

Workshop report for the ETSI HF workshop on Personalization and user profile standardization

28-29 January 2009

Summary and thanks

The ETSI team working on personalization wish to thank all participants who made this workshop a success, including those who presented their projects and all who participated in interesting discussions, and who sent input to us after the workshop! The input and comments we have received will be useful to the ETSI Technical Committee Human Factors and eHealth which are both working on personalization and user profile standardization. We are very much looking forward to further cooperation with you, for mutual benefits!

Agenda and presentations are available online

The workshop invitation, agenda and presentations are available online from our web page:
http://portal.etsi.org/STFs/STF_HomePages/STF342/STF342.asp

Further information

Do you want to receive our newsletters or discuss personalization and user profiles with a wider group? You are welcome to subscribe to our mail lists:

- Personalization aspects including architecture and preferences for a wide range of services and devices: http://list.etsi.org/HF_USER_PROFILE_MANAGEMENT.html
- Personalization of eHealth systems: http://list.etsi.org/stf352_consultation.html

Meeting participants

21 workshop participants attended the workshop at ETSI, and in addition, one person made a remote presentation (he had planned to come to ETSI but got problems with the flight due to the strike affecting Paris airport).

Lastname	FirstName	Organization	Country
Alliez	Damien	NDS	FRANCE
Barrera	Carmen	UNED - Universidad Nacional de Educación a Distanc	SPAIN
Bars (remote presentation)	Remi	ORANGE SA	FRANCE
Bartolomeo	Giovanni	CNIT - Il Consorzio Nazionale Interuniversitario per le Telecomunicazioni	ITALY
Broll	Gregor	University of Munich (LMU)	GERMANY
Cadzow	Scott	Cadzow Communications Consulting Ltd.	UNITED KINGDOM
Ceri	Alessandro	Fastweb S.p.A.	ITALY
De Cata	Luigi	Fastweb S.p.A.	ITALY

Dosch	Christoph	Institut für Rundfunktechnik GmbH (ARD & ZDF)	GERMANY
Droegehorn	Olaf	University of Kassel	GERMANY
Engelen	Jan	K.U. Leuven - ICRI	BELGIUM
Frisiello	Antonella	Istituto Superiore Mario Boella	ITALY
Gutiérrez y Restrepo	Emmanuelle	UNED - Universidad Nacional de Educación a Distancia	SPAIN
Kovacikova	Tatiana	University of Zilina	SLOVAKIA
Kubryk	Gérard	Université de Séville	SPAIN
Olesen	Henning	CMI, Copenhagen Institute of Technology (AAU)	DENMARK
Petersen	Francoise	Apica IT	FRANCE
Pluke	Michael	Castle Consulting Ltd.	UNITED KINGDOM
Rust	Carsten	Sagem Orga GmbH	GERMANY
Sabadello	Markus	Parity	UNITED STATES
Trottin	Jean-Jacques	Alcatel-Lucent	FRANCE
Zetterström	Erik	ITS - Information Technology Standardization	SWEDEN
Zimmermann	Gottfried	Access Technologies Group	GERMANY

Meeting notes linked to the agenda items day one

The workshop has been held in the ETSI main building, Iris Amphi theatre

Day one: Wednesday 28th January

Introduction and overview

Françoise Petersen and Mike Pluke: *A summary of previous and ongoing ETSI work on personalization including architectural framework, preferences in general as well as for eHealth systems. Purpose of the workshop and selection of major topics for discussion at the workshop. Also, some key issues will be proposed for discussion at the workshop. The workshop participants are welcome to suggest further issues for discussion. (30 min)*

- 1 participant interested in eHealth.

Architectural Framework for personalization and user profile management – Part 1

Françoise Petersen and Mike Pluke: *The ongoing work on the Architectural Framework will be presented. The workshop participants are welcome to discuss the requirements and proposed solutions, and to suggest further input. (30 min)*

- Overview of concepts
- Scenarios illustrating key concepts

- Q¹: When the context watcher detects a new context, who is giving it a name?
- A: The system gives a default name and the user can choose name.
- C: The User interface should be focused, as a subpart of the profile would be interesting such as space between buttons (e.g. for people with tremor, on a boat etc.)
- A: ETSI Human Factors gives more general guidelines rather than telling in detail how the interface should look like.
For example: we say things like “the user must be informed about which profile(s) are currently active” but we will not describe exactly how that information will be shown in the user interface.

