

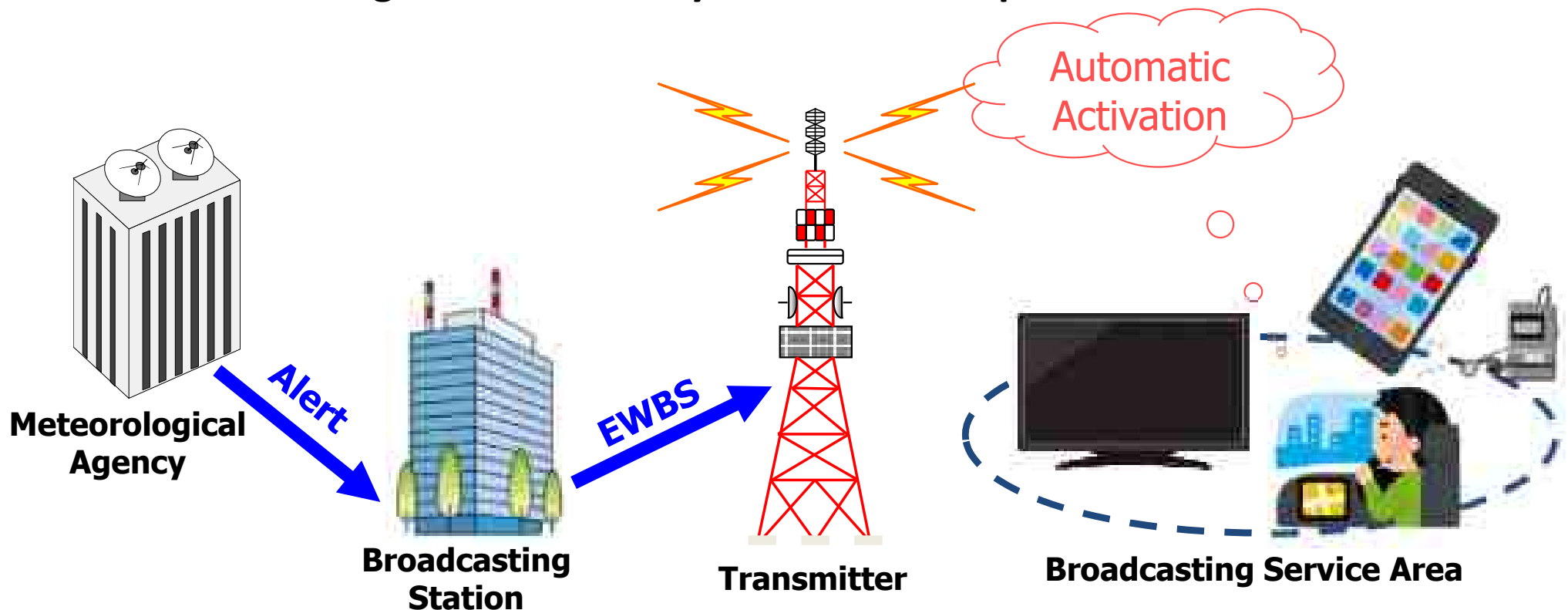
Emergency Warning Broadcast System (EWBS)

9th MAR. 2023

Engineering Administration Department
NHK (Japan Broadcasting Corporation)

What is EWBS ?

- Remote activation of Radio and TV receivers ready for EWBS
 - AM, FM Radio : Control signal and Alert Sound
 - Digital TV Broadcasting “ISDB-T” :
EWBS Control (Activation Flag)
- In Japan, EWBS has been operated since September 1985.
EWBS on ISDB-T has been operated since December 2003.
- EWBS test signals are monthly broadcast in Japan.



Operation of EWBS

In Japan, EWBS is operated under three conditions:

– The precaution declaration of the large-scale earthquake.

