

Tribute to the founder of terminology

1998 marks the centenary of Eugen Wüster's birth

Geoffrey Kingscott reviews the life and work of a remarkable linguist

It was Eugen Wüster's seminal work, *International standardisation of technical terminology*, published in 1931, which served as the impetus for the establishment of Technical committee 37 (Terminology) of the International Standards Association (also known as the International Federation of National Standardising Committees). With its work interrupted, it recommenced in 1951, the International Standards Association having now become the International Standards Organisation (ISO). The recommencement so soon after the war, and the almost seamless resumption of the committee's activities, was due to tireless efforts and travel in the difficult postwar conditions by Wüster himself. Indeed until 1970 Eugen Wüster himself supported many of the costs of the committee, the secretaryship of which is still held in Austria. 1998 also marks the 30th anniversary of the appearance of Wüster's ground-breaking technical dictionary, *The machine tool - an international dictionary of basic concepts*.

Eugen Wüster did not exactly coin the word *Terminologie*, but he was the first to apply it systematically to what was previously called the *Wortschatz* when this was used in a specific scientific or terminological area. For Wüster *Terminologie* meant "das Begriffs- und Benennungssystem eines Fachgebietes, das alle Fachausdrücke umfasst, die allgemein üblich sind" (the concept system and naming system of a specialist domain, including all specialist expressions in normal use). He applied his principles first to the area of electrical engineering.

The discipline of terminology was defined by Wüster as a "linguistisch-pragmatische Disziplin, die auf internationaler Ebene durch Angleichung der Begriffe, Sinnformen und Schreibungen die nationalen Fachsprachen einander angleicht..." (a linguistic and pragmatic discipline, which at the international level provides comparisons between concepts, forms of meaning and written terms in the national special purpose languages...).

Eugen Wüster was born in the small Austrian town of Wieselburg in 1898, the son of an industrialist, who was also called Eugen Wüster

(until his father died Wüster used to sign himself off in notes to colleagues as EWS - Eugen Wüster Sohn; after his father's death this became EW). Our Eugen Wüster attended the high school (Humanistische Gymnasium) in Hirschberg. After leaving school he studied electrical engineering at the Technical University of Berlin Charlottenberg, where he graduated in 1927, and in Stuttgart.

In 1931 he returned to Austria in order to take over the management of the long-established (see photograph) Wüster family firm, which comprised an electric power plant, a cold rolling mill, and tool manufacturing (particularly saws and woodworking tools). In that same year, 1931, he submitted his doctoral thesis - *Internationale Sprachnormung in der Technik, besonders in der Elektrotechnik* - and was awarded his doctorate 'summa cum laude'. In addition to running the family firm (which he continued to do until his death - he became sole proprietor in 1951) he early in his career made it his business to collect relevant literature on terminology from all over the world (the Wieselburg collection), and quickly found himself in possession of the world's most extensive archive.

The thesis was translated into Russian, and it is still a key text there. As a result of its impact it was the Soviet Union which proposed the setting up of ISO Technical Committee 37.

Between 1967 and 1973 TC 37 of the ISO published six ISO recommendations (ISO/R) and one ISO standard on terminology, some 300 pages in all. Many of these drafts had been prepared by Eugen Wüster, using analyses based on material from the Wieselburg collection. ISO/R 1087 contains the vocabulary of the theory of terminology, ISO/R 704 and ISO/R 860 deal with terminological principles, ISO/R 919 contains guidelines for terminology work, ISO/R 1149 describes the methods of terminological lexicography, and ISO/R 639 with ISO 1951 contain symbols for languages, countries, and authorities, as well as symbols to be used in vocabularies.

In the 1950s Wüster did a lot of work coordinating existing terminologies and glossaries,

and this resulted in 1955 in the first edition of the *Bibliography of monolingual scientific and technical glossaries - volume I - national standards* with some 10,000 entries. In 1959 he was largely responsible for volume II - miscellaneous sources.

