DG SANTE

Terminology server analysis FH Dortmund
Executive Summary

eHealth DSI

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Document Authors:	Markus Kalliola, Marta Terron Cuadrado, Michèle Foucart
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1 STUDY PURPOSE

This study was commissioned to analyse further the terminology server developed and maintained by the German university "Fachhochschule Dortmund" (later FHD Server), at the technical level and also regarding the fitness of its functionalities for the eHealth DSI project. This summary provides the findings and the recommendations for further action.

2 CONTEXT

In the context of the need for a terminology server for the CEF eHealth DSI, DG SANTE A4 conducted in 2015 a market study with the different terminology servers available on the market (Both commercial and open source solutions were considered). The open source solution developed by FH Dortmund (FHD) stood up from the other candidates (CTS2 compliance…) and the second phase of the study concluded that FHD Server was mature and fitted the requirements the DG SANTE eHealth DSI demands.

The eHOMB agreed in January[1] to further analyse the FHD Terminology server in order to take a final decision on the choice of terminology server in June 2016.

The result of this examination is outlined in this paper.

3 ACHIEVEMENTS

The study has started with the analysis of the data model used by FHD Terminology and the identification of potential mismatch with eHealth DSI needs.

It has been followed by the successful import of eHealth DSI code systems in the terminology server, as well as the value sets MVC 1.8[2]. An inventory of the code systems used in the eHDSI has also been done, their, scope, and the way they are maintained.

Initial developments of a new synchronization module have been done to ensure the compliance with CTS2 standard. The developments are decoupled from any terminology server product.

Finally, the user interface of FHDTS has been tested from the user perspective (including the translation part) in order to evaluate if it fits the eHDSI uses cases.

4 FINDINGS

No blocking issue was raised following the technical analysis.

With regards to the compliance to CTS2 standards: FH Dortmund Terminology Server (FHDTS) was built based on the specifications set up in the HL7 Common Terminology Services – Service Functional Model Specification, Release 2, which refers to the service's functionalities and not specifically to the service implementation. Consequently, the FHDTS allows the representation, access, and maintenance of terminology content through the basic operations of administration, search/query, authoring/maintenance, associations, value set and bindings.

The FH Dortmund Terminology Server provides the required basic functionalities of:

- Administration: managing content, and importing and exporting terminologies.
- Search/ Query operations: finding concepts based on search criteria.
- Authoring/ Maintenance: ability to create and maintain terminologies, i.e. adding, changing, or deleting concepts and associations.

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[1] eHOMB decision on 8/01/2016.

[2] The latest official version of value set currently in use

- Associations: ability to map concepts and the concept's associated attributes[3] from a source terminology to a concept in a target terminology.
- Value Set: ability to define (manual/import), manage, remove, and use (export) sets of coded concepts.
- Specifically, the FH Dortmund Terminology Server enables the translations of terms into different languages, manually each concept at a time or via a new "copy-and-paste" capability for a group of terms.

The terminology server lacks some required functionalities, such as:

- Absence of different user's profiles with various access rights and a specific linked-"environment" per Member State (i.e. access to only each Member State's own MTC and national or local code systems[4]).
- A collaborative area and linked workflow that would permit the different groups of users in Member States such a collaborative work.
- Translations area not fitting the needs of the project.
- As it is now, with all the text in German, the association (mapping) functionality is very difficult to analyse.

A final obstacle is that, currently, the Administrator area as well as the Terminology Browser have not been entirely translated into English, impeding a more detailed analysis of some functionalities (as mentioned before).

5   CONCLUSION AND RECOMMENDATIONS FOR FURTHER ACTIONS

FHD Server provides the basic functionalities needed to execute the eHealth DSI uses cases. It will however require important adaptations, especially with regards to the implementation of role management (currently no multi-level access in place) and with regards to the user friendliness of the translation functionality.

It is recommended to implement a terminology server based on FHD Terminology server code and to make the developments necessary in order to customize the server to eHealth DSI needs, especially with regards to the role management and its integration with ECAS and SAAS, the identification and authentication systems in use at the European Commission.

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[3] In the current version it is difficult to analyse these different attributes given that they are still in German.
[4] An alternative would be to establish an instance of the terminology server in each NCP).