



Templates WG

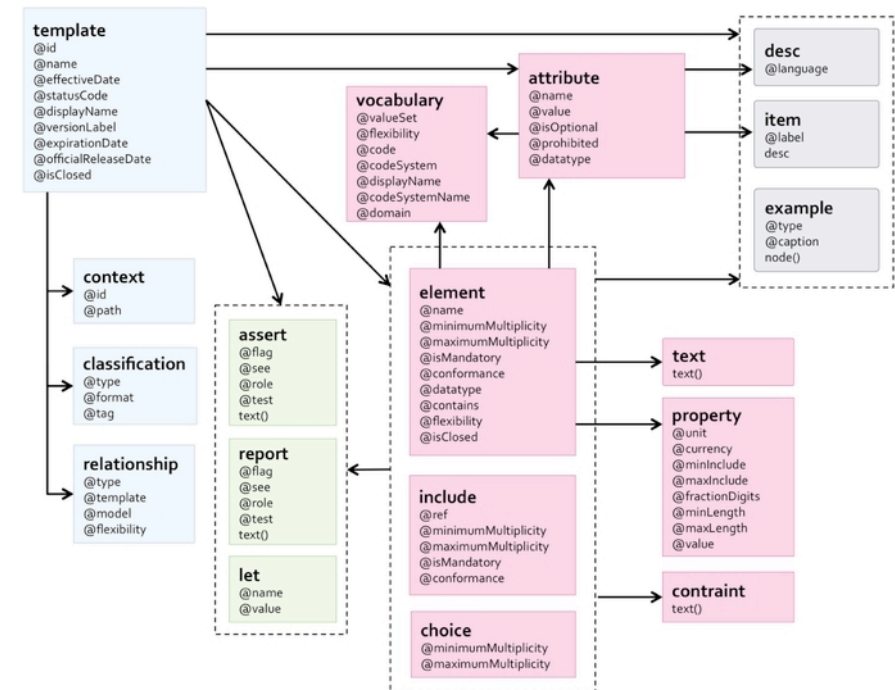
Friday, 20 Jan 2017

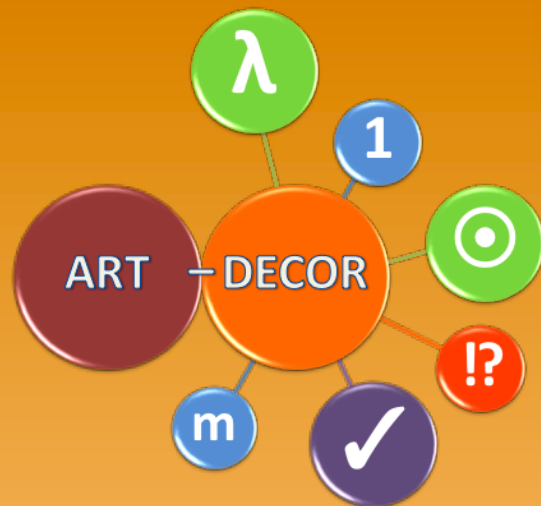
- Committee Meeting, hosting StrucDoc and IST
 - STU Comments, Action Items and List of Changes for Templates ITS Release 1
 - Art-Decor update (Kai)
 - Follow-up from meetings during the week
 - Next WGM schedule
 - Conference Calls (Tue, 2pm EST, bi-weekly, starting on Jan 31)



Templates STU R1

- HL7 Templates Standard: Specification and Use of Reusable Information Constraint Templates, Release 1
- No new STU comments
- All resolved
- HL7 STU → normative





ART-DECOR®

Update

HL7 International Templates WG

Dr Kai U. Heitmann, MD, FHL7
Heitmann Consulting and Services
ART-DECOR Expert Group
ART-DECOR Open Tools
Gefyra GmbH, Germany
Template WG co-chair, HL7 International
Advisory Board, HL7 Foundation
CEO HL7 Germany
HL7 Germany / Netherlands / International



ART-DECOR in 4 bullets



- ... is an **open-source tool** suite that supports the **creation and maintenance of HL7 Templates, Value Sets**, scenarios and data sets
- ... features **cloud-based federated Building Block Repositories** (BBR) for Templates and Value Sets
- ... supports **comprehensive collaboration** of team members within and between governance groups
- ... allows separation of concerns and different views on a **single common documentation** for different **domain experts** and **multidisciplinary** stakeholders of healthcare information exchange

Projects (some of them)



- International projects
 - Austria (ELGA National eHealth programme): roll-out
 - Netherlands (added national screening programme on cervix cancer, bowel cancer existed already)
 - epSOS/EXPAND (European eHealth programme)
 - International Patient Summary IPS
 - IHE Profile and Value Set Repository (grown)
 - IHE Cardiology Profiles
 - British Columbia Canada (Medical Imaging, Lab)

