

UDK 81'373.46:004

81'373.46:007

Pregledni rad

Rukopis primljen 1. IV. 2023.

Prihvaćen za tisak 3. X. 2023.

<https://doi.org/10.31724/rihjj.49.2.11>

Barbara Heinisch

Centre for Translation Studies, University of Vienna

Porzellangasse 4, AT-1190 Vienna

orcid.org/0000-0002-1362-4088

barbara.heinisch@univie.ac.at

TERMINOLOGICAL DATABASES AS A MEANS TO ACCESS KNOWLEDGE: MAKING THEM USABLE FOR A NON-EXPERT AUDIENCE

Terminological databases are a means to manage and access specialist knowledge. Since they are specialist tools, non-terminologists may face difficulties when using them. This is related to two aspects. On the one hand, the user interface of a terminological database is targeted towards terminologists who are familiar with terminology management and the terminology of terminology. On the other hand, the content of terminological databases, i.e. terminological entries containing terms of certain domains, as well as the concept orientation of terminological databases might seem daunting at first glance if the users are not familiar with the relevant domain and terminology work.

Therefore, drawing from usability engineering principles, this article addresses how terminological databases can be designed in a way that allows users who are not familiar with terminology work to easily access terminological databases, and thus the knowledge contained in them. Terminological databases are often used by terminologists and non-experts in terminology alike. Therefore, the needs of these different user groups should guide the (further) development of terminological databases to make the knowledge contained in them accessible to a broad audience.

1. Introduction

Terminological databases are the result and core of terminology work in organisations, companies or initiatives since they are a means to manage and access

specialist knowledge. A terminological database contains terms and associated information, being a collection of data about concepts and designations in certain subject fields. A terminological database consists of two major components, the data base which is filled in a technical application, also referred to as terminology management system (Schmitz 2006: 133). Terminology management systems are “software products (programs and program packages) that are designed for the management of terminological data. They enable the user to collect, store, manipulate, and retrieve terminology” (Schmitz 2001: 539). Thus, termbases are systems that make information and knowledge manageable, accessible and retrievable (Schmitz 2006: 129).

1.1. Terminology management

Terminology management can draw from various approaches (Budin 2001). Since international standards, such as the ISO 1087, are drawing from the theory of terminology by Eugen Wüster, who is considered the father of terminology, also several termbases follow ISO norms related to terminology work and management to guarantee interoperability and reusability of terminological data.

The main principles followed in terminology standards are concept orientation, term autonomy and data elementarity. Concept orientation means that an entry in a termbase contains and describes only one concept. Therefore, abbreviations, synonyms and spelling variants are also listed in the same terminological entry. Term autonomy means that each term, including synonyms, abbreviations and spelling variants can be described in the same entry with the same types of information (Warburton 2018: 123–124). Data elementarity refers to only “one type of information in a database record or field” (Warburton 2018: 124). This means that, for example, the full form of a term (e.g. *General Data Protection Regulation*) and the abbreviated form (GDPR) must not be entered in the same data field but in separate ‘term’ fields within the same terminological entry. Although termbases are mainly designed according to concept orientation, the information in the termbase is usually retrieved and accessed through a (search) term (Schmitz 2011: 43).

1.2. Purpose of terminological databases

Termbases are created for different purposes. These include language policy, translation, (technical) writing and controlled authoring. Depending on their purpose, they differ in their approach, the subject fields and languages covered as well as their size, structure and level of detail.

An example for a termbase with a strong focus on translation in official languages is IATE, which covers EU-specific terminology in all languages of the member states, among others. It is a comprehensive database covering the domains of the different EU institutions. Non-governmental organisations, such as the United Nations (Figure 1) also have their own termbases. In addition, countries may have their national termbases, rather focussing on language planning and terminology standardisation in several disciplines, such as the Termportalen (a Norwegian portal for terminology resources, Figure 2) or STRUNA (giving the public access to standardised Croatian terminology in a wide range of professional domains).

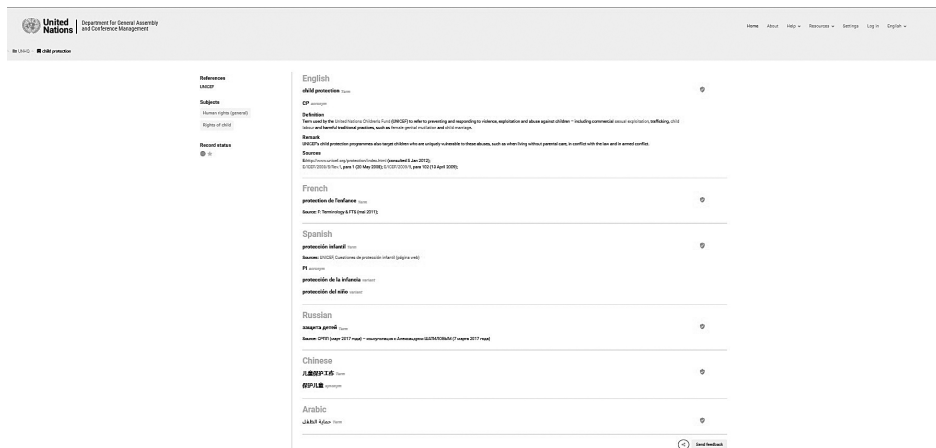


Figure 1: UNTerm (terminological database of the United Nations)