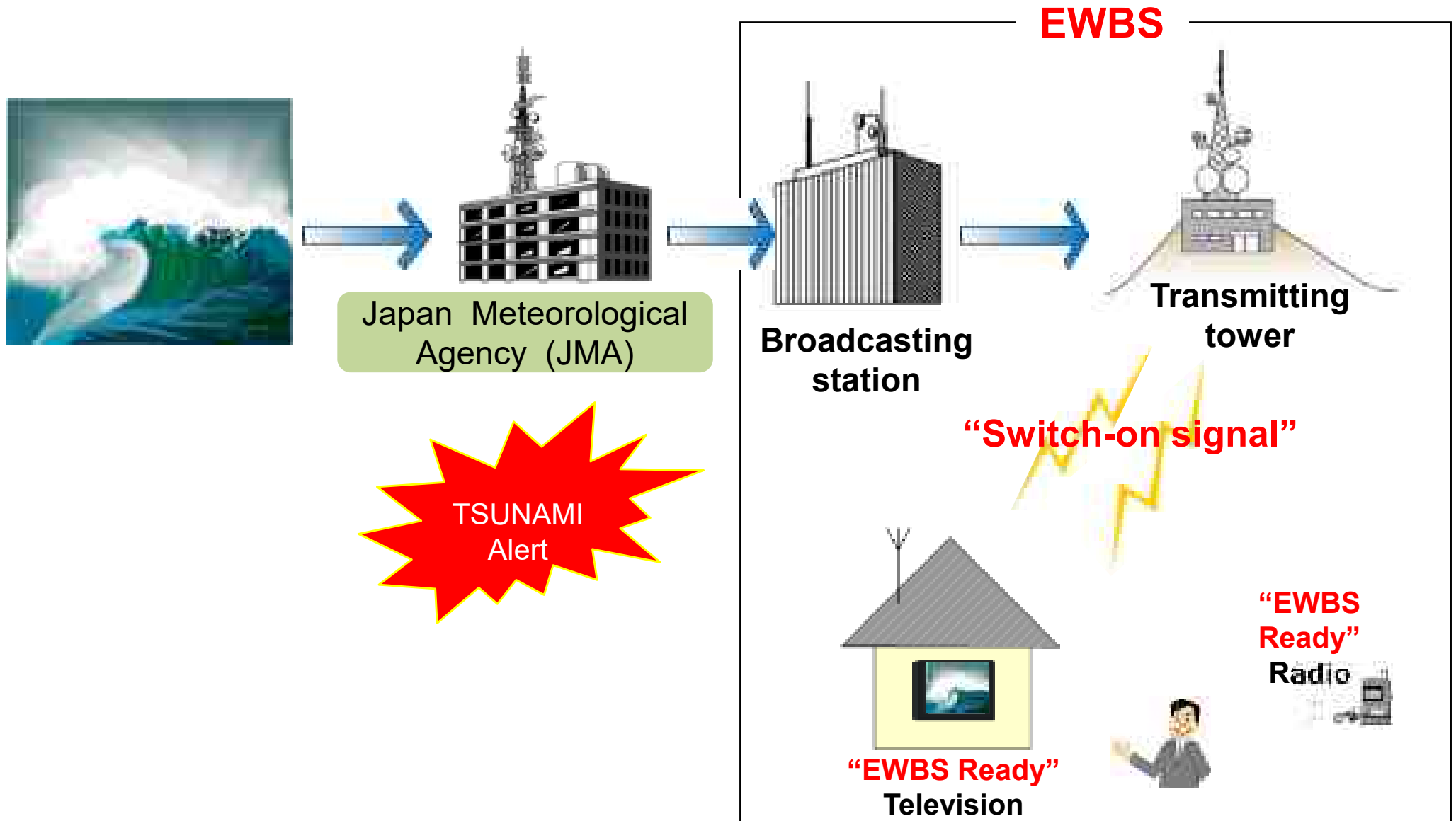
– Tsunami alert.



