REPORTS AND COMMUNICATIONS

18th DRTC Annual Seminar (1981) on Information Analysis and Consolidation: A Short Report

One of the activities of the Documentation Research and Training Centre (DRTC), Bangalore (India), is the Continuing Education Programme, the objective of which is to provide an opportunity to the professionals in the field to keep themselves up-to-date as far as professional skills and knowledge are concerned. Under this programme, the DRTC organised its 18th Annual Seminar this year at Bangalore between 23 and 27 February 1981 on the theme "Information Analysis and Consolidation: Principles, Procedures and Products". A close analysis of the tasks involved in the preparation of some of the information analysis and consolidation (=IA+C) products – such as, state-of-the-art reports/reviews, special country profiles, feasibility reports, comparative product/process profiles, digests, etc. – showed that adequately qualified information professionals are better equipped to do these tasks. About twenty papers covering six facets/ areas were presented and discussed in detail in twelve technical sessions. The six areas were: General aspects, Methods and techniques, Interaction between specialist groups in the preparation of IA+C products, Standards/ Formats for presentation of information in IA+C products, Feedback and evaluation, and Planning of Information Analysis Centres. The details regarding the papers are given below:

Paper Title of Paper and Name of Author(s)

AA Information Analysis for Consolidation: Some Basic Considerations/G. Bhattacharyya.

BA Information Analysis for Technical Enquiries/K. Ramamurthy.

BB Information Analysis and Consolidation Methods and Techniques: A Case Study/ K. K. Bhatia and M. C. Ragavan.

BD Reference Frame-work: An Aid to Information Analysis and Consolidation/ A. Neelameghan and S. Seetharama.

BE Linguistic Approach to Condensation of Information in Natural Languages/ N. K. Gopalakrishnan.

BF Typology of Structural Relations for Information Analysis and Consolidation Processes/ M. A. Gopinath.

CA Specialist Groups in the Preparation and Production of Information Analysis and Consolidation Products/ A. Neelameghan and S. Seetharama.

CB Information Analysis and Consolidation for the Preparation of a Reference Book in Production Technology: A Symbiotic Approach/ B. S. Ramananda and M. V. Ranganathan.

DA Trade Catalogue: A Source for Information Analysis and Consolidation: A Case Study/ K. N. Prasad.

EA Information Analysis and Consolidation Products: Feedback and Evaluation: A Case Study/ S. P. Gupta and M. C. Ragavan.

FA Information Digest Service for Industrial Personnel/ D. V. Patwardhan.

GA Techno-economic Feasibility Report in Small Industry Development: Its Preparation and Use/C. Spurgen.

GB Status Report in Marine Small Scale Fisheries: Format for Presentation of Information/ V. Bhavani.

HA Spiral of Development of Information Analysis Centre/ M. C. Ragavan.

HB Organisation and Set up of Information Analysis Centres/ D. Elhence and M. Ramachandran.

HC Some Practical Steps for Setting up an Information Analysis Centre in Information Centre for Aeronautics/ S. Kartikeyan.

HD Planning of Information Analysis Centres: Some General Considerations/ S. Seetharama.

Altogether about 100 participants – information scientists, engineers, scientists – belonging to governmental, non-governmental scientific and research organisations – both private and public sectors – participated. There was considerable interaction between the information scientists and other scientists as to the roles each had to play in the preparation and production of various types of information analysis and consolidation products.

A general agreement was reached that while critical compilations, reviews and similar works were the domain of the experts in the subject fields concerned, other products of information analysis and consolidation fall within the direct purview of information scientists. However, an integrated effort of all specialist groups is necessary, if not essential, in the preparation of really good products. In addition, the implications on course curricula and syllabi, methods of teaching and learning, entry qualifications to information science courses was extensively discussed. In conclusion, it was emphasised that the profession of information scientists should consider its future in terms of the techniques of information analysis for consolidation. Priced copies of the seminar volume would be available from Professor and Head, Documentation and Research Training Centre, 31, Church Street, Bangalore-560001. India.

