IT for Disaster Relief
an experience from Indonesia

Valens Riyadi
Introduction

Valens Riyadi

• Dept Head of NIR, Indonesia ISP Association (APJII – IDNIC)
• Volunteer, Founder of Airputih Foundation, IT Task Force for Disaster (www.airputih.or.id)
• Consultant, Certified Trainer of MikroTik
December 26, 2004
IT Task Force by APJII

- Dec 30: 2 people by local flight
- Jan 1: 4 people by Australia AF
In 1 month

- Create several wifi areas
- Re-established 2 local ISPs
- Serve 20 clients (NGO/Government)
- Established “Airputih Foundation”
Activities

- Wireless backhaul with pre-wimax technology, donation from Intel Corp (3 BTS + 50 CPE)
- Website: acehmediacenter.or.id
- Media Center at several area/cities
- Short code SMS 9731
- Community Development Program, providing IT application technical training for local society
- Early Warning System Application (EWS)
Activities
Wireless Backhaul Plan
Base Station installation at Tabina, Banda Aceh
Media Center

Media Center in Nias

Media Center in Banda Aceh

Media Center in Calang

Media Center in Jesuit Refugee Service
Community Development

*Microsoft office and Internet training in Women Development Center - Beujroh*

*Application Microsoft office training for school teachers in Calang*

*Website and computer training for Penglima Laot, Banda Aceh*

*Application Microsoft office and Internet in Nias*
• Airputih Foundation keeps doing their support for disaster relief program across the country:
  – Nias (2005)
  – Wasior (2010)
  – Padang (2009)
  – Padang & Bengkulu (2007)
  – Pangandaran (2006)
  – Mentawai (2010)
  – Bojonegoro (2006)
  – etc
October-November, 2010
Mt. Merapi Eruption 2010
Mt Merapi Eruption

- Mt Merapi 1st eruption: Oct 26 2011
  - Almost 50,000 people, 10km radius, evacuated
- Real time live report using communication radio 149.070MHz, relayed to several internet based radio streaming.
- Second eruption, Nov 4, 1am, government extend evacuated area to 20km, all refugees have to move down.
  - People in town, use social media to coordinate to fulfill the primary need of refugee
APJII

- APJII deploy 20 WIFI area at Government building, or refugee camp
- Half of the wifi area swiped by the second eruption
- APJII initiate FM radio station to speed up news distribution to local people
Radio Tanggap Merapi FM

• DGPT assign temporary allocation 100.2 FM
• This program supported by:
  – Indonesia ISP Association (APJII), APKOMINDO, KOMINFO, RRI, KPID, JRKY, personal donation
• 24 hours/day on air, live from mini studio at BNPB compound for 30 days
• Operate by 59 volunteers
  – Announcer, script writer, IT support, etc
• Live streaming at www.jogjastreamers.com
Tanggap Merapi
100.2 FM
Disaster in Indonesia

• From Indonesia National Disaster Management Agency/Badan Nasional Penanggulangan Bencana (BNPB) in 2010:
  – approximately 644 disasters
  – 1,711 people died
  – 1,398,923 people suffered and lost
  – 14,639 houses damaged

• Of 644 disaster incidents, about 81.5% or 517 incidents were hydrometeorology disaster. Meanwhile, geological disasters such as earthquakes, tsunamis and volcanic eruption occurred respectively 13 times (2%), 1 times (0.2%) and 3 times (0.5%).
Task

• Communication
  – If telephone line and cellular broken, we can deploy VOIP and make termination to telephone network
  – OpenBTS, make your own GSM network
  – Social Network – twitter, facebook, youtube

• Information Dissemination
  – To the people in disaster area
  – To the world

• Disaster Management
  – Data collection, relief supplies, missing person, humanity program, etc
Needs

• Preparation (equipment, people, service, technology, connection, application, money, etc)

• Immediate response

• Utilize local resource

• Collaboration with government, NGO, local society

• IT skills in wide range technology
Thank you!

• Comment and suggestion:

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