



Use of emergency telecommunication systems in disaster management drills: the case of Philippines



Feasibility Study of Restoring Connectivity through the use of
the Movable and Deployable ICT Resource Unit (MDRU)

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An initiative resulting from collaboration of the Regional Development Council (RDC) - Information Technology Committee, the Department of Science and Technology (DOST) Region 7 and Government Organization for Information Technology (GO-IT).

Started as government project in providing Internet connection in 1997 and evolved as a registered by the Securities and Exchange Commission as a non-stock non-profit foundation on May 9, 2000 under SEC Registration No. C200000454

CVISNET envisions to support the government agency in delivering fast and efficient services to public and private sectors through ICT.

Awards & Recognitions

- ISIF Asia Awards – SEED Alliance during the 2016 Internet Governance Forum in Guadalajara, Mexico, December 2016
- United Nations – International Telecommunications Union (ITU-MCC) Award for Promotion of Transformational Power of Broadband – Connecting at the Roots, Bangkok, Thailand, December 2013
- Asia Pacific Economic Cooperation (APEC) Digital Award for the Best E-Practices, Taipei, Taiwan 2005
- Regional Development Council Resolution 41 Series 2006 – Commending CVISNET for Pursuing ICT Development in Central Visayas

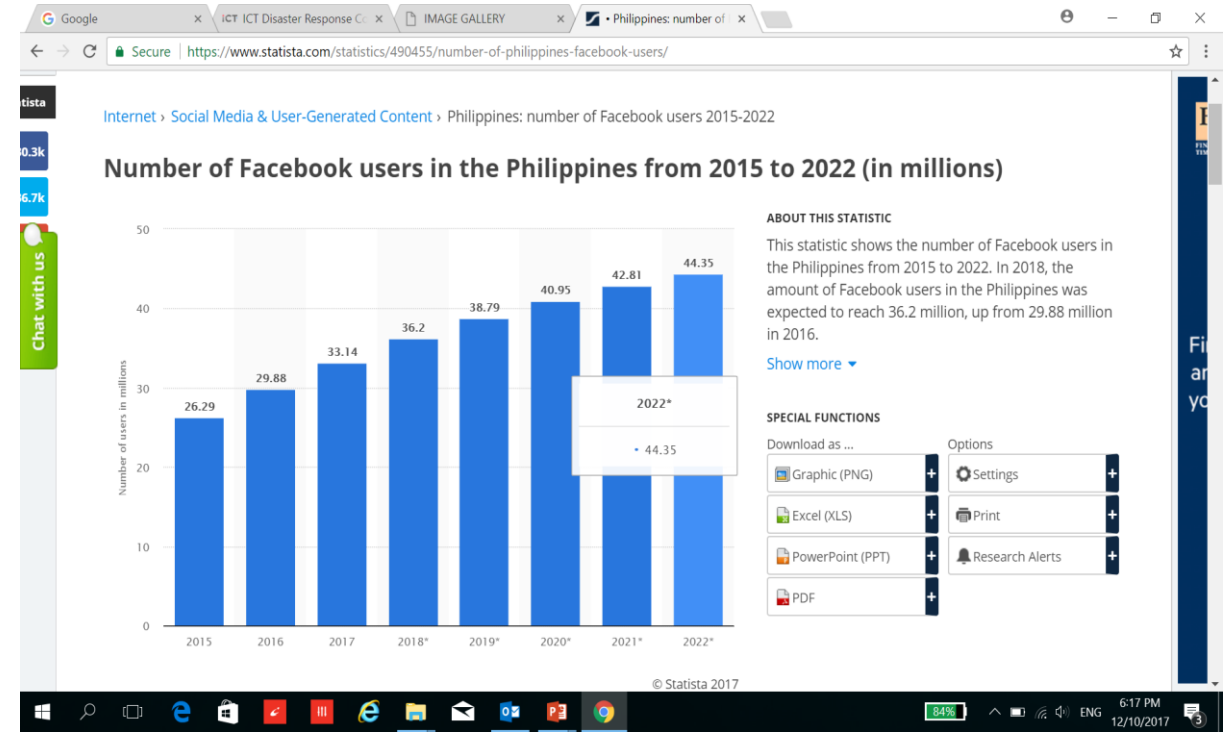
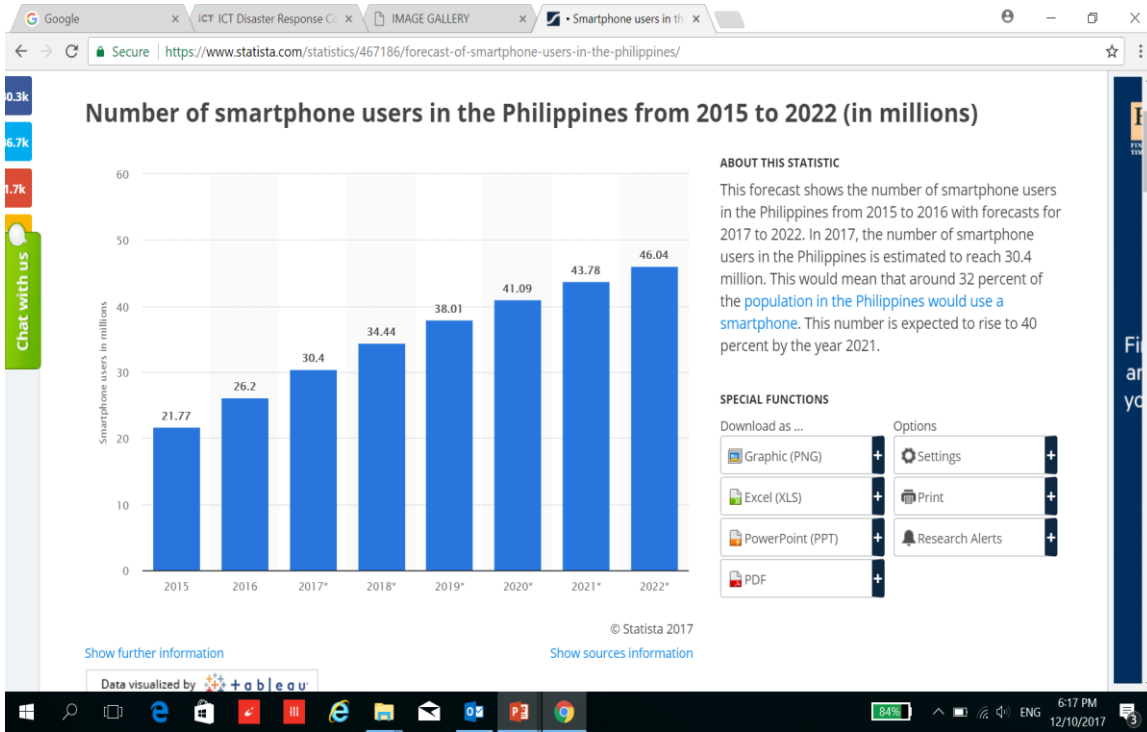


