

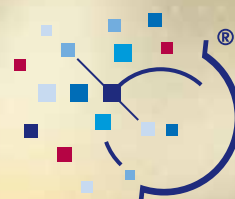
ACTIVITY REPORT 2010

Broadening the use of SNOMED CT®
within and across countries and professions

IHTSDO

Global efforts for a common
health terminology

■ INTERNATIONAL HEALTH TERMINOLOGY
STANDARDS DEVELOPMENT ORGANISATION



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Letter from Our CEO

■ The 2010 Annual Report reflects not only how vibrant and active the IHTSDO community of practice is, but also how it works within a clear strategic direction set by the General Assembly but crafted through many people's efforts. Professing a focus on implementation is easy, but putting it into action entails a continued effort on all of our parts.

With implementation in mind we are celebrating three major themes in the 2010 Annual Report: Kaiser Permanente's donation of its Convergent Medical Terminology, the translation effort and post tsunami Sri Lanka's implementation efforts. The examples provided illustrate how greatly the various perspectives differ, but also how they jointly comprise the complex SNOMED CT implementation jigsaw.

The IHTSDO is exceptionally lucky with the people who participate in it for the general benefit of others through SNOMED CT and its derivatives. This year's Committee reports demonstrate great depth and expertise, while the two awards given out recognize both excellence and commitment. The people involved are the reason the IHTSDO is so successful. Your implementation efforts are deeply appreciated, but we need more help and involvement if SNOMED CT is to be put into every practice, setting and encounter in which electronic records are used, so please bring colleagues along and get them involved!

The 2010 National Reports demonstrate that implementation is crucially linked to organizational commitment by governments, their agencies and the industry. The positive steps being taken by IHTSDO Members are creating a marketplace for industry to invest and innovate, which is tremendously encouraging.

Finally the IHTSDO has to demonstrate good financial management, especially with the current global financial situation. Our overall financial situation is sound and the annual accounts show a small surplus, thus providing the organization with reserves to meet its business continuity goals.

Thank you once again for your efforts.

Sincerely



Jan-Eric Slot
CEO IHTSDO



Martin Severs
Chair IHTSDO
Management Board

IHTSDO Strategic Direction to 2015

■ During 2010, the IHTSDO developed and published the IHTSDO Strategic Direction to 2015, with excellent consultation and feedback from its Standing Committees and Member Forum.

The stated vision of the organization is confirmed, based on the Articles of Association, with a clear purpose statement:

“Broaden the use of SNOMED CT within and across health IT systems, countries and professions”,

which is further refined across two clear pre-requisites:

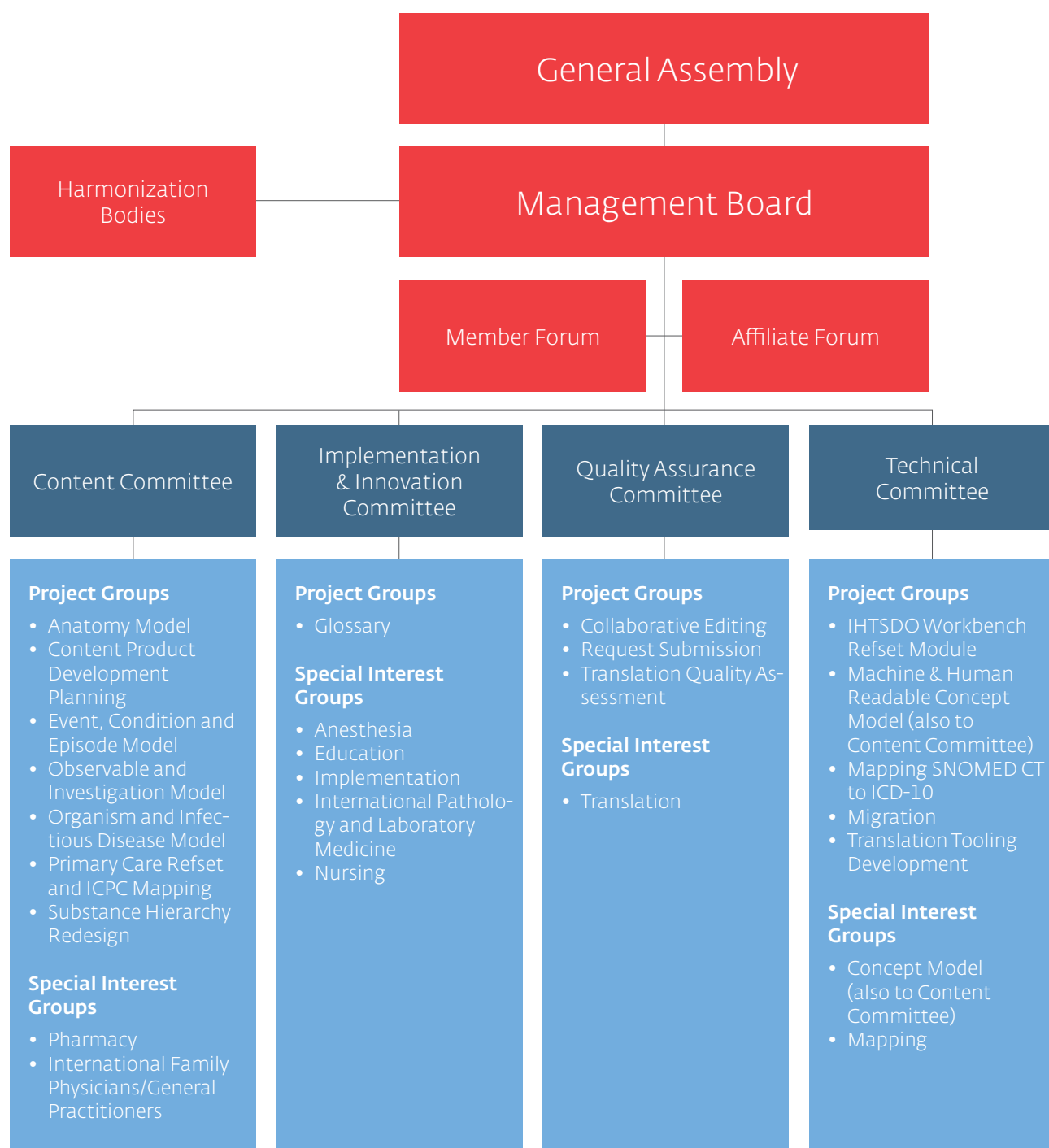
1. A set of technologies (guides, examples, software, etc.) that make SNOMED CT and its relationships to other essential components of the computerized patient record easier to implement for its various users.
2. A sound and valued primary product (SNOMED CT) and a range of secondary products, e.g. maps and guides.

These pre-requisites are the basis for the organization's five strategic priorities to 2015:

1. Making it easier to use SNOMED CT for priority use cases.
2. Producing robust terminology standards that are “fit for purpose” for priority use cases.
3. Facilitating use of SNOMED CT with other international standards.
4. Strengthening responsiveness and clinical governance of SNOMED CT.
5. Sustaining and strengthening the organizational foundations of IHTSDO.

Strategic initiatives to 2012 are set out with clearly defined, agreed-upon stretch goals as well as accountability targets for the priorities. This whole approach has been built into the work planning for 2011, which means work plan items correspond to an agreed priority, helping the organization move forward in the direction it has set out and leaving space for reviewing and making adjustments as 2015 approaches.

