Translating & the Computer 2011

The NATO Terminology Programme and NATOTerm

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1.   Background

a.   NATO, the North Atlantic Treaty Organization, was founded in 1949 by a group of ten Western European states together with the USA and Canada to counter the perceived threat from the Soviet Union and, in its initial stages, to prevent any resurgence of German ambitions. Whereas at first NATO was little more than a political association, the Korean War (1950-1953) brought the realization that a more robust organization, known as the integrated military structure, was required.

b.   In such a structure, the military forces of all services: Army, Navy, Air Force and Marines, belonging to twelve countries (others joined later and the Alliance now has 28 members) needed to cooperate with each other in order to provide effective collective defence and to achieve what we now call "interoperability". Each of those nations and services had different doctrines, procedures, organizations, equipment and languages, although English and French had been adopted as the Alliance's official languages at the very first meeting of the North Atlantic Council (NAC) in 1949. To deal with this problem, in 1951 NATO set up the Military Agency for Standardization (MAS) for the purpose of fostering the standardization of operational and administrative practices and war material. A number of groups within NATO soon recognized that it was not possible to plan and conduct effective Allied operations without a common understanding of the language, i.e. the terminology, to be used. They therefore began to compile glossaries, the most well-known in military circles being Allied Administrative Publication (AAP) 6 - NATO Glossary of Terms and Definitions (English and French) "listing terms of military significance and their definitions for use in NATO", first published by the MAS in 1956. In all, more than 20 official NATO Glossaries covering various domains have been issued. You can find the latest versions of some of these glossaries by following this link: http://nsa.nato.int/nsa/ and clicking on the "Terminology" box to the left of the home page.

c.   You will note that from the very beginning, terminology was placed within the sphere of standardization and terms and definitions were adopted for use by NATO as a whole. In other words, terminology was not being recorded simply for the benefit of linguists.

d.   In 2001, the MAS was merged with the NATO International Staff's Office of NATO Standardization, which dealt with broader standardization issues, to form the NATO Standardization Agency (NSA) located at NATO HQ in Brussels. The NSA is responsible for coordinating standardization activities throughout the Alliance. It publishes thousands of Standardization Agreements (STANAGs) covering equipment, systems and procedures as well as Allied Publications dealing with administrative and doctrinal issues. Curiously however, it was not until 2000, when the NSA Charter was adopted, that terminology standardization became an official policy objective. At that time, the terminology office in the NSA was staffed by a military officer, known as the "NATO Terminology Coordinator", a non-commissioned officer (NCO) to provide clerical support and a civilian secretary. Like all posts staffed by military personnel, the military incumbents were rotated every few years and generally had no particular expertise in terminology management. The office had no professionally-trained terminologists.

2.   Reform

a.   To consider ways of improving the management of terminology in NATO, a small working group called the Terminology Sub-Group of the NATO Standardization Staff Group was set up at the beginning of the 21st century to review the situation and propose solutions. I was a member of the group from the start and subsequently became its chairman. Our initial findings were that there was little or no coordination among the bodies that had adopted NATO Glossaries and that there were therefore inconsistencies in the various terminologies not only in substance but also in terminography[1]. We also found that the manner in which terminology was published (the glossaries were "paper" ones – originally typed, later word-processed) was inefficient and did not help to promote consistency.

b.   We therefore drafted three documents that were ultimately adopted by the NAC in 2003, 2005 and 2007 respectively: a terminology policy, a directive and a guidance. These documents also may be consulted via the link shown above. The policy lays down the basic principles of the NATO Terminology Programme (NTP), the directive gives the procedures to be followed by the various actors in the programme and finally, the guidance contains detailed rules to be followed in developing terminology and formatting NATO Glossaries and lexicons[2].

c.   At the same time, we began to consider how to modernize the management and dissemination of NATO terminological data. The rather obvious solution was to bring all the terminology together into a single database that could be accessed by all potential users. At that time, a number of NATO linguistic or translation services had for some years been using TRADOS Multiterm in conjunction with the Translator's Workbench. Despite the fact that using a common system would have been highly advantageous,

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[1] Terminography is "that part of terminology work concerned with the recording and presentation of terminological data" (see ISO 1087-1:2000), as opposed to the substance of terminology.
[2] In NATO parlance, a "NATO Glossary" is a formal document issued for the sole purpose of promulgating terminology, whereas a "lexicon" is a list of terminology included in or annexed to a document other than a NATO Glossary in order to facilitate its comprehension.

Multiterm 95, as it then was, was ruled out on several grounds: it was not considered powerful or flexible enough for the NATO Terminology Programme (you may recall that it had originally been developed for the use of individual translators rather than for large organizations); secondly, we wished to have a system that would not only store the terminology itself but also handle NATO's terminology proposal and approval cycle; finally, certain decision-makers in NATO wished it to have its own system developed in-house that could be modified by the organization as it wished, rather than relying on an external proprietary system. This led to the development of the current NATO Terminology Management System (NTMS), of which more below.

d.   Lastly, the NSA created two new positions for professional terminologists to assist in providing quality assurance and in managing the terminological data.

