

# The Malaysiana Conference Collection on CDS/ISIS: The Second Phase

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**Abstrak:** Koleksi Persidangan Malaysiana dimulakan oleh Bahagian Koleksi Kebangsaan (BKK) pada tahun 1984. Pada peringkat pertama penubuhan koleksi ini, usaha dijalankan bagi mengumpul dan mengindeks bahan-bahan dalam koleksi ini. Indeks yang berbentuk perkara ini ditempatkan di luar ruang BKK untuk rujukan para pengguna. Pada peringkat kedua, usaha telah dibuat bagi mengautomasikan indeks ini dengan menggunakan program CDS/ISIS yang dicipta oleh UNESCO. Penulis bercadang untuk menghuraikan berkenaan dua pangkalan data yang dibentuk (CONLIS dan BKKCON) untuk menampung keperluan Indeks Koleksi Persidangan Malaysiana ini. Kejayaan dari segi pencarian data dan keupayaan mendapatkan beberapa jenis pencetakan dari pangkalan data tersebut juga diperlihatkan. Masakini, sejumlah 525 judul persidangan dan lebih daripada 4,000 kertaskerja telah dimasukkan ke dalam pangkalan data yang telah dibentuk ini.

**Abstract:** The Malaysiana Conference Collection was initiated by the National Collection Division (NCD) in 1984. The first phase of its establishment involved the collection and indexing of the proceedings of locally-held conferences into various subject areas. These subject cards were filed in the 'Malaysiana Conference Index' Card Catalogue physically located outside the National Collection Division. The second phase of its development was the automation of this index, using the CDS/ISIS programme developed by UNESCO. This paper attempts to describe the two databases created (CONLIS and BKKCON) to accommodate the Malaysiana Conference Index. Success in terms of searching the database and the generation of various printouts is also shown. To date about 525 conference titles and over 4,000 papers have been keyed into the BKKCON and CONLIS databases.

The CDS/ISIS programme is developed by UNESCO to run on the mini/micro computers. It is especially designed to manage non-numerical databases, that is, databases which consist mainly of text. It is this very feature that makes it especially valuable in a library set-up where databases are mainly of a bibliographic nature.

The Malaysiana Conference Collection of the University of Malaya Library was initiated by the National Collection Division (NCD) in January 1984. The first phase of its development concentrated on locating relevant items from various parts of the main library, placing them in a special shelving sequence within the NCD, and indexing all papers in the collection. Simultaneously, letters of acquisition were also sent out to organizers of currently held conferences for copies of papers/proceedings. Up to December 1987, there were approximately 2076 titles of conferences that were held locally as well as papers on Malaysia presented at conferences outside the country. These 2076 titles contained

about 20,000 papers. Each of the papers is indexed according to the relevant subject area. Each subject entry contains details such as the name of paper presenter/author, title of the paper, title of the conference at which it was presented and the call number. Thus access to the papers in the Conference Collection is via the Conference Index Card Catalogue. This card catalogue is physically located outside the NCD. The arrangement of the index is in two sequences, the first sequence consists of titles of conferences kept in the collection, arranged in an alphabetical order. The second sequence provides for an alphabetical arrangement by subjects of each paper in the collection. Due to space constraints and the tremendous pressure on typing and filing of cards, it was decided to use the CDS/ISIS programme which the library received in early 1987. It was decided that even though it would mean the retyping of data which were already in card form, the advantages of a multi-access search format, less error in the

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filing of cards and its varied sorting capabilities are worth the time and effort in making the index a more meaningful and useful database. This decision was made in October 1987 and marked the beginning of the second phase in the development of the Malaysiana Conference Collection.

## PLANNING FOR THE DATABASE

At this juncture it is necessary to describe briefly the CDS/ISIS programme. The programme consists mainly of 5 sub-programmes, each specializing in specific system tasks. The sub-programmes and their functions are shown below:

### Sub-Programme/Main Tasks Performed

#### ISISDEF

- o Creating/updating field definitions of databases.
- o Creating/updating data entry work sheets.
- o Creating/updating display format when searches are initiated.
- o Creating/updating the predetermined searchable fields, etc.

#### ISIS

- o Entering data.
- o Editing data.
- o Searching the database.
- o Defining defaults.
- o Clearing defaults, etc.

#### ISISPRT

- o Printing with own or standard specification. A good knowledge of the programme's formatting language is essential.

#### ISISUTL

Provide miscellaneous system utility functions such as, changing the screen display attributes, creating/editing system worksheets and menus.

#### ISISINV

Inverting the master file of databases so as to make data entered searchable. This inversion function is also given under ISIS (Entering data)

#### ISISXCH

Interchanging data with other systems and most important of all, providing for the reorganization of the master file which re-compacts the master file and therefore reclaims lost space generated by frequent master file updates. This is equivalent to the 'PACK' function in the dBase programme.

