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ACCESS TO A TAIWAN OPAC ON THE INTERNET
ACCESSING THE ACADEMIA SINICA'S CHINESE/ENGLISH LIBRARY CATALOG

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Academia Sinica's Online Public Access Catalog (OPAC), built on the INNOPAC integrated library system began operations in June 1992. It has since been open to TANet (Taiwan Network) users for remote access. In order to access the English catalog, North American users require only standard hardware and software on the Internet, which is the same configuration used to access North American library catalogs. The user may use, for example, an MS-DOS-type personal computer, an Ethernet card, a Western Digital packet driver, and a network connection. Accessing Academia Sinica's Chinese catalog requires additional software to interpret the multibyte Chinese character codes. This article will introduce a simple configuration that can provide access to both the English and English-Chinese catalogs.

The first section is on software and hardware to be used on an MS-DOS-type personal computer. The second section explains how to set an 8-bit environment on a network node on the networks. Once a user has logged into the library catalog, the searching procedure is self-explanatory. Each screen has its own instructions on how to proceed. Consult the appropriate documentation on how to search the catalog.

This article will not instruct someone on the setup of the personal computer, the Chinese character system, or the network. Readers should consult the manuals of the computer, the Chinese characters system, and the Internet for operation of those systems. There are two reasons for not elaborating on these procedures: (1) the explanations would be too involved for a short article, and (2) these systems are all under rapid revision and any explanation made here might soon be outdated. This article will therefore focus on how to configure these systems for the purpose of accessing the Academia's catalog. Once the user is familiar with accessing the Academia's catalog, accessing to other OPAC's which access Chinese, Japanese, Korean (CJK) language-based databases would be similarly easy.

The Workstation

I. English mode

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Remote access to the English catalog is comparatively simple, with standard network software on an MS-DOS-type personal computer, using the following procedure:

1. Log into your local node of TANet in Taiwan or Internet in the United States.

2. Telnet to the DEC5500 computer at the Academia Sinica using the catalog's IPs:
   
   \[
   \text{telnet 140.109.4.14 (or telnet las.as.edu.tw)}
   \]

3. When connected, the DEC5500 will display the following message for a user name:
   
   \[
   \text{ULTRIX V4.1 9Rev.52) (las.as.edu.tw)}
   \]
   
   login:

   At the cursor, type in "library". No password is required. The computer should respond with a menu. In case the computer responds with "unknown host" or a similar message, suspect an inappropriately set local computer routing table. Consult with your system manager to remedy the problem.

4. The system will present a menu of terminal types:

   \[
   \text{What kind of Terminal are you using?}
   \]
   
   \[
   C>CCCII PC
   E>E-Tien PC
   V>VT-100 PC
   \]

   Press "V" for a typical English terminal.

5. You should now see the main menu of the OPAC. Follow the on-line instructions to search the western language library catalog.

II. English/Chinese Mode

To use the Chinese catalog, your local PC needs a Chinese character system to interpret the 8-bit codes in order to display the Chinese characters. For the Academia's catalog, the choice is either a Chinese Characters Code for Information Interchange (CCCII) card produced by JOIN Computer (Taipei) or the Eten system. The Eten system lacks simplified characters and some traditional characters. The CCCII card has some 56,000 CJK characters. This includes all characters in the East Asian Characters Code (EACC), an American National Standard set in 1989) which is used by the CJK systems of the Research Libraries Information Network (RLIN) and the OCLC Online Computer Library Center's Online Union Catalog (OLUC) in North America. A low-end version of Eten costs about US$40.00 in Taiwan, while a set of CCCII cards costs several thousand dollars, and a soft version of the same program costs several hundred dollars at the time this is being written.
For first-time or infrequent users of remote access to Chinese catalogs, we recommend Eten for its low cost. When installing the Chinese system, be sure to set the CCCII card to CCCII codes and the Eten system to Big-5 codes. If you use an Eten system, expect certain characters to be omitted on the screen display.

Considering the above assumptions, a typical configuration would consist of:

- A 386 PC running MS-DOS 3.0 or higher (version 6 is the latest),
- an Eten system, floppy version 4 or higher (version 6 is the latest),
- an Ethernet card,
- a WD300E packet driver,
- a Telnet driver (preferably, a Chinese version by Industrial Technology Research Institute CCL from Taiwan).

There are many other possible configurations in addition to the one suggested above. Each has its own characteristics and idiosyncrasies. The example above was chosen for its balance of cost and availability. When installing this system, try to preserve as much conventional memory space (the first 640K on a PC) as possible by loading programs into high memory and unloading all other programs that are irrelevant to the access programs.

1. Log in with the Internet by entering:

   telnet 140.109.4.14

2. When connected, the DEC500 will respond with a message:

   ULTRIX V4.1 9Rev.52) (las.as.edu.tw)
   login:

   Type in "Chinese" and you will be logged into the computer without the need of a password.

3. The OPAC will now prompt you with the following question which asks for terminal type:

   What kind of Terminal are you using?
   C>CCCII PC
   E>E-Tien PC
   V>VT-100 PC

   Press "c" if you are using a JOIN system, or "e" if you are using Eten. If you press "v" at this time, Chinese characters will not appear on the screen (even though you have a Chinese character system). You are now logged into the OPAC.
If you are using a regular telnet facility without modifications as those done by ITRI/CCL, you may see gibberish on the screen where Chinese characters should be. At this point, set up the Internet node server to 8-bit mode. Different servers require different procedures. The following paragraphs are instructions for users of SUN workstations, IBM-RS workstations, VAX/VMS computers, and some general recommendations for other types of computers.

**SUN workstation:** To set up an 8-bit environment, use the vi editor to edit the .cshrc file:

```
vi .cshrc
```

Enter the following three command lines to the file:

```
stty -parenb
stty cs8
stty -istrip
```

Save the file. An 8-bit environment will be created whenever "telnet" is used to make remote connection. Those who prefer not to use the vi editor procedure described above may use the rlogin command to connect to the library system:

```
rlogin las.as.edu.tw -8 -l chinese
rlogin 140.109.4.14 -8 -l chinese
```

Please note that the "-l" shown above is the lower case letter "el", not numeral one "1".

**IBM-RS6000 workstation:** There is no need to set the environment to 8-bit. Direct use of the telnet command above will work.

**VAX/VMS computers:** Users of WIN/TCP as TCP/IP protocol must set the environment to 8-bit before executing either of the two:

```
telnet/eight las.as.edu.tw
telnet/eight 140.109.4.14
```

For all other types of computers, users may first try to telnet directly to the Academia Sinica computer and log into the INNOPAC system. If gibberish appears, try entering the command "rlogin". If login is still not possible, contact your systems managers to set up an 8-bit environment, and/or acquire a Chinese telnet driver and try again.

**Conclusion:** Internet is economical and convenient in accessing many computers in the world. Each may require different technical procedures and individual agreement for access. The Academia Sinica Library has agreed to open its OPAC to library users who want to
experiment with international connections. The experiment may be terminated unilaterally by the Academia at any time. It is the author's hope, however, that this experiment will lead to the opening of many other OPAC's in many other languages around the world.

The above techniques may be used to access other OPAC's. For example, the same hardware and software package can access Roger, the OPAC at the University of California, San Diego, Library via telnet 132.239.88.61 and login "eten" (if you are using a Big-5 terminal), "chinese" (for a CCCII terminal), and "library" (for an ascii terminal). Other OPAC systems can be accessed, providing the user has obtained permission to access them. Please direct any questions and comments about the technical setup to the author at bear@las.as.edu.tw.

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