3.   Terminology approval process

a.   NATO is an organization of many parts – it is by no means a monolith! I am not going to bore you with a complete description of its structures, commands, agencies and committees. If you wish to know more, go to the NATO web site: http://www.nato.int/cps/en/natolive/index.htm. What concerns us here is the fact that there are a number of senior committees responsible for specialized areas reporting directly to the Alliance's supreme body, the NAC. They include the Military Committee, responsible for military policy and doctrine, the Committee for Standardization, which is also the governing authority of the NSA, and committees dealing with many other areas such as air defence, civil emergencies, budgets, logistics or medical services. These bodies are empowered to validate standardization objectives or proposals, to establish the related standardization tasks and to produce, endorse and maintain the resulting NATO standardization documents. They have subordinate bodies which they can task to develop standards on their behalf, hence they are known as "tasking authorities". They can all approve NATO terminology, giving it the status we call "NATO Agreed".

b.   This obviously begs the question of how to coordinate and reconcile the decisions on terminology taken by all these bodies. Such coordination is of course all the more vital if all NATO terminology is to be stored in a single database. The solution adopted consisted of providing for an "Arbitration Ad Hoc Working Group" where any differences were to be resolved between the interested parties. However, it quickly became apparent, especially following the publication in 2007 of the third NTP document (the Guidance), that this system did not work well and an overhaul of the three basic documents was initiated.

c.   The Terminology Sub-Group therefore reviewed all three documents. They were reduced to two: a Directive and a NATO Terminology Manual which have been submitted to the nations for approval. We propose a new arrangement in which the various "tasking authorities" would retain their powers to approve NATO terminology in their fields of competence, but all terminology would subsequently be validated by a NATO Terminology Board

reporting to the Committee for Standardization after quality checks by the terminologists in the NSA. At the time of writing, not all member nations have agreed to this approach.

4.   NATO Terminology Management System

a.   In NATO, terminology is defined as "the body of terms and their abbreviations, together with the definitions of the concepts that they designate, used in a given discipline, field or subject". The system that stores and manages this data must therefore capture those three main elements: terms, abbreviations and definitions, as well as other data related to the terminology: notes, examples, cross-references, etc., plus metadata required to manage it: acceptability rating, source, approving authority, date of approval, etc.

b.   The current NATO Terminology Management System (NTMS) was developed within NATO based on MS Access software. The original intention was to develop a system that would not only contain NATO terminology but also permit the processing of proposals to add, modify or delete terminology. The latter element proved to be too ambitious and was subsequently abandoned so that the system actually implemented (in 2004) only contains terminology data. The NTMS is not open to the general public but only to authorized NATO users, because among other reasons, the data in it needs to be treated with caution, as we shall see.

c.   The NTMS data structure is in theory based on the uninotional record, i.e. all terminological and other data related to each notion or concept is placed within the same record and only one record is permitted for each concept. In reality, because the database was originally populated using the terminology contained in the current NATO Glossaries, it now unfortunately contains duplicate entries. Furthermore, much of the data had not been subjected to rigorous quality assurance, meaning that there are errors and inconsistencies as well as obsolete entries.

d.   The NTMS permits various kinds of searches: exact matches, partial matches, etc. of terms, abbreviations and the data in the definition field. An exact match leads you straight to the relevant entry if it exists. Other types of search lead to a hit list that shows whether a term is defined in the database or whether the entry is simply an abbreviation and its full form. Below you see screen shots of the NTMS home page requesting a partial match search of the term "countermeasures" followed by the resulting hit list. A tick under "DEFINITION" means that the concept is defined. If there is no tick, it means that the entry only contains an abbreviation and its full form, which is of course a term.

NATO OTAN **NATO TERMINOLOGY MANAGEMENT SYSTEM** **NSA**

| Home | NATO Glossaries (NSDD) | NSA Public Site | NSA Protected Site | Log out |

SEARCH NATO TERMINOLOGY DATABASE

Welcome to the NTMS

The NATO Terminology Management System is used to search terms, abbreviations and definitions found in NATO documents, communications and activities of all kinds.

Reference Documents
- Policy for Standardization of Terminology
- Directive on the NATO Terminology Programme
- Guidance for NATO Terminology
- Terminology Tracking Form

Contacts
- NTMS Coordinator
- Office of NATO Terminology Coordination

Type of Search
- ○ Exact
- ● Partial
- ○ Starting With
- ○ List ALL

Search For
- ● Terms (Designations)
- ○ Abbreviations (Designations)
- ○ Definitions and Full forms
- ○ Designations, Definitions and Full forms

Search Language
- ● English
- ○ French

[Search]

Please enter the Term - abbreviation - word - starting letter(s) you would like to search for:

`countermeasures`

DISCLAIMER
NTMS data may no longer be current until the NTMS will be relaunched as NATOTerm later this year.

The database currently contains the following 21 glossaries: **AAP-6 (2009)**, **AAP-15 (2008)**, **AAP-19(C)(1997)**, **AAP-28(B)(2002)**, **AAP-31(A)(2001)**, **AComP-1(Ed.3) (2005)**, **ADatP-2(Ed.10)(2005)**, **AAP-21 (2006)**, **AAP-24 (2005)**, **AAP-42 (2007)**, **AAP-45 (2004)**, **AAP-46 (2004)**, **AOP-38 (2006)**, **AAP-33 (1998)**, **ACMP-06 (2007)**, **AMovP-03 (2002)**, **ARMP-07 (2001)**, **STANAG 3968 (1998)**, **AAP-43 (2005)**, **STANAG 4389 (1990)** and **AAP-23 (1992)**.
More information can be found by clicking on the **NATO Glossaries (NSDD)** link.

Please be aware that this data collection represents the initial stage in the development of this database. It may therefore contain more than one entry for a given concept. In such cases, all those involved in the NATO Terminology Programme will combine the information into a single entry over the next few years.

Terminology contained in the NTMS is made available free of charge to all users. Users may copy or extract terminology developed by NATO and contained in the NTMS without the express consent of the NSA, provided NATO is shown as the source. Terminology taken from external sources and found in the NTMS may be subject to copyright. Users wishing to copy or extract such terminology for non-NATO purposes must seek permission from its intellectual property holder.

