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International Telecommunication Union

The Universal Communications Identifier (UCI) – Trusted, meaningful identification

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ETSI work on UCI

- The Universal Communications Identifier (UCI) concept originated in 2000
- The eEurope programme has funded packages of work on the end-user aspects of UCI
- Ongoing ETSI work considering application of UCI in NGNs

UCI - the meaningful identifier

- You can use versions of your name that you find acceptable
- Multiple alternatives
- No forced compromises
- No spurious data

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  or
  Michio NAKAO
- Martin Böcker
  never
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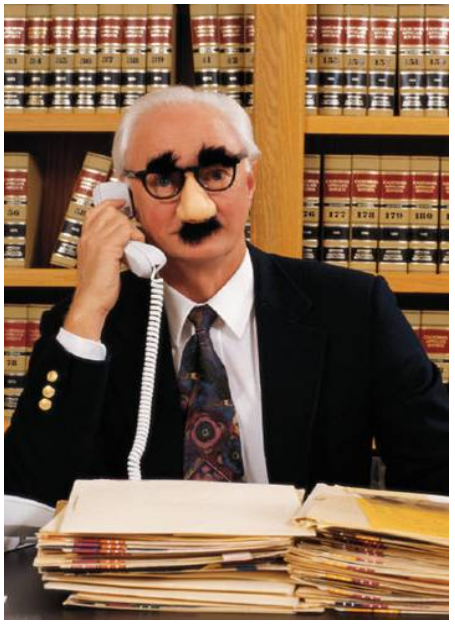
UCI – the trusted identifier

- Masquerading in the real world is often obvious



- In the online world it can be undetectable

Verity.truth@realme.com

UCI – the trusted identifier

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Caller: 07824345768

- Would you trust this anonymous character?
- Is the person calling from this number to be trusted?

UCI – the trusted identifier

- If he assured you that an identifier was a true description of a person would you believe it?

- UCI has the concept of an "authentic" label that has been certified by a trusted 3rd party
- All other labels are considered to be aliases
- Almost all of today's identifiers would be classed as aliases by UCI's definition

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UCI – the unique identifier

- An identifier must be resolvable to identify a unique resource
- If it is to be used universally, all systems must be able to transport and decode it
- It must be structured
- It would be beneficial if existing systems can process it without significant update
- A numeric element conforming to the E.164 scheme easily meets all of the above criteria

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UCI – additional data

- Additional data elements can be used to convey information such as:
  - whether the UCI label is “authentic” or not
  - the preferred language for the information or communication session
  - special user requirements e.g. textual information presentation for a deaf user

UCI - the full picture

A UCI with the following structure meets all of the previous requirements:

child element	element declaration	meaning
UCI-numeric	*(none)*	Exactly one child element
UCI-label	*	Zero or more child elements
UCI-AdditionalData	*	Zero or more child elements

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The Personal User Agent (PUA)

- Each UCI user has a Personal User Agent (PUA. This is permanently available, and acts as a proxy for the user within the ICT environment. PUAs:
  - have access to a list of the user's contacts
  - have access to all of the user's information and communication preferences
  - contain rules that control how a user wishes their communications to be managed
  - can negotiate with other PUAs to try to achieve a mutually acceptable outcome