Mother Nature Calls and Communication Network Falls



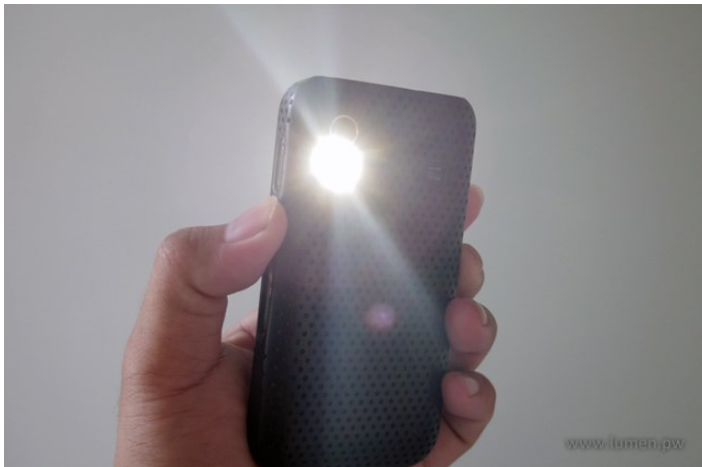
Typhoons
Earthquakes
Tsunamis
Cyclones

Digitally connected but isolated..



Disaster Time - Dark Ages for Technology

- Communication Infrastructure Damage
- Power Supply Disruption
- Computers, smartphones, tablets and ICT equipment becomes useless except for :



Flashlight



Camera

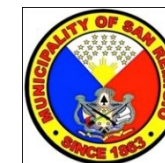


Entertainment

Movable and Deployable ICT Resource Unit

- The aim of the MDRU project is to provide and establish an immediate communications infrastructure using ICT as the method to response during disaster period.
- Mobility in ICT resources is necessary to provide both communication and information services. This is ideal when disaster and emergency occurs where the MDRU can be deployed immediately and effectively to affected areas.

