### 3.3.2.1 Conventional vocabularies

Terminological data are collected, stored in card files and mostly published as lists of terms, glossaries, vocabularies, etc.

The standardized terms and definitions of the British Standards Institution (BSI), United Kingdom, is an example for such a terminological data collection.

### 3.3.2.2 Terminological data banks

There are also terminological documentation services in existence which collect terminological data (facts), i. e. individual concepts (definitions), terms, equivalents in other languages and the like. These data are stored in a computer in order to be able to retrieve quickly not only any information on a given concept but also to produce quickly upon inquiry different types of lists of terms which may be needed for special purposes.

Such terminological data banks exist in Canada, France, Germany, Sweden, USSR. Some of them collect standardized terminology (for instance ISO, France, Germany, USSR). It will be necessary in the near future to establish interconnections of these word banks to increase their efficiency.

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# REPORTS AND COMMUNICATIONS

## An Indexing Manual for PRECIS

*1. Introduction*

PRECIS, or the *PRE*served *C*ontext *I*ndex *S*ystem, is a computer-assisted method for producing alphabetical subject indexes to collections of documents and other media. Its development has been entirely pragmatical, though the basis for the system can be traced back to the NATO-supported research into a new faceted general classification which was carried out by the Classification Research Group in London during the period 1964–1969. In a later project, based at the British National Bibliography and funded by the Office for Scientific and Technical Information, the citation formula developed during the CRG research was first applied to strings of words rather than elements of notation, the object being to devise an indexing system which could be used by the *British National Bibliography* when it adopted computer production. It soon became apparent that a citation order which is suitable for a classification scheme (based on the relative 'significance' of each element in a compound subject) does not necessarily lead to the production of meaningful index entries when it is applied to terms selected from natural language. During the period 1970–1973 a number of changes were made to the citation order formula. Each change showed an increasing tendency towards the organisation of terms into strings according to their grammatical functions rather than their relative significance, and the final version of the system, established during 1973, is based quite firmly upon grammatical principles derived from a study of sentence structures. A history of these developments, together with examples showing the need for certain changes, has been reported in the *Journal of Documentation*[1]. The classificatory background is dealt with more extensively in a different but complementary paper[2].

The "Manual" which is the subject of the present preview[3] is a substantial work of over 500 pages. Over a third of this consists of appendixes, the longest of which contains the algorithms and flow charts on which the computer programs are based. Every technique of string writing and reference construction is demonstrated with examples; consequently, a large part of the actual text consists of examples rather than narrative. The text is also interspersed at various points with self-test exercises, the answers forming one of the appendixes. The theories on which PRECIS is based are also briefly described, particularly where such explanations might help an indexer to resolve a problem through reference to the appropriate underlying principle.

The system differs in some respects from traditional indexes and subject headings, insofar as PRECIS consists essentially of a set of working procedures, not a pres-




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cribed list of terms and phrases. The system is firmly based upon the concept of an open-ended vocabulary, which means that terms can be admitted into the system at any time, i. e. as soon as they have been encountered in literature. Once a term has been admitted, its relationships with other terms are handled in two different ways. These are distinguished as the syntactical and semantic sides of the system, and they show, respectively, a general correspondence with the syntagmatic and paradigmatic relations established by Gardin.

## 2. *The syntax of PRECIS*

The whole of the syntax is amboied in a schema of *role operators*, a selection of which is shown in the table below. One of these codes is written as a prefix to each of the terms in an input string which expresses, as a summary statement, the subject of a document. The position of each term in this string is generally regulated by the ordinal value of its preceding operator, so that the operators constitute a kind of indexing grammar. These operators have three principal functions. Firstly, they are intended to ensure that a team of different indexers (or the same indexer on different occasions) will consistently achieve the same order of terms in their input strings. This, in its turn, ensures that the entries produced from their strings will collocate successfully in the alphabetical index. The operators also ensure that terms are set down in an order which experience has shown to be best suited to the automatic construction of a full set of index entries out of a single string. This order is based on a principle which we call 'context dependency', which simply means that each term in the input string sets the next term into its wider context. Thirdly, these codes function as computer instructions, and they determine not only the typography of the terms within entries, plus their associated punctuation, but they also regulate the format of the entries and the relative positions of each term within the entry.

