Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

11-May-2001

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English - Or. English

NUCLEAR ENERGY AGENCY
NUCLEAR SCIENCE COMMITTEE

RULES FOR THE DISTRIBUTION OF
COMPUTER CODES BY THE NEA DATA BANK

Tenth meeting of the NEA Nuclear Science Committee Executive Group
11 June (a.m.) 2001

JT00107465

Rules for the distribution of computer codes by the NEA Data Bank

The text below describes the rules in force for the computer program services of the NEA Data Bank. The document has been put together as a background paper for a general discussion of these rules at the meeting of the NSC Executive Group on 11 June 2001.

Rules Applied and Clients

The Data Bank operates a computer program service related to nuclear energy applications. The software library collects programs, compiles and verifies them in an appropriate computer environment, ensuring that the computer program package is complete and adequately documented. It distributes them to nominated establishments.

To ensure efficient contact between the laboratories, institutions and centres participating in the work of the Data Bank Program Services, a liaison group of users' society has been formed. Following nomination by the Data Bank Executive Group Members of those laboratories, institutions or centres intending to take part in the activities of the Program Services, each establishment nominates an experienced member of its staff to act as its liaison officer with the Data Bank. There is a specific procedure to follow to request nomination.

Tasks and duties of liaison officers comprise co-ordination of the contacts between the Computer Program Service and users within their respective establishments concerning requests, distribution of material and information received, and also the release of codes for distribution by the Data Bank.

Materials can only be distributed following a request from a nominated establishment or on specific authorisation of the Executive Group Member. Users must contact the liaison officer in their establishment. Codes cannot be downloaded directly from the Web-site by anyone, only by authorised liaison officers via passwords.

Details on the rules applied for the distribution of computer codes at the NEA Data Bank and how these refer to existing agreements are given in *Annex 1*. These rules are applied strictly and full records are kept of all transactions made. The exact version of the information distributed, the correspondence exchanged and the rule or authorisation applied to each item distributed can be identified and traced back. This is achieved through the DBAIS database developed over the years that implements the rules.

All users of computer programs distributed by the NEA Data Bank must adhere to the restrictions placed on the use of programs (see *Annex 2* on Restrictions).

The rules so far established, though complex, reflect the needs that have emerged to ensure that agreements are complied with and have ensured that the service could be carried out without incidents. As they have not been re-discussed since the Executive Group was established, the Executive Group is asked to review them, to propose amendments if considered necessary and to endorse them.

At present there are the following 491 nominated establishments in the NEA Data Bank Member countries:

Austria	6	Korea (Republic of)	11
Belgium	15	Mexico	4
Czech Republic	10	Netherlands	9
Denmark	4	Norway	6
Finland	10	Portugal	4
France	54	Spain	50
Germany	95	Sweden	18
Greece	2	Switzerland	14
Hungary	8	Turkey	26
Italy	32	United Kingdom	62
Japan	39	International Org.	12

In addition, within the co-operative agreement, the IAEA has nominated 87 establishments in 41 countries.

Through questionnaires, establishments which are no longer interested in the service are identified and removed in consultation with Executive Group Members.

Proposed actions

The Executive Group Members are asked to:

- check the list of nominated establishments in their country and indicate any modifications needed,

- review the rules for the computer program services and to propose amendments if needed,

- endorse the finally agreed rules for the computer program services.

Annex 1

Rules applied for the distribution of computer codes at the NEA Data Bank

The rules that apply to distribution of computer codes at the NEA Data Bank depend on the following:

1. Rules established by the former Management Committee of the NEA Data Bank, now transferred to the Executive Group of the Nuclear Science Committee.
2. The Agreement for Co-operation in the Field of Nuclear Data and Computer Programs between the US DoE and the OECD/NEA.
3. The Co-operative Arrangement with the IAEA for a Computer Program Service to non-Data Bank Member countries.

Other documents pertinent to the distribution of computer programs are the circular letter sent by the former DG K. Uematsu to National Delegations requesting instructions as to the restriction that apply to the distribution of computer codes outside the OECD area and replies received by these Delegations. Another NEA Steering Committee document relevant to this service dates back to 1992. At about that time the Executive Group of the NSC was established.

The **rules** endorsed by the **Data Bank Management/Executive Group** in essence establish the following:

The service is provided first of all to Member countries of the NEA Data Bank

It is up to the Member countries to decide which establishment or institution in their country has access to the Computer Program Service. Members of the NSC Executive Group are in charge of nominating such establishments and to name the person that is in charge of maintaining the liaison between that establishment and the Data Bank.

The liaison officers are in charge of co-ordinating the distribution and the requests for information within their organisation. They also release new computer codes to the NEA Data Bank developed in their organisation. For that purpose the duties of liaison officers have been established as well as the restrictions that apply to the use of the items received. This set-up aims at avoiding interference in the internal affairs of organisations and enforces that established rules are respected. Upon authorisation of the responsible Member of the Executive Group, requests from non-nominated establishments can be approved case-by-case. These rules have been endorsed at NEA meetings and are distributed to new members of the Executive Group and to new officially nominated customers.

For each country statistical data about the exchange of information with the Data Bank are distributed annually to each Member. This data contains detailed and summary information as to the items distributed, their precise version and identifies the recipient of information. For each item distributed a rule or a specific authorisation for distribution must be traceable. Authors are informed of distribution of their computer programs upon request.