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LIST OF TERMS		
TERM	**DEFINITION**	**ABBREVIATION**
acoustic countermeasures		ACM
acoustic warfare counter-countermeasures	☑	
acoustic warfare countermeasures	☑	
advanced threat infrared countermeasures		ATIRCM
airborne mine countermeasures mission		AMCM
communications countermeasures	☑	
deceptive electronic countermeasures [obsolete]		DECM
dedicated mine countermeasures asset	☑	
defensive mine countermeasures	☑	
directed infrared countermeasures		DIRCM
electronic counter-countermeasures		ECCM
electronic counter-countermeasures (obsolete)	☑	
electronic counter-countermeasures [obsolete]		ECCM
electronic countermeasures	☑	ECM
electronic countermeasures	☑	ECM
electronic countermeasures target list	☑	
electro-optical counter-countermeasures		EOCCM
electro-optical countermeasures		EOCM
follow-on mine countermeasures	☑	
medical countermeasures		MCM
medical countermeasures (chemical, biological, radiological and nuclear)	☑	
mine countermeasures	☑	MCM
mine countermeasures command and control ship		MCSC
mine countermeasures command and support ship		MCCS
mine countermeasures exercise		MCMEX
Mine Countermeasures Force North [designation under review within ACO]		MCMFORNORTH
Mine Countermeasures Force South [designation under review within ACO]		MCMFORSOUTH
mine countermeasures pouncer procedure	☑	
mine countermeasures report		MCMR
mine countermeasures vessel		MCMV
offensive mine countermeasures	☑	
optical countermeasures		OCM
radar countermeasures	☑	RCM
smoke and obscurant countermeasures materials evaluation test		SOCMET
standing NATO mine countermeasures group		SNMCMG
standing NATO mine countermeasures group 1		SNMCMG1
standing NATO mine countermeasures group 2		SNMCMG2
torpedo countermeasures		TCM
very shallow water mine countermeasures	☑	
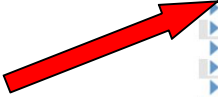
e.   If we click on a term (electronic countermeasures), we see that there are actually two entries for the same concept containing similar definitions, taken from different glossaries, approved at different times, with different approval statuses and slightly different presentations.

6

SEARCH NATO TERMINOLOGY DATABASE

Type of Search
- ◉ Exact
- ○ Partial
- ○ Starting With
- ○ List ALL

Search For
- ◉ Terms (Designations)
- ○ Abbreviations (Designations)
- ○ Definitions and Full forms
- ○ Designations, Definitions and Full forms

Search Language
- ◉ English
- ○ French

Search

Please enter the Term - abbreviation - word - starting letter(s) you would like to search for:

`electronic countermeasures`

⊕ **Printer friendly version**

LIST OF DEFINITIONS

ENGLISH	STATUS	Abbr.	FRENCH	STATUS	Abbr.
electronic countermeasures	NA 9 Jan 1996	ECM	**contre-mesures électroniques**	NA 9 Jan 1996	CME

That division of electronic warfare involving actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum through the use of electromagnetic energy. There are three subdivisions of electronic countermeasures: electronic jamming, electronic deception and electronic neutralization.

Responsible group(s):MC, MCTC;
Source(s):AAP-06;

Partie de la guerre électronique qui concerne les mesures visant à empêcher ou réduire l'utilisation efficace de l'ennemi du spectre électromagnétique grâce à l'emploi de l'énergie électromagnétique. Les contre-mesures électroniques se divisent en trois catégories : le brouillage, la déception et la neutralisation électroniques.

electronic countermeasures	TAA 30 Jun 2003	ECM	**contre-mesures électroniques**	TAA 30 Juin 2003	CME

1.Chapter: 778.NN.03

That division of electronic warfare involving actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, through the use of electromagnetic energy.
NOTE - there are three subdivisions of electronic countermeasures: electronic jamming, electronic deception and electronic neutralization.

Source(s):ACOMP-01(B);

Chapitre: 778.NN.03

Partie de la guerre électronique qui concerne les mesures visant à empêcher ou réduire l'utilisation efficace par l'ennemi du spectre électromagnétique grâce à l'emploi de l'énergie électro-magnétique.
NOTE - les contre-mesures électroniques se divisent en trois catégories : le brouillage, la déception et la neutralisation électroniques.

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f.   Another example is "escort" (see next page). This is actually a polysemic term. There are a number of entries: some duplicates, some so similar in meaning that they should be combined in one entry to respect the principle of uninotionality. There is no French definition in two entries, even though this is compulsory.

ENGLISH	STATUS Abbr.	FRENCH	STATUS Abbr.
escort **Synonym(s) - admitted: attendant** A person who is competent to ensure the security of UN Class 1 ammunition and explosives when being carried in a vehicle. Responsible group(s):CNAD, CASG; Source(s):AOP-38;	Not NA 1 Oct 2006	*escorte* Personne compétente pour garantir la sécurité de munitions et explosifs de classe 1 (catégorie des Nations Unies) transportés à bord d'un véhicule. *Synonyme(s) - toléré: accompagnateur.*	Not NA 1 Oct 2006
escort An armed guard accompanying persons as mark of honour. Responsible group(s):MC, ARMY; Source(s):AMovP-03;	Not NA 1 Nov 2002	*escorte*	Not NA 1 Nov 2002
escort Combatant unit(s) assigned to accompany and protect another force or convoy. (AAP-6) Responsible group(s):MC, ARMY; Source(s):AMovP-03;	Not NA 1 Nov 2002	*escorte*	Not NA 1 Nov 2002
escort 1.A combatant unit(s) assigned to accompany and protect another force or convoy. Responsible group(s):MC, MCTC; Source(s):AAP-06;	NA 1 Dec 1979	*escorte* 1.Une ou plusieurs unités de combat chargées d'accompagner et de protéger une autre force ou un convoi.	NA 1 Déc 1979
escort 2.Aircraft assigned to protect other aircraft during a mission. Responsible group(s):MC, MCTC; Source(s):AAP-06;	NA 1 Dec 1979	*escorte* 2.Aéronefs ayant pour mission de protéger d'autres aéronefs au cours d'une mission.	NA 1 Déc 1979
escort 3.An armed guard that accompanies a convoy, a train, prisoners, etc. Responsible group(s):MC, MCTC; Source(s):AAP-06;	NA 1 Dec 1979	*escorte* 3.Garde en armes accompagnant un convoi, un train, des prisonniers, etc.	NA 1 Déc 1979
escort 4.An armed guard accompanying persons as a mark of honour. *Related term(s): convoy escort.* Responsible group(s):MC, MCTC; Source(s):AAP-06;	NA 1 Dec 1979	*escorte* 4.Garde en armes accompagnant des personnes en signe d'honneur. *Terme(s) connexe(s): escorte de convoi.*	NA 1 Déc 1979

