Centre "Informatique et Bible" (CIB-Maredsous): Repository, Archives, Data Base, What Else?

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A „center" is in the first place defined by the activity of the individuals gathered together to work toward a particular goal. The center in Maredsous (Belgium), based on the works of its founders who began to study computer sciences in 1971 (computer analysis, COBOL, Assembler, JCL IBM-360), includes exegetes, computer specialists, documentalists and clerical staff. The team has varied in size from 3 to 27 members and at present has stabilized at about a dozen.

The primary objective hat always been to produce basic publications on the Bible, its meaning and distribution. The Benedictine abbey at Maredsous has been one of the engine of the „catholic biblical movement", mainly in French speaking areas, since 1949 mostly, when it published a translation of the Bible in modern French – the first new translation since the one prepared by cannon Crampon (1894, 1904) – and initiated the distribution of a periodical devoted to biblical spirituality and formation *Bible et Vie Chrétienne* (1952-1972). The name of Fr. Georges Passelecq (1909-) is inseparable from the Maredsous Bible version as is that of Dom Célestin Charlier (1911-1976) from the periodical and the monographs series published until 1972.

The creation of an analytical Index of the whole Bible for the French language was the first product of Maredsous' computer-aided works. A classic file containig references, contexts, synonymous terms, classification of the various usages of the biblical terms (or even non-biblical depending on the context and the need to put a bridge between meanings of today and meanings of the words in biblical writing) was used: data input, checking for coherence on all possible levels, corrections and modifications, programming output suitable for electronic phototypesetting and automatic page lay-out directly from the resulting magnetic tape ... and, finally, storage and classification for further use.
With the *Table Pastorale de la Bible* (1974) published, the first data were thus present in archive form. The first programs were operational. The tool could be used for other objectives. The second, too ambitious in the eyes of the „investing" publishers totally unused to this method of working, was a multilingual concordance of the Bible using 4 French translations and an English translation with references to the original texts (Hebrew, Aramaic, Greek) as well as Latin.
Although this project could not be realized in a single printed edition and moreover was too expensive when compared to the then newly introduced PC's, the materials to build the project has been progressively collected in the center in Maredsous by the consecutive generations of bible scholars and computer experts. The biblical texts have been encoded or integrated and analyzed: Hebrew and Aramaic texts

according to the *Biblia Hebraica Stuttgartensia*; Greek texts from Rahlfs *Septuaginta* and from *UBS-3* New Testament as produced by the TLG (Irvine, CA); French versions: *Bible de Maredsous*; *Bible de Jérusalem*, *Bible de Segond*, *Traduction Oecuménique de la Bible (T.O.B.)*; English text of the *Revised Standard Version with the Apocrypha/Deuterocanonical Books*. To these will be added: the *Latin Vulgate* of Tübingen; the Syriac and Arabic Gospels; Allioli's German Bible; the Spanish version of the Jerusalem Bible; the Willibrord Dutch Bible; complementary French versions *Lemaître de Sacy, Osty, La Pléiade*.
Economic pressure for maintaining a team at work enlarged the electronic data fund by adding biblical Dictionnaries (see below) and the computer expertise by creating packages for library cataloguing (*Debora.Doc*) or for parish management (*Debora European Pastoral Program*).
The tool was also used to process other textual data as works of Nicolas Barré (17th c.), J.B. de la Salle (17th c.) or Columba Marmion (19th-20th c.) as well as other types of documentation such as a bibliography of computer-assisted Bible study, etc. Numerous Gigabytes of data.

Of this whole certain parts are accessible interactively, either by telecommunication or by loading onto a PC hard disk. The data accessible in telecommunication are available via the host computers of GENETEL (Bordeaux, France) in the Télétel network (VTX standard TELETEL, phone number 3615 – from outside France 33.36431515 – code: MPBIBLE). Since 1985 it offers the T.O.B. and the Maredsous versions of the Bible and the *Dictionnaire de la Bible et des religions du Livre (judaïsme, christianisme, islam)*. The *Dictionnaire Encyclopédique de la Bible* with more than 13,000 bibliographical references, was added in 1987. These data are linked to the well known STAIRS (IBM) text retrieval program which allow for a fast and broad multicriterion search. An electronic mailbox allows users of this service to address their own questions and problems in the field of the Bible.

