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CARISPLAN: Manual of Indexing Procedures



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CARISPLAN: Manual of Indexing Procedures

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P R E F A C E

This manual has been prepared to serve as a guide for indexing documents for the Caribbean Information System - Economic and Social Planning Sector. It is intended to guide indexers working in the decentralized system to ensure uniformity in selection of:

- a) type of material;
- b) level of sub-division;
- c) appropriate subject areas; and
- d) appropriate indexing terms.

This is the first manual which has been prepared for the system and it is planned that periodical updatings will cover the changes made in the technical aspects of the system.

In the preparation of this manual, several other indexing manuals were consulted including:

1. INIS - Manual for indexing.
2. The CEPAL/CELADE DOCPAL Procedure Manual for indexing.

These have both been found to be very useful.

The structure of the manual follows the sequence of the indexing process. It outlines the decisions which the indexer must make before beginning actual indexing. It therefore describes the principles of indexing, interpretations of documents, identification of subject content, concepts and descriptors. The principles of vocabulary control are also examined and the CARISPLAN/INFOPLAN system of proposing new descriptors is also outlined.

The Bibliographic Record Card is described and its various uses are explained.

It is hoped that this manual will assist indexers in the System to achieve a facility for indexing documents produced in the region, and therefore advance the development of a well-structured data base.



INTRODUCTION

The Caribbean Information System - Economic and Social Planning Sector was mandated by member countries of the Caribbean Development and Co-operation Committee (CDCC) to provide an information base to serve the community of planners, policy-makers and researchers in the region. The system works on the basis of systematic inputs of bibliographic records from the member countries, as well as input from the Caribbean Documentation Centre.

Type of Material

The system places special emphasis on locally produced material, especially the reports, studies, etc., which might not have been widely disseminated originally, but which is likely to be valuable to other users of the system.

Subject Scope

The definition of subject coverage is:

1. The areas covered by the users of the various information centres which make up the system.
2. The priority areas of the CDCC work programme.

As a consequence the subject scope is flexible and is likely to be modified according to changes in users needs and to changes in the CDCC work programme.

The Caribbean Documentation Centre is building up a collection of user profiles for the planners, policy-makers and some technical personnel of the member countries. These will assist in showing the subject areas of interest to the system.

The method of dissemination of the information collected in the data base is principally through CARISPLAN Abstracts which is issued periodically from computer print-outs.

As this material is not usually available through commercial distribution, the indexing should be as detailed as possible and should follow the rules of the system as much as possible to ensure standardization, and to enable users to have a clearer understanding of its orientation.

There is also need for inputting material into the system as early as possible after publication to ensure that the data base can be kept as current as possible, and can therefore provide an up-to-date picture of the planning information in the region.

DECISIONS PRELIMINARY TO INDEXING

At this point the indexer will need to make a brief examination of the piece of literature to be indexed, in order to decide if it is appropriate for entry into the system and that the treatment given will ensure most effective results in the retrieval process.

1. The Subject Scope

A decision needs to be made about the subject scope of the document and its relevance to the Caribbean Information System.

2. The Information Content of the piece of literature should also be evaluated as documents of an ephemeral nature should be eliminated.

3. The Level

As the system is intended for policy-makers, planners and other technical personnel in the government services, material entered in the system should be of the level to be of value to such users, eliminating any information which is too elementary, such as school texts and other simplified versions of a topic.

4. Bibliographic Level

The indexer will also decide on whether the document consists of chapters and articles which are worth separate treatment, or if it should be entered as a single entry. Wherever possible separate treatment should be given to each section of a document on the Caribbean, which deals with a priority area.

Sub-divisions of documents, which do not have separate titles should not be given individual treatment. The definitions below identify the various types of literature.

5. Classes of Documents

Of the documents included in the System, some because of their content and orientation are given more detailed analysis. They are:

- a) development plans of the Caribbean countries; and
- b) technical and methodological planning studies.

BASIC DEFINITIONS

Indexing

Controlled language is the process of detailed subject analysis of a piece of literature, identification of the concepts contained and the translation of these concepts into a special pre-designated vocabulary.

The purpose of indexing is to facilitate retrieval, and to lead to required information as outlined in queries or requests. This can be either in terms of bibliographical references or in terms of the subject content.

Indexing is therefore a most important stage in the information process system, as the success or failure of later retrieval operations depends on how well the original subject analysis was done. The indexing process is even more important in large collections of documents, and as collections expand the effectiveness of the retrieval is even more dependent on the detail of the indexing which was originally done.

In the CARISPLAN System, indexing is post-coordinate, enabling more detailed identification of the concepts and combination of the descriptors at the stage of retrieval.

Thesaurus

The Thesaurus is usually defined according to its functions and its structure. It functions as a terminological control device used to translate the natural language of documents, indexers, or users into the 'system language' as well as to translate the 'system language' back into natural language. Its structure shows a controlled and dynamic vocabulary of semantically and generically related terms which covers a domain of knowledge. It serves as an authority list for a particular information system.

Descriptor

The terms permitted by a thesaurus for use in indexing are called descriptors. These are authorized or formalized terms or codes used to represent unambiguously the concepts of documents and queries. Descriptors may be terms denoting concepts, or concept combinations or terms denoting individual entities.

The following terms which will also be used in this manual to identify type of document are defined below with the corresponding alphabetic codes which are used on the bibliographic record.

The codes are a mnemonic representation of the Spanish translation of the terms and have been entered as such in the data base. They therefore do not always correspond to the English terms.

<u>SPANISH</u>	<u>ENGLISH</u>
P Publicación Periodical	Periodical
L Libro	Book
I Informe	Report
V Literatura no-convencional	Non-conventional literature

P = Periodical publication:

"A publication which is expected to appear indefinitely in successive parts, each of which is numbered chronologically and numerically."

"A journal is a serial publication which appears or is expected to appear indefinitely at fixed intervals, at least more than once a year: each number usually contains articles, news and other independent writings."

According to the UNISIST Manual journals should not be entered as entities in themselves but should be limited to the description of the articles or contributions contained in each issue. Journals are treated at the analytical level. Exceptionally a journal might contain a single contribution and may be considered as a special issue. However, even in this case, the study contained in it is considered as an ordinary journal article, the only article in that issue.

L = Book:

We consider as books all publications which, reproduced by different means, constitute units in themselves, have a publisher or institution responsible for the publication, with covers, although not necessarily hard ones, and a cover

page with the data essential to identify it (author, title, publisher, date of publication). The book may be made up of one or several volumes.

The Yearbook is a publication which appears once a year and is generally published by an institution. It contains information on events, statistical data, activities, discoveries, etc. Yearbooks are treated as books with multiple editions, in which case the year to which the information corresponds should form part of the title. The yearbook is treated only at the monographic level.

I = Report:

A report is a publication which, generally speaking, cannot be bought through normal commercial channels, but through the organization responsible for publishing it. It is always identified by a number and/or letters. In Latin America these publications are usually confused with a series. When there are doubts as to identification of the report they will preferably be treated as books belonging to a series.

V = Non-conventional:

In this category are included basic documents such as loose sheets, folded sheets, forms, microforms, audio-visual materials, etc. This would include those documents which do not fit into one of the three categories described above and those documents which do not have a publisher responsible for them.

The 3 complementary categories are:

S = Series:

It is considered that a book belonging to this category does form part of several independent works published successively and interrelated by the fact of having a common denomination which generally appears at the head of the title page, opposite the title page or on the cover. Generally, speaking, the series is published in a standard style and frequently appears in numerical order. It is also called "monographic series" or "series of monographs" (Field No. 36).

