



Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG-DR&NRR)

Dr. Leo Lehmann
Vice chairman FG-DR&NRR
Mr. Noriyuki Araki
Chairman FG-DR&NRR

Outline



1. Background

2. About FG-DR&NRR

- ✓ Terms of Reference (ToR)
- ✓ Management team of FG-DR&NRR
- ✓ Deliverables
- ✓ Structure (Working Group)
- ✓ Relationships
- ✓ Output documents from 2nd meeting
- ✓ Schedule of meetings

3. Conclusion

Background



- The great East Japan earthquake and tsunami devastated a large part of the east coast of Japan on 11 March 2011. At the subsequent annual CTO meeting held on October 2011, Japanese companies including NTT stressed the importance of standardization studies in relation to safety confirmation systems, emergency communication, and ICT systems to be utilized during a disaster.
 - **Mr. Malcolm Johnson, ITU-T TSB Director, indicated to consider the establishment of a New Focus Group.**
- At the TSAG meeting on January 2012, the Japanese government led the discussion on establishing an FG on a disaster relief system as requested by ITU-T director.
 - **It was agreed to establish a new FG on disaster response in the TSAG.**

<New FG name>

Focus Group on Disaster Relief Systems, Network Resilience and Recovery (FG-DR&NRR)

ToR of FG-DR&NRR



Scope

- Identifying requirements for disaster relief and network resilience
- Identifying existing standards and existing work that are related to the requirements mentioned above
- Identifying any additional standards that may need to be developed and identifying future work items for specific ITU-T Study groups and related actions
- Encouraging collaboration among ITU-T Study Groups, in particular SG2, SG5, SG11, SG13, SG15, SG16 and SG17, ITU-R, ITU-D and relevant organizations and communities, including the PCP-TDR;

Objective: to make following documents,

- Disaster relief systems and/or applications from a telecommunication/ICT perspective, and
- Improved network resilience and recovery capability which could better cope with a disaster.

Management Team of FG-DR&NRR



Title	Name
Chairman	Mr Noriyuki Araki (NTT, Japan)
Vice Chairman	Mr Takashi Egawa (NEC, Japan)
Vice Chairman	Mr Leo Lehmann (Switzerland)
Vice Chairman	Mr Ramesh K. Siddhartha (India)
TSB Secretariat	Mr Hiroshi Ota
TSB Assistant	Ms Emmanuelle Labare

Relationships



- ✧ **ITU-D (SG2)**
- ✧ **ITU-R (WP 4B, WP 4C, WP 5A, SG4)**
- ✧ **ITU-T (SG's, JCA-SG&HN, JCA-AHF, JCA-ICT & CC)**
- ✧ **UNISDR**
- ✧ **UNDP**
- ✧ **IARU**
- ✧ **W3C**
- ✧ **DAISY consortium**

Presentations from organizations outside ITU (examples)



organization	name	presentation
Daisy Consortium	Olaf Mittelstaedt	Inclusive disaster preparedness
IARU	Hans Zimmermann	The Role of the Amateur Service in Emergency Telecommunications
UNDP	Veronica Grasso	Early Warning Systems (EWS)"
UNISDR	Vincent Fung	Telecommunications/ICT and Disaster Risk Reduction

Presentations from other groups within ITU (examples)



organization	name	presentation
ITU-T Study Group 15	Ghani Abbas	Service Resiliency - ITU-T SG15 Q9 Activities
ITU-R	Amy Sanders	Broadband in Disaster Relief and in the ITU
BDT (ITU-D)	Maritza Delgado	Information and Communication Technologies in Disaster Management
BDT (ITU-D)	Maritza Delgado	Outcomes of Multi-Stake Holder Forum on the Role of Telecommunications
BDT (ITU-D)	Maritza Delgado	ICT in Disaster Management

Deliverables of FG-DR&NRR



Deliverables of FG-DR&NRR

- (1) Overviews
- (2) Definitions, terminology and classification
- (3) Use case
- (4) Gap analysis
- (5) Requirements documents for disaster relief (incl. accessibility) and network resilience and recovery