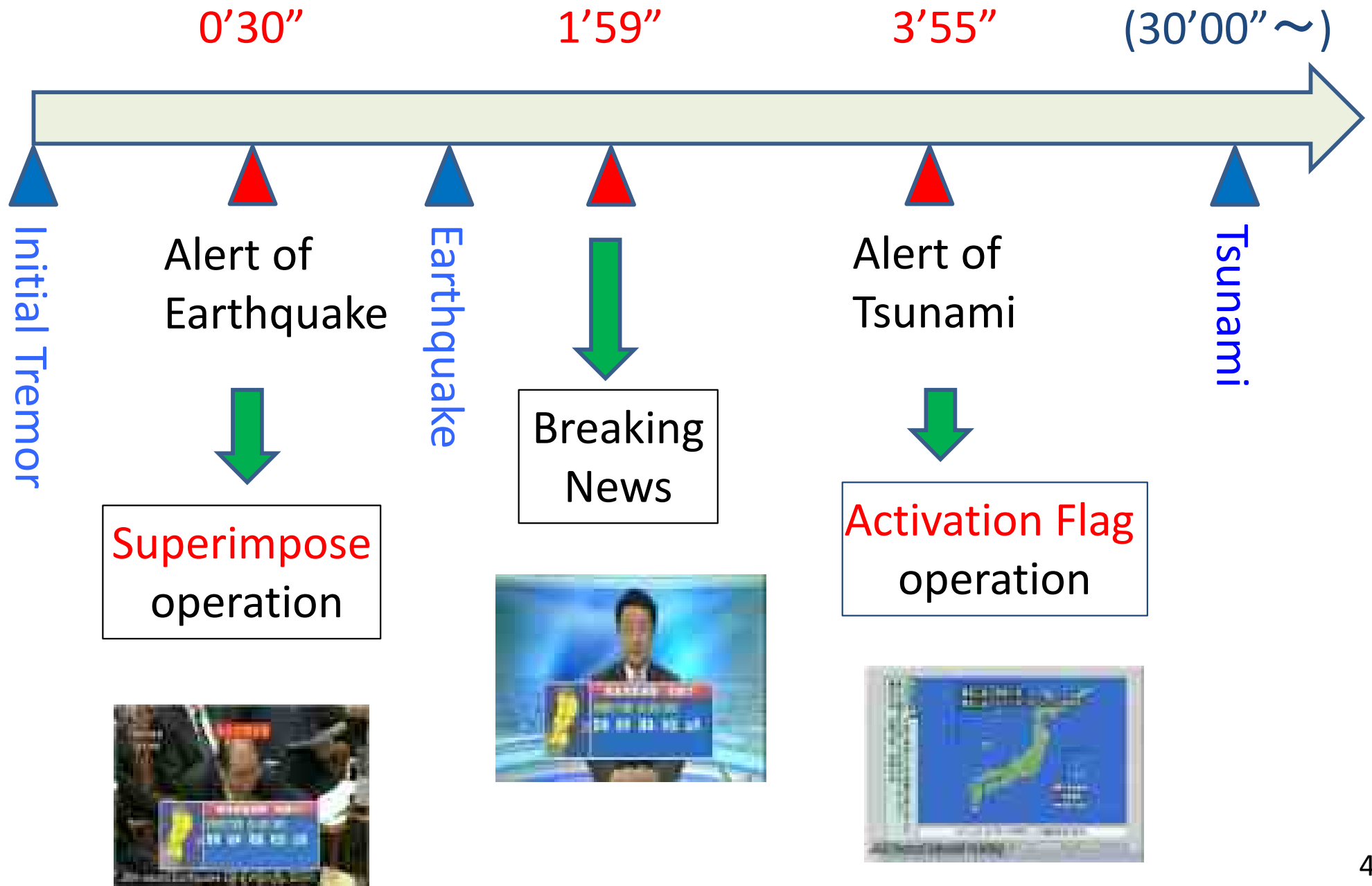
– The local governor's request for an emergency warning broadcast.



