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Interface Between CDS/ISIS and the Web at the Library of the Cagliari Observatory

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Abstract. The library catalog of the Cagliari Observatory was digitized some years ago, by using CDS/ISIS with a practical format named "ASTCA" derived from the well-known "BIBLO". Recently the observatory has put some effort into the creation and maintenance of a Web site; on that occasion the library database has been interfaced to the Web server by means of the software WWWISIS and a locally created search form. Both books and journals can be searched by remote users. Book searches can be made by authors, titles or keywords.

1. Introduction

The library of the Cagliari Observatory (CAO) is not very old, but has inherited the bibliographic patrimony of the former Stazione Astronomica di Carloforte and has acquired in the course of the years a remarkable collection of books of historical interest in various fields of science and culture. At present the library has a patrimony of over 5000 books, covering most fields of Astronomy and related sciences, but also Philosophy, Religion, and History. In 1993 CDS/ISIS was adopted as the archiving software for the realization of an electronic catalogue. The digitization was accomplished in two years, and from then on the database has been used as an internal tool for archiving, searching and administrative purposes.

The CAO library has participated in 1995 in the first experiment of *CUBAI* (Denotti & Mureddu 1995), an integrated astronomical catalog based on the cooperation of all the Italian astronomical observatories, and in the *SICOB*, the academic information network of the Cagliari area.

Recently, with the implementation of a Web server, an on-line version of the library catalog was also created. This poster shows the main characteristics of this catalog, together with the tools and formats we have used.

2. The format ASTCA

ASTCA is the bibliographic format that was developed at the CAO library. It was derived from the format BIBLO, very popular in Italy, with some simplifications aimed at reducing the number of fields and the complexity of data input operation. The format was implemented on an MS-DOS PC with network support, with the micro-ISIS version of the software. The Field Definition Table (FDT) of ASTCA is reported in Table 1.

Tag	Field name	Rep	Type	Length	Subfields
01	Title/responsible entity	R	X	800	tscdra
02	Edition	R	X	100	er
03	Typology		A	2	
04	Imprint	R	X	240	lndsta
05	Description	R	X	240	ea
06	Collection	R	X	240	tprav
07	Condition		X	100	
10	Notes	R	X	400	
12	Language	R	A	3	
13	Country	R	X	12	
18	ISBN/ISSN	R	X	100	bs
41	Personal author		X	240	cnq
42	Corporate author		X	240	1qa2b
51	Add. pers. authors	R	X	240	cnq
52	Add. corp. authors	R	X	240	1qa2b
61	Subjects (keywords)	R	X	400	st
62	CDD		X	15	
63	Abstract	R	X	480	
71	Location	R	X	50	
72	Date of cataloging		N	6	
73	Operator	R	A	2	
74	Inventory number		X	30	si
87	Loan permitted		A	1	
88	State of loan		A	1	
89	On loan to		X	200	dn
91	Acquisition		A	2	
92	Price or value		X	100	cfs
94	Check		A	2	

Table 1. Field Definition Table of ASTCA

3. Interface between ISIS and the Web: client-server applications

Since the first diffusion of the World Wide Web many efforts have been devoted to the creation of interfaces to be used with the existing library databases, in particular those based upon CDS/ISIS.

Two approaches have been exploited:

- Export of the database, i.e. translation of the data from the ISIS format to another (plain text, ISO 2709, and so on) in order to make the material searchable by means of other tools.

- Creation of an ISIS-interface to search the Master File in the same format as created and updated by the librarian.

Both methods have been widely used in the last years. For instance, the first realization of the CUBAI project (Ferrucci & Balestra 1994) for an integrated astronomical catalog in Italy was based on the WAIS search engine on an export of the databases to text files. A second approach was the realization of a WAIS-ISIS interface to search the database itself. It is obvious that this

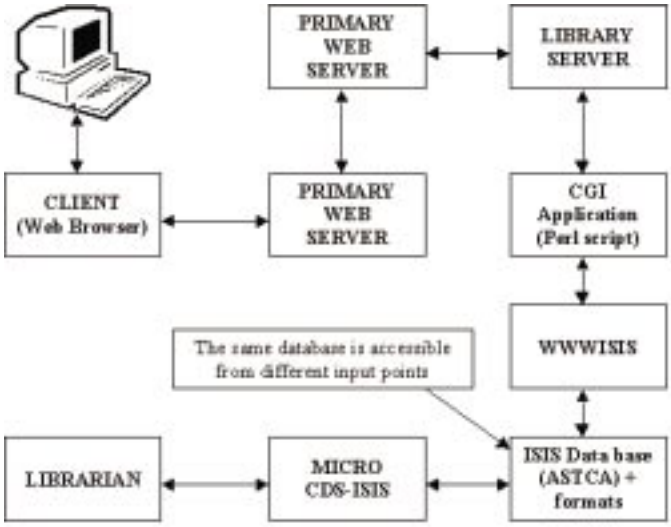

Figure 1. Scheme of the interface.

second approach is preferable because it offers the real-time searchability of the catalog.

The solution to be adopted strongly depends on the hardware platform where the CDS/ISIS software is installed. The library catalog at CAO is based on a PC running CDS/ISIS under WIN-95. The WWW server is run on a second computer (http://www.ca.astro.it), which acts as main gateway for all incoming requests as well as outgoing data. The scheme of the interface is given in Fig. 1.

The software we adopted is WWWISIS, developed and distributed in Brazil by the BIREME organization. It is designed to act as a server for ISIS databases in a WWW client-server environment, with a CGI interface developed in Perl language. Figures 2 and 3 show the homepage and the search form for the book catalog. A useful feature of the search interface is the possibility to pick a keyword from a pop-up list in the form.

References

Denotti, F. & Mureddu, L. 1995, 1st CUBAI Workshop: Rome 1995

Ferrucci, M.& Balestra A. 1994, WWWorkshop: Padova 1994

Figure 2. Homepage of Cagliari Observatory

Figure 3. The search module