Data that can be loaded onto an IBM PC (XT, AT or PS/2 and compatible) are mostly the Bibles linked with the FindIT (MARPEX, Toronto) search engine, namely, the *Maredsous* version, the *Bible de Jérusalem*, and the *Biblia de Jesusalén* (Spanish); but also the analysed text of the *Biblia Hebraica Stuttgartensia* compared to the lexicon of the *Revised Standard Version* (program COMPUCORD, a joint-venture with Mikrah Computing, Brooklyn, New-York).

The remaining data is stored (15th August 1991) on 684 standard magnetic tapes of 6250 BPI and on 1205 diskettes (including security copies). Diskettes or tapes can be loaded at any time onto the IBM and compatibles PCs' local network (10-NET) at the C.I.B.-Maredsous. Transitory storage of very large files is now on rewritable magneto-optic disks (July 1991). Hard disk (Winchester) capacity in the network is more than 1,5 Gigabytes (with one 600 Mb disk and two 300 Mb). The files accessibles via this network are limited to those containig data for the projects in progress (at the moment, the data necessary to create an analytical concordance of the French *T.O.B.* with refereches to Hebrew/Aramaic and Greek texts).

This accessibility is strictly governed by the center's own programs which verify the permanent coherence of the data along the work of the scholars on those data. The coherence, from the side of computer management on a long term basis, is guaranteed by a continuous maintenance and a tradition of programming in COBOL (a language which has been used in more than 70% of the applications worldwide over more than 25 years and which is now again in style in the very fast, new version for PCs introcuced by Microsoft in 1989/90).
It will most likely be necessary to wait for the arrival of very large capacity classic or optical disks (5 to 10 Gigabytes) before being able, with the same micro-budgets and micro-environment, to create a relational database for internal (and external?) use which will allow users to move quickly from one set of data to another as the need arises.
CD-ROMs projects are on the way, even though it is possible to question the value of this storage method for purposes other than mass storage of data representing a coherent and complete whole (e.g. Irvine's TLG). Probably data bases of varying size, produced for a given audience to fill a targeted need will soon be stored and transmitted on large capacity $3^{1/2}$" inch diskettes (such as the 127 Mb magneto-optic $3^{1/2}$" disketes recently announced by IBM).

When the association and center were being organized on a permanent and autonomous basis in '79-'80 – the work itself having begun in 1971 – I had proposed to name it *„Informathèque Biblique"* (on the patern of the French „bibliothèque" – Library). My collaborators rejected this in favor of *Centre „Informatique et Bible"*.
We recall this name to refer in the most compact and true manner to the tool constructed within the limits imposed by the center's history technology, finances and staff.
In such a „data library" („noöthèque" was another name I suggested[1]) there is, in addition to the people qualified to promote its development, conservation, and exploitation: programs, projects plans, tools for computational verification and development, data related to research or utilities programs, data being treated or being used to create new tools, archive data, data stored for later use, and an environment comprising reference tools (printed library of monographs and series in the field of exegesis, linguistics, computer science, electronic publishing, telecommunication, etc...).

There is normally also a public relation department whose role, if the center is to exist from its productivity, is academic, as well as publicity oriented and commercial. CIB-Maredsous publishes two bulletins (*INTERFACE* and *DEBORA.DOC-INFORMATIONS*), provides a semi annual technical report on telecommucications for the Belgian church leaders, takes a leading role in the organization of the A.I.B.I. (Association Internationale Bible et Informatique) the International Bible and Computer Association whose meetings (1985, Louvain-la-Neuve; 1988, Jerusalem; 1991, Tübingen) gather together leading scholars in the

[1] See „Editorial", *DEBORA.DOC-INFORMATIONS,* 1990/1, p.1.

field and allow contact with related research areas: ACH, ALLC, biblical congresses, computer congresses, etc.
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