Warning Dissemination and Public Alerting
– JMA–NHK Broadcast Case Studies –

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Japan Meteorological Agency
JMA’s Position and Japanese Laws

In Japan,
- JMA is the only authority to issue tsunami warnings
- Responsibilities of warning issuances, dissemination and later actions are provided in laws

✓ Meteorological Service Act
   Forecast and issuance of warnings by JMA

✓ Disaster Countermeasures Basic Act
   Dissemination of warnings and taking countermeasures by local governments

✓ Broadcast Act
   Broadcast of warnings
Requirements for Warning Dissemination

- To be announced quickly in multiple ways
  .... warnings must reach under any conditions ....

- To be used for disaster management
  - JMA’s Warnings and information are disseminated to central/local governments and medias
  - Local government is responsible for evacuation order

- To be as simple as possible, and to be easy to understand
  - Contents to be easily understood and consistent
  - Fixed format and encoded messages
Dissemination Flow

Dissemination Flow

JMA as the National Center

Dedicated Telephone Line

Local Governments

Fire offices, Police

Radio Stations

Central Government

TV broadcasting

Internet web sites

Residents in coastal areas at risk

Loud Speakers, Sirens, Sound Car,
and others...

On TV Screen

J Alert
Dissemination Flow

- **Satellite**
- **FDMA**
- **Prefecture**
- **Municipalities, Fire department headquarters**
- **Municipal disaster management radio communication system**
  - **Sirens**
  - **Radio**
  - **Sound car**
- **Residents**

**JMA**

**Dedicated Telephone Line**

**Disaster prevention information providing system**
Dissemination Flow

- JMA as the National Center
- Internet web sites
- Dedicated Telephone Line
- Local Governments
- Fire offices, Police
- TV broadcasting
- Radio Stations
- Central Government
- Satellite
- Loud Speakers, Sirens, Sound Car, and others...
- Residents in coastal areas at risk
- On TV Screen
- J Alert
Emergency Operation Triggered by Seismic Intensity Information

1.5min
Seismic Intensity Information

1.5min
Tsunami Warning

3min
Earthquake Information

Cabinet Secretariat
Call of an urgent gathering team
6 lower

Cabinet Office
Estimation of damages
4

Ministry of Defense
Investigation of damages
5 lower

Japan Coast Guard
Investigation of damages
5 lower

Metropolitan Police Department,
Fire and Disaster Management Agency
Investigation of damages
4

NHK a broadcasting company
Announcement by TV or Radio

EQ.
NHK’s Emergency Response

- NHK is the only designated public corporation among the press in case of a disaster by the Disaster Countermeasures Basic Act

- NHK is obliged to cooperate with prefectures, cities and others for disaster mitigation, and broadcasts warnings, situation of damage and so on in case of disaster
NHK’s Emergency Response

Issue as Urgent Breaking News

- Automatically generated scripts
  NHK has a system to convert JMA’s warnings/information into a note automatically and displays it on a newscaster’s desk in about 10 seconds

- Automatically created screen
  NHK automatically creates a screen with the followings:
  - earthquake information
  - areas where tsunami warnings are in effect and estimated tsunami heights and arrival times

- 450 cameras nationwide

- Helicopters
Automatically generated scripts

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Automatically created screen
NHK automatically creates a screen with the followings:
- earthquake information
- areas where tsunami warnings are in effect and estimated tsunami heights and arrival times

E.g. #1 When an earthquake with max. seismic intensity of 3 occurred
NHK’s Emergency Response

Automatically created screen

NHK automatically creates a screen with the followings:
- earthquake information
- areas where tsunami warnings are in effect and estimated tsunami heights and arrival times

e.g. #2 When an earthquake with maximum seismic intensity of 6L or greater occurred
NHK’s Emergency Response

Issue as Urgent Breaking News

✓ Automatically created screen
  NHK automatically creates a screen with the followings:
  - earthquake information
  - areas where tsunami warnings are in effect and estimated tsunami heights and arrival times

  e.g. #3 When tsunamis are expected/observed

NHK’s Emergency Response

Issue as Urgent Breaking News

☑️ 450 cameras nationwide

☑️ Helicopters

e.g. #4 When damage is observed
NHK’s Emergency Response

Issue as Urgent Breaking News
NHK’s Emergency Response

Issue as Urgent Breaking News

✔ Data Broadcasting

Earthquake information is automatically displayed when an earthquake occurs.

Information on earthquakes of seismic intensity 3 or greater within the past 24 hrs.

Upper: origin time, location and magnitude
Lower: detailed information of seismic intensity and locations
NHK’s Emergency Response

Issue as Urgent Breaking News

 ✓ Data Broadcasting

Upper: Information on 6 earthquakes of largest seismic intensity in the past 24 hrs.

Lower: Information on earthquakes of seismic intensity 3 or greater in the past 30 days

Tsunami information on areas to be affected as well as estimated/observed tsunami arrival times and heights

© NHK
Ratings Surge (TV)

Jul. 26, 2003
7:13 am (JST)
Magnitude: 6.4
Seismic Intensity: 6 U
Why Broadcasting?
~ Useful tool to convey vital information ~

✓ Reach Wide
  TV/Radio is in most houses

✓ Speedy
  Allow people to respond

✓ Live
  Update to the latest information

✓ Visual/Auditorial
  Easy to understand
NHK’s Preparations
~ Minimizing Damage ~

Aiming at saving as many people’s life as possible

✓ Operating Procedures
  NHK prepares operating procedures for all types of warnings/information on disasters

✓ Regular Drills
  NHK conducts drills periodically to
  - check procedures and systems
  - practice to respond quickly under a real case

✓ Coordination
  NHK coordinates with JMA and other authorities, keeping a hotline and other multiple communication lines
Thank You

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