

October Business Meeting 2019

Community Updates

Tuesday October 29, 2019

Global Overview

Liara Tutina

2019 Key achievements to date

- Global Patient Set (GPS) released; use cases and implementation guides finalized.
- Member onboarding policy completed and undergoing approval with GA.
- Successful stakeholder engagements and presentations at MedInfo, HIMSS AsiaPac 2019, HIC 2019, OHDSI China conference.
- Agreement signed for education service delivery in China and in Argentina.
- Terms of reference finalised with German Department of Education.
- Agreement with Brazil finalised for Portuguese translation of the Foundation course.
- Preliminary expressions of interest received for hosting 2022 Expo in APAC.
- User Support Reference Group – gaining momentum with positive feedback from participants.

Key regional activities

Americas

- Membership discussions with Paraguay including meeting with Minister of Health.
- Keynote presentation delivered and meeting held with Hospital Italiano in Argentina.
- FDA day participation.

Asia and Pacific

- Membership application from Armenia received.
- Stakeholder engagement carried out at HIC 2019 (Australia), HIMSS AsiaPac 2019 (Thailand) and presentation delivered at OHDSI China conference (Shanghai).

EMEA

- Working with the African Union on regional licensing agreement for Africa.
- Managed Service discussions with Austria.



Vendor Engagement

- Global license agreement with Roche and Siemens signed.
- Amazon including SNOMED CT in Comprehend Medical product. Ongoing discussions re: broader co-marketing/technical partnerships.
- Working with Nuance who are using SNOMED CT in new Dragon Medical Advisor product. Ongoing discussions re: broader co-marketing/technical partnerships.
- Exploring analytics pilot study opportunities with several vendors/organizations.
- HIC 2019 (Brisbane, Australia) – engagement meetings held with many vendors including Medical Director, Best Practice, Pen CS, Medirecords, Nuance, Clinic to Cloud, Genie, Vmore, Cerner etc.
- Planning for Arab Health (January 2020).



Looking ahead

- Document way forward for working with openEHR.
- Finalise the AMA announcement and deploy Phase 1.
- Complete Managed Service onboarding of New Zealand.
- Complete the vendor maturity assessment.
- Continue business development work and membership discussions as per the regional operational plans.
- Implementation survey.
- Education Delivery agreement in the European Region.



Collaboration

Jane Millar



Collaboration – Standards Organizations

01

HL7 International

- Renewed Agreement
- Updates to HL7 IPS freeset for inclusion in Global patient Set
- Member led work on SNOMED CT binding in FHIR - implementation guide and profiles

02

DICOM

- Updates to DICOM free set for inclusion in Global Patient Set

03

Integrating the Healthcare Enterprise (IHE)

- Updates to IHE free-set for inclusion in Global Patient Set (32 profiles)
- Contribution to IHE IPS profile to use IPS/GPS free-set

04

WHO

- Input to development of a WHO mapping white paper – between terminologies/classifications and WHO classifications
- Exploring options for managing link with ICD-11 and further content alignment work
- Participation in WHO-FIC advisory council and various committees



Collaboration – Standards Organizations

05

openEHR

- Starting to explore options for working together including use of GPS in openEHR archetypes

06

ISO

- Review of ballots and responses ISO TC 215 Health Informatics
- Input to new ISO sub committee for Genomics

07

Global Medical Device Nomenclature Agency

- Adding GMDN content to SNOMED CT where in scope and meets Editorial guidance
- Map to support regulatory requirements

08

International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH)

- Preparing a Collaboration Agreement to support ongoing maintenance, updating and releasing of SNOMED/MedDRA, MedDRA/SNOMED map, post EU WEB RADR 2 project



Collaboration - Clinical

01

International Council for Nursing (ICN)

- Draft principles agreed to support better integration between SNOMED CT and ICNP.
- Agreement being drafted.

02

Institut national de la sante et de la recherche medicale (INSERM)

- Completed inclusion of priority set of Orphanet Rare Disease content in SNOMED CT for July 2019
- Work started on map between SNOMED CT and Orphanet of priority set - for Alpha release post January 2020

03

European Renal Association-European Dialysis and Transplant Association (ERA-EDTA)

- Updates to ERA-EDTA free set (Causes of Death) for inclusion in Global Patient Set

04

Academy of Nutrition and Dietetics (AND)

- Incorporation of NCPT (National Care Process Terminology) into SNOMED CT terminology.
- Maintenance and updating processes of new nutrition content.
- Principles for collaboration agreed and agreement being drafted



Collaboration

01

International Nursing Knowledge Association (NANDA-I)

- Discussions for including NANDA content (nursing diagnoses) in SNOMED CT which would help to align the content of the two terminologies.

02

American Medical Association (AMA)

- Collaboration agreement in place
- Announcement to be made during meeting on a joint initiative

03

Clinical Data Interchange Standards Consortium (CDISC)

- Re-opening discussions re use of SNOMED CT in CDISC standards for clinical trials and clinical research

04

Joint Initiative on SDO Global Health Informatics Standardization (JIC)

- Input as directed through SNOMED International
- Facilitates collaboration with other SDOs



Education & Product Support

Linda Bird



Where do I find it?