¹ Q. stands for Question; A. stands for Answer; C stands for Comment; N for Note.

- C: The discussion mentioned whether the user wishes to disclose their disabilities.
- A: Research shows that people with disabilities want preferences in their profiles that address their specific interface needs – not profile entries that list their disabilities.
- A: The STF interviews showed that some people wish to disclose their disability and others not – but instead their needs. This was also found in earlier STFs – where some people would be happy to disclose their disability if it was the only way to guarantee a satisfactory outcome. However, expressing suitable preferences is frequently the most effective way to achieve the required outcome for the user, as a device or service will frequently not know what interface changes to make if it is only told the name of a disability.

Information sharing and privacy

Scott Cadzow: *As personalized services become more common, personal privacy issues will become an increasingly important factor in their acceptance. This presentation highlights some important requirements and discusses possible solutions. (30 min)*

- Q: Is the ontology extensible?
- A: Yes. It has been designed to capture the ontology of each of Identity Management and Cyber Security from previous work published in TR 187 010.
- Q: Is the dictionary usable?
- A: It will be but is still in development.
- Q: Id management. Are you looking at virtual id?
- A: Only at virtual identity (i.e. we are looking at the representation of a user (human) in the digital world).
- Q: Where should the data be stored and controlled by whom? Under control of the user, on the device or in the network?
- A: All of these as the model have to identify ownership and existing models (Internet and NGN) allow very little user ownership of profile data. This is being extended by the work we are doing to show lease type models of service and network access profiles to allow the UPM model of user control of service use through personal preference to work.
- C: The SIM model is very specific.
- Q: Legal framework: is the idea coherent with EU regulations?
- A: Yes in that it takes its privacy model from the OECD guidelines and the EU directives. However there is uneven interpretation of these models in national regulation and this is being considered.

Areas of Discussion:

- Security
- Privacy Ontology
- Ownership
- Regulations
- STF Comment: Therefore we need to extend the current document to clearly identify the relation to regulation and highlight where the proposed UPM model extends the existing considerations (e.g. the existing considerations are very biased towards the OECD guidelines to data collectors but not as much to data transfer and data users). The ontology has to be more completely developed and provided in a future version of the document. However as ontology is a tool for analysis we also need to formalise the ontology to a more formal (UML??) structure for discussion with the technical bodies implementing it.

Architectural Framework for personalization and user profile management – Part 2

Tatiana Kovacikova and Giovanni Bartolomeo: *The ongoing work on the Architectural Framework will be presented. (50 min)*

- Q: Is this a distributed model?

- A: Yes
- C: Integration of security in that model is necessary, and we are doing that.
- Q: What about not using a telecom centric architecture but rather an Internet architecture?
- A: We have taken a User Centric and Data Centric View for our work rather than network centric. The STF focus on user's needs. That's why we have defined an abstract architecture and many "bindings" to existing technologies.
- C: The solution the STF is working on will be at a syntactic as well as a semantic level.
- STF comment: The STF has interesting input from 3GPP, see document on 3GPP's work on user data convergence [3GPP TR 22.985]. It has been also raised the issue to check Server User Prof Initiative by OMA.

Information and preferences proposed in the draft ETSI Standard (ES)

Erik Zetterström, Antonella Frisiello: *The structure of the ongoing work on the ES will be presented. Some principles will be highlighted and interesting issues will be studied in detail. The workshop participants are welcome to discuss the current draft, and to provide suggestions on further preferences that should be included. (30 min)*