Some Key Features of ART-DECOR

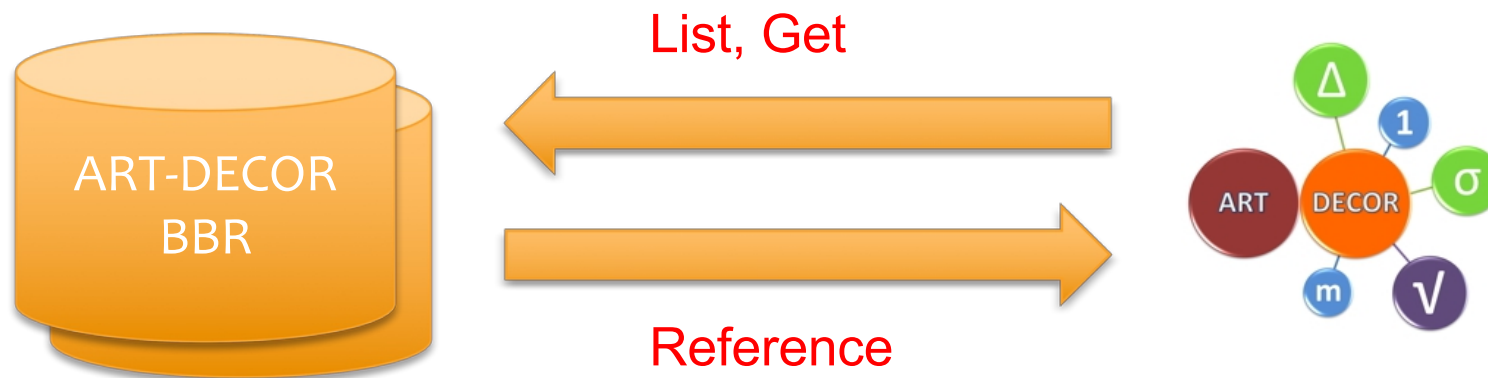


- Template Viewer/Editor based on Templates STU R1 Exchange Format
- Documentation of templates in ART, HTML, PDF
- Terminology Browser for various terminologies
- Base Value Set Editor
- Building Block Repositories with various “standard” templates and value sets
- ISO schematron generator (open /closed)
- RESTful services to get various artifacts
- FHIR import/export functions, profile support

BBRs = Building Block Repositories



- **Shared repositories** with collection of artifacts
 - Prototypes for Templates
 - Ready-to-use Templates to refer to, to specialize or to adapt → **Template Repository & Registry**
 - Also all necessary Value Sets etc.



My ART-DECOR
references BBRs

BBRs = Building Block Repositories



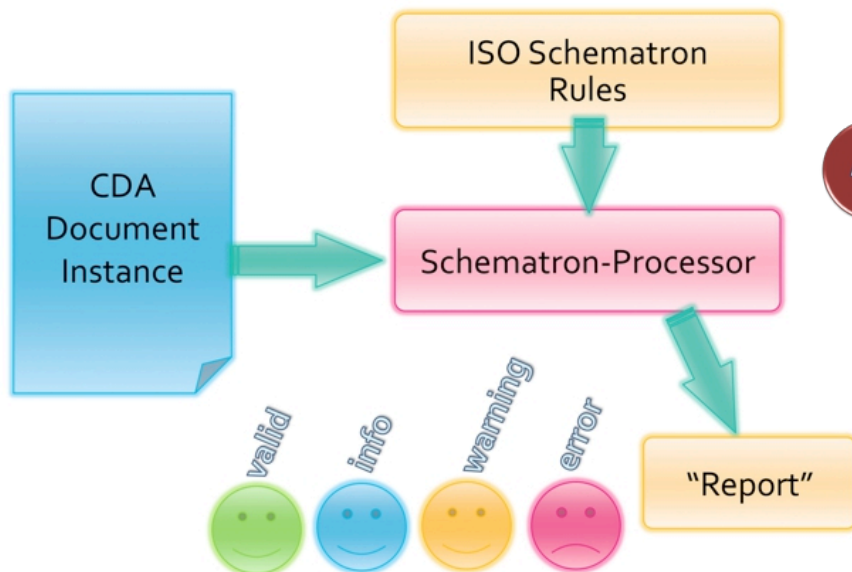
- Official ART-DECOR servers

Server	Description	Host
art-decor.org	Main Server Server hosts various international projects and repositories	ART-DECOR Expert Group (ADEG), ART-DECOR OPEN TOOLS (ADOT)
decor.nictiz.nl	Server hosts various Dutch projects and repositories	Nictiz
art-decor.ihe-europe.net	Server hosts various IHE projects and repositories	IHE Europe

