Naming/Numbering and Identification of UMTS Users

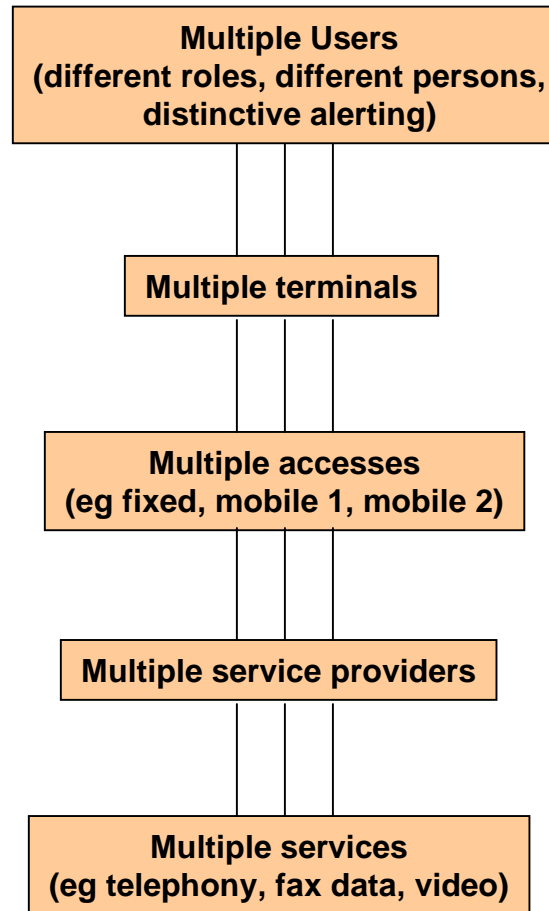## Mohammed Shabeer

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Presentation Outline:

- Legacy - to- UMTS / Issues
- User Expectations
- Common Naming / Numbering
    - What's wrong.
- UMTS User Requirements
- Current Activities & Conclusions

Contacting a UMTS User - Issues
Multi-Everything

Multiple Users
(different roles, different persons,
distinctive alerting)

Multiple terminals

Multiple accesses
(eg fixed, mobile 1, mobile 2)

Multiple service providers

Multiple services
(eg telephony, fax data, video)

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UMTS Customer Expectations

- **To be oblivious of technology.**

  Network Access/Technology Independent.

- **'Always on' - seamless services.**

- **Multi-media on the move.**

  But tailored to their environment & quality Vs cost requirements.

- **To be in control.**

- **Easily Contactable/Addressable.**

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Names and Addresses

Name: Unique alpha numeric label* which identifies the communicating entity - may be **portable.**

Address: Alpha numeric, symbols or additional information combination which identifies specific termination point(s) in public / private networks & is used for routing.

Key difference: User can migrate from address_1 to address_2 whilst retaining the SAME name.

* Label Name / Number combination

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Naming and Addressing - Common Examples

	Telephony	Email	Telephony on IP Tiphon	"IP Telephony" IETF
Name	E.164	User@host	E.164	User@host
Address	Routing E.164 or Prefix+E.164	IP address	IP address	IP address

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Accumulated History- to Date

As Well as:

- **Technical legacy of:**
  - Network-dependent schemes
    - E.g.: E.164, X.121, F69, IP (IPv4, URL), etc.
  - Network-centric deployment
    - (Reflecting network topology, network technology, service-provider preferences, etc.)

Others

- **legacy problems include:**
  - Political issues
  - Organizational/Jurisdictional issues

What's Wrong?

- **Terminals linked to communication type**
- **User identifier schemes linked to communication type**
- **Some user identifiers linked to terminals**
- **Some user identifiers portable – telephony**
- **Some user identifiers linked to provider – email**
- **Terminals/user identifiers linked to users' roles**
- **The caller has to guess the most successful way to communicate.**
- **Others:**
- **Many solutions lock users to 1 provider**
- **Proprietary solutions are incompatible**
- **Most solutions rely on fixes applied to legacy systems**
- **Most solutions are unfriendly – to the caller and/or called party**

UMTS user's "identifier" requirements

- **Uniquely identifies the user**
  - independent of access network / technology
  - independent whether user is fixed or mobile.
- **Uniquely identifies the user**
  - independent of terminal type being used at any time.
- **Network topology independent.**
- **Service Provider independent.**
- **Scalable (Enough capacity to meet expected future demands).**
- **Portable.**
- **Tariff independent.**
- **Human / User friendly!**

Some (current) Work Areas *

- **IETF:** - ENUM WG.

  - PINT Control connection between PSTN dial-up access and ISP.

  - IPTEL general work based on SIP.

- **Tiphon:** - E.164 to IP resolution.

- **ITU:** - Various study groups. Recent Workshop on Numbering, Naming… 25 - 27th Jan 2000 in Geneva.

- **ETSI SPAN2:** - Study on Naming & Numbering.

- **3GPP:** - Numbering, addressing and Identification.

*   *Not an exhaustive list*

Way Forward & Conclusions

1   Avoid a wholly new system allow smooth market-led migration.

2   Work needed on privacy vs exchange of information to facilitate search engines.

3   UMTS is intended to be UNIVERSAL, so as well as supporting the traditional naming and numbering schemes (I.e; E.164, X.121, IP/DNS etc) , ideally it should support a GLOBAL approach.

   - Bearing in mind the legacy schemes that will be present by the time UMTS deployment starts, probably it will not make sense to strive for a single fully global solution & 1 above may be the best opton!

4   Co-ordinated, Collaborative Efforts in the Various Standards bodies and Forums should ensure 'best' possible solution(s).

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Way Forward & Conclusions

An urgent study is needed:

3GPP should clearly define the naming and addressing requirements for 3G.

- the requirements must be aligned with developments in the fixed and internet areas, and not mobile specific.
- 3GPP should set up strong co-ordination with related studies in ETSI, ITU, IETF and UMTS Forum.
- A common solution with 3GPP2 should be sought.
- must take into account mapping to legacy services, E164 numbers, SMS ….
- etc, etc.

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