INFOTERM—
International activities in the area of standardized terminology

M. Krommer-Benz
INFOTERM, Austria

1. Introduction
Progress in all fields of knowledge is heavily dependent upon the communication of information. Unambiguous communication, however, is only possible if the concepts—the elements of thinking—have the same meaning for all who participate in the communication process, whether the exchange of information be national or international [1]. Today, the ever increasing world-wide exchange of information in nearly all fields of human endeavour has brought to the fore linguistic difficulties which heavily impede the flow of information.

In order to meet this 'information challenge' it will be necessary, as has been stated in the 'Study Report on the feasibility of a World Science Information System (UNISIST)', initiated by Unesco, that 'the attention of scientists, learned societies and information science associations should be drawn to the need for joint efforts in developing better tools for the control and conversion of natural and indexing language in science and technology ...' [2].

Thus, terminology and terminological lexicography are becoming increasingly important since information networks, particularly those of a multilingual nature, require more sophisticated communication tools based on reliable terminologies which in turn facilitate the preparation of thesauri.

1.1 What is 'terminology'?
Basically, the term 'terminology' describes at least two different concepts: Terminology' is the aggregate of terms representing the system of concepts of a particular field[3]. Terminology2 is the theory of terminology which is an interdisciplinary field comprising linguistics, logic, the information sciences and individual subject fields [4].

Terminology work thus spans a wide area of activities, i.e. collection and analysis of terms, elaboration of systems of concepts and of definitions, assigning of terms to concepts, etc. Since it permeates so many aspects of knowledge particular efforts have to be undertaken to gather and disseminate information on terminology work.

2. State of the art of terminology work
Nationally and internationally terminological activities have increased immensely during the last decades. The reasons for this are manifold:
— rapid progress in science and technology necessitating the elaboration of monolingual terminologies;
— increasing collaboration on an international scale in a number of fields, i.e. science, technology, economics, etc., necessitating the elaboration of multilingual terminologies;
— the need for the elaboration of thesauri, i.e. the establishment of descriptors in connection with the analysis of documents, storage and retrieval of information.

It is particularly at the level of thesaurus construction that terminology work becomes extremely important for the field of information and documentation.

Three areas of terminology work are to be distinguished:
2.1 Terminological principles
2.2 Elaboration of terminologies
2.3 Documentation of terminology

The first two items in particular are closely entwined with standardization in so far as terminological principles agreed upon internationally facilitate the exchange of ter-
minological data and standardization of terminology precedes the standardization of objects.

2.1 Terminological principles

To facilitate terminology work and—above all—to attain the highest degree of conformity possible for the elaboration of terminologies, directives, i.e. terminological principles and methods for terminological lexicography applicable to all fields and all languages, have been and are being elaborated and/or revised. The committee concerned with the establishment of these principles is ISO/TC 37 ‘Terminology (principles and co-ordination)’ founded as ISA TC 37 in 1936 upon the instigation of the USSR. The impetus for the foundation of this committee was provided by the book Die internationale Sprachnormung in det Technik [International standardization of language in the field of technology] by the late Prof. Eugene Wüster which presented the results of the most intensive investigations into new methods for terminology and terminological lexicography. Since 1952 the Secretariat of ISO/TC 37 has been held by the Austrian Standards Institute (ON) in Vienna. At present ISO/TC 37 comprises 14 participating member bodies, 27 observing member bodies, and has liaison with 38 international organizations [5].

The documents elaborated so far represent an entity and span the whole spectrum of dictionary making.

Class 1 ‘Vocabulary’
ISO/R 1087-1969 ‘Vocabulary of terminology’

Class 2 ‘Guide’
ISO/R 919-1969 ‘Guide for the preparation of classified vocabularies’ (example of method)

Class 3 ‘Naming principles’
ISO/R 704-1968 ‘Naming principles’
ISO/R 860-1968 ‘International unification of concepts and terms’

Class 4 ‘Layout of classified vocabularies’
ISO/R 1149-1969 ‘Layout of multilingual classified vocabularies’
ISO/R 639-1967 ‘Symbols for language, countries and authorities’

All of the ISO/TC 37 documents are under revision.

National versions (= standards) of some or all of these guidelines exist in France, Poland, the Federal Republic of Germany, the Netherlands, etc.

These recommendations were also adopted by Unesco within UNISIST (= Intergovernmental programme for co-operation in the field of scientific and technological information). They are also being observed by a number of non-standardizing national and international terminology committees involved in the elaboration of terminologies.

