

SNOMED CT January 2017 International Edition - IHTSDO Release notes

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1 Introduction

1.1 Background

SNOMED CT terminology provides a common language that enables a consistent way of indexing, storing, retrieving, and aggregating clinical data across specialties and sites of care.

SNOMED International maintains the SNOMED CT technical design, the content architecture, the SNOMED CT content (includes the concepts table, the descriptions table, the relationships table, a history table, and ICD mappings), and related technical documentation.

1.2 Purpose

This document provides a summarized description of the content changes included in the January 2017 release of SNOMED Clinical Terms[®] (SCT) International Release.

It also includes technical notes detailing the known issues which have been identified. These are content or technical issues where the root cause is understood, and the fix has been discussed and agreed, but has yet to be implemented.

This document is available alongside the January 2017 International Edition release.

1.3 Scope

This document is written for the purpose described above and is not intended to provide details of the technical specifications for SNOMED CT or encompass every change made during the release.

1.4 Audience

The audience includes National Release Centers, WHO-FIC release centers, vendors of electronic health records, terminology developers and managers who wish to have an understanding of changes that have been incorporated into the January 2017 International Edition release.



2 Content Development Activity

2.1 Summary

Continuous quality improvement and enhancement of existing content is ongoing based on requests received via the Content Request System (CRS). The January 2017 International Release has seen a continuation of the work driven by contributions from the Kaiser Permanente Convergent Medical Terminology (CMT), Global Medical Device Nomenclature Agency (GMDNA) and Orphanet to add new content to SNOMED CT. Additionally, member-identified priority projects, have driven enhancements in the anatomy hierarchy, while other project-driven changes have resulted in new content additions and enhancements to existing content detailed below.

2.2 Content Quality Improvement

• In total: 5123 new concepts were authored with an additional 13899 changes made to existing concepts.

SCT Statistics	New concept additions
SNOMED CT Concept (SNOMED RT+CTV3)	5123
Body structure (body structure)	332
Clinical finding (finding)	2880
Environment or geographical location (environment / location)	3
Event (event)	6
Observable entity (observable entity)	153
Organism (organism)	277
Pharmaceutical / biologic product (product)	7
Physical force (physical force)	0
Physical object (physical object)	247
Procedure (procedure)	517
Qualifier value (qualifier value)	68
Record artifact (record artifact)	32
SNOMED CT Model Component (metadata)	21
Situation with explicit context (situation)	154



Social context (social concept)	28
Special concept (special concept)	0
Specimen (specimen)	2
Staging and scales (staging scale)	90
Substance (substance)	305

2.2.1 Anatomy

2.2.1.1 Laterality

Included with this release is the first release of the Lateralizable Body Structure Reference Set as a simple type refset. The refset includes all body structures that can be lateralized. The primary purpose is to support RF2 to RF1 conversion. It can also be used for the MRCM specification for quality assurance. The post-coordination of laterality can be supported by the new refset. It can help with the identification of concepts in hierarchies, e.g. finding/disorder, procedure, situation, which are lateralizable based on their concept modelling.

To support systems that cannot implement post-coordination at the moment, the Editorial Advisory Group (EAG) approved the acceptance of requests for pre-coordination of concepts with laterality.

Pre-coordinated concepts with laterality

This approach can support systems that cannot implement post-coordination at the moment. However, post-coordination is still the recommended approach.

- New lateralized concepts have been added as follows:
 - i. 250+ in anatomy and
 - ii. 400 in disorder and procedure hierarchies

2.2.1.2 Structure/Entire/Part

- The naming conventions for supporting the Structure/Entire/Part (SEP) model have been enhanced to resolve potential ambiguity between structure and entire concepts. All descriptions for Entire concepts must contain the word 'entire'.
 - i. 9,000 + descriptions without 'entire' have been inactivated and
 - ii. 3,600 + new descriptions added to facilitate searching

2.2.2 Clinical finding

- 23 new nutrition and dietetics concepts to support clinical documentation, care planning and research for nutrition.
- 45 new laboratory finding concepts to support microbiology, chemistry and pathology

2.2.3 Convergent Medical Terminologies (CMT)

619 concepts were added for the January 2017 release, updating domains in Cardiology, Ophthalmology and Radiology.



2.2.4 Diagnostic Imaging Procedures

• 10 new concepts, Dual energy computed tomography and body site specific subtype concepts added

2.2.5 Functioning

• Disambiguation of the "Interpretation value (qualifier value)" hierarchy, with correction of approximately 600 findings using this as a target for an attribute

2.2.6 Disorders

2.2.6.1 Orphanet

 As a result of collaboration with Orphanet (http://www.orpha.net/consor/cgi-bin/index.php) 700 new concepts have been created to represent rare diseases in the disorder hierarchy.

2.2.6.2 ICD-11 Harmonization plan

• 1200 ICD-11 concepts added from the Mortality and Morbidity Linearization

2.2.7 LOINC

• 215 new concepts among the substance, Techniques, body structure hierarchies added to support antibody, antigen, DNA and RNA components needed to map to LOINC Parts.

2.2.8 Observables

- Fully modelled more than 150 physiological measurement concepts (body temperature, respiratory rates, heart rates, blood pressure) based on the IHTSDO-979 Vital Signs Observables Inception/Elaboration document.
- Created 10 required, metadata, attribute and range concepts in different hierarchies

2.2.9 Organisms

250 concepts to support microbiology reporting.

2.2.10 Physical objects

• Concepts representing test kits were relocated from the Substance hierarchy to the Physical object hierarchy. Because the meaning of the concept was not changed, the concept IDs were retained. Duplicates were resolved; new FSNs were created.

2.2.11 Procedures

• Dual energy computed tomography and body site specific subtype concepts added.