01

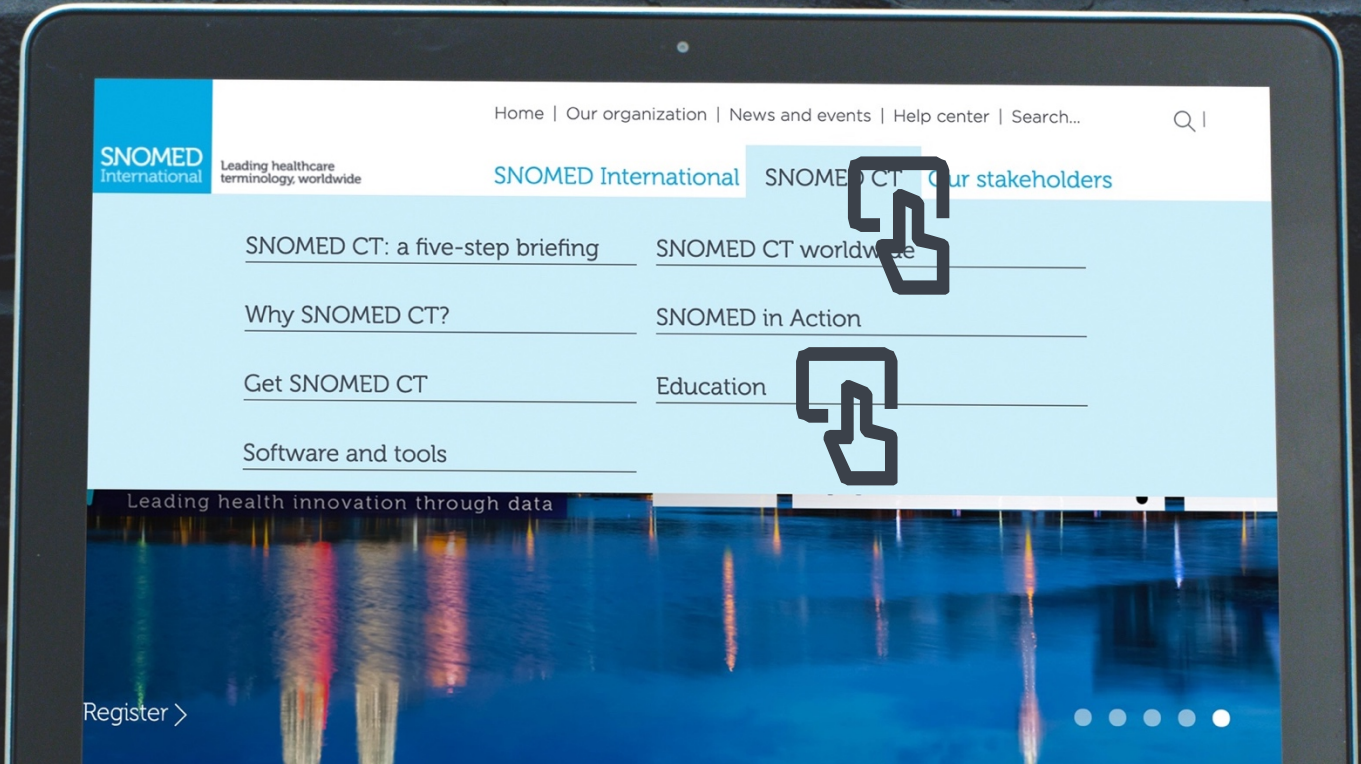
Visit

snomed.org

02

Select

SNOMED CT,
next Education



SNOMED International
Education

Select the
“Education”
feature box

Education

Information about SNOMED CT E-Learning services



SNOMED CT courses

Our courses teach you SNOMED CT knowledge and skills through online presentations, practical exercises, assignments, tutorials and assessments

4496
Students

**SNOMED CT
Foundation
Course**

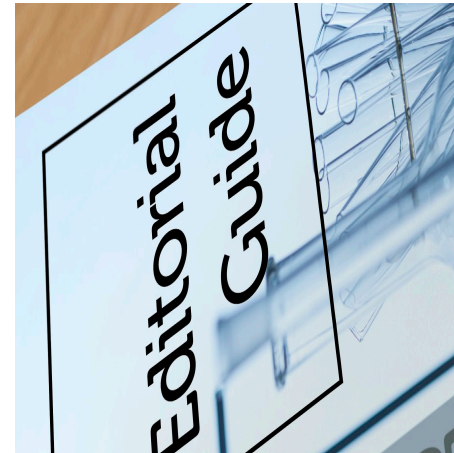


**Curso de
Fundamentos de
SNOMED CT**

**SNOMED CT
Implementation
Course**
(Jan & Jul)



**SNOMED CT
Authoring
Level 1**
(Mar & Sep)



3075
Completions

86
Countries

SNOMED CT certifications

Our certifications recognize your competence in performing specific SNOMED CT tasks and are tested via proctored online exams

15

Students

4

Countries

15

Completions



Recognizes your competence in performing **basic SNOMED CT authoring tasks**

- **Must pass authoring level 1 certification exam**
- **Exam is electronically proctored**
- **Valid for 3 years**

SNOMED CT partnerships

SNOMED International is partnering with organizations around the globe to deliver SNOMED CT education in non-English languages



Education delivery agreements with

- Hospital Italiano - Spanish
- Digital Health China – Mandarin

Education translation plans with

- Finnish NRC & Uni of Eastern Finland
- Swedish NRC
- Brazilian NRC

Member benefits

Each Member is entitled to

01

**FREE Foundation Course
for all students**

02

**Membership discount (50%)
for all education courses**

03

**NRC access to 1 FREE enrolment in each
course per year**

04

**NRC access to 1 FREE enrolment in each
certification per year**



WIN A FREE COURSE!



Visit the SNOMED CT course catalogue

courses.ihtsdotools.org



Discover the answer to this simple question:

“How many products are available on the SNOMED CT Course Catalogue?”



Submit your answer at snomed.org/win

*Two free SNOMED CT course enrolments to be won
All entrants will receive a 20% discount voucher - first 50 enrolments only
All vouchers must be used before December 2019*

Clinical

Ian Green



Clinical Engagement

01

Clinical Reference Groups

Active CRG's – 7 groups, Active Project groups – 2
Under development – 4 CRG's and 1 Project group

02

Clinical Education

Clinical education videos are completed in draft, and have had both internal and external review. Will be finalizing content and professionally recording them in November, for publication

03

Clinical content review

We have been working with individual and groups of clinicians to review SNOMED CT content, and to provide advice to the authoring team

04

Identifying key clinical conferences

SNOMED International is actively looking to provide a presence at key international clinical conferences.



Clinical Engagement – Getting involved

01

Clinical contacts database

We have a database of clinicians with up to date clinical knowledge to advise the authoring team on content issues, and also act as the basis for new CRG and project groups – this is added to as we work with relevant clinicians.