T = Thesis:

Original piece of research submitted to University or higher education centre for the purpose of and as a requisite for obtaining an academic degree or professional qualification.

C = Conference:

The generic term "conference" is used to designate conferences proper, seminars, symposia, meetings, congresses, etc. This category is used to identify both the studies presented at a conference and those produced as a result of it. They may appear in different forms: as books, as a contribution to a review or a review article, a mimeographed document, etc.

A minimum of one category and a maximum of three should be assigned. In order to indicate the category to which the document belongs, a circle is made around the corresponding code or codes. One of the four indispensable codes will always be selected, and one, two or none of the three complementary codes, as appropriate.

The selection of the essential elements for the description of the document and the notation in the corresponding field depend first of all on the category or categories which have been chosen in this Field No. 02, i.e., the type of literature concerned and, secondly, the geographical level at which it has been decided to treat the document.

It should not be forgotten that the determination of a complementary category is not valid in itself, which means that any of the three least categories, "S", "T", "C", must always be accompanied by one of the four categories termed indispensable. Thus if category "L" and "S" are marked in Field No. 2, this is an indication that this is a book belonging to a series. The code "S" cannot in this case be assigned alone since it is a complementary category.

DOCUMENT INTERPRETATION RULE

The indexer is required to select the "meaningful information content of the document". The criteria for selection should be based on the requirements of the user: "the user only wants to be referred to those pieces of literature which actually convey to him useful, direct and real information on whatever topic he is searching for". ^{1/}

^{1/} INIS: Manual for Indexing. Vienna, International Atomic Energy Agency, 1971. p. 29.

As the purpose of indexing is to enable users to identify from a collection those items of interest to them, the indexer should aim at directing the user, who has a limited amount of time at his disposal and cannot afford to wade through documents which might not be valuable to him, to those items which actually convey to him useful, direct and real information on the topic in which he is interested.

The users of CARISPLAN are the planners, policy-makers and technical personnel in the service of the governments of the region. They require information in the course of their planning, project preparation and other technical work and are likely to need information on very specific subjects and sometimes at very short notice.

In addition, the type of material included in CARISPLAN is largely unpublished documentary material of limited distribution. As the actual documents are rarely available commercially and sometimes are not easily obtainable, the correct interpretation of the document is therefore very important in this system.

It is recommended that the indexer interface himself between the user and the document and identify the concepts which are discussed in enough detail to provide some useful information on a topic.

"Choose such information items for indexing as you would yourself expect in the piece of literature if you were the user searching for that information."

The rule of thumb suggested by the INIS Manual is:

"In order to obtain information on topic A, would the present document be a useful reference?"

There might sometimes be a tendency to index too many information items in a given document. This feature - "over indexing" is time wasting, creates noise in retrieval and is likely to make the user lose confidence in the system.

"Therefore it follows that only those descriptors must be assigned which represent concepts actually discussed in some detail in the piece of literature and on which some useful information can be obtained by reading the document."

The INIS Manual for Indexing also advises that superfluous indicators should be ignored. Some items of information do not increase the knowledge already provided for in a document known to have entered the system earlier.

Some documents will fall only partly within the subject scope of CARISPLAN, while containing also subjects which do not fall within the scope of the system. As the system will be serving a variety of users, all subjects in such documents should be prepared for entry into the data base.

PRINCIPLES OF INDEXING

Indexing for any system, and indexing for CARISPLAN, has to follow certain principles to ensure that the information stored in the data base can be readily and effectively retrieved. The main principles are:

- Exhaustivity
- Consistency
- Objectivity
- Multiplicity of descriptors
- Dynamism

A document which has been indexed correctly should reflect these principles and should therefore identify all the concepts which have potential value for the users of an information system.

EXHAUSTIVITY / COMPLETENESS

The process of identification of concepts contained in a document should be as exhaustive as possible. Each concept identified as important to the user of the information system should be recorded for translation into the controlled language.

The concepts of interest to CARISPLAN should be considered as:

1. The user profiles of the information centre in which the entry is being prepared.
2. The subject areas of CARISPLAN as listed earlier in the scope of the System.

Specificity

Each concept identified should be expressed as specifically as possible. The indexer should always consider narrower and related terms listed in the thesaurus to ensure that the most specific descriptor has been chosen.

In some circumstances, general terms might be considered suitable, as the indexer might decide that a generic term, for example, is preferable to a listing of the specific items.

The decision on the desired level of specificity would depend on the amount of information provided by the author on the general and specific concepts, and also the interest of the users at both the general and specific level.

In general retrieval experience, the more specific the retrieval terms, the higher the relevance of the documents retrieved.

At the inception of the data base and during its early stages of growth, the specificity rule might not demonstrate its value as much as it would when the data base has become larger.

Although CARBIB is at present a small data base it is expected to expand and therefore indexers contributing to the system should follow the specificity rule as closely as possible.

Consistency

In interpreting the indexing rules, consistency should be ensured in the application of these rules: the identification of the concepts, the translation to the controlled vocabulary, and the final choice of the most suitable descriptors must be done according to a consistent application of the indexing rules and a consistent interpretation of any areas which might not be covered by the rules.

Such consistency will encourage the user to understand the system more easily, and to have greater confidence in the retrieval process.

Because of the decentralized nature of CARISPLAN, efforts at consistency by the indexers are even more important.

The system manuals are provided to assist consistency and all entries are checked in the Caribbean Documentation Centre to ensure consistency. Comments will be sent to indexers as the system develops.

Objectivity or Impartiality

Achievement of impartiality or objectivity in indexing is a key factor in achieving indexing consistency, and the indexer in the selection of concepts and their translation to descriptors should always ensure that the principle of objectivity is maintained.

As the purpose of indexing is to convey in indexing language the author's thesis, i.e. the exact information contained in the document, the indexer must therefore avoid subjective criticism or selection of any terminology which might place a different interpretation on the author's thesis, as this will inevitably affect the performance of the indexing system.

Multiplicity of descriptors

In CARISPLAN there is no arbitrary limit to the number of descriptors which can be assigned to each document. As each descriptor is the translation of an important concept, the number of descriptors is therefore limited only by the number of important concepts identified.

ADAPTABILITY OR DYNAMISM OF THE CONTROLLED VOCABULARY

Although the use of a controlled vocabulary is an important aspect of the standardization of the terminology used for indexing, some modification of the vocabulary will be required. While the OECD Macrothesaurus, the controlled vocabulary used in CARISPLAN, has new descriptors included from time to time, there will be some cases where

it will not be possible to locate a suitable descriptor for translation of a concept identified in a document. In such a case the indexer should propose a new descriptor to represent the concept.

This reflects the desired dynamism of the indexing process to ensure that new concepts are reflected in the indexing language.

Example: Nutmeg
 Lomé Convention

In CARISPLAN, the names of Caribbean organizations are some of the terms which might not be found in the OECD Macrothesaurus, and for which new descriptors might need to be proposed.

The indexer might need to modify the controlled vocabulary to effectively express the concepts found in the document; however, care should be taken to ensure that the structure of the vocabulary is not distorted by unnecessary additions.

IDENTIFICATION OF SUBJECT CONTENT

Again it is worth placing emphasis on the fact that the purpose of indexing is to facilitate retrieval.

The basis of identification of the subject content of a document is the document interpretation rule and therefore this stage of the indexing process should be based on this rule.