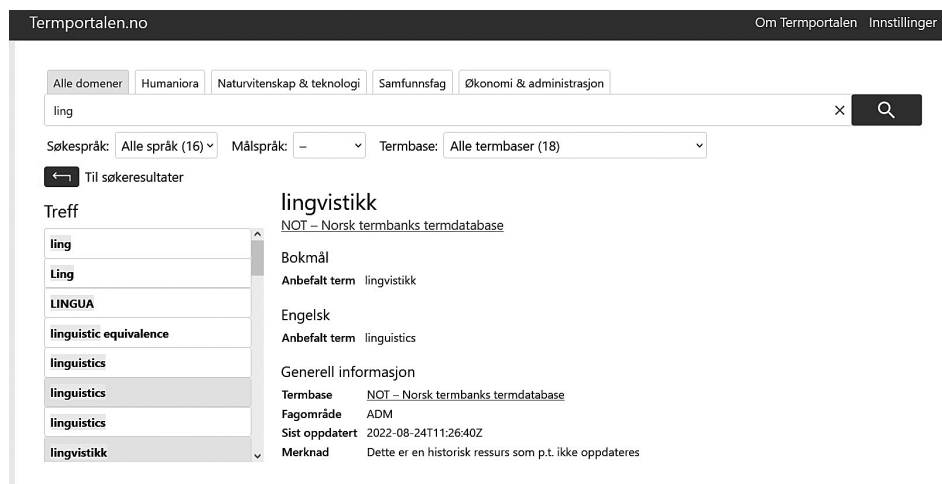


Figure 2: Termportalen (Norwegian portal for terminological resources): searching for “linguistics”

Termbases serving the purpose of language policy might require a contrastive analysis of terms, while termbases for standardisation purposes might require references to standards. The data categories in termbases might be selected accordingly. Here, the status of terms, contexts, collocations, functional equivalents and illustrations or pictures might be needed to facilitate comprehension (Tamás and Sermann 2019: 36).

Companies or associations may also rely on internal termbases for guaranteeing adherence to a corporate language as well as avoiding misunderstandings in communication, including technical writing and translation. Language service providers, such as translation companies may have internal termbases for guaranteeing consistency and quality in translation (assignments). Termbases are also important means for the organisation of knowledge, and are also created in research.

Terminological resources are interesting for a wide field of applications, including natural language processing, such as machine translation, or content and product classification, indexing, controlled authoring, keyword extraction and search engine optimisation (Warburton 2018: 118). Terminological resources can also be integrated into prompts for large language models, such as Chat-GPT in the form of an API. When using text-generative artificial intelligence, the

integration of terminological databases in prompts can help to adhere to the corporate language or to the terminology of a certain domain or to use the preferred terms in a translation.

Terminological data can be used in different fields of application and can serve multiple purposes. Since termbases can be used for a wide range of purposes, including purposes that were initially not intended by the creators, the repurposability of a termbase is essential (Warburton 2018: 119–120). An important aspect of repurposability is that terminological data can be easily interchanged and re-used by different users (see below). To illustrate the importance of repurposability, Warburton (2018: 120) uses the examples of authoring and translation. In controlled authoring, among others, style, grammar and terminology are predefined and applied to a certain content or product. In computer-assisted translation, on the other hand, termbases are used as an additional resource to increase productivity and consistency. These two purposes of termbases already demonstrate that other data categories may be more important depending on the actual use. For example, synonyms are more important in controlled authoring to determine the preferred terms to be used in content and to avoid using the term of the competitor in technical documentation. For translation purposes, however, the ‘translation’, i.e. the target-language equivalent might be more important than synonyms in the source language. To be truly repurposable, a termbase would have to include all data categories and terms needed for these uses. The purpose of termbases already leads us to the major stakeholders in usability: the users.

1.3. Users of terminological databases

One of the first questions that designers of termbases have to consider in a terminology project are the intended users. Among the primary users are usually terminologists, (specialised) translators, technical writers, language planners or standardisation experts (Schmitz 2001: 539). While these groups may be using termbases on a regular basis and in their everyday work, other user groups, such as domain experts, marketing specialists or knowledge engineers may consult termbases only occasionally or if they work on special projects. The knowledge of terminology work differs between the main user groups. This means that non-

terminologists are usually not familiar with the principles of terminology work. This is especially relevant since, as mentioned before, the terminology management system's user interface usually contains the terminology of terminology.