The International Electrotechnical Commission (IEC) has prepared directives based on the guidelines mentioned above.

Other terminological authorities primarily concerned with non-standardized terminologies have prepared guidelines for the elaboration of terminologies meeting their particular needs, such as the Office de la Langue Française (formerly: Régie . . .) in Canada, the World Health Organization (WHO) in Geneva, etc.

Harmonization of these existing—partly diverging—guidelines will be a task for the future although efforts are already being undertaken in this direction.

For easier application of all seven documents issued by ISO/TC 37 a Manual is to be prepared which will include the principles as well as a number of practical examples; it is to be disseminated widely to ensure application both within ISO and other standardizing bodies, on the national and international level, and also in other terminology preparing bodies. As the past has shown, development of such principles does not suffice; rather every effort has to be undertaken to ensure world-wide application of these principles agreed upon internationally thus facilitating the exchange of terminological data.

It is our hope that the Manual mentioned above, together with additional measures to be undertaken, will fulfil this need.

2.2 Elaboration of terminologies

Contrary to common language and literary language where synonymy and homonymy are desirable by-products of the living dimensions, i.e. of the diversity, flexibility and variability of human communication, this is certainly undesirable in technical language. The need for control, namely standardization, of terminology was first recognized in the fields of biology [6] and chemistry [7]. However, the need for the
'unambiguity' (German 'Eineindeutigkeit', a term coined by the late Prof. Wüster) of terms in other technical fields became apparent much later with the sudden upsurge of practically millions of technical concepts and terms. In these subject fields completely uncontrolled development of terminology would lead to such an abundance of terms that any kind of flow of information would be impeded. This was the reason why commissions have been set up for a number of fields with the specific assignment to unify and standardize concepts and terms.

The preparation of standardized terminologies consists of three stages:

1. Investigation into the terminological system of a given field (survey of present usage of terminology).
2. Elaboration of the terminological system, i.e. the system of concepts and terms. This conscious formation of terminology represents the core-work necessary for the preparation of classified vocabularies, for classification systems, and also for thesauri.
3. Recommendation of the terminology agreed upon by an authority, i.e. publication of the terminological standard and promotion of its application.

These procedures are being observed by a large number of terminological commissions composed of subject specialists working within the framework of national standards bodies or of national or international organizations. The various stages of terminology-making allow for circulation, comment and discussion of the results in question.

A survey of standardized vocabularies issued world-wide so far will be given in Infoterm's 'International bibliography of standardized vocabularies', to be available late 1977. (See below item 2.3.1 'Infoterm'.)

The need for classified vocabularies which provide systems of concepts, terms and definitions developed by competent terminological commissions of experts are in great demand. The majority of those involved in the information process have come to realize that purely alphabetical arrangement of terms with a high percentage of ambiguities no longer can serve scientific and/or documentation purposes even though they might be useful for translation. Particularly in international work, standardization of the systems of concepts, which can differ from language to language, is necessary.

This would eventually lead to international unification of terminology and permit a less obstructed flow of information.

2.3 Terminological documentation

Terminological documentation represents a valuable source for the standardization of terminology.

Terminological documentation can be divided into:

2.3.1 literature documentation (Infoterm)
2.3.2 fact documentation

2.3.1 Literature documentation (Infoterm)

This type of documentation provides information on the sources, i.e. bibliographical description of documents which lead the user to the information requested. The need for an information centre in terminology which would provide a general overview of what has been, is being or will be done in terminology has long been felt.

However, it was not until the end of October 1971 that Infoterm could be established with the aid of Unesco within the framework of UNISIST, now Unesco's General Information Programme. Infoterm's tasks are defined in a contract between Unesco and the Austrian Standards Institute (ON), the latter being supervised by the Austrian Ministry of Building and Technology. Infoterm works in close liaison with Technical Committee ISO/TC 37 'Terminology (Principles and co-ordination)'.

As a focal point for co-ordination of terminology work Infoterm's functions, in compliance with UNISIST Recommendations 4 and 12, consist in co-ordinating terminological activities carried out throughout the world with a view towards development of a network of terminological agencies (TermNet).

The main tasks are:

— co-ordination and advice in the field of terminology, particularly with respect to the application of terminological principles and other relevant standards pertaining to terminological documentation;

— co-operation with all terminological agencies on the national and international level;
— collection and analysis of terminological publications;
— preparation of bibliographies of standardized and specialized vocabularies;
— preparation of an inventory of all terminology preparing and terminology documentation bodies;
— investigation into the possibilities of effective co-operation between terminology banks.

