



World Class Standards

ETSI Specialist Task Force 342
on Personalization and User Profiles

Questions to professionals
Summary of results

7/22/2008

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Foreword

Organized by **IST-Opuce**, the first international workshop on user-centric service creation and execution (**UGS - *User Generated Services Workshop***) was held in Madrid in **June 2008**.

The workshop involved **professionals** working in service design, creation, development and distribution.

During the workshop preparation, a survey was jointly carried out by the **TSOA European Projects cluster** and **ETSI STF 342 on Personalization and User Profile Management Standardization**.

For **STF 342**, aim of this survey was to collect input, opinion and evaluations about some of the aspect of the personalization from the point of view of the professionals.

The survey

The meeting participants were given an **ad-hoc online questionnaire**.
It was composed of **11 questions, mainly multiple choices questions and Likert scales**.
Free comments in text fields could be given for each question presented.

The questionnaire was organised in **3 sections**:

- About **the responder**
- **General questions on service creation tools**
- **Specific questions on personalization** related to the tools the responder tested

Answers in the 3rd section have been aggregate to report the general attitude of the professionals toward the implementation of the personalization features without a bias towards a specific service creation tool.

The data analysis

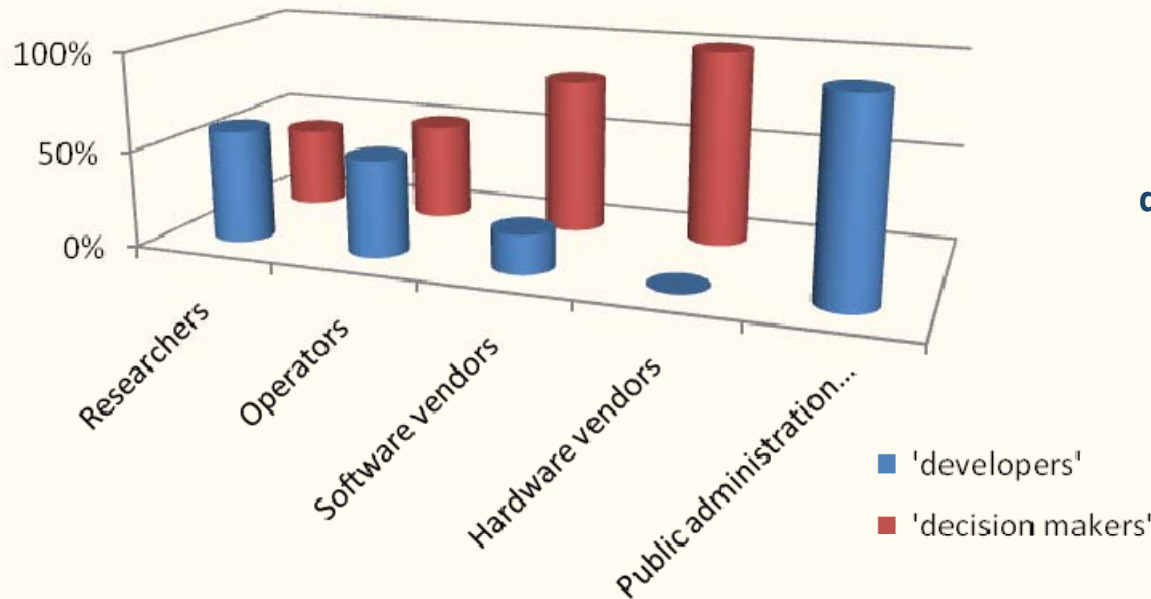
Collected raw data have been elaborated with **basic statistics**:

- **average**
- **average deviation**
- **correlation (when significant)**

A **categorical analysis** has been applied to the text of the open answers/comments.

The results presented here constitute an **integration of the analysis conducted by TSOA** and, according to the goals of the *STF 342*, they are **especially focused on the second and third part of the questionnaire**.

The sample



The audience results were well distributed between 'developers' (48%) and 'decision makers' (52%)

Under the label 'developers' we collect:

- Junior Level
- Graduate
- Internship/Trainee/Student
- Junior
- Ph D student

Under the label 'decision makers' we collect:

- Management
- Senior Management (CEO, CTO, CFO, etc...)

			'developers'	'decision makers'
Total	31	100%	48%	52%
Researchers	12	39%	58%	42%
Operators	10	32%	50%	50%
Software vendors	5	16%	20%	80%
Hardware vendors	3	10%	\	100%
Public administration professionals	1	3%	100%	\

Interest

From 1 ----- 4 ----- to 7
 (strongly disagree neutral strongly agree)

I would like to use them in the future

	Average
	5,2
Software vendors	5,8
Researchers	5,7
Operators	5,6
Public administration	5,0
Hardware vendors	4,0
'developers'	5,4
'decision makers'	5,5

They are unnecessary in my life/work (negative statement)

	Average
	2,4
Operators	3,2
Hardware vendors	3,0
Researchers	2,0
Public administration	2,0
Software vendors	1,8
'developers'	2,4
'decision makers'	2,4

They mean nothing new to me (negative statement)

	Average
	3,5
Public administration	6,0
Hardware vendors	4,6
Operators	2,8
Software vendors	2,4
Researchers	1,8
'developers'	2,4
'decision makers'	2,5

Personalization arouses a **good level of interest**: it appears rather new, especially (and strangely) for the Researchers*.

