



Smart Open Services for European Patients

5 Open eHealth initiative for a European large scale pilot of
Patient Summary and electronic Prescription


10 **Work Package 3.9**
D3.9.1 – Appendix B.3
ePSOS Central Reference Terminology Server
(eCRTS)

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30 Dissemination level: PU = Public, PP = Restricted to other programme participants, RE = Restricted to a group specified by the consortium, CO = Confidential, only for members of the consortium.

ABSTRACT

This document represents Appendix B3 of the epSOS Deliverable: D3.9.1: Pilot System Components Specification. It is focused on the functionalities related to the epSOS Central Reference Terminology Server and the procedures to be performed by MS terminology experts. Links to the relevant guidelines and training material are also provided

Change History

Version	Date	Status Changes	From	Details	Review
V0.1	12/08/2010	Draft	CareCom	Created document based on a merge from other earlier documents	
V0.2	03/09/2010	Draft	CareCom	Updated B3.2 and B3.3	
V0.3	03/09/2010	Draft	Lombardy	Changed first page, abstract and formattings	
V0.9	03/09/2010	Draft	Lombardy	Version for PEB approval Included comments from CRS	
V1.0	01/10/2010	Final	Lombardy	Version approved by the PEB	
V1.1	25/07/2011	Final	Lombardy	Updated the role of Sylvia Thun.	

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1 B3.1 - a description of roles regarding using the CareCom tool: HealthTerm

1.1 Background

75 The epSOS Master Value Set Catalogue (epSOS MVC) is the result of the work performed by the participants of the Member States in the work package 3.5, Semantic Services within the epSOS project. The readers are considered to have familiarized themselves with these concepts which are described in detail within the deliverable D3.5.2 and the associated appendices.

80 The epSOS Master Value Set Catalogue is a collection of terms that correspond to each coded element as per defined by the Member States Participating in the work package 3.5. The methodology of how a value set was created (in terms of the choice of the code system, the number of terms, and the level of granularity) is described in detail in the deliverable D3.5.2, as well as in the associated appendices and will not be repeated in this guideline.

85 For more information on the methodology involved in developing the epSOS Master Value Sets Catalogue or for any other related information, please refer to the documents:
D3.5.2_epSOS_WP3_5_v0.0.5_20100223 - Work Package 3.5 - Semantic Services Definition D3.5.2 Document Version: 0.0.5 and
90 *D3.5.2_Appendix_D_epSOS_Master_Value_Set_Catalogue_v0.0.3_20100215 - Work Package 3.5 - Semantic Services, Appendix D - epSOS Master Value Set Catalogue D3.5.2. Document Version: 0.0.3.*

The MVC and MTC are developed, validated, archived and downloaded to the National Contact Points of every Member State by using the epSOS Central Reference terminology Server (eCRTS).

95 The eCRTS is based on the HealthTerm system developed and maintained by CareCom, a company belonging to epSOS Industry Team.


1.2 Objective

100 This document is intended to help the epSOS member states that will be part of the epSOS central Reference Terminology work. It has been decided to use CareCom's tool for the terminology tasks.

To be able to allocate the right resources needed to setup the tool so it can run in the epSOS project to best fit all peoples' this document shall describe which roles are necessary for the use of the tool.