In the following, three of the user groups (terminologists, translators, writers) are briefly described to get an insight into their needs: Terminologists are responsible for collecting, editing, maintaining and making accessible terminology. They are usually familiar with the terminology of terminology and the principles of terminology work. They are collaborating with other users, such as translators, writers or domain experts to clarify concepts and their definitions or to provide equivalents in another language. They might be responsible for overseeing related terminology workflows and forwarding information to different users. In addition to terminology management systems, they might also rely on other systems, such as term extraction tools, corpus analysis tools and recently, text-generative artificial intelligence to extract terms, definitions or contexts to be included in the termbase. Since they are using termbases on a regular basis and complete complex tasks related to terminology work, they are expert users.

Translators may have different knowledge of and experience with termbases. Based on the individual translator's background, translators can be found anywhere on the spectrum of expert to novice users of terminological databases. Regarding the tasks they have to complete, their main goal when consulting termbases is usually to quickly find an equivalent term in the target language. In case of doubt, they might consult additional information in the terminological entry, such as the definition or the context to help them decide on the most appropriate term in a certain context (Warburton 2018: 121–122).

Compared to translators, (technical) writers are usually not interested in the 'translation' of terms, since they are preparing texts in the source language first. However, they might need synonyms and a clear indication of the preferred and deprecated terms that should or should not be used in a text. They might also require collocations and adjective or verb terms.

Although the frequency of consultation might differ, termbases are used by terminologists and non-experts in terminology alike. The needs of these user groups should guide the development of termbases to make the knowledge in them accessible to a broad audience (Heinisch 2019).

2. Usability of terminological databases

Termbases are a combination of both a terminology management system (the technology) and terminological entries containing terms and additional information, such as definitions, grammatical information or administrative information (the terminology). Knowing the purpose and the users of termbases is crucial in terms of usability (Heinisch 2019).

Since termbases are specialist tools, non-terminologists may face difficulties when using termbases: On the one hand, the user interface of a termbase is often targeted towards terminologists who are familiar with terminology management and the terminology of terminology. On the other hand, the content of termbases, i.e. terminological entries containing terms of certain domains, as well as the concept orientation of termbases might seem daunting at first glance if the users are neither familiar with the relevant domain nor with terminology work.

Drawing from usability engineering principles, the following section addresses how termbases can be designed in a way that allows users to easily access termbases, and thus the knowledge contained in them.

2.1. User-centred design

Termbases are subject to human-machine interaction (HCI). Usability as part of this human-machine interaction describes the extent to which a product can be used by a certain group of users to reach a goal in an effective, efficient and satisfactory manner in a certain usage context (ISO 9241-11). This shows that usability is not an absolute property of a technological system, rather it depends on several factors, including the concrete users, their goals and the usage context.

Usability itself is related to user-centred design (ISO 9241-210), which focusses on the users and their expectations, requirements and needs while taking into account their capabilities and skills. It is also important to note that the assumed needs and expectations by designers might not reflect the actual needs and expectations of the users. Therefore, it is paramount to integrate users already at an early stage in the product development process since users might have different needs and expectations towards a termbase.

This also includes termbases that are used by a wide range of user groups, including specialised translators, terminologists and technical writers as well as employees in organisations or writers. A terminological database is just one of the tools, among many others, they are using. Generally, it is a look-up tool users consult for either finding a term in another language (e.g. translators), for finding a picture of a product (e.g. technical writers) or for finding a definition of a term (e.g. new employees during on-boarding). These users may consult termbases rather frequently or only once in a while. Different users have different capabilities, including sensory and cognitive ones that should be considered in user-centred design. Although the principles of universal design and accessibility come into play here as well, they are not the focus of this article. To illustrate the usability aspects covered in the next sections, examples of different terminological databases are given.

2.2. Usability of the terminology management system

The terminology management system is the technical application with which terminology is collected, edited, stored, accessed and disseminated. Examples for commercial terminology management systems are SDL MultiTerm (Figure 3) or crossTerm. Although terminology management systems might differ according to their purpose, they are specialist systems primarily used by terminologists, (specialised) translators or technical writers, who might be trained in terminology work.

