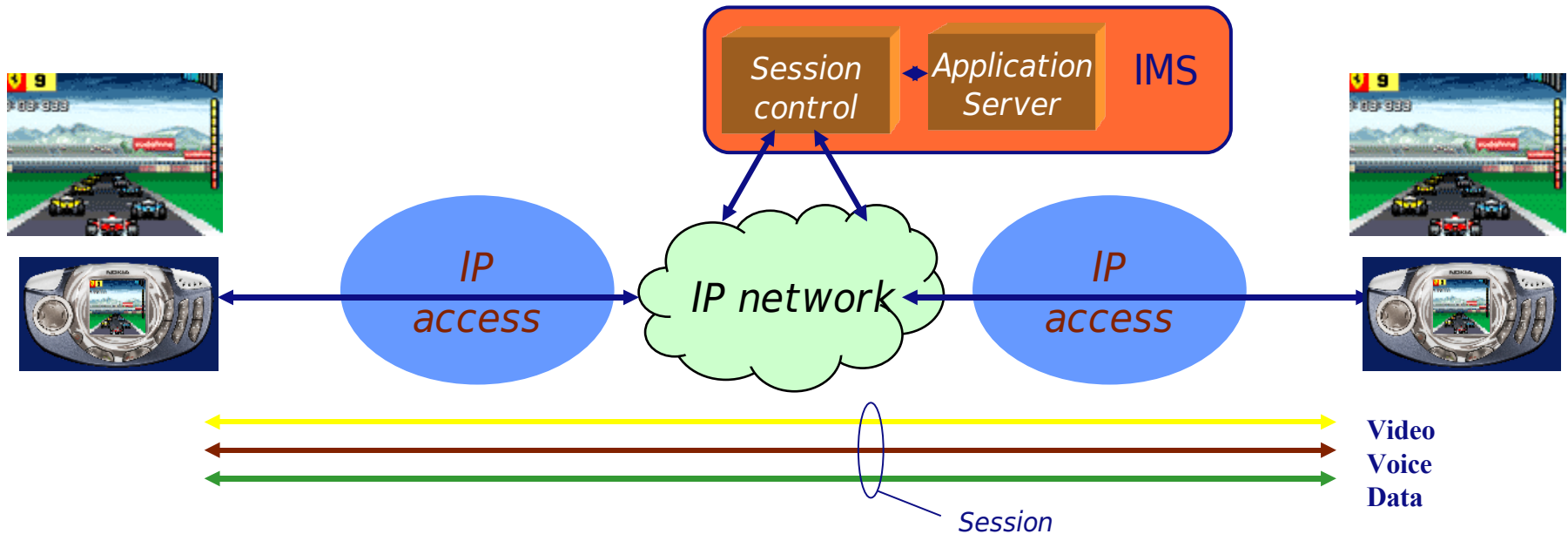
IMS developments in 3GPP

**TNO | Knowledge for business**

Toon Norp – Business Consultant

IMS provides multimedia connections over IP

- IMS enables real time multimedia connections over IP
  - Combinations of media, with associated QoS and charging
  - Applications implemented on terminal and/or in network make use of these connections
- IMS is enabling technology
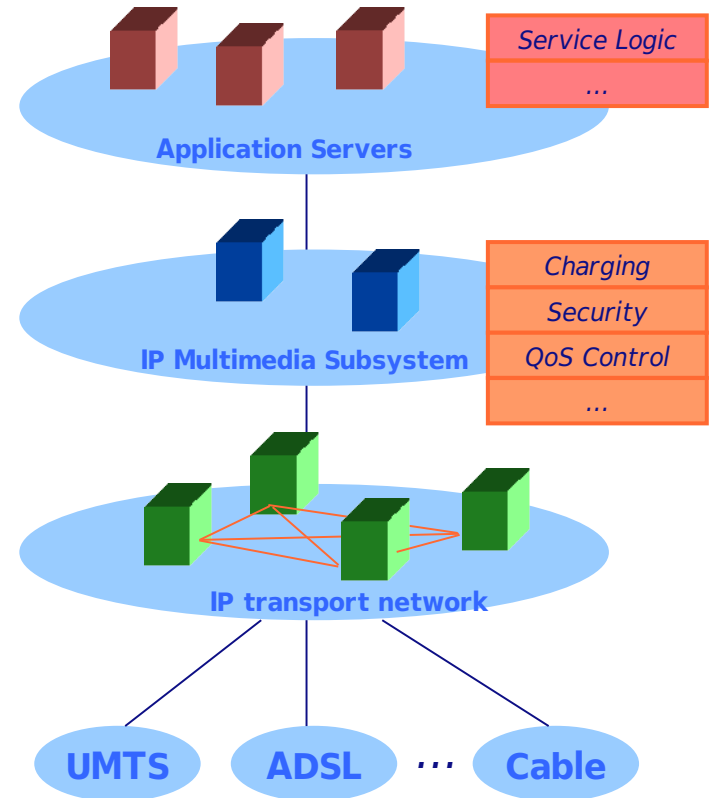 - IMS does not define particular services

