# Fundamentals

Personalization involves tailoring aspects of the user experience to meet the preferences (or needs) of the user.

Technology holds the promise of being extremely flexible and the design of many systems includes the expectation that users will be able to optimise their interaction experience according to their personal preferences or accessibility requirements (needs).

We need personalization because:

1. Different user needs can conflict
2. Learning new design patterns (and widgets) can be confusing - we want to allow users to stick with what works for them
3. Extra support can be annoying to people who do not need it
4. Making content predictable is necessary for accessibility but can often be considered boring design
5. Ability to change levels of complexity (increase or decrease) - As people skills improve or decrease over time or context.
6. Enable us to really meet the user needs

 Typical configurable features include adjustments such as colours, text and icon size, sounds or mouse double click speed. More comprehensive preferences include enabling different input methods such as speech recognition or Assistive Technology like screen readers. Other preferences such as language or regional conventions also effect the user's interactions.

# Contextual personalization

One important factor in optimizing the personalization of a product or service is to ensure that the personalization is appropriate for the current context of use. For example, settings that will suit the user of a mobile phone in their office or home will not be well suited to that user when they are driving a car. In their home or office a typical user would probably prefer to send and receive text messages using the keyboard and screen of the mobile phone. However, in the car, voice input and text to speech output would be the most appropriate. In this car context, the profile settings of a typical user might be very similar to those that a blind user would use in all contexts.

The concept of context in personalization can be very broad and it can cover geographic location, type of location, the presence or absence of other people, time of day, ambient lighting conditions, the noise environment, etc. Wherever possible, the determination of context should be done automatically to avoid the user having to continually adjust their settings or manually invoke different context-dependent user profiles.

The ETSI personalization scheme (see the References) describes scenarios where context-dependent personalization is important. The ETSI personalization scheme has context handling as a key element of its architecture.

# Proposed Actions

The following is a suggested approach for a robust future-proof approach to how personalization-based solutions can be proposed by the Task Force:

1. Identify and document every instance where experiencing a facet of a product or service in a way that is different from the commonly accepted default way would help that user (within the set of users we are trying to support) to interact with the product or service in an effective way. That facet of a product or service is a personalization item candidate.
**How this is addressed: Ongoing COGA TF Activity**
2. For each of these instances, try to identify the range of ways that this facet of the product or service needs to be changed. This could be allowing the user to set a value from a set of values (e.g. screen brightness or contrast), or allowing them to select one item from within a set of items (e.g. language in symbols, or spoken English or written French).
**How this is addressed:** "Syntax for adaptable links and buttons", "Providing graded help", "meta data support" and "New adapting content for coga personalization" all contribute towards this.
3. Identify whether existing personalization standards already address this particular personalization item. GPII looks to the currently accessibility in e-learning focussed ISO/IEC 24751:2008 for user profile items whereas [ETSI2] and [ETSI3] give many examples of general user profile items that are expressed in an implementation-free way and that reference external standards where possible for data value ranges.
**How this is addressed:** The standards listed in the "New Intro" are those that can be examined.
4. Wherever possible re-use existing proposals rather than further fragment the already weak personalization space. Also use existing standards, schemas, ontologies etc. that define the parameters that require to be configured by user profiles.
**How this is addressed:** We always need to remind ourselves of this!
5. Ensure that the user profile items are documented in an implementation-free way and that they are not tightly tied to (and hence dependent on) one personalization approach or scheme. This will allow a range of different ways of offering these configurable options to be developed.
**How this is addressed:** The heavy warnings in the "New interoperable preferences" document give strong warnings not to expect any single all-embracing interoperable solution to exist in the near future or possibly at all. We need to be flexible.

The Task Force could propose a range of alternative techniques to provide the required configurability. In parallel, those trying to develop the ultimate global interoperable personalization scheme can take the proposed user profile items, map them into their own profile specification schemas, and utilise them in their developing platforms.

**References**

[ETSI1] EG 202 325 "Human Factors (HF); User Profile Management" at <http://www.etsi.org/deliver/etsi_eg/202300_202399/202325/01.01.01_60/eg_202325v010101p.pdf>

[ETSI2] ES 202 746 "Human Factors (HF); Personalization and User Profile Management; User Profile Preferences and Information" at <http://www.etsi.org/deliver/etsi_es/202700_202799/202746/01.01.01_60/es_202746v010101p.pdf>

[ETSI3] ES 202 642 "Human Factors (HF); Personalization of eHealth systems by using eHealth user profiles (eHealth)" at <http://www.etsi.org/deliver/etsi_es/202600_202699/202642/01.01.01_60/es_202642v010101p.pdf>

[ETSI4] TS 102 747 "Human Factors (HF); Personalization and User Profile Management; Architectural Framework" at <http://www.etsi.org/deliver/etsi_ts/102700_102799/102747/01.01.01_60/ts_102747v010101p.pdf>