The level of interest **does not show relevant differences between 'decision makers' and 'developers'**

**interpretative errors could have been produced by the negative formulation of 2 statements*

Problems (I/II)

Implementing personalization features in services and devices can cause ...

From 1 ----- 4 ----- to 7
 (strongly disagree neutral strongly agree)

... reliability problems

	Average	σ
	3,6	
Operators	3,8	
Researchers	3,7	
Software vendors	3,4	
Hardware vendors	3,0	
Public administration	2,5	
'developers'	3,6	1,5
'decision makers'	3,6	1,5

... privacy related problems

	Average	σ
	4,5	
Software vendors	5,3	
Public administration	5,0	
Operators	4,4	
Researchers	4,3	
Hardware vendors	3,8	
'developers'	4,7	1,7
'decision makers'	4,4	0,0

The **implementation** of personalization features in services and devices **is not considered as a critical issue.**

The expected difficulties concern aspects related to the “adoption” and acceptance by the final users:

user acceptance and privacy are considered the most delicate matters. Nevertheless, the problem is not judged severely (the average is round to the neutral score).

The evaluations of decision makers’ and ‘developers’ are well aligned.

(→ The reason is not clear.)

There is a general agreement within the individual classes (see σ , average deviation)

Problems (II/II)

Implementing personalization features in services and devices can cause ...

From 1 ----- 4 ----- to 7
 (strongly disagree neutral strongly agree)

... user acceptance criticisms

	Average	σ
	4,7	
Software vendors	5,5	
Public administration	5,0	
Operators	4,6	
Researchers	4,6	
Hardware vendors	4,0	
'developers'	4,7	1,2
'decision makers'	4,7	1,2

... usability (interaction) lack

	Average	σ
	4,3	
Operators	4,9	
Researchers	4,3	
Software vendors	4,0	
Hardware vendors	3,3	
Public administration	3,0	
'developers'	4,8	0,9
'decision makers'	4,0	1,4

In general, we can observe that the **possible problems** introduced by the implementation of the personalization **are not judged obstructing**, at least on the implementation side (see also the slide 7).

The importance of the usability, the quality of the interaction and the user experience mainly comes out from the open answers, where **the personalization is intended as a risk of additional complexity for the end-user** *.

→ The accent on the usability issues drawn by the answers, suggests the importance to work on indication and specification, in the ES, on the 'high level' aspects.

* probably as a consequence of the demo experienced by the audience

General evaluations (I/II)

Implementing personalization features in services and devices ...

From 1 ----- 4 ----- to 7
 (strongly disagree neutral strongly agree)

... are an added value for end users

	Average	σ
	5,2	
Software vendors	6,1	
Operators	5,5	
Researchers	5,1	
Public administration	4,0	
Hardware vendors	3,8	
'developers'	5,1	0,9
'decision makers'	5,3	1,3

... are an innovative business for providers

	Average	σ
	5,1	
Software vendors	5,8	
Operators	5,6	
Researchers	4,8	
Public administration	4,0	
Hardware vendors	3,7	
'developers'	5,0	0,8
'decision makers'	5,2	1,4

Correlation coefficient: + 0,7 (quite strong and positive)

The 2 variables are positively interrelated

The value of **personalization** is almost generally recognized as a **possible innovation both for end users and stakeholders**.

Within the stakeholders, the SW vendors and the TLC operators are the most interested, whereas the 'coldest' are the HW vendors.

→ *Since this group did not point out particular problems about personalization in the previous questions, it would be interesting to enquire in depth about the weakness and the difficulties in device personalization.*

→ *A re-writing of the ES in order to give possible specifications dedicated to hardware may be helpful.*

General evaluations (II/II)

Implementing personalization features in services and devices ...

From 1 ----- 4 ----- to 7
 (strongly disagree neutral strongly agree)

... imply complications for developers

	Average	σ
	3,6	
Software vendors	4,2	
Operators	3,9	
Hardware vendors	3,8	
Researchers	3,0	
Public administration	3,0	
'developers'	3,4	1,6
'decision makers'	3,6	1,3

... are an expansive add-on

	Average	σ
	2,9	
Operators	3,5	
Hardware vendors	3,0	
Software vendors	3,2	
Public administration	2,5	
Researchers	2,4	
'developers'	3,1	1,5
'decision makers'	2,8	1,3

Correlation coefficient : + 0,9 (high and positive)

The 2 variables are positively interrelated, when one change the other change in the same direction

In the last questions of the form, the sample confirms the opinion that **the implementation of personalization features should not be a difficulty**, neither from an implementation point of view, nor regarding the resources.