IMS standardisation in 3GPP

- *3GPP started IMS standardisation in 2000*
  - *at first targeted at mobile multimedia*

- *IMS based on SIP protocol (IETF RFC3261)*

- *3GPP IMS specifications and SIP extensions define how to use SIP in a telecommunications network*

- *In 2002, the first IMS specifications where frozen*
  - *3GPP Release 5*
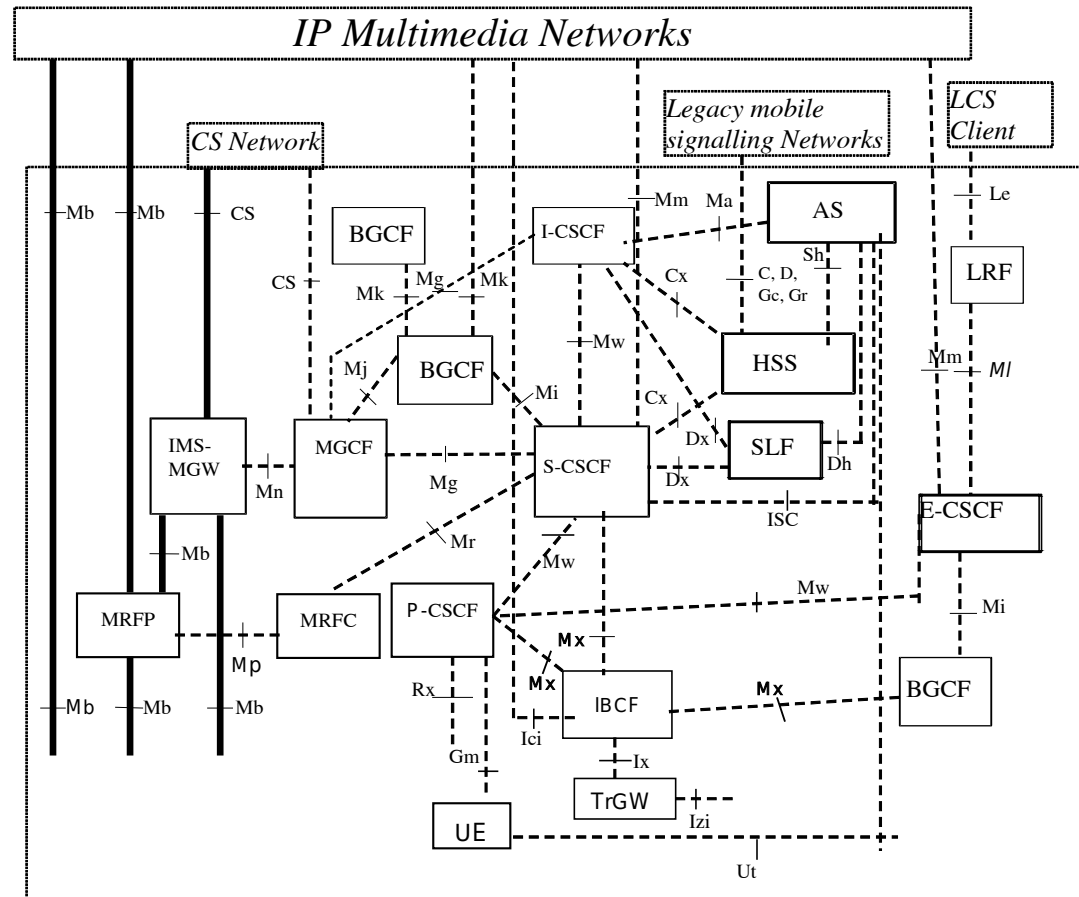
IMS architecture [3GPP 23.002]

