INFOTERM NEWS

(compiled from Infoterm Newsletter 10)

State-of-the-art of terminology in Tanzania

Infoterm's effort to assist those countries where technical terminologies are in the stage of development are constantly increasing. From January to April 1978 a young linguist, Ms. Zubeida N.Z. Tumbo from Tanzania stayed with Infoterm for training in the General Theory of Terminology, in methods of terminology work and documentation, and the like.

Below Ms. Tumbo gives a report on the state of terminology work in her country.

Developing terms in Kiswahili (Tanzania)

Background

Being under the British colonial rule for more than forty years, Tanzania (mainland) found herself using English as her official and communication language for years in her post-independent period.

This was not only unfavourable to the new leadership but the masses at large, particularly with reference to the role Kiswahili played to unite the people during the struggle for independence. Besides being the language that Tanganyika African National Union (TANU) members agreed to use as their official language, it was the language which transcended tribal and educational barriers and made Tanganyikas, especially of African origin, feel as one.

Therefore, it was not hard for the people of Tanganyika to recognize Kiswahili as their national language as soon as the green, black and yellow striped flag replaced the Union Jack, but its promotion to the status of an official language was reached six years later in 1967, when it was declared that Kiswahili was to be used in all official correspondence, except where it was deemed necessary to use a foreign language. It was at this time that a body was formed, by an act of parliament, to develop and standardize terms.

The body, Baraza da Kiswahili la Taifa (Tanzania) [National Swahili Council], or as it is widely known, BAKITA, is to work in collaboration with other institutions which deal with language, e.g. Institute of Kiswahili Research, Institute of Education, Departments of Kiswahili and Foreign Languages and Linguistics of the University of Dar-es-Salaam, regional language bodies under the Ministry of National Culture and Youth and voluntary organizations and associations and individuals interested in language development.

Present situation

The first task the Council undertook was the collection of English terms in alphabetic order in fields like commerce, office management and finance management, the source being mostly glossaries of books on these subjects. Most of the work was carried out by individuals who collected English terms with their equivalences in Kiswahili without definitions. The work was then submitted to a group of people without considering whether they were subject specialists or not, who approved or disapproved the translations. The approved terms were then published in booklets for dissemination.

This method had a lot of flaws. Firstly, since subject specialists usually were not consulted during preparatory work and no reference was made to international standards, it was very hard to come to a clear-cut decision as to which English terms belonged to which field e.g. terms like "logarithm", "quadratic equation" and "linear equation" which are purely mathematical terms but were also included in Commercial terms. There were also repetitions of terms which were given double translation e.g. "insurable interest" was translated as "utashi wa bima" and "riba ya bima", whereby "utashi" and "riba" show no sign of being synonyms. Since no definitions were included, it is hard to find out the reason for the double translations.

The near break-through in terminology work was Ndugn H. Akida's (Senior Research Fellow with the Institute of Kiswahili Research) Kamusi ya Biolojia (Biology Dictionary), which – though in alphabetic order – gave definitions of the English terms in Kiswahili and the reasons for suggestions of the Kiswahili terms. However, its shortcomings were that it gave no definitions in English for comparison and also no sources were provided. Moreover, it was a one man's job up to the final when subject field specialists, BAKITA members and linguists met to approve or disapprove the terms and definitions in Kiswahili.

During a 10-day workshop subject specialists requested the Institute of Kiswahili Research, whose members undertook a lot of the preparatory work on terminology, to tackle the problem of terminology in a systematic rather than alphabetic approach, so that it would be easier for them to link related concepts; and that subject specialists be involved at an earlier stage than just to approve or disapprove terms and definitions. They also requested the inclusion of English definitions for comparison purposes, so that it would not be necessary for them to search books just to find the English definition. However, they suggested that sources of terms and definitions were necessary for counter checking. Many of them also showed concern over the waste of material and time which was apparent in book form of unfinalized work. Most of the subject specialists preferred paper slips which could easily be rearranged or deleted. Nonethe-less, one third of the dictionary was discussed and finalized.

It was at this juncture that the Institute of Kiswahili Research found it necessary to train one of its members in terminological lexicography before launching the next project in technical and medical terms due to start in August 1978.

