

Automatic addition DOI to EXFOR entries: to do or not to do? Collection of PDF and BibTeX for papers referenced in EXFOR.

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NRDC2010-A10 /V.Zerkin/ Investigate possible problems of automatic adding of DOI number to original EXFOR Entries and create software if appropriate.

DOI (Digital Object Identifier) is important information providing a universal access to Web publications. Since 2009 it is possible to include DOI into EXFOR Entries as free text using special convention (WP2009-25 and WP2008-20). Such coding of DOI numbers is now recognized by software, stored in database and used by retrieval system(s). There are other sources of DOI numbers in the IAEA/NNDC EXFOR database/software system, namely: NSR database (Nuclear Science References), external text files supplied by compilers and automatically downloaded from Web publisher.

As of 2011-05-18, whole EXFOR Master File contains 323 DOI numbers among 11822 DOI numbers existing in EXFOR database and mostly imported from NSR and Web resources (see Table.1; note: some information from different sources is overlapping). Now DOI numbers are known for 70% of journal references.

<i>DOI numbers in</i>	<i>Journals</i>	<i>Conferences</i>	<i>Reports</i>	<i>Total</i>
EXFOR Master File	277	44	2	323
Imported from NSR	9,467			9,467
Supplied by Otsuka/Semkova	861			861
Downloaded via BibTeX (ZV)	2,606			2,606
Downloaded from www.crossref (ZV)	1,961			1,961
Total {Reference, DOI}	11,776	44	2	11,822
<i>Total in EXFOR</i>	<i>17,580</i>	<i>2,533</i>	<i>4,307</i>	<i>24,400</i>

Table 1. Source of DOI numbers in IAEA/NNDC EXFOR database

Of course, it is possible to put all known DOI's to EXFOR Master File, but what is the goal of this exercise - just for retrieval systems to be able to generate link to Web journals? It is already achieved in the IAEA/NNDC system (and may be in others as well), where DOI numbers are also displayed in X4+ output.

Really important tasks are: (a) to have complete bibliographical information for every publication referenced in EXFOR and (b) to have original paper for every publication.

- task (a) is partially implemented via import of all needed information from NSR database, and as result IAEA/NNDC EXFOR Web retrieval system is able to generate actual BibTeX output not only for the first reference but often for others
- task (b) is partially completed here in the IAEA-NDS, where PDF files are systematically collected by NDS compilers through last 6 years (according to proposal: WP-2005-14, "Central storage of EXFOR source papers"). Altogether the collection consists of almost 18,000 PDF files.

Since December 2010, large collection of PDF files (source of EXFOR data) is available directly via IAEA EXFOR Web retrieval system. For the moment this option works only for internal NDS staff and visitors, but if NRDC is interested, the system can be extended to display PDF publications referenced in EXFOR for NRDC compilers (and possibly evaluators) using password protection.

Request Examples: 1 2 3 4 5 6 7

Submit Reset Help

Target AI-27 »

Reaction n,tot »

Quantity CS »

Product »

Energy from 0 to 20e6 eV »

Author(s) »

Publication year »

Accession # x4comp »

EXFOR Compiler ●●●●●●●●

X4	X4+	X4±	T4	1974	W.Dilg	1.88e1	1	1	[pdf]+	J,ZN/A,29,1750,197411	20602005
X4	X4+	X4±	T4	1974	S.Mubarakmand+	1.70e6	1.43e7	12	[pdf]+	J,NIM,115,345,197403	30305003 1974MU04
X4	X4+	X4±	T4	1973	W.Schimmerling+	3.79e8	1.73e9	15		J,PR/C,7,248,197301	10082004 1973SC01

What would be desirable if EXFOR compilers when submitting PRELIM file – submit also PDF copy of the compiled articles and supply BibTeX file if available. Normally BibTeX output is freely available from Web publisher. Sending single PDF file for scientific purposes is also usual practice and does really not break copyright rules – it is often done: sending papers between centers for compilation and for checking. Having BibTeX file for every EXFOR reference we will solve not only problem with DOI numbers, but we will also step by step collect proper bibliographic database with correct authors list and title for every single reference (not only for the first one as it is implemented now in EXFOR).

Conclusion

I. Proposal for NRDC:

to refuse the idea of automatic adding of DOI numbers into EXFOR entries.

II. Proposals for compilers:

- 1) submit BibTeX file together with PRELIM or with final TRANS file
- 2) when submitting PRELIM EXFOR file, send also PDF copy to the IAEA NDS

III. Proposal for NRDC:

to support the idea of compiler's access to the IAEA-NDS PDF collection using password protection.