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g.   What is not evident from the screen shots is that there are really only four fields for terminology data proper: term, abbreviation, definition and related terms and a small number of fields for metadata, including responsible group, source, status and approval date. The definition field has to contain various data elements: definition, notes, examples… that should be put in their own fields. Other fields that would normally be found in a terminology database are missing altogether. This makes it very difficult to manage the data effectively as the database does not contain all the necessary information. Furthermore, the software used does not easily permit certain operations, such as sorting or global changes. A glossary cannot be generated automatically.

h.   As a result of these limitations, the NSA decided in 2009 that rather than trying to fix the problems in the existing NTMS, it would procure an off-the-shelf terminology management software package. There are of course advantages and disadvantages in such an approach: on the one hand the software supplier develops the product and accepts any risks (i.e. they have to fix it if it doesn't work…) and the development cost is in effect shared among all the customers; on the other, the user must generally accept the system the

supplier is willing or able to provide and has less ability to tailor the system or add features.

5. <u>New system</u>

a.   The first step was to draw up the specifications for the new system. The software had to take account not only of the technical terminology management requirements but also of the business processes adopted in NATO for the adoption of official terminology. A body called the NATO Translation & Terminology Systems Advisory Group (NTTS AG), which I chair, was tasked with drawing up the specifications. That group is formed of experts from the NATO Linguistic Services and from NATO nations' linguistic or terminology services.

b.   To manage the terminology proposal process, a document called a "Terminology Tracking Form" (TTF) is prepared for each concept. It contains details of the proposer, the proposal, discussions by the various groups and the decisions taken. Each entry in the database is therefore linked to a TTF (although this is not necessarily the case for legacy data). It is a permanent document that is maintained throughout the life of an entry, as it also records any later modifications or its deletion. It enables the actors in the programme to see the complete history of an entry. TTFs are even kept for proposed entries that have been rejected. An example of a TTF is given in enclosure 1.

c.   It was decided that the information contained in the TTF would not be stored in the terminology database, principally to simplify the data structure and management of the latter. The specifications for the new system were therefore developed to provide for it to contain only terminology data and the associated metadata, not to manage the terminology approval cycle and the related documents.

d.   The specifications were drawn up in the course of 2009 and 2010 in two stages. A draft "Statement of Requirements" was sent for comment to industry leaders whom we felt might be interested in bidding. We wished in particular to ensure that we did not demand features that did not exist, could not be easily developed or would effectively exclude certain potential suppliers. Based on those responses, the final Statement of Requirements was issued to industry for competitive bidding in the latter half of 2010. The contract was finally awarded to the Canadian Multicorpora company at the end of 2010 based on the most complete compliance with the specifications as well as price.

6. <u>The specifications</u>

It is impossible to describe here every requirement laid down in the specifications, which stretch to 28 pages. However, I will attempt to describe some of the more salient features below.

a.   NATOTerm is required to contain the terminology itself, associated metadata (e.g. indications of status, type of entry, etc.), and data required by the system manager (e.g. user information, etc.). It is to be compliant with the

ISO 30042/2008 TermBase eXchange (TBX) standard, and achieve "Level 1" implementation of this standard. The reason for the TBX compliance is to enable easy exchange of data with other terminology systems used by NATO, such as SDL Trados Multiterm and by member or partner nations. However, given that the TBX standard is relatively new, few commercially-available systems have yet complied with it. We hope that it will become the industry standard in the coming years.

b.   The system is required to permit both central control by the NATO Terminology Office using a client-server application, but also distributed management via a web-type interface so that certain users can be authorized to manage portions of the database. This latter feature is particularly important as the intention is to add the equivalents of the NATO terminology in other languages. This will be done by the terminology offices of member nations, which already translate much of NATO's terminology, e.g. Germany would be authorized to add German equivalents, Estonia the equivalents in its language, under their responsibility. NATO will only take responsibility for the terminology in the official languages. The web interface means that those offices are not obliged to buy the software to be able to contribute their terminology.

c.   Naturally, the system has to be compatible with the NATO information technology environment and have robust security features to prevent unauthorized intrusions as the database will also be made available for consultation by the general public, in read-only mode, via the internet, also using the web interface.

d.   There are many detailed requirements about the languages that can be handled, display features, types of fields such as text fields, date fields, pick list fields, etc., plus functionalities such as the ability to display images, to print records, to filter records, to generate glossaries automatically, to display incomplete or duplicate records, to carry out different kinds of searches in single or multiple fields, to perform global changes, to import and export data.

e.   One very important functionality is, to quote the exact words of the SOR: "a tree structure of nested fields and field attributes (e.g. Country, Province and City) from a pre-determined pick list structure to a minimum of ten levels. (Multilevel pick list.) In order to provide as much context as possible to the user, this field will be represented as a string of domains separated by a character such as a semi-colon or colon. This means, for example, that after having selected "Canada", "Ontario" and "Ottawa", the user will see in one field "Canada; Ontario; Ottawa" and not just the final node "Ottawa"."

7. Taxonomy

a.   One of the challenges that has to be met by a terminology database containing terms related to many different fields is how to show the domain to which terminology relates. The current NTMS has no means of doing this other than by placing a "qualifier" at the beginning of a definition (an example is given below: "In aircraft loading" is the qualifier which shows to which domain this entry relates).