2.2.12 Social concept



• 10 new concepts, subtypes of 125676002|Person (person)| different types of relatives

2.2.13 Substances

• Concepts representing test kits were relocated from the Substance hierarchy to the Physical object hierarchy. Because the meaning of the concept was not changed, the concept IDs were retained. Duplicates were resolved; new FSNs were created.

2.2.14 Various

• Based on SIRs requests a number of new concepts were added in various hierarchies.



2.3. Internal Quality Improvement

- Over 300 concepts with redundant IS A relationships were revised to remove redundancy
- Combined/compound allergy concepts inactivated as ambiguous
- Drug indicated (situation)| sub-hierarchy reviewed and modeling updated.
- Inactivated disjunctive substance concepts
- Created around 10 required metadata, attribute and range concepts in different hierarchies.



2.4 SNOMED CT derived products

2.4.1 ICD-10 map

The SNOMED CT to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (© World Health organisation 1994) 2010 Version map (SNOMED CT to ICD-10 Map) is included in the SNOMED CT International release as a Baseline. The SNOMED CT to ICD-10 Map was created to support the epidemiological, statistical and administrative reporting needs of IHTSDO member countries and WHO Collaborating Centres.

The SNOMED CT to ICD-10 Map is released in Release Format 2 (RF2) only. It is located in the file der2_iisssccRefset_ExtendedMapFull_INT_20170131.txt, which is in the Map folder under Refset, in each of the three RF2 Release Type folders.

The SNOMED CT to ICD-10 Map is released as Refset 447562003 |ICD-10 complex map reference set (foundation metadata concept)|.

2.4.1.1 Content development activity summary

The map is a directed set of relationships from SNOMED CT source concepts to ICD-10 target classification codes. The SNOMED CT source domains for the MAP are limited to subtypes of 404684003 |clinical finding|, 272379006 |event| and 243796009 |situation with explicit context|. The target classification codes are ICD-10 2010 release.

2.4.1.2 Mapped content for January 2017

The map provided for the January 2017 release has been updated, and now represents a complete map from SNOMED CT International release to ICD-10 2010 version.

• 315 new concepts added

We would welcome feedback on any issues that users of the map may detect when using the map. Issues should be submitted via mapping@ihtsdo.org



3 Technical notes

3.1 Known Issues

Known Issues are content or technical issues where the root cause is understood, and the resolution has been discussed and agreed but has yet to be implemented. This can be due to a number of reasons, from lack of capacity within the current editing cycle, to the risk of impact to the stability of SNOMED CT if the fix were to be deployed at that stage in the Product lifecycle.

For the Snomed CT January 2017 International edition, the following Known Issues were identified, and agreed to be resolved in the next editing cycle (to be published in July 2017):

Кеу	Summary	Description	Р
ISRS-102	The state of the s	There are 2 concepts that after new type of validation have been shown to not have any equivalent ICD-10 maps:	4
	ICD-11 perspective that aren't mapped	ID Preferred Name	
		722302009 Glycogen storage disease type II infantile onset (disorder)	
		722343009 Glycogen storage disease type II late onset (disorder)	
		This was not reported until very late in the January 2017 release cycle. It was therefore discussed with the relevant Stakeholders, and the potential risk of impact involved in implementing a change to the content at this late stage in the release cycle was decided to be far greater than the perceived benefit of adding in just two map records. This will therefore be resolved in the July 2017 editing cycle, in order to preserve the quality of the January 2017 International edition.	

1 issue



3.2 Resolved Issues

Resolved issues are Known Issues which were not fixed as part of the previous release lifecycle, but which have now been resolved in the latest release - in this case the January 2017 International Edition. They can also be issues found during the Alpha and Beta testing of the current release, which were resolved before the final deployment of the associated Member release. Finally they can be issues which were reported or found during the testing phase, but which have been closed without any action taken.

The Resolved Issues for the Snomed CT January 2017 International edition can be found here:

Кеу	Summary	Description	Р	Reporting Entity	Resolved
ISRS-45	Historical relationship types (RF1)	Three retired concepts have a historical relationship of an inappropriate type: 139521000 267174001 700043003	4	UK (UKTC/HSCIC)	2016-Nov-21
		RESOLUTION: IHTSDO Content Team resolved as follows:			
		139521000: Tingling: [sensation] or [has sensation] (finding) now retired as ambiguous 267174001: Tingling: [sensation] or [has sensation] (finding) now retired as amibiguous (both with Possibly equivalent to 274676007 Tingling of skin (finding))			
		The third concept (700043003) was found to be valid, and therefore no action required			
ISRS-46	MOVED_TO status acceptability (RF1)	Ten RF1 descriptions for active concepts are status 10 (MOVED_TO), alongside descriptions with active status: 473038012: Hyperprolinemia type II 473040019: Hyperprolinemia, type II 357693015: Lichen planus pigmentosus 377070012: Joubert syndrome 378213010: Irapa type spondyloepimetaphyseal dysplasia 1787720010: Frontal fibrosing alopecia 473039016: Hyperprolinaemia type II 473043017: Hyperprolinaemia, type II 113698011: Warkany syndrome 187742012: Caroli's disease	4	UK (UKTC/HSCIC)	2016-Nov-21
		RESOLUTION: IHTSDO Content team have inactivated all of the descriptions in question with reason "moved elsewhere"			
ISRS-47	Multiple historical relationships (RF1)	Three concepts in RF1 have more than one historical relationship (except MAY_BE_As, MOVED_TOs OR WAS_As): 79965005 137650007 410068002	4	UK (UKTC/HSCIC)	2016-Nov-21
		RESOLUTION: IHTSDO Content Team remodelled so that the three concepts now have one reason for inactivation and one historical relationship each as appropriate.			
ISRS-53	Verify that earlier decision on retaining a relationship is still valid	As part of the previous editing cycle, a minor issue was found with several relationships, which had targets with different semantic tags to their sources. In discussion with the Content Team at the time, we agreed to fix all but one, which was seen to be an example of the exception to the rule, and therefore a valid relationship to retain:	4	UK (UKTC/HSCIC)	2016-Nov-21
		id effectiveTime active moduleId sourceId destinationId relationshipGroup typeId characteristicTypeId modifierId 6598284022 20160731 1 900000000000207008 718447001 363013003 0 116680003 9000000000011006 90000000000451002			
		RULEID SCTID DETAILS TERMLIST 187 718447001 718447001 (finding): 363013003 (disorder) 718447001: Difficult intubation (finding) - 363013003: Complication of introduction procedure (disorder) 9			
		RESOLUTION: IHTSDO Content Team remodelled this concept and removed the disorder parent.			
ISRS-93	Concept Model violations found in International Alpha release - Issue 1	ADHA ran the alpha package through their validation routines. Technically, it passed – from a content persective there looks like a number of concept model violations.	2	Australia (NEHTA)	2016-Dec-06
	International Alpha release - Issue I	· AFTER(255234002) - only modelled with valid destination concepts 6795991026 Displacement of intraocular lens (disorder) After (attribute) Intraocular lens implant (physical object)		(INCITIA)	
		RESOLUTION: 1 Relationship deleted completely, as it was new to the 20170131 Release cycle, and therefore not previously published.			
ISRS-94	Concept Model violations found in International Alpha release - Issue 2	ADHA ran the alpha package through their validation routines. Technically, it passed – from a content persective there looks like a number of concept model violations		Australia (NEHTA)	2016-Dec-06
		· CAUSATIVE AGENT(246075003) - only modelled with valid destination concepts 6806717028 Megacolon co-occurrent and due to infectious colitis (disorder) Causative agent (attribute) Infectious process (qualifier value)			



		RESOLUTION: 1 Relationship record updated, in order to replace the Causative agent attribute with Pathological process.			
ISRS-95	Concept Model violations found in International Alpha release - Issue 3	ADHA ran the alpha package through their validation routines. Technically, it passed – from a content persective there looks like a number of concept model violations HAS INTERPRETATION(363713009) - only modelled with valid destination concepts 6795824028 Androgen excess caused by drug (finding) Has interpretation (attribute) Androgen level (procedure) 6799904021 Transient neonatal neutropenia co-occurrent and due to neonatal bacterial sepsis (finding) Has interpretation (attribute) Neutrophil count (procedure) 6804767021 Transient neonatal neutropenia due to congenital viral infection (finding) Has interpretation (attribute) Neutrophil count (procedure) RESOLUTION: 3 records removed, plus 3 records added in the Relationship and Stated Relationship Delta files in the Beta release, in order to change the attribute to "Interprets".	2	Australia (NEHTA)	2016-Dec-06
ISRS-96	Concept Model violations found in International Alpha release - Issue 4	ADHA ran the alpha package through their validation routines. Technically, it passed – from a content persective there looks like a number of concept model violations OCCURRENCE(246454002) - only modelled with valid destination concepts 6622179020 Acquired postural plagiocephaly (disorder) Occurrence (attribute) Acquired (qualifier value) 6646405025 Acquired arteriovenous malformation (disorder) Occurrence (attribute) Acquired (qualifier value)	2	Australia (NEHTA)	2016-Dec-06
		RESOLUTION: 2 Relationships deleted completely, as they were new to the 20170131 Release cycle, and therefore not previously published.			
ISRS-97	Concept Model violations found in International Alpha release - Issue 5	ADHA ran the alpha package through their validation routines. Technically, it passed – from a content perspective there looks like a number of concept model violations I've got almost 700 observable entity concepts failing the tests below but observable entity(363787002) only approved defining attributes used COMPONENT(246093002) - only modelled with valid source concepts SCALE TYPE(370132008) - only modelled with valid source concepts TIME ASPECT(370134009) - only modelled with valid source concepts All concepts within hierarchies without information models are primitive 90000000000074008 or are concepts with less than 2 Is a relationships Only concepts within hierarchies with information models are defined 9000000000073002 or are concepts with 2 or more Is a relationships It's likely the concept model here has been updated, and our tests need updating However, I've just checked the most editorial guide and it still lists Observable entity in Table 5 as a "Top-Level Hierarchies That Have No Defining Attributes". RESOLVED: This was traced back to a change that was made to the Concept model for Observables, that was implemented in September 2016. The editorial guide was updated accordingly, but has not been published since the update was made, and so ADHA did not have visibility of the updates. IHTSDO therefore provided them with the information on the new Concept model, and they will update their validation rules accordingly. This is therefore a non-issue and no action is required.	3	Australia (NEHTA)	2016-Dec-21
ISRS-98	RF1 conversion process issue	URTC reported the following issue with the RF1 conversion tool as part of the Alpha feedback process: Greetings. The URTC are having issues with the RF2 to RF1 conversion routine again sadly. Got the new RF2 release down and modified the go.bat script for the new file names (including pointing at the previous RF1 conversion for the '-p' flag) but I'm getting a failure message before a Java exception is thrown (see red line below): E>go.bat How much memory do you have available? [10g]: 2g Do you have a 2nd drive? (eg.E.) Y/N: N Where is the RF2 Archive? [E:\Release\ReleaseBuild\RF2\toRF1\xSnomedCT_International\RF2_Production_20170131T120000.zip]: E>java -jar -Xmx2g RF2\toRF1\converter.jar E:\Release\ReleaseBuild\RF2\toRF1\xSnomedCT_International\RF2_Production_20170131T120000.zip -p Te:\Release\ReleaseBuild\RF2\toRF1\SnomedCT_RF1\Release_INT_20160731_UKTC.zip' Initialising Database Creating database schema 10.61% complete. Extracting RF2 International Edition Data 14.62% complete. Process falled in 1.016 min after completing 63/443 operations. Cleaning up resources 14.67% complete. Exception in thread 'main' java.lang.NullPointerException at java io Reader.sinits-Unknown Source) at java io Reader.sinits-Unknown Source) at org.htsdo.snomed.rf2torf1conversion.ConversionManager.load.lateralityIndicators(ConversionManager.java:641) at org.htsdo.snomed.rf2torf1conversion.ConversionManager.main(ConversionManager.java:186) This looks like a problem extracting the contents of the RF2 alpha release archive, so either operation 63 or 64 is at fault here. Also tried running without the '-p' flag and still get the same error messages. I'm ignoring the null pointer exception for now as the routine never got as far as asking for the location of the laterality file. RESOLUTION: Latest code needed to be used - once this was downloaded and implemented, the issue was resolved	4	UK (UKTC/HSCIC)	2016-Nov-30
ISRS-99	New RVF failure after Alpha fixes applied -	RESOLUTION: Latest code needed to be used - once this was downloaded and implemented, the issue was resolved The following new RVF failure appeared after applying the Alpha feedback fixes that the Content Team implemented:	3	Internal	2016-Dec-06