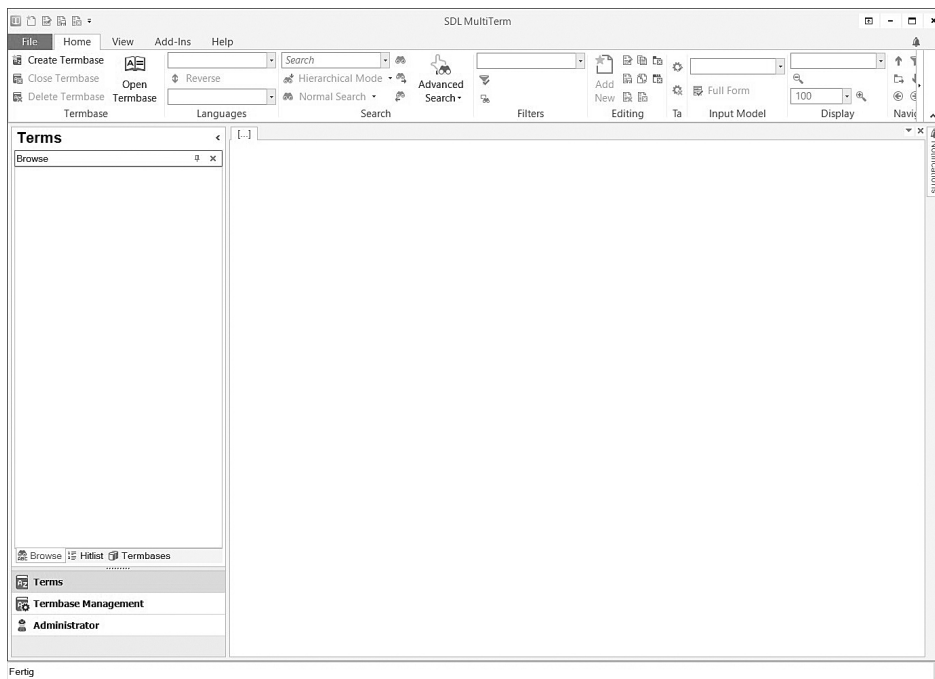


Figure 3: Terminology management system SDL MultiTerm 2017

When assessing the usability of termbases, several aspects (as illustrated in Figure 4) should be considered: the content of the termbase itself, the screen layout, the search form, search query and search modes, the display of the result list and the terminological entry. Moreover, there should be a help section, documentation and useful error messages as well as customisation options and the possibility to integrate the database into other platforms. Also feedback options and social features might increase the usability of a termbase (Heinisch-Obermoser 2016: 45–52).

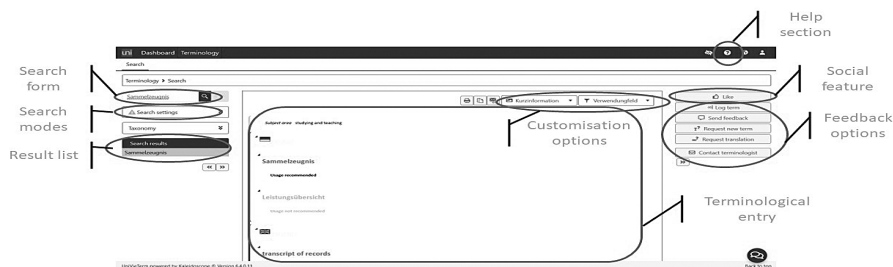


Figure 4: UniVieTerm (terminological database of the University of Vienna) to illustrate different features

2.1.1. User interface

Since terminology management systems are specialist tools, their user interface, including menu elements and dialogue windows is full of the terminology of terminology. The language used in user interfaces is the basis for human-computer interaction since it guides users and is decisive for usability. In user interfaces, language and, thus, terms are used in menus, dialogue windows, messages and help sections. They include general computer terminology, the terminology of the subject field of the relevant application and words from everyday language (Isohella and Nissila 2015: 2). In the case of terminology management systems, the terminology of the application’s subject field is ‘terminology’.

Since terminology studies and usability engineering share several commonalities, Isohella and Nissila (2015: 1–3) concentrate on appropriateness, which is crucial in both fields, terminology and usability. Regarding usability, appropriateness refers to a product’s suitability for its intended purpose. Regarding terminology, it needs to be appropriate for the defined users and the context of use, including the tasks that the users want to fulfill to achieve a certain goal. While the use of terms supports precise communication, users who are not familiar with the subject field to which a term belongs might face difficulties when using a system. Appropriateness thus means that the user’s level of knowledge

is considered when selecting user interface terms. Since many user interfaces, including those of terminology management systems often address both expert and novice users, there might be a knowledge gap between those groups. Therefore, the basic rules for selecting linguistic items in the user interface are to use words from everyday language as far as possible, to rely on established terms (and avoid coining new ones) and to use terms whenever necessary. While in English, the word ‘term’ is also used in everyday language and can thus be used in a termbase’s user interface too, in German, *Begriff* (concept) is used in everyday language to designate *Benennung* (term). Therefore, the question arises whether the users of the termbase should be introduced to the terminology of terminology through the user interface or whether the word from everyday language, i.e. *Begriff* is used to increase usability for non-terminologists. A similar example is the term *Kontext* (context) used for a data category. In German, it might make sense to use *Verwendungsbeispiel* (usage example) instead to be more transparent.