Example Flow of Emergency Warning Broadcasting System (EWBS) Operation in JAPAN



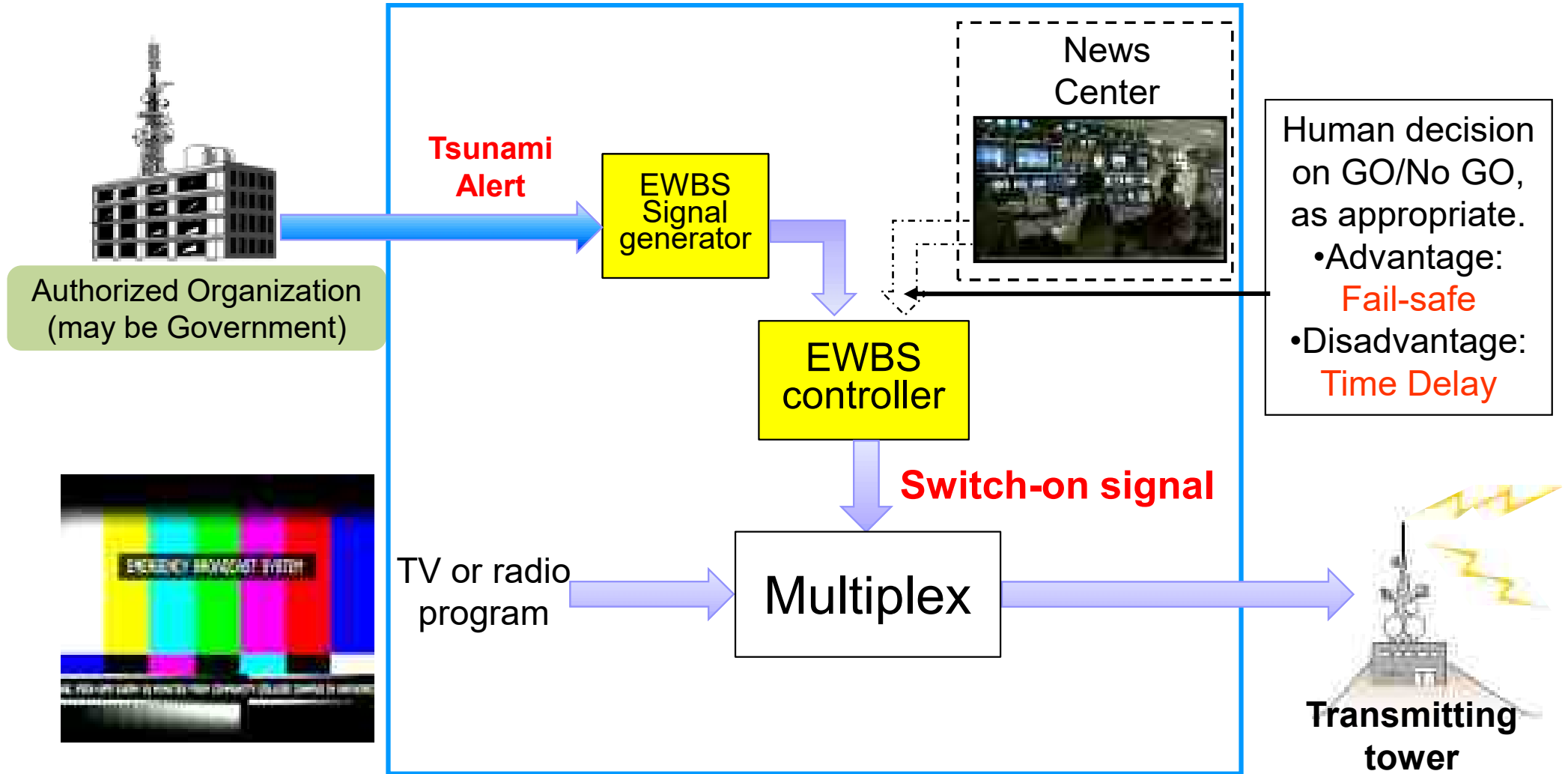
NHK's Broadcasting on 11th March, 2011



NHK's Broadcasting on 11th March, 2011



