

Anatomic Pathology Structured Report (APSR) From Release 1 to Release 2

An evolution, proposed by Gunter Haroske, Thomas Schrader,
Rajesh Dash, Christel Daniel, François Macary, Frank Oemig

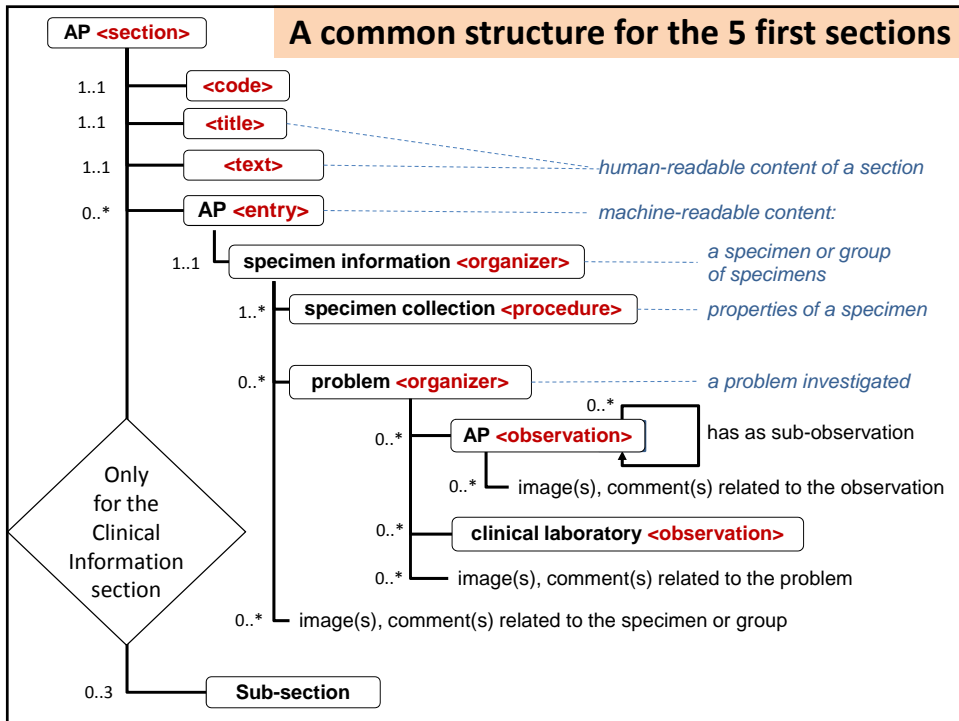
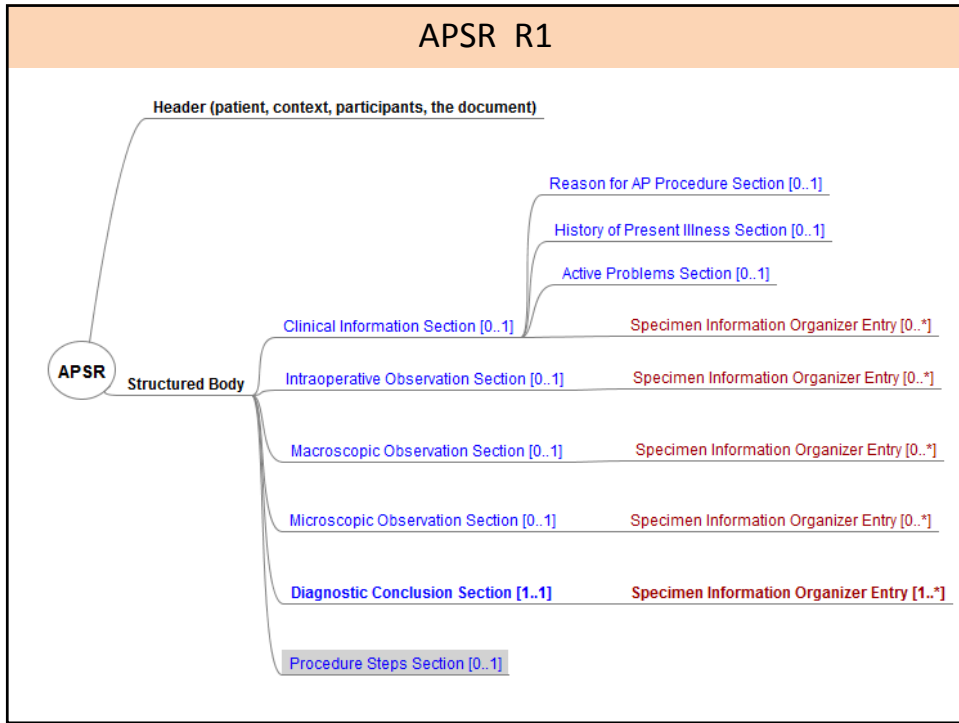
IHE AP in cooperation with HL7 AP and CAP

