

**ITU Workshop on “Making Television Accessible –  
From idea to reality” hosted and supported by Nippon Hōsō  
Kyōkai (NHK)**

**(Tokyo, Japan, 28 May 2012)**

# **Sign Language Service Issues and Standardization**

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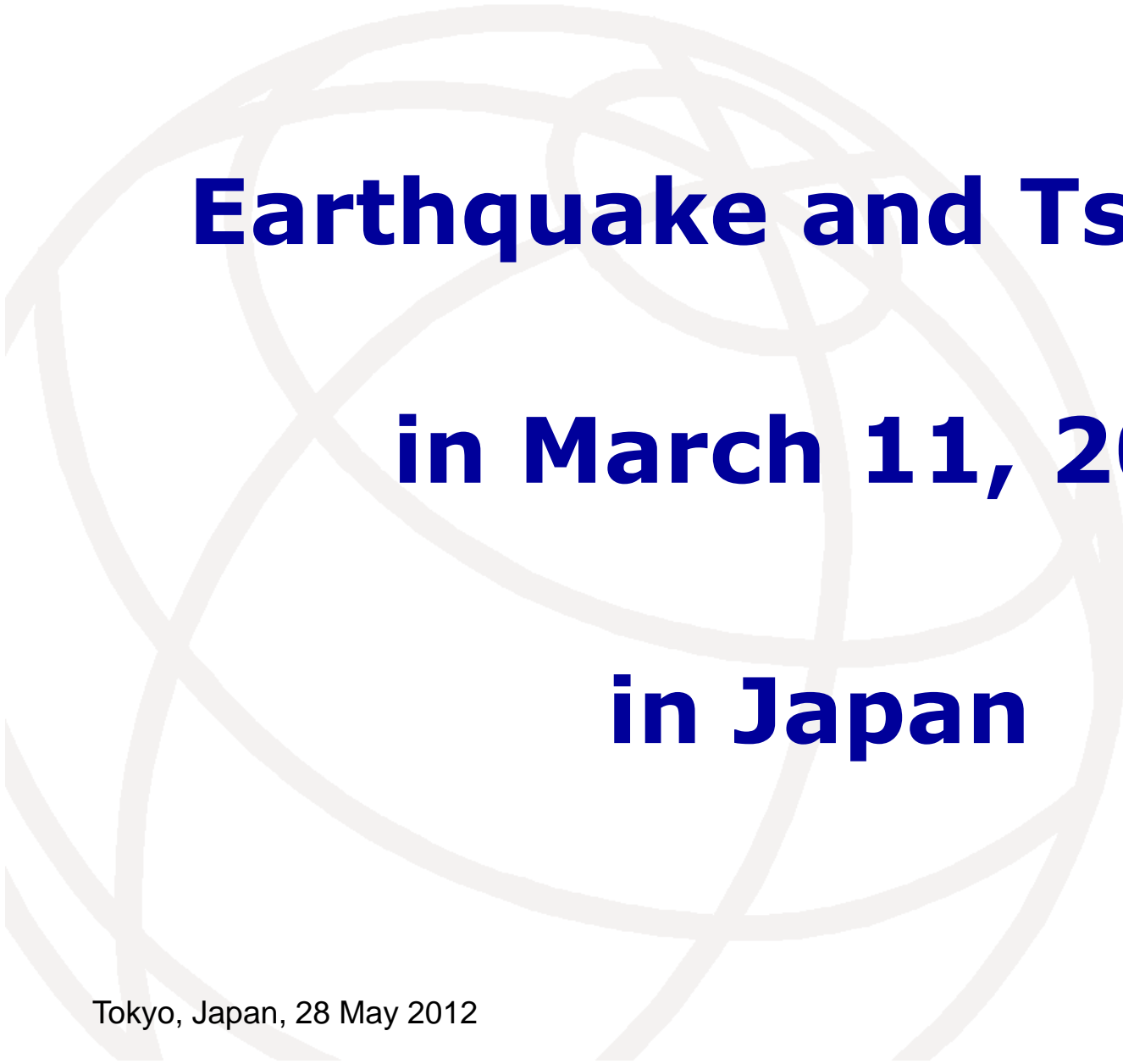
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Tokyo, Japan, 28 May 2012





**Earthquake and Tsunami**  
**in March 11, 2011**  
**in Japan**

Tokyo, Japan, 28 May 2012

# Death Rate in the East Japan Disaster

## ■ NHK report (NHK “Welfare network” Team)

	Deaths	Population	Death rate
Total (3 Prefs.)	12,853	1,244,167	1.03%
Impaired Total	1,388	67,509	2.06%
Physical	1,243	53,928	2.30%
Visual	74	3,755	1.97%
Hearing	75	3,753	2.00%

Impairments caused double death rate.