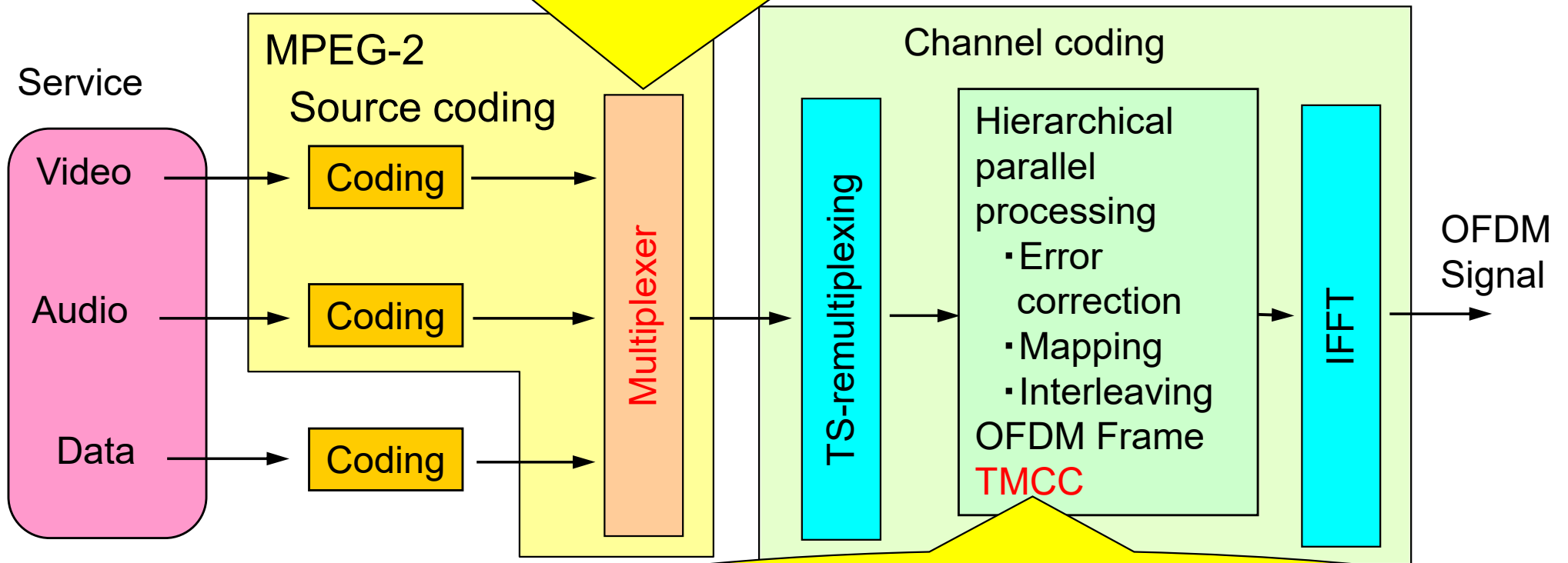
Example of Block Diagram of EWBS in Broadcasting Station



TWO EWBS signals on ISDB-T system

1. Addition of Emergency Information Descriptor (Service Information)

(Service Information)