02

Individual clinicians

We would encourage clinicians to put their name forward. Further information can be obtained through info@snomed.org

03

Joining a Clinical Reference Group (CRG)

Details of all CRG's can be found here -

<https://confluence.ihtsdotools.org/display/CP/Introduction+-+Clinical+Reference+Groups>

04

Getting SNOMED International support

For larger projects related to SNOMED CT, or discuss how SNOMED International can support national or international clinical meetings, please email info@snomed.org



Genomics - Current

01

Genomic Pilot

Pilot based on Genetic Kidney disease is complete, and reports available from Confluence (<https://confluence.ihtsdotools.org/display/GR/Genomic+Pilots>). The pilot also produced a FHIR value set of phenotype SNOMED CT codes linked to genetic kidney disease, details are available from info@snomed.org. A further pilot will be published in July, 2020, focused on Cardiovascular Disease

02

Human Phenotype Ontology (HPO)

Development of a SNOMED CT to HPO map, focused on current content within SNOMED CT release. Creation of the map, will be a joint project between SNOMED, HPO and GA4GH, and publication will be jointly across all three organisations

03

European Bioinformatics Institute (EBI)

Working with EBI to include SNOMED CT in Ontology Xref service (OXO), which provides an online resource linking terminologies and classifications with the clinical and genomics spaces

04

Orphanet

Inclusion of initial set of Orphanet terms into the SNOMED CT release will be published in the January 2020 release, followed by a SNOMED to Orphanet map. This will support genomic researchers who are looking to leverage clinical EHR data, and also support greater granularity for clinicians recording rare disease data



Development plans for Genomics

01

Human Phenotype Ontology (HPO)

Following creation of the SNOMED to HPO map, the two organisations will explore ways of working to allow HPO phenotype content to be added to the International release

02

Online Mendelian Inheritance of Man (OMIM)

Alignment and enhancement of phenotype content in the International Release, with discussions on the development of a mapping between SNOMED and OMIM

03

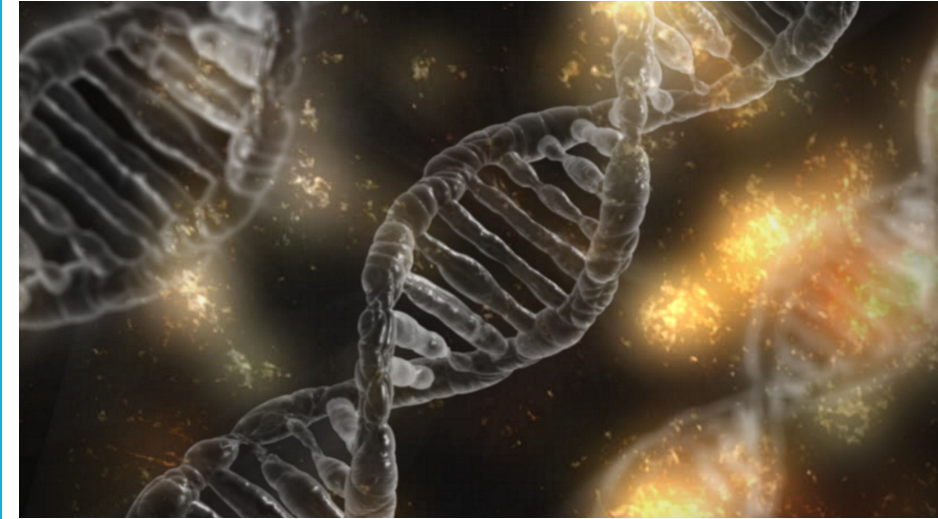
Human Disease Ontology (HDO)

HDO provides disease definitions (including mutations) with links to the gene ontology. Development of ways to link SNOMED and HDO to allow SNOMED users to access mutation details, and also to inform the development of SNOMED definitions in line with emerging clinical understanding

04

Gene Ontology

Provide a link from SNOMED to Gene Ontology to support genomics data analysis by researchers



USE CASES

1. Supporting genomics researchers to access of SNOMED EHR data
2. Development of SNOMED disease definitions in line with genomic definitions of disease

Content Strategy

Jim Case



Update on Quality Improvement project

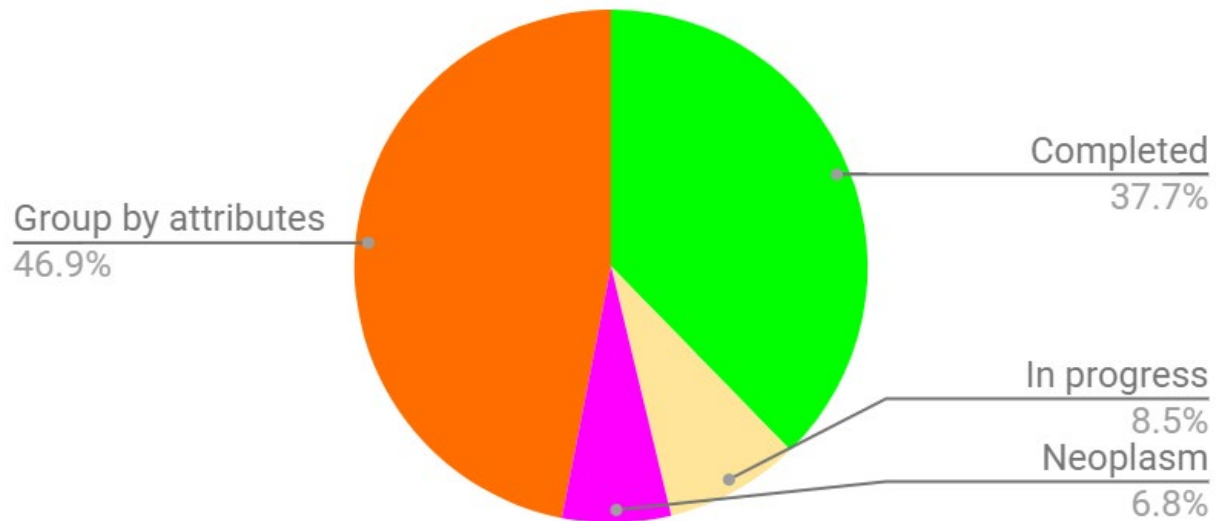
The SNOMED CT quality improvement (QI) initiative was launched in 2017 to improve internal structural consistency of SNOMED CT content through:

- **Improved** adherence to the Machine Readable Concept Model (MRCM)
- **Improved** adherence to editorial policy
- **Application** of a consistent modeling philosophy to current and new content
- **Reduction** of the number of intermediate primitives/Maximized number of sufficiently defined concepts
- **Application** of defined templates to content to reduce the introduction of new modeling errors
- **Leveraging** the use of automated processes to batch refine content
- **Updating** the editorial guide to reflect the more streamlined authoring principles