Governance and Advisory Bodies



Informal bodies that are not part of the formal governance structure do not appear here.

Content Report 2010

■ In 2010, the key program activities for the Content area were: (1) regular content maintenance and release; (2) facilitating implementation by clarifying the scope of SNOMED CT and enhancing documentation; and (3) ongoing design and restructuring of key areas of content, in particular the creation of new models for observables and pharmacy content. This report highlights only some of the content activities undertaken during the year.


Regular Content Maintenance and Release

Two releases of SNOMED CT were produced as a result of work done in 2010 (the July 2010 and January 2011 releases). There was a steady and increasing level of requests for additions to the terminology, resulting in an increase of 2,563 active concepts and 6,740 active terms (descriptions). For the same period, 550 concepts were retired (because they were duplicate, ambiguous or for other reasons) or moved to extensions – by far the lowest number of concepts retired in a calendar year to date. Translation (the Spanish Edition) and cross-mappings (ICD-9-CM and ICD-O Topography) were also maintained and released. In addition, the Stated Relationships and translation to OWL Web Ontology Language were distributed with positive response by the semantic web and computer science community.

Facilitating Implementation

Clarifying the scope: The Precoordination Roadmap Project gathered broad participation from a wide spectrum of individuals and groups interested in the issue of pre- and post-coordination. Extensive discussions helped clarify certain issues and provided input to the next phase of planning for content development in 2011. The Content Committee developed the Content Product Development Plan, which lists several key use cases to be used to guide further development and quality review of the content, so that suitability for use can be evaluated, tested and improved.

Enhancing the documentation: Significant progress was made in consolidating and integrating SNOMED CT documentation. The content-related documentation was brought together in a single consolidated Editorial Guide, which is coordinated with technical documentation in the Technical Implementation Guide. Sections of the guides were tagged according to the level (Standard or Guidance) and approval status (Draft, Review or Current).



Ongoing Design and Restructuring of Content Areas

Observables: As a culmination of several years of work, IHTSDO approved the Editorial Guide and Model as a Draft for Trial Use for Observable Entities and Evaluation Procedures (Laboratory). The aim of this project overall is to improve the consistency and usability of SNOMED CT for reporting the results of tests and observations in all result reporting domains, including e.g. laboratory, physical examination, radiography and pulmonary function testing. Initial testing

of the model for non-laboratory observables was also performed, with results indicating very good generalization to the broader scope beyond laboratory tests.

Pharmacy: Progress was made towards a standard for the boundary, scope and model for pharmaceutical and biologic products. The Pharmacy Special Interest Group led this work with significant input from Member countries. A series of documents reached Draft for Trial Use status in early 2011.

Quality Report 2010

■ The IHTSDO Quality Assurance Committee has met monthly throughout the year, with small task and finish groups working as required to deliver specific committee work-plan activities. Early in the year, a set of quality metrics were defined for all aspects of e.g. content development, editing, documentation and mapping as a starting point for application of the IHTSDO Quality Framework across content development activities. This led to reviewing a Subset of SNOMED CT Content from a clinical perspective and to providing feedback on content, editing guidance and the actual methodology. Work will be undertaken in 2011 to respond to this feedback and the methodology updated for use in future clinical reviews.

The aforementioned work builds on the IHTSDO Quality Framework now being applied to activities at all levels of the organization, e.g. regarding content, organizationally and technically. As its usage increases, examples are to be shared for reuse to facilitate easier application.

The IHTSDO process “Development, Approval, Maintenance and Review of IHTSDO Technical Reports, Guidelines and Standards” has been introduced and is being applied across IHTSDO activity, subsequently bringing rigor, quality and a clear direction to the activities in question. The introduction and application of this process has led to identification of the need for a fully documented content development process which will be developed in 2011.

2010 saw updates to the IHTSDO Request Submission process as a result of a 2009 user survey. These updates will also feed into new future processes when the IHTSDO Workbench is fully adopted. The committee began feeding into the quality components of the IHTSDO Workbench and will continue to be active in this area.

The IHTSDO Quality Assurance Committee has also committed to producing an Annual Quality Report in 2011, which will initially summarize the status of quality in the IHTSDO up to and including 2010. Subsequently, the annual report will include the specific results of quality initiatives and related activities.



Translation SIG April 2010

Implementation and Innovation Report 2010

Executive Summary

■ In 2010, the IHTSDO Implementation Action Plan was approved by the Management Board and General Assembly at the April IHTSDO Conference in Copenhagen. Subsequently, the 2010 Work Plan for Implementation and Innovation (I&I) was developed. All the items in the 2010 Work Plan were accomplished. In 2011, the following Special Interest Groups (SIGs) changed their reporting to the I&I Committee:

- Nursing
- Implementation
- Anesthesia
- International Pathology and Laboratory Medicine (IPaLM)
- Education

This report includes SIG activity reports.

2010 Work Plan

1. Strategy for sharing resources that facilitate implementation: Regular webinars were organized by the Education SIG on various topics. Member Exchange on Collabnet was established for sharing implementation resources.
2. Affiliate Forum: A forum was established on the IHTSDO website, providing links to the appropriate areas on the IHTSDO website. Affiliate Forum items were added to the "How Do I" section of the IHTSDO website and a process was developed for identifying holders of valid Affiliate Licenses.
3. Action Plan to accelerate implementation of SNOMED CT: The Action Plan was completed and approved by the Management Board and General Assembly.


4. Improved understanding of who uses SNOMED CT and how: A web survey was completed and the results were reported to the Management Board and published on the IHTSDO website.
5. Updated technical implementation guidance: A Technical Implementation Guide (TIG) was produced in July 2010 with a January 2011 update.

Implementation and Innovation Committee

The I&I Committee met monthly. During the first quarter of 2010, they worked on the IHTSDO Implementation Action Plan, which was subsequently approved by the Management Board and General Assembly in April 2010. In the second and third quarters, the I&I Committee worked on the 2011 Work Plan and also provided guidance to the SIGs on projects such as the SNOMED CT Implementer's Curriculum and IHTSDO Glossary. During this period, the I&I Committee also actively worked on developing a survey on who uses SNOMED CT and how. The survey was conducted in the last quarter of 2010, at which point the I&I Committee also worked on SNOMED CT case studies and business use cases.

Nursing Special Interest Group

In 2010, the Nursing SIG worked on revising the Nursing Occupations and Roles to be reported to the Content Committee. The SIG also worked on a Nursing Problem/Diagnosis subset. There were discussions with the International Council of Nurses on collaboration and harmonization



activities that resulted in collaborative projects. One such project is the Canadian Health Outcomes for Better Information and International Classification for Nursing Practice subset.

Implementation Special Interest Group

In 2010, the Implementation SIG facilitated a series of webinars on implementing post-coordination, which resulted in starting a project designed to document the challenges identified. The Implementation SIG also facilitated and coordinated discussions on the adoption of RF2, reviewed the SNOMED CT TIG and worked collaboratively with the Education SIG on the Implementer's Curriculum.

Anesthesia Special Interest Group

In 2010, the Anesthesia SIG focused on the ISO 11073 10101/SNOMED CT harmonization and requirements from the Integrating Healthcare Enterprise Rosetta ventilator nomenclature project. It also worked on terminology related to assessment scales not yet incorporated in SNOMED CT.