## ■ Information and movement barriers

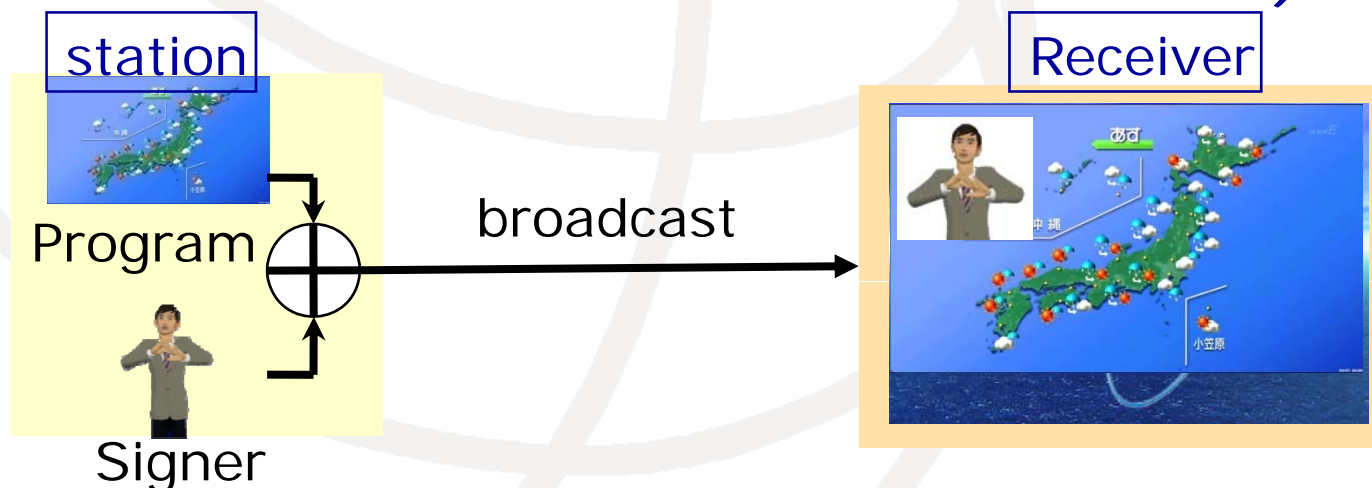
- ➔ Improving **accessibility of broadcasting** is **VITALLY important** for impaired people.

# What is Sign Language?

- Sign language (SL) is the first language for deaf people.
  - ➔ Deaf people prefer SL to captions.
- Each SL has its own grammar and vocabulary independent from the spoken languages.
  - British SL is different from American SL.
- Non-finger expression is as important as finger shape and motion.

