Background Notes and Specific Suggestions for Implementation of the United Nations Convention on the Rights of Persons with Disabilities: Input for the Expert Group Meeting on Accessibility, 28-30 June 2010, Washington, DC.

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# **Professional Activities and Contributions in the Field of Access to Knowledge**

## DAISY Consortium

Hiroshi Kawamura is the President and a foundation member of The DAISY Consortium which received the ITU World Telecommunication and Information Society Award in 2008 in recognition of its contribution to support persons with diversity of print disabilities, persons with minority languages including indigenous languages without written scripts, and people who are illiterate.[[1]](#footnote-1)

The DAISY (Digital Accessible Information System) Consortium was formed in May, 1996 by talking book libraries to lead the worldwide transition from analog to Digital Talking Books. Members of the Consortium actively promote the DAISY Standard for Digital Talking Books because it promises to revolutionize the reading experience for people who have print disabilities. Specifically, the Consortium's vision is that all published information is available to people with print disabilities, at the same time and at no greater cost, in an accessible, feature-rich, navigable format. The DAISY Consortium has established a mission[[2]](#footnote-2) and goals in order to make this vision a reality.

The most current DAISY Standard is known as ANSI/NISO Z39.86-2005 which is open, non-proprietary, inter-operable, and free of charge standard of digital talking books. He has been contributing to guide the strategy of the DAISY Consortium in particular to enhance the use of accessible multimedia in DAISY format to cover wider areas of community.

## Library Services

Hiroshi started his professional career at the University of Tokyo Library in Japan to ensure equal access to library services for students with disabilities on campus. He chaired the Section of Libraries for the Blind/International Federation of Library Associations (IFLA) prior to the foundation of the DAISY Consortium in 1996. From 1996 through 1998, he went around 5 continents for world field testing of DAISY to encourage participation of blind and low vision people in the standard development process.

## World Summit on the Information Society and CRPD

Hiroshi continued to keep his concern on the participation of persons with print disabilities and people in the south in standard development and its implementation throughout the 3 years process of United Nations World Summit on the Information Society (WSIS) 2003-2005. He was serving as WSIS Disability Caucus Focal Point and coordinated the Global Forum on Disability in the Information Society in Geneva and Tunis[[3]](#footnote-3).

He sees a synergy between implementation process of the WSIS plan of actions and the United Nations Convention on the Rights of Persons with Disabilities and coordinated two international conferences on Disaster Risk Reduction (DRR) of persons with disabilities in Phuket 2007 and 2009 in collaboration with Senator Monthian Buntan[[4]](#footnote-4). In addition, he coordinated the Workshop on Accessibility Guidelines and Standards for Persons with Disabilities at the United Nations Internet Governance Forum (IGF) in Rio 2007.

## Disaster Risk Reduction of Persons with Disabilities

Hiroshi has been engaged in research on DRR with special reference to persons with disabilities through knowledge based enabling methods taking advantage of accessible multimedia in DAISY format last 10 years. Recently he specially focused on social isolation of persons with Autism Spectrum Disorders and psycho-social disabilities as most vulnerable people at disasters and developed a US-Japan collaboration network on this issue. Urakawa Town located in one of the most frequent earthquake zone in Japan has been identified as the research field of action research on Tsunami Preparedness development of some 150 persons with psycho-social disabilities and residents at large. Knowledge-based participatory approach to enable each group home members with severe psycho-social disability has been chosen by group discussion supported by scientific research result on potential Tsunami. Research findings on attention of people with autism in the US significantly contributed to develop accessible multimedia training manual for Tsunami evacuation to get and keep attention of persons with severe psycho-social disabilities. Today, group homes of Bethel’s Home in Urakawa Town are conducting self-help Tsunami evacuation training 4 times per year including severely cold winter evening successfully. They are now recognized as model group of Tsunami evacuation in the Town. This proves the fact that persons with severe psycho-social disabilities may share scientific understanding of the disasters such as earthquake and Tsunami and decide to respond properly if the knowledge on disasters is presented in the right format and properly handled in their meetings and trainings. This eye-opening outcome was confirmed when Chilean Earthquake Tsunami reached to Urakawa Town early this year. The Group home residents in potential Tsunami zone precisely evacuated. Action research in Urakawa caught attention of other Tsunami region in the country. The annual conference of Japanese Association of Psychiatric Rehabilitation to be held in Urakawa to learn from Bethel’s Home will invite Hiroshi as the keynote speaker for Disaster Risk Reduction of persons with psycho-social disabilities session.

