

## Proposal for a Common NRDC EXFOR Web Service

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*This working paper addresses two statements in “Objectives and Tasks of NRDC”:*

- *Coordinated development of computer software for managing and disseminating nuclear data,*
- *Coordination of the development and dissemination of end user software for both on line and local access to nuclear data*

### 1. Reality, 2008

NRDC has a common EXFOR master file which is centrally maintained at the IAEA-NDS. NDS staff have ensured the operational success of the following features of EXFOR in a unique manner or through bilateral co-operation:

- specialized software to maintain the database;
- maintenance of raw data using FTP access (backup, Trans/Prelim files, dictionaries);
- updates of CHEX program (checking code for compilers);
- MS-Access Dictionary database for EXFOR-Editor;
- EXFOR compilation control system (database, software, regular updates, statistics);
- compilation re-scheduling for the main journals (in case of large delays);
- possible centralised correction of errors;
- communication with extended user communities (e.g. SG-30 and IBANDL) for analysis of data errors;
- production of specialised output from EXFOR (e.g. C4 and R33), as requested by extended user communities;
- production of full EXFOR in C4 format;
- automatic import of information from EXFOR to CINDA;
- production of CD-ROM with full EXFOR database and interface for FORTRAN programs (e.g. for Empire community and EndVer users);
- etc.

Some of these functions require regular Web access to the central EXFOR database (e.g. all corrections of existing EXFOR entries start from the central database to avoid duplications). *De facto* NDS basic EXFOR Web retrieval system as prepared by NDS is already used by NRDC members, functions at NNDC, USA, and has been exported to BARC (India) and IPEN (Brazil). The functionality of this system is continually being improved by NDS efforts through the implementation of requests and recommendations of the NRDC centres and others (e.g. BibTeX (2006, 2007), R33 (2007), Exfor+ (2007)).

### 2. Proposal - 2008

NRDC has a common EXFOR master file for which the following proposal would appear logical in the development of EXFOR system: **agree and declare a common EXFOR Web Service that would provide access to the central EXFOR database located at the IAEA-NDS.**

NDS will take responsibility to provide global Web access to the common EXFOR database, develop retrieval systems and implement basic/standard features (all to be

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agreed by NRDC). This approach would establish full co-operation in the development of dissemination systems: NRDC could make decisions about (for example) output formats that would be implemented, and NRDC centres would only need to request copies of the output from the database. This proposal would not mean that other centres would have to stop development of other retrieval systems (e.g. NEA-JANIS, NNDC-Sigma, and JAERI-Web).

One important implication would be the establishment of a standard Web address [1] recommended for the citation of EXFOR entries, for example:

<http://www-nds.iaea.org/EXFOR?10004>

This address would be guaranteed by IAEA-NDS and can be used for publications from now on. If other centres wish to provide similar links, they could also be implemented:

<http://www.nndc.bnl.gov/EXFOR?10004>

<http://www.nea.fr/EXFOR?10004>

<http://a-center/EXFOR?10004>

These two proposals are offered for discussion at the NRDC 2008 meeting.

#### **Reference**

1. V.Zerkin, "Web retrieval tool supporting citation of EXFOR data", WP2008-28.

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