This aspect of user interface terminology is addressed by domain usability, i.e. “the aspect of a particular user interface that relates to its terminology, hierarchy of terms, feature descriptions or icons, language and consistency” (Bacikova et al. 2017: 24). Bacikova et al. (2017: 25–29) found that users are intolerant against consistency errors in user interfaces. Inconsistencies are, for example, several synonyms for the function “view”. If the function is referred to as “view” in the menu and as “display” in the help section, this causes confusion. The users can not be sure that both terms refer to the same function since they have different names. Therefore, consistency is considered a major aspect of domain usability. Regarding domain usability, in addition to consistency, terminology management systems having a domain-specific user interface can also be evaluated for domain content, world language, domain specificity or language errors and barriers.

Another aspect of avoiding cognitive overload in users is to adjust the user interface to their needs. Regarding the terminology management system, assigning users to different user roles allows to create different user interfaces. For example, for terminologists, the user interface might be quite complex, including functions for editing and linking terminological entries as well as functions for workflow steps (Figure 5). Some terminology management systems allow to

send terminological entries or parts of them, such as definitions or terms in a certain language to specified user groups. Domain experts may check the definition created by the terminologist. Reviewers in the target country may check the appropriateness of a preferred term for the locale in question. Therefore, these groups would only see those system functions they need to perform their work, thus lowering the threshold for using termbases.

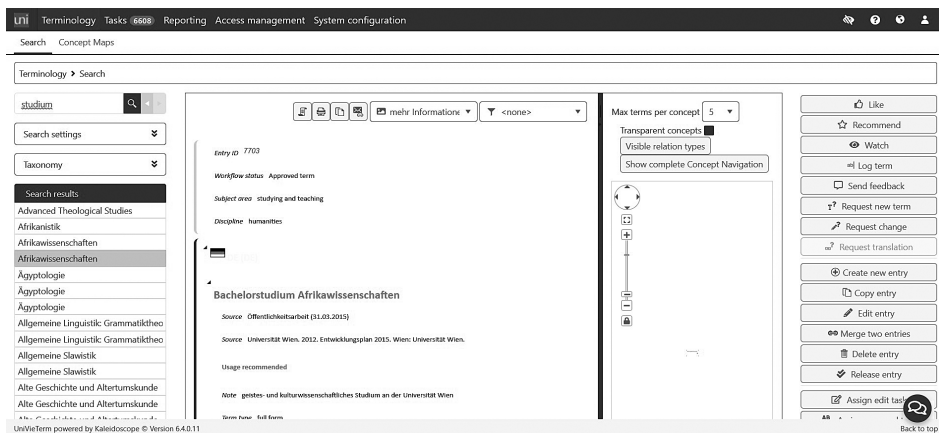


Figure 5: UniViTerm: Display for terminologists

One of the main features of a termbase is the search function. The search should be easy and allow for simple and advanced search, including filters that help users to narrow down their search (Figure 6). The user can also be supported by visual aids and concept systems. Since user manuals and help functions are part of a terminology management system, they should help users in achieving their goals and provide useful information in case of error messages and troubleshooting. They should be of a good quality and be available in all the languages of the user interface (Schmitz 2001: 544).

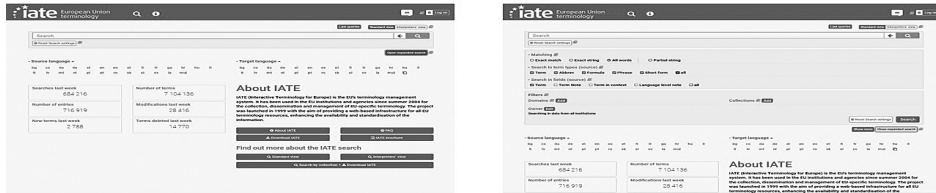


Figure 6: IATE: simple search on the left (focus on the selection of source and target language(s)); advanced search on the right (allowing the user to define match values and set filters)

2.1.2. User engagement

Interactive features allow users to engage with terminology. This can contribute to making a termbase more usable. These interactive features (Figure 4) may include a ‘like’ button to highlight or pin a terminological entry they may need frequently, a term request feature if they would like to suggest new terms or a feedback feature to give users the opportunity to point out errors, such as spelling mistakes or obsolete definitions. This engagement can also help to increase commitment among users, since they can contribute content they actually need, or participate in the quality assurance of terminological entries.

Social features that invite users to delve into terminology can help to make terminology and a termbase more attractive to certain user groups, e.g. the former IATE Term of the Week (Figure 7), which highlighted a topical term from the database and gave further explanations. Another social feature that might increase engagement with terminology are term quizzes. For example, the termbase of the University of Vienna (UniVieTerm) invites users to test their knowledge of university terminology by completing a quiz (Figure 8).

So, what is the definition of non-fossil fuel sources, which could also be called non-fossil energy?

According to wiseGEEK, non-fossil fuels are alternative sources of energy that do not rely on burning up limited supplies of coal, oil, or natural gas. Examples of these fuels include: **biomass, wind or water generated energy, and solar power**. These tend to be renewable energy sources, or means of generating power that can be utilized indefinitely.