Discussed in HL7 AP, at HL7 WGM, Chicago, September 14-19, 2014

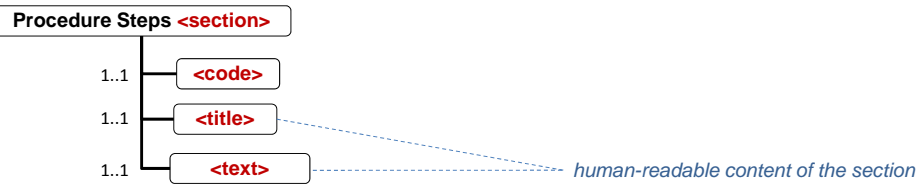
Anatomic Pathology Structured Report (APSR) Release 1

- APSR profile R1 published in 2011 for Trial Implementation on www.ihe.net/technical_framework#pathology
- Produced by IHE AP in cooperation with HL7 AP and CAP
- A set of 21 CDA document templates:
 - A generic template usable for any anatomic location and any pathology
 - 20 specialized templates for 20 anatomic locations/specimen collection procedures

APSR R1



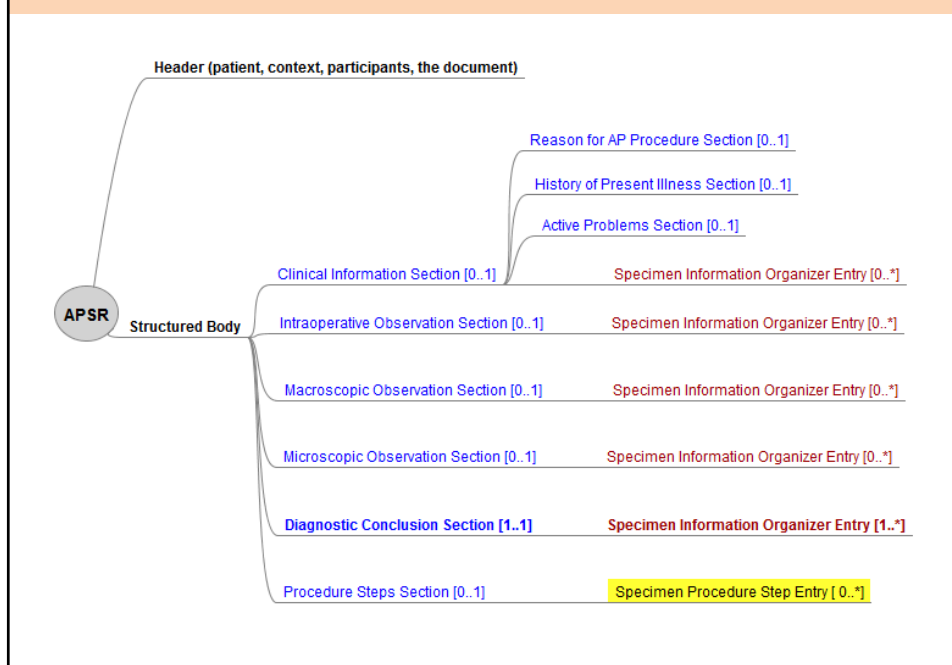
The Procedure Steps section is only human readable