In a brief preview of this kind it would not be appropriate to attempt a full description of the technique of concept analysis and coding used in PRECIS, but at least some of these techniques can be demonstrated by analysing a typical compund subject, then showing the entries which would be produced by the computer in response to the input string of operators and terms.

During the first stage of work, the indexer examines the document and mentally formulates a title-like phrase which summarises its subject content; in some cases, this would also include its intended audience and bibliographic form. A indexer may, for example, decide that a given work is a 'Bibliography on the role of the sociologist in planning welfare services in England'. The terms in this initial phrase are then subjected to a stage of rapid syntactical analysis. The role of each term is established (e. g. its function as an action, an agent, an environment etc.) and the appropriate operator is selected in each case. As part of their initial training, indexers are taught to look first for a term which denotes an action. If this concept is present, it frequently determines how the rest of the subject should be treated, much as the verb tends to dominate the sentence in traditional grammar. In the example above, an action is clearly present in the term 'Planning'. This should therefore be prefixed by the operator 2, e. g.

(2) planning

The indexer next tests for the presence or absence of a term which represents the object of the action; this concept is generally labelled as the key system. In the example above, the act of 'Planning' has been applied to the entity 'Welfare services', which means that the string, as developed so far, should now read:

(1) welfare services
(2) planning

When considering the subject shown above, it is a fairly

*Table 1: Schema of Role Operators*

| | | |
|---|---|---|
| Main line operators | | |
| | *Environment of observed system* | 0 Location |
| | *Observed system* | 1 Key system: *object of transitive action; agent of intransitive action* |
| | | 2 Action/Effect |
| | | 3 Agent of transitive action |
| | *Date relating to observer* | 4 Viewpoint-as-form |
| | *Selected instance* | 5 Sample population/Study region |
| | *Presentation of data* | 6 Target user/ Documentary form |
| Interposed operators | | |
| | *Dependent elements* | p Part/Property<br>q Member of quasi-generic group<br>r Aggregate |
| | *Concept interlinks* | s Role definer<br>t Author attributed association |
| Connectives | | |
| | *Components of phrases (prefixed by $)* | v Downward reading component<br>w Upward reading component |



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straightforward matter to decide that the term 'Sociologists' has an agentive function: that is, these persons are somehow involved in the act of planning welfare services. It therefore follows that 'Sociologists' should be prefixed by the operator 3, which indicates an agent. They are not, however, the principal agents involved in planning, but instead have some vague but unspecified role. This particular relationship is expressed by the following combination of operators:

(1) welfare services
(2) planning $w of
(s) role $v of $w in
(3) sociologists

The two codes, $v and $w, which have now been introduced into the string do not strictly indicate grammatical role as such, but, instead, they indicate ancillary components of the string which will later form the basis for constructing compound phrases from terms which are immediately adjacent in the string. Examples of these phrases appear in the entries shown below.

The two remaining concepts, i. e. 'England' and 'Bibliographies', are handled in a similar fashion. The former is coded as an environment (operator 0), and the latter as a form (operator 6). The final version of the input string should therefore read as follows:

(0) England
(1) welfare services
(2) planning $w of
(s) role $v of $w in
(3) sociologists
(6) bibliographies

It is only fair to point out that the experienced indexer would not consciously go through these analytical steps, but would tend to write the string as a single integrated action. Once this has been done, the string is completed by adding further computer instruction codes which indicate, for example, the indexer's choice of those terms which should appear as leads in the alphabetical index. If we assume, for the sake of this demonstration, that each of the terms in the string shown above has been marked as a lead, the computer would respond to these codes by producing the following set of entries:

**England**
Welfare services. Planning. Role of sociologists – *Bibliographies*

**Welfare services**. England
Planning. Role of sociologists – *Bibliographies*

**Planning**. Welfare Services. England
Role of sociologists – *Bibliographies*

**Role**. Sociologists. England
In Planning of welfare services – *Bibliographies*

**Sociologists**. England
Role in planning of welfare services – *Bibliographies*

**Bibliographies**
England. Welfare services. Planning. Role of sociologists.

These are fairly typical entries which demonstrate four basic points concerning a PRECIS index and the strings from which it is produced:

a) these entries were constructed entirely by the computer out of a single string; they were not written by the indexer.

b) each entry is co-extensive with the original subject statement; there is no loss of specificity, since all the principal components of the original string are present in each entry.

c) despite computer manipulation, the meaning of the original string has not been distorted in any of the entries. This is partly due to the fact that terms were initially organised as a context-dependent sequence; partly, also, to the structure of the entry itself.

d) a PRECIS entry can occupy two or more lines in the printed index.