As a first step the indexer is required to examine the document thoroughly, and to establish its subject content.

Examination of the document

The examination should be as thorough as possible, but this is somewhat conditioned by the physical format of the material. The ISO publication Methods for examining documents, determining their subjects and selecting indexing terms distinguishes between the examination of printed and non-print materials. The printed materials which are much easier to handle, can be examined more thoroughly than those which are not printed.

A full reading of the text would of course be ideal but in the interest of economy this is not possible in preparing entries for the CARISPLAN system; these important parts of the texts should be considered:

1. title
2. abstract (if available)
3. introduction, opening chapter and conclusion
4. illustrations, diagrams, tables and their contents
5. words or groups of words which are underlined or printed in a special type face.

This should be used by the indexer. Indexing and retrieval experience will show that these elements serve as a guide to provide a correct identification of the subject content of a document.

Non-print Materials

These are less easy to examine but the title, synopsis or abstract and a selective examination might be adequate to provide an identification of the subject content.

Identification of Subject Content

After a careful examination of the document, the indexer should first identify the objective and scope of the document, and if necessary distinguish between the real content and that which might be proposed by the title, preface or introduction.

In addition, the theoretical aspects and orientation, and the basic concepts and ideas on which the author bases his proposals will also help to identify the subject content of the document.

Any methodologies, techniques, processes, models, or actions which are described in the document, should also be identified at this stage of the analysis, and any conclusions or description of results also noted.

Identification of Concepts

After examining the document and identifying its subject content, the indexer should follow a systematic approach to the identification of those concepts which are essential elements in a description of its subject. These can be described as the important ideas which usually constitute the essential reasons for publishing the document.

In CARISPLAN there are certain factors which might be related to the identification of concepts. The following can be used as a checklist for concept identification:

1. Is a specific sector identified?
e.g. Tourism
Health etc.
2. Is a final condition proposed?
3. Is an operation or process described?
4. Is there an agent of the operation?
5. Is a particular location or environment identified?
6. Are any dependent or independent variables identified?
7. Was the subject considered from a special viewpoint not normally associated with that field of study?

This checklist is of course by no means exhaustive, but should be used as a guideline for identification of the concepts.

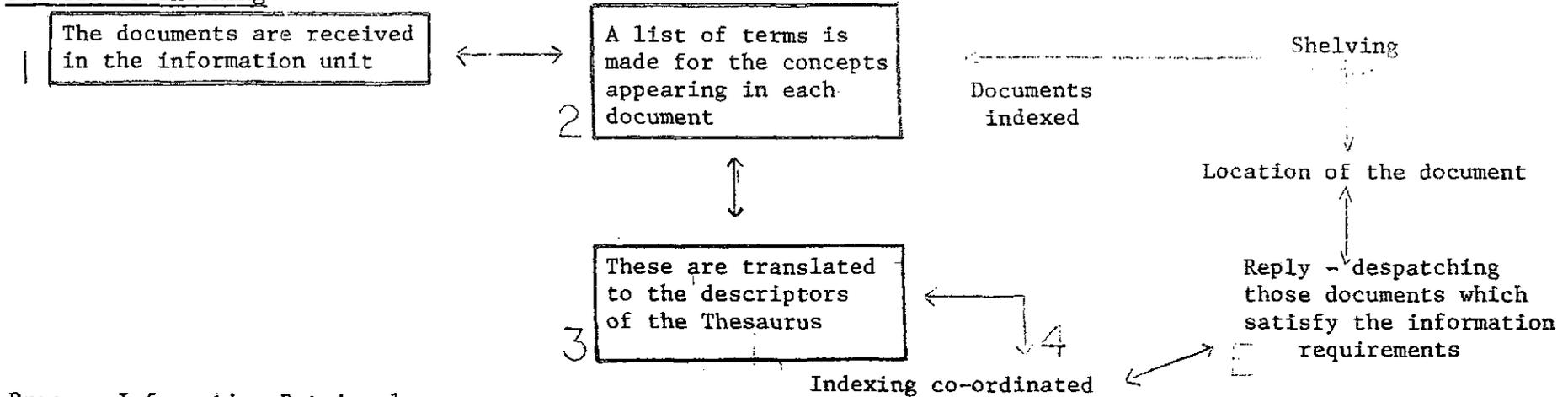
The manual on abstracting, outlines additional factors to be considered in the analysis of subject content. These are listed in more detail there, and as a development of this would provide the information required for the abstracting process.

This is a point at which the purpose of the CARISPLAN indexing operation should be re-considered, and the selection of the concepts made in relation to this.

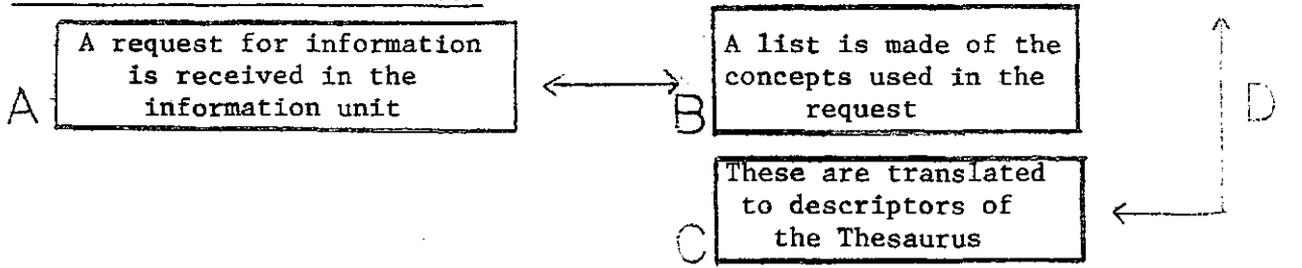
While a book indexer might wish to make a reference for each term mentioned, the indexer for CARISPLAN would only be required to denote as a concept, a topic on which there is a substantial piece of information in the document. By contrast to the book indexer the subject cataloguer might be inclined to include only broad subject headings. CARISPLAN falls between the two and is oriented to providing references to as many concepts as there is meaningful information.

SYSTEM OF INFORMATION RETRIEVAL BASED ON
THE USE OF A THESAURUS

Process of Indexing



Process Information Retrieval



Extracts from Population/Family Planning Thesaurus:

An alphabetical and hierarchial display of terms drawn from population - related literature in the social sciences, by Caroline Lucas and Margaret Osburn. Chapel Hill, N.C. Technical Information Service, Carolina Population Centre, University of North Carolina at Chapel Hill, 1975. p. iii.