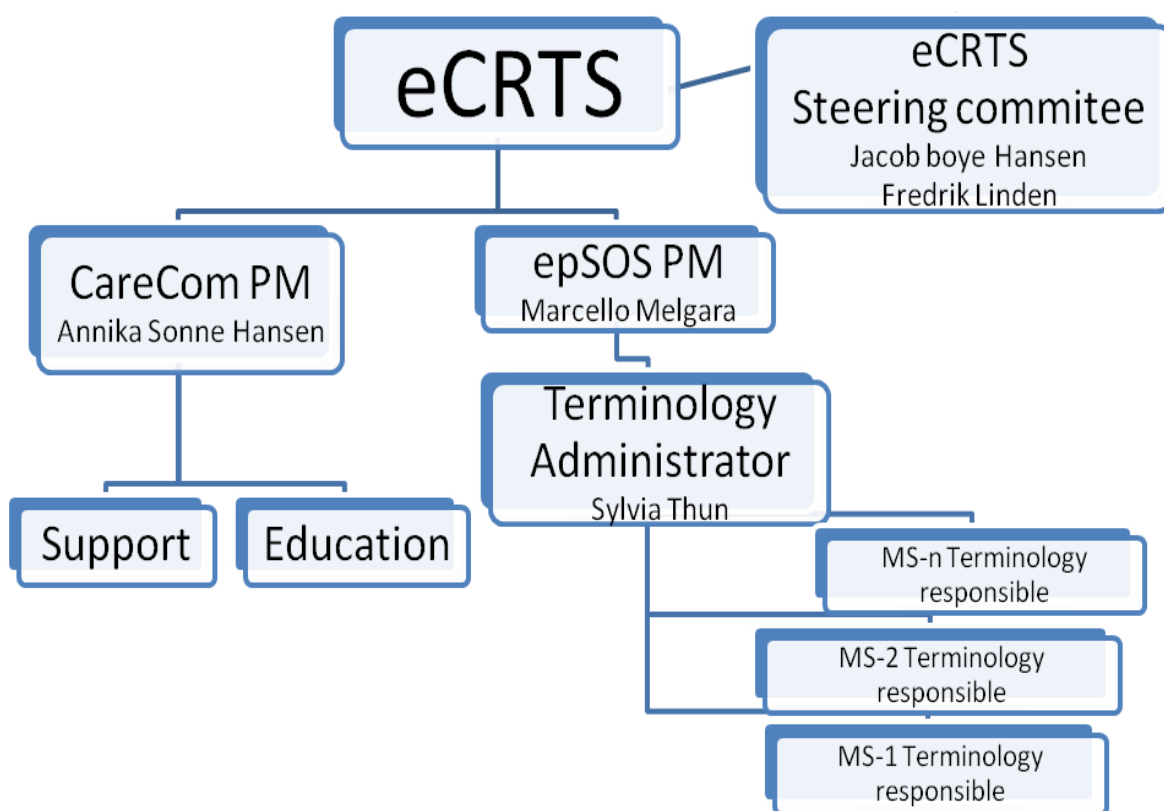
105 There are two constellations of people:

- The project management hierarchy
- The system support levels


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110 1.3 eCRTS Organizational structure

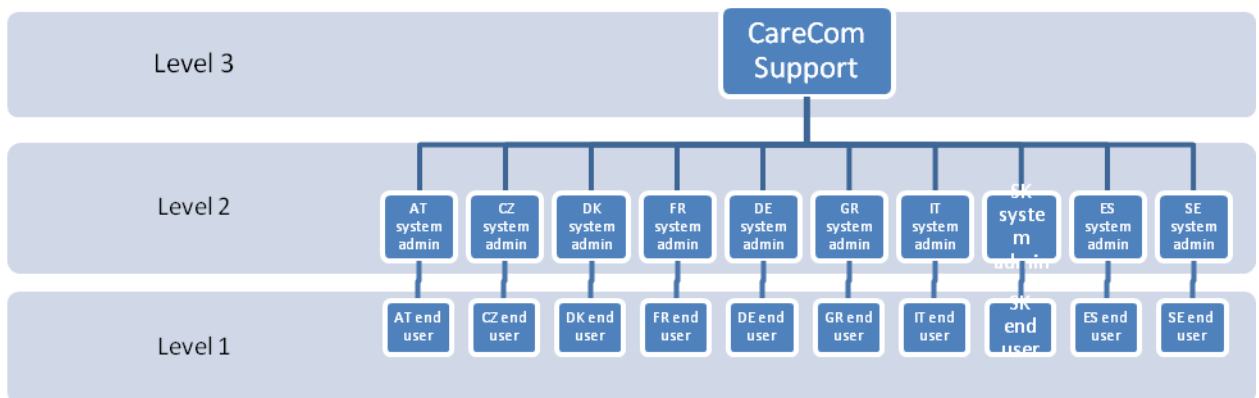
Figure describing the project management hierarchy regarding the project management of the eCRTS¹:



¹ Since June 2011 Sylvia Thun has left the role of Terminology Administrator.