S. Seetharama

International Colloquy: Special Language Research and Theory, Focus: Spanish

From November 6–8, 1980, in Saarbrücken, FRG, an international colloquium on Technical Language research and theory was held, sponsored by the E. E. C. (E. W. G.) and the "Institut für Angewandte Sprachwissenschaft sowie Übersetzen und Dolmetschen" of the University of Saarland. The invited participants included technical language researchers and scholars and practitioners of terminology from Europe and Latin America. Among the guest speakers were Professor Lothar Hoffmann of the Karl-Marx-Universität, Leipzig; Dr. Rudolf Beier, Universität Hamburg; Dr. Roger Goffin, Commission of European Communities, Brussels; Dr. Ernesto Zierer and Dr. Guillermo Gil-Malca, both of the Universidad Nacional de Trujillo. Peru; Manuel Criado de Val, director of HISPANOTERM; Mr. A. Bothe of the Dutch Foreign Ministry, The Hague; Professor Reiner Arntz of the Hochschule

Hildesheim, FRG (also a major organizer of the colloquium); Mr. Ingo Hohnhold of Siemens, Munich; Professor Jean-René Ladmiral of the University of Paris; Professor Juan C. Sager of Manchester; Dr. Heribert Picht of the Copenhagen School of Economics and Business Administration; and others. Papers were presented in Spanish, German, French and English on general aspects of the topic as well as special problems relating to Spanish, with the goal of improving communication and cooperation in this field between the Spanish-speaking world and the rest of Europe.

The papers reflected the various interests and activities of their authors: *Professor Hoffmann* described the goals and applications of technical language research, and outlined the problems facing scholars in the coming years, and the methods – statistical, functional, semantic and contrastive – which have been most useful in the development of an independent theory of technical language. *Beier's* contribution, dealing with English technical language, identified nine extra-linguistic factors which account for differences between types of technical language texts. The author then singled out two of them for detailed discussion – presupposed knowledge on the part of the reader, and goals of the exposition – and suggested the hypothesis that the frequency of definitions as well as their content and syntactic structure depend on the degree of previous knowledge of the subject the reader is assumed to possess. *Dr. Goffin* spoke about the relationship between theoretical linguistics and the practice of translation. He first made the point that technical language was long ignored as an area of research by academicians; the first studies were produced by subject specialists, engineers, and standardization committees. Drawing from the work of M. Wandruszka, Goffin asserted that technical language ('Fachsprache') like ordinary language, was an "asystematisches System". He described the problems faced by the translator as a result of the expansion and specialization of technology, and the "internationalization" of science, accompanied by a wild growth of new coinages, jargons and interlingual borrowings. Technical language research is both too linguistic to be left to subject specialists and too subject-related to be left to linguists: excessively practice-oriented and excessively scholastic approaches are both to be avoided. A solution might be the appearance of a linguistically trained technical translator, presupposing that the knowledge of the linguistic reality of practitioners in the field is made available to linguistic researchers, resulting in the creation of a "fachbezogene kontrastive Linguistik" which would be fully in keeping with the goals of the new sociolinguistics.

Mr. Bothe, speaking in Spanish, addressed the problems of developing terminological methods oriented to the needs of translation, and brought to the task his own experience as head of the Terminology and Documentation office in The Hague. He made the point, for example, that the classification systems developed for documentation are inadequate for the classification of terminology. The contribution of *Dr. Nereu Feix*, of Saarbrücken, aimed at a comparative Spanish-German Terminology of economics. *Professor Zierer* introduced the term 'tecnolectologia' (technolectology), defined as the branch of applied linguistics which studies the structure, evolution and use of technical languages, termed 'tecnolectos' (technolects), as subsystems of their respective languages. His paper was an attempt to lay the foundations for a comparative technolectology, using contrastive methods on the levels of word, sentence, and discourse. He highlighted the need for such studies particularly in Latin America, where linguistic barriers and the absence of normalized terminology present a hindrance to socio-economic development.