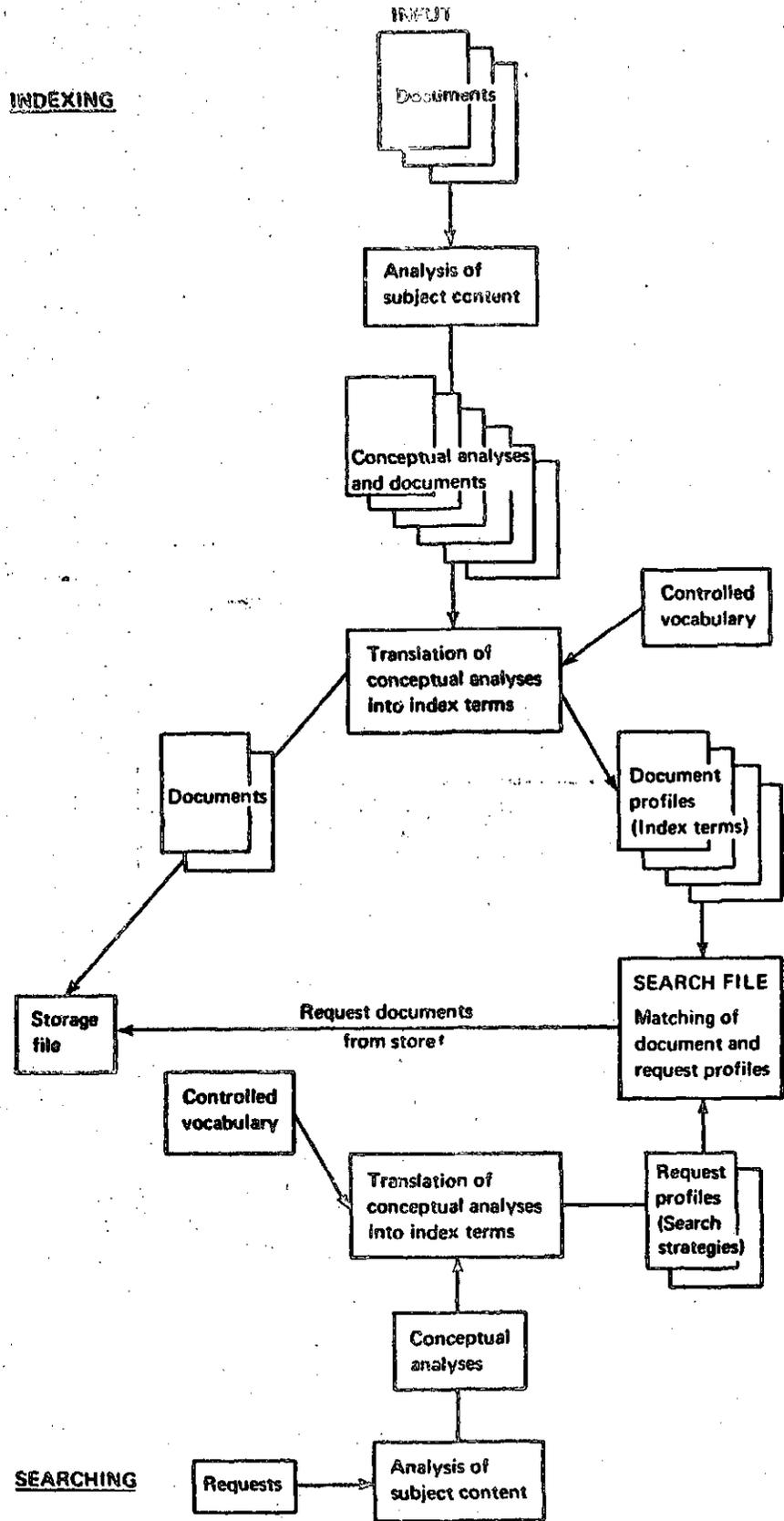


FIGURE 2 Information retrieval: input and output processes.

Source: Lancaster, F.W. Vocabulary control for information retrieval. Washington, D.C. Information Resources Press, 1972.

GUIDELINES FOR INDEXING

Within this process there are several sub-divisions. Indexing requires sequential activities to be performed which will together identify the concepts and translate them to the controlled vocabulary. The flowchart of the International Organization for Standardization (ISO) details the stages and their relationships with each other. After initial identification of all the concepts, the succeeding stages are all based on the controlled vocabulary or thesaurus.

The concepts as identified are each given individual treatment for translation into the terms of the vocabulary and while the indexing process has to be done as rapidly as possible, it is also necessary to ensure that the concepts have been searched for at various points of entry in the thesaurus.

Following the indexing specificity rule, this stage of the process is followed by an examination of the word block to which the chosen term belongs, possibly selecting a more specific term than the one originally chosen. To complete the indexing process it is also necessary to propose new descriptors where there are no suitable ones available in the vocabulary.

Quality control is also reflected in the vocabulary, and in the method of proposing new descriptors. These need to be prepared in accordance with the general framework of the vocabulary and with its method of elaborating the word blocks of associated terms.

VOCABULARY CONTROL Its rationale

In ensuring that indexing can effectively achieve its purpose of retrieval, one of its activities which has to be maintained, is the control of the vocabulary used in the indexing process.

The controlled vocabulary is usually very vigilantly maintained by cataloguing and indexing systems and in a decentralized information system such as CARISPLAN, it is very important that the reasons for vocabulary control be understood.

In the indexing process documents should be assigned to classes according to some consistent pattern bringing together documents on a particular topic and facilitating retrieval.

The controlled vocabulary exists primarily to provide standardization and control over synonyms, quasi-synonyms, and homographs, to link semantically related terms, to reduce or eliminate ambiguity of meaning and to provide sufficient hierarchical structure to allow the conduct of generic searches.

The principal effect of the use of a controlled vocabulary such as the OECD Macrothesaurus is to provide consistency in selection of indexing terms. This is especially important in a decentralized system such as CARISPLAN where different indexers provide input, and are likely to place different interpretations on indexing terms. The controlled vocabulary also helps the individual indexer to maintain consistency over a period.

Synonyms

The ambiguity caused by the existence of synonyms is a factor which often preoccupies indexers. The controlled vocabulary attempts to eliminate such difficulties by referring the indexer and subsequently the user from the given concept to the preferred term. Similar treatment is given to quasi-synonyms and homographs.

Relationships and Generic links

The controlled vocabulary similarly clarifies the relationships which are known to exist between terms, allowing the indexer to examine the generic word blocks and select the most appropriate indexing terms.

Subject coverage

By comparison with natural language the controlled vocabulary provides a range of terms, which aims to cover all aspects of a particular subject. This assists the indexer in broadening his range of knowledge on the subject and in selecting terms of which he/she might not otherwise be aware.

In providing a structured coverage of the subject, and a logical elaboration of the areas covered, the inclusion of new terms and concepts are also a function of the controlled vocabulary.

Retrieval

The controlled vocabulary also aids in retrieval, by serving as the common language of both the input and output aspects of the process, standardizing the terminology of both the indexer and the user.

Cost Effectiveness

While the compilation, maintenance and use of a controlled vocabulary might be expensive compared to indexing by natural language, the retrieval of information by an indexing language rather than by natural language is, however, more immediately effective, and therefore saves time and effort at the most important stage of information processing.

In addition to providing information to the users of a given system, vocabulary control also aids in more effective interchange of information between systems using the same vocabulary or vocabularies based on the same principles.

Vocabulary Control - Thesauri

Thesauri follow the objectives of vocabulary control, and ensure that there will be consistency in selection of indexing terms.

Similar to the conventional subject headings, the thesauri aim at developing a vocabulary which meets the users convenience wherever possible. They therefore follow certain rules and conventions which aim at the simplest possible form of descriptor, and at a format most applicable to the users needs. The conventions cover form of entry, level of co-ordination, and type of structure.

Word Forms

The word forms of descriptors are often the simplest, though in some cases as in the Macrothesaurus the scope of the subject requires some amount of pre-coordination.

"Project evaluation" is a pre-coordinated term and although "evaluation" is also included in the thesaurus, 'project' is not a descriptor. Similarly,, "business cycle" is pre-coordinated but neither 'business' nor 'cycle' is included as individual terms.

The grammatical form is the norm wherever possible, although the adjectival form and gerundive are sometimes used.

e.g.