IMS access independence

- *IMS works on any IP connectivity access network (IP-CAN)*

- *On request from 3GPP2, 3GPP made IMS specifications access independent from Release 6 onwards*

- *Also other standards bodies indicated they wanted to base themselves on 3GPP IMS specification.*

Application Servers

Service Logic
...

IP Multimedia Subsystem

Charging
Security
QoS Control
...

IP transport network

UMTS **ADSL** ... **Cable**

Common IMS

- *In 2007, with Common IMS it was agreed that 3GPP would take overall responsibility of IMS specifications*
  - *Avoid fragmentation of IMS specifications*

- *ETSI TISPAN IMS specifications moved to 3GPP in 2007 (www.3gpp.org/specs/TISPAN-IMS-transfer.htm)*
  - *All TISPAN Release 1 specs included 'as is' in 3GPP Release 7*
  - *Some TISPAN Release 2 specs merged with 3GPP Release 8*
  - *Harmonisation of 3GPP Rx and TISPAN Gq' interface [TR23.822]*

- *Also 3GPP2 MMD requirement specifications have been merged with Release 8*
  - *Last week, 3GPP SA1 meeting completed common IMS harmonization for Release 8 (from ETSI TISPAN and 3GPP2)*

- *From Release 9 onwards, 3GPP maintains one common set of IMS specifications*

# Why is standardisation of IMS so important

- *Telco approach*
  - *All operators co-operate to provide a service*
  - *One client / subscription*

- *Internet approach*
  - *Little or no co-operation between services*
  - *Multiple clients*
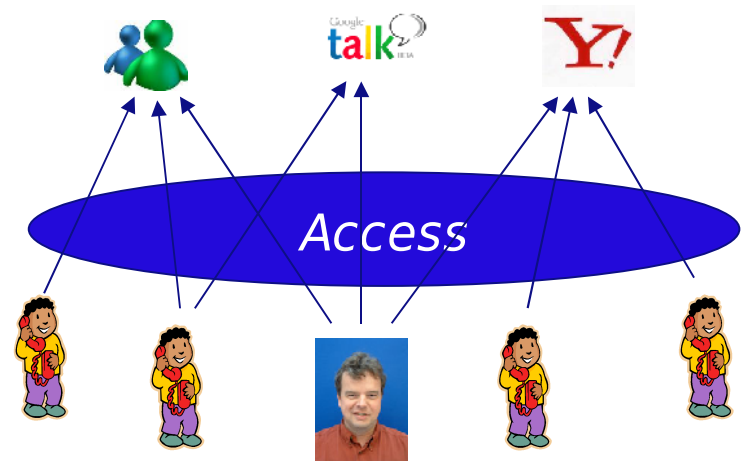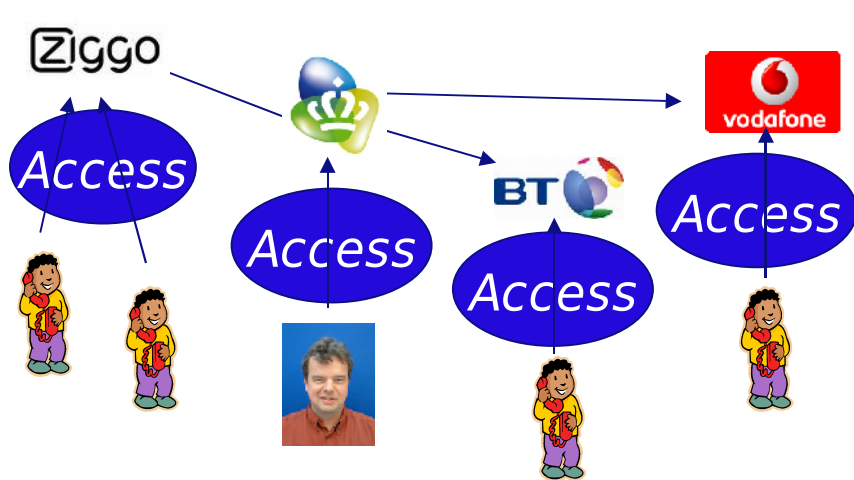
Telco operators need to look at IMS standards if they want to provide more than VoIP