A study of these entries will also show that the computer has, in fact, carried out a number of quite complex operations upon the original string. In some cases, terms have been transposed, so that the order in which they are offered to the user may vary from one entry to another. The machine has also constructed certain compound phrases (e. g. 'Role of sociologists') out of the coded noun phrases and prepositions which were present in the input string. It should be stressed, however, that this complexity lies entirely within the computer, which is where it rightly belongs. The writing of input strings is a relatively straightforward task, and the technique can be mastered by most indexers within a week or so.

### 3. *The semantics of PRECIS*

One of the indexing rules in PRECIS states that two terms should not be written as adjacent components in a string if the first serves only to establish the class of concepts to which the second belongs according to common frames of reference. These semantically related terms are handled instead by a different set of routines, leading to the production of *See* and *See also* references in the printed index.

After a string has been written, each term which was marked as a lead is considered out of its context and as an entity in its own right. Terms which are semantically related to one of the terms in the string, e. g. its synonyms, generically superordinate terms, etc. , are determined from a study of dictionaries, available thesauri, classification schemes, and so on. In this way, a first level of semantically related terms is established, each of which could serve as a user's entry point, and so justifies a reference to the term which appeared in the string. Each of these interrelated terms is then assigned to its own numbered address in a machine-held file, and the relationships between the terms held at these various addresses are indicated by a set of codes which are unique to this part of the system. These relational codes generally express those thesaural relationships (such as equivalence, superordination, and association) which are recognised in the ISO 'Guidelines for monolingual thesauri' (IS 2788).

As soon as a first level of related terms has been established in this way, the indexer next considers each of the superordinate and associated terms. Each of these is now regarded in its turn as a potential indexing term, and the indexer goes on to establish a second level of semantically related terms. These, too, are assigned to their numbered addresses in the machine-held file, and the relationships between these terms is also recorded as codes. This operation continues until the indexer is satisfied that an adequate hierarchy of related terms has been established



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and assigned to the store. It is worth noting that, in PRECIS, hierarchies are established from specific terms encountered in indexing 'upwards' to successive levels of more general terms, not, as frequently happens in thesaurus construction, 'downwards' from the general term to the specific.

Once such a hierarchy has been constructed, the numbered address for any term in the hierarchy is available for use whenever that term is encountered in indexing. This number is then quoted in a special field in the input record, where its presence directs the computer to the appropriate address and starts the following sequence of actions:

a) the machine extracts the term held at the indicated address.

b) it then determines what other relational codes and addresses are also recorded at this position.

c) it proceeds to each to these new addresses, where it extracts the term and constructs the appropriate reference.

d) the machine then checks, at each of these 'higher' addresses, for the presence of further relational codes and addresses. If these are present, it proceeds a further step up the hierarchy, where is extracts the term ... and so on.

A complete hierarchy of semantically related terms can be searched very quickly in this way, appropriate references being constructed at each step.

*See* references are used to direct the reader from unused synonyms to their preferred equivalents, while *See also* references are made from superordinate and other related terms which could appear as indexing terms in their own right. The kinds of references which are produced by this routine can be demonstrated most simply by assuming that a term such as 'Birds' has been admitted into the system, and has been assigned to the address 2345. This address will also hold codes which indicate its relationships with terms held at other addresse. Quoting the number 2345 as part of a PRECIS input could then lead to the automatic production of references such as the following:

**Aves** *See* **Birds**

**Ornithology**
*See also*
**Birds**

**Vertebrates**
*See also*
**Birds**

**Animals**
*See also*
**Vertebrates**

**Zoology**
*See also*
**Animals**
**Ornithology**

etc.

*4. Survey of PRECIS users*

The initial version of the system was applied to the *British National Bibliography* from its first issues of 1971. BNB has now adopted the final version of the system, as described in the 'Manual', and this version is also being used in the following publications:

a) *The British National Film Catalogue*

b) *Audio-visual materials for higher education*, published by the British Universities Film Council

c) *HELPIS*, i. e. the catalogue of audio-visual materials issued by the Council for Educational Technology.

d) a forthcoming catalogue of A/V materials in the field of medicine, to be issued jointly by the British Medical Association and the Council for Educational Technology.