2. Addition of Activation signal for EWB (Control Signal)

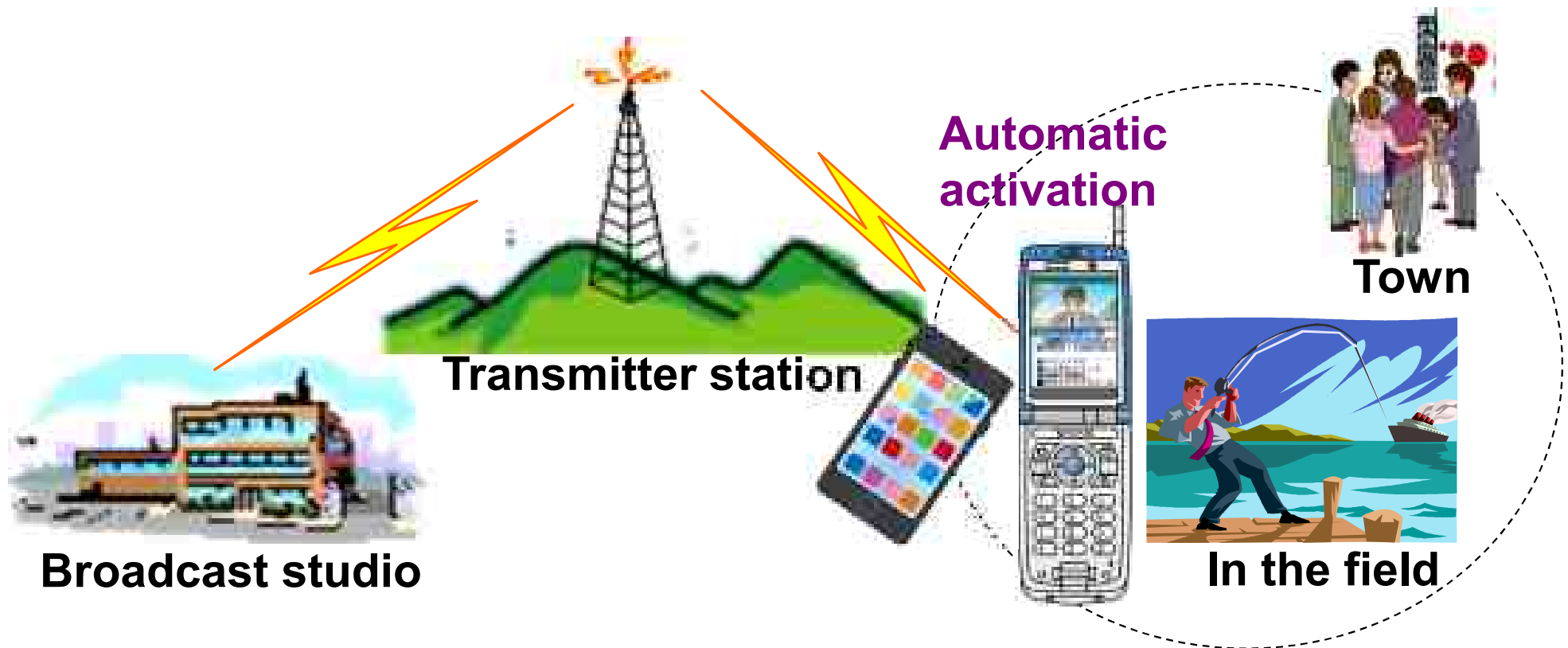
(Control Signal)

