

**Joint G3ict/ITU Workshop on
Inclusive ICTs for Disaster and Emergency Preparedness for
Persons with Disabilities and those with specific needs
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**Need for Standards for inclusive disaster risk
reduction for Persons with Disabilities
-ITU Standards for emergency preparedness-**

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List of some of Recent Major Disasters

- 2005 Hurricane Katrina (USA)
- 2009 L'Aquila earthquake (Italy)
- 2011 Great East Japan Earthquake Disaster
- 2011 Thailand Floods
- 2012 Northern Italy Earthquake
- 2013 Typhoon Haiyan (Philippines)
- 2015 Nepal Earthquakes
- 2016 Ecuador earthquake
- 2017 California floods

Lessons

- Disasters can happen anywhere, anytime
- Emergency situations are not limited to natural disasters
- Persons with disabilities and older people have more casualties than others during disasters
 - The death rate of PWDs in the East Japan Disaster is twice that of general population
 - Needs of PWDs and older people were not addressed adequately in many cases

Earthquakes in Nepal and PWDs



- Report by National Disaster Risk Reduction Centre (Nepal) indicates that PWDs and older people were inadequately addressed in humanitarian aids

Accessibility and Emergency

- Accessible Inclusive Disaster Risk Reduction is of immediate need
 - It is not something for tomorrow, but now
 - We can't wait; we have to provide it as soon as possible
- Accessibility implies interoperability
 - Emergency preparedness is hindered by non-interoperable systems
- Standards are necessary to ensure interoperability
- **Interoperable, standard-based solution** for Accessible Disaster Risk Reduction is of immediate need

Why is standardization of Accessibility important?

- Improved Interoperability
 - Products from different companies, countries can be used in the same way
 - Especially important in time of emergency
- Lowered cost of operation, purchase, etc.
 - More competition makes prices go down
 - More affordable to the user
- Lowered barrier to development and market entry
 - A wider market
 - More availability

International Telecommunication Union (ITU)

- United Nations Agency for Information Communications (including broadcasting) Technologies
- Founded in 1865, The oldest international organization, inheriting the International Telegraph Union, established in 1865.
- Standards making one of the ITU's first activities
- 193 Member States and over 800 private sector entities
- HQ in Geneva



International Telecommunication Union (ITU) Cont.

- SOS, the international Morse code distress signal ($\cdot \cdot \cdot - - - \cdot \cdot \cdot$) was formalized by ITU, in 1906.
- ITU took a more prominent role of intergovernmental coordination after the Titanic disaster.
- Some well-known ITU standards include:
 - International Telephone country code
 - (ITU-T Rec. E.164) “The international public telecommunication numbering plan”
 - Public-Key and Certificate
 - ITU-T Rec. X.509 “Open Systems Interconnection – The Directory: Public-key and attribute certificate frameworks”
 - Video Compression
 - ITU-T Rec. H.264



ITU: Emmy Award Winner



Question 26 of Study Group16

- Q26/16 is the group specifically designated to deal with Accessibility to Multimedia Systems and Services for persons with disabilities.
- Q26/16 is responsible for developing (or assisting in the development of) multimedia technical standards addressing accessibility needs of persons with disabilities
- It also reviews accessibility features included in telecom standards developed in other Study Groups
- Cooperation with PWD (persons with disabilities) organizations, e.g., World Federation of the Deaf (WFD), International Federation of the Hard of Hearing (IFHoH), the World Blind Union (WBU), and with other UN agencies e.g., such as World Health Organization (WHO).



Some Relevant Standards from ITU-T for Emergency Preparedness

- H.702 Accessibility profiles for IPTV systems
- F.921 Audio-based network navigation system for persons with vision impairment
- H.MD-DiDRR Profile metadata for persons with specific needs as part of disability-inclusive disaster risk reduction
- H.ACC-RDE Application layer information specification at the terminal to network interface for people with hearing and speaking difficulties to request rescue to emergency rescue agencies
- FSTP-UMAA Use cases for assisting persons with disabilities using mobile applications



H.702: Accessibility profiles for IPTV systems

Merits of IPTV for DiDRR

- Ease of Use and Simplicity (accessible information)
 - Little training for use and for maintenance,
- Lower barriers to acceptance of technologies into a daily routine -> Important for emergency
 - Low-cost (Delivery head-end can be a van, or even a bicycle) -> ideal for developing countries and emergency situations where electricity is not always available
- Regional as well as global
 - Critical information about a specific region can be precisely and readily provided
 - Regional information can instantly be transmitted globally, thanks to Internet Protocol.

How can IPTV help PWDs for DRR?

- Pre-Disaster Preparedness
 - Education through everyday information
 - Integration of every day activity and preparation
 - Evacuation information
- Immediately after the Disaster support systems
 - Emergency information dissemination
 - Evacuation sites, subsistence information
 - Confirmation, identification, connection
- Post disaster response
 - Support for victims, survivors and families
 - Support the long term recovery and reconstruction

Use-case: IPTV iDRR Support system in the Philippines

- Ateneo de Manila University in the Philippines has been conducting an IPTV testbed for DiDRR
- They implemented an IPTV system that will help DiDRR preparedness and also for post-disaster events (Story telling, etc.)



F.921 : Audio-based network navigation system for persons with vision impairment (“Wayfindr”)

- This is one of the series of Recommendations for navigating persons with vision impairment
- Based on the “open” specification called “Wayfindr” by Royal London Society for Blind People (RLSB).
- The specification itself has been implemented and being tested in several cities like London and Sydney.
- Provides guidance on the way smart phone app for navigation is made for blind people
- Essential for inclusive DiDRR for persons with visual impairment.

[Demo video](#)



H.MD-DiDRR: Profile metadata for persons with specific needs

- “Sendai Framework for Disaster Risk Reduction 2015-2030” recommends
 - *“Promote the collection, analysis, management and use of **relevant data and practical information**.”*
 - *“Ensure its dissemination, taking into account the needs of different categories of users, as appropriate”.*
- This is exactly what “profile metadata” is expected to achieve
- Define a “profile” of a person
 - Age
 - Disabilities
 - Specific needs
 - Specific disease,
 - Etc.
- To be shared by relevant organizations in preparation for emergency



Conclusion

- Emergency can happen anytime
- Persons with disabilities are the ones affected most – Accessible Disaster Risk Reduction is of immediate need (not tomorrow, but now)
- Interoperability is essential and Standards are mandatory
- ITU-T has defined many standards for inclusive disaster resilience and emergency preparedness
- They can provide interoperable accessibility to many in disaster situations and emergency preparation

Thank you

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