- C: See input from:
 - ISO 24751 – Information technology — Individualized adaptability and accessibility in e-learning, education and training
 - Part 1- Framework and reference model
http://webstore.iec.ch/preview/info_isoiec24751-1%7Bed1.0%7Db.pdf
 - Part 2 – “Access for all” personal needs and preferences for digital delivery
http://webstore.iec.ch/preview/info_isoiec24751-2%7Bed1.0%7Den.pdf
 - Part 3 – “Access for all” digital resource description
http://webstore.iec.ch/preview/info_isoiec24751-3%7Bed1.0%7Den.pdf
 - ISO 24752 - Information technology — User interfaces — Universal remote console
 - Part 1 – Framework
http://webstore.iec.ch/preview/info_isoiec24752-1%7Bed1.0%7Den.pdf
 - Part 2 – User interface socket description
http://webstore.iec.ch/preview/info_isoiec24752-2%7Bed1.0%7Den.pdf
 - Part 3 – Presentation template
http://webstore.iec.ch/preview/info_isoiec24752-3%7Bed1.0%7Den.pdf
 - Part 4 – Target description
http://webstore.iec.ch/preview/info_isoiec24752-4%7Bed1.0%7Den.pdf
 - Part 5 – Resource description
http://webstore.iec.ch/preview/info_isoiec24752-5%7Bed1.0%7Den.pdf
- C: We need to provide possible extensions of information and preferences including:
 - Proprietary: a specific company make their own preferences and put them in their profile
 - Updating the standard: we need to find out a procedure for updating the standard later. It should take into account:
 - Proposals from organizations
 - Approval
 - Release mechanism
 - Check if tools such as OMA tool (hosted by Forapolis) and procedure used by OMA UApruf might be useful input.
 - Check ETSI MTS

- Check Dublin Core procedure
- Check extensible vocabulary and namespace (repository for common vocabulary)
- C: Input during the Higgins demo: Information Card Foundation (ICF), see informationcard.net, which is an initiative from IBM, Google, Novell, Equifax (dealing with credit card), Microsoft.
- Q: Have you considered emotional aspects?
- A: Yes, we have Mood in the ES.
- STF comments: The “Mood” (already in the ES) can be used in rules for changing the behavior of the system. There are two types of “Mood”, which need to be separated:
 - “social Mood” is set by the user, for social networking services.
 - “eHealth Mood” could potentially be detected by a body network monitoring relevant mood related physical parameters, e.g. measuring stress from Galvanic Skin Response (GSR) measurements.

“Mood” is relevant in both of the above bullets, and would also be relevant in an eHealth context, but should not be exactly the same as Mood given in a social networking as it is something to broadcast to others. “eHealth Moods” are not to be broadcast but to be used within the user profile management system to determine outcomes e.g. to alert someone to a potential stress-related health deterioration.

- C: Have you taken into account ageing of data?
- A: We have “Life time” in the ES, which can be set on a profile level. Currently (in the ES), it is not considered to be used on individual profile data elements, however we should do that to consider Static vs. dynamic situations of the user.
- C: Could add a preference addressing the users’ motor capabilities (whether it is a physical condition e.g. Hand tremor or whether it relates to a situation such as being on a boat).

Magnet Beyond and WWRF work on personalization

Henning Olesen: *The talk will give an overview of the work on user profiles and profile management carried out in MAGNET Beyond. The conceptual structure of the user profile is presented, with emphasis on specific issues related to Personal Networks (PNs). Profile management in PNs and PN federations as well as interfaces to ongoing activities regarding subscriber data management and identity management are discussed. Results are also presented from a whitepaper on "User profiles, personalization and privacy", which is currently being prepared in a joint effort between Working Groups 1, 2 and 7 of Wireless World Research Forum (WWRF). (40 min)*

Issues addressed:

- Q: How much context info can we put in the profile?
- A: Context can be in the profile, which is not a problem if it is not released (unless the user wishes to release it, e.g. for social networking services)
Context can be:
 - Set by the user
 - Kept private
 - To be disclosed (e.g. for social networking purposes)
 - Context Watcher gets values from sensors, GPS location etc.
- C: How context information entered into popular sites can be dealt with must be addressed (e.g. in social networking applications, it is difficult to require them to conform to the standards based approach to context handling that we describe)
- C: The service provider may know the structure of the profile, but not necessarily the content, (slide 7).
- STF comments: Consider issues regarding