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115 Figure describing the support communication lines regarding the eCRTS:



In the figures it is visualized that there are 2 very important roles per member state:

- a MS Terminology responsible
- a MS HealthTerm system administrator

120 Whether it is going to be the same person who should uphold both roles is up to the member state to decide who a member state see to best fit the roles. For helping the member state in taking the right decision in pointing out the person(s) for the different roles, the tasks for the two roles are described in more detail below:

1.4 MS Terminology responsible

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The MS Terminology responsible is the person who is responsible for the member state's creation of the member state's terminology content.

130 In the epSOS context, the Master Value Set Transcoding and Translation Catalogue (MTC) is the referred terminology content. An explanation of the MTC and of the Master Value Set Catalogue (MVC) can be found both in D3,5,2 and in WD3.9.1: "Guidelines on performing the Quality Assurance on the Master Value Sets Catalogue and on filling in the National Surveys, distributed to the MS by WP4.2.


Responsibilities:

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- Ensures that the required terminology content requested from the epSOS project is produced by the member state in the quality the member state defines in cooperation with the epSOS terminology administrator.
- Assists the member state people who are doing the physical translations and transcoding/mappings in any terminology related questions.

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- Work together with the MS HealthTerm system administrator when rights need to be set up/changed, member state data need to be uploaded into the system or if functionality needs to be explained in more detail for the MS end users with the member state terminology focus in mind.

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- Has the overview of which member state terminology resources are required and may need to be added to the member state terminology team.
 - Works together with the epSOS terminology administrator and CareCom Project Manager through regular meetings to manage and support the processing of the member state terminology work.

150 1.5 MS HealthTerm® system administrator

The MS HealthTerm® system administrator is the person responsible for technical support to the member state terminology team (the member state end users) in their creation of the member state's terminology content. The MS HealthTerm® administrator responsibilities are:


- 155
- To ensure together with CareCom that the entire member state terminology team has the required rights to be able to perform their translations and transcoding/mappings.
 - To assist the member state terminology team if additional documentation is required in the system in order to perform the translations and the transcoding/mappings by uploading the documentation into the system.
 - To assist the member state terminology team if additional education is required either by performing the education themselves or by organizing extra training performed by CareCom.
 - To assist the member state terminology team if problems are experienced with the system. The MS HealthTerm® system administrator may be able to resolve the problem if it is only an explanation problem or else contact CareCom for assistance by reporting the problem in the bug database which the MS HealthTerm system administrator have access rights to. (Note: if it is an explanation problem only, then the MS HealthTerm® System administrator is saving the MS money as the problem is resolved internally instead of paying for consultancy by CareCom).
 - To work together with the epSOS terminology administrator and CareCom Project Manager through regular meetings to manage and support the processing of the member state terminology work.

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175 The MS HealthTerm® system administrator shall participate in a detailed education program in the HealthTerm® tool to be able to fulfil this role.

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1.6 Training programme

185 It is foreseen that the persons involved in the use of HealthTerm system may be trained to the usage of the system, at different level of competence, according to the different responsibility.

The courses, according to CareCom experience are either provided as webinar or as face-to-face training.



