Centre Sismologique Euro-Méditerranéen
European-Mediterranean Seismological Centre

CSEM-EMSC NEWSLETTER

N° 2 December, 1992

Season's Greetings and Happy New Year

Editorial

The first CSEM Newsletter was well received. It enabled us in particular to inform the participants at the meeting of the European Seismological Commission in Prague of our activities. We hope in this way to be able to maintain a regular contact with our members, and through them, the seismological community concerned.

The CSEM family is growing. In addition to the new members accepted at Prague: The Royal Meteorological Institute of the Netherlands, Utrecht, and the Geophysical Laboratory, Aristotelian University of Thessaloniki, Greece, we have received an application for membership from the Geophysics Group, Instituto Superior Técnico, Lisbon.

The new procedures for the rapid determination of epicentres, requested by the assembly, are being progressively implemented. The efficiency and independent capability of the CSEM are thus being improved.

The new agreement being negotiated with the EOPGS will consolidate a firm and healthy relationship between an international institution and the organization, under whose wing it shelters and which provides it with some means to function, to their mutual benefit. We also expect the premises of the CSEM to be enlarged, as the EOPGS will soon have new offices available.

For the coming year of 1993, we should thus forsee the strengthening of our activities so as to be able to respond in a better way to the requirements of our members. We hope that it will also be a productive and satisfying one for each of you.

Christian Weber

EMSC Assembly meeting

An EMSC Assembly meeting is planned on the occasion of the European Union of Geosciences (EUG) meeting in Strasbourg during the beginning of April, 1993. Announcements of the date, location and agenda will be sent to all members during early February, 1993. This assembly will provide an opportunity for our members to visit EMSC offices and a MEDEA database presentation.

EMSC database - MEDEA

EMSC has developed in the past few years an earthquake database, called "MEDEA", under a contract (as a database prototype for 3 years starting Aug. 1988) with the CEC. Careful management of the funds has allowed, with the permission of the CEC, to continue this development during 1992. A review panel, comprising **M. Chinnery** (NGDC), **V. Karnik** (GI), **J.P. Lepretre** (BRGM), **L. Rivera** (EOPGS), and **O. Signore** (CNR), that deliberately studied the MEDEA database content and structure in July 1992, strongly supported the continuation of the development of the database, as reported during the EMSC Assembly meeting in Prague, 1992. At the same conference, the EMSC Assembly and later the ESC General Assembly have adopted the following resolution:

"Considering the efforts invested in building the earthquake parametric database, MEDEA, at the EMSC, Strasbourg, and the recent strongly supportive report by a professional peer review panel, the ESC recommends that means be found for its continued funding with a view to developing this database as a major source of earthquake information for those requiring data for the European-Mediterranean region."

During the next coming months several issues should be contemplated concerning the future of the MEDEA database. The computer centre, where the database is currently installed, will be closed in several months (before the end of 1993). **C. André** and **J. Morel** are checking these days several possibilities of other hosting locations, like the transfer of the database to another computer centre or the installation in the computer of the EOPGS. In addition, the financial and manpower aspects of database are unclear, on a medium term. Some financial help comes from the French Ministry of Environment, Dept. of Major Risks, that recently agreed to provide a partial support to the MEDEA database, in order to continue its activity and development during 1993. Another support, though it is not yet guaranteed, is the carry on of the former database contract with the CEC, as the sources left are sufficient for a modest continuation of about half year.

We urge the scientific community to refer more to the MEDEA database. Here, we add a reminder from the last newsletter, describing how to approach the database - the MEDEA database can be approached by Telnet (130.79.50.21 or 130.84.4.105);

by X25 (0208067000238); by phone (+33-88286020); by Videotex (in France 3613 then 167000238, other countries +33-36431313 then 167000238); by telex (667000F then 167000238). As a guest userid, enter : "U79102/MEDEA NONOTICE". If you did not get the User's Manual and MEDEA's newsletter "The Gazette" numbers 1 to 3, and/or if you want to get your own account on the database (so MEDEA answers your requests at your e-mail address), or if you meet any problem while using MEDEA, send a message to EMSC. The MEDEA database is still being tested and your suggestions and comments are most valuable. Feel free to ask for data of particular interest in case there is a need.

