

***Joint Activities at the Interface between Terminology and Knowledge  
Engineering***  
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GTW – Association for Terminology and Knowledge Transfer

Terminology studies is a subject field which is defined and interpreted in many different ways. On the bottomline we may say that terminology is a discipline which deals with concepts and their representations, although there may be already reservations about this general statement by some scholars, especially regarding the concept of concept.

It would not be very fruitful to enumerate all the different definitions of concept. In the framework of a growing multilingual information society and expanding international communication we define concepts as knowledge units (Dahlberg 1976). The main focus of terminology is not lexical units but the elements of a domain knowledge. Knowledge represents a concept which again is the object of many different definitions and approaches.

Knowledge manifests itself in the following aspects: Knowledge about things and objects, concepts, relations, facts and statements, representations (Picht 1997). Without doubt concepts stand at the center of all this types of knowledge. Communication of knowledge about objects is possible only through the process of abstraction with the help of concepts. Relations link concepts of the same subject field and statements are statements about concepts. Therefore, we can say that concepts are the key elements of the knowledge space of a subject area. A knowledge space is constituted by relations and interdependencies between concepts of a predefined domain and is represented by statements. Concept systems are a primary tool for conceptual knowledge representation in a formal way.

Knowledge Engineering as a branch of applied cognitive sciences tries to lay the foundations for knowledge-based systems which should help solving problems in a specific domain. It encompasses the representation, description and management of knowledge spaces to be used together with inference rules by expert systems. Knowledge-based systems and Artificial Intelligence are not the topic of terminology, though. What we would like to focus on is the role of terminology in such applications or more in general, terminology under the aspect of knowledge management.

In recent literature the term Terminological Knowledge Engineering has been used, a term which should cover both aspects: the role of terminology in AI applications as well as the knowledge component in terminology applications and terminology management. Terminological knowledge engineering, thus is the management of conceptual knowledge units in all kinds of applications. To be successfully transferred knowledge needs a medium which in our case is constituted by Specialized Communication. Through the medium knowledge becomes information which can be transmitted, stored and used in all kinds of ways. Language is the preferred type of medium and it is also used to describe and to define or to redefine concepts. Language Engineering i.e. the control of natural language, therefore, is an important factor in the transfer of knowledge.

The whole process of knowledge transfer and knowledge acquisition is responsible for the dynamics of conceptual evolution and the constant adaptation of concepts. Nonetheless it is vital to describe and store concepts even if this would be a complicated and a repeated task. Terminology documentation which according to Felber (1984) means “the collecting, recording, analyzing, ordering and storing of terminological documents, terminological data and

factographic data”, as well as “providing pertinent documents and data world wide, disseminating terminological information via information systems”.

To accomplish this task some basic and essential preconditions must be met:

- Infrastructure
- Resources
- Standards and tools

Back in 1986 when all these considerations were just at the beginning and there were only very few terminology tools available, the Association for Terminology and Knowledge Transfer (Gesellschaft für Terminologie und Wissenstransfer GTW) was founded at the university of Trier. Its first task was the support of people interested in improved terminology software. With the establishment of numerous Working Groups the GTW soon became a focal point for Terminological Knowledge Engineering, Language Engineering and Knowledge Transfer.

The objective of the association in accordance with paragraph 2 of the statutes is “The objectives of the Association shall be to promote terminology and knowledge transfer by means of research and development in information technologies for LSP communication at national and international level.” The objective of the Association shall be fulfilled in particular by:

- the organization of terminology-related conferences and conventions;
- the promotion of expert knowledge and information;

In order to accomplish these tasks GTW soon began to organize the first “International Conference on Terminology and Knowledge Transfer TKE” in 1987. This marked the beginning of a series of successful TKE congresses which were organized by GTW every three years: 1990 again in Trier, 1993 in Cologne, 1996 in Vienna and 1999 in Innsbruck. Central topic for the TKE conferences is to support the availability of information and knowledge via computerized methods and tools. This is encouraged by a combined effort in the disciplines of Terminology Science, Information Science and Computer Science and in particular by an integration of methodologies.

Recent developments and research in the areas of multilingual information processing, new media and multi/hypermedia, the emerging information super-highways, legal aspects of information interchange, social and cultural impact bring together experts and researchers from different disciplines such as terminology research, knowledge engineering, language engineering, computational philosophy, classification theory, information & documentation, computerized terminography, specialized translation, technical writing. TKE conferences organised into eight sections, two or three keynote addresses, a discussion panel and several workshops usually gather up to 250 researchers from all continents. The proceedings for each TKE conference are printed before the congress and distributed to all participants at the congress. The variety of contributions and their quality make the TKE Proceedings volumes a valuable tool to every researcher in the field of terminology.

Soon after GTW was founded the board set up programme groups to discuss the scientific position of the Association with regard to long-term objectives. While these programme groups were very important in the initial phase of the association more practice-oriented publications resulted from the GTW working groups. In total, 13 working groups were established in the course of the last 14 years. Some of these groups yielded internal papers, others published reports such as e.g. the “Guidelines for the Design and Implementation of Terminology Data Banks” (1994) or the “Criteria for the Evaluation of Terminology Management Software” (1996). The results of the Working Groups within GTW contributed pre-normative work to be used for successive normative efforts in terminology.

Various formal and informal cooperation agreements between the GTW and other national and international terminology bodies allow GTW representatives to participate in many terminology relevant activities. In 1997 GTW concluded a liaison agreement with ISO TC 37 and all its 3 Subcommittees. GTW works closely together with Infoterm in its strategic planning of activities as well as for specific events. It is also one of the first TermNet members since 1989. GTW also is in close contact with German Terminology Associations such as the DDT, as well as the DIT. Through the members of the board the GTW is represented in the RaDT, in EAFT as well as in other associations.

Bearing this in mind, the main contribution GTW could bring to a European Network of Terminology Documentation Centres would be identified within the standards and tools necessary for such a network. In the framework of a horizontal terminology infrastructure GTW acts as an international association for individuals providing a platform for discussion but also for carrying out specific research project at the interface between Terminology and Knowledge Engineering.

Please find further information about GTW and its activities at its website (<http://gtw-org.uibk.ac.at>).

#### *References:*

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