Accessible, Affordable and Adaptive Information and Communication Technology for All;
a measure to combat against social exclusion and human rights abuse
Report to the panel session on
The changing role of the Dag Hammarskjöld Library – Bridging the information gap between developing and developed countries, New York, 1 March 2002.

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[Summary]

Information and communication technologies (ICT) offer new possibilities for "systematic exchange of information, experiences and ideas", which is a key to any successful collaboration, in accessible format with affordable cost and adaptability that enables everybody may fully participate in the community.

The Dag Hammarskjöld Library (DHL) must deploy the best opportunity offered by evolving ICT to bridge the information gap between developing and developed countries, as well as the gap between "non-disabled" and people with disabilities.

1. Why Virtual Library?

DHL and UN Depository Library system in the world is a unique and powerful information dissemination mechanism. The strength of the

system exists in the bibliographic/documentation work dramatically improved by the web-based information services of DHL.   The weakness is its weak visibility in the community compared with its potential.

It is strongly recommended for DHL to reach out to those people who have to take part in "systematic exchange of information, experiences and ideas" of the UN system, and provide them with necessary bibliographic and documentation services.

Social development, poverty alleviation in particular, is one of the most important key area of the activities of the UN.   It is even related to peace and global environmental issues.   Those who are involved in the combat against poverty, social exclusion and all forms of human rights abuse are the potential users of UN information systems for regional or global "systematic exchange of information, experiences and ideas" in order to accomplish the goals and objectives set out by the plan of actions of the UN Social Summit.

Due to economic constraints, there are limited options to improve the information services of DHL and UN Depository Libraries in the world.   We may find a consensus on the importance of virtual library development to reach out to those target groups in the world to guarantee "systematic exchange of information, experiences and ideas".   Virtual Library in this context is a library services on the Internet in combination with a local collection of library materials which may include electronic files of UN documentations.

When it comes to electronic documents, consideration should be given to the needs of people with disabilities. Thoughtful consideration on Accessibility, Affordability and Adaptability is required.

2.   Accessibility

ICT and infrastructures are rapidly growing in the provision of information and services to the population.   ICT must therefore be made accessible and their great potential to assist and support persons with disabilities must be utilized.

There are standards and guidelines for WWW accessibility and electronic document accessibility.

Web Content Accessibility Guidelines (http://www.w3.org/TR/WCAG20/)

set out by the Web Accessibility Initiative (WAI) is the world standard for WWW contents accessibility. It is most important to examine and share existing guidelines with active participation. If we create our own, the maintenance of the guidelines will require a lot of resources of our own when technology evolves.

Accessible electronic documents specifications have been developed by the Open eBook Forum (http://www.openebook.org/). Accessible electronic documents may help people with visual impairments, motor disabilities who have difficulties with handling of printed materials, hospital patients, and people with learning disabilities, etc.

Professional consultation for requirements for each disability may be available from following international disability organizations:

Disabled People's International (http://www.dpi.org)
Inclusion International (http://www.inclusion-international.org)
Rehabilitation International (http://www.rehab-international.org)
World Blind Union (http://umc.once.es)
World Federation of the Deaf (http://www.wfdnews.org)
World Network of Users and Survivors of Psychiatry (http://www.wnusp.org).

Other regional cross-disability concerned organizations such as UN ESCAP based Thematic Working Group on Disability-related Concerns (http://www.dinf.ne.jp/doc/twg/eng/index_e.html) may also give consultation to each UN System library.

3. Affordability, Adaptability and intellectual properties rights

A Virtual Library will be relying on computer and Internet more and more. As infrastructures are improved, the running cost for a virtual library will become lower and lower. Since a CD-ROM which costs less than 1 US Dollar may contain thousands of pages of UN Documentations, if we compare the distribution cost of printed UN documentation with electronic delivery via Internet upon request, we will find it cheaper to distribute in electronic format in the long run.

There are projects to develop Internet infrastructures in developing countries such as DOT Force or J-Net project. DHL must identify opportunities to take advantage of those projects for linking all UN Depository Libraries to the Internet.

An adaptive user interface for web-based accessible multimedia application in DAISY format is being developed by JSRPD (http://www.dinf.ne.jp). An adaptive system allows a choice of touch panel, computer game interface such as joystick, voice command, or other special user interface for people with disabilities. Further details of the DAISY (Digital Accessible Information System) is available at the DAISY Consortium website (http://www.daisy.org).

I am quite sure that the requirements for people with cognitive or intellectual disabilities will be met by accessible multimedia such as DAISY which allows to use synchronized audio, text and graphics at the same time if it is necessary. Convention on the Rights of the Child, for example, has been rewritten in "Easy to Read" format with small vocabularies in several languages. If an adaptation of the original document including rewriting in small vocabularies and adding graphical or oral explanations is elaborated, it will give better understanding on the issues for people with intellectual disabilities, children or people who learn one of the UN official languages as a foreign language.

Another example is the Oral History of Mr. Dag Hammarskjöld on the DHL web. Accessible multimedia streaming on the Internet will allow DHL to provide audiences with original voice and picture of DH together with caption for people with hearing impairments, sign language interpretation for deaf people, audio description for people with visual impairments, a set of caption text and audio description text to serve for deaf-blind community.

Recording of sessions may be changed from current print format to audio-visual but accessible format with better attraction and usability for everybody.

4. Conclusions

DHL is recommended to develop accessible and adaptive web-based information support. Accessible document distribution on CD-ROM will eventually reduce the cost for document delivery and improve the access to UN Documentation in general with lower cost even in developing countries.

Introduction of accessible multimedia with adaptive user interface for UN documentations will increase the understanding on UN activities and support for UN Information System from grass roots level.