

Action IC0604 : Anatomic Telepathology Network (EURO-TELEPATH)

Minutes of the WG2 - Informatics Standards in Pathology

October 2nd, 2008, Evora

(joined meeting with IHE Anatomic Pathology Planning&Technical Committee Meeting)

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Agenda COST IC0604-WG2

- Progress within
 - o ISO-CEN-HL7 Joint Initiative for SDO Harmonization (B.Blobel)
 - o IHE (C.Daniel)
 - Validation of the Change Proposals to IHE Anatomic Pathology TF
 - Discussion of the Brief Proposals to IHE Anatomic Pathology TF (2009-10 cycle)
 - Cancer Registry Pathology Reporting (CRPR) Integration Profile (W.Schraber, NAACCR, CDC)
 - o DICOM WG26 (J.Klossa)
- Working plan

ISO-CEN-HL7 Joint Initiative for SDO Harmonization

In 2006 during the World of Health IT Conference in Geneva, the three Health Informatics Standards SDOs (Standards Developing Organizations) agreed on a program for harmonizing their work with the objective of providing one standard for one problem and interoperability between all work products. The initiative is open to all related SDOs. Several organizations established already liaisons with the Joint Initiative.

Fort evaluating and harmonizing standards as well as fort defining gaps, an architectural framework for eHealth products, but also for the specifying standards is inevitable. For solving this problem first internally, HL7 launched a project for defining a dynamic architecture model. Such model must define the design principles considering both structural and behavioral issues of eHealth product, the interrelationships between the architectural approached according to the perspectives reflected by different domains involved, and finally the development process perspective from requirements analysis through business modeling, design, implementation and deployment.

The overarching framework needed has to be created and maintained based on meta-descriptions through all the dimensions of the architecture reference model presented.

As common expression means, formal languages (meta-languages) have to be deployed. For more information see the attached PPT "SDOs' Activities in the Context of Telepathology and the Framework of Standardization". For guaranteeing that the COST Action IC0604 "Tele-pathology" meets the requirements for integration into advanced and sustainable eHealth environments as part of our quality assurance process, the architectural principles have to be followed and the systems design has to be formally evaluated.

IHE Planning & Technical Committee Meeting

IHE Planning Committee: Discussion of the Brief Proposals¹

Cancer Registry Pathology Report Integration Profile (W.Scharber, CDC, NAARRC)

Cancer Registries are data systems that collect data on the occurrence of cancer; the type, extent, and location of the cancer; and the type of initial treatment. Cancer registry data is used to provide information on cancer trends, survival, treatment standards, access to healthcare and serves as a resource for research. The aim of the Cancer Registry Pathology Report Integration Profile is to provide implementation guide of standards reporting pathology information directly to the central cancer registry.

Two documents explain the purpose and scope of the brief proposal²

- North American Association of Central Cancer Registries (NAACCR) Electronic Pathology (E-Path) Reporting Guidelines (Dec 2006) defines recommended approach for implementing standards for reporting between pathology laboratories and central cancer registries.
- (NAACCR) Standards For Cancer Registries – Volume V - Pathology Laboratory Electronic Reporting (May 2008) provides implementation guide for transmission of pathology laboratory reports using of HL7 version 2.3.1 standards protocols.

This Cancer Registry Pathology Report Integration Profile was accepted for 2009-10 IHE Anatomic Pathology cycle and assigned to Wendy Scharber and Christel Daniel.

A detailed version will provide business process models with explicit triggers and/or filtering process to select the cancer-related pathology reports that need to be sent to central cancer registries.

A Change Proposal is proposed in order to align IHE Anatomic Pathology TF with NAACCR Volume V on ORU message & segments descriptions, at the international level.

Anatomic Pathology Value Sets (related to Sharing Value Set Integration Profile(ITI))

This proposal was accepted was accepted for 2009-10 IHE Anatomic Pathology cycle and assigned to Vincenzo Della Mea and Christel Daniel. This propel is a contribution of IHE Anatomic Pathology domain to the Sharing Value Set Integration Profile of the ITI domain. The aim is to provide use cases of this IP in the Anatomic Domain.

Structured reporting in Anatomic pathology White paper

There are many initiatives in different countries and/or within standardization bodies (HL7, CEN) aiming at proposing standard structured architecture for anatomic pathology reports (CEN TC 251 WI 130.1.1:2003, CAP Cancer Protocols and checklists (US), INCa (France), Royal College (UK), etc). The objective of this white paper is to collect, analyze and summarize these different initiatives, to discuss the available technical solutions to store and share structured reports in anatomic pathology in order to choose the most appropriate one. This proposal was accepted was accepted and assigned to Thomas Schrader.

¹ Available http://wiki.ihe.net/index.php?title=Anatomic_Pathology

² Also available http://wiki.ihe.net/index.php?title=Anatomic_Pathology

Anatomic Pathology Laboratory Device Automation IP (with IHE LAB domain)

This proposal was accepted and assigned to Marcial Garcia and Luis Goncalvez. The aim is to analyze the Laboratory Device Automation IP of the IHE Laboratory to evaluate in what extend this IP is suitable to Anatomic Pathology.

Inter-departments workflow IP (with LAB) was not accepted for the next cycle.