Non-fossil fuels are considered to be extremely important to the future of power creation. In addition, energy production using non fossil-based fuels usually generates much less pollution than other energy sources. This is considered crucial by many governments which are looking for ways to reduce the amount of pollution produced by their countries.

ENERGY [COM]	Full entry
EN non-fossil energy	**** *@
DA ikke-fossil energi	**** *@
DE nichtfossile Energie	**** *@
EL μισοπέζ ενέργεια από μη ορυκτές πηγές	**** *@
ES energía no fósil	**** *@
FR énergie non fossile	**** *@
IT energia non fossile	**** *@
NL niet-fossiele energie	**** *@
PT energia não fóssil	**** *@
SK nefosilne zdroje energie	**** *@

[su_note note_color="#dcea0f"][su_button url="https://docs.google.com/forms/d/e/1FAIpQLSc17un1IH5E7nDf319b_eKJJ-Q72EsQBdfQp60dG_4MMzLvQ/viewform" style="flat"]Contribute to IATE![/su_button] We would welcome your contribution if you know the correct term in your language and it is among the missing

ones or if it needs an update. A terminologist for the respective language will revise your answer and validate it. Given the implications of the process, a delay is to be expected.

Languages to be completed for this term in IATE: BG, CS, ET, FI, GA, HR, HU, LT, LV, MT, PL, RO, SL, SV.[/su_note]

Figure 7: IATE term of the week



Figure 8: UniVieTerm term quiz

User engagement may even go a step further so that terminology management may solely rely on the contributions of users, e.g. in crowdsourced terminology or collaborative terminology work (Kudashev 2013).

2.1.3. Integration into other applications and re-usability

As repurposability is one of the crucial aspects of termbases, it should be possible to integrate termbases into the users' tool environment. In the case of translators, termbases might be integrated into a computer-assisted translation (CAT) tool so that translators can look up terminology directly in their CAT software and conduct terminology checks. Technical writers rely on authoring memory systems or controlled authoring tools helping them to write consistent texts for technical documentation in the corporate language, in line with the corporate terminology.

However, not only humans might rely on the re-use of termbases, but also machines, such as applications for natural language processing. With the advent of large language models, such as ChatGPT, also the integration of terminology in prompts will play an increasing role.

After having discussed the usability of the technology, i.e. the terminology management system, the following section concentrates on the usability/usefulness of the content of a termbase, i.e. the terminological entries.

2.2. Usability of terminological entries

Drawing from the evaluation of dictionaries, Tamás and Sermann (2019: 38–45) have developed four basic criteria for the evaluation of termbases that are also relevant from the perspective of usability. These four criteria are 1. the provision of background information about the termbase, 2. the technical parameters, 3. provision of information about the content of the termbase and 4. information about the usage of the termbase. For users to achieve their goals, they do not only require the content of terminological entries but also information about the termbase itself to assess whether it is an appropriate resource for completing their tasks. First, regarding the background information, users should be informed about the domain the termbase covers, the dates of creation or adaptation of the termbase as well as the aim and purpose of the termbase, such as language policy, standardisation or translation. Furthermore, the users should be informed about the organisation having produced the termbase and the target users as well as whether it follows a prescriptive or descriptive approach. Second,

regarding the technical parameters, providers of a termbase should inform about the underlying software and the re-usability of the data, e.g. for data exchange. Third, users should be given information about the content of the termbase. This encompasses information about adherence to the concept orientation and the complexity of the termbase, such as the data categories used and the number of structural elements, number of entries, domains and languages covered. Users should receive help, such as through a chat and be able to search for terms in different ways. Also the display of information and links to other entries or resources are important. The principles of concept orientation, term autonomy and data granularity also come into play. Fourth, under the aspect of information about the usage of the termbases, five subcategories are subsumed. These are user friendliness, updates, reliability of the data, the innovative character of the termbase and the value of the termbase for society and its relevance. User friendliness is characterised by understandability, the lack of abbreviations, the use of visual elements and an easy search. Updates relate to the frequency of updates and the actuality of the termbase. The reliability of the data can be inferred from the documentation, indications and editing options. The innovativeness of the database can be derived from elements that are not found in every other termbase, such as concept maps or a corpus search, video tutorials or innovative ways to display terminological information. Finally, the value of the termbase for society and the significance for a profession should be highlighted. This can be done by reference to language strategies or terminology policies, the number of experts reached or opportunities for training.

2.2.1. Usability of the overall content

Termbases that contain terms that are not actively used may not be used productively (Warburton 2018: 122). According to usability principles, this means that termbases should contain terms and related information that help users achieve their goals in a certain context of use, efficiently, effectively and in a satisfactory way. The coining of terms or the indication of preferred terms in termbases might already decide whether a term is actually used and/or useful. These principles include the motivation of terms, the linguistic correctness and concise-

ness, on the one hand, and appropriateness of the term concerning style, use or difficulty, among others, on the other (Isohella and Nissila 2015: 2).