Recommendations for a possible procedure

This work would be incomplete without giving suggestions on terminology development in developing countries like Tanzania, where there is a need to develop terms in a language considered originally as a lingua franca but with a present official status of a language, used as a medium of instruction in education, technology and science.

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1. For existing terms:
1.1 The existing terms in alphabetic order should be systematically classified following international standards under UDC broad headings.
1.2 A card should be prepared for each term in accordance with ISO recommendations.
2. For terms not yet in existence:
2.1 Classified vocabulary in English (terminological standards of BSI, ISO and ANSI) should be taken as a basis for the conceptual system of small fields under the UDC broad headings.
2.2 The small subject fields should then be proposed to the BAKITA, or a national language body in a country, to decide on the field(s) of priority.
2.3 When the priority field is decided, a linguist who has been trained in the theory of terminology should be assigned to undertake the task.
2.4 The linguist would be responsible for contacting subject specialists and forming a small terminological committee for a particular field (it will be his work also to introduce the committee member to fundamentals of the general theory of terminology and principles and methods of terminological lexicography).
2.5 At the beginning, the main job would be to translate the definitions given in classified vocabularies (the vocabularies to be worked upon should be as up-to-date as possible), and proposals for terms should be made.
2.6 The terms and definitions would then to be submitted to external subject experts for comments.
2.7 The comments received should be discussed by the committee and decisions taken on terms.
2.8 The terminology approved should be published and disseminated as widely as possible.

Since all this work cannot be done without properly trained terminologists, a course should be introduced at the University level to train terminologists and terminology documentalists.

Conclusion

Little has been done in the field of terminology in developing countries but if proper methods were followed from the beginning, it could save a lot of frustrations, waste of time, energy and material and lead to a more meaningful terminology development.

Zubeida N. Z. Tumbo

First meeting of ISO/TC 37 "Terminology (principles and co-ordination)" / Working Group 3 "Layout of vocabularies"

From 22nd to 24th May, 1978 the first meeting of ISO/TC 37/WG 3 took place in Paris. The Secretariat of this Working Group is held by Canada. The following main decisions were taken:

- Redefinition of the scope of WG 3: "Standardization of methods of elaboration and presentation of terminologies including creation and use of appropriate symbols"
- Revision of document ISO/R 639 "Symbols for languages, countries and authorities"
- Revision of document ISO/R 919 "Guide for the preparation of classified vocabularies"
- Revision of document ISO/R 1149 "Layout of multilingual classified vocabularies"
- Preparation of a new ISO Standard concerning the layout of monolingual classified vocabularies
- Revision of document ISO 1951 "Lexicographical symbols particularly for use in classified defining vocabularies"
- The work on document ISO/TC 37 N 186 "International Colour Code for Languages" will not be continued.

A more detailed report on this meeting will follow.

Nordic Terminology course

Following the recommendation of the First European Symposium on Language for Special Purposes NORDTERM (Denmark, Finland, Norway, Sweden) held a Nordic Terminology course from 20 to 30 June, 1978 in Copenhagen. A report will follow.

Future meetings

November 20–24, 1978: Moscow: Meeting of ISO/TC 37/WG 1 "Principles of terminology"

New books

International Institute of Refrigeration / Institut International du Froid. *New International Dictionary of Refrigeration / Nouveau Dictionnaire International du Froid.* Paris: I.I.R., 1978, 560 + XXXVII p., A4 (E-F-R-D-S-I-No).

Food and Agriculture Organization of the United Nations (FAO). Terminology and Reference Library. *Dictionaries and Vocabularies 1966–1977.* Roma: FAO, 1978, 170 p., 215 x 270. (GIP:Bib/7).

Centre National de la Recherche Scientifique. *Répertoire des dictionnaires scientifiques et techniques monolingues et multilingues 1950–1975.* Paris: Conseil international de la langue française (CILF), 1978, 590 p., 157 x 240.

Dansk Standardiseringsräd (DS). *Terminologiens terminology* (Vocabulary of terminology). Kφbenhaven: Dansk Standardiseringsräd, 1978, 22 p., A4. (DS/ISO/R 1087, apr. 1978).

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THE TERMDOK BULLETIN

by Erik Sundström, Stockholm

No. 41

On June 24th and 26th, meetings were held in NORDTERM WG 2, the working group devoted to communication between term banks in the Nordic countries. Advances had been made and issues had become clearer since the February 16th meeting reported in No. 37 of this newsletter.

