

# AURA's Contribution to Codification of Services and Increasing Efficiency of Acquisition Processes



Company AURA, s.r.o. (Ltd.) hosted the final examining proceedings related to the triennial Defence Research Project “Applied Research of Integrated Logistic Support System Technology Based on Automated Data Exchange between the Defence Industry and the Defence Department” – the DRP EXCHANGE in short. The session was attended by the AURA’s project team, representatives of the defence logistic branch and the University of Defence and it took place in Brno, Czech Republic, in the last week of March. The project examined the options of OTD (Open Technical Dictionary) use when codifying assets (materiel) and services within the defence department and how this technology might be applied in acquisition processes of assets and services. The AURA Company is supporting the materiel codification system for the Czech defence department using its own software applications (MC CATALOGUE, MCC Industry). Nowadays overall 11 nations within the NATO Codification System (NCS) are using its codification tools. The company also organises both national and international codification training courses, workshops and it supports NCS College organised by the University of Defence, the US Defense Logistics Agency Logistics Information Service and the Czech National Codification Bureau (NCB).

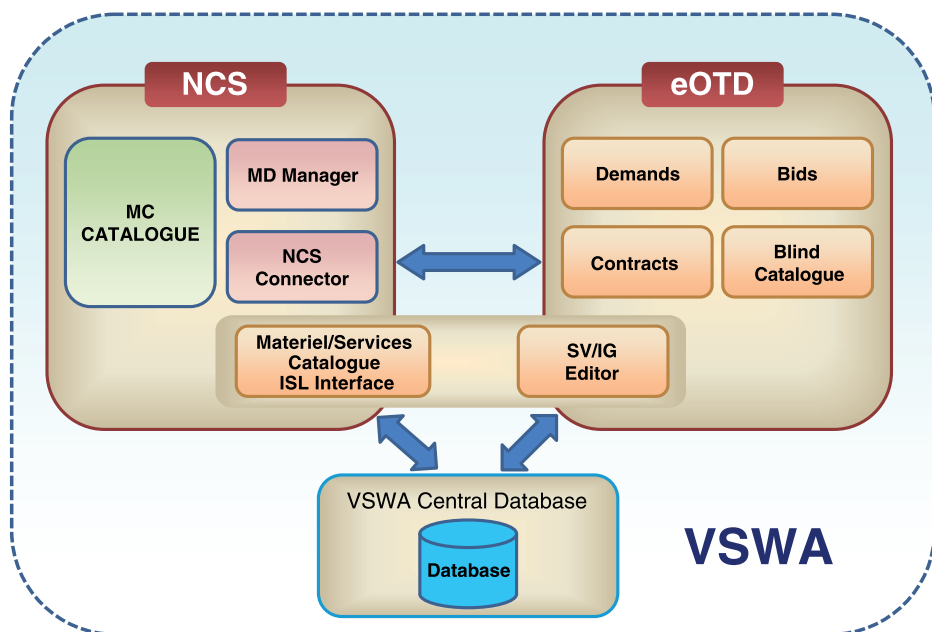
**Data Exchange between the Defence Industry and the Defence Department**  
Main topics for the DRP EXCHANGE (based

on the research timetable) were analysis of the current status of codification systems, specifications of user requirements in terms of information support to codification processes, development of user requirement catalogue, analysis of options for data processed in line with OTD to be used for more effective purchase of assets (materiel) and services, development of functionalities of the Validating Software Application (VSWA) for codification of assets (materiel) and services, verification and testing of

OTD-based codification using the VSWA and parametric description of purchased items supporting the acquisition process and evaluation of potential interconnection of the VSWA with the existing information systems run by the Czech Defence Department and with the electronic public contracting. Because of the advanced computerisation of the Uniform Codification System in the Czech Republic, the optimal way to verify the accuracy of presented proposals was to test the VSWA in live use within the military environment. Some of the main targets of the project were analysis and design of methods, procedures and technical tools enabling use of OTD-processed data to support acquisition of assets and services within the defence department, and proposal of a method for evaluating efficiency and benefits when applying the new way of codification based on ISO 22745 and ISO 8000 standards. The research made use of consultations with the Allied Committee AC/135 – Group of National Directors on Codification – working groups’ representatives, participations in international codification conferences and expert meetings of the project team with the Czech and foreign NCB representatives.

## Validating Software Application - VSWA

The fundamental part of system validating and testing of proposed use of new OTD-based codification technologies is the so called VSWA, Validating Software Application. The core of this information system is based on a SW application regularly delivered by the AURA Company for codification of materiel items in line with the NCS principles. During the research, this application has been supplemented by an eOTD-based codification module, transformation functions designed to enable data communication between



NCS environment and eOTD and, most importantly, it has obtained tools enabling description of public contract item and its processing within the NIPEZ (National Infrastructure for Public Electronic Procurement) Project. The AURA Company participates on its solution for the Ministry of Regional Development CZ.