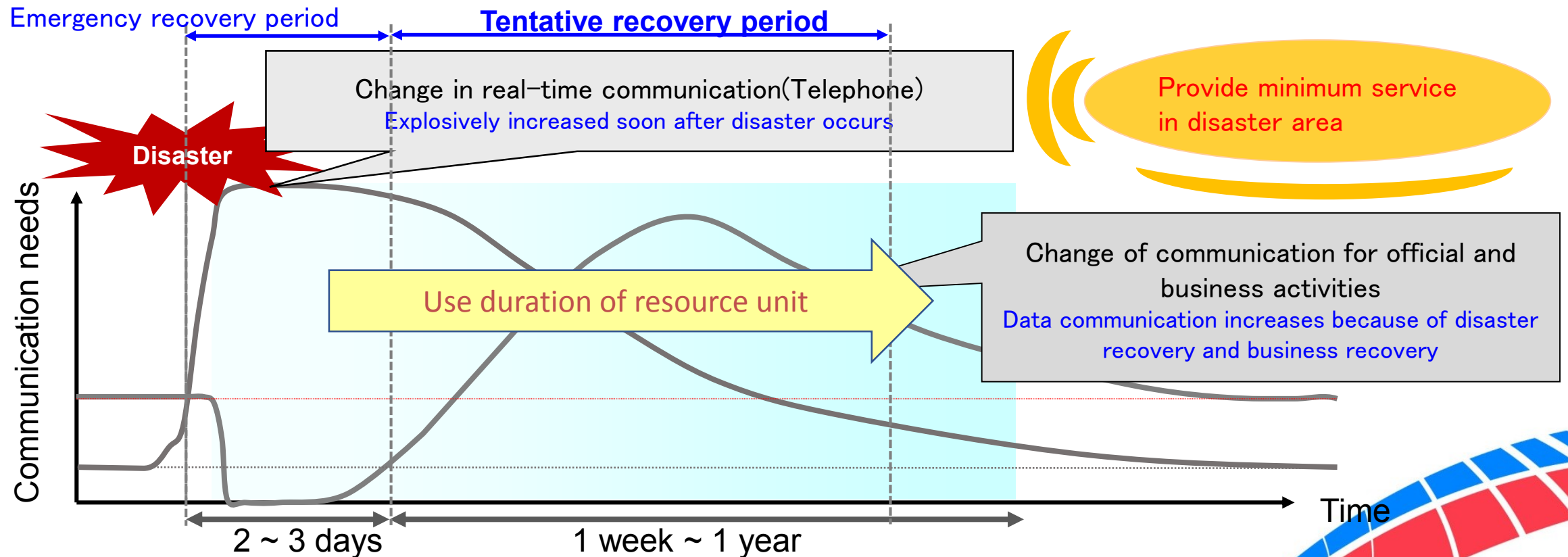
Item	Contents
Services	<ul style="list-style-type: none"> • Voice, Internet access, Virtual NW for sufferers, local governments and enterprises.
Capacity	<ul style="list-style-type: none"> • Single unit covers an area with 500m radius and 5,000 people. • 100 concurrent user connections for telephone.
Terminal	<ul style="list-style-type: none"> • Private terminals for Wi-Fi or Ethernet, such as smart phones and PCs.
Expandability	<ul style="list-style-type: none"> • Broad service area realized by using buried optical fibers or satellites for reaching broad area NW.



Application concept

●MDRU provides minimum ICT service to meet communication demand in a disconnected area soon after a disaster occurs.

- Emergency recovery period: Real time communication demand increases explosively because of need to confirm status.
- Tentative recovery period: Data communication demand increases because of information gathering by local governments and enterprises.



Main Functions

➤ MDRU can provide the basic set of ICT services, such as local area telephone call service, to meet communication demand in the disaster area soon after a disaster.