Due to the fact that Infoterm's staff is very small the tasks listed above could not be undertaken simultaneously, priorities had to be set on the one hand, and—in agreement with the concept of decentralization in information and documentation—specialized work will have to be delegated.

The following projects have been undertaken so far:

'International bibliography of standardized vocabularies'

This bibliography originally drawn up by Prof. Wüster and published by Unesco in 1955 contains some 12,000 entries on standardized vocabularies issued by national and international standardizing bodies and/or linguistic authorities. In addition to bibliographical references agreed upon internationally (ISO 690-1975) Infoterm provides translation of the titles into English or French.

An additional system of references pertaining to the inclusion of one or more languages, arrangement and interdependence of terms, existence of definitions, etc. is used. The order of entries (inclusive of cross references) is based on the UDC. (See extract on p. 225.)

The bibliography is produced with the aid of the SIEMENS TEAM system of programmes (= data acquisition using OCR-B equipment for storage in a data bank, automatic sorting of the bibliographical entries, data-bank-controlled composition with automatic page make-up by means of Digiset CRT phototypesetting equipment), and will appear as Infoterm Series 2 by the end of 1977.

It is hoped that this bibliography can serve as pilot project as future revisions of this bibliography will have to be undertaken collectively with the assistance of all standards institutes. A number of efforts in this direction have already been undertaken, e.g. by AFNOR, GOST, BSI, etc. A proposal concerning future collaboration on this project will be presented within ISO/INFCO.

'World Guide to terminological activities'

The World Guide, which appeared a few weeks ago, the 'Who is doing What Where in Terminology' contains detailed information on some 250 terminological organizations and committees, as well as terminology banks, and is thus intended to serve as a basic tool for co-ordination of terminology work.

With the assistance of all concerned revisions and further extensions are intended in machine-readable form for the near future.

2.3.2 Fact documentation

Fact documentation provides immediate access to terminological data either with conventional dictionaries or via microfilm and microfiches, and also via recently established terminology banks. Terminology banks both for standardized and non-standardized terminological data exist in France (Normaterm), in the Federal Republic of Germany (TERM), in the USSR (ASITO), and others. (For a complete survey see Infoterm Series 4 'World Guide to terminological activities'.)

A number of others are in the development stage, such as the terminology bank of the United Nations, etc.

A meeting especially designed to further future collaboration between existing and developing terminology banks will be convened by Infoterm in 1978. The agenda will deal with problems related to the exchange of data (such as formats) and other aspects of terminological data input and output.

Network of terminology preparing and terminology documentation bodies (Term-Net)

Collaboration of all those involved in terminology work will be essential to avoid duplication of effort on the one hand and to ensure close co-operation between terminologists, linguists and information scientists on the other hand.

At the first Infoterm Symposium on 'International co-operation in terminology', held in
Vienna in 1975, it was recommended that Infoterm take immediately appropriate action with a view towards the establishment of a world-wide network for the co-ordination of terminology work following a detailed study to be carried out in consultation with competent authorities in this field. This study prepared by Infoterm will be the subject of detailed discussion in a forthcoming meeting of experts to be convened by Unesco in October 1977. In particular measures necessary for the implementation of this study as well as questions concerning the organization, administration and control of such a network will be deliberated.

Meanwhile, the development of national focal points and sub-nets can be observed, such as:

AFTERM—Under the guidance of the Association francaise de terminologie in Paris close collaboration has commenced between terminology bodies in Canada, France, Belgium and other French-speaking countries.

HISPANOTERM—Recently established HISPANOTERM is responsible for the co-ordination of terminology work in the Spanish-speaking world.

NORDTERM—Close co-operation also with reference to terminology teaching and training is being established between the Scandinavian countries.

COTERM—This Co-ordinating Terminological Board was founded to co-ordinate terminological activities of the five terminology bureaux existing in South Africa.

CIRSTERM—The establishment of a Centre international de recherche scientifique en terminologie is being discussed in Canada.

Similar endeavours are to be observed in other countries, such as the USSR, the Federal Republic of Germany, Yugoslavia and Poland. In addition to these, efforts in the field of terminology can also be observed within other networks and within the Unesco programme. It is intended to link these activities with those of TermNet.

Example:

EURONET—The European network under the auspices of the Commission of the European Communities is to provide immediate access to scientific and technological information. Within EURONET the establishment of multilingual thesauri is of particular importance to ensure a free flow of information between member states of the CEC.