The general picture

The total number of machine-readable term records, authorized by the organizations co-operating in NORDTERM, is still well below 100000. The annual increase may, however, amount to some 20 %. Term records in the different countries do not, as a rule, contain equivalents in the other Nordic languages but almost invariably do have English equivalents.

Search predominantly proceeds by the naming of terms, parts of terms, classification codes or a combination of these elements. This means that, in a majority of cases, considerably less than 10 % of the information in the term record is affected by search operations.

It is further evident that a term bank, when it is first made publicly available, will need a substantially larger storage space than its actual size at the moment. This depends on, firstly, the considerable rate of increase of the bank and, secondly, on the lack of exact information as to the actual rate of this increase.

The neighbours' index

It should be clear from the facts just offered that a possible first step in communication between Nordic term banks is to generate an index for each co-operating bank, containing the original terms, their English equivalents and classification codes. These indices are to be exchanged, put into the neighbours' term banks and kept up-to-date. The rate of updating should be frequent but may be different for different parts of the information.

The cost associated with this procedure would be comparatively low and the average increase in term bank volume would not exceed 30 %. Search can then be performed entirely in the local term bank and use its own search language. Only when inspection of complete term records stored in a co-operating bank is desired, one has to establish communication and perform the actual transmission.

A commercial by-product

A published, comprehensive index to term records authorized by a national terminology organization is evidently most desirable. An index of this kind seems not, at the moment, to be feasible in Sweden due to considerations of cost and of the limited time during which the published index is up-to-date. This holds true both for printed indices and indices produced by COM technique.

An agreement to bring about the procedure out-lined above will contribute to the realization of such an index, since the processing preceding publication is identical with the production of the machine-readable index intended for exchange between the term banks.

A temporary solution

It must be understood that the procedure described is a temporary solution only. When a limit in storage capacity is reached, the decision must be made either to implement search by telecommunication or to acquire more storage space and prolong the index exchange agreement. If it has proved to yield the expected advantages of better co-ordination in terminological work, the decision will probably be in favour of a more full-fledged procedure.

An important point in this connection is that no costs will be incurred that either are not motivated by the long-term development or do not pay off immediately. It is also important to note that certain other functions can be implemented and tested in full scale in concurrence with the simplified search procedure. This is valid for the actual transmission of terminological data, the elaboration of a common classification system etc.

No. 42

Several readers of this newsletter have shown an interest in economic aspects of the TERMDOK system. TNC has kept silent on the subject during four years of otherwise rather detailed information. This attitude depends more on a realization of the difficulty to draw any useful parallels than on a reluctance to disclose the actual economical considerations. It seems as if no two term bank systems are so similar in aim, structure, volume, content, use, etc. as to make a comparison meaningful. In the case of the TERMDOK system, its origin as an aid in glossary production (though always directed towards development into a publicly available system) makes it even more dubious to draw other than very general conclusions when building a new system. Such is, namely, the point of departure in all known cases where advice has been sought on the issue.

But then, general conclusions *are* sometimes desired and occasionally *do* deserve both wide attention and a thorough discussion. This applies in particular to the policy on imposing charges on public access to a term bank.

TNC's predicament

Being essentially a private institution, TNC relies in all its dealings on government support, as for instance in developing the TERMDOK system. Also, the elaboration of new terminology at TNC is to a great extent subsidized jointly by government and industrial sources. In this work, it is of importance that problems of copyright etc. do not constitute any additional economical burden.

It is in perfect harmony with this declared attitude that term records stored in a term bank under TNC's administration should be kept available to the public without any extra charge. Naturally, administration and operation of the term bank do incur costs and must be paid for by its users. But any surcharge is equivalent to letting TNC's patrons pay twice for one and the same commodity: once at its production and once at its distribution.

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Such a situation would cause an untenable position when negotiating new and urgent terminological work. It would induce other producers to take a restrictive attitude in copyright questions etc. in the first place, and to claim royalties when TNC supplied other users with their term records from the bank in the second place. Also, it would burden the quite expensive use of the term bank still more. As a result, the existence of the entire system would be jeopardized. The situation described would furthermore impede the desired development of the term bank into a forum of free exchange of terminological information, as described in No. 40 of this newsletter (see Intern. Classificat. 5 (1978) No. 2, p. 110).