# Current Service in Broadcasting

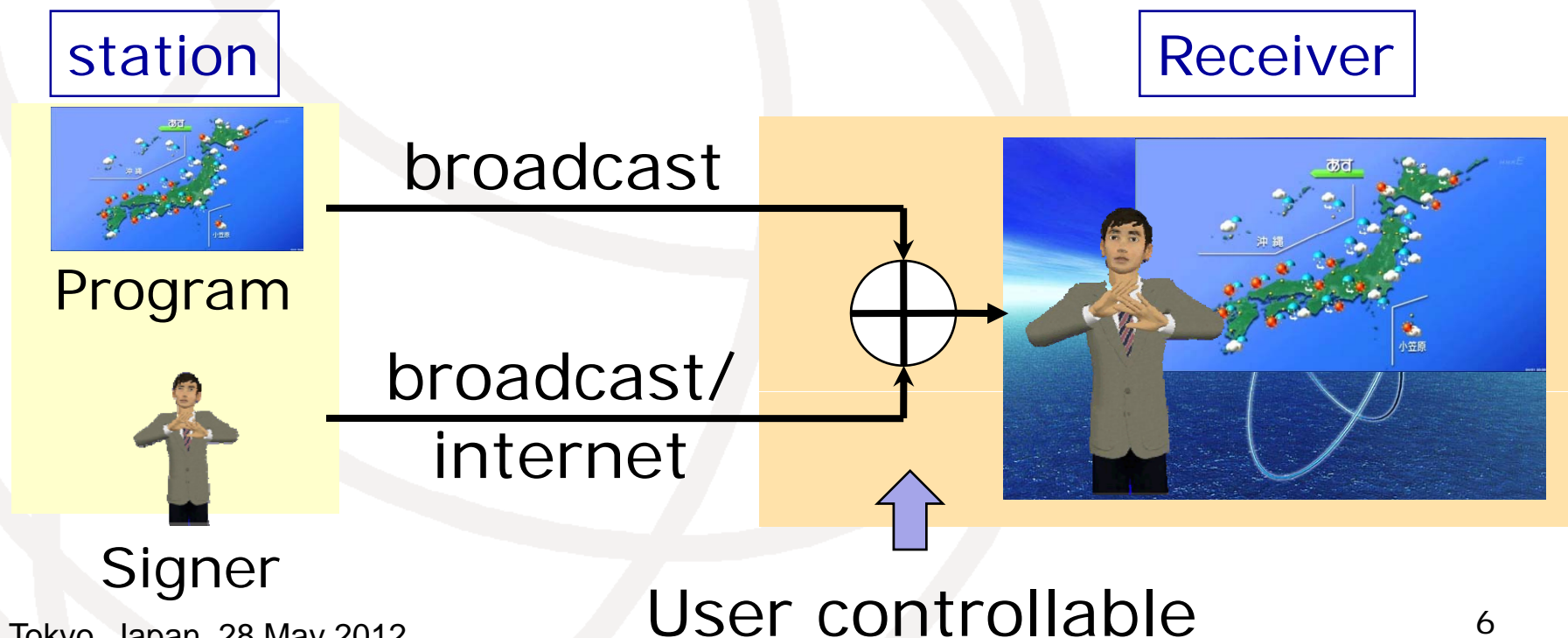
- SL programs are very few.
  - NHK : 0.1%(ch1), 2.4%(ch2) (2010)
  - BBC : 5% or more (2009/2010)
- Why?
  - Problematic (signer image is too small for users but nuisance for non-users)