For the Malaysiana Conference Collection it was decided initially to 'play around' with a sample of about 20 varied entries before embarking on full scale inputting. It was only when the desirable results in terms of display formats and the ability to achieve various types of printing output were known that fullscale inputting began. Using the ISISDEF sub-programme, two databases called BKKCON and CONLIS are created. The BKKCON contains details of each paper in the collection and the CONLIS Database contains a listing of conference titles held in the collection. Although titles of conferences are included in the BKKCON, the desired type of print-out cannot be achieved in this mini/micro version. Thus, details such as titles of conferences, organizers, editors, etc. have to be re-input into the CONLIS database.

All possible aspects of a database to be created must be thought out in advance because the CDS/ISIS programme does not give any option for delays in making decision. The following aspects need to be thought out in advance.

1. the fields needed for each database,
2. the selection as to which of the fields created are to be made searchable.
3. data entry worksheet format (this can be multiple pages) which has to be created right after (2)
4. the screen blanks immediately after (3) in order to create the display data for the database. This format will be used to display data entered into the database whenever a search of the database is made. For this a sound knowledge of the formatting language is essential.



The BKKCON database comprises 15 fields with the following features:

| Fields                     | Features   |
|----------------------------|--|
| 1. Authors                 | A repeatable field, i.e., it can accomodate more than one author.  |
| 2. Title                   | Title of the paper presented   |
| 3. Conference / Book Title | A field which is subfielded to accomodate details such as the number, place, and date of the conference. |
| 4. Editors                 | A repeatable field which can accomodate more than one author.  |
| 5. Imprint                 | Divided into three subfields for place, publisher and date of publication.                               |
| 6. Collation               | Divided into three fields to accomodate page/paper number, illustration and size of item.                |
| 7. Series                  |  |
| 8. Organizers              | A repeatable field which can accomodate more than one organizer.   |
| 9. Notes                   | The data in this field is enclosed within predefined brackets  |
| 10. Other items            | Translation into English of titles in Malay.   |
| 11. Subjects               | A repeatable field.  |
| 12. Geocode                | For states within Malaysia and countries other than Malaysia. This is a repeatable field.                |
| 13. Location               | BKK (National Collection Division).  |

14. Call no.

Call number of the conference title.

15. Keywords

A repeatable field, created to be used in conjunction with field 12.

The CONLIS database has 6 fields comprising the conference/book title, editor, imprint, organizer, notes and call number. For the BKKCON database, the 'authors' field has not been divided into subfields for forenames and surnames (although this is possible).

Having defined the fields for both databases, the searchable fields created through file inversion facility are: authors (by first name element entered), conference/book title, subjects and geocode. Although searchability of all fields is desirable, we decided to be selective and to concentrate on the most essential fields so as to save computer space. After defining which fields can be searched, the data entry worksheet is then created. Example 1 shows a print screen of the two-page data entry worksheet of the BKKCON database and CONLIS database.

## DATABASE ENTRY AND MAINTENANCE

Once the worksheet has been created, data is entered into the BKKCON database through the ISIS sub-programme. In order to achieve the desired results with regard to screen display and print-outs, a variety of data are entered such as:

- i) a paper authored by more than one person,
- ii) Malay names preceded by hereditary titles which need to be placed before the name element but to be ignored for filing,
- iii) problems of variant spellings in the case of 'Muhammad' for Malay names and 'Mac/Mc' for European names,
- iv) articles such as 'The', 'A' and 'An' which are found at the beginning of sentences but to be ignored for filing.

Each data entered is given a unique Master File Number (MFN) number, which is automatically generated. Example 2 shows a print screen of data entered into a BKKCON data entry worksheet. There are differences between data entered in the author field and those in the subject field even though both fields are repeatable. The



## Example 1: Print Screens of the BKKCON and CONLIS Data Entry Worksheets

### (a): Print Screen of the BKKCON Data Entry Worksheet

```

authors _____
title _____
conference/book title _____
editors _____
imprint _____
collation _____
Series _____

M - Modify  J R - Right just  J S - Shift  J D - Delete  J - Center
A - Add field <TAB> - Previous J F - Next  J X - Exit  J
                                BKKCO / 1

organizers _____
notes _____
other title _____
subjects _____
geocode _____
location _____
call no. _____
keywords _____

M - Modify  J R - Right just  J S - Shift  J D - Delete  J - Center
A - Add field <TAB> - Previous J F - Next  J X - Exit  J
                                BKKCO / 2
  
```

### 1 (b). Print Screen of the CONLIS Data Entry Worksheet

```

conference/book title _____
editors _____
Imprint _____
Organizers _____
Notes _____
Other title _____

Call no. _____
Conf code _____
M - Modify  J R - Right just  J S - Shift  J D - Delete  J - Center
A - Add field <TAB> - Previous J F - Next  J X - Exit  J
                                CONLI / 1
  
