



## EC ACTIVITIES ON SNOMED CT - SEMANTIC INTEROPERABILITY *4th Meeting of the eHealth Network*

*For consultation by the eHealth Network  
(Prepared by DG SANCO and DG CNECT)*

### 1. Introduction

Semantic interoperability in eHealth refers to the ability of (computer) systems, services or users, to transmit data with an unambiguous and shared meaning. Without effective semantic interoperability, the exchange of data is less valuable or even useless.

The complexities and the barriers to achieve effective semantic interoperability were discussed in the 2nd and 3rd eHealth Network meeting. The eHGI presented both a discussion and policy paper which clearly defined the challenges, opportunities and next steps to be taken.

During these discussions several Members of the eHealth Network called upon the European Commission to take further steps on the health terminology called SNOMED CT<sup>1</sup>. Also the adopted policy paper on semantic interoperability, expressed the need for the European Commission to take action, urging the European Commission to start negotiations to provide access to SNOMED CT (or parts thereof).

This paper describes the activities that the European Commission has planned to start in 2014, so that Member States can make informed decision whether or not to move forwards with SNOMED CT as one of the core terminologies to achieve semantic interoperability. To reach that objective in a transparent way, the two main activities of the European Commission starting in 2014 are a study to assess SNOMED CT, and a process to ensure that the SNOMED CT terminology is useable for the cross-border exchange of health data within the European Union.

### 2. SNOMED CT

The primary purpose of SNOMED CT is to code the meanings that are used in health care delivery and support the clinical recording of health information. SNOMED CT contributes to the improvement of patient care by underpinning the development of Electronic Health Records that record clinical information in ways that enable meaning-based retrieval. This provides effective access to information required for clinical decision support and consistent

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<sup>1</sup> SNOMED CT is an acronym for *Systematised Nomenclature of Medicine Clinical Terms* and is a clinical healthcare terminology. It can be used to code, retrieve, and analyse clinical data.

reporting and analysis. Patients can benefit from the use of SNOMED CT because it can improve the recording of EHR information and facilitates better communication, leading to improvements in the quality of care.

In contrast to coding systems such as the International Classification of Diseases (ICD) and other terminologies, which have been playing an important role for administrative and billing issues of healthcare delivery, SNOMED CT represents an international effort to develop a standardised terminology for clinical use.

The SNOMED CT terminology is available in US English, UK English, Spanish, Danish and Swedish. Translations into French, Lithuanian, and several other languages are underway.

The International Health Terminology Standards Development Organisation owns and administrates the rights to SNOMED CT. The General Assembly is the highest authority of IHTSDO and consists out of 23 Member countries, of which 14 are EU/EFTA Members). IHTSDO is responsible for on-going maintenance, development, quality assurance, and distribution of SNOMED CT. Within countries that are Members of IHTSDO, SNOMED CT is freely available for use by any actor.

### 3. SNOMED CT in EU

Below an overview of the countries that are a Member of IHTSDO and where users have free access to SNOMED CT:

<b>EU/EFTA Members:</b>	<b>Non-EU/EFTA Members:</b>
Belgium (as of Sept 2013)	Australia
Czech Republic	Brunei
Denmark	Canada
Estonia	Chile (as of Nov 2013)
Iceland	Hong Kong-China
Lithuania	Israel
Malta	Malaysia
Netherlands	New Zealand
Poland	Singapore
Slovakia	United States
Slovenia	Uruguay
Spain	
Sweden	
United Kingdom	

Members of IHTSDO can be either an agency or a national government (or another body endorsed by the appropriate national government). In addition, SNOMED CT can also be used outside of Member countries by obtaining an Affiliate License. When used outside of a Member country, user charges apply.

## 4. EU Activities concerning SNOMED CT

The activities mentioned below are the key new elements –as from 2014– of the work of the European Commission concerning SNOMED CT. It should be noticed that this is not an exhaustive list of activities concerning semantic interoperability, and it doesn't address other projects and programs that may be of great relevance to this (e.g. like the SemanticHealthNet program).