The *Australian National Bibliography* adopted the initial version of the system in 1972, but will change to the final version in January 1975. The Canadian MARC Task Group recommended that PRECIS should be applied to *Canadiana*, though the system has not yet been adopted. It has, however, been applied in Canada to records processed at the College Bibliocentre in Don Mills, Ontario, and the results have appeared in issues of their *Film Catalogue*.

It was stated earlier that PRECIS is based on grammatical principles derived from a study of word strings in natural language. Tests have been conducted to see how far these principles, which were derived from English word strings, would continue to apply in languages other than English. The results have been most encouraging, and a number of examples of foreign language indexing are presented in the 'Manual'. Experiments in applying PRECIS to indexing in French have now been started by the Department of Audio-Visual Materials of the Ministry of Education of Quebec Province, and we hope that we shall shortly see the first French PRECIS index.

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2 Austin, D.: Trends towards a compatible general system. In: Maltby, A. (Ed.): Classification in the 1970s. London: Bingley 1972.

3 Austin, D.: PRECIS: a manual of concept analysis and subject indexing. London: Council of the British National Bibliography 1974. ISBN 0 900220 42 2


*Derek Austin*

## Merkmalsordnung für Produkte

Die ständig wachsende Zahl von Produkten sowie die sich immer stärker integrierenden Wirtschaftssektoren erfordern zur Vermeidung von Reibungsverlusten eine rationellere Gestaltung der Kommunikation über Produkte.

In einer derzeit erscheinenden Dissertation[1] wird eine Möglichkeit aufgezeigt, wie Produkte derart beschrieben werden können, daß sie sich eindeutig identifizieren, und von Produkten gleicher Art unverwechselbar unterscheiden lassen, wobei von der Prämisse ausgegangen wird, eine Produktbeschreibung unter dem Aspekt ihrer Anwendbarkeit für *alle* Wirtschaftspartner zu konzipieren.

Einleitend werden zunächst die Motive für die Entwicklung eines vereinheitlichten Produktionsinformationssystems dargestellt und die Ziele des Subsystems Produktbeschreibung präzisiert.

Da im Mittelpunkt eines Beschreibungssystems *identifizierende Produktmerkmale* stehen, setzt sich der Verfasser mit verschiedenen Merkmalsgruppierungsvorschlägen auseinander, die sich jedoch für alle Wirtschaftspartner als nicht operational erweisen.

Der vom Verfasser für Produktmerkmale mit „Sachleistungscharakter" entwickelten Beschreibungssystematik liegen zwei Prinzipien zugrunde: Holimus und Finalbetrachtung. Alle Produktmerkmale werden ausschließlich zweckorientiert gesehen und lassen sich der Kategorie der Finalmerkmale subsumieren. In einem weiteren




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chritt wird eine Gliederung der Finalmerkmale in die Gruppe der „*rubrizierenden Merkmale*" – zur Grobidentifizierung – sowie in die Gruppe der „*Leistungsmerkmale*", die Wissen über die Eignung eines Produktes für einen bestimmten Zweck oder ein Zweckspektrum vermitteln, vorgenommen.

Leistungsmerkmale erlauben eine grundsätzliche Dreiteilung in Merkmale, die
1. Sache/Sache-Beziehungen,
2. Mensch/Sache-Beziehungen und
3. Sache/Sache- und Mensch/Sache-Beziehungen

kennzeichnen. Dem üblichen Vorgehen der Praxis folgend wird die sich anschließende weitere Untergliederung unter fachwissenschaftlichem Aspekt vorgenommen. Diese unter einzeldisziplinärem Blickwinkel gebildeten Gruppen werden letztlich noch dergestalt aufgefächert, daß sich verwendungsbezogene aussagekräftige Untergruppen ergeben.

Die Operationalität der vorgelegten Merkmalsordnung wird abschließend mit einigen exemplarischen Merkmalszuordnungen unter Beweis gestellt.

1 Paass, W.: Produktbeschreibung als Teilaspekt eines Produktinformationssystems. Ein Beitrag zur Informationsrationalisierung. Köln/Bonn: Hanstein-Verlag 1974. ca. 280 S., DM 42,–

*W. Paass*

## Informatics II

*Report on the Annual Conference of the Aslib Co-ordinate Indexing Group, Oxford, England, 25–27 March 1974.*

A most welcome and important series of meetings has evolved from the Co-ordinate Indexing Group's (CIG) annual conferences. The *Informatics* series started in 1973 presently provides the only regular forum for exchange of ideas and (dare one say) information between information scientists and scholars in other disciplines which have related interests and problems. As might be expected, there has been an emphasis in these meetings on problems of classification (but classification in its widest sense), which has not, however, excluded contributions on the most fundamental theoretical issues of information science (and other disciplines) as a whole.