Templates and Validation



- Validation of XML instances
 - Upload + validate with ART-DECOR
 - Download schematron package for own use
 - Use of Validation and Testing Framework IHE



Directly derived
from Template
Definitions



IHE

GAZELLE
eHealth test framework
for interoperability





ART-DECOR®

Recent and New 2.0 Features



- Use case oriented (partial) publications
- Live Runtime Compile (LRC)



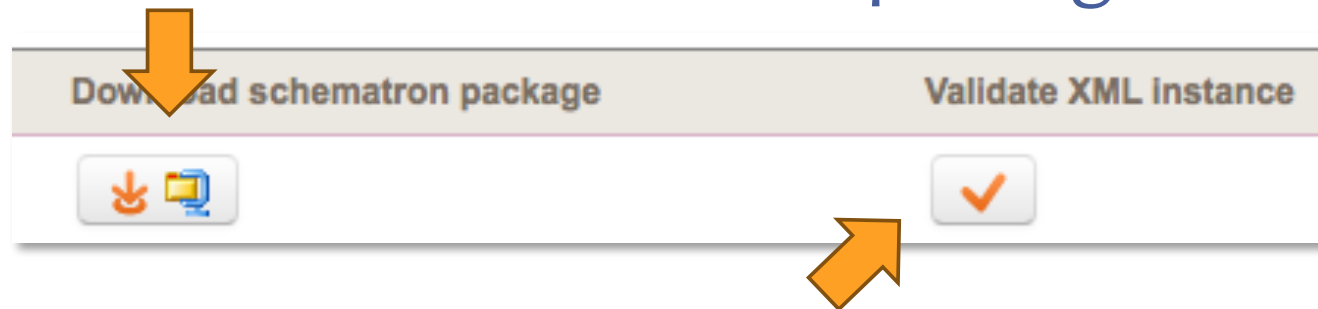
Results: 2 item(s)					
Date	Status	By	Transactions	Download schematron package	Validate XML instance
2016-12-19 15:30:58	● Active	dr Kai U. Heitmann	1		
2016-12-18 13:06:33	● Active	dr Kai U. Heitmann	1		

- Instance Fragment Validation (IVF)
- Template Design Standards Check for CDA



Recent Feature: Live Validation

- Creation of a validation package of the specification based on the Template and Value Set definitions
- Download the validation package...



- ... or validate an example instance live

ART-DECOR®

Recent Feature: Live Validation



Validate XML Instances



Validate XML Instances

Upload message then select a schematron set and finally validate your instance against that set

Upload message

example5cda3.xml (3 KB) ✖

Select

✓ Scenario: summaryvitalsigns - Summary vital signs data (2.16.840.1.113883.3.1937.99.60.5.4.101) ▾

Validate



Results

Results: Schema and schematron check - 3 item(s)



Schema Validation: 0 item(s)



Schematron Validation: 3 item(s), 1994 rule(s)

Level:

error

Location:

/*:ClinicalDocument[namespace-uri()='urn:hl7-org:v3'][1]/*:component[namespace-uri()='urn:hl7-org:v3'][1]/*:structuredBody[namespace-uri()='urn:hl7-org:v3'][1]/*:component[namespace-uri()='urn:hl7-org:v3'][1]/*:section[namespace-uri()='urn:hl7-org:v3'][1]/*:entry[namespace-uri()='urn:hl7-org:v3'][2]/*:observation[namespace-uri()='urn:hl7-org:v3'][1]/*:effectiveTime[namespace-uri()='urn:hl7-org:v3'][1]

Description:

dtr1-2-TS: effectiveTime "201312191" is not a valid timestamp.

Test:

empty(\$theTS) or (\$theTS=\$theTSString and \$theDateTime castable as xs:dateTime)

Level:

warning

Location:

/*:ClinicalDocument[namespace-uri()='urn:hl7-org:v3'][1]/*:component[namespace-uri()='urn:hl7-org:v3'][1]/*:structuredBody[namespace-uri()='urn:hl7-org:v3'][1]/*:component[namespace-uri()='urn:hl7-org:v3'][1]/*:section[namespace-uri()='urn:hl7-org:v3'][1]/*:entry[namespace-uri()='urn:hl7-org:v3'][2]/*:observation[namespace-uri()='urn:hl7-org:v3'][1]/*:value[namespace-uri()='urn:hl7-org:v3'][1]

Reference:

http://localhost:8080/art-decor/decor-templates-demo5-?id=2.16.840.1.113883.3.1937.99.60.5.10.127

Description:

(OxygenSaturation): value SHALL be in range [..100]

Test:

(@nullFlavor or (number(\$theValue)<=100))

Level:

hint

Location:

/*:ClinicalDocument[namespace-uri()='urn:hl7-org:v3'][1]/*:component[namespace-uri()='urn:hl7-org:v3'][1]/*:structuredBody[namespace-uri()='urn:hl7-org:v3'][1]/*:component[namespace-uri()='urn:hl7-org:v3'][1]/*:section[namespace-uri()='urn:hl7-org:v3'][1]

Reference:

http://localhost:8080/art-decor/decor-templates-demo5-?id=2.16.840.1.113883.3.1937.99.60.5.10.3001

Description:

(VitalSignsSection): Specialized entries found

Test:

count(hl7:entry[hl7:observation/hl7:templateId[not(@root='2.16.840.1.113883.3.1937.99.60.5.10.115')]])=0

Upload your CDA
instance to validate

Validation results

ART-DECOR®:

New 2.0 Features



- Instance Fragment Validation (IVF)
 - Allows validation of example fragments during the design of Templates (Editor feature)
- Template Design Standards Check for CDA
 - Checks conformance of your own Template Design against the original CDA Release 2 standard



GAZELLE
eHealth test framework
for interoperability

**Check against
Base CDA Std**



ART-DECOR® is...

- ...driven by the ART-DECOR Expert Group
- ...supported by a Team of Testers...
- ...and the Community
- ...is a Trademark ®

Founders



DECOR is developed by Dr Kai Heitmann who works as an healthcare IT consultant in Europe with the main focus on Germany and the Netherlands. He is mainly active in the fields of standardization in healthcare communication, especially the HL7 (Health Level Seven) family of standards like CDA and FHIR.

Kai is an acknowledged expert in Healthcare Information Technology; he has advised the Ministries of Health of some European countries, as well as large trade associations in Germany and the Netherlands, on aspects of e-Health.

ART is developed by Gerrit Boers who is a health care consultant.



[\[edit\]](#)

ART-DECOR Expert Group

Since the original development of ART-DECOR, the following people have joined the ART-DECOR Expert Group:



Alexander Henket is a consultant at Nictiz with >15 years of experience in the creation and implementation of various standards and based in The Netherlands. He is an active member of the HL7 community both national and international.

Marc de Graauw is an independent consultant who specializes in digital information exchange, health & ICT, information architecture, security, semantics & Web Services and based in The Netherlands.



Maarten Ligtoet is an architect at Nictiz who specializes in network infrastructure, audits of health information systems, open standards, authentication & security and based in The Netherlands.

Dr Frank Oemig works for Deutsche Telekom Healthcare and Security Solutions GmbH and focuses on Conformance and Testing as well as on Java applications around ART-DECOR. He is based in Germany.



Mathias Aschhoff works for The Competence Centre for Telematics in HealthCare (ZTG) and is a HL7 CDA and JAVA expert focusing on the intelligent diff strategies for ART-DECOR artefacts such as like value sets and templates. He is based in Germany.

ART-DECOR® Open Tools



- ...an Entrepreneurial Company with limited liability
- ...handles commercial aspects of the ART-DECOR® tool suite development, services and support
- ...complements the ART-DECOR® Expert Group that drives the development
- ART-DECOR® remains open source, neither licensing nor intellectual property rights have changed
- art-decor-open-tools.net



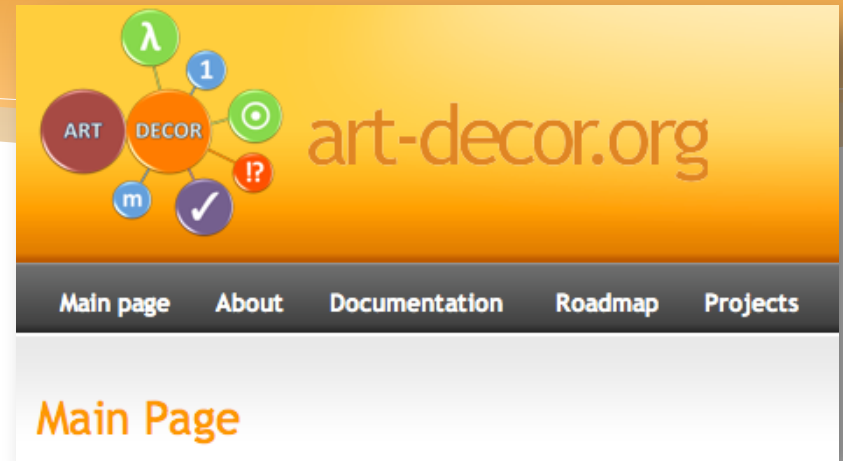
Visit us @ ART-DECOR®



- Main site: art-decor.org
- Also
 - blog.art-decor.org etc.



- Sourceforge 
<http://sourceforge.net/projects/artdecor/>
- decor.nictiz.nl
 - In Dutch





Thank you!
Questions?