Expected output

- Develop and maintain a living list of standards bodies, forums, and consortia dealing with telecommunication/ICT aspects
- Gather relevant new ideas and identify potential study areas
- Develop use cases of services and reference models for telecommunication/ICT
- Develop and maintain terminology and taxonomy
- Carry out an analysis of communications networking requirement functions and capabilities (including QoS/QoE, security, reliability and accessibility)
- Perform a gap analysis of standards for communications networking
- Develop a roadmap to guide further developments of relevant ITU-T Recommendations

Structure of FG-DR&NRR



WG1: Use cases and disaster classification

Leadership; Mr. Takashi Egawa, (Japan)

- To liaise with other groups, in particular ITU-T study groups, to identify what is being done, and potential gaps or areas where additional work might be required.
- - Identify different types of disasters and develop use cases of services and reference models for telecommunication/ICT, considering both technical solutions and best management practices.

WG2: Requirements for network resilience and recovery

Leadership: Mr. Leo Lehmann, (Switzerland)

- To consider specific topics such as: systems and/or applications for (1) power supply in disaster situations (e.g., for mobile base station or other network equipment) and (2) design of physical network infrastructures.

WG3: Disaster relief systems

Leadership; Mr. Ramesh K. Siddhartha, (India)

- To consider specific topics such as: systems and/or applications for (1) disaster relief for individuals (to notify the damage situation from victims to their relatives, friends, and employers), (2) disaster relief guidance (to show victims the routes to evacuation shelters, home, etc.), (3) disaster notification, (4) special treatment for emergency communication (5) public protection and disaster relief (PPDR) and public safety mobile networks, and (6) aspects for persons with disabilities (accessibility) and older persons (human factors).

Example: Disaster Relief by Guidance

"Mobile evacuation tool supporting you safety"

- (1) Enabled for self positioning
- (2) Anti-disaster goods purchasable from sites
- (3) Accessible to Disaster Message Board
- (4) Still operate even if Mobile Phone radio signal is cut off and in no-connection with central server



Evacuation shelter map

Get locations displayed, targeting wide-area evacuation shelters, railroads, main roads, administrative offices, railway stations, and emergency hospitals.

Set your destination to know the direction and distance to that place.

Point your Sun Icon to the sun to determine the direction facing ahead.



Homcoming support map

Make use of downloadable map that tells you the route between two points you have specified in advance.

Get information displayed, targeting the locations of evacuation shelters, emergency hospitals, disaster designated hospitals, convenience stores, toilets, among others.

Also get information displayed, targeting dangerous/hazardous points such as a block wall.

Peace of mind service - you can still use it should major disaster cause Base Stations to suspend transmission.

Schedule of FG meeting



- ❑ 1st meeting: 25-27 June 2012, Geneva Switzerland
- ❑ 2nd meeting: 24-26 September 2012, Geneva Switzerland
- ❑ 3rd meeting: 11-13 December 2012, Host Istanbul Technical University (ITU), Istanbul Turkey
- ❑ 4th meeting: targeted February 2013, Host country TBC (Target location: Japan, tentative)
- ❑ 5th meeting: targeted April - May 2013, Host country TBC (Target location: Thailand, tentative)

Note: Host countries are expected that they experienced serious disaster, such as flood, hurricane, earthquake and tsunami. At every meeting, FG will have workshop/special session to listen to the voice of local experts on disasters.

Output Documents from 2nd meeting 09/12



- Draft document "Overview deliverables"
- Draft document "Definitions, terminology and classification"
- Template for usage assessment of telecommunication services in disasters
- Draft document "Requirement documents for disaster relief systems"

Output Documents expected for the 3rd meeting special focus on:

- Considerations on accessibility
- Detailed requirements concerning network recovery and power supply

Conclusion



- ITU-T established a new FG on disaster response, FG-DR&NRR)
- 2nd meeting was held in Geneva Switzerland, 24-26 September 2012.
- Support from groups and organizations outside ITU
- First draft output documents from 2nd meeting
- FG-DR&NRR meetings outside Geneva enables participation of local experts from countries that have experienced serious disaster, such as flood, hurricane, earthquake and tsunami, to learn and collect their experiences all over the world.

The FG-DR&NRR would not only study the standardization concerning the disaster, but also take the role of distributing effective ways of proceeding during a disaster anywhere in the world based on the experiences of several countries with a view to contributing to society.

URL FG DR&NRR: <http://www.itu.int/en/ITU-T/focusgroups/dnrnr/Pages/default.aspx>