International Pathology and Laboratory Medicine Special Interest Group

In 2011, the IPaLM SIG worked on establishing collaboration with international societies with expertise on molecular pathology and transplantation pathology. A preliminary gap analysis was also started to assess where SNOMED CT terms are needed.

Education Special Interest Group

In 2011 the Education SIG worked on the proposal and Work Plan for an IHTSDO Glossary and definition of terms. The SIG also worked on the Implementer's Curriculum and defined the metadata elements for creating an inventory of education materials.

Technical Report 2010

■ The bulk of the work on IHTSDO Workbench development necessary to author and release SNOMED CT International took place in 2010. Development work on the Translation Module also started in January 2010, with interim releases produced quarterly. The Technical Implementation Guide (TIG) was also revamped to support the migration of SNOMED CT releases from RF1 to RF2 format. The TIG was converted as well to Darwin Information Typing Architecture (DITA) format to modularize it and make it releasable in different formats, including PDF and HTML.

Hosting and Support services for the IHTSDO Workbench were renegotiated, resulting in significant savings, and this new service was put into operation on January 1, 2011.

During 2010, RF2 completed its consultation process and was approved as a standard by the IHTSDO Management Board. Towards the end of 2010, a project was also started to develop implementation tooling for RF2, in particular to assist with the conversion of RF2 releases back to RF1 format. To better support promotion of content to parent extensions and to the international release, a change request started a consultation process to enable SNOMED CT identifiers to be preserved on promotion of components.

A proposal to enable representation of numbers in SNOMED CT using concrete domains, specifically in support of pharmacy, was started in 2010. Alongside this, a standard diagramming notation for representation of SNOMED CT concepts was also proposed.

Harmonization work continued with Health Level Seven International (HL7). The Vocabulary Working Group is investigating use of the IHTSDO Workbench to maintain HL7's vocabulary. The organizations also explored better ways to liaise on request submissions from HL7 for new IHTSDO concepts. The IHTSDO Management Board agreed to support Common Terminology Services v2 (CTS2), which is being developed as a joint effort between HL7 and the Object Management Group (OMG). An agreement was also put in place with the International Performance Computing and Communications Conference (IPCCC), enabling them to contribute to the development of cardiac content within SNOMED CT.

Kaiser Permanente Donates Convergent Medical Terminology

■ In September 2010, Kaiser Permanente (KP) donated its Convergent Medical Terminology (CMT) and tooling to the International Healthcare Terminology Standards Development Organisation (IHTSDO).

CMT is the terminology used in Kaiser's electronic health record systems to document thousands of patient encounters every day. CMT is a crucial hierarchical interface terminology that ties together several underlying vocabularies most notably, but not solely, SNOMED CT which improves the usability of SNOMED CT and the other vocabularies.

The donation consists of terminology content already developed, a set of tools to help create and manage terminology and processes to control the quality of terminology that is developed. CMT also includes mappings to classifications and standard vocabularies, including SNOMED CT.

Donated CMT Components: "Technology Transfer"

- CMT SNOMED Extensions: Concepts modeled as extensions of SNOMED CT hierarchy using a SNOMED CT Identifier with a KP namespace and following SNOMED CT editing guidelines.
- CMT SNOMED CT Derivatives: Consists of (a) SNOMED CT Content from the Core or KP Extension together with (b) either (i) additional properties and/or attributes about such SNOMED CT content, and/or (ii) any set of relationships between that SNOMED CT

Content and content of other nomenclatures, classifications or knowledge structures, including Cross-Maps and Subsets/Refsets.

- CMT SNOMED CT Tooling: KP modifications/enhancements to IHTSDO Workbench to enable it to support KP business functions and terminology model or SNOMED CT in general.
- CMT Non-SNOMED CT Extensions: Concepts modeled as extensions of terminologies other than SNOMED CT, such as LOINC.
- CMT Non-SNOMED CT Derivatives: Work consisting of Non-SNOMED CT Terminologies together with additional properties and/or attributes about such content, i.e. additional descriptions such as "clinician friendly name" or "patient friendly name".

Implication of Donation

Over the next three years, the incorporation of CMT content into the international release of SNOMED CT will provide more comprehensive coverage of the content needed by implementers. At the same time, the availability of the interface terms used by Kaiser carefully linked to the reference terminology will make it easier for vendors and users to provide standards-based solutions for the implementation of electronic health record systems. Finally, the donation of tooling is expected to make it easier for organizations to create and maintain their own specific terminology extensions well integrated with national and international standards, thus reducing costs and improving the quality of support for the careful recording and use of health information.



Left to right: Aneesh Chopra, Kathleen Sebelius, David Blumenthal, Martin Severs, Betsy Humphreys

Four Years' Experience with SNOMED CT in Sri Lanka

■ Early Experience with Electronic Patient Records in Developing Countries

When electronic medical records were first introduced into several Sri Lankan hospitals in the early 2000s, they concentrated on admitted, rather than ambulant, patients. It was thought that admissions would be easier to record as there were fewer of them than out-patients and the staff in the wards would have more time than those in the out-patients department (OPD) to enter the patient data. Hundreds of patients, in some hospitals thousands, throng the OPD section every day and jostle to be seen by a handful of doctors.

In fact, when an international non-governmental organization (NGO) installed the multi-disease surveillance (MDS) patient record systems in 27 tsunami-affected hospitals on the east coast from 2006 to 2009, most of them used the computers to record admitted patients. This was encouraged by the requirement to supply quarterly diagnostic returns to the statistical authorities in Colombo. As these are coded using the International Classification of Diseases, 10th Edition (ICD-10), it seemed logical to have the clinical staff enter the diagnosis directly using the ICD terminology. Unfortunately, the terminology in the ICD is so far removed from the clinical terms generally used by doctors and nurses that they could rarely find the correct term; hence, the objective of the project, to have an updated record of the patient immediately available, looked like it was failing.

A representative example of this difficulty in the use of ICD by clinicians is the simple term 'cut ankle'. There are 332 terms in the ICD-10 that contain 'ankle' but none of them contains 'cut'. The best match is S91.0 (Open wound of ankle), not an obvious choice for someone whose mother tongue is not English. Unlike SNOMED CT, there is no 'Normal delivery', the usual clinical term here, in the ICD. Perhaps O80.9 (Single spontaneous delivery, unspecified) comes closest. Medical records staff can deal with such arcane terms, but the doctors and nurses were quite bemused and found excuses to avoid using the computers.

How Staff Were Motivated to Use the Computer

Just as it seemed the project would founder from lack of staff support, we heard about SNOMED CT from a doctor who had trained in the UK. A request to the British National Health System led to the granting of a free humanitarian license to use SNOMED CT in tsunami-affected areas and a surprising bonus was that a link from SNOMED CT to ICD-10 was being developed in the UK. What happened in the years that followed is now well-known in this part of the world. The hospital staff changed their attitude completely when nearly every term they entered came up with a hit and ICD coding by the hospital staff became a thing of the past for the 27 Sri Lankan hospitals. The medical records staff, released from the quarterly drudge of manually listing all diagnoses, could concentrate on other tasks such as training staff in good documentation and computer use.