> **reference datum**
> In aircraft loading, an imaginary vertical plane at or near the nose of an aircraft from which all horizontal distances are measured for balance purposes.

b.   It would be possible to set a business rule whereby all definitions must begin with a qualifier. This would not however solve the problem for entries that do not have a definition. Furthermore, it would make filtering and sorting very difficult. One of the purposes of NATOTerm is to permit users to generate their own glossaries of terms used in a particular subject field. To be able to do this, they need to be able to identify the relevant entries.

c.   The solution is to indicate the domain or domains to which each entry relates, like many other terminology databases or library classification systems. Easier said than done! The difficulty resides in formulating the taxonomy and subsequently in deciding to which taxon(s) a particular concept belongs (a concept may of course be used in more than one field). Anyone who has ever tried to do this, even for a limited domain, knows how challenging this exercise is.

d.   But never to be daunted, my group of devoted experts in the NTTS AG set about defining a taxonomy for NATO terminology. NATO deals with a broad range of issues but with an emphasis on political, security and military matters and the assets – personnel, equipment and infrastructure – it requires to perform its activities. We therefore based our work on the range of subjects dealt with by the various NATO committees, agencies and groups and on the documents they produce. We looked at classification systems used by a number of terminology databases such as Termium or the German Lexis DB and consulted subject-matter experts. In a series of meetings, we poured all these ideas into a big pot, stirred in our own ingredients and hoped that we could bake a palatable pudding!

e.   The result will (at the time of writing) shortly be implemented in NATOTerm. The proof of all puddings is of course in the eating. It will not be until we try to assign each entry to one or more taxons in our system that we will be able to determine how successful we have been. We know that we will have to make adjustments, not just to correct initial deficiencies but to take account of future developments in NATO's activities. So what we have produced must be considered as no more than a "beta" version. An extract from our taxonomy is given in Enclosure 2.

8. The database structure

a.   Another major element of NATOTerm that had to be defined was the structure of each terminology record. The database will be used as the central repository of official NATO terminology. In future, NATO Glossaries will be simply extracts of NATOTerm and terminology used in NATO documents of all kinds must be the same as that contained in the database. Its contents must therefore be controlled rigorously to ensure its quality and integrity. As a result, we have a data structure that is possibly more elaborate than is the case in

other terminology databases. The database structure adopted is shown in Enclosure 3 (the original name of the system was "NTMS2", however we have now adopted the snappier title "NATOTerm"). NATO's terminology rules are largely based on a number of ISO terminology standards (see references below). Those standards are very rigorous and well thought out. However, feeling that they were a little over-academic in their approach, NATO decided to simplify them, largely because the majority of the actors in the NTP are not professionally-trained terminologists but staff members who have many other duties and responsibilities.

b.   There must be a separate terminology record for each concept containing all information related to that concept, i.e. the designations (terms and abbreviations including any synonyms), definitions, notes, examples, as well as metadata, in each language. Each record contains a number of fields at three levels, each with subfields. Various attributes are assigned to each field, e.g. whether it is compulsory or optional, whether only one field is allowed or whether it can be multiplied, whether it is a text field or whether it contains a pick list, etc. Some field values are generated automatically by the system, e.g. certain dates or the indication of who created or modified the field.

c.   The three levels of fields are:

     i.   Record level: contains all information pertaining to the record as a whole.

     ii. Language level.

     iii. Term level: contains designation(s) in a specific language, as well as the definition of the concept, note(s), example(s), related concept(s), graphic(s) and key term(s) in that language.

d.   Record level.

     The subfields of this level include a unique record identifier generated by the system, the domain, a cross-reference to the relevant TTF, a "project" field (for management purposes), comments concerning the entire entry, graphics common to the entire entry and other automatically-generated management fields.

e.   Language level.

     This indicates the language of the fields at the term level.

f.   Term level.

     This is the level at which we find the terminology proper. It includes a number of fields and subfields, the purpose of some being self-evident. The others are explained below.

i. Designation

This field may only contain one designation but may be multiplied as many times as required to accommodate synonyms and abbreviations.

Subfields, some of which are compulsory, some optional:

1. Unique identifier: used to differentiate polysemic terms so that when creating hyperlinks from another record, the link will take the user to the correct record (i.e. not to a record in which the same term has another meaning);
2. Type: either term or abbreviation. NATOTerm will not include designations like codes, symbols or icons;
3. Source: an authoritative reference source. This information enables the latest editions to be checked to ensure currency of the designation;
4. Approval status: NATO Agreed, Not NATO Agreed (only applies to legacy data) or Cancelled. The latter status shows that a designation is no longer used. However it will remain in the database to help users to understand old documents and to point them towards up-to-date terminology;
5. NATO Glossaries: indicates any NATO Glossaries in which the designation is included;
6. Acceptability: either "preferred", "admitted", "deprecated" or "obsolete";
7. Grammar: indicates the part of speech, e.g. noun, verb, adjective and gender etc. where this is considered useful;
8. Usage (regionalism): indicates that a term is only used in certain countries;
9. Comments: pertaining to this term only.

ii. Definition

This field is optional as just a term and its equivalent in the other language may be entered, or just a term and its abbreviation. There are very precise writing rules for NATO terminology laid down in the Guidance (future Manual). In particular, definitions must be no more than a formal description of the concept and not contain "encyclopaedic" matter. The source field is repeated after each subfield at the term level as the contents of each of them may have different sources.

iii. Note(s)

Additional information concerning the concept that may not appear in the definition but is useful for the reader.

iv. Example(s)

Examples of the concept, e.g. ship – examples: cruise liner, aircraft carrier, car ferry…

v. Key terms

A field hidden to the user that contains alternative spellings, e.g. labor/labour, or different grammatical forms such as the feminine in French, e.g. traducteur/traductrice, so that the entry will be found by users irrespective of the spelling or form they use.

vi. Related concept(s)

Cross-references to related entries.

vii. Graphics

Any image, diagram, etc, specific to the language.

9. Implementation

At the time of writing, the data is being converted from NTMS to NATOTerm. This process has not been completed and it is not therefore possible for me to include screen shots of the results in the written paper. If any are available at the Conference, I will try to show them. There will of course be a test phase before the system is released. The good news for you is that it will eventually be possible for the general public to consult the data via the NATO web site.