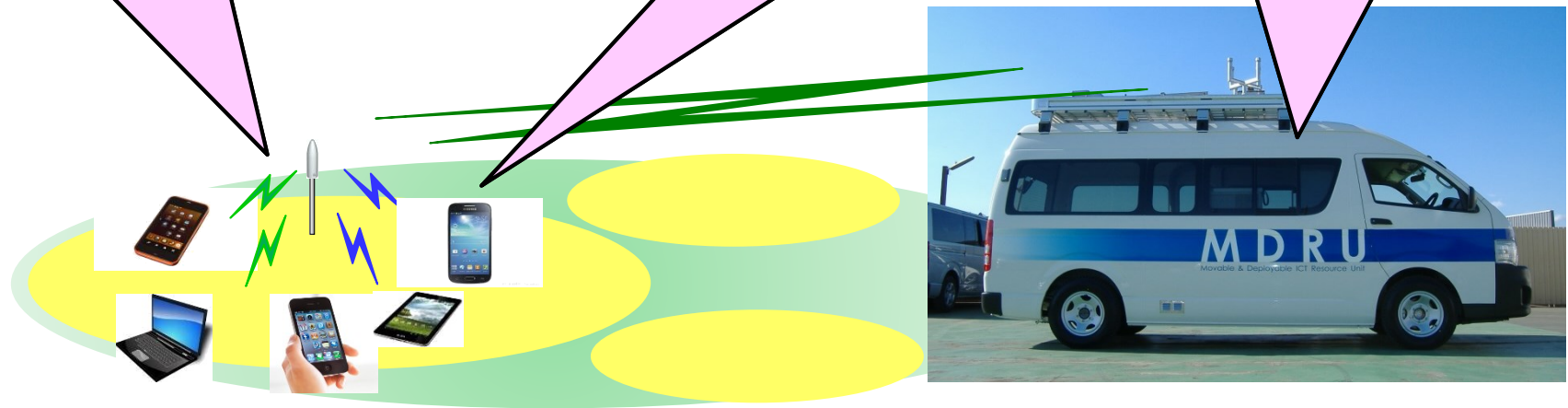
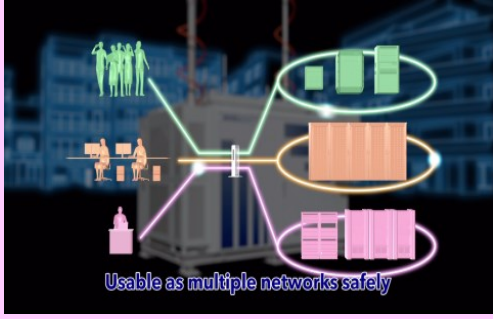
Wi-Fi wireless access networking function



Local area telephone call function



Virtual network (Slice) function



Wi-Fi wireless access network

Models and Types



Container Type



Van Type

A Modularized function of MDRU -Voice communication function -



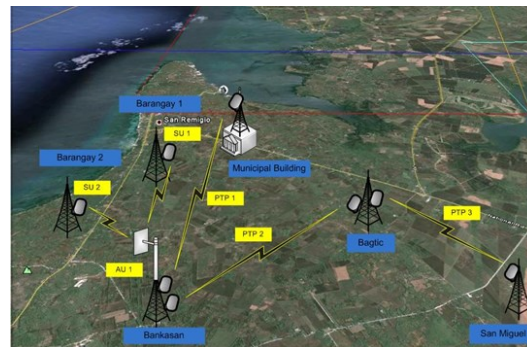
Attache Case

Feasibility Study in the Philippines as an ITU Project

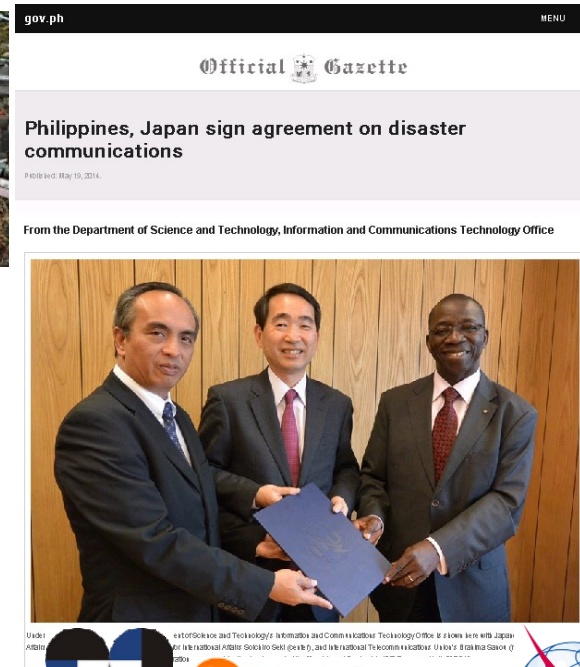
- The Philippines and Japan, along with ITU, signed a cooperation agreement for MDRU development activities on May 2014. This feasibility study was launched in December 2014 in San Remigio and continued until September 2015.
- The goal is to use MDRU to restore the connectivity damaged by typhoon Haiyan.