With such obvious benefits from using a comprehensive and non-bureaucratic terminology for the records of admitted patients, the staff of several hospitals asked if the out-patients records could also be computerized. There was, however, widespread scepticism that a doctor who saw a hundred patients in a morning would ever consider using a computer, especially as many of the staff had never used one before. But when it became clear that choosing terms from drop-down lists was many times faster than handwriting them, and into the bargain the record was easily readable on the return visit of the patient, the use of the computer in the OPD spread and out of the 27 aforementioned hospitals nearly a quarter of them are now paperless.

Subsequent Developments

Predictably, a stream of visitors started checking on the unbelievable claim that in rural Sri Lanka, far removed from the capital, a patient could attend the busy ambulant department of the Trincomalee General Hospital, be seen by a doctor without pen or paper, pick up medications from a similarly paperless dispensary and upon returning the next day see another doctor who was quite familiar with their case. It was not long before other provinces looked into the possibility of computerizing their medical records and already three more hospitals in the middle of the country now run electronic patient record (ePR) systems (similarly paperless in OPD) with a handful more in the pipeline.

In December 2010, the government agency charged with introducing e-governance in Sri Lanka, the Information and Communications Technology Agency (ICTA), commissioned a re-write of the MDS software as a free, open-source version that could be distributed and used without any licensing charges throughout the country (named MDSFoss, which stands for Free and Open Source version of the MDS database). Rapid progress was made on this development and in April 2011 the first beta test-version was introduced into a base hospital in Mawanella, near Kandy, with four others planned. If these pilots run successfully, they may be extended to other provinces soon.

In order for the new software to take advantage of the look-up capabilities of SNOMED CT, an application was made to the IHTSDO to include SNOMED CT in this open-source version to be used throughout the whole country and a free Affiliate License was approved in April of this year, a week before the hospital pilot was started. It is hoped that this will be the precursor of Sri Lanka adopting SNOMED CT as a national standard and becoming an Ordinary Member of IHTSDO.

SNOMED CT?


With government hospitals in South Asia unable to afford high-cost hardware (a server for a 500-bed hospital should cost less than EUR 1000), the software had to be skillfully written if Google-like speeds for look-ups were to be obtained. Performance was improved and costs were minimized by running all the computers under Linux with an open-source database engine, LAMP (Linux, Apache web-server, MySQL and PHP), on the server in each hospital.

The SNOMED CT terms are grouped into various concepts, allowing the enormous database to be conveniently partitioned for use by different types of look-up. For example, to add more detail to the main complaint in outpatients, 'finding' concepts are appropriate, while 'event' concepts can enlarge on the circumstances of a trauma and the past history takes advantage of 'situation' concepts. While working diagnoses can be drawn from 'finding' concepts as well as 'disorder' concepts, the final diagnoses draw entirely on 'disorder' concepts to make them as specific as possible. The official requirement to code and group discharge diagnoses under the ICD-10 makes it necessary to show users which 'disorder' concepts are mapped in order to make this automatic. As time goes on, however, the proportion of 'disorder' concepts mapped to ICD is increasing, and in the future such a choice by users may not be necessary.

There are other concepts built into SNOMED CT, including 'procedures' (used for coding surgical and anesthetic interventions as well as for treatments in the wards and the OPD). The 'physical force' and 'social context' concepts are planned to be used in the future for the more detailed records kept in specialist clinics.

The look-ups initially took advantage of the contextual indexes built into Caché, a proprietary database from Intersystems Corporation. The open-source version uses similar techniques available in MySQL. Both text and code are stored in the patient database for rapid access to the language terms on screens and in reports while supporting the possible later use of the rich hierarchy and the modifiers that are associated with the SNOMED CT codes.

In keeping with our general philosophy, we started off by using SNOMED CT in a highly simplified way in order not to overwhelm hospital staff initially. As electronic patient recording becomes more sophisticated in this part of the world in the years to come, the real power of the SNOMED CT records stored in the patient databases will be available for applications such as medical auditing, statistical analysis, research and perhaps even artificial intelligence.



Main Benefits from Using SNOMED CT

We must avoid making exaggerated claims for the ePR systems now running in 30 hospitals. They are far from the comprehensive clinical records found in hospitals like the Peter Bent Brigham Hospital in Boston. In developing countries, such comprehensive records are rarely kept, even with the current paper-based manual methodologies. One of the principles followed in the development of the MDS software was that existing manual health records should be copied as closely as possible and the temptation to make them more comprehensive should be resisted.

Only the data that were already being recorded manually were included and the output forms had the same information as currently written on official governmental health forms. The visual availability of even this simple record when patients return, however, was a revolution for the hospital doctors who had never imagined it as a possibility. They are now firmly wedded to the system and complain bitterly if an electric storm trips the main switches to the OPD and screens freeze for even five minutes.

It is reasonable to say that without a database as comprehensive and as well structured as SNOMED CT, even this simple achievement would have been impossible.

Translation Plans and Activities

Swedish

■ In June 2010, the Swedish NRC finally reached one of its primary goals, translating the main part of SNOMED CT into Swedish. At that point, around 275,000 preferred terms had been translated, proofread and reviewed in a well-defined process.

Sweden joined the IHTSDO in 2007, and in October that year the translation project, which involved around 15 translators/proofreaders, 20 reviewers, 7 editorial board members and a number of subject matter experts, took off. Over a period of two and a half years, around 10,000 terms were translated, reviewed and approved each month. Since June 2010 the work has continued. With every new release of SNOMED CT, there will be newly added concepts that will need to be translated, and this will be a continuous process for the Swedish NRC. Another ongoing project is the task of trying to find explanations for concepts that have been extremely difficult to translate and to report all unsolvable problems to the IHTSDO using the Request Submission System. By reporting such "impossible cases", concepts that are incorrect, not clear enough or out of date can be traced and edited, also in the core version of SNOMED CT, which means that the quality of some of the more ambiguous content can be improved.

The next step will be to identify suitable pilot projects which will result in use cases and more concrete examples of how SNOMED CT can be implemented and used in Swedish health and social care. This is a task that has already been started by the NRC as the interest in SNOMED CT as a part of the Swedish strategy for eHealth is growing and there is a definite need to show what can be done and how.

By May 2011, the number of issued Swedish affiliate licenses grew to 120. In March 2010, the Swedish versions of SNOMED CT were distributed to users for the first time, but for browsing only. However, in October 2011, SNOMED CT – in the new format – is planned to be released for actual implementation in EHR systems.

Translation Plans and Activities

French Canadian

■ The French Canadian Extension of SNOMED CT developed by Canada Health Infoway from February 2008 to May 2009 contains 35,220 current, active concepts. The first translation phase, completed on May 31, 2009 and based on the January 2008 Release of SNOMED CT, produced 32,531 concepts. The selected concepts to be translated came from jurisdictional implementation project priorities and a defined systematic translation approach (levels 2-5 of most hierarchies). A team of about 27 people was involved in this phase, with a budget of USD 2.5 million.

Subsequently completed on August 10, 2009, a second, shorter phase was undertaken to update the translations to align them with new content contained in the January 2009 release. During this phase 2,689 concepts were added to the French Canadian Extension.

Subsequent to the translation effort in 2009, we provide updated data files semiannually converted for the CliniClue Xplore browser for each international release. These files allow coupling of the French Canadian language files to the latest international content.