Jamaica	Noun
*Jamaican	Noun or adjective
Job searching	Gerundive
Learning	Noun or Gerundive

Adjective - noun combination

These are sometimes used in pre-coordinated form.

e.g.

Basic needs
National income

Verbs are never used as descriptors and

Prepositions are usually excluded: a rare example being well established phrases like "Flag of convenience".

Number

In establishing the form of the descriptors, the singular is preferred for specific processes, properties or conditions.

e.g.

deforestation

while the plural used for count nouns

e.g.

tubes

and the singular for mass nouns

e.g.

sheep
equipment

*/ The adjectival forms of the names of some of the Caribbean countries are not all included in the Macrothesaurus. These can be proposed as new descriptors for inclusion in the data base.

Relationships

An important aspect of all subject heading lists and thesauri is the relationship between the terms used. The indexer is required to ensure that the term selected is the most appropriate, in terms of scope and coverage and also most appropriate by comparison with the other descriptors which are available.

Instead of the see also references provided by the traditional subject headings, there are in the thesauri sub-divisions of these into:

Broader Term	(BT)
Narrower Term	(NT)
Related Term	(RT)

In using the thesaurus the indexer should examine the word blocks which are enumerated below each descriptor, and which list all the terms which have any relationship to the chosen term. The word block therefore provides the indexer with other possibilities which should be considered before the final choice of an indexing term is made.

If for example ENERGY is selected as a descriptor, then the word block:

ENERGY

NT	Electric power Nuclear energy Solar energy Thermal energy Tidal energy Wind energy
RT	Energy conservation Energy consumption Energy crisis Energy policy Energy resources Energy sources Energy utilization OECD IEA

of Narrower Terms, and Related Terms should be examined and the possibility of selecting in this case a Narrower Term or a Related Term,

which might more specifically describe the concept and therefore be more appropriate, be considered.

On the other hand the Broader Term might be more appropriate and if there is one included in the word block it should also be considered.

e.g.

EMPLOYMENT OPPORTUNITIES

BT Equal opportunity

Form of Entry

Direct entry is considered to be the simplest form and therefore is preferred to the inverted form of entry. The problem which might arise by direct entry are usually solved by word blocks showing the other related descriptors.

e.g.

human nutrition

instead of

nutrition, human

showing

BT nutrition as the broader term

or

transport infrastructure

instead of

infrastructure, transport

NT Bridges

WORD BLOCK Canals

Pipelines

Ports

Railways

Roads

Stations

Tunnels

RT Civil engineering

Construction industry

Public works

Transport

Scope Notes and Definitions

provide clarification of the meanings and manner of using the descriptors within the indexing system. These definitions should only be considered as applicable within the particular indexing system rather than universally.

e.g.

statistics and statistical data might ordinarily be considered as synonyms, but in the Macrothesaurus the scope note for statistics instructs:

"Use when referring to the science of statistics" and has a relational word block:

STATISTICS

RT Econometrics
 Mathematics
 Statistical analysis
 Statistical data
 Statistical services
 Statistical tables
 Statisticians

while

STATISTICAL DATA

is used for what might normally be considered statistics and has a relational word block:

STATISTICAL DATA

NT Economic Statistics
 Educational Statistics
 Food Statistics
 Vital Statistics

RT Data banks
 Statistical tables
 Statistics

In addition to the instructional scope note as seen under statistics, there is also the scope note which provides definitions as in the case of

OCCUPATIONAL DISEASES

where the scope note defines this descriptor as:

"The unhealthy result on workers of particular occupational activities and work environments."

References

In addition to the scope notes, additional references are provided instructing the indexer on the most appropriate descriptor. References between

Synonyms are the most widely used.

e.g.

Shipping

use

Sea transport

or

Occupational training

use

Vocational training

and in the Macrothesaurus USE and USE FOR references are confined to clarification of the use of synonyms.

Punctuation

The only punctuation marks which are used as part of the descriptors are hyphens:

e.g.

East-west trade

and even these are rarely used.

Abbreviations

These are not considered suitable as descriptors and are employed in the Macrothesaurus only in the case of well-established acronyms, which are

internationally recognized.

e.g.

ECLA
ECE
ECA

Even here an explanatory scope note is provided for each abbreviation.

ECLA
Economic Commission for Latin America

ECE
Economic Commission for Europe

ECA
Economic Commission for Africa

Co-ordination

While there is some degree of pre-coordination in the Macrothesaurus the orientation is towards post-coordination with basic terms combined where possible to provide access to the information.

Structure

Thesauri tend to be structured in alphabetical and classified sequences and while many place the classified sequence as primary, the Macrothesaurus provides the alphabetical sequence as the first point of entry.

THE OECD MACROTHESAURUS

The Macrothesaurus is the controlled vocabulary used for indexing and retrieval of information in CARISPLAN. Its stated purpose is:

"..... to provide a language which can process information relating to all the aspects of social and economic development and at the same time give a common dimension to the more specific vocabularies corresponding to each of them."

The edition presently used is the third, and this, as with previous editions was compiled after several years of consultations with the international organizations most directly concerned with the problems of development.

Uses

Various organizations have adopted the Macrothesaurus for processing information in individual information units and in decentralized information systems, as well as for retrieval of information. It has also served as the foundation of several specialized thesauri.

The Macrothesaurus has therefore been instrumental in maintaining a certain discipline in the processing of information relating to development and in strengthening co-operative practices in the organizations responsible for processing development information.

Language Coverage

The Macrothesaurus - as a multilingual thesaurus - is particularly relevant to processing of information in a multilingual system, such as CARISPLAN, as each indexing term is included in the three principal languages of the Caribbean.

ENGLISH SPANISH FRENCH

facilitating processing and subsequent retrieval.

The entries prepared for the CARISPLAN data base require the indexer to record the descriptors in only one language, as these terms will automatically be translated into the other two languages.

Updating Procedures

In the field of socio-economic development, there is need for a dynamic vocabulary which is always able to include new concepts and modify terms according to changes and developments in the socio-economic field.

Although there is not yet a caretaker institution appointed to permanently manage the Macrothesaurus, the International Development Research Centre (IDRC) prepares proposals of changes to be included in the Macrothesaurus, and distributes these periodically to participating centres.

Structure

Divided into four parts, the Macrothesaurus allows several approaches for translation of concepts into indexing language.

SECTION II - Alphabetical Sequence

This section has been considered by the compilers of the Macrothesaurus to be the one most frequently consulted by analysts; however, indexers for CARISPLAN should consult the Descriptor Group Display of Subject Category Fields as well before selecting an indexing term, to ensure that the most appropriate subject is being considered.

In the alphabetical sequence are included all the descriptors and any synonyms, along with a reference number for the subject to which it is related.

The descriptor is followed by a scope note if necessary and references.

Scope Note (SN)

In the Macrothesaurus several variations of the scope note are used:

1. Explanation of abbreviations

e.g. ISO

SN International organization
for standardization

2. Directing the indexer when to use the descriptor
and how to interpret it

e.g. Administrative aspects

SN Use in connection with administration only and distinguish from managerial aspects which are covered by the descriptors 'MANAGEMENT' 'PERSONNEL MANAGEMENT' etc.

3. Explaining the meaning of the term

e.g. Automation

SN The use of automatic devices which perform production and assembly operations and which provide built-in inspection and control features.