(IHTSDO) 12 born inactive relationships testCategory: "release-type-validation", assertionUuid: "89ceaf00-79b9-11e1-b0c4-0800200c9a66", assertionText: "All stated relationships inactivated in current release must have been active in the previous release.", queryInMilliSeconds: 4513, failureCount: 12, firstNInstances: { conceptId: 293291000119108, detail: "Stated relationship: id=6620438022 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 5251000119108, detail: "Stated relationship: id=6632688023 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 722541007, detail: "Stated relationship: id=6782796024 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 722925004, detail: "Stated relationship: id=6788810029 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 722926003, detail: "Stated relationship: id=6788816024 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 722945007, detail: "Stated relationship: id=6788881024 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 723017008, detail: "Stated relationship: id=6789097021 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 723067001, detail: "Stated relationship: id=6794014029 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 723067001, detail: "Stated relationship: id=6794015028 is inactive in the current release but no active state found in the previous snapshot." } { conceptId: 723067001, detail: "Stated relationship: id=6794016027 is inactive in the current release but no active state found in the previous snapshot." } extractResultInMillis: 1 RESOLUTION: 12 Relationships deleted completely, as they were new to the 20170131 Release cycle, and therefore not previously published. ISRS-100 New RVF failure after Alpha fixes applied -The following RVF failure was newly added after the Alpha fixes that the Content Team implemented: Internal 2016-Dec-06 (IHTSDO) 1 born inactive concept testCategory: "release-type-validation", assertionUuid: "5f1a51a3-6200-4463-8799-d75998165278", assertionText: "New inactive states follow active states in the CONCEPT snapshot.", gueryInMilliSeconds: 91168, failureCount: 1, firstNInstances: { conceptId: 723067001, detail: "CONCEPT: id=723067001: is inactive but no active state found in the previous release." } extractResultInMillis: 1 RESOLUTION: Concept 723067001 deleted completely, as it was new to the 20170131 Release cycle, and therefore not previously published. ISRS-101 New defect after RVF improvements - 7 The following RVF failure is now reporting 7 Active Descriptions that have Inactivation reasons assigned to them: 2016-Dec-06 Internal Active descriptions with Inactivation (IHTSDO) assertionText: "Active descriptions do not have active inactivation indicators", reasons queryInMilliSeconds: 6970, failureCount: 7, { conceptId: 416097007, detail: "Active description 2546220016 has inactivation reason 90000000000482003" } { conceptId: 416097007, detail: "Active description 2548498010 has inactivation reason 900000000000483008" } { conceptId: 63160006, detail: "Active description 1232434012 has inactivation reason 900000000000485001" }



