

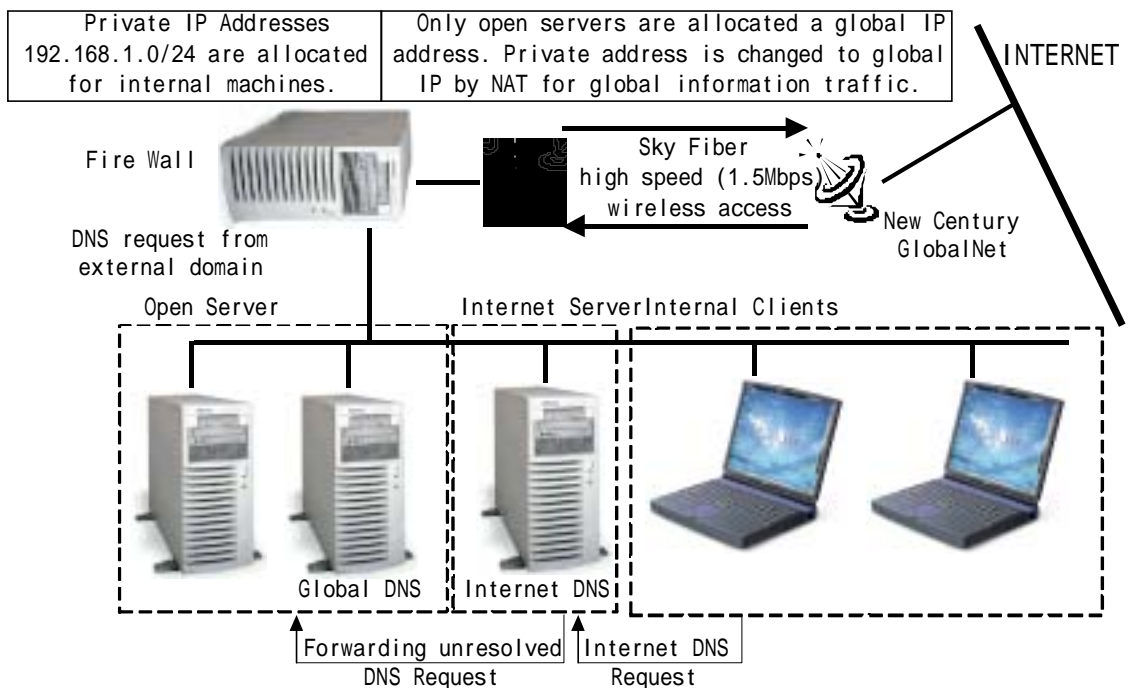
## 2-4. ADRC's Network for Information on Natural Disasters and Disaster Reduction

### 2-4-1. Configuration and Hardware

The configuration and hardware of ADRC's network is shown in Fig. 2-4-1-1. We have a wireless connection to the Internet of about 1.5 Mbps through New Century GlobalNet (<http://www.ncgnet.co.jp>). We chose not to go with ADSL despite its rapidly growing popularity because of the asymmetrical upload and download speeds, and the few providers offering services with stationary IP addresses.

IMnet, which we used until last year, was a network for research institutes, such as national test labs and institutes involved in joint research with them, to share information on research and circulate research information around the world. It aimed to promote the sharing of information required by research. The nearest node to us was in Osaka and Kobe was connected to it by a 126 kbps dedicated line. This created a bottleneck and defeated the purpose of the high speed IMnet, so we changed to a wireless high-speed network. We will keep an eye out for other networking opportunities and will jump at the first viable network that offers faster speed and cost advantages. We are building a platform to share a diversity of information including still images and moving pictures, and which will enable easy access from the outside.

Fig. 2-4-1-1 Configuration and hardware of the ADRC network



For security reasons, ADRC separates the internal and external networks, and has a firewall between the two. The internal network consists of laptops used by researches and desktop PCs that act as servers. Each server has a private IP address that enables only internal use. When attempting to access an internal server from the outside, the firewall converts the global address to the private address of the server to enable the connection. The firewall not only converts global addresses to private addresses, but it also routes packet transfer in consideration of the protocol, source and destination of the packet, whereby restricting access to internal servers and monitoring any attempts at illegal access.

As peripherals, ADRC is equipped with backup devices such as CD-R, MO and DAT, printers including a B/W laser printer and color printer, and raster image devices such as a flat bed scanner and film scanner.

## 2-4-2. ADRC's Website

As shown in Fig. 2-4-2-1, the ADRC's website (URL <http://www.adrc.or.jp/>) consists of the following 12 databases plus access to VENTEN, our internet-based GIS.: Recent Disaster Information, Disaster Information from Member Countries, Training Information Database, ADRC E-Net, Conference and Disaster Studies, Internet Exhibition, Glossary on Natural Disasters, The Great Hanshin-Awaji Earthquake Database, ADRC Highlights, Archives, Disaster Reports from Member Countries, and Center Information..

As shown by Fig. 2-4-2-2, information is made available through the diverse databases. When a request is made from the Internet, the information is retrieved from the corresponding database and sent to the user in a hypertext format based on instructions for determining display color and layout. Because information is stored in the database and layout is individually controlled by instructions, administrators are free of complicated layout settings and layouts can be changed easily in batch to keep pace with user needs and technological innovation. By managing databases in this way, users are given two ways to access information: by content or by country. Therefore, a directory can be provided to facilitate access.

