

LISA

Cross cultural communication: How can you deliver what the user really wants?

*Determining what the user really requires
and the dangers of getting it wrong*

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The logo features the word "LISA" in a bold, serif font, with a small "TM" trademark symbol to its upper right. The text is centered within a diamond-shaped frame that has a light beige background and a dark grey border. A thin red horizontal line is positioned directly beneath the letters "LISA".

LISATM

1 What's the problem?

When communicating with another person or accessing an information service, everyone wants to be able to do so in ways that are compatible with their language and cultural preferences. This very obvious sounding user requirement might appear to be an easy one to satisfy. This is a simple requirement to state, but anyone who believes that it is simple to satisfy is probably failing to see the real complexity that lies behind it.

When the problem of how a service should address the requirements of its culturally and linguistically diverse user base is raised many people react with - "what problem?" They think they have the problem solved, but all too frequently their solutions may help many people but make the situation much worse for a significant minority of their customers, or sometimes even a majority!

Many providers of devices and services attempt to satisfy this apparently simple requirement by using straightforward techniques to match language and cultural defaults to what they believe the user needs. This paper uses some examples that will hopefully make everyone with a stake in providing genuinely usable solutions realise that meeting a simple sounding requirement can sometimes require complex and sophisticated solutions. It will also show how failure to adequately address the issues can lead to solutions that are counterproductive and that inhibit use of products and services.

In the business environment, failing to take into account cultural issues can lead to communication conflicts or confusions which can hinder productivity and lead to loss of business opportunities. In the case of people trying to access emergency services, failed attempts to meet users' cultural requirements could be fatal.

2 Some imperfect solutions

In this section, some examples of counterproductive attempts to meet people's cultural requirements are presented.

2.1 Language difficulties when using the phone

When phoning abroad and encountering problems, a caller will often receive warning messages in the language of the country being called. Frequently the caller will be unable to understand the message. Callers will usually prefer to receive all messages in their own language, irrespective of where they are phoning from or to.

In emergency situations it is possible for all mobile phones in an area to receive a "cell broadcast" giving important information. However, these messages may only be broadcast in a limited range of languages. As the range of message languages that a phone can receive is limited by a language list in the phone's SIM card (Subscriber Identity Module smartcard), the trend for using a local SIM card of the country being visited could mean that the visitor might fail to receive a potentially life-saving message.

In both these cases, the language of the announcements or messages sent to the user depends on factors such as the country from which the announcement is generated or the country which issued the SIM card. No sources of information about the person's individual language preferences or abilities are sought or used.

2.2 Using network addresses to guess language needs

There are global services that identify that a user is working in France by inspecting the current network (IP) address and recognizing that it is a French one. These services can then make the very mistaken assumption that the service is required in a French language version. This is very ironic if you consider that the laptop being

used contains very clear information that shows what the user's language and cultural preferences really are e.g. the language and cultural settings that have been chosen when the operating system was installed on the user's laptop. Although there are potential privacy issues in accessing the information about a user's real preferences that are stored in their laptop, this example clearly illustrates the potentially disruptive effect on some individuals caused by a service that tries to guess a user's needs and gets it badly wrong.

2.3 The language used to "correct" words in text messages

The ease of entering text messages into mobile phones has been greatly enhanced by the widespread use of predictive text entry systems which offer word completion functionality. However, the text prediction only works correctly for text written in the same language as that of the dictionary used for text prediction. The default language for predictive text is usually configured, by default, to be the same language to which the user interface of the mobile phone has been set. In the simple case of a person who only ever communicates in one language, this option will usually be very satisfactory. In all other cases, the situation will be much more complex.

Giving users a language menu is one solution that is offered to help them when they wish to use a variety of languages. The problem is that, potentially, this menu could be long. Where people are competent in a number of different languages, they will be helped if it is their own preferred languages are at the top of any language menu. This solution presupposes that the mobile phone has knowledge of the user's preferred languages. Unfortunately, at present this is not usually the case. However, even this solution is far from perfect as having to manually change the predictive text language each time a message needs to be written in a different language will be very irritating to most users.

Every non-English speaking person employed in an environment where the language for technical business communication is English will experience a problem. When communicating with friends and non-technical contacts, one predictive text language will be required and English will be needed for every technical message. This shows that the appropriate predictive text language depends on a complex combination of factors such as the context of use and the identity of the other person. These requirements point to solutions that make use of stored information on the correct language to be used for each person or group of people. Storing this information as part of a person's address book entry is one promising option to consider here.