A quantification and a goal

The issue can be clarified by an attempt at quantification. A deliberation on costs should, it is felt, in this case start from a conception of the desired state of affairs and then proceed to an estimate of how and when this state can be realized. In Sweden, a local telephone call costs about one tenth of the lowest domestic letter postage. The unprepared user, wishing to consult a term bank on one or a few terms, would certainly expect the charge to be in some reasonable proportion to these two amounts. He would also expect the charge to reflect the time he is connected to the term bank, rather than the volume of information he succeeds to elicit from it. Considering that the user pays for his own (multi-purpose) terminal equipment and is charged the communications costs via his telephone account, it can be assumed that a minimum search cycle of one or two minutes, to appear reasonable, should not cost more than, say, one or two times the letter postage.

Current calculations suggest that TNC's own activities alone will lead to a cost of about ten to thirty times the assumed level in the planned multi-access system. The uncertainty depends on the choice between technical solutions investigated by TNC. The decision reached in this situation may well be to favour a low-price solution (lacking some useful but dispensable facilities) and vigorously persuade other producers of terminology into using the system. One advantage with such a solution is that maximum freedom of action will be preserved.

Other aspects on the economy of the TERMDOK system, namely development costs and cost-benefit considerations on actual operation, have been treated in the fourth revised edition of The TERMDOK System. Copies can be ordered in writing from TNC.

No. 43

In TNC's almost 40 years old information storage and retrieval system, each new document added to the holdings was analyzed according to a set of ordering rules and made subject to retrieval by means of a card file. While simple and fast to the user, this system makes no provision for the elimination of obsolete information. It is true that TNC's holdings must accommodate documents of historical interest along with more up-to-date information. The profusion of work in progress on successive stages should be kept accessible in the system, but cannot be allowed to stay there permanently once a final version is authorized. For this and other reasons, the manual system has fallen into disuse except for a few clear-cut functions: to retrieve general information of historical or systematic interest but without claims on completeness and to store and retrieve information on certain top interest activities. Meanwhile, documents have accumulated in ever-increasing numbers, with little or no analyzing and recording.

Possibilities of computerization

The solution of this evidently untenable situation has since long been seen in the TERMDOK system. The question is how and when the card file can be replaced by the term bank. Massive input of relevant portions of the accumulated holdings in a single work cycle is out of the question. Funds are not likely to be made available, staff qualified to perform the necessary selection cannot be withdrawn from the production of new terminology and the criterions on information to be selected are certain to be very difficult to put down and to apply.

Confronted with these circumstances, TNC has planned for a piecemeal transformation of the stored information into machine-readable form at the very moment when it is retrieved and found relevant to a specific terminological problem. The rationale behind this attitude can be summarized thus.

- the intellectual effort spent in analyzing the information has to be done and the result has to be recorded anyway
- the cost for retrieval and processing can be carried by a specific terminological task, be it the query service, glossary production or checking of external material
- automatically, only such information as is actually of terminological interest will be processed
- the information input into the system is likely to be of higher quality than that retrieved from the stored documents alone since other relevant information will be analyzed simultaneously.

Effects and implementation

It is evident that the proposed procedure is not a complete solution. Documents that have been elicited all relevant information have to be identified and eliminated in an additional routine. This will probably be performed by means of some kind of marking in the source document. Cover-to-cover input of certain high-quality sources must also be implemented. The extent to which this is done will always remain a question of acquiring the necessary funds. A procedure by which terminological data on a level above the individual term record is made available in the term bank, as discussed in The TERMDOK Bulletin No. 38, would be convenient here.

A piecemeal transformation of TNC's holdings of terminological information into the TERMDOK system may well be the only practicable road to an integration of all information handling activities at TNC. The procedure gains an added value inasmuch as it can readily be combined with another urgent task, namely efforts to increase the utilization of TNC's query service. (See the description in The TERMDOK Bulletin No. 24, in Swedish.) Provoking more questions to the system will lead to lower cost per consultation and more rapid input of conventionally stored information into the computerized system. The benefits to TNC's other activities cannot be over-estimated.

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