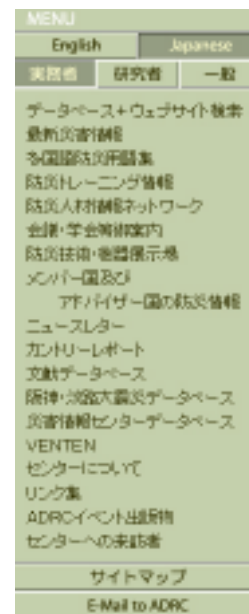


Fig. 2-4-2-1 Homepage menu

As an example of information access, here is information on how to access our Recent Disaster Information database. This particular database gathers and releases information on ongoing natural disasters as quickly as possible. It collects web reports from the UN and media, summarizes the content and establishes a link to the original text. As shown in Fig. 2-4-2-3, the information is managed in both a disaster event table and report table. Information requested by the user (which report the user wants to see) is extracted from these tables and a report is created with a textbook layout.



Fig. 2-4-2-2 Linked Database Website

Remote updating is possible over the Internet as shown in Fig. 2-4-2-2. Currently, considering how frequently information needs to be updated, the Recent Disaster Information and the Conference and Disaster Studies database are designed for remote updating. Other than that, the Topics and Links pages accessed from our top page can also be updated remotely. With due consideration to security, ADRC plans to upgrade the system to enable remote updating with all databases to make updating easier and, as a result, provide even more accurate information.

Information on recent disasters is collected and recorded by ADRC staff in order to limit the lag time from when a disaster occurs until information is made available as short as possible. When the earthquake struck Jiji, Taiwan, for example, it was in the middle of the night, but the first bulletin was posted within 4 hours and, over the next 3 days, ADRC's website had received over 4,700 hits.

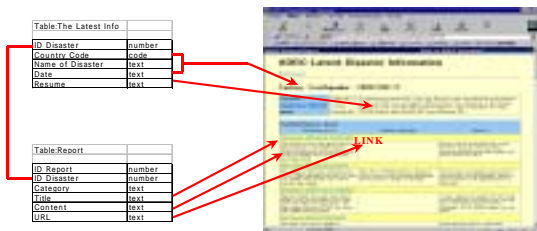


Fig. 2-4-2-3 Recent Disaster Information and window layout

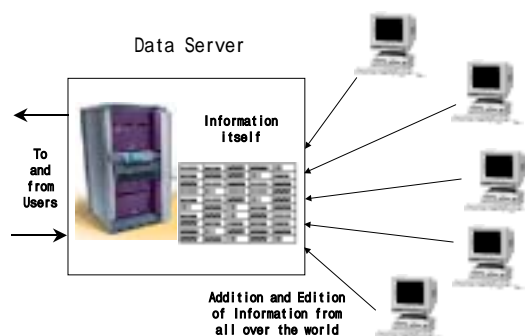


Fig. 2-4-2-4 Remote updating over the internet

To make our website easier to use, we completely redesigned it. The 4 main changes were easy-to-use menus for the three categories of users (Professional, Academic and General), a dual structure of image-embedded pages and text-only pages which can be selected in accordance with the kind of communication infrastructure on the user's end, a dual structure of English and Japanese pages, and a platform that lets the user select the aforementioned ~ conditions. To make these changes, we added an entry page prior to accessing our top page (Fig. 2-4-2-5).

Fig. 2-4-2-5 Newly added entry page



We also redesigned each of the homepages on our site. The key changes were to add a highly visible clickable<sup>1</sup> map 1 to our top page and a powerful search engine for searching both within our site and outside it (Fig. 2-4-2-6).

<sup>1</sup> Clickable map: A feature of web browsers that locates multiple links in an image that transfer the user to the link destination when clicked on. An image with such a feature is also called a "clickable map". By setting multiple links in a single image, a web site with a map as well as menus above and below it can be used.

**Asian Disaster Reduction Center**

ADRC TOP

World

English Japanese

Academic General

DB + WWW search

The latest Disaster Information

Glossary on Natural Disasters

Training Information Database

ADRC E-Net

Defense and Disaster Studies

Internet Exhibition

Disaster Information of

Member Countries

ADRC Highlights

Country Report from

Member Countries

Archives

The Great Hanshin-Awaji

Earthquake Database

ADIC Accident and

Disaster Database

WORLDWIDE Internet-based GIS

Center Information

Links

ADRC Events & Publications

Visitors

Startup

E-Mail to ADRC

The latest Information

The latest in a map is being inter locked with Topics.

**TOPICS**

- 02/04/12 ■ An earthquake struck south of Afghanistan's capital. **TERR**
- 02/03/23 ■ A forest fire which started on March 23 in the southern province of Vietnam, has destroyed thousands of hectares of virgin forest. **TERR**
- 02/04/03 ■ Eight killed in northern Papua New Guinea landslide, 22 missing
- 02/03/31 ■ A powerful earthquake hit North Taiwan on March 31.

Fig. 2-4-2-6 ADRC top page