```

## Example 2. Print Screen Example of Data Entered Into the BKKCON Data Entry Worksheet

```

authors <MOHD.=muhammad> Nor Abdul Ghani<Nik> ABDUL Rashid Ismail<VIJANDRAN, D.
P.
title Management, decision-making and productivity
conference/book title Malaysia incorporated and privatisation: towards national
unity
editors Mohd. Nor Abdul Ghani
imprint ^aPetaling Jaya^bPelanduk Publications^cl984
collation ^ap. 9
Series
EDIT: Replace          More ...          MFN= 3490

organizers
notes Contain paper presented at a National Seminar on Malaysia Incorporated and
Privatisation held on the 10-11 Oct 1983 in Kuala Lumpur
other title
subjects <Privatization - Malaysia><Corporations - Malaysia>
geocode
location bkk
call no. HC445.5 Mal
keywords

J F - Next page  J B - Previous page  J M - Modify  J R - Restore screen  J
J X - Exit      J D - Delete          J C - Cancel  J T - End revise  J
                                Last page          MFN= 3499
  
```



former can accommodate subfields (for forenames and surnames if desired) while the latter cannot accommodate subfields.

#### a) Database Maintenance

It is the usual practice to print out in the proof mode a batch of 200 entries for proof reading and amendments. Amendments to the database entered can be made through the ISIS sub-programme. Uniformity in the way names of authors and subject headings are entered is of utmost importance to ensure efficient retrieval of information from the database. Exactness in terms of entry must be ascertained each time the same name or subject is repeatedly used. To ensure this uniformity, a print-out of subject headings used together with the MFN numbers is generated after about 2,000 entries are entered into the database. Similarly, a print-out of names of authors with the MFN numbers is also generated after about 4,000 entries are entered. It is only through proof-reading these print-outs that discrepancy in spellings and subject terms can be detected and amended accordingly. These print-outs also form the basis for future reference and guide for subsequent entering of data. Example 3 shows two samples, a Subject Headings Listing (3a) and the Authors' Name Listing (3b).

Frequent amendments and updating of the database result in a considerable amount of computer space being occupied especially since data tagged to be deleted are not deleted immediately but only after a reorganization of the Master File is called for under the ISISXCH sub-programme, which under option 'C', can be used to reclaim lost computer space.

#### b) Inversion

Data entered into the database needs to be inverted or updated for two reasons; firstly, to facilitate 'online' search of data entered and secondly, no back-ups can be effectively made if inversion is pending for some data. CDS/ISIS will initiate a warning if this occurs. Inversion can be done in two ways; under the ISIS sub-programme itself after the termination of each data entering session and under the ISISINV sub-programme.

## THE STOPWORD FILE

When entering data, not all the elements entered are considered essential. Some should be ignored when a filing function is called for. The CDS/ISIS programme does provide for the creation of a 'Stopword File', which consists of words that should be ignored during filing to save sorting time. This file is created by using EDLIN and each word is entered in the upper-case in an ascending alphabetical order. For the BKKCON database the stopwords file is called BKKCON.stw. Example 4 shows the stopwords file BKKCON.stw. There are about 123 words in the file which can be increased if necessary.

## PRINT FUNCTIONS

The CDS/ISIS programme has the ability to perform a variety of print functions. However when giving print instructions, a good knowledge of the print formatting language is necessary, so as to be able to generate the kind of print format desired. The print function is carried out by using the ISISPRT sub-programme. For the BKKCON and CONLIS database the following examples of print format have been successfully generated.

#### a) Conference Titles Listing

The CONLIS database can generate a fairly detailed listing of all conference titles in the Malaysiana Conference Collection. Example 5 shows an alphabetical listing of Conference Titles. To date about 525 conference titles have been entered into the CONLIS database. Details such as organizer of the conferences, imprint and editors (for titles that have been published), the class number and the MFN number are given. The inclusion of the MFN number in the print-out is essentially to indicate which entry needs to be amended in the listing.

#### b) Listing by Subjects

A subject approach print-out has also been successfully generated from the BKKCON database. In the subject listing, a three-level sorting function is required; firstly, by subject headings; secondly, by authors' names and lastly by title under each author. A large amount of computer space is needed to perform this kind of sorting. This is especially so when the subject headings