- Offline profile
 - Whether we should exploit the identity concept and features: Virtual ID (VID), private, professional, casual) - see DAIDALOS project <http://www.ist-daidalos.org>
 - Virtual identities and identity management: ETSI has been active in the identity area for many years at both a simple Naming-Numbering-Addressing level as seen in conventional telecommunications (and found in the work of ETSI TISPAN WG4) and in use centric identity through the work of TC HF for UCI (Universal Communications Identifier). TC HF and the efforts supported by STF342 is actively looking at extending the UCI architecture in order to allow full extension and cooperation of the "Personalization and user profile concept" with UCI. Work on IdM is of course not restricted to TC HF and has been active in ETSI TISPAN for some years leading to publication of TR 187 010 and to ongoing work on IdM in the context of NGN due to complete later this year. This is in addition to the close cooperation of ETSI with IdM groups in ITU-T and ISO. As we have the person (Scott Cadzow) responsible for investigating identity management in ETSI within the STF, we expect that these issues will be thoroughly covered.
 - Permanent vs. volatile preferences
 - Device capabilities define the context of interaction possibilities that the user has
 - 3th party profile is about service delivery (e.g. cookies) rather than user need
 - Templates are used for a continuous updating of the profile
- N: See Secure context management framework, slide 16
 - N: See public deliverables (slide 22)
 - N: WWRF whitepaper:
 - Involved WWRF WGs 1,2,7
 - Scenarios, daily life 2020
 - Will be publicly available, will be finalized in February
 - Digital butler knows "all" about the user and can deliver good services, see slide 27
 - Also, there are social networks (Facebook, etc) out there which are not standardized. Need to take these into account.
 - Going to work on how to process data...

IST-SMS project Simple Mobile Services (SMS)

- Introduction

Giovanni Bartolomeo: *SMS is a community of users based on innovative tools enabling a new class of services, addressing the specific needs of mobile users. SMS services are mostly built on the user-friendly concept of Mobile Electronic Memos (MEMs), electronic notes used to share/exchange information related to people, locations, activities. (5 min)*

- Interface and interaction design of mobile SMS client applications

Gregor Broll: *This presentation will give an overview of the development of guidelines for the interface and interaction design of mobile SMS client applications. In order to ensure the usability of their different features, this process includes scenario analyses, the definition of functional requirements, low-fidelity prototyping as well as their evaluation. (20 min)*

- Secure and privacy respecting user data management based on Smart Card Web Server technology

Carsten Rust (SAGEM-ORGA): *Presentation of an architecture for Simple Mobile Services integrating the SIM as an enabler for SP&T; Smart Card Web Server and Servlet Architecture. Also providing an overview of SIM-based services (e.g. Identity Management, Secure and portable user data management, Signatures) (25 min)*

- Demo of IST-SMS project Simple Mobile Services

Giovanni Bartolomeo: *This demo will present the SMS web community, the SMS client software for mobile phones and several different features related to the creation, management and sharing of MEMs*

SIM-cards

- N: Next generation Java Card 3.0 – much improved! See slides (14?, 15)

- N: Signature service (slide 16)

SMS- Usability

- N: Problems for the users: lack of assistance in mobility
- Q: Presence is a needed service. Are users willing to pay for it?
- A: They do not want to pay for every single service

Sms – Security and privacy

- The role of the smart cards server
- Distinction between terminal and SIM (which is owned by the operator). Will users accept to put more than address book on the SIM card? Some users would refuse to put private data on the SIM card as it is used by the operator.
- Q: What about a second card, which is owned by the user? (needs a second card slot on the device). Then the user would feel in control of the data which they own.
- C: we need to distinguish between the smart card itself (UICC) and its operator-oriented application (USIM).
- C: this work addresses UICC in general (it has been developed using JCard3.0 technology)
- N: Mobile Electronic Memos (MEM): (slide 19)
- N: MEMs can be used in different scenarios. They can be used to describe information related to location, person, service, shops, events... the identity of the MEM sender/creator can be proved by signing the MEM, thus making them suitable for eCommerce, eGovernment, eHealth (allowing patients to prove their id before accessing hospital services)...

Discussions of selected topics (60 min)

(Iris 2/3 and Iris 4 meeting rooms)

Selected topics:

- Security
- Privacy – ownership
- Ontology
- Regulation
- Open internet vs telecom
- Extensibility, vocabulary, repository
- Context info and relation to profile

Security – Scott:

- We have to separate access profile and application profile.
- Legal framework: the direction should change. Spice projects investigated 'local host' solution.
- Identity management – refer to ETSI TR 187 010
- User control and design of rules addressed to end users.
- Scenario for eLearning (but are there existing standards)
- eHealth, Smartgrid and other scenario to extend the applicability check
- Content preferences in user profile: how the users express them? Are there taxonomy? And preference on aging of content – timestamp tagging

AEGIS - Open Accessibility everywhere Groundwork Infrastructure Standards

<http://www.aegis-project.eu/>

This was a 5 minutes presentation. The project started in September.