The references which provide additional guidance to the indexer and to the end user are:

The Synonym References

The symbol USE directs the indexer and the searcher from a term that cannot be used to the synonym or quasi-synonym which is preferred

e.g. Shipping

USE Sea Transport

UF (Use for)

expresses the opposite relation; it follows the actual descriptor and designates the term to be replaced

e.g. Sea Transport

UF Maritime Transport
Shipping

The Generic Reference

BT (Broader Term)

Refers the indexer to broader terms which might be more appropriate descriptors than the narrower ones which might initially have been considered. It also helps to clarify doubts about the meanings of some indexing terms.

e.g. Coating

BT Industrial Process
OR Clearing Agreements
BT Monetary Agreements

Specific Terms

NT (Narrower Term)

Indicating the more specific term which should also be considered as an indexing term. As CARISPLAN places emphasis on the most specific terms possible, the terms following the NT reference are likely to reveal more appropriate descriptors, than the ones originally considered.

e.g. Educational Institutions

NT Higher Educational Institutions
Schools
Training Centres
OR Budgetary Resources
NT Tax Revenues

Associated Descriptors

RT (Related Term)

The terms listed in this section of the word block show a variable relationship to the descriptor at the head of the word block. In some cases the related terms might be more appropriate and therefore might be considered more suitable than the one originally considered.

e.g. Austerity Policy

RT Economic Recession
Inflation
OR Transport Infrastructure
RT Civil Engineering
Construction Industry
Public Works
Transport

In the alphabetical section it is therefore possible to obtain all the significant information on the relationship of the descriptors.

This section is likely to be the most commonly used for translation of concepts into descriptors, however, indexers should always use the other points of entry as well, especially when the concept identified cannot easily be translated into an appropriate descriptor.

SECTION III Descriptor Group Display

This is the classified section which provides general indexing terms listed according to their subject divisions and sub-divisions.

The listing of descriptor groups provides below the main subject headings, a list of subject divisions, and other descriptors, which are considered to be narrower terms of the main headings.

e.g. 19
Information. Documentation
19.01
Information
19.01.01
Access to Information
Data Protection
Documentation
Information
Information Needs
Information Network
Information Policy
Information Sciences
Information Sources
Information Users
Library Science
News
Scientific Information

Technical Information

Technological Information

USE Technical Information

The section on Information continues into sub-divisions:

19.01-01 - 19.04.00

which are

19.01.02

Information processing and information system

19.01.03

Types of information services and resources

19.01.04

Bibliographic records

19.02

Documents

19.02.01

Types of documents and other materials

19.02.02

Bibliographical information

19.02.03

Authorship and property rights

19.02.04

Illustrative material

19.02.05

Conference documents

19.02.06

Serial publications

19.02.07

Methods of processing information

19.02.08

Types of reports

19.02.09

Types of literature

19.03

Terminology

19.-3.00

Reference aids

19.04

Conference

19.04.00

Types of meetings

This section 19 of the classification, therefore provides all the descriptors relating to information and documentation with references clarifying the use of synonyms and indicating the preferred term.^{1/}

SECTION IV Hierarchical Display

This section analyses the descriptors according to their hierarchical relationship. Top descriptors have been identified and their narrower terms have been listed below.

All the descriptors are included in this display which shows for example:

The main discipline

Engineering

..... The sub-divisions

Agricultural engineering

1/ In Section 19.02.01 the term environmental control has been included in error and should correctly appear instead in Section 16.04.01.

..... The narrower sub-divisions

Fishery engineering

Forest engineering

and

..... The next sub-divisions in alphabetical order

Chemical engineering

Civil engineering

Therefore although Agricultural Engineering is the broader term of Fishery engineering, and forest engineering, it is not included as a top descriptor, but rather within the hierarchy of engineering terms.

The section on energy shows that:

Geothermal Energy is a secondary sub-division of Energy, but its broader term Thermal Energy does not appear as a top descriptor but rather as a sub-division of energy.

The hierarchical display also lists under the names of continents, the regions as sub-divisions, and the countries as further sub-divisions. Similarly, the section of international organizations lists all regional and international organizations, the United Nations organizations, the non-governmental organizations and regional organizations sub-divided by region.

SECTION V KWOC Index
(KWOC = Key word out-of-context)

This index provides supplementary access to the descriptors in the first section.

The descriptors used in the previous sections are now sub-divided into their component key words with each component listed in alphabetical sequence as a top descriptor. There are therefore entries for

Hydroelectric power

under

Hydroelectric

and under

Power

SUBJECT COVERAGE

The Macrothesaurus covers all areas of the socio-economic field and in addition includes terms from the socio-economic aspects of other disciplines:

- 07 Agriculture
- 15 Biology, food health
- 16 Environment, natural resources
- 17 Earth sciences, space sciences
- 18 Science, research methodology

PROCEDURE FOR SELECTION OF DESCRIPTORS

At this stage the concepts - the main ideas which usually constitute the important reasons for publishing the document - will have been identified and the indexer will now be required to translate these concepts into indexing terms or descriptors.

The adherence to the Document Interpretation Rule is equally important at this stage, as the indexer should continue indexing on the basis that descriptors will only be assigned for concepts on which the document contains meaningful information.

In translation of concepts to descriptors, some descriptors will be self-evident and will immediately suggest themselves.

These, however, will need to be verified, and should first be checked in the alphabetical sequence to ensure that the term chosen has been included in the OECD Macrothesaurus and that the form and spelling of the term are uniform.

In addition, it will be necessary to verify also the semantic interpretation of the chosen term. This can be done by considering the other terms in the word block.

e.g. Codes
NT Labour code

and the location of the term within the descriptor group display.

The Scope Note can sometimes also be used to assist in interpreting the meaning of the term.

Classes

SN Groups of students
NT Experimental classes
RT Ability grouping

When the semantic interpretation of the term has been defined, the indexer should also check the related descriptors which might be more appropriate than the term originally chosen.

At this stage, the Indexing Specificity Rule should also be applied and the most specific term should be chosen to translate the concept.

When the descriptor is not clearly identifiable, it will be necessary to locate the indexing term through the various sequences. The alphabetical sequence is the one most likely to be consulted first, and as all descriptors and references are included in this sequence, it should provide the access required for identifying possible terms.

All descriptors which are related to the concept should be checked along with the notes and references to ascertain appropriateness as indexing terms.

The descriptor group display can also be used to verify the relationship of a descriptor to a subject area, and the Hierarchical and KWOC (key word out-of-context) indices are additional sequences for assisting in selecting the most suitable descriptor.

In translation of the concepts it might not always be possible to identify a descriptor for an exact translation of each concept. It might sometimes be necessary to introduce two descriptors to translate one concept, and at other times it might be necessary to propose a term which might not appear in the OECD Macrothesaurus.

Indexers are advised to avoid the use of terms which are so frequently used in the literature that they might have lost a clear definition of meaning. The use of such terms is likely to bulk the data base and prevent meaningful retrieval. It is recommended that more specifically descriptive terms be chosen instead. For example, terms such as "project" and 'development' are considered to be too widely used to be significant descriptors. They have therefore been eliminated from the Macrothesaurus and should not be proposed as new descriptors.

In the event that the document deals with highly technical subjects, with which the indexer might not be familiar, it is recommended that there be consultation with the authors or producers of the document or with other subject specialists.

THE PROPOSAL RULE

In some cases the indexer will find that there is no appropriate descriptor to translate a given concept. Then it will be necessary to propose a new descriptor to translate the concept. At this stage it is assumed that a thorough and exhaustive search through the Macrothesaurus has already been done, and that no suitable descriptor can be found among those already listed.