## DAISY for All Project in developing countries

Hiroshi has been active to bridge the Digital Gap of the North and the South. As the Project manager of the DAISY for All Project, he took initiative to establish DAISY focal points in Bangkok, New Delhi, &c. Those 13 DAISY focal points established by the DAISY for All Project in developing/emerging areas are now providing knowledge in DAISY format to children and adults in the region.

## DAISY to combat against HIV/AIDS

Tackling global issues such as DRR and HIV/AIDS by making the most of DAISY technology is one of strategies of the DAISY Consortium as a result of DAISY use case research of persons with disabilities. The use case research, in particular in South Africa, shows extremely difficult situation of persons with disabilities who cannot read English or Afrikaans. He took initiatives to transfer DAISY technology to South Africa to disseminate HIV/AIDS resource manual in DAISY format in 11 official South African languages through close collaboration of Disability Peoples South Africa and the DAISY Consortium[[5]](#footnote-5). So far the resource manual in DAISY Format is available in English, Afrikaans, Zulu and Xhoza.

## DAISY + EPUB = mainstreaming DAISY

DAISY so far has been alternative book standard which enables people with print disabilities share knowledge. However, as mainstream industry such as Microsoft, Adobe and Google supports DAISY XML and EPUB, DAISY is going to become one source solution for mainstream publishers to publish in different format depending on users needs.

By the end of 2010, the DAISY standard known in USA as ANSI/NISO Z39.86-2005 will integrate motion pictures such as sign language and gestures that are fully synchronized with text, audio and graphics. EPUB, de-facto industry standard for commercial electronic publication developed by the International Digital Publishing Forum, IDPF, is going to be revised shortly. Since the accessibility technology component of EPUB is contributed by the DAISY Consortium, there are good reasons of the coordinated revision of the DAISY and EPUB which will hopefully result in harmonization of both open standards.

## Universal design of publishing

Hiroshi Kawamura’s next target is to develop DAISY / EPUB as mainstream technology to support universal design of publishing which guarantees access to all publications to everybody including persons with print disabilities and those so far excluded from access to knowledge in publications. Harmonization of rights of persons with disabilities and copyright in international copyright arena is extremely important. He has been concerned with Digital Rights Management issues and suggests pilot projects to start with public documents to showcase performance of mainstream accessible publications by UN agencies including accessible digital library service network development.

# List of professional activities in chronological order

2009-: Member of the Stakeholders Platform, WIPO

2008-: President of the DAISY Consortium

2007-: Technical Advisor, Nippon Lighthouse for the Blind

2007-: Vice President, Assistive Technology Development Organization, Japan

2006-2009: Member of the Strategy Council, United Nations Global Alliance for ICT and Development

2003-2005: WSIS Civil Society Bureau Disability Focal Point

2003-2009: Manager, DAISY for All Project of the DAISY Consortium

2003-2008: Member of the United Nations Working Group, World Blind Union

2003-2007: Director, Division of Social Rehabilitation, National Rehabilitation Center for persons with Disabilities Research Institute

2002-: Member of JICA Advisory Committee for Asia Pacific Development Center on Disability.