Time line : Detailed Proposals must be available on IHE WIKI November, 5th (or sent to IHE co-chairs (M.Garcia or T.Schrader)

Conf call for final approval of Proposals: November 6th

Anatomic Pathology TF (cycle 2009-10): end of December

IHE Technical Committee: Discussion of the Change proposals (CPs)

After discussion the CPs status is described below and action list is:

CP	Issue	assigned to	status
1	How many (OBR, ORC) in a PAT-3 message Order is placed by the physician: « Examine this specimen or this group of specimens ». A report can aggregate more than one order, and vice-versa.	J-C. Cauvin	Almost completed Approved
2	Complement & correct PAT-2 chapter	J-C. Cauvin	Almost completed
3	Externalize ACK rules → ITI TF	G.Rodriguez	Completed, wait G.Rodriguez's verdict
4 + 6	Actors descriptions	C.Daniel M.Garcia	Approved
5	Profile name : PWF → APW	C.Daniel	Approved
7	link to pdf report in PAT-3	F.Macary	Almost completed
8	Query modality worklist	J.Klossa	In progress
9 + 10	Typo + page footer Year one TI → Release 1.0	M.Garcia	Approved, goes with CP 13
11	List of other domains	M.Garcia	Approved
12	Wording on SDO activities SNOMED CT is moving to IHTSDO	M.Garcia	Approved
13	Full review of vol 1 → typos, wording, questions...	F.Macary	incoming
14	Alignment with NAACCR Vol.V on ORU message & segments descriptions, at the international level. (e.g. « race » should appear as optional)	W.Scharber	incoming

Time line : Completed CPs must be available on ftp server October, 10th (or sent to IHE co-chairs (M.Garcia or T.Schrader)

Conf call for final approval of CPs November 6th

Deadline for Anatomic Pathology TF publication: November 13th

2008			
Jan.	TC Publishes Trial Implementation Supplements	January 25	www.ihe.net or www.gmsih.fr
May.	Brief Profile Proposals 2009-2010 Discussion(PC&TC)	May. 17	Toledo (Spain) IHE Pathology-DICOM WG26 joint meeting held in conjunction with the 9th European Congress on Telepathology and 3rd International Congress on Virtual Microscopy
Aug.	Submit Change Proposals on APW(2008-09)	Sept. 9	Minutes of the TConf
Sept.	Submit Brief Profile Proposals 2009-2010 to Pathology Planning Committee (PC)	Sept 15 - Deadline	Wiki & Email to cochairs
Oct.	PC Selects "Short List" of Profiles	Oct. 2	Evora, Portugal in conjunction with with COST action WG1
Oct.	Short listed Profile Proposal Authors to submit Detailed Proposals to PC	Due to Nov 5th	wiki & Email to cochairs
Oct.	Submit completed Change Proposals on APW(2008-09)	Due to Oct 10th	wiki & Email to cochairs
Nov.	TC Evaluates Detailed Proposals for APW (2009-10) & Validates CPs for APW (2008-09)	Nov. 6	T-conf
Dec.	PC & TC Decision of Detailed Proposals for 2009 work	End of Dec	Tconf
2009			
Jan.	Test implementations at Connectathon	Jan	Chicago
Jan.	PC review of scope of White Papers	January	
Mar.	Profile development meeting: finalize supplements for Public Comment (TC)	Mar 10-13 (COST MC, WG)	Paris
Apr.	Connectathon Europe	Apr.	??

DICOM WG26

Summary of WG26 meetings in Toledo (May) and in San Diego (September).

Pathologist needs quick and smooth Zoom and Pan in very large image files. DICOM Suppt 106 proposes a solution using jpeg2000 files and JPIP server. However Whole Slide Images produced by slide scanners can exceed the DICOM limit of size (64000 pixel) and weight (4Gb) and there is no hope for short term extension of the DICOM limits. So the solution proposed by the group was to cut WSI in smaller objects (tiles) that can be handled by DICOM.

For that purpose we needed to define a new IOD (Information Object Definitions) describing the organization of the tiles. A draft supplement has been written by Ole Eichhorn from Aperio, a company that build WSI slide scanners.

This draft proposes the use of a pyramidal structure with different zoom levels of tiles. It allows the use of one single tile containing a jpeg 2000 file less than 64k pixels and less than 4 GB after compression. In such case we need a JPIP server for Zoom and pan in the WSI.

We will have to face more complex situations: in one single scanning session of a specimen, some modalities can modify the scanning parameters (changing light and filters, changing lenses, ...). The resulting images can be stored either in a single object or in different objects.

The proposed draft allows many layers for each level, so both solutions can be used. So, before presentation of the proposal to WG06 (this will not be possible before January 2009) we will still have to refine the WSI IOD by explaining:

1. the way we plan to handle multimodal images (i.e. multiband fluorescence, multispectral or multi-lenses microscope images): in one or in many objects
2. and the way we will store and we will describe the modality parameters for each optical configuration

Also for short term implementation purposes, as proposed by Vytenis PUNYS, we could test a simple model of tiles which could be handled by existing DICOM viewers.

COST Action IC0604 WG2 - Working plan

- Active participation International standards (DICOM, HL7, SNOMED, CEN) and IHE initiative.
 - o DICOM WG26: Define a set of standardized **DICOM** file headings for pathology microscopic images.
 - o IHE: Definition of new types of **messages** needed for pathological image information exchange templates & values sets for structured report and messages, integrating automatons, tissue banks and TMArrayers to Pathology Information systems.
- Increase the **European scientific leadership** in the Anatomic Pathology domain (IHE-Anatomic Pathology, HL7, SNOMED): A meeting of the WG2 in conjunction with the HL7 working group meeting
- Training & dissemination
 - o Implementation guides/User hand book (DICOM, HL7, IHE)
 - o Glossary
 - o On line tutorials

***Next meeting of COST Action IC0604 WG2 - Informatics Standards in Pathology
March 10-13th, 2008, Paris***