Because of the need to regulate the controlled vocabulary, and to maintain its effectiveness, CARISPLAN and INFOPLAN together operate a unified system of proposals for new descriptors, whereby all indexers in the two decentralized systems propose new terms for the controlled vocabulary, and these are all evaluated at the regional co-ordinating centre in CLADES.

The proposed descriptors require several background statements to assist in clarifying the scope of the term proposed.

SOURCE: This should be stated wherever possible with at least one bibliographical reference, and any other indication of the term's use.

SCOPE NOTE: This is sometimes necessary to give the range of a descriptor's application; the sole purpose of the scope note is to circumscribe the use of a descriptor within the context of the documentary language and should not be confused with dictionary definitions.

TRANSLATED FROM (term): This is sometimes necessary as an indication of the meaning in the original language.

Observations

Any comments on the origin of the term, or other areas with which it might be related.

Descriptor

The form of the proposed descriptor as finally accepted.

Semantic Field

The semantic field as listed in the classified sequence should be designated by the indexer for approval at a later stage by the central processing unit. The number of the semantic field of the proposed descriptor should be given.

Non-Descriptors

This section includes terms which have not been approved as descriptors and for which if desired a use reference can be made to the accepted descriptor. The inclusion of non-descriptors is usually useful, as it reduces the time spent by indexers in proposing terms which might already have been considered.

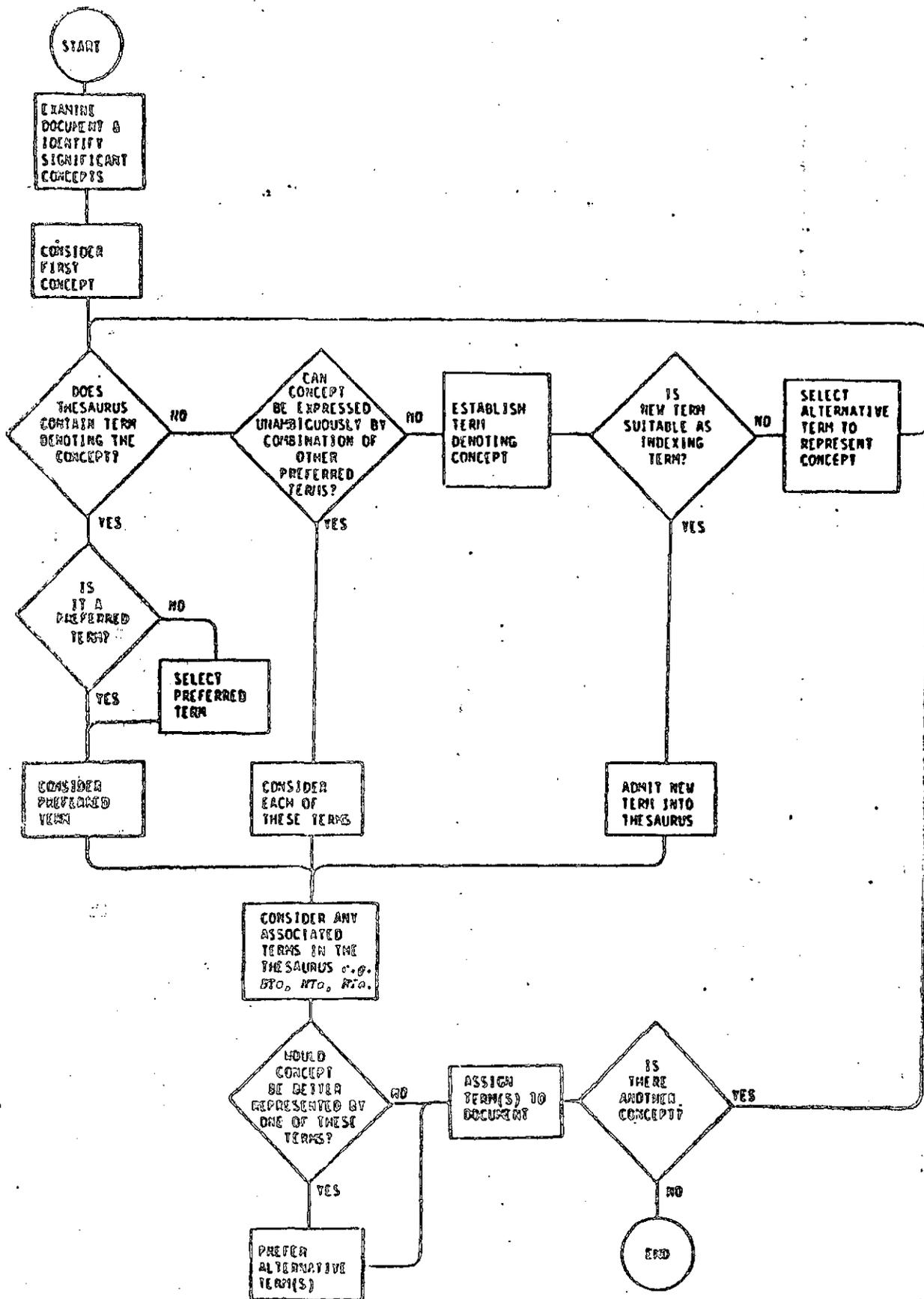
The Sections:

ELIMINATED

ACCEPTED

REVISED

are filled in by the co-ordinating centres.



THE BIBLIOGRAPHIC RECORD CARD

Bibliographic records for the CARISPLAN data base will be entered on the Bibliographic Record Card. The card was originally designed by the Latin American Documentation System for Population (DOCPAL) and has been adopted by the Caribbean Documentation Centre (CDC) with very little modification for use in CARISPLAN.

This Card is intended for use by libraries and information centres which operate a manual system. At the same time, however, it can be integrated into an automated system as the information is organized into clearly identifiable fields. It is, therefore, valuable to libraries which expect to convert to an automated system in the near future, as there ought to be no need for re-cataloguing to ensure machine-readable form.

This card is designed to record the bibliographic information, that is, author, title, publisher, imprint, etc., of articles and chapters in books, monographs and conferences; the abstracts; descriptors and any additional descriptive information which might be necessary. The Bibliographic Record Card allows for a fairly detailed level of processing, but also permits a smaller number of elements to be entered if this is considered necessary by the information centre.

The mandatory elements are explained in the Manual for the Use of the Bibliographic Record Card (BRC).

Another important characteristic of the BRC is the fact that it facilitates linkage with the uniterm sequence by indicating the elements which should be used as Uniterm headings.

The example given of a BRC shows the fields available for entry of the bibliographic information. The detailed instructions for use of the card are given in the Manual for the Use of the Bibliographic Record Card.

THE UNITERM SYSTEM

The Uniterm System was developed for use in small and medium-sized libraries for the arrangement of publications where detailed access to their contents is required.

It is a post-coordinate indexing system - the combination of terms taking place at the stage of retrieval rather than at the initial stage of indexing.

Following the indexing principles of CARISPLAN, the documents are indexed by the most specific descriptors possible - usually single terms or simple combinations of terms. The terms which are used as heading for the index cards can include:

- Descriptors
- Corporate authors
- Personal authors
- Series
- Conference names
- Names of countries

At the time of indexing, each document is assigned a sequential number, as well as the number of descriptors which adequately describe the contents of the document.

The sequential number serves as the unique identifier of the document, and when linked with the descriptors provide detailed access to the contents of the documents.