2000-2003: Co-chair, United Nations ESCAP Thematic Working Group on Disability-related Concerns, and the Leader of its ICT Task Force

1999-: Steering Council Member, W3C Web Accessibility Initiative

1998-: Chairman and Advisor, Copyright Committee, Disability Concerned National Forum on Broadcasting, Japan

1997-2003: Director, Information Center, Japanese Society for Rehabilitation of Persons with Disabilities

1996-: Board Member, the DAISY Consortium

1992-2003: Advisory Board Member, Japanese Federation of the Deaf

1984-: Chairman and a Standing Committee member, Library Services for Persons with Print Disabilities, International Federation of Library Associations and Institutions

1977-: Member, Committee on Library Services to the Handicapped, Japan Library Association

1970-1997: Librarian, The University of Tokyo Library

# List of publications (Publications in Japanese are excluded)

Kawamura, H. “Accessible, Affordable and Adaptive Information and Communication Technology for All; a measure to combat against social exclusion and human rights abuse”. The changing role of the Dag Hammarskjöld Library – Bridging the information gap between developing and developed countries, New York, 2002-03-01.

DeMeglio, M., Hakkinen, M. and Kawamura, H. “Accessible Interface Design: Adaptive Multimedia Information System (AMIS)”. Springer Lecture Notes in Computer Science, 2398, 2002. p.406-412.

Kawamura, H., Hakkinen, M. and DeMeglio, M. “AMIS: The Open Source Adaptive Multimedia Information System”. Paper for International Conference on Technology and Persons with Disabilities, 2003-03.

Kawamura, H. “Multimedia Design for All: DAISY Way”. ITU Workshop: Communication by all means: Accessibility for all in telecommunications enabled by multimedia standards. Geneva, 2003-10-17

Kawamura, H. “Digital Accessible Information Systems (DAISY) for all”. Informational Telecommunication Conference 2003, Colombo, 2003-12-01/12-07.

Kawamura, H. “Disaster Preparedness of Persons with Disabilities”. Global Forum on Disability in the Information Society, World Summit on the Information Society, Geneva, 2003-12-12.

Kawamura, H. “DAISY Across the World”. Sixth BDA International Conference, DYSLEXIA: The Dividends from Research to Policy and Practice, Warwick, UK, 2004-03-27/03-30.

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Kawamura, H (Moderator). “Disaster Preparedness of Persons with Disabilities”. Second Global Forum on Disability in the Information Society, World Summit on the Information Society. Tunis, Tunisia, 2005-11-18.

Kawamura, H. “Report on WSIS: outcomes and follow-up”. International Workshop on Disaster Preparedness of Persons with Disabilities. Tokorozawa，National Rehabilitation Center for Persons with Disabilities，2006-01-17．

Kawamura, H. and Kerscher, G. “Emergency Preparedness Information and Warning Systems must be Accessible to All”. California State University, Northridge Center on Disabilities' 21st Annual International Technology and Persons with Disabilities Conference General Sessions, 2006-03.

Kawamura, H. “Assistive Technology for Activity and Participation – Towards Secure and Sound Life of Persons with Disabilities, 1. Information and Communication Technology (ICT) development for promotion of full participation of Persons with Disabilities”. RESNA 2006: Thriving in Challenging Times: The Future of Rehabilitation Engineering and Assistive Technology, Atlanta, 2006-06-25.

Kawamura, H. “DAISY: a better way to read, a better way to publish – a contribution of libraries serving persons with print disabilities”. World Library and Information Congress: 72nd IFLA General Conference and Council, Seoul, 2006-08-21.

Kawamura, H. Information support in context: lessons learned from an international ICT development project on Tsunami preparedness of persons with disabilities. Session B2: Usability issues for the mobile user. ASK-IT International Conference: Mobility for All – The Use of Ambient Intelligence in Addressing the Mobility Needs of People with Impairments: The Case of ASK-IT, Nice, 2006-10-24.

Kawamura, H. Yamaki, C. Hamada, M. Accessible Multimedia for Disaster Preparedness. International Conference on Tsunami Preparedness of Persons with Disabilities. Phuket, Thailand, 2007-01-12.

