

# Review of Emergency Alert System for Foreigner

Bongseok Kim\*, Goanyup Lee, Jongsoo Kim, Hyun Ki Kim, Seungyeon Baek, Kanghyeon Lee, and Hae-Cho Lee  
Korea Atomic Energy Research Institute, 111, Daedeok-daero 989beon-gil, Yuseong-gu, Daejeon, Republic of Korea  
\*kbs@kaeri.re.kr

## 1. Introduction

If an emergency situation occurs in KAERI, the emergency information will be broadcast only in Korean. However, foreigners who are work or research in KAERI is about 100. And they could not understand Korean well. What would happen to these people in real emergency situation without emergency broadcast for them? They could not get adequate information in adequate time. Which means that it can cause casualties.

The purpose of emergency preparedness is to save the lives. Thus, emergency information should be broadcast in adequate language for everyone.

## 2. Case study

### 2.1 Tsunami warning in Japan

In Japan, when a tsunami occurs, tsunami warning is broadcast on TV. Tsunami warning initially appears as subtitle in Japanese with a map. After subtitle, the full screen alarm starts with specific information of tsunami in Japanese. After then, tsunami warning broadcast in other languages, which are English, Korean, Chinese and Portuguese.



Fig. 1. Tsunami warning screen.

### 2.2 Multilingual App in Japan

Docomo, which is mobile service provider in Japan, develops prototype multilingual app for disaster warning. This app notify information of disaster in English, Chinese, Korean, Spanish and Portuguese.

The disaster warning service, which is called ‘Area Mail’, distributed disaster warnings issued by the Japan Meteorological Agency, and also local disaster and evacuation information issued by national and regional public institution. However, these disaster information is provided only in Japanese.

The new app provide disaster information from ‘Area Mail’ in the preset language. Thus, people who don’t understand Japanese could receive the disaster information in time.



Fig. 2. Example of information in multilingual app.

### 2.3 Phone interpreters in Japan

Japan will host the Olympics in 2020. Thus, Japanese government plan to develop a new helping

foreigners who need emergency assistance. Currently, there is language barrier between tourists and fire department in Japan. The new support system, which is planned to develop, could mediate phone conversation between tourists and fire department.

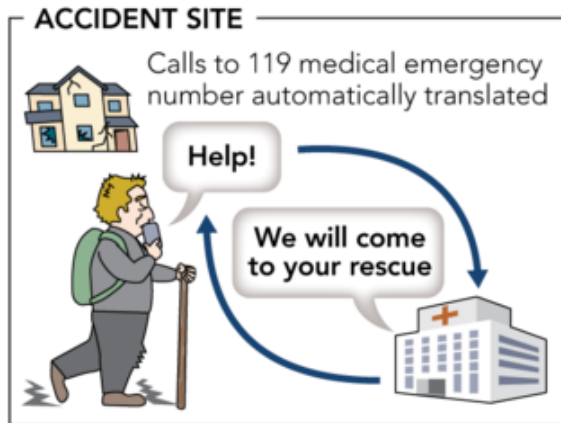


Fig. 3. Example of phone interpreters.

#### 2.4 Fire Alarm of Hotel and Airport

In general, there is many foreigner in hotels and airport. If an emergency situation occurs in these places, the alarm should be broadcast in multiple languages. The most hotels and airports have multilingual emergency broadcast systems. It could be helpful for foreigners.

#### 2.5 Multilingual disaster alert app in Korea



Fig. 4. Emergency Ready app screen.

Korea hosted the PyeongChang Olympics in 2018. Thus, Korean government launched ‘Emergency Ready’ app. The real-time disaster information such as storms and earthquakes, could be sent in English and Chinese through this app. This app bolster emergency support for foreigners.

### 3. Application in KAERI

In KAERI, emergency alarm broadcast through a speaker which is installed in all buildings in KAERI. All foreigners in KAERI could understand English. Therefore, if emergency alarm broadcast in English, emergency information could reach out all foreigners in KAERI. Thus, the emergency alarm system is added to English broadcast which follows Korean broadcasting.

### 4. Conclusion

The adequate emergency information spread is essential to save the lives. Thus, emergency information should be understandable for everyone regardless of the language used by receiver. Therefore, Emergency alarm system should be developed in multiple languages.

### REFERENCES

- [1] Nuclear emergency preparedness team, KAERI, “EPIP-2.2 Emergency Warning, Instruction and Call of Emergency Worker” (2017).
- [2] “Japan bolstering emergency support system for foreigners”. Nikkei Asian Review, Mar 02, 2017.
- [3] “Docomo develops prototype multilingual App for disaster warning”. NTT Docomo, Mar 10, 2015.
- [4] Kim Min-joo. “Korea developing multilingual disaster alert system for foreigners”. The Korea Herald, Nov 20, 2017.