### Example 3(a). Subject Headings Listing

|  |  |
|--|--|
| AGRICULTURAL CREDIT - MALAYSIA<br>00006  | LANGUAGE PLANNING - MALAYSIA<br>00021  |
| BANKS AND BANKING - MALAYSIA<br>00006  | LUMBER TRADE - MALAYSIA<br>00001   |
| BUSINESS ENTERPRISES - MALAYSIA<br>00015   | MALAY LANGUAGE - HISTORY<br>00021  |
| COMPUTERS<br>00008   | MALAYS - ECONOMIC CONDITIONS<br>00018  |
| COOPERATION - ASIA<br>00019  | MANUFACTURES - MALAYSIA<br>00011   |
| ECOLOGY - ASIA<br>00025  | MASS MEDIA - ASIA<br>00020   |
| ECONOMIC CONDITIONS - MALAYSIA<br>00018  | MODERNIZATION<br>00020, 00022, 00023,<br>00024, 00025, 00026,<br>00027, 00029, 00030 |
| ECONOMIC DEVELOPMENT<br>00025  | OCCUPATIONS - MALAYSIA<br>00013  |
| ECONOMIC INTEGRATION - ASIA<br>00019   | POOR - MALAYSIA<br>00018   |
| EDUCATION - ASIA<br>00023  | RACE RELATIONS - MALAYSIA<br>00005   |
| EDUCATION - DEVELOPING COUNTRIES<br>00022  | RUBBER INDUSTRY AND TRADE -<br>MALAYSIA<br>00008                                     |
| EDUCATION - MALAYSIA<br>00021  | SCIENCE - CHINA<br>00024   |
| EDUCATION, HIGHER<br>00007   | SEMICONDUCTOR INDUSTRY - MALAYSIA<br>00012   |
| EDUCATION, HIGHER - MALAYSIA<br>00009, 00010   | SOCIAL CONDITIONS - MALAYSIA<br>00005  |
| ELECTRONIC DATA PROCESSING<br>00008  | TEACHING<br>00007  |
| FOREIGN ECONOMIC RELATIONS -<br>MALAYSIA - UNITED STATES<br>00001                    | TECHNOLOGY<br>00026  |
| FURNITURE INDUSTRY AND TRADE -<br>MALAYSIA<br>00001                                  | TECHNOLOGY - ASIA<br>00027   |
| HOUSING - SINGAPORE<br>00028   | TECHNOLOGY - CHINA<br>00024  |
| INDUSTRIES - MALAYSIA<br>00011, 00012, 00015,<br>00016, 00017                        | TELECOMMUNICATIONS - MALAYSIA<br>00002, 00003, 00004                                 |
| INDUSTRIES - PULAU PINANG<br>00014   | TIMBER - MALAYSIA<br>00001   |
| INDUSTRIES - SELANGOR<br>00015   | URBANIZATION - ASIA<br>00030   |
| INFORMATION STORAGE AND RETRIEVAL<br>SYSTEMS - RUBBER INDUSTRY AND<br>TRADE<br>00008 | URBANIZATION - HONG KONG<br>00030  |
| INVESTMENTS - MALAYSIA<br>00004  | URBANIZATION - INDONESIA<br>00029  |
| LABOR SUPPLY - MALAYSIA<br>00013   | URBANIZATION - SINGAPORE<br>00028  |
|  | WAGES - MALAYSIA<br>00013  |

### Example 3(b). Authors' Name Listing

|  |  |
|--|--|
| A. LATIFF Ibrahim.<br>00298  | ANWAR Ibrahim.<br>00119                                |
| A. ZAHARUDIN Idrus.<br>00151   | ARUN, K.C.<br>00251                                    |
| ABDOELLAH, Arma.<br>00076  | ASMA Ahmad.<br>00192                                   |
| ABDUL Rahman Al-Ahmadi.<br>00246   | ASMAH Haji Omar.<br>00274                              |
| ABDUL Rani bin Pawanchek.<br>00185   | AUDU, James.<br>00195, 00197                           |
| Nik ABDUL Rashid Ismail.<br>00065  | AWANG Had Salleh.<br>00159, 00271, 00285               |
| ABDULLAH Bujang.<br>00158  | AWANG Sariyen.<br>00167                                |
| ABDULLAH Hassan.<br>00273  | AZIMI HJ. Hamzah.<br>00192                             |
| ABDULLAH Malim Baginda.<br>00203   | BENAMARA, Abdul Kader.<br>00201                        |
| ABDULLAH Mohd. Salleh.<br>00200  | BENDER, E. Milton.<br>00027                            |
| ABDULLAH Omar.<br>00127  | BERGMALL, Lars.<br>00202                               |
| ABDULLAH Zakaria bin Ghazali.<br>00243   | BUSINESS-Government Relations<br>Study Group.<br>00050 |
| ABHINYA Ratanamongkolmas.<br>00105   | C., Daniel Hock Seng.<br>00085                         |
| ABU Bakar Nordin.<br>00163   | CANN, Donald.<br>00255, 00262                          |
| AGARWAL, R.P.<br>00284   | CH'NG, G.C.<br>00143                                   |
| AHMAD Kamari.<br>00264   | al-CHALABI, Fadhil J.<br>00199                         |
| AHMAD Mustaffa bin Haji Babjee.<br>00208   | CHAN, Ngor Chong.<br>00096                             |
| AHMAD Noordin.<br>00061  | CHANAR Kasipar.<br>00290                               |
| AINON Khariyah Dato Mohd. Abas.<br>00247   | CHANG, Pao Min.<br>00092                               |
| AINUDDIN Abdul Wahid.<br>00064   | CHANG, Peter.<br>00044                                 |
| ALLAN, Daniel S.<br>00140  | CHANG, S.T.<br>00175                                   |
| ALWI Jantan.<br>00120  | CHEAM, Soon Tee.<br>00156                              |
| ANI bin Arope.<br>00187  | CHEN, Edward K.Y.<br>00180                             |
| ANON.<br>00053, 00067, 00160,<br>00220, 00221, 00222,<br>00223, 00224, 00225,<br>00226, 00227, 00231,<br>00233 | CHEN, Kwek Kong.<br>00218                              |
| ANUAR Nor Arai.<br>00211, 00265  | CHEN, Voon Fee.<br>00114                               |
|  | CHEONG, Yeow Fook.<br>00155                            |