{ conceptId: 87776000, detail: "Active description 145528018 has inactivation reason 900000000000485001" } { conceptId: 331569003, detail: "Active description 1192521011 has inactivation reason 900000000000485001" } { conceptId: 373870008, detail: "Active description 1229290011 has inactivation reason 900000000000494007" } { conceptId: 193497004, detail: "Active description 2870945014 has inactivation reason 900000000000494007" } Either the Descriptions need to be inactivated accordingly, or the reasons updated/removed as the Descriptions should remain Active. RESOLUTION: 6 Inactivation reasons were inactivated (as they were previously published), and 1 was deleted (as it was new to this release cycle). ISRS-103 RVF Assertion failure: 2016-Dec-06 testCategory: "release-type-validation", Internal eff30fb0-7856-11e1-b0c4-0800200c9a66 assertionUuid: "eff30fb0-7856-11e1-b0c4-0800200c9a66", (IHTSDO) assertionText: "All language refset members inactivated in current snapshot must have been active in the previous release.", queryInMilliSeconds: 67734, failureCount: 8, firstNInstances: [{ conceptId: 399933017, detail: "Language Refset: id=84f34586-23eb-5291-816f-75bbcd42b844 should not have a new inactive state as it was inactive previously." } { conceptId: 381073013, detail: "Language Refset: id=8d7b81e6-835e-5f46-a171-6454938b39f8 should not have a new inactive state as it was inactive previously." } { conceptId: 307312012, detail: "Language Refset: id=91da23e4-2b1f-5979-aaad-b77dd2bbb76a should not have a new inactive state as it was inactive previously." } { conceptId: 242919015, detail: "Language Refset: id=94013256-b116-5ad6-9b38-0e229227c422 should not have a new inactive state as it was inactive previously." } { conceptId: 310405012, detail: "Language Refset: id=a56ef1b5-d399-588d-b0ae-3f4fdaf55b0e should not have a new inactive state as it was inactive previously." } { conceptId: 426584018, detail: "Language Refset: id=0c231168-4187-5a7f-95ea-4d5a726f1b98 should not have a new inactive state as it was inactive previously." } { conceptId: 439646010, detail: "Language Refset: id=42dddfab-30ad-5c9a-b8b3-e68e2fe140d0 should not have a new inactive state as it was inactive previously." } { conceptId: 138360013, detail: "Language Refset: id=6807a544-1002-5ba9-956b-3a596a28cd63 should not have a new inactive state as it was inactive previously." } extractResultInMillis: 0 RESOLUTION: This is just a warning and not an error and so no action is required ISRS-104 RVF Assertion failure: 2016-Dec-06 testCategory: "release-type-validation", Internal 0cc708af-6816-4370-91be-dba8da99d227 (IHTSDO) assertionUuid: "0cc708af-6816-4370-91be-dba8da99d227", assertionText: "There must be actual changes made to previously published descriptions in order for them to appear in the current delta.", queryInMilliSeconds: 337, failureCount: 5, firstNInstances: [{ conceptId: 253903007, detail: "Description: id=378012010 is in the detla file, but no actual changes made since the previous release." } { conceptId: 18620009, detail: "Description: id=1222144014 is in the detla file, but no actual changes made since the previous release." } { conceptId: 444668001, detail: "Description: id=2871143011 is in the detla file, but no actual changes made since the previous release." } { conceptId: 449692007, detail: "Description: id=2912776019 is in the detla file, but no actual changes made since the previous release." } { conceptId: 449691000, detail: "Description: id=2913210014 is in the detla file, but no actual changes made since the previous release." } extractResultInMillis: 1



RESOLUTION: This is just a warning and not an error and so no action is required. ISRS-106 RVF Assertion failure: testCategory: "component-centric-validation,INT", 2016-Dec-06 Internal cc9c5340-84f0-11e1-b0c4-0800200c9a66 assertionUuid: "cc9c5340-84f0-11e1-b0c4-0800200c9a66", (IHTSDO) assertionText: "Calling procedure testing that terms that contain EN-GB language-specific words are in the same GB language refset.", queryInMilliSeconds: 22741, failureCount: 43, firstNInstances: [{ conceptId: 720203009, detail: "DESCRIPTION: id=3319755019: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: computerized" } { conceptId: 722360004, detail: "DESCRIPTION: id=3331690010: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: connection" } { conceptId: 722404009, detail: "DESCRIPTION: id=3331872011: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: disconnection" } { conceptId: 717752005, detail: "DESCRIPTION: id=3310170018: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } { conceptId: 717753000, detail: "DESCRIPTION: id=3310172014: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } { conceptId: 717754006, detail: "DESCRIPTION: id=3310174010: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } { conceptId: 717755007, detail: "DESCRIPTION: id=3310176012: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } { conceptId: 717801000, detail: "DESCRIPTION: id=3310290016: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } { conceptId: 718719001, detail: "DESCRIPTION: id=3313324016: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } { conceptId: 10743881000119104, detail: "DESCRIPTION: id=3317327012: Synonym is prefered in the GB Language refset but refers to a word has en-us spelling: fetal" } extractResultInMillis: 1 RESOLUTION: This is just a warning and not an error and so no action is required. ISRS-107 RVF Assertion failure: 2016-Dec-06 testCategory: "component-centric-validation", Internal c3249e80-84f0-11e1-b0c4-0800200c9a66 assertionUuid: "c3249e80-84f0-11e1-b0c4-0800200c9a66", assertionText: "Calling procedure testing that terms that contain EN-US language-specific words are in the same US language refset.", queryInMilliSeconds: 23263, failureCount: 35, firstNInstances: [{ conceptId: 717319002, detail: "DESCRIPTION: id=3313026013: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: behaviour" } { conceptId: 716591005, detail: "DESCRIPTION: id=3313028014: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: behaviour" } { conceptId: 716702006, detail: "DESCRIPTION: id=3313030011: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: behaviour" } { conceptId: 273774005, detail: "DESCRIPTION: id=3313035018: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: behaviour" } { conceptId: 718889002, detail: "DESCRIPTION: id=3314317011: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: disorganised" } { conceptId: 719026000, detail: "DESCRIPTION: id=3314718016: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: entamoeba" } { conceptId: 720730003, detail: "DESCRIPTION: id=3321898014: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: entamoeba" } { conceptId: 720731004, detail: "DESCRIPTION: id=3321903013: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: entamoeba" }