The language of the user interface might be adjusted to the users' needs. While the use of the terminology of terminology in menus, dialogue windows, etc. might be reduced to increase usability, the content of the termbase, i.e. the terminological entries can only be adjusted to a limited extent to increase usability for non-domain experts or non-terminologists. Since terminology is aimed at precision and unambiguous communication, the way how, for example, definitions are written depend on the termbase's purpose and user groups. A termbase used by students for learning a specialised language certainly differs from a termbase addressing domain experts (working in a multilingual environment).

Not only the terms in a terminological database need to be relevant for the task of the user but also the additional information provided. Therefore, the data categories in a termbase should reflect the user's needs. Terminologists are usually responsible for adapting the design of the terminological database, the workflows or the terminology in the user interface, as far as possible. To adjust a termbase on the level of data categories to the user needs, only data categories relevant to the user group, e.g. translators, terminologists, domain experts can be displayed in the terminological entry. A simple form to avoid information overload in these groups is to provide only a small set of data categories in the terminological entry, such as the term and administrative information only. If a user needs additional data categories, such as a definition, the geographical usage, part of speech, etc., they can, for example, click a 'more information' button or choose a different layout displaying more data categories. A more sophisticated form is to display a different set of data categories to each and every user group (see section 1.2.). In addition, the usefulness of a terminological database for users can also be increased by integrating concept systems.

2.2.2. Concept systems and concept relations

Concepts are usually described as units of thought or units of knowledge that share certain properties which are derived by the abstraction or categorisation of objects. Concepts can be described through definitions (Schmitz 2011: 37). The characteristics of concepts allow to "relate concepts to each other and to

construct terminological concept systems. These concept systems represent the knowledge of a domain or sub-domain in a systematic way” (Schmitz 2011: 38). Concept systems serve the purpose of the systematic organisation and representation of knowledge while structuring a subject field. They help translators, writers and subject-field experts accessing knowledge in a certain domain. They are useful for understanding a domain, for assessing the equivalence between terms in the source and target language and to be precise and clear when producing content. For these, concept relations are used. The termbase of the World Intellectual Property Organisation (WIPO Pearl) makes use of concept systems (Figure 9) to access knowledge in addition to the traditional linguistic search by means of entering search terms. Thus, the graphical representation of concept systems can enhance the usability of a terminological database for different user groups.

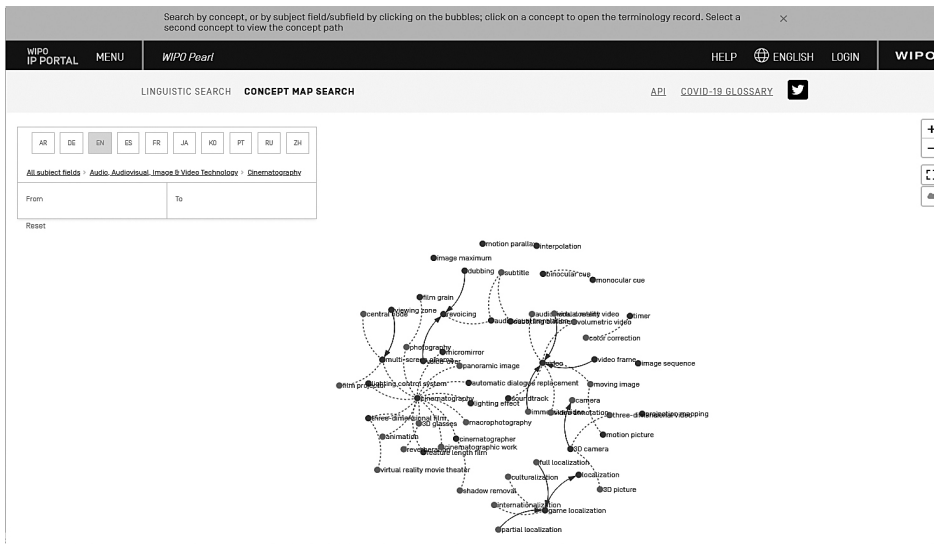


Figure 9: WIPO’s Multilingual Terminology Portal: concept map search

3. Conclusion

When developing and designing termbases, the user groups and their needs should guide the process. This user-centred design is also at the heart of usability considerations to guarantee that a termbase can be used by a broad range of persons. Termbases should not only be designed according to terminological principles but also to usability principles. Therefore, the design of termbases (intended for a broader user group) should consider both the application (terminology management system) and the content (terminological entries), while adhering to the standards of terminology work and guaranteeing the interoperability of terminological data.