It is requested to the MS to identify the persons that should attend the different courses

190 In the following table the list of the courses, together with the duration and the kind of provisioning is provided.

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2 B3.2 – HealthTerm system training material

195 2.1 Education overview

11/08/2010	JWG 3.8-3.9 Semantics group eCRTS education	3		
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Education overview

Education type	Participants	Duration	Day	Time of day	Type of education
HealthTerm overview 1 or	Max. 10	½ day	31-05-10	9-12	TCON
HealthTerm overview 2	Max. 10	½ day	31-05-10	13-16	TCON
Concept browser 1 or	Max. 10	½day	01/06/10	9-12	TCON
Concept browser 2	Max. 10	½day	01/06/10	12-15	TCON
User management	Max. 20	½day	07/06/10?	13-16	class/F2F
Subset development	Max. 20	1½ days	08/06/10?	8-18	class/F2F
Translation	Max. 20	3 days	14-16/06/10?	9-16 (9-14)	class/F2F
Mapping	Max. 20	2 days	22-23/06/10?	9-16	class/F2F
Export 1	Max. 10	½day	28/06/10?	9-12	TCON
Export 2	Max. 10	½day	28/06/10?	13-16	TCON



2.2 HealthTerm Overview

200 The power point slides from this education session are named: *HealthTerm overview V0 1.ppt* and are located on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r482494385>

2.3 Concept Browser

205 The power point slides from this education session are named: *Concept Browser V0 1.ppt* and are located on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r482950057>


2.4 User Management

210 The power point slides from this education session are named: *User management V0 1.ppt* and are located on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r486365606>

2.5 Subset development

215 The power point slides from this education session are named: *Subset development V0 1.ppt* and are located on Projectplace:

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<https://service.projectplace.com/pp/pp.cgi/r486365241>

2.6 Translation

220 The power point slides from this education session are named: *Translation V0 4.ppt* located on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r487926604>

2.7 Mapping

225 The power point slides from this education session are named: *Mapping V0 1.pptx* and are located on Projectplace:


<https://service.projectplace.com/pp/pp.cgi/r491710835>

2.8 Export

230 The power point slides from this education session are named: *Export V0 1.ppt* and are located on Projectplace:

<https://service.projectplace.com/pp/pp.cgi/r504140647>

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3 B3.3 - Import of existing translations and national classifications into HealthTerm

240 3.1 What is the purpose of the import templates?

In order to import existing national translations of the concepts in the MVC or to import classifications which should be mapped to the concepts in the MVC, the epSOS Semantic group decided that CareCom should create import file templates to ensure that there is no doubt in what is needed in an import file.

245 The benefit of this is to make it as cost effective as possible for the MS to create content for the MTC if translations already exist.

3.2 Where are the templates located?


The import templates are located on Project Place. There are 3 import templates:

- Template for import of existing translations:
250 <https://service.projectplace.com/pp/pp.cgi/r503778382>
- Template for import of a national classification:
<https://service.projectplace.com/pp/pp.cgi/r503778555>
- Template for import of classification to classification mappings:
<https://service.projectplace.com/pp/pp.cgi/r506226651>

255 3.3 What does the import templates contain?

The 3 templates are .tsv files (tab separated value files). The files contain the following:

- Template for existing translations:
 - CODE: the MVC code of the concept - mandatory
 - 260 ◦ TRANSLATION: the national translation of the codes' associated English display name - mandatory
- Template for import of a national classification:
 - CODE: the unique code of each concept in the code system - mandatory
 - 265 ◦ PARENT CODE: an identification of which concept the actual concept should be a child of (used for building the hierarchical structure of the code system), if empty the concept is considered a top level concept!
 - HIERARCHY: if the classification has subhierarchies the name of the subhierarchy can be added here. If no hierarchies should apply then
270 just fill in the name of the classification here - mandatory