ISO references

- ISO 704, Terminology work - Principles and methods, 2nd edition 2000
- ISO 860, Terminology work - Harmonization of concepts and terms, 2nd edition 1996
- ISO 1087, Terminology - Vocabulary, 1st edition 1990-05-01
- ISO 1087-1, Terminology work, Vocabulary - Part 1: Theory and application, 1st edition 2000
- ISO 1087-2, Terminology work, Vocabulary - Part 2: Computer applications, 1st edition 2000
- ISO 1951, Lexicographical symbols and typographical conventions for use in terminography, 2nd edition 1997
- ISO 10241, International terminology standards - Preparation and layout, 1st edition 1992
- ISO 12199, Alphabetical ordering of multilingual terminology and lexicographical data represented in the Latin alphabet, 1st edition 2000
- ISO 12616, Translation-oriented terminography, 1st edition 2002
- ISO 30042, Systems to manage terminology, knowledge and content – TermBase eXchange (TBX), 1st edition 2008

List of abbreviations used

AAP	Allied Administrative Publication
ACO	Allied Command Operations
DB	database
MAS	Military Agency for Standardization
NAC	North Atlantic Council
NATO	North Atlantic Treaty Organization
NCO	non-commissioned officer
NSA	NATO Standardization Agency
NTMS	NATO Terminology Management System
NTP	NATO Terminology Programme
NTTS AG	NATO Terminology & Translation Systems Advisory Group
STANAG	Standardization Agreement
TBX	TermBase eXchange
TTF	Terminology Tracking Form

Terminology Tracking Form / Fiche de suivi terminologique

1. Administrative information / Informations administratives		
Type of proposal / Nature de la proposition	ADDITION IN: NTMS	AJOUT DANS : NTMS
Initiator / Auteur	Mr I.P. Jones, Custodian, Study 2579 AJOD – Linguistic Support for Operations – ALingP-1, Head Linguistic Service, S1 Admin, HSG, SHAPE	ian.jones@shape.nato.int +32-65-44 4733
Initiator's reference / Référence de l'auteur	3030.7/SHHSL/01/10	
Date	13/1/10	
Reserved for the NATO Terminology Office / Réservé au Service de terminologie de l'OTAN		
Approving TA/DTA approbatrice		NTB endorsement / Confirmation NTB

2. Existing entry(ies) / Article(s) existant(s)		
NTMS	None	Néant
Glossary / Glossaire	None	Néant

3. Proposed entry / Article proposé		
Term / Terme	translation	traduction
Abbreviation / Abréviation		
Definition / Définition	The written transfer of the full meaning of a text from one language to another.	Transfert écrit, d'une langue vers l'autre, de la globalité du sens d'un texte.
Note		
Example of concept / Exemple du concept		
Entry source / Source de l'article		

4. Justification		
.	This entry is included in the first study draft of ALingP-1 on linguistic support for operations. It is essential that readers understand the difference	Cet article figure dans l'avant-projet de l'ALingP-1 sur le soutien linguistique des opérations. Il est indispensable que les lecteurs

	between the various functions so as to organize and manage services correctly	comprennent la différence entre les différentes fonctions afin d'organiser et de gérer correctement les services à fournir.

5. Comments and decisions/ Commentaires et décisions	
ONTC Comments / commentaires de l'ONTC 01 March / mars 2010	The ONTC has performed the quality assurance of this proposal and has no comments. This proposal can now be submitted to the member nations for NATO Agreement. L'ONTC a effectué l'assurance de la qualité de cette proposition et n'a pas de commentaires. Cette proposition peut être soumise aux pays membres pour agrément OTAN.
CAN Comments 15.04.2010	In the French definition, it is proposed to replace "vers l'autre" by "vers une autre" to reflect indefinite pronoun "another" used in English: Transfert écrit, d'une langue vers ǂ une autre, de la globalité du sens d'un texte. Dans la définition française, nous proposons de remplacer « vers l'autre » par « vers une autre » pour refléter le caractère du pronom indéfini « another » utilisé en anglais : Transfert écrit, d'une langue vers ǂ une autre, de la globalité du sens d'un texte.
USA Comments 16.04.2010	Position – Concur
DEU Comments 16.04.2010	DEU rejects this TTF and suggests its resubmission to the initiator (SHAPE) for revision. Rationale: The following TTFs have to be harmonized regarding the use of the words "transfer" and "translation": 2010-1000, 2010-1002, 2010-1005, 2010-1013, 2010-1014.
ACT Comments 1-10-2010	ACT comments : Reject as self-evident Commentaires ACT: rejet. La notion est déjà claire ou définie dans les dictionnaires de référence.
CAN comments 04-10-2010	Canada maintains it comments of 15-04-2010. Le Canada maintient ses commentaires du 15-04-2010.
DEU comments 5-10-2010	DEU rejects this TTF. Rationale: the concept of "translation" is sufficiently covered by the COED. Furthermore, "translation" is not a military term and therefore not appropriate for AAP-6. However, DEU suggests to include this term in AAP-42. If this term is included in a NATO publication its definition should be reviewed with regard to the consistent use of the words "transfer" and "translate/translation" (see DEU comments submitted on 16-04-2010).
USA comments 5-10-2010	USA concurs with proposal to define **translation** as stated in previous comments from April 16, 2010.
SHAPE comments / Commentaires du SHAPE 20-10-2010	We request that this TTF be deferred to SHAPE as custodian of ALingP-1. / Nous demandons que cette TTF soit renvoyée au SHAPE en sa qualité de pilote de l'ALingP-1.
FRA comments / commentaires de la France 24-09-2010	La FRA apporte son soutien à cette entrée et à sa définition dans l'AAP-6 et la NTDB. Cependant, elle propose que, dans la définition française, soit remplacée l'expression « vers l'autre » par « vers une autre ».