### Example 4. The BKKCON Stopword File

|           |          |          |          |         |
|-----------|----------|----------|----------|---------|
| A         | CARA     | KEATAS   | SECARA   | WITHIN  |
| ABOVE     | CIRI     | KERANA   | SEMUA    | WITHOUT |
| ADA       | DALAM    | KINI     | SERING   | YANG    |
| ADALAH    | DAN      | KITA     | SOME     | YOU     |
| ALONG     | DAPAT    | LAGI     | SYED     | YOUR    |
| AMONG     | DARI     | LAIN     | TELAH    |         |
| AMONG     | DARIPADA | LANGSUNG | TENGKU   |         |
| AN        | DENGAN   | LEBIH    | TENTANG  |         |
| AND       | DI       | MAY      | TERDAPAT |         |
| APA       | DULU     | MEMANG   | THAT     |         |
| APABILA   | FOR      | MENGENAI | THE      |         |
| ARE       | FORWARD  | MUNGKIN  | THESE    |         |
| AS        | FROM     | MUST     | THEY     |         |
| ATAS      | FRONT    | NIK      | THIS     |         |
| ATAU      | HAD      | NO       | THOSE    |         |
| AWAY      | HAJI     | NOR      | TIDAK    |         |
| BAGAI     | HARUS    | NOT      | TO       |         |
| BAGAIMANA | HAS      | OF       | TOWARDS  |         |
| BAGI      | HAVE     | OFF      | THROUGH  |         |
| BE        | HIS      | OFTEN    | TUNKU    |         |
| BEFORE    | HER      | OLEH     | UPON     |         |
| BELOW     | HERS     | ON       | USED     |         |
| BELUM     | HEREWITH | ONLY     | WAN      |         |
| BILA      | IN       | ONWARDS  | WAS      |         |
| DIN       | INI      | PERLU    | WERE     |         |
| BINTI     | INTO     | PULA     | WHEN     |         |
| BOLEH     | IT       | RAJA     | WHERE    |         |
| BT        | ITS      | SAMA     | WHICH    |         |
| BTE       | ITU      | SAME     | WHOSE    |         |
| BUT       | JUGA     | SAPERTI  | WITH     |         |

## Example 5. Alphabetical Listing of Malaysiana Conference Titles Generated by CONLIS

- AAMQ Regional Management Conference; 8th, 30 Oct-2 Nov 1983, Pulau Pinang.  
Organised by: Asian Association of Management Organisations, Penang.  
(Theme: The new region - the new manager, changes and challenges. Also published as part of, Malaysiana Management Review, Vol.18, no.3, Dec 1983)  
FHC412 AAMQ83C. (00046)
- Accounting Seminar, 24 Sep 1983, Kuala Lumpur.  
Organised by: Accounting Club, University of Malaya.  
HF5667 AS. (00047)
- ACU Conference of the Executive Heads of Commonwealth Universities; 12th, 18-23 Aug 1986, Penang.  
Organised by: Association of Commonwealth Universities.  
(Unpublished)  
FLB2301 ACUCHECU. (00065)
- ADI-USM Sub-Regional Training Seminar on Urban Redevelopment and Low Cost Housing, 17 May - 4 Jun 1977, Penang.  
Organised by: United Nations Asian Development Institute and Universiti Sains Malaysia, Penang.  
(Available in two volumes)  
FHD7358 A3ADIUSMS. (00077)
- ASAIHL Conference, 1974, Manila SEE Conference on Majority-Minority Situation in Southeast Asia, 8-10 May 1974, Manila.  
(00013)
- ASAIHL Seminar on Modern Technology in ASAIHL Universities, 16-17 Oct 1981, Kuala Lumpur.  
Organised by: University of Malaya.  
LB1028.3 ASAIHLSMT. (00043)
- ASEAN Ceramic Exhibition and Workshop; 6th, 3-5 Mar 1987, Kuala Lumpur.  
Organised by: Malaysian Ceramic Industry Group.  
(Unpublished)  
FHD9617 A77ASEANC. (00076)
- ASEAN Investment Seminar - Rubberplas '80, 27-28 May 1980, Singapore.  
FHD9161 M42ASEANI. (00064)
- Asian Conference of Editors of Mass Communication Periodicals, 3-6 Oct 1972, Singapore.  
Organised by: Asian Mass Communication Research and Information (Singapore).  
FPM5449 M4ACMCP. (00067)
- Conference of Teachers of Economics in Schools, 13-16 Apr 1967, Kuala Lumpur.  
Organised by: Faculty of Economics and Administration, University of Malaya.  
(Unpublished)

## Example 6. Sample Printout of the BKKCON Database by Subject Headings

### AGRICULTURAL CREDIT - MALAYSIA

- SANJIT Jindal.  
"Rural loans: a commercial bank's experience" Seminar Towards a Progressive Agribusiness Community, 12-14 Aug 1976, Serdang. FHD916 WESTPAC.