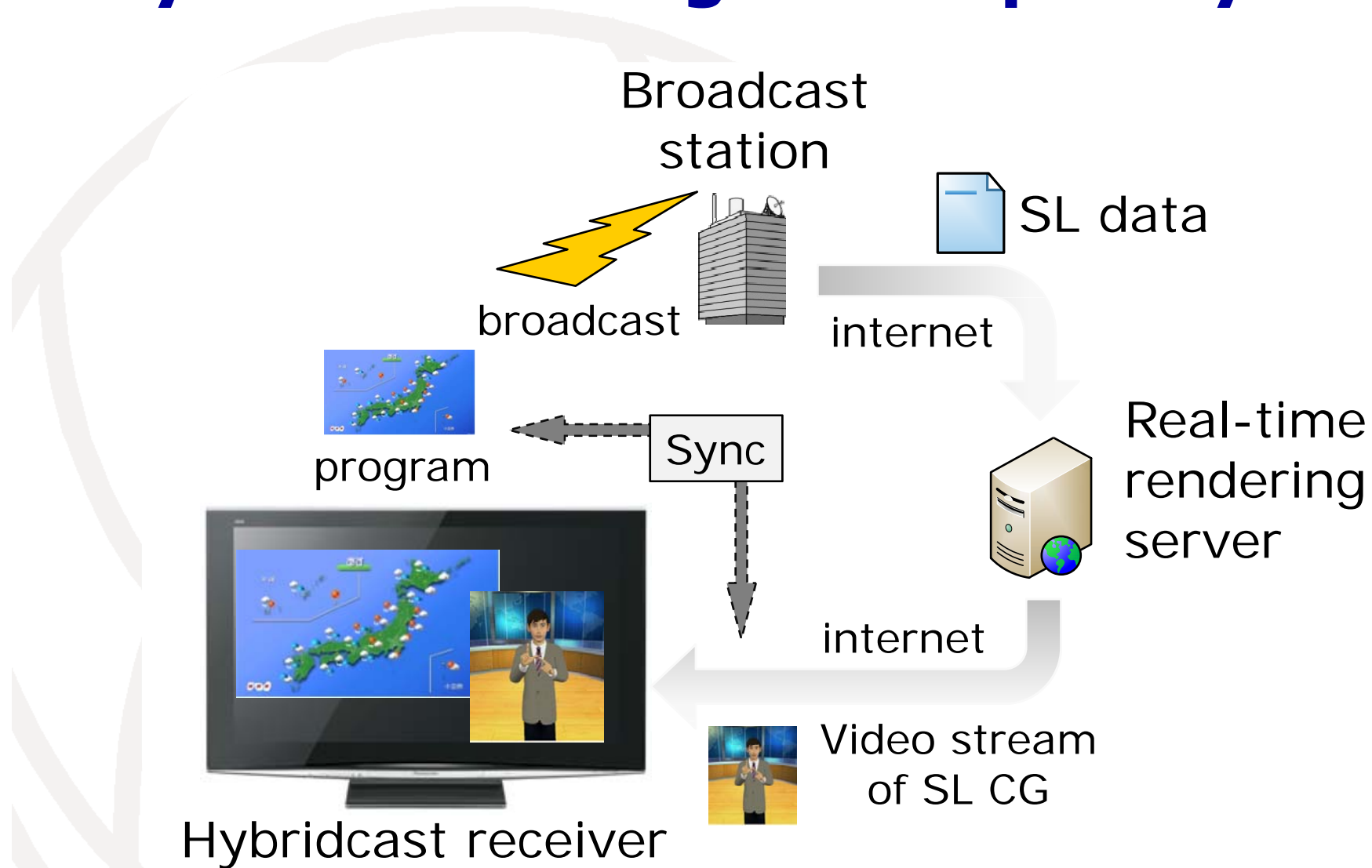
- Not enough SL interpreters

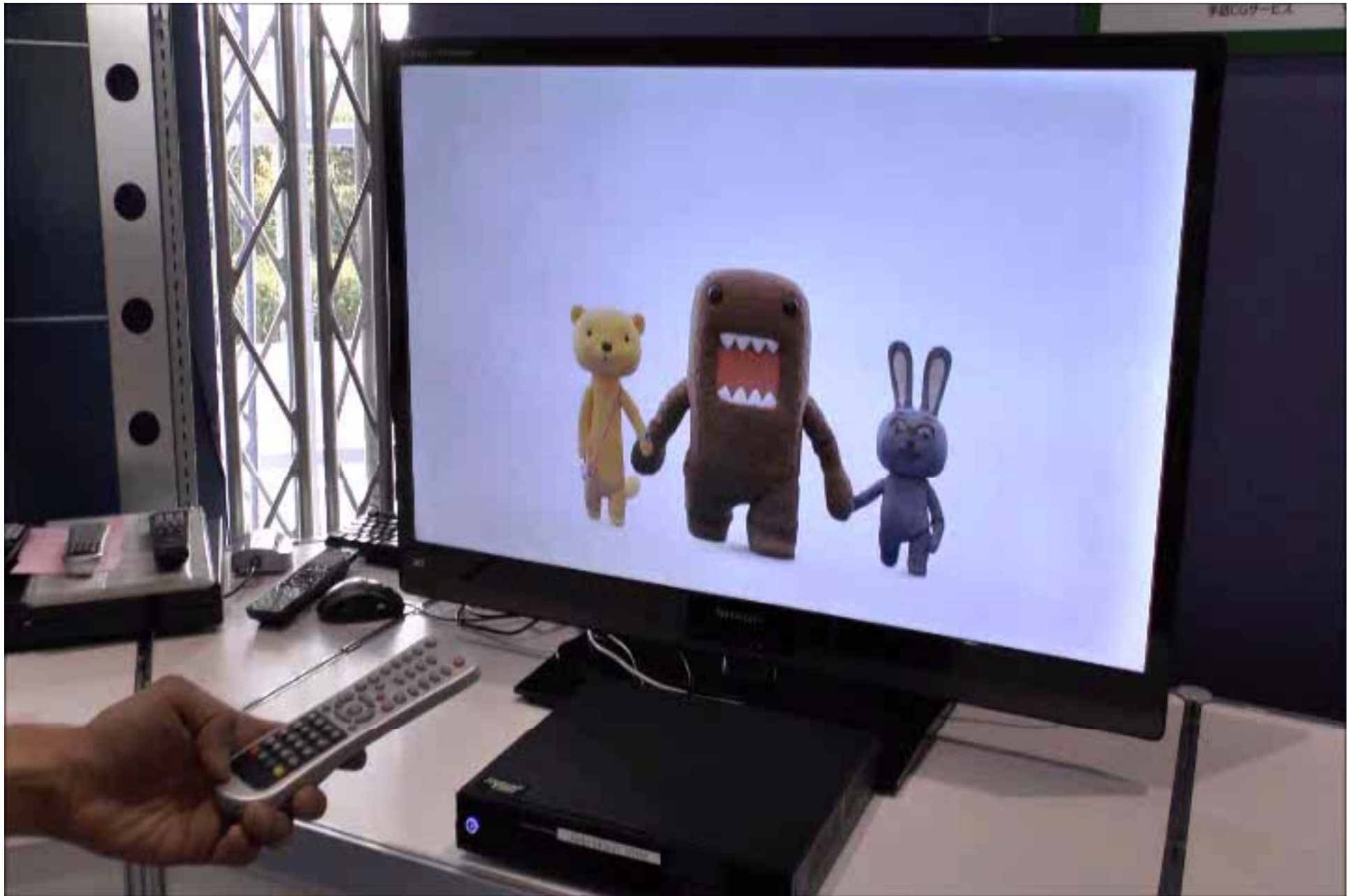
# Visions of sign language service in 2015/2020 (I)

