

# **TEMPLATE SYSTEM FOR TRANSLATING DISASTER INFORMATION INTO EIGHT DIFFERENT LANGUAGES**

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It is highly required to inform people who do not understand Japanese language with the needed information as soon as possible in case natural disasters occur in Japan. We amassed the disaster information that will be issued by mass media at the time of natural disasters, including the information especially for foreign people, and made a list of more than 500 short sentences covering information needed right after the disaster to life afterwards. We have developed a template system for translating the Japanese sentences into multiple languages, including English, Spanish, Tagalog, Portuguese, Chinese, Taiwanese, Korean and Indonesian so foreign people could get the necessary information at the same time as Japanese people do.

## **INTRODUCTION**

### **Foreign People in Japan**

The number of people from other countries coming to Japan is increasing year by year. Among them, it is the number of foreign residents rather than short-term visitors such as tourists that are increasing the most. The number of registered foreigners in Japan is 1,851,758 (as of the end of Dec., 2003). This number accounts for 1.5% of the total population of Japan (126,008,000 as of Jan. 1, 2003), and includes people from over 180 countries.

### **The Situation of Foreign People at the Time of Hanshin-Awaji Earthquake in 1995**

During and in the aftermath of the Hanshin-Awaji Earthquake, which took place on January 17, 1995, the death toll reached 6433 people (as of Jan. 14, 2003, including 910 people who died afterward because of the earthquake).

Following the Hanshin-Awaji Earthquake, people at a disadvantage in times of disaster such as the elderly, infants, handicapped, or travelers suffered more damage. They received very little necessary information and were placed in a hard situation. Foreign people who could not understand information in Japanese were also in a weak position.

It will be essential to prepare for natural disasters in terms of disaster protection and a system to distribute information from the point of view of risk control.

### **SYSTEM FOR DISTRIBUTING DISASTER INFORMATION TO FOREIGN PEOPLE UTILIZING THE TEMPLATE**

To clear the language barrier in case of natural disasters, we, the members of the project, “Establishing a System for Distributing Disaster Information to Foreign People Utilizing the Template Translation System,” have developed a system for translating disaster information into eight languages—English, Spanish, Tagalog, Portuguese, Chinese, Taiwanese, Korean and English and Indonesian.

We researched and amassed the information that was issued by mass media at the time of Hanshin-Awaji Earthquake, including the information especially for foreign residents, and made a list of more than 350 short sentences covering information needed right after the disaster to life afterwards. Then we added 164 sentences about flood disaster.

We divided the information into two big categories: Earthquake Information and Flood Disaster Information. We then divided the earthquake information into categories such as warning information, earthquake information; information on persons; foreign nationals; relief information; government information; living information; damage situation; evacuation guidance; lifelines (electricity, water, gas); and traffic information. The system was completed this March.