### BANKS AND BANKING - MALAYSIA

- SANJIT Jindal.  
"Rural loans: a commercial bank's experience" Seminar Towards a Progressive Agribusiness Community, 12-14 Aug 1976, Serdang. FHD916 WESTPAC.

### BUSINESS ENTERPRISES - MALAYSIA

- CHI, Jack Choo; TAYLOR, Michael.  
"Business organisations, labour demands and industrialization in Malaysia" Industrialization and labour force processes: a case study of Peninsular Malaysia. Edited by: T.G. McGee. Canberra, Australian National University, 1986. B05622.6 AFHC.  
(Papers of a Workshop held on 6-7 November 1985 at the Australian National University in Canberra)

### COMPUTERS

- LYEN, G.C.; KAN, B.W.; CHIAN, T.T.  
"Information retrieval system with a mini computer" International Conference on Computer Applications in Developing Countries, 22-25 Aug 1977, Bangkok. Edited by: J.A. Jordan & Kenneth Mulsowong. Bangkok, Asian Institute of Technology, 1977. T57.62 I05AAC.

### COOPERATION - ASIA

- KARAPATY, V.  
"A policy guideline for economic cooperation in Asia" International Conference on the Modernization of Asia; 3rd., 3-8 Sep 1972, Penang. Edited by: Lim, Teck Ghee; Vincent Looe. Kuala Lumpur, Heinemann Educational Books, 1976. B635 I0NA.

### ECONOMIC CONDITIONS - MALAYSIA

- Eyed BESIN Ali.  
"Social and political constraints on economic growth and development in Malaysia" International Conference on the Modernization of Asia; 3rd., 3-8 Sep 1972, Penang. Edited by: Lim, Teck Ghee; Vincent Looe. Kuala Lumpur, Heinemann Educational Books, 1976. B635 I0NA.

### ECONOMIC INTEGRATION - ASIA

- KARAPATY, V.  
"A policy guideline for economic cooperation in Asia" International Conference on the Modernization of Asia; 3rd., 3-8 Sep 1972, Penang. Edited by: Lim, Teck Ghee; Vincent Looe. Kuala Lumpur, Heinemann Educational Books, 1976. B635 I0NA.

### EDUCATION, HIGHER

- FATMAH David Bin.  
"Teaching - it's role in human development" Seminar on Higher Education: A Reevaluation, 4-5 Jun 1980, Kuala Lumpur. FLA123H B08H.

### EDUCATION, HIGHER - MALAYSIA

- KORANDEEN Raji Kuchor.  
"Pendidikan dan dasar ekonomi baru: antara harapan dan pencapaian melalui dari aspek kemudi dan kemudi" Kertas-kertas Pendidikan; ke 9, 15-17 Dec 1984, Pulau Pinang. FLA123H KP.  
Translated title: Education and the new economic policy: between hopes and the achievement of objectives from the aspects of quantity and quality.  
"The role of university administration and technology in achieving the Malaysian national objectives of education" ASAIHL Seminar on Modern Technology in ASAIHL Universities, 16-17 Oct 1981, Kuala Lumpur. LB1028.3 ASAIHLSMT.



## Example 7. Sample Printouts by Authors

### Example 7(a). Sample Printout by Authors in Single Column

- CHI, Seck Choo.  
'Business organisations, labour demands and industrialisation in Malaysia' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac.
- CHIAM, T.T.  
'Information retrieval system with a mini computer' International Conference on Computer Applications in Developing Countries, 22-25 Aug 1977, Bangkok. Bangkok, Asian Institute of Technology, 1977. T57.62 ICCADC.
- DAUD bin Ishak.  
'The role of the telecommunications industry in Malaysia' International Conference on Telecoms - New Developments, New Technology and New Opportunities, 3-4 Mar 1986, Kuala Lumpur. FH8390.6 ICTNDNTNO.
- FATIMAH Hamid Don.  
'Teaching - it's role in human development' Seminar on Higher Education: a Reevaluation, 4-5 Jan 1986, Kuala Lumpur. FLA1238 SHBH.
- GIBBONS, David S.  
'National integration and cultural diversity: the case of Malaysia' Development in Southeast Asia: issues and dilemmas. Bangkok, Southeast Asian Social Science Association, 1972. HC413 A77Dev.
- HIGGINS, Benjamin.  
'Industrialisation in Malaysia: a comment' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac.
- Syed HUSIN Ali.  
'Social and political constraints on economic growth and development in Malaysia' International Conference on the Modernization of Asia; 3rd., 3-8 Sep 1972, Penang. Kuala Lumpur, Heinemann Educational Books, 1976. DS35 IOMA.
- IVER, G.C.  
'Information retrieval system with a mini computer' International Conference on Computer Applications in Developing Countries, 22-25 Aug 1977, Bangkok. Bangkok, Asian Institute of Technology, 1977. T57.62 ICCADC.
- JEGATHESAN, J.  
'Investment incentives, policies and facilities for the telecommunication industry' International Conference on Telecoms - New Developments, New Technology and New Opportunities, 3-4 Mar 1986, Kuala Lumpur. FH8390.6 ICTNDNTNO.
- KAMAL Salih.  
'Regional impact of industrialisation: a case study of Penang State' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac.
- KAMARUDIN Haji Kachar.  
'Pendidikan dan dasar ekonomi baru: antara harapan dan pencapaian matlamat dari aspek kuantiti dan kualiti' Konvensyen Pendidikan; ke 9, 15-17 Dec 1984, Pulau Pinang. FLA1236 KP.  
'The role of university administration and technology in achieving the Malaysian ultimate national objectives of education' ASATH Seminar on Modern Technology in ASATH Universities, 16-17 Oct 1981, Kuala Lumpur. LRI02H.3 ASATHSMT.
- KANAPATHY, V.  
'A policy guideline for economic cooperation in Asia' International Conference on the Modernization of Asia; 3rd., 3-8 Sep 1972, Penang. Kuala Lumpur, Heinemann Educational Books, 1976. DS35 IOMA.