- Closed SL service
  - ◆ Allows user to switch on/off and select superposition style/size they prefer



# Hybridcast being developed by NHK



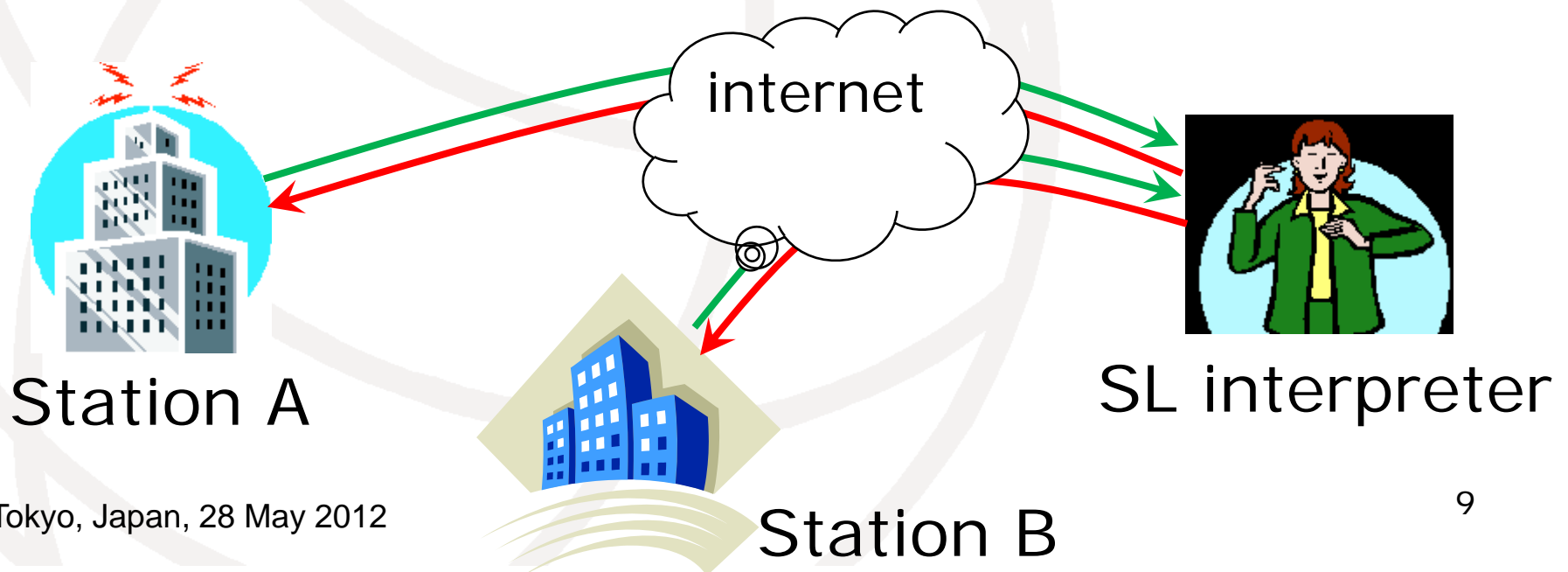


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# Visions of sign language service in 2015/2020 (II)