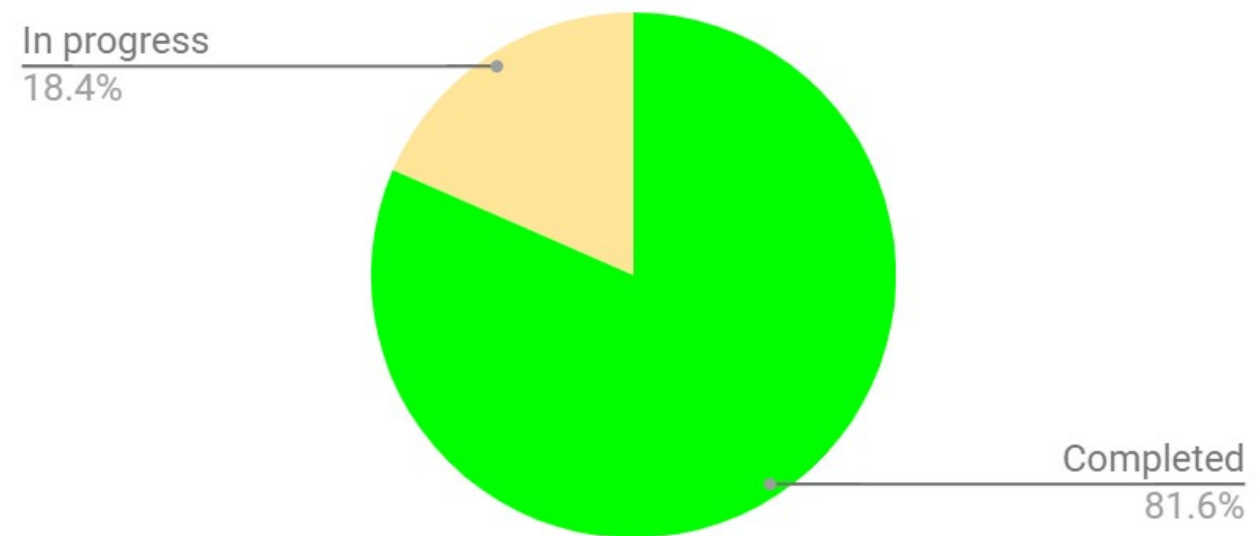
Current status of phase 1

Focus on Clinical findings with “simple” underlying concept model

67641 SIMPLE Clinical findings in scope



31268 first cut Clinical findings



- 43% completed in April
- 84 Templates created to verify conformance

Content strategic initiatives

Key content strategies for 2020

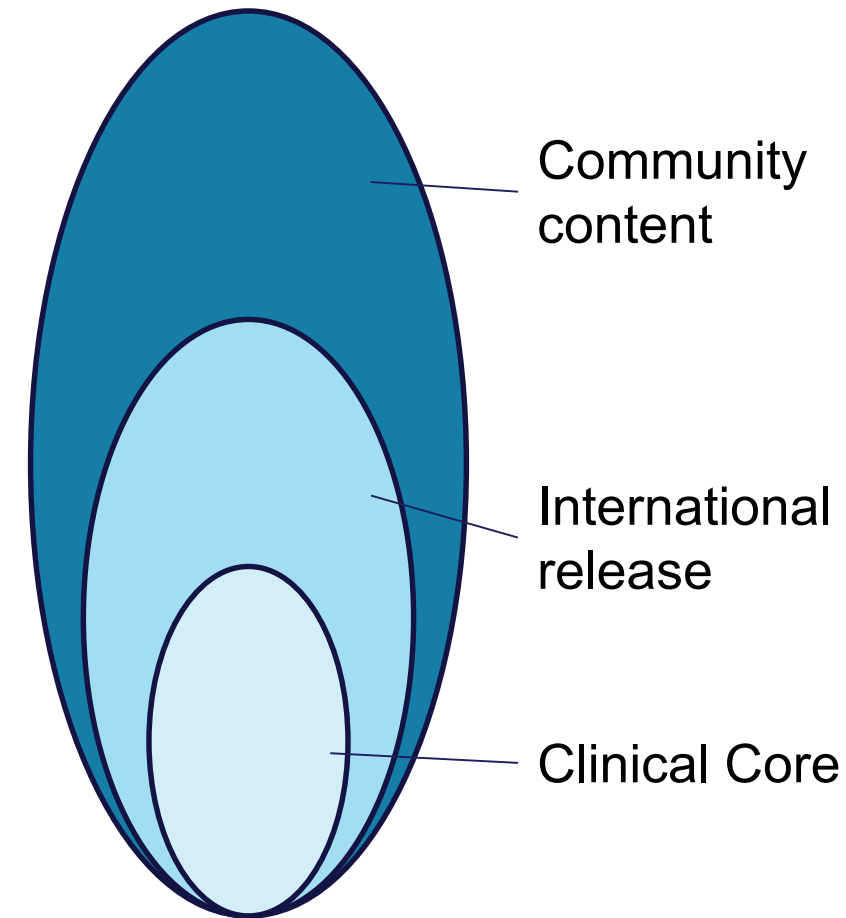
The focus of the content strategy is to improve the overall delivery of enhanced high-quality clinical content to members. To that end a number of strategic deliverables will be developed over the next year.

Proposed deliverables:

- Definition and agreement on the scope of content for the Clinical Core
- Requirements and certification of external authors for International release
- Development of “content quality” levels
- Content promotion criteria

Objectives:

- Focused effort to represent current clinical knowledge (*Clinical core*)
- Ongoing maintenance of useful ancillary content (*International release*)
- Expand coverage of content through Community of Practice contributions (*Community content*)
- Improved/rapid availability of content in use by the community (*Community content*)
- Increased coverage and ongoing filling of terminology “gaps” (*Promotion process*)



Strategy “details”

SNOMED CT Clinical Core

- High level description of scope
- Inclusion/exclusion criteria
- Criteria for expansion

Requirements and certification of external authors

- Education requirements
- Certification requirements
- Definition of approved functions

Strategy “details”

Development of “content quality” levels

- Discussion with MAG for inclusion as content metadata
- Quality level definitions
- Criteria for quality level promotion

Content promotion criteria and process

- Definition of “International usage”
- Compliance with International release editorial policy
- Minimal quality levels requirements
- Component identifier retention/replacement

Editorial Advisory Group agenda topics

Select EAG discussions

Topic description

- SNOMED CT alignment with upper level ontologies
- Source of truth for Clinical Content
- Clinical Core selection criteria
- Observable vs. Evaluation procedure reconciliation
- Policy on the use of “degree of synonymy” in the International release and extensions

Product & Services

Rory Davidson



**Content
&
Mapping**



**Technical
Services**

**Bringing
product
delivery
together to
support the
strategy**

Technical Services

```
"owlExpression": "SubClassOf (:308557000 :14734007) "
```

OWL

July 2019 International Edition released with the move from stated relationships to using axioms, Managed Service Members content upgraded as well