Rich Communication Suite

- *The Rich Communication Suite Initiative is an effort of a group of operators, network and terminal vendors to launch a set of interoperable services based on IMS*
  - *Operators: Orange, Telecom Italia, Telefonica, TeliaSonera, AT&T, NTT DoCoMo, Telenor, Telstra, SFR, SK Telecom*
  - *Vendors: Nokia, Nokia Siemens Networks, Samsung Sony-Ericsson,, Ericsson, Alcatel-Lucent, Motorola, LG*

- *Main features of Rich Communication Suite Phase 1*
  - *Rich Call: calls enhanced with media sharing*
  - *Enhanced phone book, contacts enhanced with capabilities and rich presence,*
  - *Enhanced messaging, conversational messaging experience.*

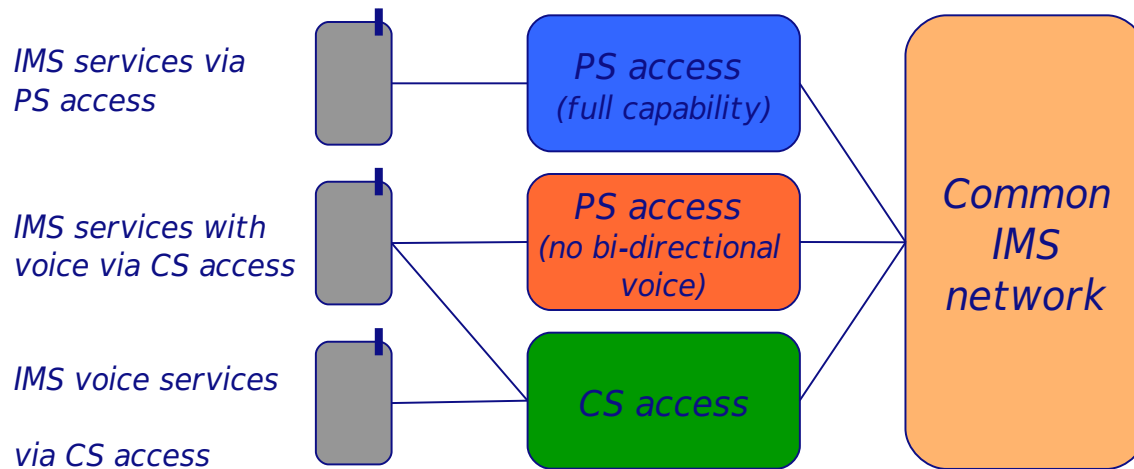- *Plan is to have RCS devices in the shops in 2009*
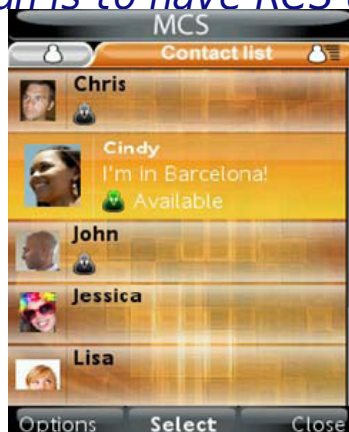
GSMA IPX