Other topics represented included methods used in the training of Spanish-German technical language translators at Saarbrücken (*Arntz*); the requirements, possibilities and methods of the day-to-day work of the translator-terminologist (A sharp division between the two, for example, does not reflect the reality that "ein Fachtext eben nicht nur aus Fachterminologie besteht.") (*Hohnhold*); the teaching of scientific German to native speakers of French (*Ladmiral*); the methodology and results of a study to determine the technical and economic feasibility of establishing a terminological data bank in the United Kingdom (*Sager*); and the training of technical translators at the Copenhagen School of Economics and Business Administration (Handelshochschule Kopenhagen) with examples from Spanish (*Picht*).

Several papers contributed by the participants from Spain and Latin America dealt specifically with terminological issues relating to Spanish, such as processes in the formation of neologisms (*Facal*, Madrid), terminological problems in the teaching of the educational disciplines (*Gil-Malca*), and problems in grammatical terminology (*Josse de Kock*, Real Academiá Española). A notable presentation by the director of HISPANOTERM (*Criado de Val*) characterized the present situation of Spanish terminological studies, and the particular problems and difficulties faced by the Spanish-speaking world. The history, organization, and goals of HISPANOTERM were described, along with its current priorities (fiscal, legal and economic terminology) and its relation to related international organizations.

At the conclusion of the colloquium, it was felt that the goals of the meetings had been attained, in that a dialog had been established between the countries and organizations represented, so that Spanish could soon be included in the great normalization effort of the major international languages.

The full texts of the papers (and full list of participants' names and addresses) are being collected and edited by Frau Dr. Gisela Thome, Institut für Angewandte Sprachwissenschaft sowie Übersetzen und Dolmetschen, Universität des Saarlandes, D-6600 Saarbrücken 11, FRG, and will be available for distribution in November 1981.

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The Swedish Centre for Technical Terminology

In Sweden, a centre for technical terminology named Tekniska Nomenklaturcentralen, abbreviated TNC, was established in 1941. In view of the fact that TNC is celebrating its 40th anniversary and also due to the increasing interest in terminological questions all over the world, we would like to give some information about our organization.

In Sweden we make a slight distinction between *terminology* and *nomenclature*. Terminology, true to its etymology, stands for the concept "the theory of terms and their proper use". A second meaning is "a collection of terms used in a specific branch of science or technology."

The result of a strictly systematic "naming" within a scientific field is usually called a *nomenclature*.

Although TNC has the word "nomenklatur" in its Swedish name, we normally talk about our work as being terminological work, both in the first and the second sense of the word. Now – what are the activities of the TNC? In the statutes (from 1941) is stated that the TNC was founded in order to "elaborate technical terminology well suited to Swedish conditions". If we use the expression *term* in the sense "a word with a well delimited definition used by experts in a specific field or branch" most people would agree that terminology is not very often used in colloquial or general language. In what kind of language is it used then? In Swedish there is a short, single word for this, namely "fackspråk" while in English one has have to make a paraphrase, "Language for Special Purposes" (LSP).

In practical terms, this means that TNC elaborates terminologies within different technical and scientific fields or, simply, within different LSPs. These terminologies are published in glossaries, today amounting to a total of 76. The glossaries contain a number of terms with definitions in Swedish and with equivalents in at least English, French and German but very often also in the other Scandinavian languages. In a few cases we have also provided Russian, Spanish and Japanese equivalents.

The TNC glossaries are all elaborated in close collaboration with experts in the fields concerned. A glossary project begins with an analysis of the need for a glossary within a particular field. At the same time investigations regarding financial support are made. When we have found that such a need exists and that it can be financed, a working-group of experts is set up. In each working group of this kind, there is at least one representative from the TNC, whose main duty is to coordinate the work with other projects in progress or with the terminology already established.