San Remigio Municipal damaged area

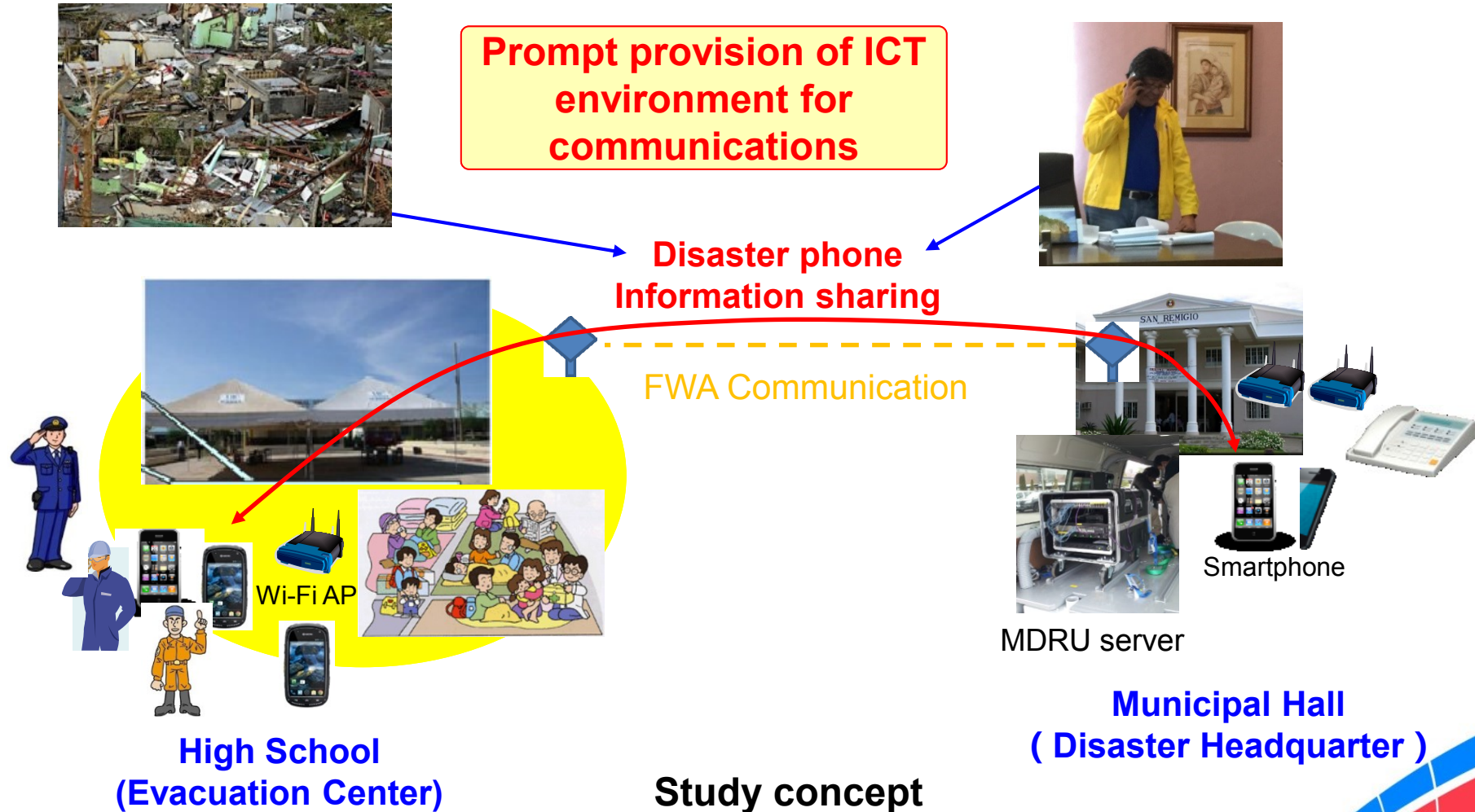


SAN REMIGIO MUNICIPAL wireless network before the typhoon. (everything was destroyed by the typhoon)