The basic shape of the conferences has been determined by the CIG's interpretation of the term *informatics* (taken from the Soviet terminology), especially from the emphasis in that term's original definition on its relationship with a wide variety of other disciplines[1]. Thus, Informatics II included among its contributors linguists, psychologists, philosophers (at least one professional and many amateurs), mathematicians, a soil scientist and a biologist, as well as speakers who might be classified as information scientists, librarians or documentalists. These classificatory labels, in keeping with one of the conferences recurring themes, should not be taken to imply *exclusive membership* in any particular group. Uniting this otherwise heterogeneous ensemble was a common interest in problems of patterns, relationships and structures, and in establishing data constructs which allow retrieval, analysis, prediction and perhaps even synthesis of information or information value.

Since abstracts of papers presented at the conference are readily available[2], and the proceedings themselves are scheduled to be published, this report will attempt only to indicate how recognition of the common theme indicated above seems to have evolved, the general approaches taken to the problems that theme poses, and some tentative conclusions that appear to this writer to have been more or less generally agreed upon by the participants. It should be emphasized that discussion at the conference was extremely lively, and that "participants" include all who attended, not just the speakers. This point must be especially born in mind since R. A. Fairthorne, to whom this meeting was dedicated, while not delivering a formal paper, exercized a considerable influence on the intellectual shape of the meeting both by his comments and through his previous inspiration of and influence on the speakers. His critical, objective and searching spirit made its influence felt throughout the meeting, and had much to do with what bits of unanimity emerged.

Three general approaches characterized the papers presented. They were: calls for a practical approach to practical problems; reports of experiments and projects in experimental situations, and papers concerned with theoretical and philosophic problems. Most of the papers were specific to quite different and particular problems, which, together with the variation in approach, hindered initial recognition of their common themes. Although many papers dealt specifically with classification, the subjects and types of classification were so disparate that there appeared to be no usable common elements. But as papers which had no apparent relationship to classification repeatedly invoked structure and order as necessary conditions or goals, the specific subjects and classifications began to mean less, and the general unifying theme began to emerge and dominate. It became evident that the individual interpretation of this theme, and the subject to which it was applied, were responsible for the differences among the participants. As this characteristic became more clear, discussion became centered less on the particular problem and more on the general implications of the particular approach to structure. And it was this shift from particular to general, from specific scheme to underlying problems of structure and form, that seems to best characterize Informatics II.

Some agreement on these general problems, as applied to information science and classification, seems to have emerged. The problem of exclusive membership of an element in a single class was especially evident, and the concensus seems to have been against schemes based on this concept. However, facted classifications were not discussed in this context, emphasis rather having been on poly-hierarchies with multiple connections, and especially on thesauri and other net-like structures.

At least partial agreement also seems to have been reached on knowledge structures being the basis of information science in general. From this point of view, classification is seen as a special case of the basic problem. This concensus was implicit in the initial realization that problems of structure and relationship underlay the various specific individual views presented at the conference, but in being stated served to emphasize the intimate connections that information science (informatics) has with



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various other disciplines. Thus the initial assumption of the CIG that cross-disciplinary contact is necessary to the healthy development of informatics, and that the other disciplines would also benefit from such contact, was justified by the conclusion of the participants themselves.

The international character of Informatics II was an added attraction with important benefits. The opportunities for international contact in an academic, small-group setting are rare in this field, and discussion at the conference showed how necessary personal, face-to-face contact is in the communication and development of new ideas. Without the forum provided by Informatics II, many new and exciting concepts would have failed to take root because of the breadth of the Atlantic, or even of the English Channel. It is to be hoped that Informatics III will also serve to provide such an opportunity.

For there will be an Informatics III, amply justified by the results of Informatics I and II. The basic concept of intentional cross-disciplinary contact has been proven sound by the emergence of common themes, and the individual approaches from the various disciplines have not resulted in chaos, but rather in recognition of common problems, and in appreciation of the potential application of various techniques and philosophies accross a broad spectrum of data-structuring disciplines. The CIG deserves to be commended for having had the courage to initiate this series of conferences as well as for having made them so successful, and also deserves wide-spread support in ensuring the successful continuation of the Informatics series.