2.4 Coping with Time Zones

Time zones are an important cultural factor that needs to be handled correctly when online or face-to-face meetings are being planned between people from different countries. If a person enters a face-to-face meeting into a conventional diary, it is likely that the local time will be used as this is what the user needs to know, both when planning travel to and when attending the meeting. When entering the time for a telephone conference, the same user would be likely to take the conference time announced by the organizer and adjust it to the local time of the country from where they will join the call (often their home country) before entering it into their diary. The user, who has carefully chosen two different strategies for deciding what time to enter, should be confident that these times will never be changed.

The most common calendar application used by business professionals today alters all of the times in the user's calendar when they alter their computer's time zone setting. Most users would probably like to adjust the time zone on their laptop so that it always shows the correct local time on the screen and for alarm setting. However

many professionals find that the automated time altering behaviour causes them so many troubles that they never do so.

The algorithm that a user uses when handling time zone variations can be complex and very situation dependent and it may vary significantly from person to person. In reality, the handling of time zones may be a situation where the user has to apply their own logic to each diary entry on a case-by-case basis and suffer the consequences when their logic is faulty. This is probably preferable to a situation where undetected scheduling errors are caused because of assumptions made by the designers of the diary software.

3 *The underlying problems*

In all of the examples presented above, the cultural and language solution that meets what the user needs depends on who the particular individual user is and/or on the very specific situation that the user is in at the time that a service needs to be delivered.

3.1 Problems for users who only understand one language

For some users, in particular those that only speak a single language, their language requirements may be very simple and constant. Such users need to have information, or to communicate, in their own language and failure to satisfy this strong need will result in a complete failure of the particular transaction. In principle, it would seem very easy to satisfy this need and, for some categories of product or service, it is. If these monolingual individuals buy a product for their own use they should have no problems if that product has been well localized to their particular needs or if they are given an option to select from a number of well localized variants of the user interface to the product. It may also be true that the needs of these individuals can be reliably met when accessing many online services if they are offered an easy means to access an online service that is well localized to their specific needs.

However, it is these very same monolingual users that will be most heavily impacted by two categories of products and services:

- those that have not been localized to the needs of the user;
- those that attempt to match the needs of the user and get it wrong.

The problem with telephone network announcements given in section 2.1 and the use of network addresses to predict language needs in section 2.2 are examples of both of these potential sources of failures to meet the needs of the user.

3.2 Problems for users who understand several languages

It may seem fairly obvious that people who only speak a single language will encounter difficulties in an increasingly global environment when interacting with people, products and services, particularly when that language is not one of the world's major languages. What is less obvious is that people who have very wide range of language abilities may also have as many problems.

People who only understand one language cannot function at all unless their need to have everything presented to them in their own language is satisfied. In contrast, people who understand several languages can cope to some degree if information is presented in any one of the languages that they understand. Their fundamental need to use products, to communicate and to access services will be met more frequently.

What is unique to people who understand several languages is that they have more sophisticated requirements on what particular language or cultural variant they prefer in any specific circumstance. These preferences do not represent the success or

failure states that confront the monolingual user, but they can be a very important factor in determining the quality of the user experience of the particular information or communication transaction in which the user is participating.

A great challenge for those responsible for delivering products or services to such users is to understand how best to meet their requirements. In the most personal activities such as person to person communication, the range of factors that can determine which language two highly multilingual people will use can depend on a number of intangible factors that include:

- the content of the communication (e.g. social or technical);
- the relative proficiency of the two people in the languages they both speak;
- the presence of others and the need to include or exclude these people in the communication;
- the circumstances in which the two people first met (e.g. the language in which they used to communicate);
- the current location of the two people (e.g. the local language may be a factor that determines their choice of language).

What should be clear from the above list is that it would be impossible for any system to reliably predict which language will be spoken. The individuals themselves frequently find it difficult to articulate what influences their choice of language and it is not uncommon to hear two multilingual people changing the language they speak several times throughout a conversation.

4 So where are the solutions?

In the previous section it has hopefully been made clear that the range of user requirements that needs to be satisfied are broad and complex. The requirements are very varied, but the ideal solution is the same – correctly understanding the user requirements and then attempting to satisfy them. Most of the imperfect solutions given in section 2 either do not attempt to meet the requirements of different users or they attempt to infer what those requirements will be.

A better approach to ignoring or inferring the user's needs and requirements is:

- allow people to (explicitly or implicitly) specify detailed language/cultural needs and requirements;
- provide ways for products and services to access those needs and requirements;
- provide mechanisms that attempt to resolve differences between the user's needs and requirements and the capabilities of the product or service;
- recognise that no automated solution will ever meet the user's needs in every circumstance and;
- provide the user with an easy way to easily override or deny the automated "solution".