For each indexing term used, a new Uniterm Card is prepared and the corresponding sequential numbers are posted on the card. The cards are ruled into ten columns numbered 0-9 and the numbers are entered into corresponding columns to facilitate retrieval.

There are, therefore, three sequences of cards:

1. Main entry cards filed in numerical sequence.
2. Main entry cards in alphabetical sequence.
3. Uniterm cards in alphabetical sequence according to indexing terms.

The Retrieval Stage

Information on a subject represented by a single descriptor is retrieved by the sequential numbers written on the card for that descriptor.

When information on a compound subject is required, however, the cards for each of the descriptors which comprise the subject are brought together and the sequential numbers which are common to all cards are the numbers of the documents relating to the compound subject.

The Uniterm System allows faster indexing of the material received in an information unit, especially as there is no need for decision or citation order for the various elements of a complex subject.

The system also allows more detailed access to the contents as a larger number of descriptors or subject headings can be employed without a significant increase in cost or expenditure of time.

The number of card sequences on the other hand is still only two, with the Uniterm Cards relatively few in number for the detail of indexing information which they provide.

Planning for automation

The Uniterm System is also easily linked with the process required for the automation of the technical services in an information unit, and its use is likely to be an advantage in the change over from a manual to an automated system.

GEOGRAPHIC CODES
PRIMARY COUNTRIES

	Latin America	XL
	Caribbean region	X1
	Central America	XC
	South America	XS
<u>CARIBBEAN</u>	Antigua	AG
	Bahamas	BS
	Barbados	BB
	Belize	BZ
	British Virgin Islands	VG
	Cayman Islands	KY
	Cuba	CU
	Dominica	DM
	Dominican Republic	DO
	French Guiana	GF
	Grenada	GD
	Guadeloupe	GP
	Guyana	GY
	Haiti	HT
	Jamaica	JM
	Martinique	MQ
	Montserrat	MS
	Netherlands Antilles	AN
	Puerto Rico	PR
	St. Kitts-Nevis-Anguilla	KN
	St. Lucia	LC
	St. Vincent	VC
	Suriname	SR
	Trinidad and Tobago	TT
	Turks and Caicos Islands	TC
<u>LATIN AMERICA</u>	Argentina	AR
	Bolivia	BO
	Brazil	BR
	Chile	CL
	Colombia	CO
	Costa Rica	CR
	Ecuador	EC
	El Salvador	SV
	Falkland Islands (Malvinas)	FK
	Guatemala	GT
	Honduras	HN
	Mexico	MX
	Nicaragua	NI
	Panama	PA
	Panama Canal Zone	PZ
	Paraguay	PY
	Peru	PE
	Uruguay	UY
	Venezuela	VE

SECONDARY COUNTRIES

Theoretical or methodological documents (no country specified) ZZ

Global XZ

Africa XA

AFRICA

Algeria DZ

Angola AO

Botswana BW

Burundi BI

Cameroon CM

Cape Verde Islands CV

Central African Republic CF

Chad TD

Comoro Islands KM

Congo CG

Dahomey DY

Egypt EG

Equatorial Guinea GQ

Ethiopia ET

French Afars and Issas AI

Gabon GA

Ghana GH

Guinea GN

Guinea Bissau GW

Ivory Coast CI

Kenya KE

Lesotho LS

Liberia LR

Libya LY

Madagascar MG

Malawi MW

Mali ML

Mauritania MR

Mauritius MU

Morocco MA

Mozambique MZ

Namibia NA

Niger NE

Nigeria NG

Réunion RE

Rwanda RW

Sao Tomé and Príncipe ST

Seychelles SC

Senegal SN

Sierra Leone SL

Somalia SO

South Africa ZA

AFRICA	South Rhodesia	RH
(Cont'd)	Spanish Sahara	EH
	Sudan	SD
	Swaziland	SZ
	Tanzania, United Republic of	TZ
	Togo	TG
	Tunisia	TN
	Uganda	UG
	Upper Volta	HV
	Zaire	ZR
	Zambia	ZM
	Europe	XE
<u>EUROPE</u>	Albania	AL
	Andorra	AD
	Austria	AT
	Belgium	BE
	Bulgaria	BG
	Byelorussian SSR	BY
	Cyprus	CY
	Czechoslovakia	CS
	Denmark	DK
	Faroe Islands	FO
	Finland	FI
	France	FR
	German Democratic Republic	DD
	Germany, Federal Republic of	DE
	Gibraltar	GI
	Greece	GR
	Greenland	GL
	Hungary	HU
	Iceland	IS
	Ireland	IE
	Italy	IT
	Liechtenstein	LI
	Luxembourg	LU
	Malta	MT
	Monaco	MC
	Netherlands	NL
	Norway	NO
	Poland	PL
	Portugal	PT
	Romania	RO
	San Marino	SM
	Spain	ES
	Svalbard and Jan Mayen Islands	SJ
	Sweden	SE
	Switzerland	CH
	Turkey	TR
	Ukrainian SSR	UA

EUROPE
(Cont'd)

Union of Soviet Socialist Republics	SU
United Kingdom	GB
Vatican City State (Holy See)	VA
Yugoslavia	YU

NORTH AMERICA

North America	XN
Bermuda	BM
Canada	CA
St. Pierre and Miquelon	PM
United States	US

ASIA AND THE
PACIFIC

Aisa and the Pacific	XP
Afghanistan	AF
American Samoa	AS
Australia	AU
Bangladesh	BD
Bhutan	BT
British Indian Ocean Territory	IO
British Solomon Islands	SB
Brunei	BN
Burma	BU
Canton and Enderbury Islands	CT
China	CN
Christmas Island	CX
Cocos (Keeling) Islands	CC
Cook Islands	CK
Fiji	FJ
French Polynesia	PF
Gilbert and Ellice Islands	GE
Guam	GU
Heard and McDonald Islands	HM
Hong Kong	HK
India	IN
Indonesia	ID
Iran	IR
Israel	IL
Japan	JP
Johnston Island	JT
Khmer Republic	KH
Korea, Democratic People's Republic of	KP
Korea, Republic of	KR
Laos	LA
Macao	MO
Malaysia	MY
Maldives	MV
Midway Islands	MI
Mongolia	MN
Nauru	NR
Nepal	NP
New Caledonia	NC

ASIA AND THE
PACIFIC
(Cont'd)

New Hebrides	NH
New Zealand	NZ
Niue Island	NU
Norfolk Island	NF
Pacific Islands (Trust Terr.)	PC
Pakistan	PK
Papua New Guinea	PG
Philippines	PH
Pitcairn Islands	PN
Portuguese Timor	TP
Sikkim	SE
Singapore	SG
Shri Lanka	LK
Taiwan, Province of	TW
Thailand	TH
Tokelau Islands	TK
Tonga	TO
United States Misc. Pacific Islands	PU
Viet-Nam, Democratic Republic of	VD
Viet-Nam, Republic of	VN
Wake Island	WK
Wallis and Futuna Islands	WF
Western Samoa	WS

WEST ASIA

WEST ASIA

West Asia	XW
Bahrain	BH
Iraq	IQ
Jordan	JO
Kuwait	KW
Lebanon	LB
Neutral Zone	NT
Oman	OM
Qatar	QA
Saudi Arabia	SA
Syria	SY
United Arab Emirates	AE
Yemen	YE
Yemen, Democratic	YD
Antartica	AQ
Bouvet Island	BV
British Antarctic Territory	BQ
Dronning Maud Land	NQ
French Southern and Antarctic Terr.	FQ
St. Helena	SH

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