References

- BACIKOVA, MICHAELA; LUKAS GALKO; HVIZDOVA, EVA. 2017. Manual techniques for evaluating domain usability. *Informatics 2017. 2017 IEEE 14th International Scientific Conference on Informatics: November 14–16, 2017, Poprad, Slovakia: proceedings*. Eds. Novitzká, Valerie; Korečko, Štefan; Szakál Anikó. IEEE. NJ. 24–30.
- BUDIN, GERHARD. 2001. A critical evaluation of the state-of-the-art of terminology theory. *Terminology Science and Research*.
- HEINISCH, BARBARA. 2019. Darstellung und Verbreitung von Terminologie mittels Terminologiedatenbanken. *Terminologie: Epochen – Schwerpunkte – Umsetzungen. Zum 25-jährigen Bestehen des Rats für Deutschsprachige Terminologie*. Eds. Drewer, Petra; Pulitano, Donatella. Springer. Berlin. 117–142.
- HEINISCH-OBERMOSER, BARBARA. 2016. Web Interfaces of Terminological Databases that are Available on the Internet from a Usability Perspective. *Term Bases and Linguistic Linked Open Data. TKE 2016 – 12th International conference on Terminology and Knowledge Engineering*. Eds. Erdman Thomsen, Hanne; Pareja-Jora, Antonio, Nistrup Madsen, Bodil. 44–53.
- ISOHELLA, SUVI; NISSILA, NIINA. 2015. Connecting usability with terminology: Achieving usability by using appropriate terms. *2015 IEEE International Professional Communication Conference (IPCC)*. 1–5.
- KUDASHEV, IGOR. 2013. *Quality Assurance in Terminology Management: Recommendations from the TermFactory project*. Helsinki. https://mustikka.uta.fi/projectglossary/download/QA_in_TM_Kudashev.pdf.
- SCHMITZ, KLAUS-DIRK. 2001. Criteria for Evaluating Terminology Database Manage-

ment Programs. *Handbook of Terminology Management. Volume 2: Application-Oriented Terminology Management*. Eds. Wright Sue Ellen; Budin, Gerhard. John Benjamins. Amsterdam–Philadelphia. 539–551.

SCHMITZ, KLAUS-DIRK. 2006. Wörterbuch, Thesaurus, Terminologie, Ontologie: Was tragen Terminologiewissenschaft und Informationswissenschaft zur Wissensordnung bei? *Information und Sprache. Beiträge zu Informationswissenschaft, Computerlinguistik, Bibliothekswesen und verwandten Fächern*. Eds. Harms, Ilse; Luckhardt, Heinz-Dirk; Giessen, Hans W. K.G. Saur. Berlin–Boston. 129–137.

SCHMITZ, KLAUS-DIRK. 2011. Concepts as building blocks for knowledge organization – a more ontological and less linguistic perception of terminology. *TOTH 2011 Proceedings – Terminology & Ontology: Theories and applications*. Ed. Roche, Christophe. Institut Porphyre, Savoir et Connaissance. Annecy, France. 37–46.

TAMÁS, DÓRA M.; SERMANN, ESZTER. 2019. Evaluation System for Online Terminological Databases. *Terminologija* 26. 24–46. doi.org/10.35321/term26-02.

WARBURTON, KARA. 2018. Terminology resources in support of global communication. *The human factor in machine translation* (Routledge studies in translation technology). Ed. Sin-wai Chan. Routledge. London 118-136.

Terminološke baze podataka kao sredstvo pristupa znanju: kako ih učiniti upotrebljivima nestručnoj publici

Sažetak

Terminološke baze podataka sredstvo su za pristup stručnom znanju i njegovo upravljanje. Budući da su to specijalizirani alati, neterminolozi se mogu suočiti s poteškoćama pri korištenju terminoloških baza podataka. To je povezano s dvaju aspekata. S jedne strane, korisničko sučelje terminološke baze podataka usmjereno je prema terminolozima koji poznaju terminološki menadžment i nazivlje terminologije. S druge strane, sadržaj terminoloških baza, odnosno terminoloških natuknica koje sadrže pojmove pojedinih područja, kao i konceptualno usmjerenje terminoloških baza na prvi pogled može djelovati zastrašujuće ako korisnici nisu upoznati s područjem i terminološkim radom. Stoga, polazeći od načela inženjeringa upotrebljivosti, ovaj se rad bavi time kako se terminološke baze podataka mogu dizajnirati tako da korisnicima omoguće jednostavan pristup terminološkim podacima, a time i znanju sadržanom u njima. Terminološkim bazama podataka često se služe i terminolozi i nestručnjaci u terminologiji. Stoga bi potrebe tih različitih korisničkih skupina trebale voditi (daljnji) razvoj terminoloških baza podataka kako bi znanje sadržano u njima bilo dostupno širokoj publici.

Keywords: user-centred design, termbases, usability

Cljučne riječi: dizajn usmjeren na korisnika, baze pojmova, upotrebljivost