Feasibility study contents of ITU project 2014

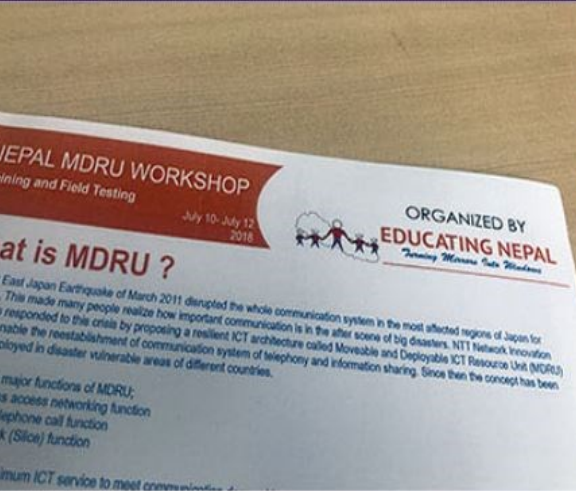
Local executives managing disaster impact and coordinate delivery of relief goods.



Study concept

MDRU Project

- Provide and establish an immediate communications infrastructure using ICT as the method to response during disaster period
- In response to experience of the Great Japan Earthquake of 2011
- Japanese R&D initiative by the government, private sector and academe
- Pilot tested in Japan, Philippines and Nepal
- ITU Recommended
- Can be utilized during disaster and normal day to day operation

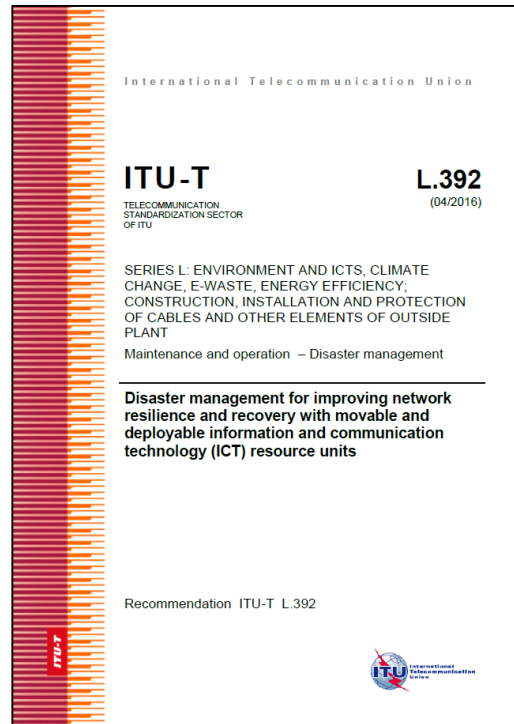


NEPAL MDRU FIELD TESTING AND TRAINING 2018

Includes regular day to day application such as Education and e-governance

Standardization Activities by ITU

- At ITU-T SG15 meeting in February 2016, ITU-T Recommendation L.392, ***Disaster management for improving network resilience and recovery with movable and deployable information and communication technology (ICT) resource units***, had been established.
- The result of Philippines project was included into ITU-D Q5/2 final report (will be published in July 2017) as ICT experiences and best practices in disaster mitigation and relief.

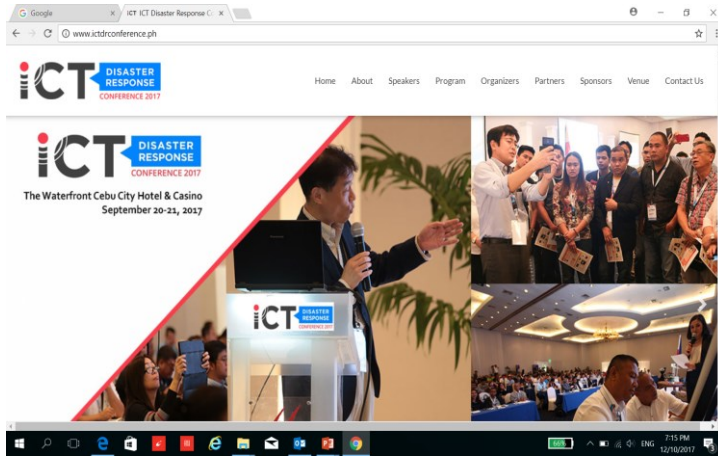


Disaster management for improving network resilience and recovery with **movable and **d**eployable information and communication technology (ICT) **r**esource **u**nits**



ICT Disaster Response Conference 2017

www.ictdrconference.ph



23 Speakers
10 International speaker
**310 Participants from Govt,
Private and NGO**



Be prepared with the technology in your hands

Thank You!