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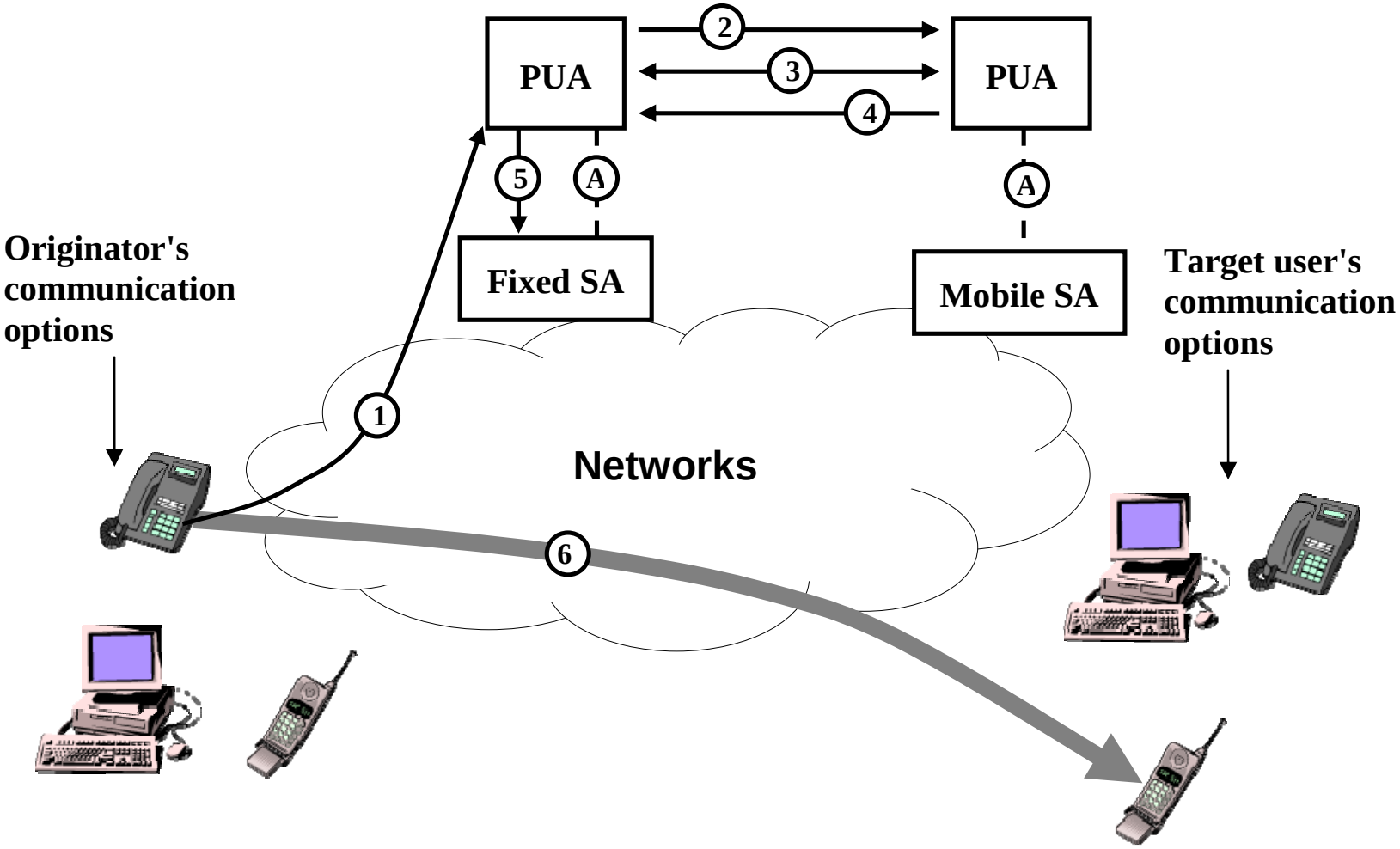
The Service Agent (SA)

- UCI needs Service Agent (SA) functionality to ensure that PUAs have a standardized interface to all applications, services and networks
- The SA functionality could require little or no changes to some existing APIs and gateways
- In other cases, SA functionality could require some form of specialised middleware

The UCI in use



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UCI as a future value add

- If UCI and the supporting PUAs and SAs are deployed they provide a platform from which a number of new value-added capabilities can easily be built. These include:
  - protection from spam and phishing attacks by trusting only “authentic” identities
  - potential to meet a wide range of user preferences e.g. type of communication, language, high availability and do-not-disturb periods

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Mapping to NGNs

- Early UCI work described requirements and defined a conceptual architecture
- This makes mapping to concrete environments easy:
  - no pre-defined technology choices
  - can examine if available services deliver required functionality
- Now examining how NGN system entities, protocols and services (e.g. SIP, Presence and ENUM) can deliver the capabilities required by UCI

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Interest in UCI

- ETSI's TISPAN is evaluating how UCI can be supported
- InternetNZ identified UCI as a significant value-add for their ENUM trial
- ETSI's UCI requirements were acknowledged by a major company as being invaluable when defining the features of a corporate converged communications product
- VisionNG identified UCI as a desirable evolution for their global UPT service