{ conceptId: 720732006, detail: "DESCRIPTION: id=3321905018: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: entamoeba" } { conceptId: 721032007, detail: "DESCRIPTION: id=3323200014: Synonym is prefered in US Language refset but refers to a word has en-gb spelling: entamoeba" } extractResultInMillis: 1 RESOLUTION: This is just a warning and not an error and so no action is required. ISRS-108 RVF Assertion failure: testCategory: "release-type-validation", Internal 2016-Dec-06 b88b9f46-4c33-4d8e-b9ab-ddb87aef3068 assertionUuid: "b88b9f46-4c33-4d8e-b9ab-ddb87aef3068", (IHTSDO) assertionText: "New inactive states follow active states in the ASSOCIATION REFSET snapshot file.", queryInMilliSeconds: 6681, failureCount: 1, firstNInstances: [{ conceptId: 190741002, detail: "ASSOC RS: id=d150e8f0-6cff-5dca-b7ee-e8e65693e306 should not have a new inactive state as it was inactive previously." } extractResultInMillis: 1 RESOLUTION: This is just a warning and not an error and so no action is required. ISRS-109 RVF Assertion failure: testCategory: "release-type-validation", Internal 2016-Dec-06 a0a0b444-b1c7-4d31-ac45-c44f2e35c5a5 assertionUuid: "a0a0b444-b1c7-4d31-ac45-c44f2e35c5a5", (IHTSDO) assertionText: "There must be actual changes made to previously published language refset components in order for them to appear in the current delta.", gueryInMilliSeconds: 362210, failureCount: 8, firstNInstances: [{ conceptId: 399933017, detail: "Language refset id=84f34586-23eb-5291-816f-75bbcd42b844 is in the detla file, but no actual changes made since the previous release." } { conceptId: 381073013, detail: "Language refset id=8d7b81e6-835e-5f46-a171-6454938b39f8 is in the detla file, but no actual changes made since the previous release." } { conceptId: 307312012, detail: "Language refset id=91da23e4-2b1f-5979-aaad-b77dd2bbb76a is in the detla file, but no actual changes made since the previous release." } { conceptId: 242919015, detail: "Language refset id=94013256-b116-5ad6-9b38-0e229227c422 is in the detla file, but no actual changes made since the previous release." } { conceptId: 310405012, detail: "Language refset id=a56ef1b5-d399-588d-b0ae-3f4fdaf55b0e is in the detla file, but no actual changes made since the previous release." } { conceptId: 426584018, detail: "Language refset id=0c231168-4187-5a7f-95ea-4d5a726f1b98 is in the detla file, but no actual changes made since the previous release." } { conceptId: 439646010, detail: "Language refset id=42dddfab-30ad-5c9a-b8b3-e68e2fe140d0 is in the detla file, but no actual changes made since the previous release." } { conceptId: 138360013, detail: "Language refset id=6807a544-1002-5ba9-956b-3a596a28cd63 is in the detla file, but no actual changes made since the previous release." } extractResultInMillis: 12 RESOLUTION: This is just a warning and not an error and so no action is required ISRS-110 RVF Assertion failure: 2016-Dec-06 testCategory: "release-type-validation", Internal 6dbaed71-f031-4290-b74f-f35561c2e283 assertionUuid: "6dbaed71-f031-4290-b74f-f35561c2e283", (IHTSDO) assertionText: "The ids should be unique across the stated and inferred relationship snapshot files.", queryInMilliSeconds: 10981, failureCount: 3, firstNInstances: [{ conceptId: 425630003, detail: "Relationship: id=3187444026 is duplicated in the stated and inferred relationships" } { conceptId: 425630003, detail: "Relationship: id=3192499027 is duplicated in the stated and inferred relationships" } { conceptId: 425630003, detail: "Relationship: id=3574321020 is duplicated in the stated and inferred relationships" }



ihtsdo					
], extractResultInMillis: 1			
		RESOLUTION: These are known historical records that have been carried through from previous Releases, and have been previously agreed not to be fixed - therefore this is just a warning and not an error and so no action is required.			
ISRS-111	Additional RefsetDescriptor record to be added	The new refset being added to the January 2017 International Edition (723264001 - Lateralizable body structure reference set (foundation metadata concept)) needs a new record added to the International edition refsetDescriptor files.	3	UK (UKTC/HSCIC)	2016-Dec-19
		RESOLUTION: The following refsetDescriptor record has been added accordingly:			
		bbdcc9fc-5bc6-415a-a5ee-c5adfc569bd5 20170131 1 9000000000000207008 900000000000456007 723264001 449608002 9000000000000461009 0			
ISRS-112	RefsetDescriptor record requested to be inactivated	The UKTC have requested that IHTSDO inactivate the refsetDescriptor record for the "Non-human simple reference set (foundation metadata concept)" refset (447564002). This is because the refset itself has been inactivated, and so they have requested that the associated rows in reference set descriptor reference set should also be inactive.	4	UK (UKTC/HSCIC)	2016-Dec-19
		RESOLUTION: Although the refset is inactive the structure of the refset is not, and so it is the correct state for the refsetDescriptor record to remain active. No action is therefore required.			
ISRS-113	Active concept has no IS_A supertype within its module	Six concepts are in the 'SNOMED CT model component module (core metadata concept)' module but the relationships in question here are in the 'SNOMED CT core module (core metadata concept)' module. The associated descriptions are all in the same module as the concept entries.	4	UK (UKTC/HSCIC)	2016-Dec-21
		718291003 718292005 718497002			
		715502004 715515008 9000000000441003			
		RESOLUTION: 5 Inferred relationships have been inactivated, and 5 new ones activated with the correct module ID, in order to align the Concept moduleID with the related Relationship moduleID's.			
		The final concept (90000000000441003) is the Model Component concept, and therefore has its Relationship in the Core module and not the Model Component module for a valid reason, as follows:			
		The 2 root modules (Core and Model Component) were setup in the first place so that the Core was dependent on the Model Component module This meant that you could distribute the Model Component module standalone, but not the Core module Therefore all of the components of this Concept reside correctly in the Model Component module However, the Relationship cannot estide inside the Model Component module is then distributed standalone the relationship would be a broken one, as the			
		concept it relates to would be inside the Core module and not part of the Model Component module			
TODO 444		The only action taken for this concept, therefore, was to update the comments in the code to ensure that this valid state is retained going forward.			0046 5 40
ISRS-114	Concept that is currently Fully defined, needs to be primitive.	5251000119108 Acquired arteriovenous malformation (disorder) incorrectly uses 255396000 Acquired (qualifier value) as the value of Occurrence	3	UK (UKTC/HSCIC)	2016-Dec-19
		IHTSDO removed attribute value pair of Occurrence - Acquired.			
		Concept therefore needs to be changed to primitive.			
		The related concept, 402847002 Acquired arteriovenous malformation of the skin (disorder) was also identified to have an invalid attribute.			
		RESOLUTION: Both concepts have been remodelled accordingly.			
ISRS-115	3 inactivated concepts erroneously moved to the Core module	Three retired metadata concepts were erroneously moved into the Core module:	3	UK (UKTC/HSCIC)	2016-Dec-19
		CONCEPTID CONCEPTSTATUS FULLYSPECIFIEDNAME 447564002 1 Non-human simple reference set			
		(foundation metadata concept) 449609005 1 ICD-10 map category reference set			
		(foundation metadata concept) 700043003 5 Example problem list concepts reference			
		set (foundation metadata concept)			
		These metadata concepts were transferred into the core module when they became inactive, so the RF1 conversion tool thinks they're relevant. The RF1 conversion filters out concepts with a metadata semantic tag, but only if they're also in the model module.			
		RESOLUTION: ModuleID for all three concepts assigned to the Model Component module (90000000000012004).			
ISRS-116	RF1 issue - root cause in RF2 content	Duplicate rows found in the component history table for a description entry:	3	UK	2016-Dec-19
		2546220016 20170131 1 2 DESCRIPTIONSTATUS CHANGE		(UKTC/HSCIC)	