Issues addressed:

- Device class: desktop, web applications, mobile
- Profile accessibility related

- Diet, physical activities, transport/tourism related preferences, everyday tasks
- Standards: Datscg, Anec, Edean, HL7, CEN, ITU, ETSI, ISO
- Epr, eu platform for rehabilitation
- Rim research in motion limited
- Atrc Toronto adaptive tech

Meeting notes linked to the agenda items day two

Day two: Thursday 29th January 9:00-12:30

- Identity management – Higgins

Markus Sabadello: The Identity framework being developed at the Eclipse Foundation will be described. (20 min)

- Higgins demo

Markus Sabadello

Issues addressed:

- Identity model for online identity
- Each ID is in its own 'silo', with username, password, attributes
- OpenID, SAME, CardSpace
- iCards, information cards
- ID selector wallet (client side application): click on the card to send it to a site
- I can have one card per each of my id or access profile
- Claims: are attributes about the user
- User centric approach: put you in control (I have cards and control...)
- 3 types: Personal cards, created by myself, Managed cards, get from websites (eg: transport government states in the card that I've got a driver licence valid for motor cycles and cards and I can use the card to rent a car), Relationship cards, attributes can be edit by the user and by another party (e.g. user and Lufthansa for updating the miles)
- DATA MODEL: contexts, attributes, entities
- <http://eclipse.org/Higgins>
- Universal data identifier
- Adobe AIR selector
- Information contained in the card: key values, list of 15 claims, extensible, you can invent fields
- C: "It's familiar, because I've got real cards, but I hate them because they are too many!"
- A: Typically, the user will not have too many.

The Universal Remote Console framework

Gottfried Zimmermann: The Universal Remote Console (URC) framework has been published recently as ISO/IEC 24752:2008. With its "pluggable user interface" approach, the URC technology supports personalization. The URC technology and user profile management are a perfect fit for personalized and adaptive user interfaces. (30 min)

Issues addressed:

- User interface as a part of the user profile
- Remote and alternative interfaces
- Pluggable solution for interfaces
- References: ISO/IEC 24752 parts 1 and 5 :2008 (number is 24 hours, 7 days, 52 weeks)
- See Myurc.org/TR/
- One of the devices made for elderly, in slide 4.
- We can use different protocols UPnP, proprietary protocols, so 3rd party can produce interfaces.
- Can extend the URC concept to know my preferences, e.g. coffee with milk, and then use the remote control, one button for getting what I want, on any coffee machine (if preferences are standardized and machine use the standard).
- Slide 16, resource properties, some from Dublin core (DCMI terms); Is extensible.

- Based on roles, Identities
- For a certain groups of presentations, can have my own preferred display.
- Task-model based user interface, e.g. as a tree with tasks, and sub tasks. (slide 20)

Feel@Home

Rémi Bars: *Feel@Home aims at the mass market adoption of Digital Home advanced audiovisual networked services enabled by a breakthrough in the "Extended Home" concept. To validate the new concept and demonstrate its benefits, Feel@Home will develop an open architecture and the required hardware and software components, and integrate and test the resulting system in several interconnected demonstration sites located in different European countries. Feel@Home will ensure the management of the digital content, the automatic Home Area Network management and the handling of multi-user service offerings. Moreover it will provide a new interaction paradigm enabling seamless, personalised and context-aware service delivery, to various types of user devices and to any user location, at home or elsewhere. (30 min)*

Issues addressed:

- Quality of experience of the extended home era
- Between nomadic usage and his home content.
- Personalization at home, in the profile, in the device, in the network? Is device access a part of personalization or only authorization?
- Mobile interfaces optimization and preferences
- Waiting for decision they will take on preferences
- Comments on current ETSI docs □ QoS: only video service □ other parameters missing

Discussions on the topics chosen at the workshop (Iris 2/3 and Iris 5 meeting rooms)

Extensibility

- RDF language used, which provides extensibility
- Two sorts of extensibility are needed:
 - Companies may extend the profile to include their proprietary information and preferences
 - Future standardization work: a procedure for extensibility of the standard need to be put in place.

Interoperability

- Dynamic human centered info will change with the user, but also device and services change. Automatic extensibility? - reusable ontology, common vocabulary
- Dublin core process
- Automatic translation service for preferences/information is under investigation as a research field. There is also a standardization initiative (OASIS XDI TC).
- The user must have the control on the profile data.