

kurz dargestellt. Ein eigenes Kapitel ist dem für die Speicherung und Übertragung von Bilddaten sehr wichtigen Gebiet der Bildcodierung gewidmet. Für die Auswertung, d.h. die Berechnung der Objekte in den Bildern werden Methoden vorgestellt, die sich auf Bildänderungen bei bewegten Objekten, die Berechnung der Objektkonturen, die Klassifikation einzelner Bildpunkte bei multispektralen Bildern und auf die Auswertung von Flächeneigenschaften stützen.

Die bei der maschinellen Verarbeitung von Bilddaten auszuwertenden Datenmengen sind so groß, daß spezielle, d.h. parallele Prozessoren benötigt werden. Für lineare Berechnungen können analoge optische Systeme verwendet werden. Durch die Verbindung optischer Systeme mit Digitalrechnern zu hybriden Systemen und durch die Entwicklung parallel arbeitender, digitaler Verarbeitungssysteme wird die notwendige Flexibilität programmierbarer Rechenautomaten erreicht.

Die Darstellung der Anwendungen ist aufgeteilt in die drei Gebiete Anwendungen in Wirtschaft und Industrie, in der Medizin und in der Erdfernerkundung und Kartographie. Das erste Gebiet beschreibt Belegverarbeitungsanlagen, ein Bildverarbeitungssystem mit Anwendungen in der Materialprüfung und Sensoren für Handhabungsautomaten in der Fertigung. Für den Bereich der Medizin werden Tomographie, Röntgenbild- und Zellbildanalyse sowie die Auswertung von Szintigrammen dargestellt. Abschließend wird die Verarbeitung von Geodaten behandelt. Dabei steht die Bildaufnahme im Vordergrund. Behandelt werden Luft- und Satellitenaufnahmen im thermischen und optischen Spektralbereich sowie die Mikrowellen- und Radartechnik. Verfahren zur Bildverbesserung und Systeme zur Aufbereitung der Bilddaten bilden die Basis für Bildinformationssysteme, in denen die Bilddaten den Anwendern der verschiedenen Fachrichtungen für die Auswertung zur Verfügung gestellt werden.

Das Buch wendet sich an Nachrichtentechniker, Informatiker und Anwender der Bildverarbeitung. Aufgrund der knappen Darstellung des sehr umfangreichen Gebietes ist das Buch als Einführung für Leser ohne ingenieurwissenschaftliche Kenntnisse auf verwandten Gebieten nur bedingt geeignet. Durch die große Zahl der beteiligten Autoren wird in der Gliederung des Gebietes und in der Notation nicht die klare Linie einer Monographie erreicht; durch die größere Authentizität der Einzelbeiträge wird dieser Nachteil aber ausgeglichen.

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FELBER, H., LANG, F., WERSIG, G. (Ed.): **Terminologie als angewandte Sprachwissenschaft**. (Terminology as applied linguistics) (In German). Gedenkschrift für Univ.-Prof. Dr. Eugen Wüster, München/New York/London/Paris: K.G. Saur, 1979. 272 p. ISBN 3-598-10028-0.

When Eugen Wüster died in 1977, the fields of international terminology and standardization lost one of their most distinguished personalities. Wüster, who in 1931 had already published a work of fundamental importance, "Die internationale Sprachnormung in der Tech-

nik, insbesondere in der Elektrotechnik," is acknowledged as the founder of terminological research and theory.

Wüster also dedicated considerable attention to the related fields of documentation and classification; further emphasis was placed on general linguistics, and here more particularly on the field of artificial languages, which Wüster viewed as an important means to surmounting language barriers.

According to the intentions of the editors the present commemorative volume is supposed "to offer help in orienting the coming generations of terminologists and translators, technical-language researchers, developers of artificial languages and standardization authorities."

Corresponding to the areas of emphasis in Wüster's work as described above, this volume is divided into the following sections: 1. Eugen Wüster – Leben und Werk; 2. Internationale Tätigkeiten auf dem Gebiet der Terminologie; 3. Terminologieforschung und -lehre; 4. Information und Dokumentation; 5. Plansprachen.

Besides an article commemorating Wüster's personality and his scholarly accomplishments, part 1 contains a complete, 26-page bibliography of his publications giving an impression of Wüster's productivity.

Part 2 begins with a contribution by *H. Felber*, "Die internationale Grundsatznormung – Rückblick und Ausblick." The activity of ISO/TC 37 is central to this article. The author gives the intensification of terminology research as an important task for the future.

The International Information Center for Terminology (Infoterm) plays an important role within the international cooperation in terminology. The following article by *H. Felber* and *M. Krommer-Benz* describes the work of this center. The role of Infoterm in the organization of the international network for cooperation in terminology (Term Net) is particularly emphasized.

In the final article in this section, *A. Manu* discusses the international bibliography of monolingual scientific and technical glossaries, an extensive work in which Wüster was able to realize numerous original ideas on bibliography and classification.

Part 3 ("Terminologieforschung und -lehre") is introduced with an article by *H.E. Wiegand* "Definition und Terminologienormung – Kritik und Vorschläge."