ISONET and TermNet—Infoterm which is to function as a centre for co-ordination within TermNet will also have to work in close liaison with ISONET. The ways and means most appropriate for effective co-operation will have to be discussed in the light of clause 3.9 of the ISONET Constitution so that Infoterm can perform such a specialized function with respect to standardized terminology.

The importance of terminology work for information systems and networks could be summarized as follows:

Information systems are designed for the analysis, storage and retrieval of information, each individual system using a specific documentation language. Standardized terminologies are of great importance for the establishment of the documentation languages to be used within a network of different information systems.

TermNet's function is the linkage of existing terminology centres, terminology banks and other terminological agencies thus providing the necessary basis for the clarification of terminologies in different languages and different fields. Infoterm is willing to aid the development of a network of banks (manual and computerized) of standardized terminological data. Eventually, concerted action will be required of all terminology banks, those of standardized as well as non-standardized terminological data.

Terminological compatibility as an essential prerequisite for the development of information systems was the nucleus of the conclusions and recommendations passed recently at the Third European Congress on Information Systems and Networks in Luxembourg[8].

'Overcoming the language barrier is a sine qua non for “Information Systems and Networks” if we conceive their function as extending the purely parochial dimension of small user groups in very narrow subject fields. . . . The creation of multilingual information systems has to incorporate terminology into information systems via thesauri.'
References


126 UDC 336

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LETTERS TO THE EDITOR

Book prices

I am very grateful for the favourable review of my book The Conversion of Scripts (The Indexer April 1979, p. 178-179), especially since the reviewer was kind enough to extol its virtues but not to mention some of its faults and shortcomings of which I am painfully aware, e.g. several misprints in Russian. However, I must disagree with her terse statement ‘The book is expensive’. In fact, among the books reviewed by Miss Piggott, it is the best bargain in terms of price per page. One page of Conversion costs 5.88 cents (although admittedly in the UK it is priced at 4.13p per page, or about 8.25 cents). The PRECIS book comes to 5.92 cents, the two small books from India (printed on rather inferior paper and poorly bound) come to 8.33 cents for Cameron's lecture and 10.90 cents for Perreault's, while the British Standard is a truly staggering 35p or 70.00 cents per page! And now hear this: a recent American book entitled The Future of the Catalog: the Library's Choices, containing 110 pages and bound in soft covers, sells for $24.50 which amounts to almost a quarter dollar per page. Talk about expensive books! In view of these facts, I believe that my publisher, John Wiley & Sons, should rather be congratulated for publishing a scholarly work with complex typography and footnotes at the bottom of each page at such a reasonable price.

Yours sincerely,
HANS H. WELLISCH.

Our reviewer writes: It may have been a short sentence but it was followed by a dozen lines of what was intended to be a justification of the price of the book reviewed. The 'statement' was the whole, not merely the introductory sentence. If only one had time to check one's references!

A captious review

Please allow me to comment on Mr Haig-Brown's captious review (The Indexer 11 (3), 186) of Wills proved at Chester 1831-1833, edited by Dr and Mrs Dickinson.

Dealing first with the criticisms of the introductory section, it should be noted that this was not prepared by the Dicksons, but by Brian E. Harris. 'The List of Volumes (hardly explicit) . . .'. This is the centenary volume of the Record Society of Lancashire and Cheshire, and the title 'List of Volumes' is perfectly explicit in its context.

'Neither index nor the Analytical Index draws attention to the references being to volume number instead of pages.' It is not clear what 'index' means here, but as the Indexes of Subjects, Editors and Printers all refer to the List of Volumes, why should anyone expect the references to be to page numbers?

As for the numbers of entries given for these indexes, Mr Haig-Brown is so anxious to demonstrate that indexers make mistakes that he makes some himself: two out of his four enumerations appear to be inaccurate.

Turning now to the main part of the book: 'The index content shows it was mechanically copied from the text, devoid of thought or system.' The list of wills was assembled from sources no doubt confused and obscure, and put into alphabetical order of testators, with accompanying indexes of places and occupations: does this not involve thought and system? The last sentence of the review is unjustifiable: much skilled intelligence has been employed throughout.

The index of occupations is full of interest. Cordwainer, sawyer, tide-waiter—do these occupations still exist? Pauper, prisoner for debt—what had these to bequeath? Second Lieutenant, Brazilian navy—a junior colleague of Admiral Cochrane?

Dr and Mrs Dickinson's labours will be appreciated by students of genealogy and local...