### Example 7(b). Sample Printout by Authors in Double Columns

- |  |  |
|--|--|
| CHI, Seck Choo.<br>'Business organisations, labour demands and industrialisation in Malaysia' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac. | SYED HUSIN Ali.<br>'Social and political constraints on economic growth and development in Malaysia' International Conference on the Modernization of Asia; 3rd., 3-8 Sep 1972, Penang. Kuala Lumpur, Heinemann Educational Books, 1976. DS35 IOMA.  |
| CHIAM, T.T.<br>'Information retrieval system with a mini computer' International Conference on Computer Applications in Developing Countries, 22-25 Aug 1977, Bangkok. Bangkok, Asian Institute of Technology, 1977. T57.62 ICCADC.              | IVER, G.C.<br>'Information retrieval system with a mini computer' International Conference on Computer Applications in Developing Countries, 22-25 Aug 1977, Bangkok. Bangkok, Asian Institute of Technology, 1977. T57.62 ICCADC.   |
| DAUD bin Ishak.<br>'The role of the telecommunications industry in Malaysia' International Conference on Telecoms - New Developments, New Technology and New Opportunities, 3-4 Mar 1986, Kuala Lumpur. FH8390.6 ICTNDNTNO.                      | JEGATHESAN, J.<br>'Investment incentives, policies and facilities for the telecommunication industry' International Conference on Telecoms - New Developments, New Technology and New Opportunities, 3-4 Mar 1986, Kuala Lumpur. FH8390.6 ICTNDNTNO.   |
| FATIMAH Hamid Don.<br>'Teaching - it's role in human development' Seminar on Higher Education: a Reevaluation, 4-5 Jan 1986, Kuala Lumpur. FLA1238 SHBH.   | KAMAL Salih.<br>'Regional impact of industrialisation: a case study of Penang State' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac.  |
| GIBBONS, David S.<br>'National integration and cultural diversity: the case of Malaysia' Development in Southeast Asia: issues and dilemmas. Bangkok, Southeast Asian Social Science Association, 1972. HC413 A77Dev.                            | KAMARUDIN Haji Kachar.<br>'Pendidikan dan dasar ekonomi baru: antara harapan dan pencapaian matlamat dari aspek kuantiti dan kualiti' Konvensyen Pendidikan; ke 9, 15-17 Dec 1984, Pulau Pinang. FLA1236 KP.<br>'The role of university administration and technology in achieving the Malaysian ultimate national objectives of education' ASATH Seminar on Modern Technology in ASATH Universities, 16-17 Oct 1981, Kuala Lumpur. LRI02H.3 ASATHSMT. |
| HIGGINS, Benjamin.<br>'Industrialisation in Malaysia: a comment' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac.                              | MEI, Ling Young.<br>'Regional impact of industrialisation: a case study of Penang State' Industrialisation and labour force processes: a case study of Peninsular Malaysia. Canberra, Australian National University, 1986. HD5822.6 AQMac.  |



tend to exceed the total number of entries in the database. Also no limit has been imposed upon the number of subject headings given to each record so as to facilitate a greater hit probability during a search. It can be roughly estimated that for over 4,000 records in the BKKCON database, the number of subject headings have so far exceeded 8,000. Example 6 shows a sample print-out of about 15 records in the BKKCON database, listed under subject headings given. The CDS/ISIS print programme allows for the suppression of repeated headings. Therefore a subject heading only appears once for several records bearing the same heading. The same goes for the author of a number of papers. The author's name which is sorted under the subject headings is not repeated under the second and subsequent papers that he writes. For example see entries under 'Kamarudin Haji Kachar' listed under 'Education, Higher - Malaysia'.