*Upcoming activities as from 2014:*

1. Assessment of SNOMED CT as a core terminology to solve semantic interoperability issues – Horizon 2020 work program 2014 to 2015
2. Cooperation with IHTSDO to ensure licensing to SNOMED CTE for EU projects and programs

### 1. Assessment of SNOMED CT

The clinical domain is probably among the most complex from a semantic point of view. Vocabularies, terminologies, classification and coding systems, ontologies have been developed by different stakeholders to address different needs in different subdomains.

SNOMED CT could play a key role in solving semantic interoperability issues in cross-border situations. For example, the epSOS pilot project has retained SNOMED CT as one of the constituents of its master value sets catalogue which ensures semantic interoperability across the borders in the frame of the pilot.

In order to see if SNOMED CT could play a role as a possible core terminology to solve semantic interoperability issues for cross border sharing of clinical information, there is a need for a detailed analysis on the advantages and disadvantages, as well as the impact of using SNOMED CT. Therefore in the Horizon 2020 program an assessment study concerning SNOMED CT is planned.

The study shall cover aspects such as (non-exhaustive list): costs, fitness to clinical requirements, legal, technical and operational, benefits, governance, impact on the different stakeholders including patients and healthcare providers, for the cross border as well as for the national and regional scenarios. It will compare the SNOMED scenario with at least two scenarios: a) do nothing at the EU level and b) define a semantic interoperability framework without SNOMED CT, in order to assess if –and which– other terminologies are available that could also serve as a possible core terminology for cross-border sharing of clinical information.

It will also assess whether SNOMED CT satisfies the criteria listed in the annex II of the EU standardization regulation. The analysis should take into account advice and guidelines from the eHealth Network and developments related to the EU-US roadmap.

The study shall be limited to one year.

### 2. Licensing to SNOMED CT for EU projects and programs

Several EU projects and programs could benefit from access to the SNOMED CT terminology. As an example the epSOS-project and the starting cooperation on European Reference Networks can be mentioned. In theory, the access to SNOMED CT could be profitable to all projects and programs that contain elements of transferring clinical data across borders.

At the moment the projects and programs wishing to get access to SNOMED CT, would each individually need to negotiate with IHTSDO to get permission to use SNOMED CT. In the case of epSOS for example, the project was granted the possibility to use SNOMED CT as part of a special exemption clause for qualifying research projects. This exempted the epSOS projects from the License Fees that would normally be applicable<sup>2</sup>.

As part of the strategy to stimulate structural deployment of eHealth services the EU, the European Commission will cooperate with IHTSDO to ensure the availability of SNOMED CT for all relevant EU projects and programs. This should lower the barriers for cross-border projects to have access to the SNOMED CT terminologies and create the possibility for structural programs to incorporate SNOMED CT as a sustainable asset.

The European Commission and IHTSDO will organise several sessions to construct the right format for this cooperation. These sessions will focus –among others– on making the agreement and scope of the cooperation more concrete, discuss financial aspects, and the involvement of the European Community in IHTSDO.

## **5. Next steps**

The proposal for the assessment of SNOMED CT is part of the Horizon 2020 program, and will follow the steps accordingly. The outcome of the study is expected in 2015, with possibly some intermediate outcomes ready for the eHealth Network meeting in November 2014. The results of the study will be shared with the eHealth Network.

Concerning the permission to use SNOMED CT for EU projects and programs, the EC and IHTSDO together will formulate a strategy that should eventually result in an agreement about the licensing. The first meetings are scheduled in December 2013. The eHealth Network will be informed about the final agreement during the eHealth Network meeting in May 2014 in Greece.

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<sup>2</sup> Besides qualifying research projects, IHTSDO also offers exemptions from License Fees for qualifying humanitarian/charitable use, the use in low income economies, and developers of freely available open source software tools as part of the SNOMED CT Open Health Tools Charter Project.