Coming to fruition in the next decade, and reflecting the sheer volume of work Eugen Wüster was able to coordinate in the 1950s, 1960s and 1970s, was the ground-breaking English/French (with German supplement) technical dictionary, *The machine tool - an international dictionary of basic concepts*. Commissioned by the European Economic Commission of the United Nations Organisation, this dictionary set a standard which has rarely been emulated in the 30 years that have elapsed since its publication in 1968.

As Chapter 1 of the book states: "In the first place, every effort has been made to derive full advantage from the work which has been done in recent decades in all the leading industrial nations of the world with the aim of achieving standardisation of their own technical terminology.

"In the second place, the compilers have aimed at a high degree of exactitude of presentation of the terms and concepts included. By a variety of means

which include the provision of careful definitions of every concept presented (together, in many cases, with illustrations), and by the adoption throughout of a system of layout quite different from that adopted in the usual translating dictionary, an attempt has been made to combine in one work all the most important advances in lexicographic method which the recent progress in the rational development of technical terminology has made possible"

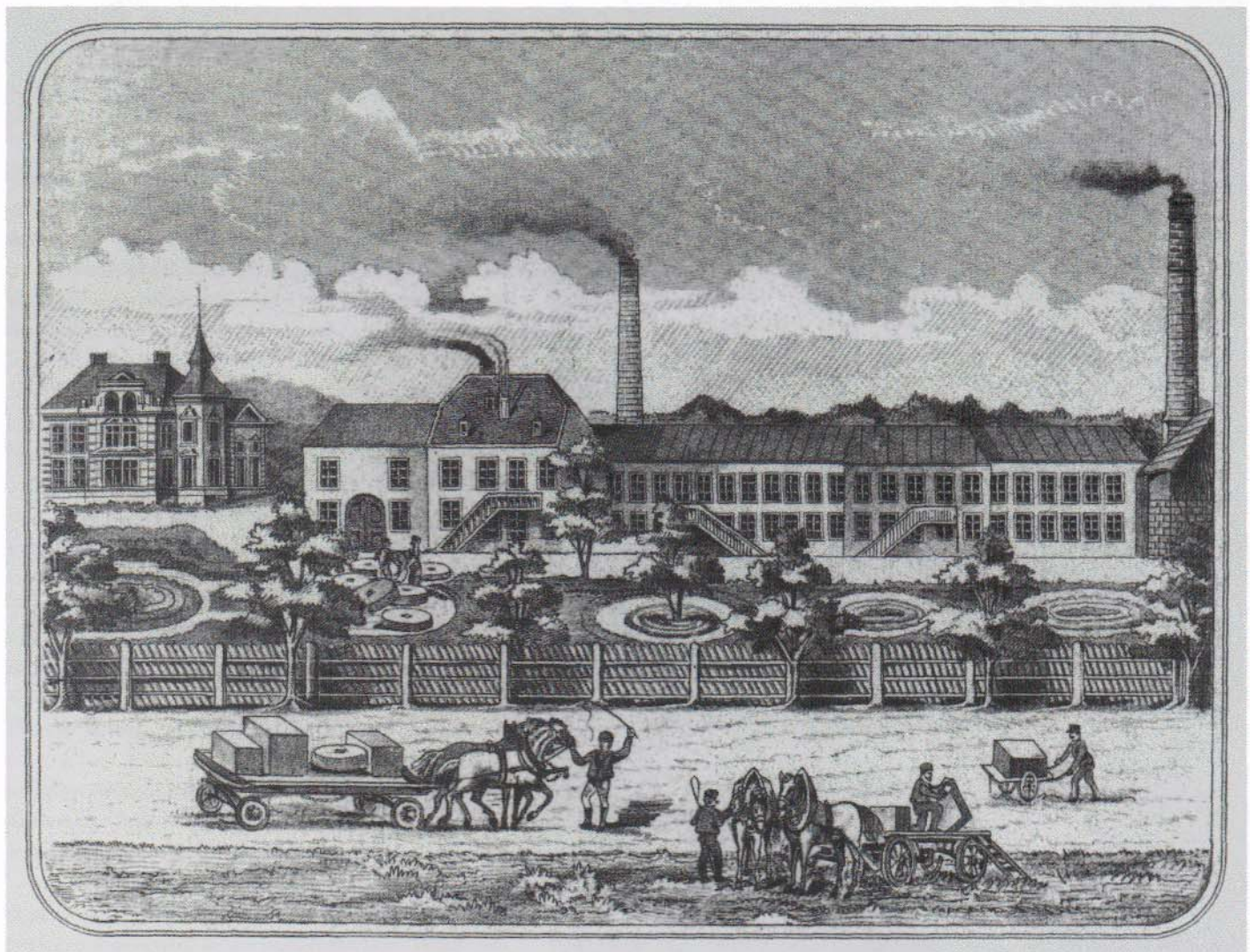
His long campaign for an international centre for terminology resulted in him being asked by Unesco to produce a business plan for such a centre, which he did in 1969. He remained scientific director of Infoterm until the end of his life.