#### c) Author Listing

The versatility of the CDS/ISIS programme makes possible a listing by authors as well. This is an advantage over the Malaysiana Conference Collection Index card form, where the author approach search is not provided for. Currently there are about 4,300 names in the author authority file. Example 7 shows two samples of print-outs of about 20 entries, one in a single column(7a) and the other in two columns(7b). Again under 'Kamarudin Haji Kachar', the author's name is not repeated after its first appearance. Titles of papers by a single author are sorted in alphabetical sequence. Elements of name which have been suppressed for filing during data entry, will appear before the proper name element but do not affect sorting by the proper name elements. See example under 'Syed HUSIN Ali', where 'Syed' has been suppressed and filing begins with 'HUSIN'.

#### d) Geographical Index

It is also possible to generate a Geographical Index based on the geocode field provided in the BKKCON data entry worksheet. Example 8 shows a sample of a Geographical Index for MFN entries 200/400. Under each country, region or town are listed subject headings which relate to the geographical area concerned. Thus to find out what papers have been written about Kuala

Lumpur one has to refer to entries under the subject headings of city planning, housing and public housing. Under each geographical area the subjects are listed alphabetically.

#### Conclusion:

The advantages provided by the CDS/ISIS programme for the Malaysiana Conference Collection Index are indeed substantial. The burden of manually filing subject cards is totally eliminated. More time can therefore be used for keying in data. Even in the course of keying in data the burden of typing is somewhat lessened, since data tagging to a given subject heading is automatic. Thus each paper needs to be keyed in only once. It is observed that about 300 papers can be keyed in each week, which takes up all 7 hours of the allotted computer time given to the NCD. It is hoped that by the end of 1988 all papers in the disciplines of Social Sciences and Humanities in the Collection would be keyed in. Since October 1987, about 4,500 papers have been keyed in from about 430 conference titles. The Social Sciences and Humanities Malaysiana Conference database is expected to accommodate over 10,000 papers from a further 1,000 conference titles accumulated between January 1984 to December 1987. Once these have been entered, the subsequent keying in of current data for each year will be less as it is estimated that the collection will grow by about 200 conference titles each year. By far, the most important advantage is the possibility of a multiple approach search. Searches of the BKKCON database can be made through names of authors, subjects, and titles of conferences.

There is also the advantage of being able to generate different kinds of print-outs, as indicated under the section on 'Print Functions' previously.

Despite the advantages mentioned above however, a number of problems have surfaced in the process of automation. The CDS programme is installed on a 20MB IBM microcomputer which is found to be insufficient to accommodate a large database such as the BKKCON. Presently, no full-scale sorting can be carried out under subjects because of limited available computer space. Currently only data entry and maintenance are possible.



## Example 8. Sample Listing by Geographical Areas

|                                 |                                  |
|---------------------------------|----------------------------------|
| AFRICA                          | HONG KONG                        |
| Universities and colleges.      | Computer education.              |
|                                 | Education, Higher.               |
| ASEAN COUNTRIES                 |                                  |
| Ceramic industries.             | Housing.                         |
|                                 | Public housing.                  |
| ASIA                            |                                  |
| Building materials.             | Universities and colleges.       |
| Construction industry.          |                                  |
| Housing.                        | INDIA                            |
| Public housing.                 | Technology transfer.             |
|                                 | Universities and colleges.       |
| ASIA, SOUTHEASTERN              | INDONESIA                        |
| Architecture.                   | Computer education.              |
| Housing.                        | Educational technology.          |
| Public housing.                 | Housing.                         |
| Technical education.            | Universities and colleges.       |
| Urbanization.                   | Urbanization.                    |
| AUSTRALIA                       | KOREA                            |
| Astrophysics.                   | Construction industry.           |
| Ceramic industries.             | Housing.                         |
| Clay soils.                     | Public housing.                  |
| Computer Assisted instructions. | KUALA LUMPUR                     |
| Universities and colleges.      | City planning.                   |
|                                 | Housing.                         |
| BURMA                           | Public housing.                  |
| Housing.                        |                                  |
| Public housing.                 | NEW ZEALAND                      |
|                                 | Universities and colleges.       |
| CANADA                          | NIGERIA                          |
| Universities and colleges.      | Universities and colleges.       |
| DEVELOPING COUNTRIES            | PERAK                            |
| Universities and colleges.      | British.                         |
| GHANA                           | Dancing.                         |
| Universities and colleges.      | History.                         |
| GREAT BRITAIN                   | Languages.                       |
| Shrimp trade.                   | Malay language - Dialects.       |
| Universities and colleges.      | Instructional materials centres. |
| Plantations.                    |                                  |

Another problem is the database limits set by the CDS/ISIS programme itself. Each database is limited to only 32,000 records. Thus for a large database such as the BKKCON, a separate database for the Science and Technology conference papers will have to be created.

Despite its limitations, the CDS/ISIS has proven to be an invaluable tool in achieving

some sort of control over a database which is mainly bibliographic in nature. For the future however, it is essential to obtain access to a computer with greater capacity because the databases are expected to grow not only in size, but in range and use. The current programme is but a modest start to greater developments in the systematic handling of bibliographic data in the University of Malaya Library.