ISDB-T Transmitter block diagram

TMCC : Transmission and Multiplexing Configuration Control

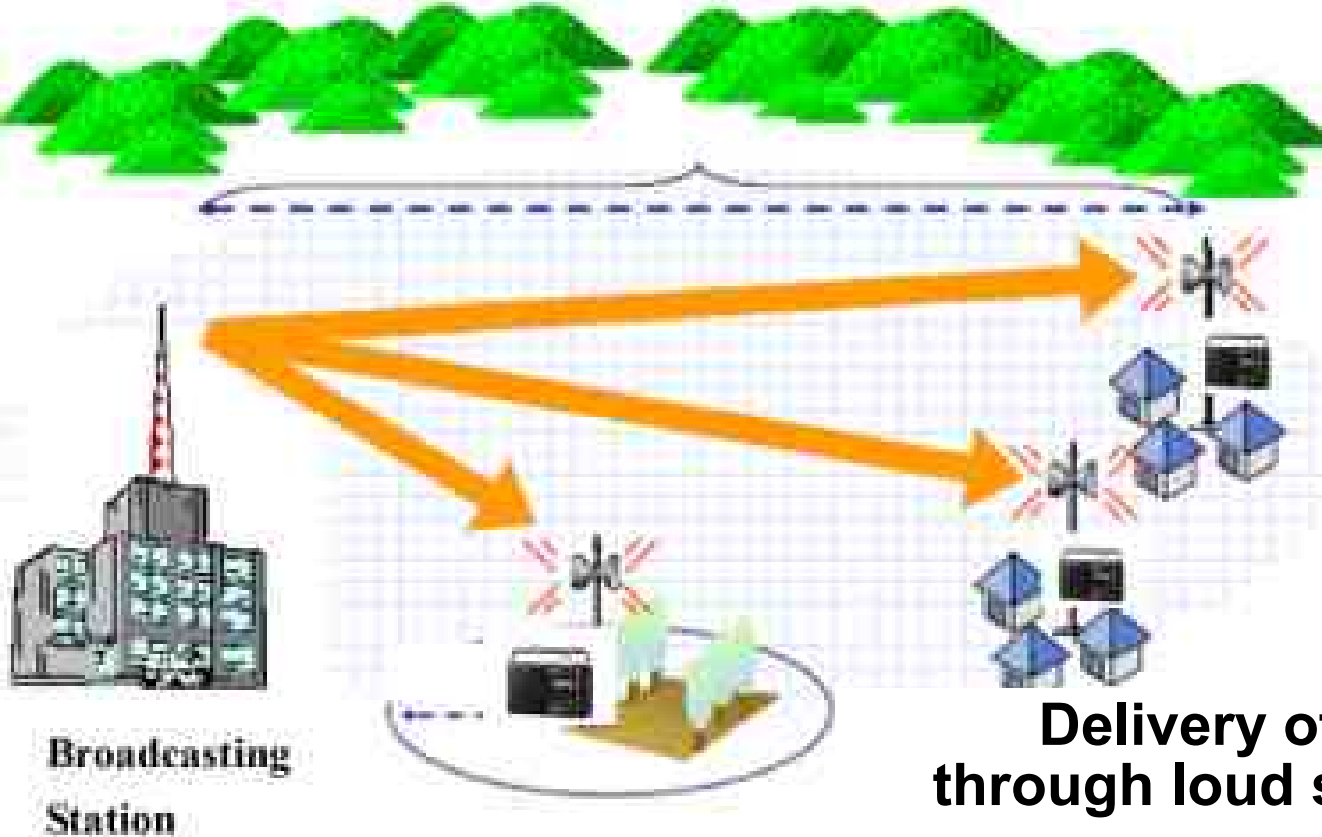
One-Seg service and EWBS

- One-Seg service commenced on 1st April, 2006
 - One-Seg service is capable of transmitting EWBS



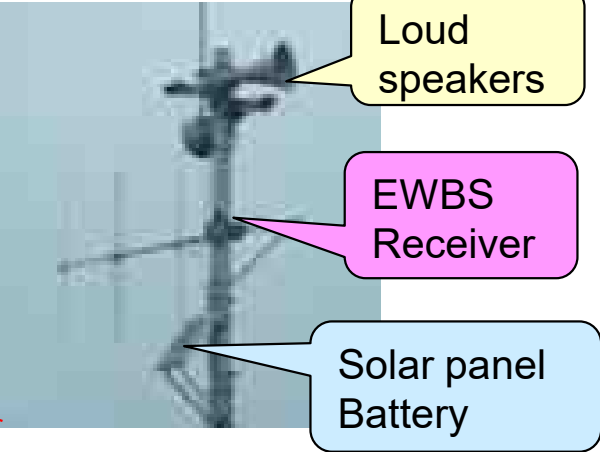
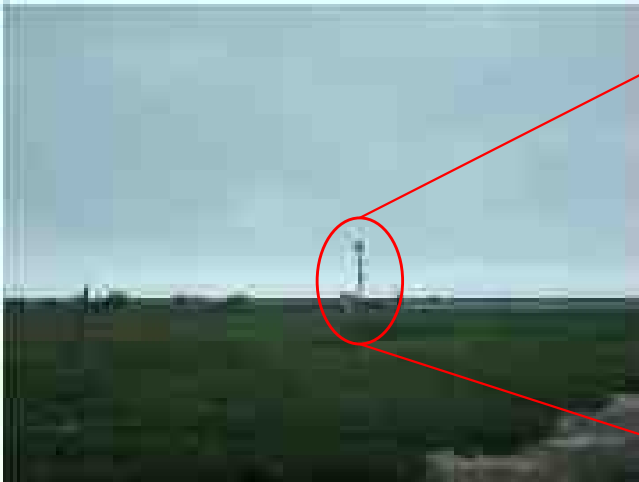
People can get disaster information quickly anywhere if cellular phones equip with One-Seg receivers capable to receive EWB

Example of Delivery of Warning using EWBS



Effectively warn to people **without receivers in the field**

Delivery of the warning through loud speakers (Image)



Thank you for your attention