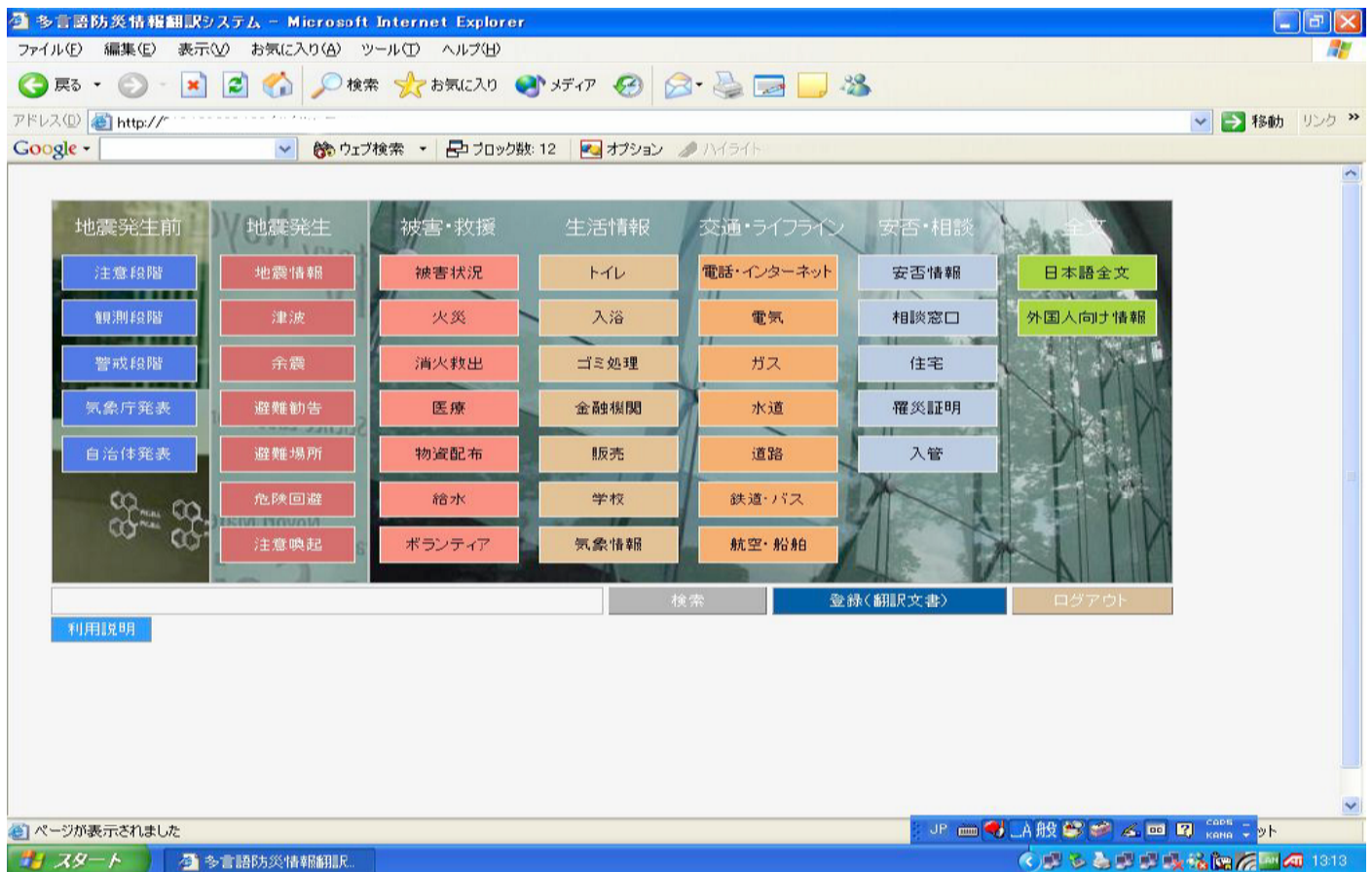


Figure 1. The First Picture of the Template Translation System for Earthquake Information

## The Example Sentences in English in Each Category for Earthquake Information

### 1) Warning Information

Announcement of the Meteorological Agency Seismology and Volcanology Department at [24-h clock time (1)] on [# (date)] (January, February, ..., December)

Caution is needed with regard to the occurrence of the Tokai Earthquake in regions targeted for enhanced earthquake preparations and neighboring areas.

The Meteorological Agency continues to closely monitor trends in observational data, including data from other observation stations.

This is information to keep you updated.

### 2) Earthquake Information

A short time ago there was a strong earthquake at [location 1].

Intensity 4: Many people are frightened. Some people try to escape from danger. Most sleeping people awake.

Intensity 7: Thrown by the shaking and impossible to move at will..

Tsunami (tidal waves) of more than [1]m are expected; take strict precautions.

Precautions are necessary for further aftershocks at location [location 1].

### 3) Damage Situation and Relief Information

There is a strong danger of secondary fires at [location 1]; evacuate immediately.

Fire may spread to [location 1]. Evacuate immediately.

Evacuation is advised for [location 1].

Rescue activities are being conducted at [24-h clock time (1)] in [location 1].

Fire-fighting activities are being conducted at [24-h clock time (1)] in [location 1].

Building ( ) at location [location 1] has collapsed.