SNOMED CT Browser

Upgraded to incorporate the changes to axioms and to a more scalable terminology server, also supporting a public FHIR Terminology Service interface

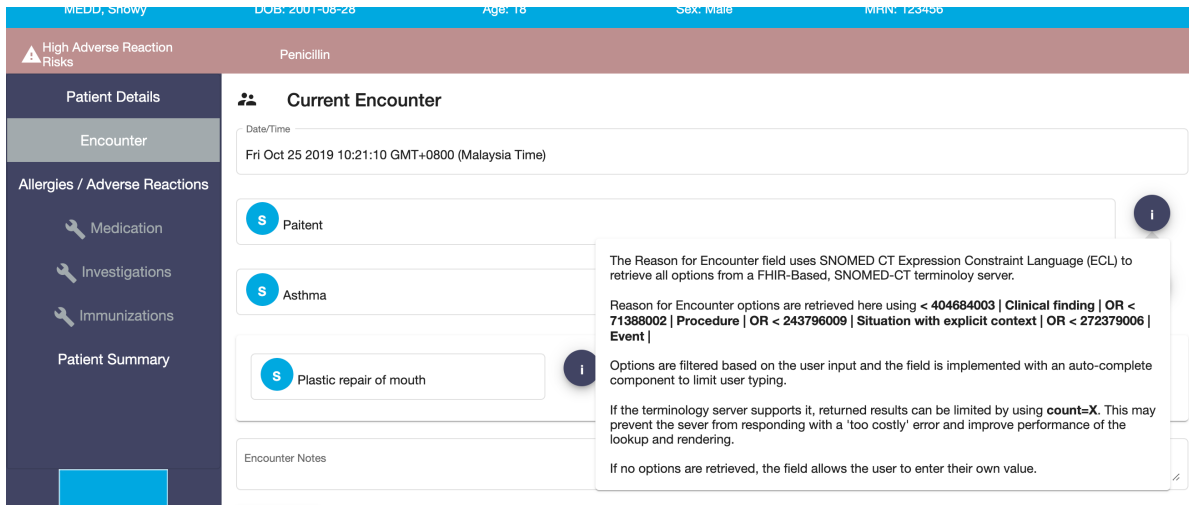
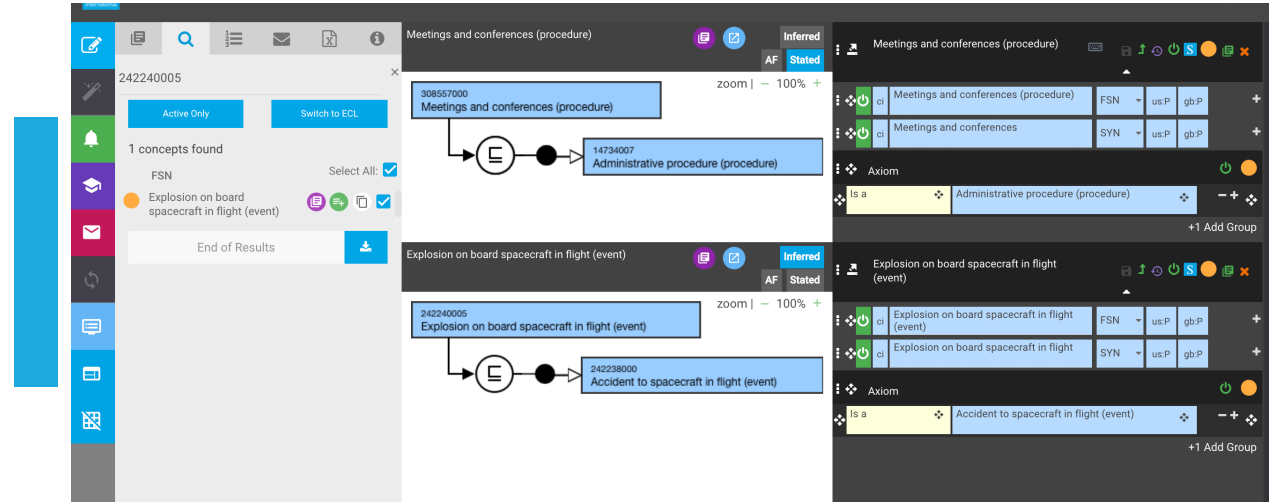
The screenshot displays the SNOMED CT Browser interface. At the top, it shows the release information: "Release: International Edition 2019-07-31" and "Perspective: Full". The main search area shows a search for "conference" with 49 matches found in 0.667 seconds. The search results are listed in a table:

Concept	Label
Case conference	Case conference (procedure)
Team conference	Team conference (procedure)
Conference report	Conference report (record artifact)
Nursing conference	Nursing conference (procedure)
CC - Case conference	Case conference (procedure)
Family case conference	Family case conference (procedure)
Meetings and conferences	Meetings and conferences (procedure)

The "Meetings and conferences (procedure)" concept is selected, showing its details. The concept ID is 308557000. The interface also shows the "Parents" section, which includes "Administrative procedure (procedure)", and the "Children (3)" section, which includes "Child at risk-case conference (procedure)", "Meetings (procedure)", and "Team conference (procedure)".

Authoring Platform

Migrated to authoring with axioms and to using SNOMED International's Snowstorm terminology server



Innovation Framework

First iteration completed on machine generated ICD-11 map prototyping and SNOMED CT User Interface example

<http://snomed.org/ui>

Preparation for the next part of the SNOMED CT journey towards a more collaborative and implementable terminology

Content & Mapping

Monica Harry

Content & Mapping team

- Jim Case
- Monica Harry
- Penni Hernandez
- Toni Morrison
- Suzanne Santamaria
- Farzaneh Ashrafi
- Maria Braithwaite
- Paul Amos
- Yongsheng Gao
- Nicki Ingram
- Krista Lilly
- Donna Morgan
- Cathy Richardson
- Phuong Skovgaard

Content maintenance

- Content Request System
 - 80% of requests completed;
 - 978 authored of possible 1217
- QI project – structural improvements
- Substances – cleanup
- Anatomy – ongoing structural improvements

New content additions

- **Nutrition** – Nutrition Care Process International (NCP)
- **CMT** – Kaiser Permanente donation
- **Drugs** – addition of Product roles to support changes in Substances
- **GMDN** – continuous monthly updating
- **ICD-11** – align with latest release
- **ICD-O** aligning to new 3.2 version