These rules are documented in the standard letters and documents distributed within the computer program service and are accessible on Internet: http://www.nea.fr/html/dbprog

The **co-operative agreement with the US DoE**:

This agreement applies to the services between the OECD/NEA and the USA and Canada. Not all computer codes are exchanged in this framework: dual codes, copyrighted codes and proprietary codes are excluded. It identifies the centres in the USA that are authorised to exchange relevant information with the NEA Data Bank. It also defines the service areas of the different centres. For the US centres the primary area of distribution is USA and Canada, for the Data Bank all Data Bank Member countries. Through this agreement establishments in the US and Canada have access to the computer codes originating in the Data Bank Member countries and nominated establishments in the NEA Data Bank Member countries have access to codes originating in the USA and Canada. It also regulates the distribution outside the NEA Data Bank service area of computer codes originating in North America. This agreement also makes provision for exchange of personnel and organisation of joint seminars. It was signed on 8 May 1997 and has a validity of 5 years. The extension can be made by written agreement of the Parties.

The US counterparts request full implementation of traceability concerning distribution to verify that only authorised copies are distributed. The US centres and the Data Bank essentially apply the same rules and standards for the distribution.

The **co-operative arrangement with the IAEA:**

Co-operation with the IAEA for a computer program service dates back to 1968. It was revised when the Data Bank was established and was discussed at the subsequent annual meetings. The last official review by the NEA Steering Committee dates back to 1992 and is summarised in NEA/NE(92) 11.

This arrangement applies to the computer program service to establishments in countries outside the OECD area. Countries that wish to have access to this service have to apply through the permanent Mission of their country to the IAEA. The IAEA then sends a request to the NEA for extending the service to the establishment in the country applying for the service. As for the Data Bank Member countries, the IAEA provides the name of a liaison officer that is in charge of keeping the contacts and facilitating the exchange. As a payment in kind for this extension the IAEA has placed a staff member at the Data Bank to carry out work relevant for the computer program service.

This service covers only computer codes that do not originate from the USA and Canada. Requests for such codes are transferred to the US centres for processing.

The establishments concerned with this service are subject to the same rules as those for the NEA Data Bank Member countries, with the additional restrictions related to codes of US and Canadian origin and others for which Member countries apply limited distribution.

This service amounts to 10-15% of the overall activity of the computer program service.

The **system used for enforcing the rules**:

The enforcing of these rules requires precise characterisation and recording of the computer programs including the restrictions that apply to their distribution, recording of the information concerning the transactions to establishments including correspondence, keeping track of nominations and changes of liaison officers. This requires a database that handles the bookkeeping of all activities in detail including the history of changes to the computer programs that are distributed. Such a database is also a necessary tool for quality assurance purposes and for generation of reports requested by Member countries concerning transaction history and for measuring the service they receive in exchange of their budgetary contribution. The system designed to handle all this is called **DBAIS** and has been continually developed over the years. It has also undergone innovative redesign to comply with changes required for modern

information management. This system requires continued maintenance, the cost of which is covered by the computing budget of the NEA Data Bank.

The present system contains information concerning about 2000 computer codes (60,000 files totalling 20 Gigabytes), and transactions of about 50,000 copies of computer codes sent to about 550 officially nominated establishments.

Annex 2

(Agreement text signed by Liaison Officers as part of the Nomination Procedure)

Restrictions on the Use of Material Distributed by the NEA Data Bank

"Authors and their establishments must be consulted if an organisation receiving programs and data intends to use them to provide commercial service to outside users.

Programs and data are provided on the understanding that the agreement of the originating establishment shall be obtained before a service is offered involving sale or use on a fee-paying basis of any program or data set distributed by the NEA Data Bank. This restriction applies also to modified versions derived from program copies obtained from the NEA Data Bank.

Transfer of a program or data to a user in a given establishment confers only the right to use the program within that organisation: in particular, copies of programs and data should not be distributed to persons outside their own establishment; users in other centres should contact the NEA Data Bank directly in order to obtain program copies.

Computer programs and data are provided on the understanding that whenever the use of programs obtained through the NEA Data Bank, or of locally modified versions of them, results in a publication (in a journal, conference proceedings, laboratory report, book etc.), the program and its author or laboratory of origin shall be acknowledged in the publication."

To be more specific as to how these restrictions should be interpreted, the following should be noted:
- the codes users receive from the Data Bank cannot be further distributed, this obviously includes that they cannot be sold,
- if users modify codes, they should inform the authors, and improved versions should not be sold unless users come to an agreement with the principal authors,
- users are not allowed to set up the code on a shared computer and have other users pay a royalty for its use,
- however, there is no objection that expert users, within a contract or project with a third party model a problem, interpret results and recover the cost of their work and expertise by using a code received from the Data Bank.

Disclaimer

Neither the Organisation for Economic Co-operation and Development or any of its Member countries, nor any person acting either on behalf of any of them or otherwise in furtherance of the activities of the Nuclear Energy Agency assumes any liabilities with respect to the use of, or for damage resulting from the use of, any information, method or process disclosed in the distributed material.

This applies also to non-Member countries and Organisations that have contributed to the distributed information.

Feedback on Computer Programs

Recipients of computer programs are invited to report back to the NEA Data Bank the following information concerning material received:

- errors or shortcomings detected,
- inconsistencies between the program and its documentation (differences in the model description and its coding in the program),
- limitations found in its applicability not reported in the documentation,
- improvements carried out (corrections of errors or removal of shortcomings),
- generalisations of the program so that it can be applied to a wider range of problems,
- auxiliary programs developed,
- information on validations carried out.

This information will be used to inform the author(s) and users of the program as well as to update the program if required.

This activity aims at updating and maintaining the quality of the computer code collection.