Heavy damage has occurred in the following areas, with more than [1]% of buildings collapsed.

#### 4) Living Information

Temporary public toilets have been set up at the following locations:

Baths are available at [location 1].in town [location 2].

Shop ( ) at [location 1].in [location 2] is scheduled to reopen on [# (date)] (January, February, ..., December).

Item ( ) is being sold at shop ( ) at [location 1] in town [location 2].

#### 5) Traffic Information and Lifelines

Water is supplied from [24-h clock time (1)] to [24-h clock time (2)] at [location 1].in [location 2].

Water is supplied by water truck at the following locations.

Telephone lines are out of service at [location 1].

Put rubble and debris at [location 1].in [location 2].

Collection of burnable trash will begin on [# (date)] (January, February, ..., December).

#### 6) Information on Persons

Safety information on persons living in town [location 1] will be broadcast on channel ( ) at [24-h clock time (1)].

Deaths in [location 1] are as follows.

The following people are being treated at hospital ( ).

Safety information on people is available on the Internet at <http://www.xxx.com>

Emergency patients have been taken to hospital ( ).

#### 7) Foreign Nationals

There will be a meeting to explain temporary housing for

foreigners at [24-h clock time (1)] on [# (date)] (January, February, ..., December) at [location 1].

Earthquake information for foreigners is broadcast daily at ( ) on channel ( ) at ( ) MHz

Public information in English is distributed free of charge at the following location(s).

#### How to Use the Template Translation System

Push a category button and choose one sentence from among the listed ones. Type the name of a place in Roman letters or the number in the bracket. Push the Translation button. The sentence will automatically be translated into the language required. Repeat this procedure to have necessary sentences translated. It is possible to eliminate unnecessary sentences and change the order of the sentences afterward. Either to show the sentences in one language or any number of languages is possible. Change the format to html and upload it to FTP server or disks if necessary. The translated information will be available on an internet website, by e-mail or fax, as well as by other means.

#### CONCLUSION

At a time of Hanshin-Awaji Earthquake, foreign people in the area who could not understand information in Japanese were placed in a hard situation. It is predicated that a bigger earthquake than Hanshin-Awaji Earthquake will hit Central Japan Area.

番号	操作	日本語
353	<input type="button" value="編集"/> <input type="checkbox"/> 登録	混乱を起こさないよう、落ち着いて行動して下さい。 [月1][日1][24時間表記(1)]に東海地震の判定会が招集されました。
334	<input type="button" value="翻訳"/> <input type="button" value="取消"/>	月1:[9月] 日1:[18] 24時間表記(1):[14:00]
335	<input type="button" value="編集"/> <input type="checkbox"/> 登録	判定会は、東海地方の地震観測データに異常が現れ、これが直接大地震に結びつくかどうかを専門家により判定するものです。

Figure 2. Japanese sentences on a web browser. Put the date and time in the windows.

番号	操作	日本語
353	<input type="button" value="編集"/> <input type="checkbox"/> 登録	混乱を起こさないよう、落ち着いて行動して下さい。 [日本語]: 9月1日14:00に東海地震の判定会が招集されました。 [英語]: A screening committee meeting for the Tokai Earthquake was convened at 14:00 on 1 September. [韓国語]: 9월1일 14:00시에 도오카이지진 판정회가 소집되었습니다. [中国語]: 9月1日14:00召开东海地震的判定会。 [ポルトガル語]: Foi convocada a Comissão de Análise do Terremoto de Tokai, às 14:00 horas do dia 1 de Setembro.
335	<input type="button" value="編集"/> <input type="checkbox"/> 登録	判定会は、東海地方の地震観測データに異常が現れ、これが直接大地震に結びつくかどうかを専門家により判定するものです。

Figure 3. Japanese sentence is translated into multiple languages.

