The International Nuclear Information System (INIS)

The International Nuclear Information System (INIS) is the world's first computer-based international documentation service for which input is prepared on a decentralized basis. It was set up co-operatively by the International Atomic Energy Agency and its Member States, within the Agency's Division of Scientific and Technical Information, to construct a data base identifying publications relating to nuclear science and its peaceful applications; it commenced operation in May 1970. Each participating Member State and international and regional organization is responsible for scanning the scientific and technical literature it produces and reporting the input data for INIS to the IAEA. This ensures that there is no duplication of data. INIS processes what is received, merges it, and provides four services:

- A **magnetic-tape service** (available only to participating Member States and organizations);
- **INIS Atomindex,** which is produced twice monthly directly by computer from the magnetic tapes and contains references to the items reported into the System during the preceding month (available to the public for a subscription price which also covers the indexes);
- **Abstracts-on-microfiche:** an abstract for every item reported in the magnetic-tape service and in INIS Atomindex (available to the public);
- **Full texts of "non-conventional" literature,** i.e. all items other than journal articles and commercially published books (available to the public).

Since INIS is a world-wide information system and highly decentralized, standards for preparing the INIS document input were formulated to take into account the requirements and practices of the participants. These standards are laid down in the INIS Reference Series Nos 1-13. In addition, training seminars on input preparation are held both in Vienna and abroad, and individual trainees from participating Member States take courses at the IAEA Headquarters in Vienna. Although English has been adopted as the working language of INIS, abstracts are accepted in any of the four IAEA official languages – English, French, Russian and Spanish – and non-conventional literature in the original language.

The input from the centres arrives at the IAEA in the following forms:

1. Bibliographical data and subject descriptions on:
    a) Worksheets,
    b) Paper tape, or
    c) Magnetic tape;
2. Abstracts;
3. Full texts of non-conventional literature.

A Status Report on INIS was presented to the Missions of Member States at the IAEA Boardroom on May 3. In his opening address, the Director General, Dr. Eklund, told those present:

"INIS is the first international information system to be established on a decentralized basis. It is not easy to be a pioneer in any field, and information dissemination is no exception. Some of our INIS participants possess very sophisticated facilities while others do not, and this has been a source of problems from the very beginning. The worst obstacles in our path have been overcome, but we do realize that many more still lie ahead."

Speaking on the benefits of participation, Dr. Eklund added, "Dissemination of information is a major factor in man's striving to attain knowledge. The Selective Dissemination of Information, or SDI, is a service which, when fully operational, can provide instant selection of items of interest from the world's literature on the peaceful uses of nuclear science and technology and related subjects.

"The value both to state research institutes and to private industry of such a service at low cost need hardly be stressed, specially when we consider that current awareness of scientific progress is vital in all areas of scientific and economic activity."

All input received from the participants is immediately registered and checked for completeness by the INIS staff. Input on worksheets or paper tape is then transferred to magnetic tape. Once it has been fed to the computer, all input passes a variety of validity checking programmes which determine whether a data element is formally correct. However, the responsibility for correct citation of references lies with the inputting centre. Manual checking, such as careful proofreading of computer printouts, is also performed for input transferred from worksheets to tape at the Agency.

During the initial period of INIS operation, from May 1970 to December 1972, the INIS subject scope was limited as recommended by the IAEA Board of Governors in 1969.

A consultative meeting of INIS Liaison Officers, held in Vienna in November last year, was attended by 52 representatives from 35 participating Member States and seven international organizations. The main decisions reached were:

1) From January 1973, INIS will operate on mandatory full scope, which is expected to result in a processed input of 65,000 items for this year.
2) INIS Atomindex will be published twice monthly this year.
3) Subject Categories and Scope Descriptions should remain unaltered for two or three years, during which the INIS participants can express their requirements for changes in the scope.
4) From this year updated versions of the INIS Thesaurus will be issued three times annually.

Magnetic tape from the INIS computer, which is then available to all participating Member States.

5) Of the various forms of subject index proposed for INIS Atomindex, the concept of two-level flagging was provisionally adopted and will be further developed by the Secretariat.
6) The INIS Secretariat will hold a Consultative Meeting for Computer Specialists using INIS Output Tapes on June 21 and 22.
7) Prices for the 1973 INIS output products will be maintained at the 1972 level (US $25.00 per subscription).

In January operation with full scope began as scheduled. Currently 44 Member States and 12 international and regional organizations are participating in the System. This membership includes the major producers of nuclear science literature, so that **the INIS participants are responsible for 90% of the world's output of literature in this field.** The principal INIS output products, i.e. the INIS Atomindex which is now printed twice monthly and the computer magnetic tapes, have found wide acceptance in the world's scientific community, as evidenced by 325 subscriptions from 30 countries. In addition, there are 52 subscriptions for INIS abstracts on microfiche and 15 standing orders for non-conventional literature on microfiche.

The experience acquired in handling input over the initial period of operation led to improvements in procedures. An experimental retrieval service (Selective Dissemination of Information) is currently being developed, with the intention of making it available to scientists and engineers within the Secretariat later this year. Retrieval services may, if required, be offered to participants at a later date on a cost recovery basis, if such a proposal is approved by the Agency Board of Governors.