The degree of agreement that can be observed between **'decision makers'** and **'developers'**, almost **completely aligned**, is a confirmation of this analysis.

"For providers it is very innovative, because they can easily and fast setup their own services and they also can easily adapt them. That reduces cost!"

Open answers (I/II)

Concerns (from the end-user perspective)

"Complexity of the service will increase and will -without any doubt- come with usability problems."

*"Every additional feature that needs to be maintained by end users themselves adds to the **complexity**. Privacy is the major concern; if privacy is not kept, user acceptance will fail. "*

"It is very important to take care about privacy."

"Privacy and reliability are main issues"

"Maybe the pushing mechanism for auto-loading new services could hide some problems"

Suggestions

*"I suggest to **add features that at least inform end users**, which service is making use of which part of his profile."*

*"User strongly need personalization even **most of them are not know about it**".*

*"**Profile synchronization** is needed".*

*"The template and **wizard-based questionnaire** is a nice way to do personalization."*

*"I think the reliability is more difficult as every configuration and personalization possibility is not going to be **tested** and thus problems may arrive"*

Open answers (II/II)

Concerns (from the developers side)

It could be *"complicated to developers because of (...) the context-aware input information"*

*"Without the **template approach** (...) complications for developers would occur, because each service would have to be programmed or adapted manually by a developer."*



Focus on personalization issues (I/II)

From 1 ----- 4 ----- to 7
 (unlikely included neutral likely included)

	Average	'develo pers'	'decision makers'	Operators	Resear chers	Software vendors	Hardware vendors	Public Admin.
Presence and location information	5,8	6,1	5,6	5,9	5,8	6,2	5,0	5,0
Special features for elderly and impaired people	5,4	5,3	5,5	5,2	5,7	5,6	3,5	7,0
Control on personal information visibility	5,3	5,1	5,4	5,7	4,9	5,3	4,5	7,0
Security preferences	5,3	5,3	5,2	5,1	5,2	6,3	4,5	5,0
Communication preferences	5,2	5,0	5,4	5,6	5,3	5,1	3,8	5,0
Calendar preferences	5,2	5,3	5,1	5,1	4,9	6,8	4,5	7,0
Output preferences	5,2	5,2	5,2	4,8	5,5	5,8	3,3	7,0
Contact and group preferences	5,2	5,5	5,0	5,3	5,2	5,3	4,0	6,0
Social networking preferences	5,1	5,5	4,8	5,3	5,3	4,5	4,8	5,0
Notification preferences	5,1	5,0	5,1	5,3	4,9	4,8	4,8	7,0
Connectivity settings	5,1	5,3	4,9	5,6	5,0	5,5	3,8	3,0
Personal interests	4,7	5,2	4,4	5,3	4,8	3,3	4,0	5,0
Input preferences	4,7	5,0	4,4	4,4	5,0	5,3	3,3	3,0
User's skills and abilities information	4,5	5,1	4,1	4,8	4,4	4,5	2,5	6,0

Focus on personalization issues (II/II)

In general, the ratings assigned to the various aspects of personalization do not generate high scores.

All of the aspects of personalization are well-known as basic elements of service/device development.

→ In this sense, they confirm that the categories identified in the ETSI standard document, are recognized.

The presence and localization preferences generate the highest scores.

Accessibility issues follow, in the rating. These data are significant, because accessibility is standardized but it still rarely implemented. Moreover, the answers reveal the awareness of this lack by products and services suppliers. In a certain sense, **these data represent identify a need for guidance in these areas.**

→ the STF could make reference to existing standards, and then contextualize them.

The items about **user information generate the lowest evaluations** (a close to neutral position), **as it was not important in personalizing services or devices (and in contrast with expectation of end-users (see outcomes of interviews with impaired people).**

Once more, the hardware vendors show the 'coldest' attitude towards personalization: they evaluate a lot of items as not suitable to include within the product features; whereas the Public Administrations are positive toward many items (maybe too much).

Input for the ES document

- *The accent on the usability issues identified by the answers, suggests the importance of giving examples and indications on user guidance and interaction aspects.*
- *A re-reading of the ES in order to give possibly specification dedicated to hardware should be helpful.*
- *In relation to Accessibility issues, the STF could make reference to existing standards, giving them visibility and contextualizing them.*
- *ensure feedback to the end-users about the state and the working of their profiles*
- *Highlight aspects of usability and interaction, in order to allow easy management of profiles by end-users*
- *Enhance the user guidance (e.g. wizard based templates...)*



World Class Standards

Available online at:

http://portal.etsi.org/docbox/STF/STF342_HF_EC_UserProfileManag/Public/TSOA/

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stf342@etsi.org