2010 Lifetime Achievement Award – Roger Côté

■ The IHTSDO's Lifetime Achievement Award recognizes giants in the terminology world. In October 2010 at the IHTSDO Conference in Toronto, Canada, the first ever Lifetime Achievement Award was presented to Roger Côté, MD, Msc, DSc, FRSC Professor Emeritus.

For more than 30 years, Dr. Côté played a leading role in the development from SNOP to SNOMED CT. In 1971, he was appointed to the College of American Pathologists Nomenclature and Classification of Disease Committee. He became chairman of the committee in 1973 and led the first edition of SNOMED CT in 1976 – SNOMED CT 1. He was editor in chief for SNOMED CT from 1973 until 1997.

In 1999, the Yearbook of Medical Informatics cited his paper, "Côté RA: The SNOP-SNOMED CT concept: Evolution towards common medical nomenclature and classification. Pathologist 1979; 31:383-389" as one of 17 papers regarded as major contributions to the development of medical informatics.

The output of the above-mentioned committee was formidable and essential to the existence of IHTSDO today. Progressive versions of SNOMED CT were produced and, in 1993, SNOMED CT 3 became SNOMED CT International, the first edition available on CD-ROM. The committee promoted specialist editions of SNOMED CT in dermatology (SNODERM) in 1978, surgical pathology in 1980, pediatrics in 1983 and veterinary medicine (SNOVET) in 1984.

The committee promoted the translation of SNOMED CT into several languages. Always insistent on accuracy and detail, Dr. Côté himself led the French translation of SNOMED CT from 1971 to 2008, his office responsible for the translation of more than 130,000 terms. At the time of his retirement, Dr. Côté agreed to transfer the rights of this translation for further development in France.

In 1996, Dr. Côté had an audience with the Pope and SNOMED CT was received into the Vatican Library.

Dr. Côté retired from his post as pathologist at the Université de Sherbrooke Hospital in 1992 but continued to work on SNOMED CT daily until early 2008. People from all over the world came to visit his office, some fortunate enough to share a cigar with the professor. He received the honor of Professor Emeritus from the Université de Sherbrooke in 2005 and also holds an honorary doctorate from the University of Victoria, British Columbia.

In 2004, Dr. Côté published the 194-page "The evolution of SNOP to SNOMED CT International: A 30 year history", a fascinating account of the individual and collective effort and the milestones behind the colossal achievement SNOMED CT has become.



Commitment to Ethical Principles

Dr. Côté has displayed the ethical principles of a giant in the field. Clear even in his early publications, his vision was the improvement of care. Throughout the development of SNOMED CT, he pursued smooth and close collaboration with many stakeholder organizations. Furthermore, he sought to democratize SNOMED CT through numerous translations as well as various specializations of its use. His approach to the dissemination of knowledge about SNOMED CT with regular new editions and electronic formats is also witness to his preoccupation that SNOMED CT should be used widely and for the benefit of the patient.

2010 Award for Excellence – Gwen Smith

■ The annual IHTSDO Award for Excellence is given for outstanding contributions to the improvement of SNOMED CT and/or its successful implementation in any aspect of health and social care. Gwen Smith's active involvement in IHTSDO, her outstanding leadership skills and her obvious passion for delivering quality products and services exemplify the qualities the IHTSDO would like to promote and reward. This made her an exceptionally deserving recipient of the 2010 IHTSDO Award for Excellence.

Gwen leads the technical team for Data Standards and Products in Connecting for Health and has been a key player in developing the UK Terminology Centre's (UKTC) technical infrastructure. As a member of the UKTC Governance Board and a senior manager of the UKTC, her patient but firm leadership has been instrumental in the establishment of the UKTC as a leading IHTSDO Release Center. She manages to merge a strong technical capability with superb people management skills.

Gwen has been a key leader in progressing the IHTSDO Tooling agenda, playing a large part in the successful accelerated procurement of the terminology Workbench. She has been a prominent member of the IHTSDO Technical Committee since its inception and chairs several of the groups that report to it. Gwen, as one of the founding members and the UK representative, has played an important role in the establishment of the Members Forum. She has also put considerable effort into disseminating informa-

tion on all of the issues on the maintenance of a National Extension to representatives of other Members.

Gwen operates well beyond expectations, both in her national role and with regard to her international commitments. In addition to her technical knowledge, she has a sound understanding of SNOMED CT and believes that it is a truly international initiative. She has organized, for example meetings with international colleagues in the UK, supporting not just IHTSDO Members but also prospective members. Clearly, the IHTSDO is highly indebted to Gwen for the progress it has made over the last two years.



National Reports



Australia



National Activities

The National Clinical Terminology & Information Service (NCTIS) is the group within the National e-Health Transition Authority (NEHTA) that performs the National Release Centre functions for Australia. It is responsible for the production and release of the Australian national release – SNOMED CT-AU along with the national medicines extension – Australian Medicines Terminology (AMT). SNOMED CT-AU is released twice yearly (May & November) and is Release Format 2 (RF2) compliant. AMT is released monthly.

Implementation Plans and Activities

During 2010, the NCTIS worked alongside a number of vendors to implement the AMT within their products. This has seen these products released into various clinical settings and has been a significant step forward.

NEHTA supports the Australian government in its commitment to enable all Australians to have the option to sign up for a personally controlled eHealth record (PCEHR) from July 2012. The design will be based on a number of Clinical Document Archive (CDA) interoperability specifications, including Health Summaries, Referrals and Discharge Summaries. The NCTIS also undertakes the Clinical Information modeling work to develop and release the various interoperability specifications. A significant activity during 2010–2011 was the development of a range of SNOMED CT-AU and AMT Reference Sets for binding into these information model specifications. Future releases will see the devel-

opment of additional Reference Sets to support these specifications. During 2011 and 2012 these will be implemented by a range of software vendors, including GP clinical systems. The NCTIS will be heavily involved in supporting these vendors with their implementation activities.

Affiliate Licensees and Activities

Australia currently has 408 affiliate licensees.

	Current Representatives
General Assembly	Bettina McMahon
Management Board	David Bunker
Member Forum	Dion McMurtrie
National Release Center	National e-Health Transition Authority (NEHTA)
	www.nehta.gov.au

Canada



National Activities

The Canada Health Infoway Standards Collaborative (SC) functions as the central coordinating point for health information standards in Canada. As such, the SC hosts the Health Level Seven International (HL7) Canada Constituency, the IHTSDO Canadian Constituency and the ISO/TC215 Canadian Constituency. Leveraging this harmonized model enables stakeholders to access a variety of standards and specifications, including SNOMED CT, DICOM, LOINC, etc., as well as HL7. Additionally, the SC also provides domestic support with development, maintenance, conformance and implementation of the standards.

SNOMED CT Education

Canada continued to provide introductory and advanced SNOMED CT course offerings for target audiences. Additionally, a free online SNOMED CT orientation course was launched in 2010 to support increased awareness and interest.

Education and training services are currently customizing education tutorial material to reflect the pan-Canadian experience and enrich the experience of our students. Accessible education offerings such as eLearning and webcasts are also being developed for the convenience of our clients.

