Dictionaries, CHEX and related software in IAEA-NDS
V.Zerkin, IAEA-NDS, 10.10.2005

Originally, all software for maintenance of EXFOR Dictionary system and EXFOR checking program (CHEX) was written in NNDC (by V. McLane and others). Programs were written for VMS on Fortran using (sometimes) DEC-Fortran specific features. Since 2000 responsibility and maintenance of software dealing with Dictionaries was moved to IAEA-NDS. At the same time, task to adopt all these programs to other platform was established.

In 2001, CHEX was adopted to non-VMS platforms (by V.Zerkin). For this purpose dictionary system accessing form CHEX was rebuilt: dictionaries were reformatted to direct-access files, special program for creating these files was written, several subroutines were developed, and some calls of these subroutines in the main program were changed. New CHEX program (called ZCHEX) is working on Windows, Linux and VMS and regularly updated since 2001. Last updates (September, 2005) was done in conjunction with reorganization of Dictionaries (TRANS-9089): program deals with Dictionary 7+207 instead of 7, 213 instead of 13, 227+209 instead of 27, 236 instead of 36.

Other programs were adopted to universal platform-independent Fortran in different time (see Table.1). The only remaining problem is with DAN2X4 (program producing official Dictionary TRANS file). This program can be used until NDS have VMS system running.

Table 1.

Program	Main function	Platform	Last updated	#Lines
DAN2X4	Make Dictionary TRANS	VMS	2005	2,493
make_back	Make Dictionary Backup	all	2005	2,616
zorder	Sorting EXFOR-file, count N1, N2, etc.	all	2003	631
danlo	Make direct-access files dictionaries	all	2001	294
zchew	Check EXFOR file	all	2005	8,259

All programs needed dealing with Dictionaries needed for ZCHEX, NDS-NNDC Web-retrieval system and NDS CD-ROMs are ready on Windows and Linux (see Fig.1).
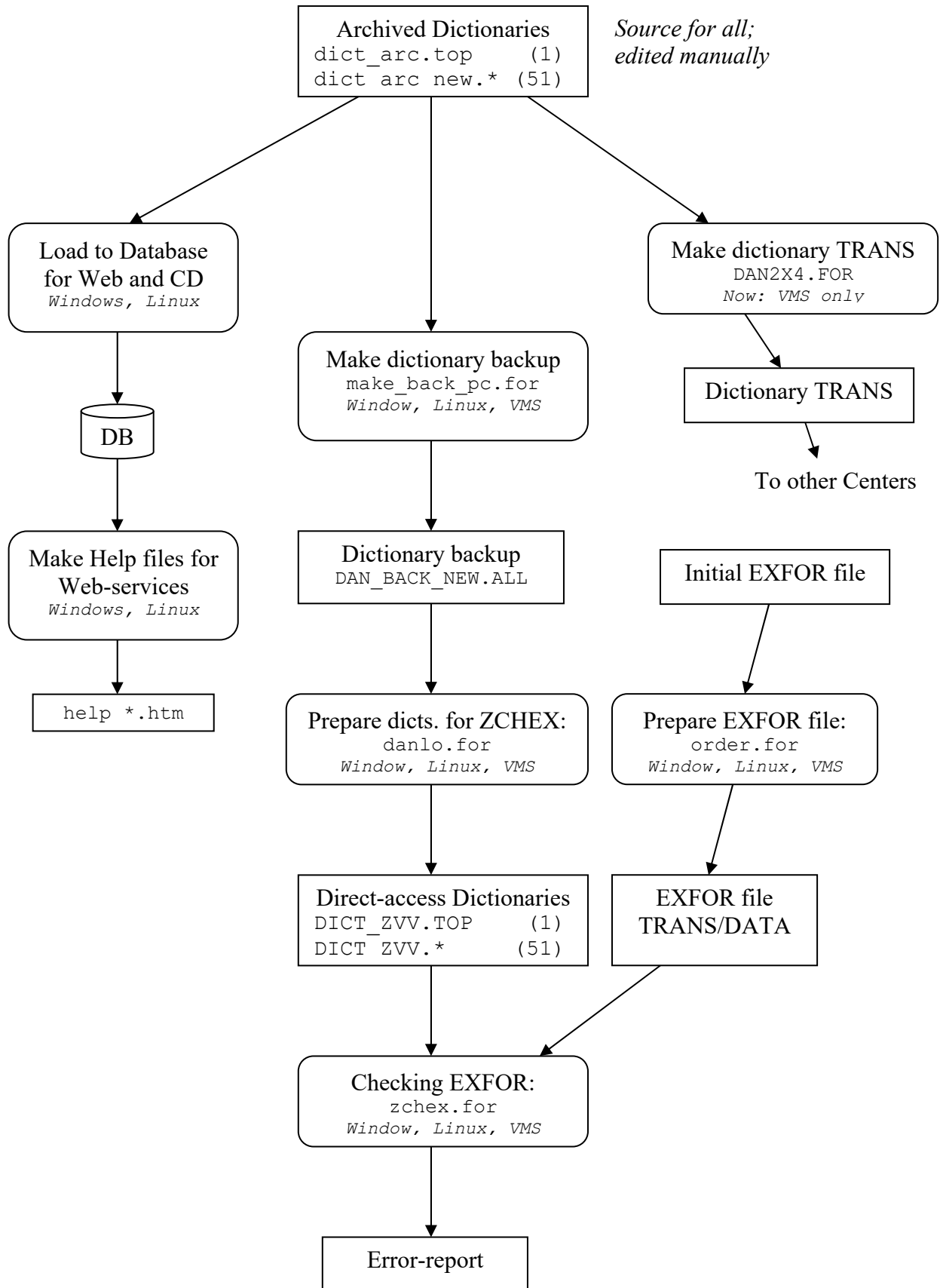
Fig.1 Dictionaries and software: data flow and programs