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- TERM/LABEL: the national term associated with the code - mandatory
- PROPERTY_A: an attribute type for the actual concept (like inclusions, exclusions, comments etc.) - optional
- PROPERTY_B: another attribute type for the actual concept (like inclusions, exclusions, comments etc.) - optional
- PROPERTY_C: another attribute type for the actual concept (like inclusions, exclusions, comments etc.) - optional
- Template for import of classification to classification mappings:
 - MAPPING_ID: Mapping identifier, identifying all related mappings (supporting many to many mapping)
 - SOURCE_CODE: the MVC code of the concept – mandatory
 - TARGET_CODE: the MVC code of the concept - mandatory

3.4 How to use the templates?

If a country has a translation, mapping or a classification and they wish to import into HealthTerm, they copy the relevant template and fill it in with the content as defined above. The example data in the templates should be removed and not be part of the final file send to CareCom. The file should be renamed like:

TRANSLATION FILE: Countrycode_Languagecode_Translation of CodesystemOID_V01.tsv

CLASSIFICATION FILE: Countrycode_Languagecode_CodesystemIOD_Codesystem Version_V01.tsv


MAPPING FILE: source_CodesystemOID_mapping_target_CodesystemOID_V01.tsv

3.5 Whom should a copy of the templates be sent to?

All files should be sent to CareCom's Project Manager, Annika Sonne Hansen, Email: ash@carecom.eu

3.6 What will CareCom do with the copy of the templates?

When CareCom receives a file, it will be checked to see if it contains what has been described above. If we are of the opinion that the file is either not complete or one or more mandatory fields have been filled in incorrectly, we shall let you know. If we see a submitted file as correct according to the above criteria we shall inform you of when you can expect to have the file imported. After the file has been imported we expect you to QA the import to verify if it has been imported correctly to your quality acceptance.

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305 4 B3.4 – Procedures to extract MTC and upload to NCP-TSAM

This chapter is a technical description of a data synchronization mechanism between the master HealthTerm repository and a number of local repositories.

310 4.1 Overview

The synchronization from the master HealthTerm repository to the local repositories will be done by a Java synchronization mechanism (SM).

At a high level the tool will use the appropriate web service accessible in HealthTerm and retrieve the needed data and write it in the local repository.

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4.2 Architecture

The primary function of the SM is to establish connections between different data repositories and other components which are:

- 320
1. The master repository
 2. The local repositories
 3. epSOS ConfigurationManager Common Component
 4. epSOS AuditManager Common Component

325 The communication to the master repository will be done via web services as each relevant entity has a corresponding web service.

An ORM layer will be build to represent the local repositories as the database software of the local repositories may vary.

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To gain access to the different repositories authentication data needed to be retrieved from the epSOS Configuration Manager Common Component.


335 The SM will communicate with the AuditManager to ensure all relevant events are registered.

4.3 Data integrity

While the SM is running there is the possibility that data in the master repository is manipulated and thereby causing data the local repository to be inconsistent.

340 To avoid this situation the query to the different web services will have two formal parameters indicating the delta start and end time. Thereby only data manipulated within these two timestamps are retrieved and thereby avoiding inconsistent data.
It must also be ensured that a local repository only can have one SM instance running at all times to ensure data integrity.

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4.4 Fault tolerance

The synchronization needs to be done in two steps. First data is retrieved and second data is written.

350 These two steps need to be done in two separate transactions. If a failure occurs during the reading of the data the synchronization is stopped. And likewise if a failure occurs when writing the data all data that have been written must be rolled back. The local repository will be in the same condition as prior to the synchronization.

355 4.5 Data to be synchronized

Exactly which entities are updated in the local repositories are the mandatory fields for all tables shown in the data model section 5.1 of WP3 9 - Specification of the common component_TSAM document.

360 4.6 Logging

The SM will log all major operations to the AuditManager such as:

- when a synchronization job is started and ended
- which web services are called during the synchronization
- the amount of data written for the different entities during synchronization

365 - occurrences of errors.

4.7 Versioning of concepts

The entities code_system_version and code_system_concept are handled in the following way:

370 The first time a concept is appearing in a terminology a record in the code_system_concept is created. The following versions only appear in the code_system_version entity.