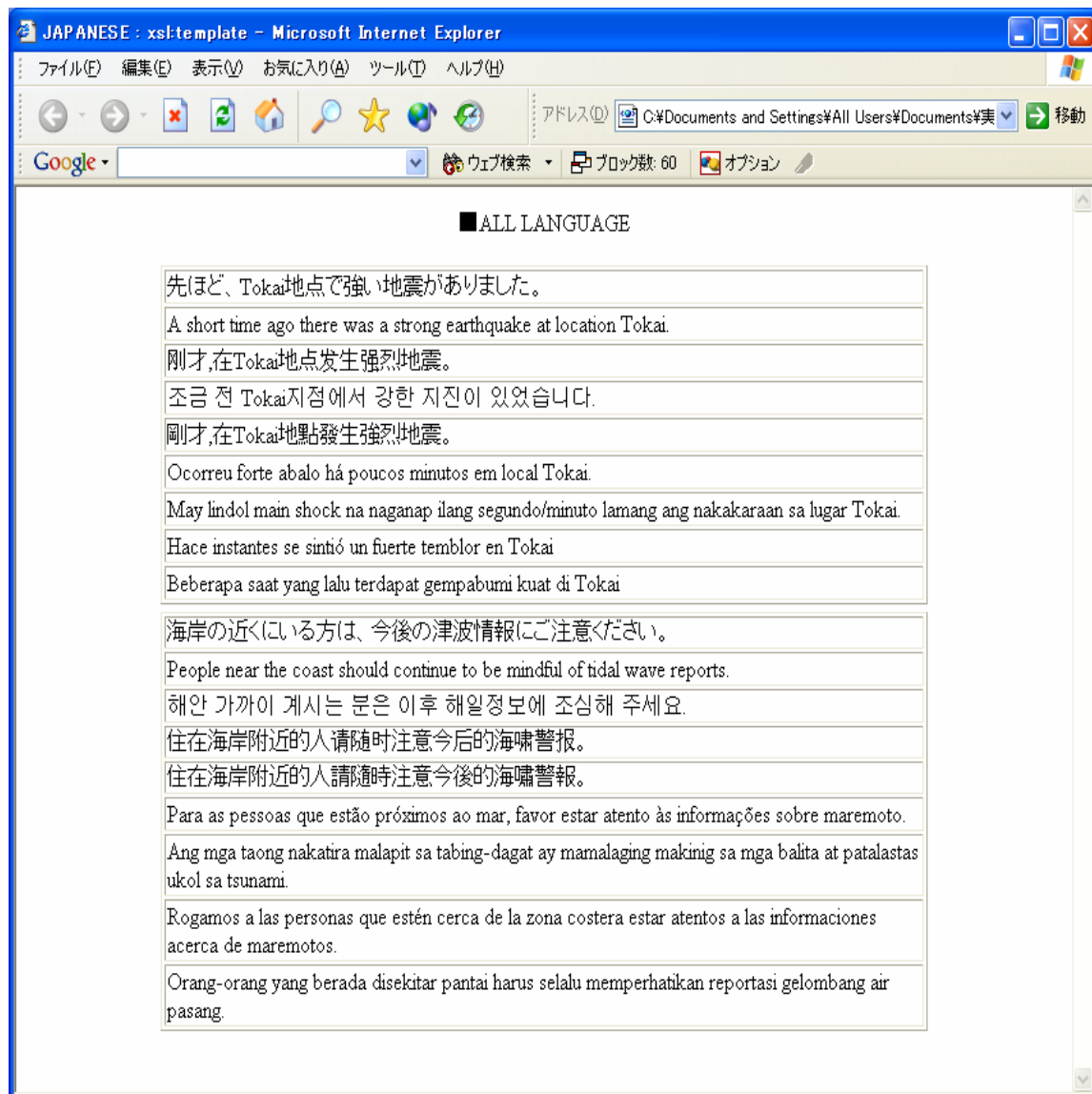


Figure 4. All the sentences chosen will appear in eight languages on one page of a web browser

To distribute accurate disaster information to foreign people as soon as possible, we, the members of the project, "Establishing a System for Distributing Disaster Information to Foreign People Utilizing the Template Translation System," have developed this system. We can get the translated information on the internet website, by e-mail or fax and so on.

Information barrier should be cleared from the point of view of risk control.

## REFERENCES

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