Rapid determination of epicentres

Since Oct. 1989, the rapid determination of epicentres has been mainly done by EOPG in Strasbourg, under a contract with the EMSC and the help of **J.-F. Guéguen.** During the last several years an obvious need for a change has appeared, in which more centres and especially several key stations in the European-Mediterranean region are to be involved. A new format, in which a series of centres cooperate in data gathering and rapid determination of epicentres, was adopted by the EMSC Assembly in Prague, that was also stated in the following resolution:
"EMSC Assembly acknowledges the efforts mainly done by EOPGS for the rapid determination of epicentres in the European-Mediterranean region. EMSC Assembly recommends that existing centres and open stations, that possess automatic detection facilities, be connected via efficient communication line in order to obtain a reliable rapid epicentre determination in the European-Mediterranean region. Within this procedure EMSC will make the data and location accessible to the members and the data contributing centres."

Since the last EMSC Assembly meeting in Prague, and with respect to the above mentioned resolution on the new policy of the rapid determination of epicentres to be carried out, the EMSC has adopted a computer algorithm. This computer algorithm is capable of handling earthquake messages arriving by e-mail and X25 from many centres, shortly after a strong earthquake has occurred, and executes the association of epicentre locations of the different centres. This algorithm is based on the one developed at the ETH, Zurich, by **U. Kradolfer** and **M. Baer.** In general, the system is triggered when there are several locations in about the same vicinity and the magnitudes of most solutions are above a given threshold. During the first phase of operation and experimentation the data centres that are sending directly their earthquake messages to the EMSC system are: ETH (Zurich), GERESS (Germany), IGN (Madrid), NEIC (USA), and NORSAR (Norway). Data arriving from other centres, during emergency times or on a routine basis are treated the usual way as before. We would like more centres located in other parts of the European-Mediterranean region to take an active role in the newly developed system in the near future. This will assist us to improve the reliability of the alarm triggering system and also the accuracy of the epicentre determination itself.

New agreement between EMSC and EOPGS

Following the recommendation of the EMSC Assembly, the former agreement, signed between EMSC and EOPGS, the hosting institute, on Oct. 1, 1989, was denounced by EMSC President in mid-October, 1992. This action is to be in force in three-months time. Meanwhile, the main items and subjects of the new agreement have been discussed during the last several meetings, between **M. Granet**, EOPGS, and **A. Hofstetter**, EMSC. The main issues include:

- the role of EOPGS as the hosting institute;
- cooperation with regard to the new procedure of the rapid determination of epicentres launched by EMSC (above presented);
- cooperation in the routine determination of epicentres;
- the possibility of technical and/or hardware support of EOPGS to the MEDEA database;
- personnel and rooms for EMSC staff and scientific visitors.

Progress has been reached regarding parts of these topics, while other topics are still discussed. EMSC bodies will be kept informed and will review the draft contract, before the final acceptance.

Exchange of data and electronic mail

We would like to shorten significantly the processing time of the monthly list of earthquakes, and here we repeat our request of the last newsletter. In order to facilitate our work and to include more station observations, we would like to get more arrival times in a digital form. This can be done by telex or a variety of electronic mail options, preferably not in paper bulletins. The arrival times are used for our data association procedure, and then to determine the epicentres, to be computed every month, taken care by **A. Pérès** and **Y. Slamani.** For this part of our work, we do not need the final bulletin, but we need the arrival times (or even part of them), with a delay of less than one month. All these arrival times are also sent to NEIC, taken care by **M. Walter**. If you wish to receive data from EMSC (i.e., arrival times used to compute epicentres for a given zone, or the monthly list of epicentres) through e-mail, please let us know. Our Internet address: hermes@furax.u-strasbg.fr (if you can, please use it rather than the EARN/BITNET address). Our EARN/BITNET address: U79101@FRCCSC21.BITNET. Our P.S.I. address: PSI%0208067001662::hermes (the first "0" is for an international code, and it may be different in your country); in France the P.S.I. address: PSI%167001662::hermes.

CSEM-EMSC

5, rue René Descartes
67084 STRASBOURG Cedex, France

phone: +33-88416381
fax: +33-88600401
telex: 890826F
e-mail: hermes@furax.u-strasbg.fr
P.S.I.: PSI%0208067001662::hermes