	translation / traduction The written transfer of the full meaning of a text from one language to another. **traduction / translation** Transfert écrit, d'une langue vers l'autre vers une autre, de la globalité du sens d'un texte.
MCTC 25-28 OCT 2010	The MCTC agreed to defer this proposal as well as those indicated below to SHAPE for further study. La MCTC decide de renvoyer cette proposition ainsi que celles indiquées ci-dessous au SHAPE pour examen complémentaire. 2010-1000, 2010-1001, 2010-1002, 2010-1004, 2010-1005, 2010 1007, 2010-1008, 2010-1009, 2010-1010, 2010-1011, 2010-1012, 2010-1013. DEFERRED TO SHAPE / RENVOYEE AU SHAPE
SHAPE comments / commentaires du SHAPE 19-01-2011	**translation** The written transfer of the full meaning of a text from one language to another. **traduction** Transfert écrit, d'une langue vers une autre, de la globalité du sens d'un texte. An NTMS entry is sufficient as proposed, i.e. not to be included in either AAP-6 or AAP-42. An NTMS entry is however required as the concept is included in ALingP-1 (STANAG 2579). Despite the dictionary definitions, interpretation and translation are often confused, although the distinction between them is essential to enable proper management of linguistic support. Both "translation and "interpretation" therefore need to be included. Il suffit d'inclure cet article dans le NTMS, comme proposé. Il n'y a pas lieu de l'inclure dans l'AAP-6 ou l'AAP-42. Un article NTMS est nécessaire car ce concept figure dans l'ALingP-1 (STANAG 2579). Malgré l'existence de définitions dans les dictionnaires, on confond souvent l'interprétation et la traduction, alors qu'il est indispensable de les distinguer afin de bien gérer le soutien linguistique. Il y a lieu donc d'inclure « interprétation » et « traduction ».

DEU COMMENTS / COMMENTAIRES DE L'ALLEMAGNE (7-04-2011)
2010-1014 translation
DEU supports SHAPE's proposal dated 19-01-2011 (inclusion only in the NTMS).

CAN COMMENTS / COMMENTAIRES DU CANADA (13-04-2011)
2010-1014 translation / traduction
Canada agrees with the modified SHAPE proposal.
Le Canada convient de la proposition modifiée du SHAPE.

USA COMMENTS / COMMENTAIRES DES USA (13-04-2011)
34. TTF 2010-1014.
USA rejects the TTF proposal to add the term translation to the NTMS.
Rationale: COED definition is sufficient.

MCTC MEETING / RÉUNION DE LA MCTC (3-6 MAY/MAI 2011)
The MCTC agreed to the following entry and its inclusion in the NTMS.
La MCTC convient de l'article suivant et de son inclusion dans le NTMS.

translation
In linguistic support, the written expression of the full meaning of a text in another language.

traduction
Dans le cadre du soutien linguistique, transposition, à l'écrit, de l'intégralité du sens d'un texte dans une autre langue.

MCTC AGREED / AGRÉÉ MCTC

NATO AGREED / NSA(P&C/TC)MCTC(2011)0504-FINAL DD 29-08-11 / AGRÉÉE OTAN

translation
In linguistic support, the written expression of the full meaning of a text in another language.

traduction
Dans le cadre du soutien linguistique, transposition, à l'écrit, de l'intégralité du sens d'un texte dans une autre langue.

2010-1014 translation

NATOTerm Taxonomy

Domain	Subdomain	Subsubdomain	Subsubsubdomain
General terminology			
Political affairs	General		
	Policy		
	Council	Council operations	
	Diplomacy	Consultation	
		Public diplomacy	
	Partnerships & cooperation		
Humanities & society	General		
	History		
	Political Science		
	Culture	Art	
		Language	
		Music	
		Cuisine	
	Sociology & anthropology		
	Psychology		
	Religion		
	Education		
	Economics		
	Information & knowledge management		
Organizations	General		
	NATO	Civilian	
		Military	
	International	Civilian	
		Military	
	Multinational	Civilian	
		Military	
	National	Civilian	
		Armed forces	Air force
			Navy
			Marines
			Army
			Joint & support
	Non-governmental		
Law & regulations	General		
	NATO regulations		
	International law	Treaties & agreements	
		Armed conflict	
		Space	
		Air	
		Maritime	
	Domestic law	Administrative	

		Civil	
		Social & labour	
		Criminal	
		Contract & commercial	
		Intellectual property	
Defence	General		
	Policy	Proliferation of weapons of mass destruction	
	Administration	Civilian personnel	
		Military personnel	
	Budget & finance	Budgets	
		Planning	
		Accountancy & Auditing	
		Customs, excise & taxation	
	Planning		
	Procurement	Project management	
		Quality assurance	
	Security		
	Arms control & verification		
	Interoperability & standardization	Standardization management	
		Terminology management	
	Education, training & exercises		
	Studies	Lessons learned	
	Logistics	Transportation	Shipping
			Handling equipment
		Movements	
		Supply	Packaging
		Storage	
		Materiel management	Asset tracking
			Codification
			Materiel accounting
		Life cycle support	
		Maintenance	Battle damage repair
		Medical	Medical support
			Medical evacuation