1 For a standard definition of *informatics*, and discussion of its relationship with other disciplines, see: Mikhailov, A. I., Chernyi, A. I., Giljarevskij, R. S.: *Osnovy informatiki*. 2-oe izd. Moskva: Nauka 1968.

2 See the Section "Classification Literature" in: Intern. Classificat. 1 (1974) No. 2, p. 116.

*Nicholas J. Belkin*

## ISO/TC 37 – Terminology – Fifth Meeting

The Technical Committee 37 of the International Standardisation Organisation (ISO/TC 37), devoted to "Terminology, principles and coordination" – the Secretariate of which is held by Austria – so far elaborated six recommandations. (See p. 90 of this issue.)

Because of new developments in the field of terminology, supplements to these documents became necessary as well as considerations on the use of EDP for terminological work. Ten member bodies of ISO/TC 37, namely Germany, France, Israel, Yugoslavia, Netherlands, Austria, Poland, ČSSR, Hungary and the USA as well as representatives from international organizations and the ISO Central Secretariate therefore convened in Vienna from 4–7 June 1974. The following decisions were agreed upon:

*1. Establishment of Working Groups*

It was resolved to establish 3 WGs to deal with future problems. These WGs are

WG 1 "Principles of terminology"
WG 2 "Layout of vocabularies"
WG 4 "Computional aids for terminology and lexiography."

*2. Scope*

Subject of detailed discussion was the report on the activities of ISO/TC 37, particularly the interpretation of the term "co-ordination". The English version of the "Scope" of TC 37 had often resulted in misunderstandings.

It was stated that *practical co-ordination* of specialized terminology did not fall within the scope of TC 37. Rather, TC 37's primary task was the elaboration of guidelines for the co-ordination of terminological activities.

*3. Vocabulary of terminology*

The supplement to ISO/R 1087 prepared by the Secretariat was turned over to WG 1 for further consideration.

*4. Terminology "signs and symbols"*

Decision to undertake this task was turned over to WG 1.

*5. Guidelines for the adoption of scientific and technical terms*

A proposal presented to Unesco by Mr. Stobersky was discussed at length. TC 37/WG 1 in co-operation with Unesco will develop principles for the creation of new terms in science and technology.

*6. Naming principles*

ISO/R 704 "Naming Principles" was turned over to WG 1 for revision. It is to be examined whether R 704, R 860, and the Guidelines mentioned under item 5 could be combined.

*7. Layout of vocabularies*

The Secretariat presented a proposal for an amendment concerning alphabetical indexing in vocabularies: It was resolved to separate this task from R 1149, and to cooperate with TC 46 "Documentation", TC 97 "Computers and Information Processing" and other competent organizations in establishing rules for the alphabetical arrangement of terms.

The revision of R 1149 is to consider the use of EDP. In the future, work on the layout of mono- and multilingual vocabularies should not be separated.

*8. Lexicographical symbols*

The proposal for an amendment presented by the Secretariat should be revised by WG 3 taking into consideration the comments received.

It should be attempted to find common symbols in cooperation with TC 46/WG 5 "Guidelines for thesauri" to be used in vocabularies of different kinds, including thesauri.

*9. Symbols for languages, countries and authorities*

The Secretariat presented a proposal for an amendment concerning symbols for languages, suggesting the inclusion of a number of additional languages. R 639 is to be revised on the basis of objective criteria. Official languages, languages officially recognized in a particular state, as well as languages considered to be important for historical or linguistic reasons should be included. Alternative symbols, namely 4 letter symbols and 5 digit symbols are to be developed.

DIS 3166.2 "Code for the representation of country names" is to be considered as well.



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*10. Exchange format for terminologcal data*

Terminological word banks are already existing in Germany, Canada, Sweden and USSR; others are either planned or in progress in various countries. Therefore, exchange of terminological data between these terminological word banks becomes more and more important. WG 4 is charged with developing an EDP-data-format for the exchange of terminological data so that uniformity of format can be achieved.