- *With IPX, the GSM Association has defined a global framework for international IMS interconnect*
  - *First specifications in 2006*
  - *Trials in 2006 and 2007*
  - *Now first commercial deployments / announcements*
- *IPX Framework specifies dedicated network infrastructure with*
  - *Security*
  - *QoS*
  - *Commercial model for interconnect*

Operator A — IPX 1 — IPX 2 — Operator B
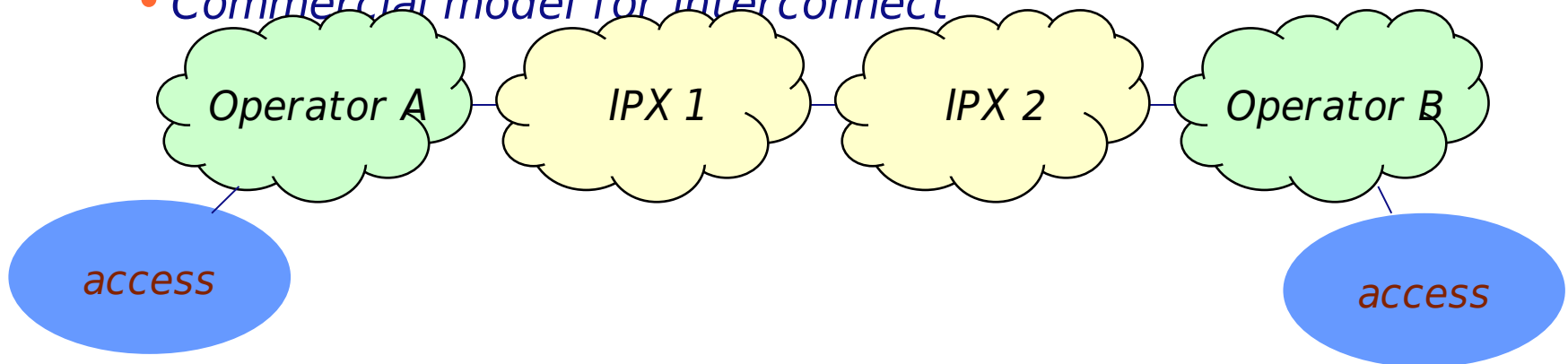
access

access

3GPP IMS developments: IMS Centralized Services (ICS)

- *Description:*
- *Providing services from a common IMS network using CS access to transport voice services where PS access is not suitable for VoIP*
- *Allows migration of service control from CS network to IMS network*

- *3GPP spec:*
- *TS 23.292*

IMS services via PS access → PS access (full capability) → Common IMS network

IMS services with voice via CS access → PS access (no bi-directional voice) → Common IMS network

IMS voice services via CS access → CS access → Common IMS network

3GPP IMS developments: Multimedia Session Continuity

- *Description:*
- *Continuation of ongoing IMS sessions with multiple media:*
  - *across different access networks*
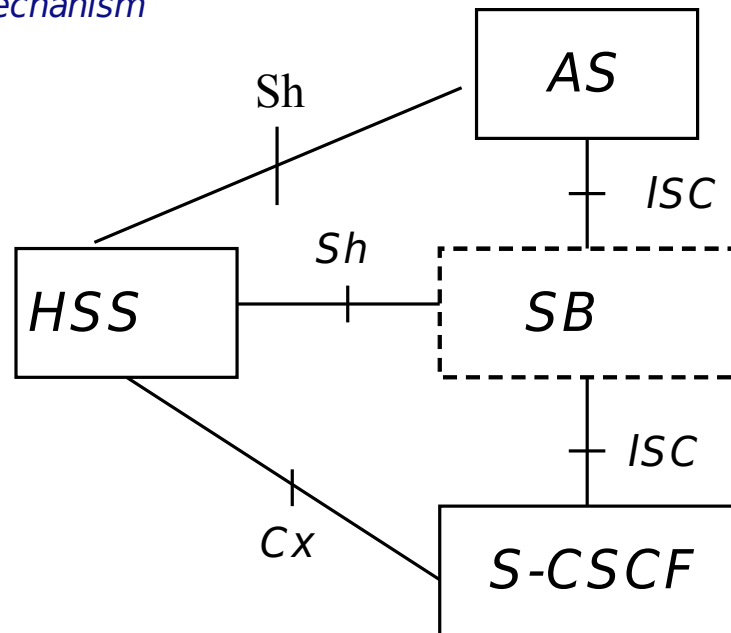 - *across different user equipments*