From 1972 to 1974 he gave lectures as an honorary professor in the Department of Linguistics at the University of Vienna on the general theory of terminology. He was also a professor for wordworking machinery at the School of Agriculture and Forestry.

Eugen Wüster was eminent in electrical and mechanical engineering as well as in terminology, and was a member (and often president) of many professional organisations. For nearly 20 years, from



The works owned by the Wüster family, a picture made in 1895 (Photograph courtesy of International Esperanto Museum, Vienna)



1955 to 1974, he lectured at the School of Agriculture and Forestry in Vienna on woodworking machines and tools.

He received many honours, particularly from his native Austria, such as the Golden Medal of Honour (*Goldenes Ehrenzeichen*) in 1960 for services to the Austrian Republic and the Medal of Honour for Science 1st class (*Österreichisches Ehrenkreuz für Wissenschaft und Forschung*) in 1973. The Austrian association of engineers and architects (*ÖIAT*) awarded him their Golden Badge of Honour (*Goldene Ehrenmünze*) in 1963, the German translators' association (*BDÜ*) their Golden Award (*Goldene Ehrennadel*) in 1973, and the UK Institute of Linguists their Diamond Jubilee Medal in 1973.

Much of his life's work was done either at the Wüster company offices or in his own home, the Villa Cuno, in his native town of Wieselburg. He was noted for his taciturnity, which was often misunderstood as arrogance. His scrupulousness and zeal for accuracy, too, were not always appreciated.

In a tribute written shortly after Eugen Wüster's death his long-time colleague, Helmut Felber, wrote: "He considered many of his carefully

elaborated treatises often too imperfect to be published. Editors at times were bewildered with changes Mr Wüster made even in galleys. For him even a missing comma or a slight correction were reason enough for sending off a letter or a telex. He brought along suitcases filled with documents when attending a meeting or dealing with authorities in order to go into details, if necessary. These documents were stored in files and properly classified. This thoroughness, necessary in scientific work, perplexed authorities and even baffled his doctoral supervisor at the sight of more than 20 huge files of manuscript [of] Mr Wüster's dissertation..."

Although he did not suffer fools gladly (he could be dry and laconic, which was sometimes mistakenly taken for arrogance), and hated being disturbed when he was at work, once he took to someone, he was a good listener, who was reluctant to interrupt his interlocutor. He often made notes - he had mastered shorthand. Making notes - on an A7 tear-off pad - was his usual method of recording thoughts. He even had such a pad by his bedside. As an engineer he also liked to put some of his thoughts and associations into graphic form.

Although involved in professional work in several fields it was terminology - together with associated work in standardisation and documentation - which engaged his chief interest. Even towards the end of his life he would make a great effort to attend meetings at which he felt he might make a contribution.