Implementation support via mapping

- **ICD-10** maintenance
- **ICD-11** preparations for future map development
- **ICD-O** 3.2 monitoring for impact to SCT
- **GMDN** Linkage Table
- **MedDRA** – completed QA of 7400 pilot maps

Publication supported derivatives

- For example:
 - Nursing
 - International Family Practice
 - European Renal Association
 - DICOM
 - International Patient Summary
 - Global Patient Set

Development work

- **Vaccines** – use case and requirements gathering
- **Devices** – proof of concept Breast implant and shunt test models
- **Drugs** – addition of Product roles to support changes in Substances

Other activities

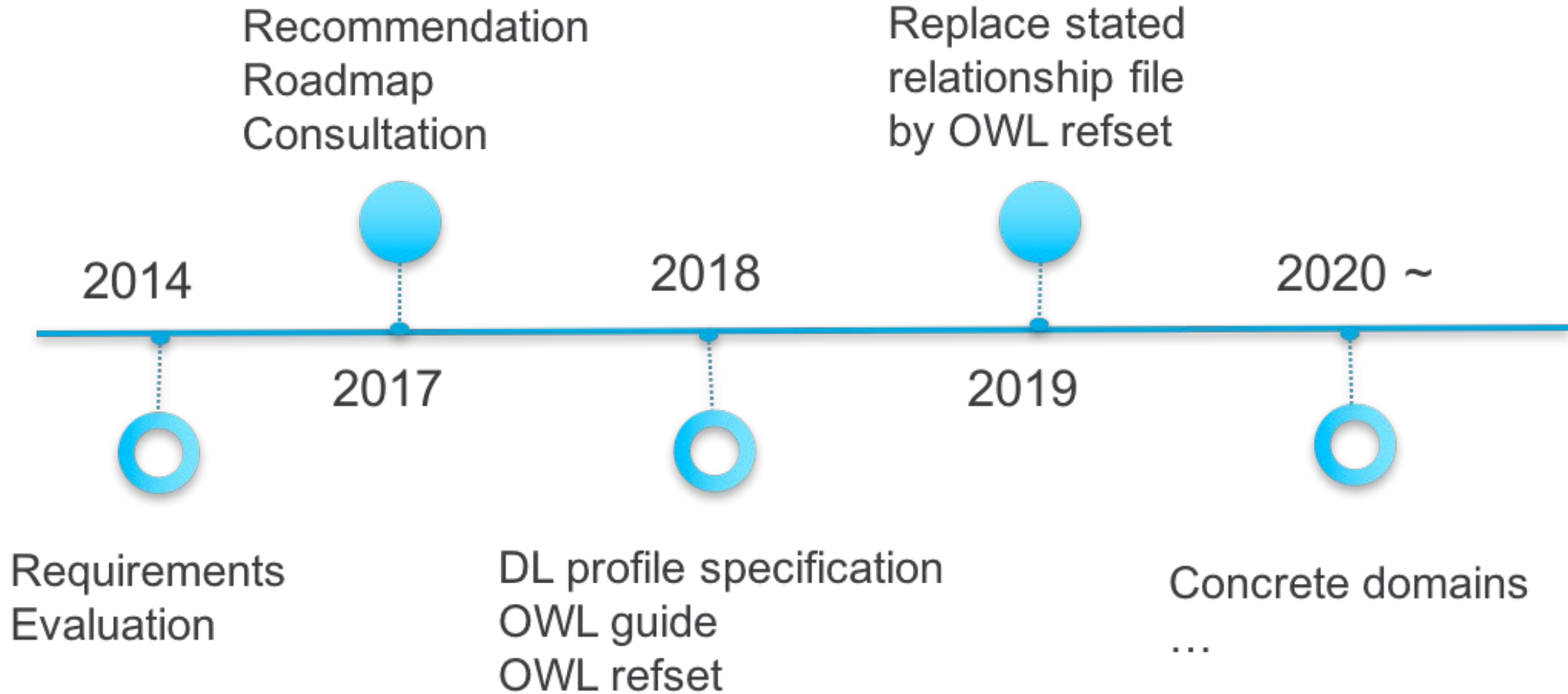
- Project & Clinical Reference Group support
- Editorial Guide updates