Implementation Plans and Activities

Canada has had a number of activities leveraging SNOMED CT. The following are examples of the activities our domestic stakeholders are currently carrying out in Canada:

- A Palliative Care pilot project exploring the creation of a Palliative Care terminology subset, a step-by-step SNOMED CT encoding methodology and the perceived value of SNOMED CT for clinicians.
- A cancer surgical synoptic reporting project: Templates developed by tumor site and using SNOMED CT subsets.
- A national Cancer Staging initiative sponsored by the Canadian Partnership Against Cancer to enhance and implement Pathology Cancer Checklists across Canada.

Affiliate Licensees and Activities

A range of development initiatives by Canada of tactical approaches as part of a long-term strategy to move SNOMED CT implementation forward in Canada by:

- Identifying and developing guidance documents to make it easier for implementers. Topics covered include, e.g. translation, subsets, extensions, workbench and clinical information.
- Enhancing knowledge management among implementers by supporting the sharing of information and lessons learned.
- Planning to initiate demonstrator projects to drive strategic SNOMED CT implementation and operational plans.

Current Representatives

General Assembly	Dennis Giokas
Management Board	Shelagh Maloney
Member Forum	Margie Kennedy, Linda Parisien
National Release Center	Canada Health Infoway www.infoway-inforoute.ca

Cyprus



National Activities

In 2010, SNOMED CT was used within the National Pathology Department for malignant and benign tumors and for selected diseases such as nephritis, gastritis, lymphadenitis.

Implementation Plans and Activities

Cyprus believes that SNOMED CT is the future and is striving to be more active in 2011.

Affiliate Licensees and Activities

The Histopathology Department of Nicosia General Hospital holds a Member license and is a user in Cyprus.

Current Representatives

General Assembly	Ioanna Zouvani
Member Forum	Ioanna Zouvani
National Release Center	Ministry of Health www.moh.gov.cy

Denmark



National Activities

In 2010, Denmark tested the Workbench in collaboration with IHTSDO, Sweden and Canada.

An allergy and cross-allergy alert proof-of-concept project testing decision support for medication has been carried out successfully. The project shows that checking for allergy towards selected products by using a web service that connects hospital and GP IT systems with a central knowledge base is possible.

Denmark hosted a national terminology workshop designed to present, discuss and share issues related to health IT, including impact of reference model choice, terminology binding, the use of national archetypes in Sweden, monitoring quality in intensive care using SNOMED CT and national standards in Norway.

The Danish National Release Centre (NRC) distributes both the international and the Danish (SNOMED CT-DK) versions of the IHTSDO semi-annual releases. The Danish National Release Centre also models new concepts on demand for the Danish Extension.

Implementation Plans and Activities

The Danish implementation activities are currently based on minor pilot projects. At present the NRC has three ongoing projects:

- Daintel II monitors quality in intensive care and is assessing whether or not Diagnosis Related Group payment is possible using

SNOMED CT. The option of doing a full-scale project on the development of Danish medical terminology is being explored.

- MiBa is a microbiological database interested in using SNOMED CT as a reference terminology.
- Region North Jutland is a consultancy for an EHR implementation project using SNOMED CT instead of local codes. Post-coordinated expressions are an area of special interest.

Translation Plans and Activities

Denmark continues to translate new releases. In connection with the above implementation activities, specific areas (medical concepts (products and substances) and microbiological terms (microorganisms: bacteria, vira, fungi and parasites)) will be reviewed and edited. Synonyms will be added and assigned based on a clinical review of preferred terms and fully specified names.

Affiliate Licensees and Activities

There are currently 31 affiliate licensees comprising vendors, universities, Ph.D. students and individuals. Denmark held two meetings with affiliates in 2010.

	Current Representatives
General Assembly	Otto Larsen
Management Board	Lene Vistisen
Member Forum	Palle Gerry Petersen
National Release Center	National Board of Health www.sst.dk/snomedct

Estonia



National Activities

The Estonian NRC currently has four employees. In 2010, in addition to three meetings held for vendors to introduce IHTSDO, SNOMED CT and terminology work, several introductions were presented to healthcare providers and other users. The Estonian NRC collaborates with the Estonian Hospital Union and the Software Technology and Applications Competence Centre.

Implementation Plans and Activities

The two biggest users of SNOMED CT are in Estonian hospitals and they lead local projects, one of which is at Tartu University Hospital and involves the pathology set. Implementing a common terminology within the national eHealth program with pathology as a first priority is an important main concern.

Subsets have not been developed yet, but pilot projects have already been discussed with family physician associations. Pilot projects will be launched in 2011-2015 on sets on objective findings and sets of complaints using the Software Technology and Applications Competence Centre.

Translation Plans and Activities

Estonia currently has no plan to fully translate SNOMED CT. Translations are produced by affiliates. In 2011, the Estonian NRC will validate concepts used by affiliates. At this point, approximately 4,000 concepts have been translated and are being used in various systems. A definitive analysis of the need to fully translate

SNOMED CT into Estonian has not been carried out. The national eHealth system uses untranslated SNOMED CT codes.

Affiliate Licensees and Activities

Twelve affiliate licensees have been issued.

	Current Representatives
General Assembly	Piret Simmo
Member Forum	Piret Simmo
National Release Center	Estonian eHealth Foundation www.e-tervis.ee

Lithuania



National Activities

The national investment project (2008-2010) for the development of a national SNOMED CT technology platform, including translation of 50,000 concepts, has been stalled due to lack of funding. The project is expected to restart in 2012. The activities have mainly focused on participation in development of the translation module of the Workbench and analysis of implementation priorities and examples.

Implementation Plans and Activities

No new implementations have been carried out in 2010. A set of national eHealth projects are set for 2012. The main implementation priorities are likely to be: problem lists, primary care, patient discharge summaries, pathology/laboratory tests and end-stage renal disease for the Transplant Registry.

Translation Plans and Activities

The national translation project is also expected to restart in 2012. The key priority for 2010 was participation in the development of the IHTSDO Translation Tool with a pilot low-scale translation option using the Tool. The IHTSDO Workbench Translation Tool development team has been provided with the Lithuanian Java Stemmer for the LUCENE search engine. Attempts have been made to apply the Translation Tool to translate the SNOMED CT concepts used in the eHealth interoperability project Smart Open Services for European Patients (epSOS).

Affiliate Licensees and Activities

Fifteen affiliate licenses have been issued to individuals, vendors, universities and medical institutions.

Current Representatives

General Assembly	Normantas Ducinskas
Management Board	Arvydas Laurinavičius
Member Forum	Danielius Algirdas Ralys and Mindaugas Butkus
National Release Center	National Centre of Pathology www.vpc.lt

The Netherlands



National Activities

In 2010, a national project team worked on heightening awareness of SNOMED CT and the significance of standardization in addition to introducing SNOMED CT in the Netherlands. Members of this project team are representatives of the National IT Institute for Healthcare (Nictiz), the department of Medical Informatics at the University of Amsterdam and the Royal Dutch Association for the Advancement of Pharmacy.

Eight introductory courses were held for health professionals, IT professionals, vendors and administrators. A conference focused on local, national and international issues was also organized to highlight the different aspects of standardization and the use of SNOMED CT.

Implementation Plans and Activities

A variety of activities took place in 2010, for instance, a prototype terminology server was developed and usage and usability options for the terminology server were further scrutinized. In addition, awareness activities, introduction courses, expert courses and a conference were held. The development of first versions of datasets and subsets in collaboration with medical professional organizations was carried out. Efforts were also made to increase familiarity with possible useful tooling for SNOMED CT and getting IT vendors more involved in this process.