The issues pointed out by Germany

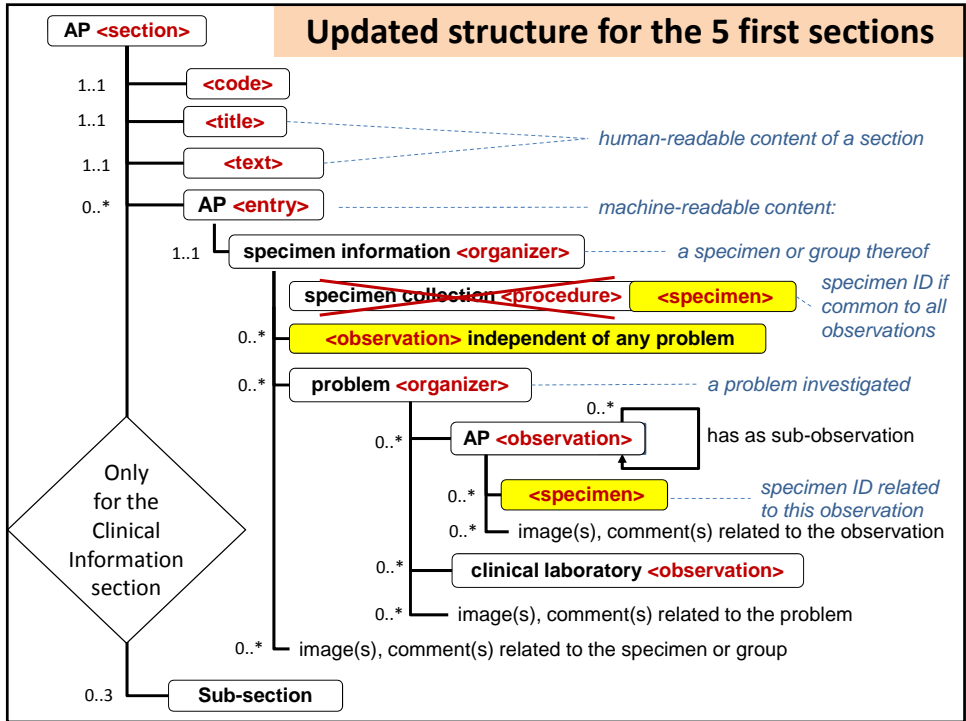
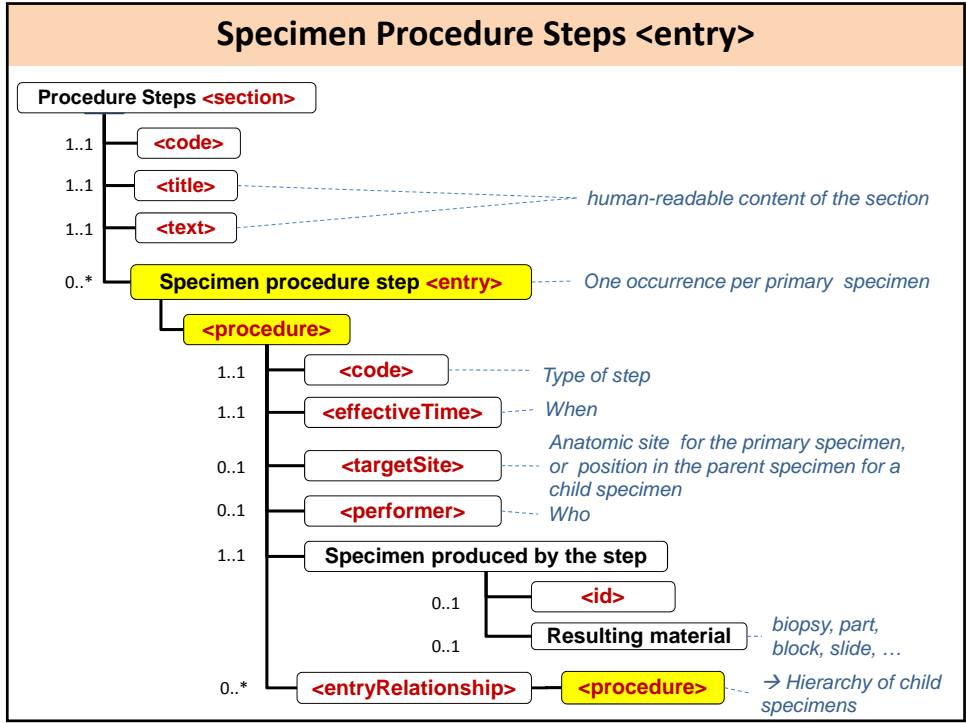
- All observations are currently sorted by problem. However observations on the specimen itself (e.g.; specimen size) should be distinguished from the other AP observations. They are not related to a particular problem
- The various steps performed on the specimen should be traceable as structured data (machine-readable):
Part → Block → Slide
- There is potentially a high number of templates. Can we obtain the same precision with less templates?