- *3GPP spec:*
- *TR 23.893*

UE-2

Voice

Video

IP Network

UE-1

UE-3

UE-4
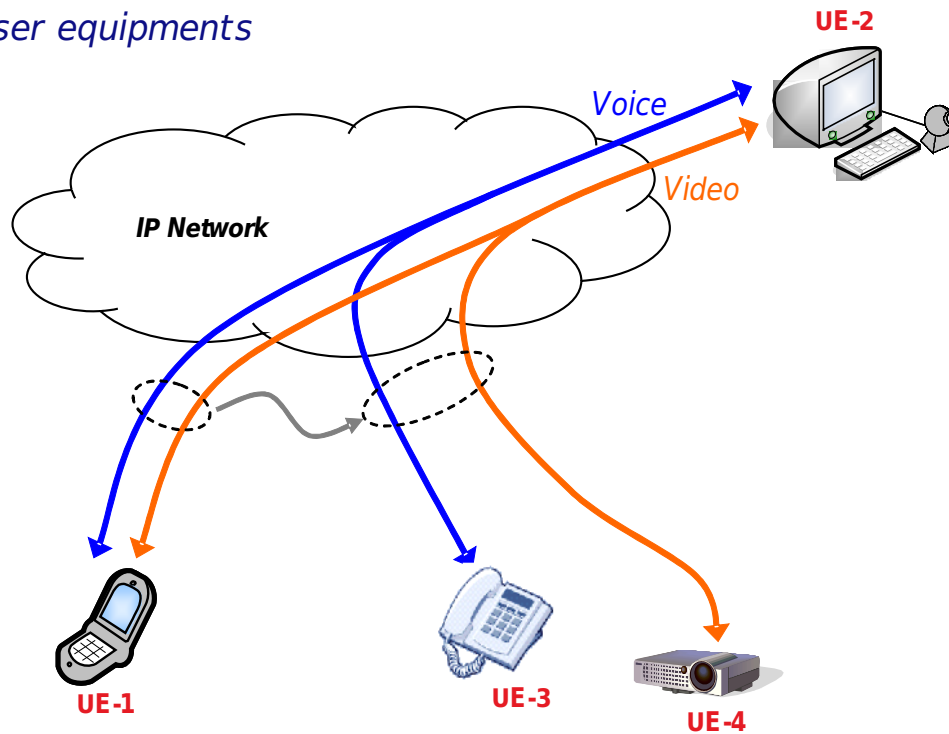
3GPP IMS developments: IMS Service Brokering

- Description:
- Enhancement of the current mechanisme of Service Capability Interaction Management (SCIM)
- Different approaches (centralised, distributed, hybrid)
- Enhancements of iFC mechanism

- 3GPP spec:
- TR 23.810

What does TNO do in standardisation?

- *Representation of customers in standardisation*
  - *Influencing standard developement to defend customer interests*

- *Rapporting on standardisation progress*
  - *Quarterly status reports*
  - *Q&A sessions*
  - *Workshops*

- *TNO knowledge building*
  - *TNO builds standards knowledge to use in customer projects*
    - *Technology assessment / impact analysis*
    - *RFI / RFQ*
    - *Architecture support*

Thank you!

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