2546220016 20170131 1 8 DESCRIPTIONSTATUS CHANGE

This relates to a concept that there were problems with last release, 416097007 'Pubic bone somatic dysfunction (finding)'. The descriptions attached to this inactive concept are status 2 and 3 after conversion respectively, where we would expect both to be status 8. It appears as though one of the descriptions has attempted a partial fix as one of the duplicate entries shows a description going to status 8. Everything regarding this concept in RF2 looks fine on quick inspection.

RESOLUTION: Already fixed in the Beta release (ISRS-49) - re-raised by UKTC because they're still testing the Alpha release.

ISRS-117 Active "WAS A" historical associations that have not been updated when the target concepts are inactivated

There are 21 Historical Associations that are active, but which have been found to have inactive concepts for their targetComponentID:

3

Internal (IHTSDO) 2016-Dec-21

id effectivetime active moduleid refsetid referencedcomponentid targetcomponentid 817ddce9-894d-54b3-84ee-4a94cee2acb5 20100131 1 900000000000207008 90000000000528000 193369009 399625000 946f56dc-684d-5cad-99c7-6f3f5e202a73 20100131 1 900000000000207008 9000000000528000 204273002 204270004 a7d5339d-d51d-5a1f-865c-0bce6af6da90 20100131 1 900000000000207008 9000000000528000 138107003 81877007 $acfbb45c-alb1-5b08-b8a9-1e6e0f0a2ca0\ 20100131\ 1\ 900000000000207008\ 90000000000528000\ 137020000\ 265987007$ ad545d56-19c0-5a57-bed4-d0a946d24d79 20100131 1 90000000000207008 9000000000528000 193371009 399625000 b463afa5-7d24-5281-b6a8-ec21b4b0bf9b 20100131 1 900000000000207008 90000000000528000 149532003 274033006 d59ef95e-e87e-5411-bff7-f35c7c4d72ad 20100131 1 9000000000000207008 9000000000528000 266937006 81877007 f356bb7a-0fda-5ccc-ba8b-4453fae7f824 20100131 1 900000000000207008 9000000000528000 159721006 265987007 f53222ee-9de3-553a-b192-a85b744a5bac 20100131 1 900000000000000000000000528000 193366002 399625000 01c6981e-075b-511f-b1a3-2a332bdbcaa8 20100131 1 900000000000207008 90000000000528000 287840006 274033006 08e4cfd5-01ba-5ea9-a05c-4aa5ffd8450b 20100131 1 900000000000207008 9000000000528000 186296003 398599000 31c7aadc-1628-5597-8d9a-d7bead9a9661 20100131 1 900000000000207008 90000000000528000 154851005 88339003 3afd517b-1eda-5904-9866-9530e19f3af8 20100131 1 900000000000207008 9000000000528000 136834007 159564001 4f8b9c16-070a-5f49-b9fe-fe9c9c8fe98c 20100131 1 90000000000207008 90000000000528000 267609006 399625000 53202a69-5329-5c06-8242-db94c348892e 20100131 1 900000000000207008 9000000000528000 139355001 267052005 55b96987-32b8-5db6-96bf-d2b282179841 20100131 1 900000000000207008 9000000000528000 162079002 267052005 641f1731-de51-558e-b27b-f135674fa28f 20100131 1 90000000000207008 90000000000528000 193355009 399625000 $6b3085fd-51d1-5fd6-a23e-19300773fb02\ 20100131\ 1\ 900000000000207008\ 90000000000528000\ 193368001\ 399625000$ 75b0053f-210f-5c35-a8ed-53ef0ea33f90 20100131 1 900000000000207008 9000000000528000 159566004 159564001 $7b85085f - 496b - 5163 - 93d3 - 77679cba2d78 \ 20100131 \ 1 \ 900000000000207008 \ 90000000000528000 \ 286932008 \ 88339003$

RESOLUTION: It was discovered that 2 of the above source concepts actually had 2 concepts referenced, and so 23 associationReference records were updated in order to replace the inactive targetComponentID's with the relevant active concepts. In addition to this, the system then automatically inactivated 12 additional associationReference records, where the source concept was also associated to "Limited components" ([900000000000486000]limited]):

ISRS-118 Role Group numbers updated

The fixes made to 2 concepts during the Alpha/Beta feedback periods (as part of ISRS-114), have resulted in the usual changes to Role Group numbers. These are a well-known artefact of the classier write-back, and do not change the Role Group themselves, they just result in churn in the Role Group numbers. As this field is mutable, and has no semantic value whatsoever, these updates have no impact other than to update the Relationship ID's and the number used to define each Role Group, and are therefore acceptable changes

4)

Internal (IHTSDO)

Internal

(IHTSDO)

2016-Dec-21

2016-Dec-22

RESOLUTION: No action is therefore required.