In his consciously polemic article the author fundamentally questions one of the decisive axioms of Wüster's theories of terminology, the existence of concepts. Among other things he strongly criticizes both the 1961 and the 1974 versions of DIN-Norm 2330 ("Begriffe und Benennungen"), which, according to the views of the author, handle the "concept" and the "definition" inconsistently. For the author, the "concept" as an instrument for terminological work is not only doubtful, but also superfluous. For him "meaning" alone is of importance in terminology which he understands as follows: "To explain the meaning of a technical term to someone is to show someone how this technical term is understood, has to be understood, should be understood." Wiegand assigns a rather subordinate function to the "concept" itself: its use should only be permitted where terminologists are making a statement about their own technical language.

In the only English contribution to this volume "Training in Terminology: Needs, Achievements and

Prospectives in the World," J.C. Sager first lists the individual groups which require instruction in terminology. He then considers the level of knowledge needed by each individual group and describes the forms of teaching terminology which are presently in use in various countries. In the concluding remarks on the further development of the instruction of terminology the interdisciplinary character of terminology play a special role.

In their contribution "Erfahrungen mit der Terminologearbeit in der Bundesrepublik Deutschland" the authors G. Beling, W.H.U. Schewe, H.-R. Spiegel and G. Wersig divide up the entire field of terminological work. They differentiate between four levels, each of which presupposing the others: 1. lexicography, 2. terminological work, 3. standardization, 4. terminological public relations. They describe in particular the work of the standards committee on terminology of the Deutsches Institut für Normung (DIN) and the work of the Verein Deutscher Ingenieure (VDI) in the fields of terminology standards and research on technical language.

The peculiarities and function of technical language as well as the differences in the structures of technical and general texts are central to the contribution of W. Wilß "Fachsprache und Übersetzen." The author underlines the eminent role of terminology and analyzes methods and problems in technical translating.

Part 4 of this volume, is dedicated to information and documentation and their relationship to terminology. G. Wersig points out similarities and differences between these two fields in his article "Terminologieforschung und Informationswissenschaft – Zwei Disziplinen in Kinderschuhen." Common to both fields are, in the views of Wersig, in particular the task of producing a communications process free from interference, and further the close relationship between theory and practice. Possibilities for a working exchange present themselves in these common tasks. Here information science anticipates in particular more exact explanations on possibilities of describing the structure of technical language. Information science for its part can help terminology in overcoming its present lack of theory.

Central to the article "Klassifikation" by F.H. Lang are Wüsters efforts for further developing the UDC.

R. Supper handles coding problems in his contribution. He makes reference here to ISO 3166 (Codes for the Representation of Names of Countries) and ISO/R 639 (Symbols for Languages, Countries and Authorities) as well as the corresponding DIN standards.

The concluding section of this book, with the heading "Plansprachen," includes three articles with quite different topics. In his article "Interlinguistik – Teil der Linguistik?" H.M. Ölberg defines interlinguistics in the limited sense as the branch of linguistics which is concerned with artificial international languages; he emphasizes the interdisciplinary character of interlinguistics.

M. Mangold investigates the Esperanto phonetic system in Africa. He compares the sounds present in Esperanto with those of about 30 African languages and comes to the conclusion that Esperanto is phonetically easier for Africans than, for example, English or French.

The final contribution deals with system quality, function equivalence, and difficulties in artificial and ethnic languages. The author, O. Back, starts from the concept "Systemgüte" which was coined by Wüster who

saw precision and convenience as its fundamental requirements. Back counters the claim that all languages are equally difficult, or equally easy, with extensive evidence; he is of the opinion that linguistics ignores artificial languages unjustly, as a comparison of artificial and ethnic languages is of great methodological interest.

If the work is viewed as a whole it appears, at least partially, to be rather heterogeneous despite its convincing organization. However, that was almost unavoidable. Eugen Wüster, to whom this work is dedicated, was a man with unusually widespread interests. Besides, terminology is a young subject with an interdisciplinary orientation, in which there are diverging opinions. The editors are to be applauded for allowing the expression of differing opinions in this volume. Here one need only mention Wiegand's critical article. The other authors who worked with comparable topics, for example Lang, assume that the "concept" forms an indispensable instrument for terminological work, and backs this up with examples. Unfortunately this interesting controversy cannot be dealt with in more detail here. At any rate terminology continues to be called upon to further establish and – if necessary – to modify its position on concepts. In this respect critical articles of the type described are certainly important.

The large spectrum of the contributions and their, at least in part, controversial character make the work appear suitable only in a limited sense as an initial introduction to terminology problems. On the other hand, it can be unconditionally recommended to all those who wish to acquire a comprehensive overview of the present discussions within terminology, of terminology's relationship to neighboring sciences, and of the future tasks of terminology research. In particular the extensive bibliographical references offer a good basis for further studies.

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SAGER, J.C.; DUNGWORTH, D., MCDONALD, P.F.: *English Special Languages: Principles and Practice in Science and Technology*. Wiesbaden: Oscar Brandstetter Verlag 1980. 368 p.

Special languages, much more than ordinary language, reflect an underlying classification system or taxonomy of objects and properties. One of the most well developed special languages, in this respect, is that of Botany, as reflected in the well-known binomial nomenclature designed by *Carolus Linnaeus* (Carl von Linné), based on an elaborate hierarchical classification of plants. In order to represent this taxonomy, a comprehensive New Latin nomenclature was devised to replace ordinary language words which, according to Sager and his associates, "implied misleading relationships." "The classificatory use," they continue, "being highly developed in special languages, assumes great significance and is the basis of much special communication." (p. 20, 22)

The same theme is elaborated in a later discussion of "nomenclatures" which contains the following:

Without classifying the great multiplicity of objects, their characteristics, their common features, their use and adaptability to