In order to enhance terminology, he laid down three objectives - the elaboration of internationally standardised terminological principles for terminology work, the establishment of an international centre for the co-ordination of terminology work and terminological documentation, and the development of a general theory of terminology as a special branch of applied linguistics.

Indeed it was on his initiative that the Association Internationale de Linguistique Appliquée (AILA) established its own commission of terminology and lexicography. Dr Wüster acted as chairman of this commission from 1971-1976.

His terminology research and the Wieselburg collection convinced Wüster of the need to identify and disseminate information about terminologies appearing anywhere in the world, and he began to develop a systemised bibliography, which is still being developed.

Since the 1950s he had campaigned actively for the establishment of an international centre to coordinate terminology work and documentation (as noted above this was one of his three main objectives in terminology), and this campaign eventually led to the creation of Infoterm.

Eugen Wüster as a young man (Photograph courtesy of International Esperanto Museum, Vienna)

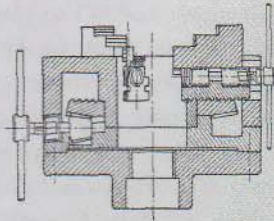


992

UDC 621.9-229.323.2

combination chuck: A chuck (984) in which the jaws (985) can be moved both concentrically (see 991) and separately (see 990) ~ √NF.

mandrin à combinaison(s); mandrin universel; rMandrin à mors (984) dont les mors (985) peuvent être serrés concentriquement (voir 991) et séparément (voir 990) ~ NF.

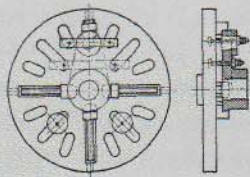


993

UDC 621.9-229.323.2

four-jaw independent (lathe) chuck (with holes and slots); four jaw plate: A faceplate (972) provided with four independent jaws (see 990).

plateau à quatre mors à serrage indépendant ~ NF; **plateau à quatre mors indépendants** NF; **plateau à quatre mors:** Plateau (972) muni de quatre mors indépendants (voir 990).

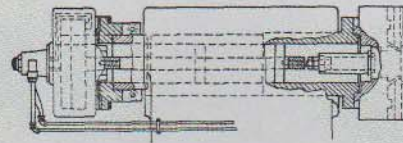


994

UDC 621.9-229.323.2-85

air-operated chuck; (compressed) air chuck: A rjaw chuck (984) designed as a rpneumatic clamping device (931).

mandrin (à commande) pneumatique; rMandrin à mors (984) constituant un rdispositif de serrage pneumatique (931).



995

UDC 621.9-229.324

mandrel; arbor ASA: A short rshaft (268) on which workpieces (1390) already bored are mounted (927) for machining (808) or measuring.

mandrin porte-pièce; tasseau: Arbre (268) court sur lequel se montent (927) des pièces (1390) préalésées pour l'usinage (voir 808) ou pour la vérification.

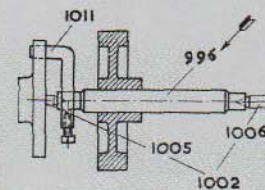
Vide spec. fig. 996, 997, 998

996

UDC 621.9-229.324

solid mandrel; > plain mandrel or > conical mandrel: A mandrel (995) consisting of a solid cylindrical ("plain") or slightly tapering ("conical") piece.

mandrin lisse; mandrin > cylindrique ou > conique; rMandrin porte-pièce (995) massif. Il est cylindrique ou légèrement conique.



When Infoterm (the International Information Centre for Terminology) was founded in 1971 by a contract between Unesco and the Austrian standards institute, Eugen Wüster's long-time colleague Professor Helmut Felber was entrusted with the management of Infoterm and the administration of the Secretariat of ISO/TC37 "Terminology (principles and co-ordination)".