ISRS-119 RVF Assertion failure: 5f1a51a3-6200-4463-8799-d75998165278

The following RVF failure was newly added after the Beta fixes that the Content Team implemented:

"assertionUuid": "5f1a51a3-6200-4463-8799-d75998165278"

"assertionText": "New inactive states follow active states in the CONCEPT snapshot.",

"queryInMilliSeconds": 58954,

"failureCount": 3,

"firstNInstances":

{ "conceptId": 447564002, "detail": "CONCEPT: id=447564002 should not have a new inactive state as it was inactive previously." }

{ "conceptId": 449609005, "detail": "CONCEPT: id=449609005 should not have a new inactive state as it was inactive previously." }

, { "conceptId": 700043003, "detail": "CONCEPT: id=700043003 should not have a new inactive state as it was inactive previously," }



J, "extractResultInMillis": 13164

RESOLUTION: This is just a warning as a result of the moduleID's being changed for 3 inactive concepts as part of the Beta feedback fixes in ISRS-115 - therefore this is a non issue and no action is required.

29 issues



3.3 Technical updates

3.3.1 RF1 package

In line with the RF1 deprecation plan approved by the General Assembly in October 2015, SNOMED International has now removed the RF1 files from the International Edition release package.

There is a new open sourced program available from SNOMED International (under an Apache v2 open source license) that allows for an algorithmic derivation of RF1 files from the authoritative RF2 distribution. This is available from Github here: https://github.com/IHTSDO/rf2-to-rf1-conversion

3.3.2 RF2 package naming convention

The naming convention of the RF2 package zip file has been improved, in order to reflect the version of the release package, within the existing Product name/Release Date version standard, as follows:

SnomedCT_[Product][Format(optional)]_[Release Status]_[Release date/time]

This format includes all of the additional information required to quickly and uniquely identify the correct package to use at any one time, without adversely impacting any of the related policies (such as the Snomed CT URI standard, etc).

Therefore, at any one time, the latest version of any product package can be identified by the fact that it has a Release Status equal to "Production", and a Release date and time later than all others of the same Product and Release Status.

The name of the January 2017 International edition package file is therefore:

SnomedCT_InternationalRF2_Production_20170131T120000.zip

3.3.3 Release Notes location

The Release Notes file has been removed from the zip file containing the main release package, and is now available as a separate file to be downloaded from the same MLDS version as the International Release package. This is available from the "January 2017 v1.0" version in the "SNOMED CT International Edition" project, which can be found on the "IHTSDO Releases" page in MLDS, accessed here:

https://mlds.ihtsdotools.org/#/ihtsdoReleases

3.3.4 Resource File location

The Stated Relationship to OWL resource file has been removed from the zip file containing the main release package, and is now available as a separate file to be downloaded from the same MLDS version as the International Release package. This is available from the "January 2017 v1.0" version in the "SNOMED CT International Edition" project, which can be found on the "IHTSDO Releases" page in MLDS, accessed here:

https://mlds.ihtsdotools.org/#/ihtsdoReleases

3.3.5 New refset added to the RF2 package

This refset is a "Lateralizable body structure reference set" (SCTID: 723264001), and has the following attributes:

• It is a Simple Refset



- It can be used as a normal RF2 refset
- It only shows concepts which have not yet been lateralised in SNOMED CT but which could be in future, and is not a complete set of Laterality concepts
- It will also be used by the RF1 conversion package in order to use the laterality content in the conversion to RF1
- It has been added to the existing Simple Refset file in the International edition package (der2_Refset_SimpleSnapshot_INT_20170131.txt)

3.3.6 RF2 package format

For future reference, the RF2 package convention dictates that it contains all relevant files, regardless of whether or not there is content to be included in each particular release.

Therefore, the package contains a mixture of files which contain both header rows and content data, and also files that are intentionally left blank (including only a header record). The reason that these files are not removed from the package is to draw a clear distinction between

- 1. ...files that have been deprecated (and therefore removed from the package completely), due to the content no longer being relevant to RF2 in this or future releases, and
- 2. ...files that just happen to contain no data in this particular release (and are therefore included in the package but left blank, with only a header record), but are still relevant to RF2, and could therefore potentially contain data in future releases.

This allows users to easily distinguish between files that have purposefully been removed or not, as otherwise if files in option 2 above were left out of the package it could be interpreted as an error, rather than an intentional lack of content in that release.

3.3.7 Early visibility of impending change in the July 2017 International edition

In 2009 the General Assembly decided that from April 26 2017 SNOMED International would no longer license the use of SNOMED antecedent works. See http://www.ihtsdo.org/snomed-ct/what-is-snomed-ct/previous-versions-of-snomed-ct.

SNOMED International again strongly urges users of these antecedent versions to migrate to SNOMED CT as soon as possible. If anyone wishes to use the RT refset purely for migration purposes, SNOMED International will therefore host a static, non-maintained version (based on the January 2017 content) in a package to be hosted here in MLDS: https://mlds.ihtsdotools.org/#/viewReleases/viewRelease/5376