

BEGINNING OF NEW ERA OF INFORMATION ACCESS WITH DAISY FOR ALL PROJECT

In developing countries, less than half percentage of published materials can be made available in accessible format to persons with print impairment. These materials are to be made available in either Braille, talking book or large print format to make them accessible. DAISY Consortium has proposed standard and methodology by which this half percentage can be increased considerably. The proposed methodology is as follows:

- all published material is first produced as a computer file. This computer file need to be produced according to the structure guidelines proposed by the DAISY Consortium.
- If this structured computer document is not contributed by the publisher, then any Braille, talking book or large print producer begins process of production by creating this document following the DAISY Structure Guidelines.
- A central collection of these well structured documents is created.
- Any not for profit organization can take documents from this central repository to produce Braille, talking book or large print books.
- Using software tools, these organizations could convert these documents into Braille, talking book or large print book within few minutes.

Using this methodology, all formats of accessible books can be created using single source document. This is revolutionary in many ways.

- This allows using of documents directly from the publishers thus the time of production of accessible formats can be reduced up to 90% of the time taken today.
- A source document takes lot of human and financial resources. This source document can be used any number of times by any number of organizations to create accessible document in any of the accessible format. Thus sharing of this important source document among various organizations through central repository can save lot of financial and human resources.

It is not just the accessible format book production methodology which is revolutionary in the DAISY Path but the reading experience for the end user is also very rich. The structure document captures all structures of print format such as, sentences, paragraphs, pagination, sections and sub-sections, foot notes, etc. The end users get full navigation facility of reaching to any part of the book that they want to read even in the talking book format.

All this became possible because more than 100 not for profit organizations from about 40 different countries are working together towards making all this possible. All these organizations have got together as DAISY Consortium. This consortium is deciding and formulating standards for accessible digital content. The consortium is also facilitating

production of software tools required to implement the proposed best way of publishing accessible format content.

Government and non-government organizations of developed countries spent lot of resources to go the DAISY Way. However, the developing countries remained untouched by this revolution until 2003. Since 80% of the population of persons with vision impairment live in developing countries, DAISY Consortium made special efforts to be proactive to take the fruits of this revolution to the Developing countries. This effort started in form of a project called the DAISY For All Project in the year 2003. This project is funded by the Nippon foundation, Japan, and was initiated by Mr. Hiroshi Kawamura who is the current president of the DAISY consortium.

The project has 4 major activities:

1. Formation of resource centres and country DAISY Focal points: These centres are equipped to undertake actions such as Production and training for production of DAISY Digital Books.
2. Software development and local language adaptation of software:
3. Trainings for production of Digital books
4. Training of Trainers
5. Awareness activities

As a result of these activities, Two Regional resource centres have been established in India and Thailand to facilitate establishment of focal points in South Asia and South East Asia respectively. Focal points have been established in Bangladesh, Indonesia, Nepal, Malaysia, Pakistan, Philippines, Sri Lanka and Vietnam. Focal points are also being established in Kazakhstan, Laos and Cambodia.

As a result of focal point trainings and International Trainer's Trainings, several persons have been trained in each focal points in production of DAISY Digital Books. Advance trainings have been provided to 2 to 4 persons in each focal point country so that trouble shooting can be done within the country itself.

In the over all methodology, there were many gaps which were technological challenges specially for local language content creation process. The DAISY consortium and the DFA Project resources have been investing in open source software development in plugging these gaps. Some of the examples of solutions provided so far are:

- Easy to use editor for creating structured documents: The DAISY Structured documents need to be in XML markup scheme. Most of the persons involved in content creation do not have very high technical skills. Thus it is important that an easy to use text editor is available by which a well structured document is created. DAISY Consortium and Microsoft are currently working on a joint project to add a feature of save as DAISY in MS word. MS word is one of the most widely used text editor. Thus creation of a well structured daisy document will become as easy as creating a document using MS word.

- Creating talking books from text documents: DAISY Consortium has released an open source free of cost software which can use computer voice to create a talking book from a structured document. This software is called DAISY Pipeline and is highly configurable to do different kinds of tasks. If computer voice of any language is available, DAISY Pipeline can be configured to use that voice to create talking books in that language. We have tried this feature in India to create Hindi language books using this feature successfully.
- Talking Book Recording software: Working hand in hand with the DFA Project, Japanese Society for persons with Disability provided Talking Book recording softwares called Sigtuna and My Studio PC free of cost to any not for profit organization of developing country.
- Braille Transcription support: companies like Duxbury systems INC are working with the DAISY Consortium to make their Braille transcription softwares work with the DAISY Structure documents. DAISY standard is a well accepted standard. Thus, adapting any Braille transcription software to use DAISY Structure document to produce Braille book is not very difficult.
- Cassette to DAISY conversion systems: Both, at Thailand and India resource centres, systems and procedures were developed for conversion of existing collection of talking books on audio cassettes into DAISY Digital books. These systems have been extremely low cost solutions and also provide employment opportunities to persons with vision impairment.
- Affordable players: One of the biggest challenge in developing countries was to make Digital Book Player available in affordable cost. Besides building a free software in local language which converted any computer into a DAISY Digital Book Player, Two more systems have been developed:
- Telephone based book reader: In Thailand Resource centre, any person with blindness can now dial a number of the library and start listening to books of his/her choice with full navigation features of the DAISY Books. The software is open source and can be deployed in other locations too.
- Small DAISY Player/Recorder: A Flash memory based small size DAISY player has been developed in India. This player is affordable and has many advance features such as recording of own notes while listening to a book.

As a result of these efforts and achievements, thousands of books in local languages are now available to persons with print impairment. However, this is just a beginning and There are several challenges in developing countries for complete solution. Some of these are described below:

- Policy for educational Books: There is a need to implement policy making it compulsory for publishers of educational books to submit DAISY Structured documents in central repository of accessible documents. Some countries have introduced law in this issue. This has made accessible format content production fast and low cost.
- Local language computer voices: there is an urgent need to develop Text To Speech Engines (computer Speech) in languages of developing countries. Without

these, many of the suggested solutions and many of the assistive technology tools will not work in local languages.

- Development of Braille transcription software in local languages or building support for local languages in existing Braille transcriptions softwares.
- Development of a policy for distribution of Digital Book Players to end users

Thus, A very clear road map has been created for availability of content in accessible format for all. Many of the technology solutions for turning this road map into reality have already been created. In Developed countries, almost all the technology solutions are available. Need is to adopt this road map in developing countries and develop technology solutions for local languages to fill up the gaps where ever they are. Considering the revolutionary solutions it has provided, it will be right to say that DAISY is the Best Way to Publish and Best way to Read. It will help us create books that every one can read.

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