Those with experience in designing and configuring products and systems will recognise that there is no generally accepted and adopted solution to any of the above proposals – the solutions simply don't exist in any easily usable form.

5 Looking towards some solutions

A European Telecommunications Standards Institute (ETSI) Specialist Task Force (STF287) has been set up to look at ways to address the difficulties and barriers encountered by people communicating and accessing information when in environments where the culture and language are unfamiliar to them. This work has

been funded by the European Commission (EC) and the European Free Trade Association (EFTA) as part of their eEurope 2005 initiative.

When most innovative services are developed, their potential market is often restricted by limitations relating to the culture and language of the potential users. If it becomes easy to deliver services flexibly to a wide range of cultures and languages, then the potential market for each service can expand significantly.

STF287 aims to give guidance to service providers, terminal manufacturers and standards makers on issues such as:

- definition and storage of cultural preferences and language skills;
- how these preferences can be accessed and used by terminals and services;
- how content production and delivery can take account of a range of cultures and languages;
- the matching of available service options to specified user preferences.

In practice it will not be feasible to offer services in variants suitable for every culture, so the STF will propose ways to ensure that the most appropriate version of a service is always delivered to each user.

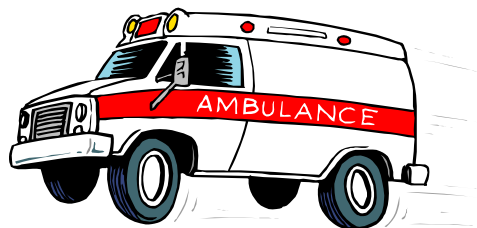
The ETSI STF will consult widely with localization and internationalization experts, identify failures in meeting users' cultural requirements and propose solutions to actively tackle them. Some of these solutions will involve innovative usage of existing ETSI recommendations related to user profile management [1] and Universal Communications Identifiers (UCIs) [2, 3, 4].

The work addresses the use of information and communication services by people with a wide variety of language abilities and cultural backgrounds. It will produce an ETSI Guide that identifies approaches to the effective delivery of cultural variants of services that meet the needs of individual users.

6 How the future could look

STF287's work should provide some guidance and a roadmap to the development of products and services that meet the needs of a diverse user population in an effective way. Below are two simple scenarios that illustrate how things could be.

6.1 Emergency Services



While a Spanish family are on holiday in Malmö, Sweden, their daughter is suddenly taken ill. The girl's father runs to a nearby public access terminal and inserts his personal identification smart card. He is immediately presented with a Spanish menu system and selects the medical emergency option. He is answered by a Spanish speaking operator and the situation is resolved in the shortest possible time.

6.2 Visiting an art gallery



A French tourist visiting Budapest, Hungary, decides to visit a gallery of modern art. She logs in to a museum and art gallery site from her smartphone. Because she has a Universal Communications Identifier (UCI), the service is able to read her language requirements from her user profile and presents her with a French version of the site. She sees there is a special Picasso exhibition and she books an e-ticket. As she walks around the exhibition, text and audio descriptions and locations of all of the exhibits are beamed to her smartphone in French.

7 CONCLUSION

The examples described in this paper demonstrate that providing communication and information services in a form that is compatible with a person's language and cultural preferences is far from easy. Many solutions that rely on simple assumptions about what a user's requirements will produce results that can be as bad as, or worse than, cases where no attempt has been made to handle linguistic and cultural issues.

Providing better solutions is frequently a case of being able to meet the specific needs of an individual in a particular set of circumstances. Fortunately, solutions that emphasise accessing and utilising precise statements of an individual's cultural and linguistic requirements are likely to be much more effective. The work being undertaken by STF287 will provide guidelines that identify ways in which such solutions can be achieved. ETSI work on User Profile Management [1] provides a good basis from which such solutions can be created.

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<http://portal.etsi.org/STFs/HF/STF287.asp>
where you can learn more about STF287, access some of our presentational material and access the latest draft of our deliverable.

9 REFERENCES

- [1] ETSI EG 202 325: "Human Factors (HF); User Profile Management"
- [2] ETSI EG 202 067: "Universal Communications Identifier (UCI); System framework".
- [3] ETSI EG 202 249: "Universal Communications Identifier (UCI); Guidelines on the usability of UCI based systems".

[4] ETSI EG 202 301: "Universal Communications Identifier (UCI); Using UCI to enhance communications for disabled, young and elderly people".

These can be accessed at:

http://www.etsi.org/SERVICES_PRODUCTS/FREESTANDARD/HOME.HTM

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