Translation Plans and Activities

Currently, the Netherlands does not intend to translate the SNOMED CT concepts; however, a stepwise implementation approach used in the Netherlands will be employed.

Affiliate Licensees and Activities

Twenty-one organizations are SNOMED CT affiliate licensees.

Current Representatives	
General Assembly	Johanan van Diermen
Management Board	John van Beek
Member Forum	Jos Baptist
National Release Center	National IT Institute for Healthcare (Nictiz) www.nictiz.nl

New Zealand



National Activities

The New Zealand Universal List of Medicines (NZULM) has been released for evaluation prior to its general release. In 2010, the main focus has been on strategic long-term planning to implement SNOMED CT in other new health IT projects currently underway.

Implementation Plans and Activities

In addition to being used by our affiliate license holders in the NZULM, SNOMED CT is being used as underlying codes for a primary care data dictionary; for primary/secondary e-referral and e-discharges (still in the planning stages); for data validation in various health IT systems; and as a resource for education and database design for academic purposes.

Affiliate Licensees and Activities

There were 43 affiliate licensees as of December 31, 2010.

	Current Representatives
General Assembly	Stewart Jessamine
Management Board	Kathy Farndon and Ted Cizadlo
Member Forum	Tracy Thompson and Christine Fowler
National Release Center	New Zealand Ministry of Health www.nzhis.govt.nz

Singapore



National Activities

Singapore is establishing a National Electronic Health Record (NEHR) as part of a clinically-driven national IT program and SNOMED CT is part of the solution. To address the challenges NEHR has faced in the pursuit of semantic interoperability, Singapore has established a clinically-driven National Standards Programme (NSP).

An integral part of the NSP is the establishment of the NRC, whose operational processes are being streamlined. A Singapore Drug Dictionary (SDD) is being developed and is expected to be released as part of the Singapore Extension of SNOMED CT dependent on the completion of the IHTSDO pharmacy redesign project. National subsets have also been released for diagnoses for the acute care sector and with primary care and subacute care to follow within the next year.

Implementation Plans and Activities

As part of Singapore's pragmatic approach to harmonizing relevant standards, the Singapore Logical Information Model (LIM) has been designed based on existing standards (ISO 13606-1, ISO 21090 and SNOMED CT) to enable the exchange of healthcare information between different healthcare providers. Currently our main focus is on the semantic interoperability of diagnosis and medication data across the different healthcare sectors using SNOMED CT International Release supported by the Singapore Extension. Some high-level-use cases for SNOMED CT in Singapore are:

- Reference Terminology: Diagnosis codes captured in the NEHR solution use SNOMED CT as the reference terminology and the SDD will be made available as an Extension of SNOMED CT.
- Interoperability: The Singapore LIM's logical representation allows SNOMED CT to be used with an Information Model (ISO 13606-1), as part of a specification designed to facilitate data interoperability.
- Subsets: Exploration of the possibility of creating SNOMED CT diagnosis subsets for specialties like primary care, emergency medicine, dermatology, laboratory and radiology orders and medication related information and procedures.
- Interface Terminology: Exploration of the possibility of using SNOMED CT descriptions as the interface terms in some of the solutions being evaluated.

Affiliate Licensees and Activities

There are 11 affiliate licensees in Singapore. Most institutions are in the exploratory stage.

	Current Representatives
General Assembly	Sarah Muttitt
Member Forum	Colleen Brooks and Reymond Wilaisono
National Release Center	MOH Holdings Pte Ltd www.mohh.com.sg

Slovak Republic



National Activities

The National Health Information Center (NHIC) became a full member of IHTSDO in late 2009 and two of our representatives attended the IHTSDO conference in Copenhagen in 2010.

The adoption of SNOMED CT in the Slovak Republic has focused on the creation of a joint terminological base designed to meet the needs of the Slovak healthcare system. Time has also been spent reviewing SNOMED CT material.

Implementation Plans and Activities

Slovakia is purposefully working towards the use of SNOMED CT for the standardization of the Patient Summary content within our national eHealth Record System.

In a reorganization stage, the NHIC is going to build a National Terminology Board in cooperation with national and international experts.

Translation Plans and Activities

The concepts selected for translation are based on the IHTSDO jurisdictional implementation project priorities and a defined, systematic translation approach. Temporarily postponed due to financial obstacles, the translation into Slovakian will continue in July 2011, though progress was made on SNOMED CT in 2010.

Progress was also made on the Slovak translation of SNOMED CT in 2010. A Master View Set Catalogue has been created as part of the epSOS project, where approximately 800 concepts were translated and released.

Affiliate Licensees and Activities

Due to the broad spectrum of organizations that includes, e.g. vendors, hospitals, academic institutions and individuals, no affiliate licenses have been awarded.

Current Representatives

General Assembly	Pavol Rieger
Member Forum	Karol Košuk and Jaroslava Pikusová
National Release Center	National Health Information Center www.nczisk.sk

Spain



National Activities

The focus of the NRC is to broaden the use of SNOMED CT in Spain's National Health System. Beginning in 2009 and throughout 2010, the NRC's major activities involved training trainers. The aim of this educational program was to ensure that the main users, clinical professionals and technical people, are aware of the benefits of using SNOMED CT. Other activities focused on the distribution of SNOMED CT, creating subsets for the Patient Summary to be validated by experts, and developing national procedures for managing terminology in the national semantic interoperability road map.

Implementation Plans and Activities

The strategic direction of the NRC has focused on the use of SNOMED CT in the National Electronic Health Record System and, specifically, in the Patient Summary content. Other activities involve the development of specific plans and guidelines for national governance.

Allergy and Vaccination Reference Set

Activities have also focused on the development of an Allergies and Vaccinations subset. This first phase aims to review, evaluate and develop several subsets that could meet the needs of clinical professionals within this context. The subsets will be made available in 2011.

Translation Plans and Activities

There is a roadmap for writing the current Spanish release in South American Spanish, one subset at a time and subsequently distributing them into the core system. The translation of

SNOMED CT into the rest of the languages of Spain is already planned, as well as the necessary working groups and who will participate in them.

Affiliate Licensees and Activities

Some hospitals and regional authorities have action plans for implementing SNOMED CT in different areas, e.g. alerts, drugs, pathology and allergies. Several regional authorities have also provided training plans for clinical users. In addition to a growing interest in using SNOMED CT in clinical areas and medical specialties, mappings with other terminologies such as ICD-9-CM, ICPC-2 or LOINC and subsets development are also of special interest.

Current Representatives

General Assembly	Arturo Romero Gutiérrez
Management Board	Gonzalo Marco Cuenca
Member Forum	Victoria Alvarez
National Release Center	The Ministry of Health, Social Policy and Equality www.mspsi.es

Sweden



National Activities

The NRC participates in several projects especially designed to develop knowledge and artifacts to support implementation of the national eHealth strategy, e.g. binding terminologies to information models, a national information structure, the national Patient Summary project, and other ongoing work within the European Union and internationally, including Member activities in IHTSDO.