Description Logic Enhancements

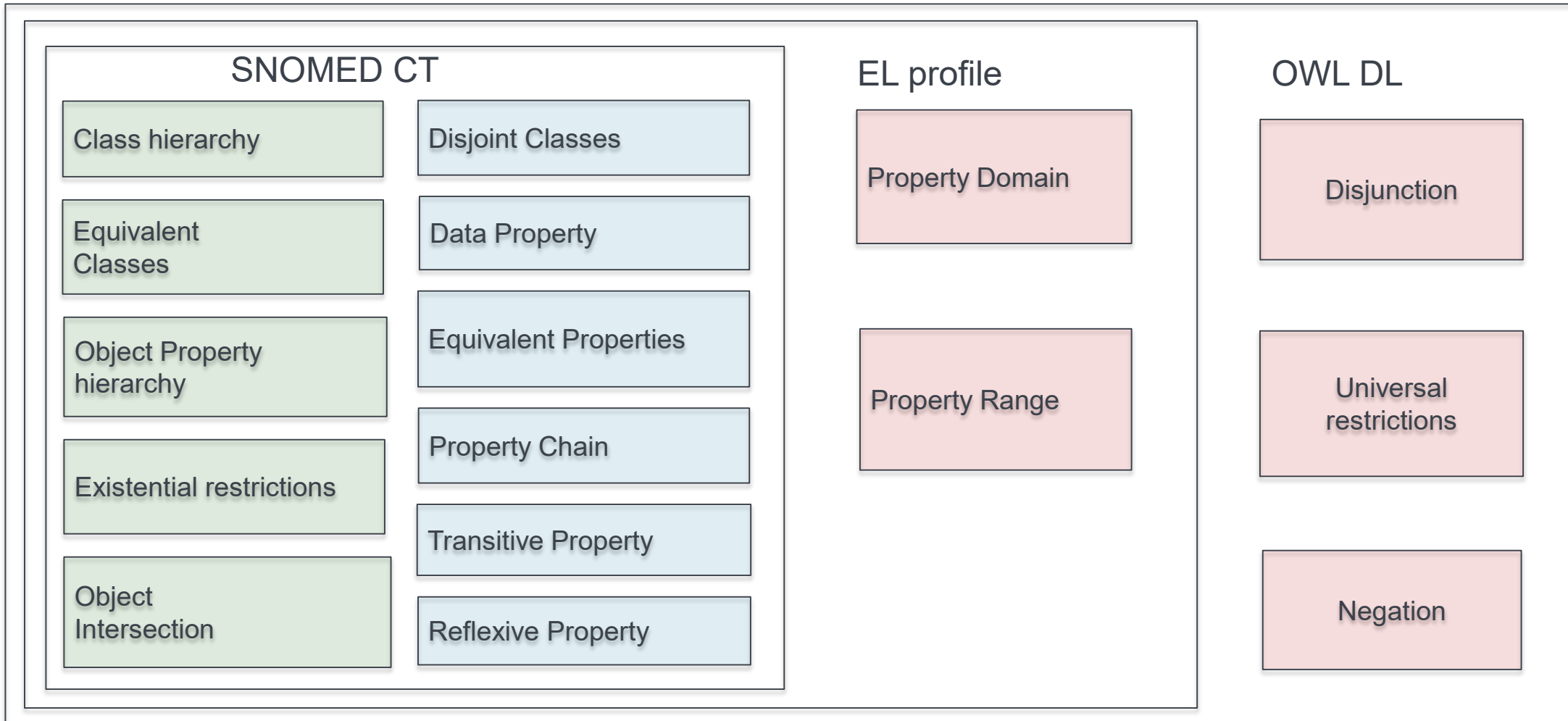
Yongsheng Gao



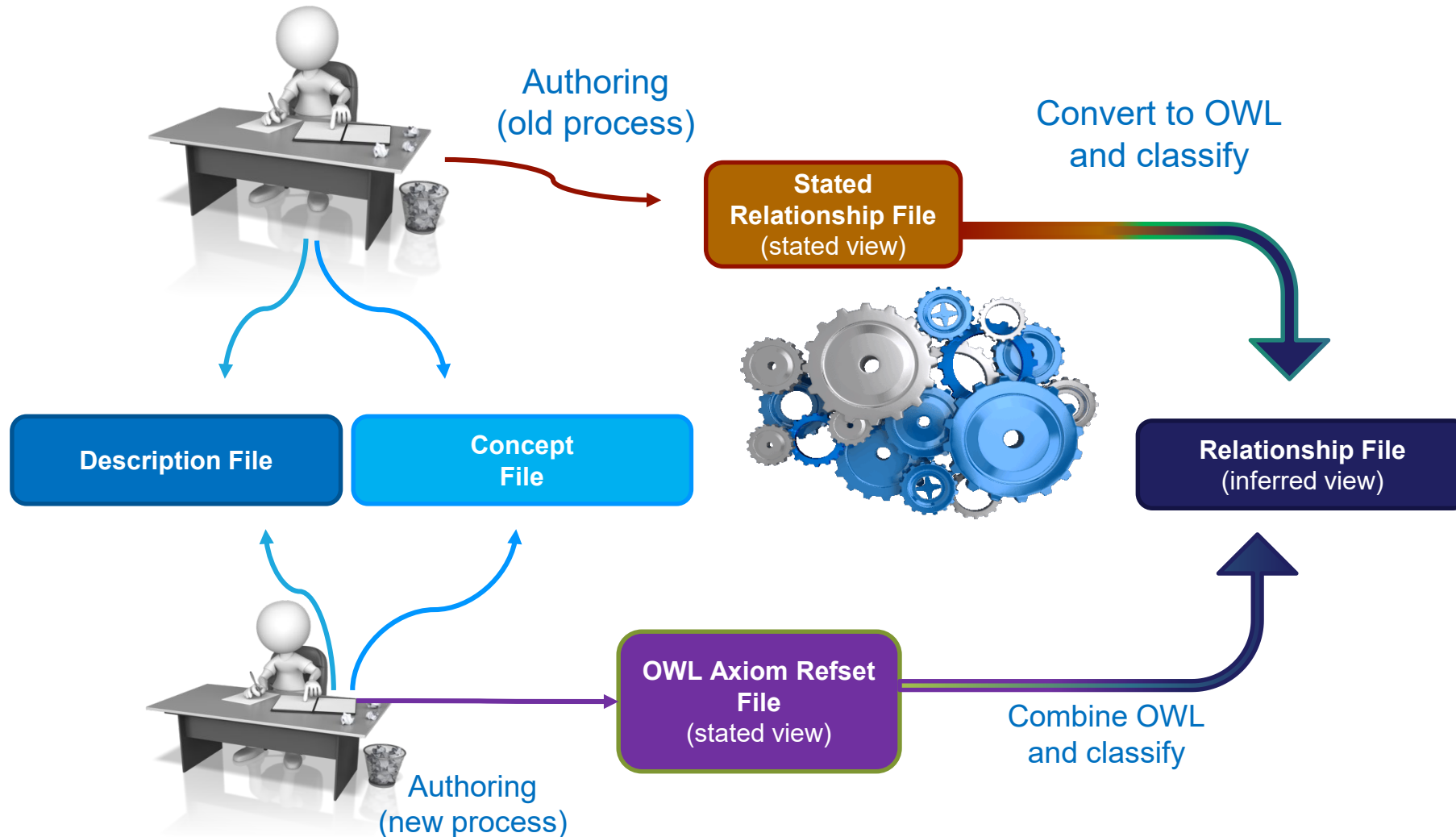
Timeline



SNOMED CT logic profile



Change to authoring process



Release Management

Andrew Atkinson



New Product Releases

- ❖ Global Patient Set (GPS)
 - Launched September 2019
 - Freeset so Published in a *New format*
- ❖ SNOMED to MEDRA map
 - ALPHA release planned for 2020
- ❖ SNOMED to Orphanet map
 - ALPHA release planned for 2020
- ❖ Upcoming new Managed Service Releases:
 - Estonia
 - New Zealand
 - Switzerland



❖ ***Feedback requested on all new products!***

International Edition Release updates

- ❖ Migration to OWL
 - Completed in July 2019 International Edition
 - Positive results
 - Ongoing process - Continued feedback requested
- ❖ Snowstorm in Production
 - Deployed in the International Authoring Platform now
 - First release due January 2020 International Edition

Confirmed Product Release Schedule

- ❖ After significant analysis and collaboration, we have migrated the Derivative products to an Annual Release schedule.
- ❖ We have also re-aligned the various Product releases to best suite the various dependencies and user requirements.
- ❖ The following Product Release Schedule has therefore now been implemented, and will continue from 2019 onwards:

January Derivative Product Release schedule

- ❖ January cycle (will be dependent upon the January International Edition):
 - ◆ SNOMED to GMDN map
 - ◆ ICNP Diagnoses + ICNP Interventions
 - ◆ SNOMED to MEDRA map (*planned new product*)
 - ◆ SNOMED to Orphanet map (*planned new product*)

July Derivative Product Release schedule

- ❖ July cycle (will be dependent upon the July International Edition):
 - ◆ SNOMED to GMDN map
 - ◆ Global Patient Set (GPS)
 - ◆ DICOM freeset
 - ◆ IHE freeset
 - ◆ IPS freeset
 - ◆ ERA/EDTA freeset
 - ◆ GP/FP refset
 - ◆ Nursing Activities refset
 - ◆ Nursing Health Issues refset
 - ◆ Odontogram refset
 - ◆ General Dentistry refset

Terminology Release Advisory Group

Tuesday 29th October 2019 – 10:30 to 12:30 + 13:30 to 17:00 (Grand Residence 101)

- ❖ Wide variety of agenda items, including:
 - Concrete domains
 - Frequent Delivery
 - Release package formats
- ❖ Please feel free to read and attend if anything interests you:
 - <https://confluence.ihtsdotools.org/pages/viewpage.action?pageId=96804891>

Observers welcome as always!

Operations

Terance Shird



Technical Operations



Hosting Migration Project

- 78 Systems Migrated
- Significant progress towards Serverless Architecture

Server Operating System Upgrade

- 82 Servers Migrated
- Only few systems remaining

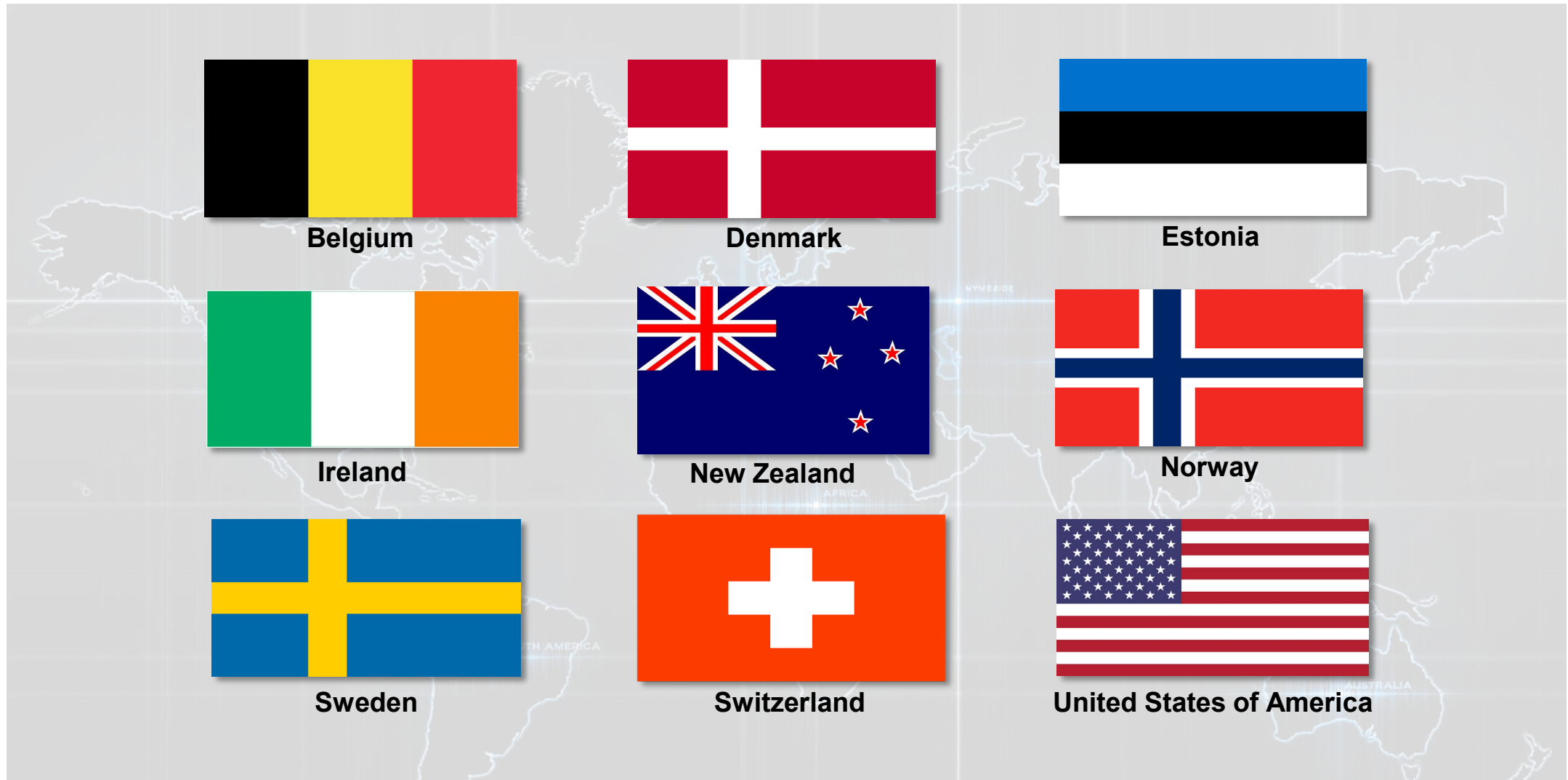


Tooling Update

- OWL
- Snowstorm in Production
 - Public Browser
 - International Authoring Platform
 - PHIR Integration
- Autoscaling
 - Classification
 - Reporting
- Various software improvements
 - Refset & Translation Tooling



Members Managed Service



Members Managed Service Sub-Group

Monday 28 October – 09:00 to 12:30

- Content Specific Language Reference Sets
- UI design for new Bulk Import feature
- Managed Service Specific demo on new Refset & Translation enhancements
- Proof of Concept report on NRC Request Management
- How to validate and QA extensions

Non Managed Service observers welcome

Tooling Users Advisory Group

Wednesday 30 October 2019 – 09:00 to 10:30 & 13:30 to 15:00

- Refset & Translation enhancements Demo
- Authoring/Reporting Platform Demo
- Feedback from recent SNOMED Browser survey
- 2020-25 Roadmap

Observers welcome

Thank you

*Catered break: 10:00 – 10:30
Grand Salon Foyer*

‘information that inspires conversation’