The translation of the terms, sometimes also of the definitions, are made in collaboration with native-speaking experts.

A term recommendation (i.e. a recommendation that a special term with a special definition representing a concept is to be used) can never be accepted if it has not first been discussed and decided upon by the experts. Terminological work is not very effective if the terms are not to be accepted and used.

A telephone service, free of charge, is offered on terminological questions, sometimes reaching beyond the fields of science and technology. We receive between 600 and 800 enquiries per year.

A news bulletin, TNC-Aktuellt, is issued regularly, dealing with recent activities at TNC and in the terminological world, in Sweden and abroad.

TNC sometimes arranges courses in "the theory of terminology". This is due to an increasing interest in learning about terminology and terminological work on the part of organizations, enterprises and authorities. In Sweden, there is no academic education or training in terminology. You cannot study to become a "terminologist". Academic level courses on terminology are offered, for example, at the University of Vienna, at the University of Manchester and at the School of Economics in Copenhagen.

TNC is supported by the Swedish government and by a number of important private enterprises in Sweden as well as by other organizations and institutions. The governmental bodies represent all Ministries. The TNC is also supported by all the Academies of Sweden, in fact it was on the recommendation of the Swedish Academy of Engineering Sciences that the TNC was founded in 1941.

Today there are 10 employees at the TNC which is more than ever before. For a long time, there were only 2–3 persons employed. Perhaps one can say – or hope – that this increase in personnel and resources is an indication of the authorities having become more aware of the importance of this kind of work.

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COGNET Newsletter (1981) No. 1

The Editor Richard B. Millward (Center for Cognitive Science, Box 1911, Brown University, Providence, R.I. 02912, USA) presents in the first issue of this new Newsletter the ideas of a planning committee on the history and aims of COGNET meant to become a national network for cognitive science. Its three major goals are

(1) The development and distribution of common software for research in cognitive science.

(2) The training of cognitive scientists in the use of basic software as well as in the more content-specific work going on at a number of different cognitive science centers.

(3) The enhancement of communication among cognitive scientists. Such communication will allow those without computational facilities to work on remote computers. It will also help in the training of cognitive scientists. Via the network, researchers at different locations will be able to interact on software development, cooperate in writing papers, and make use of data bases at different host nodes.

Of the 12 pages Newsletter, 6 pages are covered by a questionnaire; its data are meant to support a proposal for funding and to "find out more about the cognitive science community so that when the network is functionning, we will know who to contact and what their needs are".

12th Annual Meeting, Classification Society, NAB

The North American Branch (NAB) of The Classification Society has held its 1981 Annual Meeting from May 31 – June 2 at Chelsea Inn, Toronto, Canada. The 57 papers (as listed in the program) have been organized into 7 sections with subsections, as follows:

1A Probabilistic approaches to classification

Milligan, G.: A discussion of procedures for determining the number of clusters in a data set.

Wong, M. A., Lane, T.: A K^{th} nearest neighbour clustering procedure.
Lefkovitch, L. P.: Conditional clustering and probability.
Windham, M. P.: Cluster validity for fuzzy clustering algorithms.
Bozdogan, H.: Use of Akaike's information Criterion (AIC) in cluster validity and identification.

1B Classification and computer science

Friedman, H.: Overview
Artis, H.P.: A technique for determining the capacity of a computer system.
Agrawala, A. K.: Using clustering for computer workload classification.
Belady, L. A.: Software components: small and large.
Francis, I.: A taxonomy of statistical software.

2 Biological classification: the continuing debate

Sokal, R.: Phenetic viewpoint.
Farris, St.: Cladistic viewpoint.