Proposed enhancements for APSR release 2



Add zero to n <entry> to the Procedure Steps Section

- Each entry carries as machine-readable content, the hierarchy of steps that were applied to a primary specimen, or group of primary specimens (e.g.; prostate biopsies)
- Each step carries:
 - The type of step that was performed
 - The anatomic site the specimen comes from (only for the primary specimen)
 - Who performed the step
 - When
 - What material it produced:
 - the resulting specimen (part, block, slide, ...),
 - with its unique identifier
 - The list of further steps that were applied to this material



Application on Raj's example "Case 1"

CASE #1

A. "RIGHT BREAST FIVE CORES 8-9:00" (ULTRASOUND GUIDED NEEDLE CORE BIOPSY);

INVASIVE ADENOCARCINOMA OF THE BREAST.
HISTOLOGIC TYPE: DUCTAL.
NOTTINGHAM COMBINED HISTOLOGIC GRADE: 1 OF 3.
TUBULE FORMATION SCORE: 2.
NUCLEAR PLEOMORPHISM SCORE: 2.
MITOTIC RATE SCORE: 1.

IN-SITU CARCINOMA: EQUIVOCAL.

BREAST CANCER BIOMARKER STUDIES:
PARAFFIN BLOCK NUMBER: A1.

ER INTERPRETATION: POSITIVE ESTROGEN RECEPTOR ACTIVITY (ALLRED SCORE = 8).

PR INTERPRETATION: POSITIVE PROGESTERONE RECEPTOR ACTIVITY (ALLRED SCORE = 8).

DAKO EGFR PHARMDX IMMUNOHISTOCHEMISTRY: NEGATIVE (0) FOR EXPRESSION OF

EPIDERMAL GROWTH FACTOR RECEPTOR.

HER2/NEU IMMUNOHISTOCHEMISTRY: EQUIVOCAL (2+) FOR OVEREXPRESSION OF HER2/NEU

ONCOPROTEIN.

HER2/NEU FISH RESULTS WILL BE ISSUED IN AN ADDENDUM TO THIS REPORT.

Hierarchy of specimens proposed by Gunter/Raj

- Part - RIGHT BREAST FIVE CORES 8-9:00 – ID = "A7102400008"
 - PARAFFIN BLOCK NUMBER: A1 – ID = "block_A_1"
 - slide from A1
 - targetSite = "Level 1"
 - Resulting material = "H&E"
 - id = "slide_A_1_HE"
 - slide from A1
 - targetSite = "Level 2"
 - Resulting material = "ER Immunohistochemistry"
 - id = "slide_A_1_ER"
 - slide from A1
 - targetSite = "Level 3"
 - Resulting material = "PR Immunohistochemistry"
 - id = "slide_A_1_PR"
 - slide from A1
 - targetSite = "Level 4"
 - Resulting material = "HER2 Immunohistochemistry"
 - id = "slide_A_1_HER2"

The CDA case #1 report (Raj, Christel, Gunter, François)

APSR_Raj_breastCancer_Case1gen_20140925.xml