

# Requirements for the Intercultural HCI Design Process

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## Abstract

On the first view, global high-tech consumer products have the same name and brand, look the same and are marketed in a similar way. However, a deeper analysis of the products shows different picture. The UI designer needs profound knowledge of the circumstances in his own cultural environment in order to be sensitive for relevant aspects in other cultures. The challenges the UI designer thereby faces are presented.

## 1 Global Products

New technical products like cars or smart phones are today launched simultaneously in the global markets of America, Europe, Asia and Arabia. On the first view, these global high-tech consumer products have the same name and brand, look the same and are marketed in a similar way.

However, a deeper analysis of the products shows different picture.

VW is the second biggest car manufacturer and aims to become the biggest car company worldwide in the next 5 years. One of the global products of VW is the VW Passat. To better correspond to the national requirements the Passat is produced in the 3 VW plants in Wolfsburg (Germany), Chattanooga (USA) and Anting (China). But this is not the only difference between 3 types of Passats (cf. Table 1).

The comparison shows that the so-called global product VW Passat differs a lot in size, price, engine power, fuel consumption and equipment in the three main markets Germany, USA and China, although it would be much more cost-efficient for the car producer to develop and manufacture just one model word-wide. Consequently there is a good reason to adopt the product to the local requirements to better correspond to the local market needs and to become therefore more successful. This is even more valid for products or product components which highly depend on the user interface and its design.

	<b>German Passat</b>	<b>US Passat</b>	<b>Chinese Passat</b>
<b>Target Market</b>	European Market	US Market	Chinese Market
<b>Price</b>	Min. 24,775 €	20,000 US\$ = 15,200 €	169.800 Yuan = 20.376 €
<b>Length</b>	ca. 4.77 m	4.87 m	4.79 m
<b>Power</b>	Min. 122 PS (big range)	Min. 170 PS	min 116 PS
<b>Consumption</b>	ca. 7 l / 100km	8-11 l / 100km	6 l / 100km
<b>Options</b>	More possibilities to choose engine, interior etc.	Very good spring system → comfortable seating, 4 cup holders	Many possibilities to choose engine variants and options

Table 1: Comparison of VW Passat models as offered in Germany, USA and China (Source: own analysis of the websites of URL=<http://www.vw.de>, <http://www.vw.com>, <http://www.vw.cn>, last access: 02.05.2013)

## 2 Necessity of Deep Cultural Knowledge for UI Design

Product engineers must therefore consider from the very beginning of the product development process that there is not just one single user group for the product. Today it is of critical importance for the development of a successful new product to know in detail the requirements of all global customer groups first before starting the global development process. The usability of technical devices controlled by a user interface (UI) which are developed in the cultural context of the designer (e.g. Mid Europe) for another culture (e.g. East Asia or India) is hardly possible as usability mainly depends on the application in the cultural context (age, sex, language, education, knowledge, experience, religion, self-conception, dealing with power and so on) and environmental factors (such as politics, wealth, income, infrastructure) (cf. Honold 2000, Röse 2002, Heimgärtner 2012).

A deep detailed cultural knowledge of the specific user habits is necessary for a designer in order to develop a new system that fits all customer requirements and can therefore be sold and implemented in different countries.

## 3 Challenges in the UI Design Process

However it is impossible that one UI designer has all this specific information from all relevant user groups world-wide. He will, however, have a profound knowledge of the circumstances in his own cultural environment in order to be sensitive for relevant aspects in other cultures (cf. Thomas, Kinast & Machl 2010).

These are some of the challenges in UI design process:

1. There is no methodology that is able to support UI designers while developing user interfaces in a systematic, structured and guided way.
2. There is no methodology for a deep understanding and of the sometimes even contradictory local different consumer requirements and combining these in the product specification.
3. There is not sufficient knowledge about the context of use as indirect intercultural variables embracing HCI margins such as service manual or packaging.
4. Integration of Agile Project Management (APM) in intercultural user interface design projects.
5. Need for co-operation in inter-culturally mixed UI designer teams.

## References

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