3A Comparing classification solutions

Day, W.: Computational pitfalls in comparing classifications.
Morey, L.: Comparison of clustering techniques in a validation framework.
Tidmore, F. E., Turner, D.W.: A comparison of clustering using Chernoff-type faces with several common hierarchical methods.
Janowitz, M. W.: Rank correlation coefficients as optimality measures for monotone equivalent cluster techniques.
Margush, T.: Distances between phylogenetic trees.
Morey, L., Agresti, A.: An adjustment to the Rand statistic for chance agreement.
Childress, M.: Statistics for evaluating classifications: a new view.

3B Classification in biomedical research

Abbott, L.: Taxonomic classification methods: An approach to medical diagnosis.
Goldberg, D.: Diagnostic classification of liver disease by discriminant function analysis.
Albert, A.: Comparison of two partially-parametric methods for discriminating between two groups.
Chaprin, M. A., Corning, W. C.: Computer-based brain analysis, classification and discrimination of problematical children.
Gershon, N.: Statistical methods to classify different kinds of molecular order on membranes.
Hirsch, H. V. B., Hagerty, K., Lees, F. C., Tieman, S. B.: Principal components analysis of the response properties of neurons in the visual cortex of the cat.

4A Monte Carlo research

Milligan, G.: A review of Monte Carlo tests of cluster analysis.
Brennan, T.: An evaluation comparison of several clustering techniques across different data structure.
Blashfield, R., Morris, R.: Directions of Monte Carlo research about cluster analysis.

4B Clustering longitudinal data

Carter, R.: Morris, R., Blashfield, R.: On the clustering of multivariate longitudinal data.
Bryant, J., Breaux, G.: Automatic identification of multitemporal signatures in farm lands.
Legendre, P., Legendre, L., Dallot, S.: Hypergeometric chronological clustering to describe ecological succession.

4C Classification software

Harshman, R., Lundy, M.: The PARAFAC analysis package: A set of portable Fortran programs for three-way factor analysis and multidimensional scaling.
Carmichael, J. W.: TAXMAP 5: A general purpose classification program.
Lei, H., Skinner, H.: Modal profile analysis: a dimensional model for classification.

5A Developments in classification methodology

Pruzansky, S., Carroll, J. D.: An analytical approach to fitting multiple hierarchical tree structures.
Lefkowitch, L. P.: A globally optimal dendrogram.
Ruspini, E.: The extension of the concept of cluster.
Michalski, R. S., Stepp, R.: A method of organizing data into conceptual hierarchies.
McQuitty, L.: Toward uniformity of clusters across methods by reducing errors in data.
More, W.: Principal component analysis to identify multivariate outlines prior to clustering.

5B Classifications of abnormal behaviour

Mezzich, J., Coffman, G.: Comparing the external validity of standard consensual, cluster analytic and factorial dimensional diagnostic systems.
Coffman, G., Mezzich, J., Strauss, J.: An empirical study of dimensional and typological patterns of psychiatric symptomatology.
Lorr, M., Sziedelis, A.: A cluster-analytic approach to MMPI Profile types.
Reddon, J., Marceau, R., Jackson, D.: Some measurement problems in classification: An example with federal penitentiary inmates.
Lyons, J., Brown, J.: Classification of alcoholism or personality using an adaptive methodology.
Golden, R.: Taxometric detection of schizotypy in children.

6 Keynote lecture

Gower, J.: Is classification statistical?

7A Developments in scaling

Carroll, J.D.: Pruzansky, S., Tversky, A.: Trees versus spaces: A computational analysis.
Nishisato, Sh.: Dual scaling and classification based on categorical responses.
Harshman, R.: Multi skew mensional analysis of skew-symmetric data.
Underhill, L.: On the folklore of multidimensional scaling.

7B Vocational and organizational applications

Jackson, D., Holden, R., Locklin, R., Marks, E.: Hierarchical classification of vocational interests associated with academic major areas.
Lattin, J.: Partitioning the corporate network: An application of a high-density clustering model on a graph.