- Remote interpretation enables efficient production of sign language programs
  - Concentration of production resources
  - Interpreters can work efficiently (no travel)



# Visions of sign language service in 2015/2020 (III)

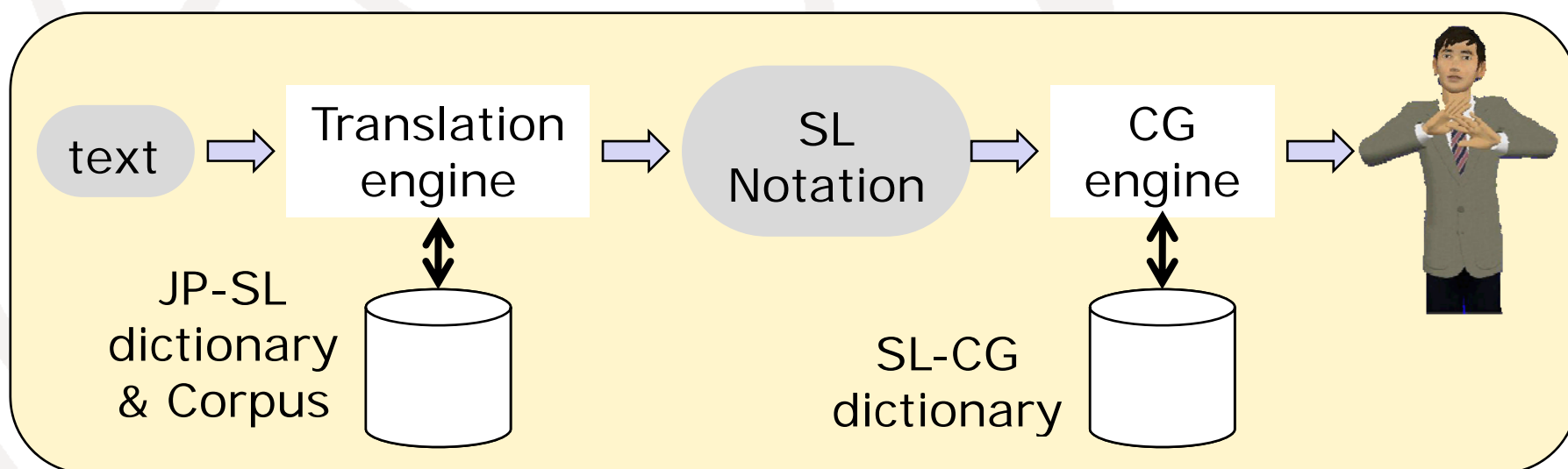
- Automatic translation from text to SL CG in limited domains
  - For emergency news (typhoon, earthquake...) and to increase SL programs
  - Issues of R&D
    - Precision of translation
    - Increase of topical domain
    - Fluency of generated CG

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# What to do to realize the vision?

- Sharing research information
  - Important for quick and effective development of new technology
  - Language independent and dependent
  - NHK, RAI/Politec. Torino, Chulalongkorn U.



# What to do to realize the vision?

- Sharing production know-how for better quality and cost-effectiveness
  1. Screen design and production rules
    - ITC GUIDELINES ON STANDARDS FOR SIGN LANGUAGE ON ... (UK)
    - Guidelines for Digital TV Equipment and Services (Ireland)
  2. Equipment and method of remote production
    - ex. Remote sign language interpretation by Richard Gatarski (Sweden)
- Portal Site of Media Accessibility

# Standardization

- Hybrid system requirements for accessibility
  - Hybrid system combining broadcasting and internet will be a powerful platform for access services.
  - Started discussion in ITU-R SG6 in 2012.
- Production Guidelines for better quality SL service
  - Develop essential requirements for production of SL service

# Conclusions and Recommendations

- Improving accessibility saves lives
- Currently sign language services are few
- Vision
  - better production, better transmission, and better technologies
- What to do?
  - Standardization activities partly started such as hybrid systems
  - Information sharing systems for effective production and effective R&D are also recommended