

An ISMS-standard array station would consist of all the elements above plus additional vertical component short-period sensors distributed to enhance the signal-to-noise ratio and to provide azimuth and phase identification information. During GSETT-2 the GSE found that arrays were especially effective in detecting small seismic events, both at regional and teleseismic distances.

The station requirements are summarized in table 1.

4. Network definition for the experimental system

Based on experience from previous tests and from results of computer simulation, the GSE proposes that the experimental system should contain a network of 53 Alpha stations and more than 100 Beta stations. The proposed Alpha station locations are shown in figure 1 and the countries are listed in table 2. Twenty-seven of these stations are of the array type and 26 are three-component stations. In the actual station implementation, the locations of some of these stations may be moved with reference to conditions in each country.

From figure 1 it is seen that most of the proposed stations already exist. Some stations conform already with ISMS standards, whereas some will need to be upgraded.

5. Requirements for the experimental IDC

The United States has offered to build and operate an experimental IDC near Washington, D.C. The products and services of the experimental IDC will include:

- an automatically produced event list based on Alpha station data within one hour;
- an automatically produced event list based on Alpha and Beta station data within four hours;
- a final, analyst-reviewed event bulletin within two days.

The IDC should keep an archive of all waveforms and all other data received, all event lists and bulletins produced, event bulletins received from national and regional networks for events detected by the alpha network, detection lists, station information, calibration, travel-time curves, amplitude-distance curves, etc.

The IDC should be an open facility, and all data and processing results should be available to participants for automatic and easy access. Data and processing results not older than 15 days should be available for on-line access, requests should be responded to automatically and promptly, and data older than 15 days should be available within 24 hours.

The IDC should monitor the status of stations and communications within the global system and provide feedback to the stations.