Kawamura, H. and Hamada, Mayu. DAISY: the best way to read and publish. ITU Regional Workshop on ICT Accessibility for persons with Disabilities for African Region, Lusaka, Zambia, 2008-7-15.

Kawamura, H. and Hamada, Mayu. Accessibility & Disaster Preparedness of Persons with Disabilities: A Critical life saver. ITU Regional Workshop on ICT Accessibility for persons with Disabilities for African Region, Lusaka, Zambia, 2008-7-16.

Hiroshi Kawamura ”Opportunities and Challenges faced by DAISY in the Broadband Age” 6th China Information Accessibility Forum (Beijing) (4th November 2009)

Hiroshi Kawamura and Mayu Hamada “DAISY, Accessible Publication for All” Digital Accessibility Forum (Singapore) (19 November 2009)

# **Comments and practical suggestions**

## Comments on CRPD implementation for UN Documentation

CRPD addresses issues of access to information very precisely. Real time communication support is relatively well elaborated compared with stored knowledge.

However, access to scientific knowledge today is heavily rely on publications printed on paper or PDF version of them even though the amount of electronic documents delivered through the Internet is rapidly increasing.

The United States, although USA does not ratify the CRPD, has set out a good practice on standard for accessible electronic document format of educational materials. National Instructional Materials Accessibility Standard, NIMAS in short, is a best example of standard setting to guarantee accessible text books. The contents of NIMAS is equivalent of the text only DAISY books.

EPUB is a relatively accessible e-publication format which makes use of DAISY technology except for synchronization of audio with text.

DAISY4, next generation of DAISY is going to support synchronization of motion pictures with text which means that those who have difficulty to understand text and/or verbal language may be supported by synchronized motion pictures including sign languages. I believe that putting forward an open, non-proprietary, inter-operable and free of charge standard which meets the requirements of both deaf and blind persons respectively is significant advancement.

Since United Nations agencies are mandated to implement CRPD, it is strongly recommended to revisit documentation manual for staffs and reinvent whole documentation process to include all persons with disabilities by taking advantage of most current accessible publications standards.

Governments may also in good position to make public documents accessible.

## Participatory Action Research on DRR of Persons with Disabilities

Disasters are devastation for everyone in particular for persons with disabilities. Survival from disasters is no doubt the most important and burning issues in potential disasters areas. In addition to compilation of good practices and lessons, we must seek bottom-up approach to connect people with disabilities on the ground to disaster warning information in order to ensure the safe and secured life for them just like others. The warning information in the right format in the right timing need to trigger appropriate response of people in endangered areas including persons with diversity of disabilities. Scenario based knowledge base development in accessible format is required to support evacuation training. Copyright de-regulation and release of band width in disasters areas must be implemented in the Tampere Convention as one of the CRPD implementation process.

On site Disaster Risk Reduction management exercise should mobilize all vulnerable people in the target areas.

A thoughtful global pilot project on DRR will generate real world requirements that will be critical for survival of both persons with disabilities and the community members at large. My suggestion is to make use of UN Human Security Fund to identify the good practices and current situation of persons with disabilities at risk of disasters in several areas in the world bearing in mind the fact that poorest among poors with disabilities may be living in the most dangerous areas and that they may be illiterate and even difficult to communicate.

This bottom-up approach will reduce the victims significantly.

1. http://www.itu.int/newsroom/press\_releases/2008/13.html [↑](#footnote-ref-1)
2. http://www.daisy.org/mission [↑](#footnote-ref-2)
3. http://www.dinf.ne.jp/doc/english/prompt/wsisindex.html [↑](#footnote-ref-3)
4. http://www.dinf.ne.jp/doc/english/prompt/cdppd/newprogram.html [↑](#footnote-ref-4)
5. http://www.daisy.org/planet-2008-05 [↑](#footnote-ref-5)