Basic VSWA functions are:

- Codification of items based on NCS and eOTD;
- Development and maintenance of a uniform catalogue of assets and services with data in eOTD format;
- Two-way transformation of codified items between NCS and eOTD formats;
- Description of public contract item using commodity feature packages from the NIPEZ Register (the NIPEZ Register as a part of the whole NIPEZ Project has been launched by the AURA Company in the middle of 2011);
- Development and maintenance of so called blind catalogue (used mainly to generate assignment documentation);
- Support in preparing public contract specifications, transmitting public contract item specifications into an E-market and accepting item data of the winning bid;
- Record-keeping of purchase contracts and generating of basic data for item codification for NCS;
- Development and maintenance of commodity feature packages of the NIPEZ Register and identification guidelines.

The significant benefit of the VSWA is its capability to process structured and standardised description of a public contract item and its specifications complying with the existing rules of the NIPEZ and use of such data for efficient and good codification of items purchased within the Uniform Codification System operated by the Czech Defence Department.

#### **First-rate Codification and Efficient Communication between the Defence Department and the Supplier**

The principal areas within the defence department to be implemented with the results of the “Applied Research of Integrated Logistic Support System Technology Based on Automated Data Exchange between the Defence Industry and the Defence Department” are codification of assets and services and support to acquisition process preparations. The NATO Codification System is the most elaborate and the most widespread system of its kind globally, its problem, however, is considerable complexity. It requires highly specialised and complicated software tools and well-trained operators. What it is lacking, is particularly the option of codification of services and it does not support efficient communication between the defence department on one side and its suppliers on the other. The integration of a software module based on the VSWA into the defence Information System for Logistics (ISL) could streamline and accelerate communication with suppliers of goods and services in terms of codification data preparation and it could be applied to the codifi-



cation of services as a whole with the option to exploit NIPEZ Register data. Maintenance of codification items would be easy and efficient, so called “codification at source” could be implemented which means better data for item codification directly from suppliers. And, most essentially, codification costs could be reduced because of higher productivity and less requirements in terms of experience and qualification of the users. The past period brought increased importance of OTD principles and that of ISO 22745 when supporting acquisition processes. The Government Resolution No. 5/2011, “Strategy of Computerisation in Public Contracts in 2011 through 2015” initiated implementation of the NIPEZ Project. All central bodies of public administration must apply this electronic system to specified types of public contracts. The implementation of VSWA functions into the preparation process of the public contract specification will simplify and accelerate preparation of assignment documentation, it will be possible to make use of existing data of already codified items in the defence Information System for Logistics Catalogue (MC CATALOGUE) to specify required items, bid data from e-market will be imported and automated evaluation of the best bid will be supported. Data of the selected bid will automatically generate good information for codification of purchased goods or service. Also, it is possible that the suppliers generate codification data on an on-line basis even without direct link to the e-market.

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It will be no exaggeration to say that the Czech Republic, represented by its defence department and its NCB and, principally, by the AURA Company is, currently, a leading nation in codification of services among those nations using the NATO Codification System. All this can also be attributed to the AURA project team that promotes, together with other participating entities, implementation of OTD principles into the international practice. OTD-based codification within the defence department could significantly improve logistic support to the Czech units in peace missions abroad. It is incontestable that the defence sector possesses the most experience

with practical use of parametrically described items in the whole public administration in the Czech Republic. It can transfer its experience even to other entities participating in the public contract market and thus positively influence extent and intensity of implementation of electronic tools from the NIPEZ, especially through the NIPEZ Register Feature Package, a product developed and implemented by the AURA Company in co-operation with the Ministry of Regional Development CZ. Deployment of the OTD technology has essential significance for development of software tools supporting automated evaluation of bids and statistical analysis of implemented purchases.

**By Antonín Svěrák**

#### **Open Technical Dictionary (OTD)**

Open Technical Dictionary is a data terminology dictionary including terms necessary for description of items registered and processed by information systems. The dictionary known as eOTD was created by the international association ECCMA about ten years ago. Terms contained in the eOTD come from various sources, including ISO, IEC, NATO Codification System or professional associations. These terms are labelled by standardised identifiers and published on the Internet. So that the eOTD system could be applied in a wide practice and internationally, it has been created in accordance with the international standards ISO 22745 and ISO 8000 dealing with data quality and standards for their exchange. The key feature of OTD-type dictionaries, hence also the eOTD, is their universal use for standardised, structured and linguistically independent description of any item. For the purpose of information systems these items can be e.g. customers, suppliers, employees, material stock, tangible assets, machines, products, services etc. Data pertaining to items described through OTD are easily portable between various software applications. The internationally acknowledged eOTD is being applied in codification processes, logistic information systems, public procurement systems and systems supporting electronic trading.