He always saw terminology as being essentially concept-based. He explained this in a key passage: "Jede Terminologearbeit geht von den Begriffen aus. Sie zielt auf scharfe Abgrenzung zwischen den Begriffen. Das Reich der Begriffe wird in der Terminologie als unabhängig vom Reich der Benennungen angesehen. Daher sprechen die Terminologen von *Begriffen*, wo die meisten Sprachwissenschaftler in bezug auf die Gemeinsprache von *Wortinhalten* sprechen. Für die Terminologen besteht eine Benennungseinheit aus einem *Wort*, dem ein Begriff als Bedeutung zugeordnet ist. Für die meisten heutigen Sprachwissenschaftler dagegen ist das Wort eine untrennbare Einheit aus Wortgestalt und Wortinhalt".

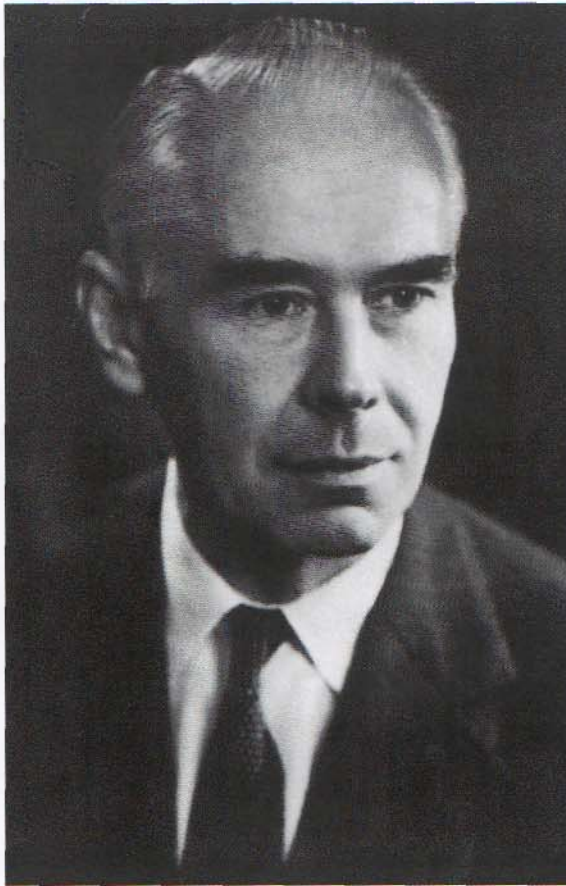
All terminology processing starts with concepts. It aims at making clear distinctions between concepts. In terminology the domain of

concepts is considered as being independent of the domain of denominations, i.e. of what the concepts are actually called. This is why terminologists speak of *concepts* when most linguists when talking about normal speech talk of word contents. For a terminologist a denomination unit consists of a *word*, to which a concept is attached as a meaning. For most modern linguists, however, the word is an inseparable unit which comes from the word *gestalt* and the word content.

Certainly in his machine tools dictionary the conceptual basis is paramount. The idea for this book came when he was returning from an ISO seminar on the standardisation of tools. The work resulted from many round table discussions with specialists, and one colleague from France was actually resident for some time at the Villa Cuno. All the illustrations were prepared in the drawing office of the Wüster factory.

Wüster was heavily influenced by Saussure's ideas on linguistics, in particular the distinction between *langue* (a language as a system) and *parole* (the way a language is actually used for communication). Saussure's work on signs and symbols led Wüster to elaborate a conceptual system of signs and symbols (*Zeichen* in German) which became the DIN draft standard 2338. The complex

Typical pages from Eugen Wüster's celebrated dictionary of machine tools



relationships of concepts in terminology work and specialist dictionaries led him to establish an additional system, which became the ISO standard ISO 1951 "Lexicographical symbols particularly for use in defining vocabularies".

The problem of standardising concepts and concept systems is that each language has only several thousand morphemes to describe millions on concepts. So to describe concepts we do not use new word elements but rather combine existing morphemes or by giving new meanings to existing words. The German standard DIN 2332 *Internationale Angleichung von Begriffen und Benennungen* is based on Wüster's work in this area.