Annex B

NATO Terminology Management System 2
(NTMS2)
Record Structure
21 May 2010

RECORD LEVEL

Information that appears at the top of each record.
Each record documents once concept.
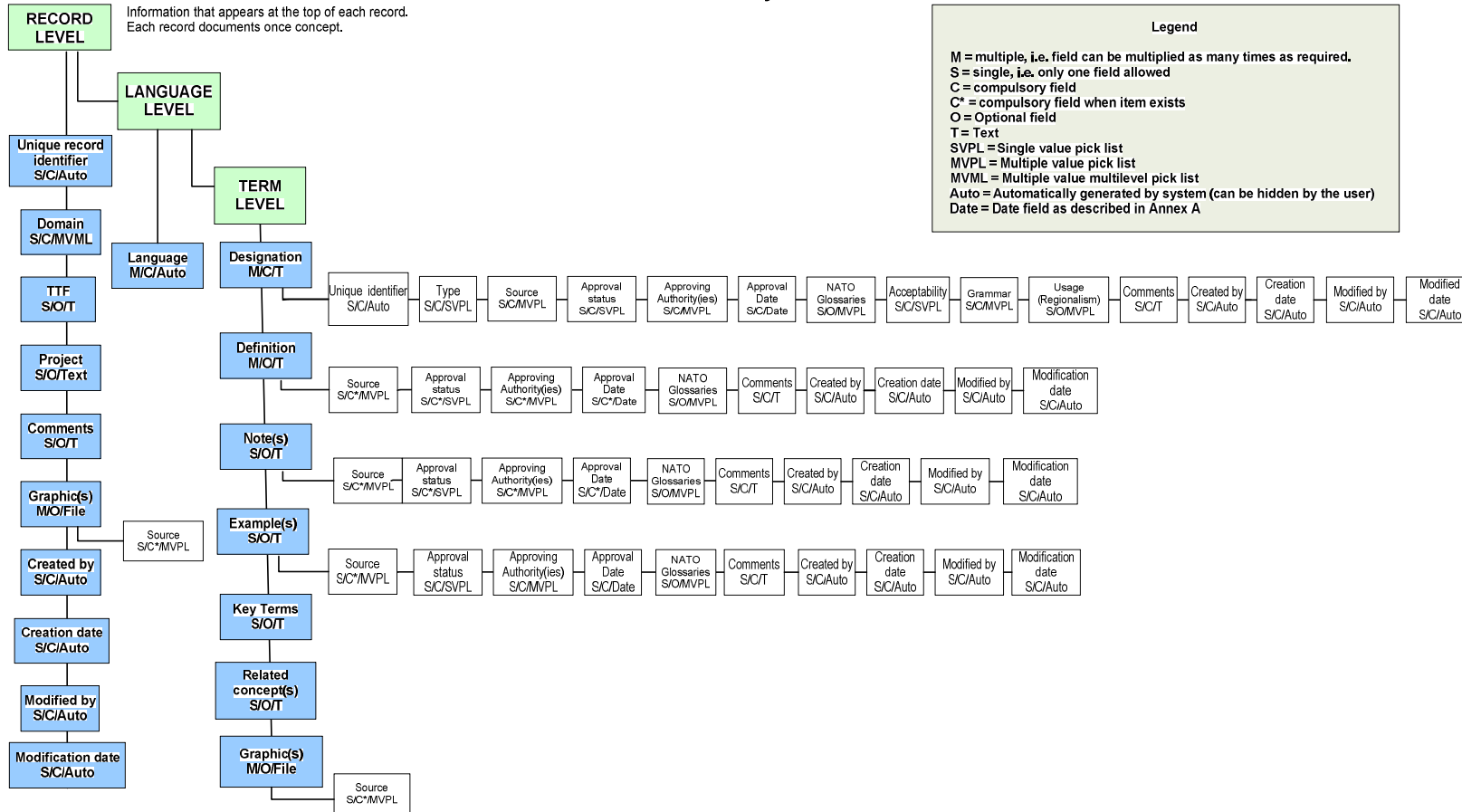
Legend

M = multiple, i.e. field can be multiplied as many times as required.
S = single, i.e. only one field allowed
C = compulsory field
C* = compulsory field when item exists
O = Optional field
T = Text
SVPL = Single value pick list
MVPL = Multiple value pick list
MVML = Multiple value multilevel pick list
Auto = Automatically generated by system (can be hidden by the user)
Date = Date field as described in Annex A

LANGUAGE LEVEL

TERM LEVEL

RECORD LEVEL fields:
- Unique record identifier S/C/Auto
- Domain S/C/MVML
- TTF S/O/T
- Project S/O/Text
- Comments S/O/T
- Graphic(s) M/O/File
  - Source S/C*/MVPL
- Created by S/C/Auto
- Creation date S/C/Auto
- Modified by S/C/Auto
- Modification date S/C/Auto

LANGUAGE LEVEL:
- Language M/C/Auto

TERM LEVEL:
- Designation M/C/T
- Definition M/O/T
- Note(s) S/O/T
- Example(s) S/O/T
- Key Terms S/O/T
- Related concept(s) S/O/T
- Graphic(s) M/O/File
  - Source S/C*/MVPL

Designation M/C/T row:
Unique identifier S/C/Auto | Type S/C/SVPL | Source S/C/MVPL | Approval status S/C/SVPL | Approving Authority(ies) S/C/MVPL | Approval Date S/C/Date | NATO Glossaries S/O/MVPL | Acceptability S/C/SVPL | Grammar S/C/MVPL | Usage (Regionalism) S/O/MVPL | Comments S/C/T | Created by S/C/Auto | Creation date S/C/Auto | Modified by S/C/Auto | Modified date S/C/Auto

Definition M/O/T row:
Source S/C*/MVPL | Approval status S/C*/SVPL | Approving Authority(ies) S/C*/MVPL | Approval Date S/C*/Date | NATO Glossaries S/O/MVPL | Comments S/C/T | Created by S/C/Auto | Creation date S/C/Auto | Modified by S/C/Auto | Modification date S/C/Auto

Note(s) S/O/T row:
Source S/C*/MVPL | Approval status S/C/SVPL | Approving Authority(ies) S/C/MVPL | Approval Date S/C*/Date | NATO Glossaries S/O/MVPL | Comments S/C/T | Created by S/C/Auto | Creation date S/C/Auto | Modified by S/C/Auto | Modification date S/C/Auto

Example(s) S/O/T row:
Source S/C/MVPL | Approval status S/C/SVPL | Approving Authority(ies) S/C/MVPL | Approval Date S/C/Date | NATO Glossaries S/O/MVPL | Comments S/C/T | Created by S/C/Auto | Creation date S/C/Auto | Modified by S/C/Auto | Modification date S/C/Auto

22