As part of the national eHealth strategy and the national information structure target area, the national standard terminology, based on SNOMED CT, comprises nationally agreed and defined concepts and terms as well as classifications in health and social care. Reports delivered to the Ministry of Health and Social Affairs by the National Board of Health and Welfare cover progress over the last four years, plans and needs for the future, methods and guidelines as well as a governance plan for maintenance and distribution. Importantly, the reports, which will be made available in English, also include several proposals for further work to guarantee successful implementation.

Implementation Plans and Activities

Since the last annual report a number of new pilots have commenced as well as new collaborations with external parties. A partnership has been established with a regional health authority to test educational models and to develop guidance for working with SNOMED CT locally. Another initiative will introduce terminology for data collection and follow-up of national guidelines, starting with national public health guide-

lines. Several ongoing activities will contribute to the validation of the Swedish translation of SNOMED CT as well as identify current use of concepts in various settings. A newly developed model for structured documentation and reuse of information on nosocomial infections uses SNOMED CT as the main terminology and is being piloted nationally in 2011.

Translation Plans and Activities

The initial translation of 280,000 concepts into Swedish was finalized in June 2010. The first full national release is planned for October 2011. A series of workshops will be arranged in 2011 to solicit input from stakeholders to meet the requirements and requests of future users. An in-depth survey was performed in 2010 in five regions to identify organizational structures and administrative aspects for work in the areas of terminology, classification and informatics in health and social care. The scope of the survey was to gain a better understanding of the current investments, prioritizations and prerequisites that regions and municipalities have regarding local resources in these work areas.

Current Representatives

General Assembly	Anna Adelöf (interim)
Management Board	Kristina Bränd Persson
Member Forum	Lotti Barlow and Erika Ericsson
National Release Center	National Board of Health and Welfare www.socialstyrelsen.se

United Kingdom



National Activities

The United Kingdom has implemented and carried out a range of activities in 2010. For example, the renal disorders subset developed by the UK Renal Association and the Renal Information Exchange had its first release and guidelines on the use of SNOMED CT in care planning have been written. The production of guidelines focused on the primary care sector to support migration to systems which incorporate SNOMED CT. In addition, functionality to support Reference Set development in the Workbench has been completed and plans for the introduction of other product authoring are well advanced with Workbench tooling to support the International Classification of Diseases (ICD-10) uplift in the UK going live on April 6, 2012. Additional enhancements to the UK licensing and distribution tool have gone live and the development of our Request Submission portal continues. Further, on-line educational resources have been developed in 2010 and the UK Terminology Centre (UKTC) website has been refreshed. Another activity is the continued efforts to re-establish a WHO Family of International Classifications Collaborating Centre in the UK.

Mappings from SNOMED CT Emergency Medicine concepts to UK administrative data dictionary codes for secondary uses have been developed. Furthermore mappings from SNOMED CT to OPCS-4 Interventions and

Procedure Classification have been updated to the latest revision, OPCS-4.6. Workbench tooling is also being developed to support the intended update for the National Health Service from ICD-10. Reprinted 2000 (with updates and corrections) to ICD-10 4th Edition. Finally, UKTC continues to support Phase 1 of the IHTSDO SNOMED CT to ICD-10 mapping project with donation of the 0.5 FTE Map Lead.

Affiliate Licensees and Activities

To date, approximately 30 million prescription messages using drug concepts represented by SNOMED CT identifiers have been used for dispensing and 98% of general practitioners have prescribing systems using SNOMED CT identifiers for drug concepts to send prescription messages. In addition, extensively used systems in the community and mental health domains are at a late stage of development of their SNOMED CT supported functionality for prescribing, allergy recording, condition recording and associated clinical decision support.

Current Representatives

General Assembly	Sally Greenway
Management Board	Martin Severs
Member Forum	Gwen Smith and Ian Arrowsmith
National Release Center	UK Terminology Centre NHS Connecting for Health www.connectingforhealth.nhs.uk

United States



National Activities

The National Library of Medicine (NLM) promotes use of SNOMED CT as part of a suite of vocabulary and messaging standards needed for interoperable infrastructure for health information technology. NLM is building upon the IHTSDO's Workbench to develop an open and transparent process, accessible to all stakeholders, for coordinating U.S. input to SNOMED CT content development.

Access to SNOMED CT was significantly improved with implementation of the new UMLS Terminology Services (UTS), which provides a streamlined license request interface for Unified Medical Language System (UMLS)/SNOMED CT Affiliate Licensing and introduces a new SNOMED CT Browser that enables searching by SNOMED CT identifiers (ConceptID and DescriptionID). It also has a term search feature that leverages the added value of synonyms from over 130 other terminologies in the UMLS Metathesaurus.

NLM collaborated with IHTSDO Management and Kaiser Permanente to establish an arrangement for the donation of Kaiser Permanente's Convergent Medical Terminology (CMT).

Implementation Plans and Activities

In 2010, NLM introduced MedlinePlus Connect, a free service that allows electronic health record (EHR) systems to draw patient-specific information from MedlinePlus, an authoritative up-to-date health information resource for

patients, families and healthcare providers. MedlinePlus Connect accepts requests from EHRs based on diagnoses (problem codes) and medications. NLM has mapped MedlinePlus health topics to two standard diagnostic coding systems (SNOMED CT and ICD-9-CM) used in EHRs to support "Meaningful Use".

NLM released the SNOMED CT Route of Administration (ROA) Subset, a listing of the current set of terms related to the location of administration for clinical therapeutics, designed to facilitate the use of SNOMED CT as the primary coding terminology for substance administration documentation.

Affiliate Licensees and Activities

NLM distributes SNOMED CT (both English and Spanish versions) as part of the UMLS Metathesaurus. NLM licensees have access to SNOMED CT in multiple formats as part of the UMLS Metathesaurus, linking it to many other biomedical terminologies and natural language processing tools. UMLS licensees also have access to SNOMED CT in native file formats from the UTS.

Current Representatives

General Assembly	Betsy Humphreys
Management Board	Andy Wiesenthal
Member Forum	Jan Willis and Vivian Auld
National Release Center	The National Library of Medicine www.nlm.nih.gov

Financial Report

The financial and business processes of the IHTSDO must ensure a sustainable and robust organization capable of responding to stakeholder requirements. The 2010 audit was unanimously approved by the General Assembly on April 13, 2011.

Income Statement

1 January - 31 December 2010

Income	USD
Membership fees	8,844,237
Voluntary contribution fees	166,809
In-scope licenses	139,238
Affiliate licenses	25,268
Other fees	31,803
Total Income	9,207,355
Expenditures	
Staff expenses	-1,717,779
Office and facilities	-306,299
Travel expenses	-250,657
Other costs	-763,874
Workbench IP	-1,328,467
Support agreement with CAP	-3,701,667
Provision severance pay, CAP	0
Amortisation, Workbench IP	0
Amortisation, SNOMED CT IP	-780,000
Total Expenditures	-8,848,743
Profit/Loss before Financial Income and Expenses	358,612
Financial income/expenses, net	-39,719
Profit/Loss before Tax	318,893
Tax on profit/loss for the year	0
Profit/Loss for the Year	318,893

Member Activity

Remember that membership in IHTSDO is open to all countries interested in using SNOMED CT® and working towards the goals and purposes of the organization. You can read more about membership under "Join Us" on our website: www.ihtsdo.org. We look forward to welcoming you.

The map shows how IHTSDO Members are currently dispersed around the world.



IHTSDO

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