*11. Presentation of a programmed algorithm to build systems of concepts in accordance with ISO/R 704 "Naming Principles"*

Mr. Lang gave a presentation of a newly programmed algorithm for the generation of relationships between concepts. He explained the algorithm used in accordance with ISO/R 704 for generating relations of concepts in logical and ontological systems of concepts. The operative on-line and interactive or, in another version, in batch processed programme based on this algorithm establishes systems of concepts and their terms for vocabularies and thesauri with the aid of a computer (see also Nachr. Dok. 24 (1973), No. 6, p. 231–238).

*12. International colour code for languages*

Since the first draft was not accepted by a vast majority of members, WG 3 was charged to pursue further study on the subject.

*13. Technical vocabulary of ISO*

In order to acquaint the public with standardized specialized vocabularies it is deemed necessary to publish an ISO Technical Vocabulary as proposed in an ISO Council Resolution. TC 37 should assist the ISO Central Secretariate in the realization of this resolution.

*14. Distr bution of ISO Recommendations and ISO Standards*

In order to ensure wide distribution of ISO Standards prepared by TC 37 and containing terminological principles it is recommended that ISO Central Secretariate make a contract with Unesco concerning dissemination of such standards. This would assist unification of terminological work.

*15. Compilation of a manual for terminological work*

It is to be examined whether such a manual for practical work could be compiled within UNISIST (World Information Network for Science and Technology of Unesco).

*16. Infoterm*

A report was given on the activities of Infoterm. The International Information Centre for Terminology was established with the assistance of Unesco within the UNISIST-Programme. Its primary task is the co-ordination of terminological work carried out throughout the world. Supported by Unesco, Infoterm intends to convence an International Symposium on terminological cooperation to discuss the establishment of a network for terminological work.

*Helmut Felber*

*Secretariate of ISO/TC 37*
*Vienna, Austria*

## Joint Meeting of FID/CCC and FID/C Officers

Twenty-seven participants (from 11 countries) represented FID/CCC and 15 of the 32 FID/C revision committees for UDC at the 2nd Joint meeting in Cologne on 14–15 March under the able chairmanship of Mr. G. Lorphèvre, Chairman of FID/CCC/EG and Vice-chairman of FID/CCC.

The 15 FID/C committees were represented as follows: C 2 Religion, C 3 Social sciences, C 4 Life sciences coordination, C 40 Environment, C 54 + 66 Chemical sciences, C 61 Medicine, C 621.3 Electrical engineering, C 621.7/.9 Workshop practice, C 629 + 656 Transport, C 63 Agriculture, C 655 + 681.6 Graphic industry, C 677 Textiles, C 69/72–IBCC Building, C 91 + (1/9) Geography, C 92/99 History.

After reviewing progress since the 1st Joint meeting in January 1973, the meeting concentrated on three main aspects of UDC revision and development, earlier discussed by FID/CCC on 11–13 March:

1. *Current UDC revision*, with special reference to a first draft revision of FID 429 UDC Revision Procedure, now to be named "UDC – principles and rules", in which attention was mainly focussed on the proposal to extend the use of general auxiliaries as independent facets;
2. *Future UDC development* in the light of papers by Kofnovec and Schmidt, at whose request an 'unofficial and informative enquiry' was conducted after some discussion. This enquiry revealed a three-to-one majority against limiting the use – and hence, the development – of UDC only for shelving purposes (i. e. in favour of maintaining UDC for information retrieval) and a clear two-to-one majority favouring evolutionary development of UDC to a strongly facetted scheme, rather than the independent development of a new general classification with later a sudden radical mutation of the UDC.
3. *UDC and thesauri*, in the light of a general background paper by Scibor and a major Belgian study (D'Haenens & Lorphèvre) on thesaurus-form indexes for UDC (specifically based on a study of 330, as recently revised by FID/C 3) whose compilation could be facilitated by optimum terminology and editing of UDC schedule text-headings as far as possible in the form of thesaurus terms.

