Mobile Cellular for Disaster Warning and Relief

By
Advanced Info Service Plc. (AIS)
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AIS Company Profile

- **1986**
  - Advanced Info Service Plc. (AIS) was established to run a computer rental business.

- **1990**
  - AIS was awarded a concession by the Telephone Organization of Thailand (TOT) to operate a nationwide 900MHz cellular network
  - Launched its first cellular service with 900 MHz analog cellular system

- **1994**
  - Launched new digital cellular service with GSM 900 MHz system

- **2000**
  - Installed base stations in all 795 districts of Thailand

- **2001**
  - Acquired Digital Phone Co., Ltd. (DPC) shares and became the operator who operate both 900MHz and 1800 MHz mobile cellular network.
Mobile Cellular in Thailand

- Mobile Penetration Rate in Thailand

Mobile Cellular in Thailand

- Mobile Cellular Market Share in Thailand

- AIS 48.40% (17.76 MSubs)
- DTAC 31.30%
- TRUE MOVE 18.40%
- OTHERS 1.90%
Mobile Cellular in Thailand

- AIS Network Coverage
  - Nationwide Network Coverage
  - ~11,000 Base Stations
Mobile Cellular for Disaster Warning and Relief

- Why do we need to discuss about mobile cellular for disaster warning and relief?
  - Large no. of mobile subscribers
  - Large network coverage area
  - Personal communication
What did we experience on our mobile cellular network during disaster?

- High no. of call congestions in the disaster area
- Loss of Mobile coverage due to loss of network elements
- Restart of switching network element due to the high usage attempted.

How to cope with these situations?
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- **Network Capacity**

- Build spared network capacities in the potential disaster area.
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- Network Design and Management strategy

1. Transmission redundancy
   - Transmission Ring network
   - Alternated Transmission Media

2. Traffic load sharing
   - Load sharing between multiple Switching Nodes

3. Node redundancy
   - N+1
Mobile Cellular for Disaster Warning and Relief

- Satellite Mobile Car
  - Fast recovery of base station coverage
  - Easy way to increase the network capacity in the spot area
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- Satellite Mobile Car
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- Disaster Alert SMS

Sending SMS to Mobile User when there is a disaster event or warning.
Thank you

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