But Wüster's underlying idea was that terminology was the essential tool in improving technical communication.

Wüster took an early interest in artificial languages, such as Esperanto, Ido or Interlingua, compiled an encyclopaedic Esperanto dictionary parts of which were published in the 1920s, and collected a wide range of publications. The remaining information collected by Eugen Wüster on card files was rescued several years ago from under the roof of the Villa Cuno by Infoterm director Christian Galinski. At the International Esperanto Museum of the Austrian National Library (consisting largely of the Esperanto and Interlingua part of his legacy) the material was treated (in order to kill all fungi and render it impervious to paper-devouring animals) and it is planned to publish the

remaining volumes after the material has been input into a database. After all these years it is still the most comprehensive Esperanto dictionary!

It was the early work on Esperanto dictionaries which stimulated his interest in structured lexicology. However, from 1947, discouraged by the lack of acceptance of Esperanto, he concentrated his efforts in this field on an international key to terminology, based on words used all over the world (*Weltwörter*), and especially on pan-European word roots. But a key was all that was intended to be, and his major efforts went into the standardisation of concepts (ISO/R, "International unification of concepts and terms").

It comes as little surprise to learn that Wüster was a major contributor to one of the oldest structured terminologies, the published extensive vocabularies of the International Electrotechnical Commission. He was chief editor, with Wallot, for the first (1938) edition German supplement, and sole chief editor for its 1954 second edition. He was a founder of the Austrian association for documentation and information (ÖGDI) and its president from 1958-1971. And he was a proponent of reform of German orthography, something that came to pass only last year. It was his interest in clarity which naturally led to an interest in orthography. He had decided views on the correct use of the initial capital letters in German, and he was a member of the Austrian committee for orthography (Österreichischen Kommission für die Regeln der Rechtschreibung).

He was methodical in all things. In his scientific work and in his general approach he always worked in what he saw as the methodical direction, seeking first to get an overview, and then working from the general to the particular,

This was why he was a lifelong enthusiast for universal decimal classification (UDC), and his machine tool dictionary gives the UDC number for each concept.

Altogether there are over 500 publications which can be attributed to Eugen Wüster, an astonishing achievement by any standards, and even more awe-inspiring when it is remembered that every one was polished and refined to definitive status, and when he spent so much time in commissions and committees, in lecturing, and also (a full-time job in itself by most people's standards) in running a successful industrial company. No wonder his influence is so profound.

How did he fit it all in? By being organised, and by a hatred of wasting time. And by time-planning; nothing was ever left to chance.

For most of his life his normal day was to spend between 9 a.m. and 11 a.m. at the family firm, discussing progress and giving whatever instructions

were necessary. Then he went back to the next-door personal office at the Villa Cuno (which in turn was next door to the family home the Villa Albert) to deal with his scientific work, which included his terminological activities. Afternoons were divided between scientific work and major factory matters (the factory made saws, other wordworking machinery, and tools). He would then often work until late at night on his scientific work, which also occupied his weekends, apart from going to church and a short walk on Sunday. He did have to travel a great deal, and preferred the train, which allowed him to work. He did fly to Canada in 1974 and Moscow in 1976. He sometimes used his company resources to help his terminology work, but this was never begrudged, because his employees knew that it was his international reputation which had probably led the Soviet Union in 1945-46 not to proceed to confiscate the factory.

Dr Wüster died after a long illness on March 29, 1977.

The vastness of his output and the groundbreaking nature of much of his work means that many of his ideas and suggestions have still not been fully explored, even today. But his personality is firmly stamped on the disciplines of terminology, classification and documentation. ■

Geoffrey Kingscott writes: In compiling this article I was grateful for the assistance of a number of people, particularly Dr Christian Galinski of Infoterm, Dr Meyer of the International Esperanto Museum in Vienna, and Mr Thiele Wüster (son of Eugen Wüster).

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