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UNESCO Chair in ICT for Development Royal Holloway, University of London

ICT4D BRIEFINGS

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Localising and Contextualising Access Technologies

The World Health Organisation (WHO) has highlighted the importance of prioity assistive technologies to ensure the needs of people with a disability are met globally. Addressing this need requires a combination of innovative new solutions and the localisation in new communities of existing ones. Localisation can be described as the linguistic and cultural adaptation of digital content to the requirements of a specific cultural market and GALA suggest that is beyond simply translation and includes other conventions such as date, time, currency, number formats, text, images, colour symbols, flow of information and product functionality. In order to complete such localisation there is a need to understand the differences between cultures and the problems that are likely to occur as a result. In seeking to address the global needs for assistive and accessible technologies such processes need to be recognised and considered. In truth, any definition of Universal design that fails to take account of culture and language cannot truly be referred to as Universal.

Our work in developing a framework for this in the Arab world has been based upon the practical experience of localising over 40 assistive technologies to support Arabic, working with developers to transition their technology, and with investment to mitigate any risks. The framework established has been effective in delivering in both the commercial and Open Source spheres. Full details of the Mada framework are available online alongside a downloadable summary of the key factors, which include the need to: 1) address design; 2) understand the language; 3) outline and address technical issues; 4) consider individual needs; and 5) deliver through partnerships

There is value in the clear discovery of requirements and local needs, generating a design that respects culture and language and recognises any impact on content. Great care should be taken with translation, which may be strengthened through the addition of a glossary and by engaging with both local translators and linguists.

David Banes is Director of David Banes Access and Inclusion Services, supporting the development of services and policy to ensure that people with a disability are digitally included.

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Developers recognise a need to establish a consistent style regardless of the local version of a product. Later localisation is facilitated if a clear style guide for design is developed which includes the use of universal graphics and icons wherever possible. Testing with potential users, provides feedback that forms the basis of further development including both maintenance and updates. In the Tawasol project, (creative commons symbol dictionary for Arabic speakers) the engagement of users was central to design. The community was at the heart of the process of review and testing through a combination of approaches including face to face and focus group sessions to discuss and vote on design options, alongside an online voting and management system that allowed users and professionals to give continuous feedback.

The delivery of successful, innovative technology solutions for people with a disability requires full consideration of these issues and implementation of suitable processes. Used effectively they can help reduce the cost of transfer, and in the case of Open Source solutions lead to a well managed, distributable solution that is cost effective and will have impact.

The ICT4D community has an opportunity to address these issues in a systematic manner. In seeking to support the production of quality cost effective solutions there is much that can be done together to map the availability of necessary components for localisation. The availability of available text to speech engines, word prediction tools and algorithms, speech recognition API's and symbols for communication all provide the bulding blocks upon which new solutions can be built. Where such direct tools do not yet exist then there is a need to stimulate the production of the resources upon which these are built. Frequency of words lists in the form of a usable corpus are essential and the work of language communities to build a shareable phonetic speech corpus is an excellent example of the ways in which research can directly impact upon the creation of solutions.

Such building blocks significantly reduce the cost of localisation. They directly engage language and cultural communities in the production of products and they stimulate local innovation and development. The use of Open licences for such resources can do much to enable digital empowerment for people with a disability. Sharing the availability of research and resources can accelerate that process significantly.

For enquiries or to contribute contact the editor at endrit.kromidha@rhul.ac.uk