*(from FID News Bull. 24 (1974) No. 4, p. 47)*

## Classification Topics at Agricultural Conference

At this year's conference of German agricultural librarians and documentalists in Detmold, June 19–21, 1974, five out of an entire number of nine papers were devoted to general and special problems of classification. Thus *Dr. R. Kluth,* University of Bremen, talked about "Einheitsklassifikation im Rahmen der Sacherschließung" (Uniform classification for subject analysis) and stressed especially the significance and political value of such an undertaking. *Dipl. Phys. G. Beling*, Forschungsinstitut für Funk und Mathematik, Meckenheim, treated "Problematik universeller Ordnungssysteme" (Problems of universal



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systems of ordering) by 1) trying to answer the questions for the reason for and manner and purpose of use of universal systems, by 2) showing three newer approaches for them (FID/SRC, Ordnungssystem der Wissensgebiete and Einheitsklassifikation) and by 3) outlining the demands for and functions of a new universal system. *Dr. H. Dehnhardt*, University of Bochum, with "Probleme der Bearbeitung eines Allgemeinthesaurus auf der Grundlage der Dezimalklassifikation mit Hilfe der Elektronischen Datenverarbeitung" (Problems in handling a general thesaurus based on the UDC with the help of electronic data processing) summarized the efforts (since 1965) towards a general thesaurus for all subject-fields. So far, a collection of 16 000 terms (with 10 000 being reference terms) has been established and brought into relationship with the classes of the UDC. There are annual printouts (alphabetical and systematic) of this thesaurus. *Dr. H. Haendler*, University of Hohenheim, brilliantly conveyed his "Vorstellungen über die Funktion von Dokumentationssprachen in Informationsverbundsystemen" (Ideas on the function of documentation languages in information networks). He demanded that a common theoretical basis be established for the network of systems of ordering, that a documentation language should be built up on the principle of creativity of language (Chomsky) and that the economic aspect (combination of concepts) should be observed. *Dipl. Volksw. S. Schrader*, then still with FAO-AGRIS, Rome, outlined the "Konzeption einer Dokumentationssprache für das internationale Agricultural Information System (AGRIS)", its history and present new features (since autumn 1973) which distinguishes between broader subject fields in agriculture (about 80), agricultural objects (plants, animals, foodstuffs) and geographical units. Thus many special subject-fields can be generated by combination of the concepts of agricultural objects with the ones of the broader subject fields.

The conference ended with a panel discussion (participants: S. Schrader, H. Haendler, Prof. Dr. H. Brodauf, G. Beling, I. Dahlberg) on "Möglichkeiten und Maßnahmen für die Schaffung eines Dachvokabulars für die Agrarwissenschaften" (Possibilities and measures for the creation of a roof-vocabulary for the agricultural sciences), stressing the necessity of observing the developments towards a universal broad system of ordering, as envisaged by the Unesco/UNISIST program and for the time being commissioned to the FID/SRC Group for elaboration of a code ob subject-fields.

*I. D.*

## Standardization in Classification

Ever since 1958 one of the Committees of the German Standardization Organisation (DNA), the Ausschuß für Klassifikation (AfK) has been concerned with problems of classification, so far mostly with the UDC. In December 1972 a subgroup of this Committee was formed (Arbeitsausschuß Grundsätze und Terminologie der Klassifikation, AA–GTK), which recently formulated a program for development of a number of standards in the field of classification. The following scope descriptions for working groups have been released; anybody interested to collaborate may register for either one or more than one of these groups by writing to the DNA-AfK, D 1 Berlin 30, Burggrafenstr. 4–7.

*WG Principles*

Collection of materials on classification systems in use. Classification of classification systems according to types. Analysis of classification systems and elaboration of findings and proposals. Identification of partial problems.

Importance of compatible classification systems. Criteria for compatibility regarding "single concepts", "compound concepts", etc. Terms, formal elements and system principles used. Methodology for the determination of compatibility between classification systems and thesauri according to the criteria established.

*WG Terminology*

Collection of all terms regarding classification. Outline for the grouping of these terms. Representation of the AfK in collaboration with other terminology groups in this area. Elaboration of a standard terminology of classification terms. Cooperation regarding terminology in other standards of the AfK.

*WG Construction of classification systems*

Kinds of classification systems and respective methods for the presentation of structure and contents. Criteria for the formation of classes and principles for their arrangement. Pre- and postcoordination. Construction of universal and special classifications. Interaction of these. Examples. Notation. Maintenance and updating.

Methodology for the elaboration of indexes to different classification systems. Manual and automatic processes. Maintenance and updating of such indexes.

*WG Guidelines for classing and indexing*

Purpose: to achieve a certain degree of unification and consistency on all semantic levels of document analysis with the aid of classification systems and thesauri. Criteria (e. g. indexing tests), guidelines for the formation of statements on contents (formal and contents related statements). Degree of concreteness and validity of statements. Segmentation of units of statements for the purpose of generation of indexes.

*I. D.*



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