AMT v3 Beta Release Background and Context Communique

4 February 2013

National E-Health Transition Authority
www.nehta.gov.au

Introduction to the AMT

Purpose of this document

To provide a high level overview of the AMT including:

- A brief history of the AMT.
- The purpose and use of AMT v3 Beta.
- Future developments.
- Links to additional resources.

What is the AMT?

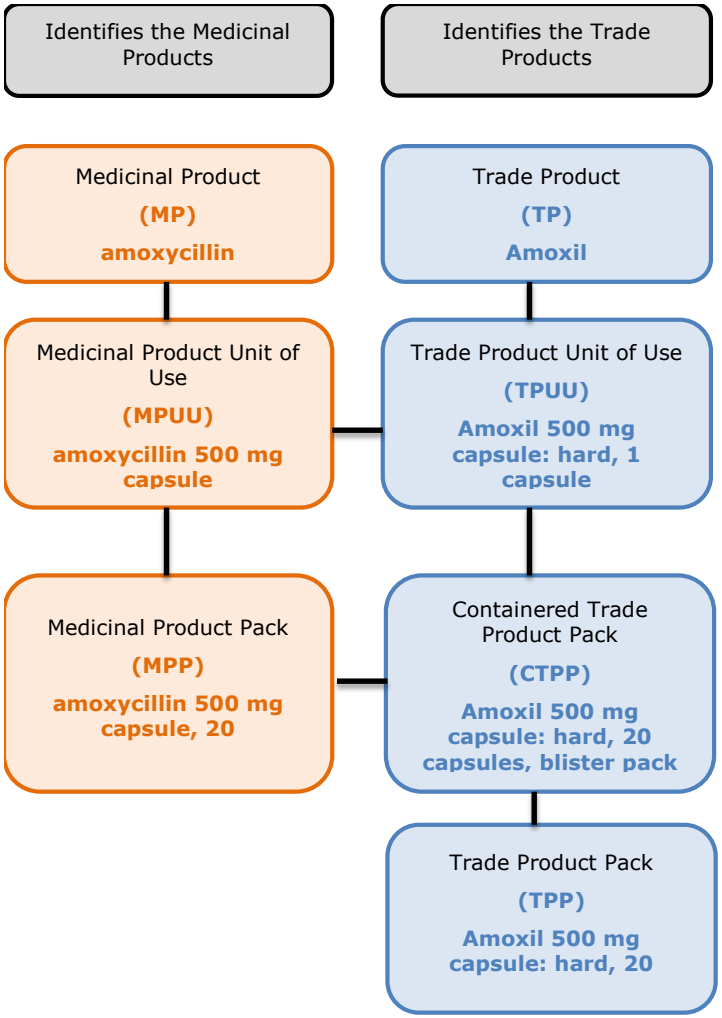
- A medicines terminology modeled with SNOMED CT principles.
- Delivers unique identification of brand (trade) products and equivalent generic medicines.
- Provides standard naming conventions to describe medicines as defined by editorial rules.
- Identifies all commonly used medicines in Australia and can be implemented in clinical information systems to support the following processes:
  - Prescribe
  - Administer
  - Record
  - Transfer information
  - Review
  - Issue – including dispense

Benefits

It is anticipated that the use of terminology within healthcare systems nationally will lead to improved continuity of care and health outcomes for patients. Some specific long-term benefits of the AMT are envisaged, including:

- Enabling communication and consistent interpretation across systems through use of a standardised language.
- Reducing the number of adverse events that occur due to the communication of inaccurate, misinterpreted medicines information.
- Communication of events relating to medicine prescribing and administration, through summary information such as discharge and other health summaries.
- Traceability of medicines throughout the prescribe-dispense-administration cycle.
- Facilitating decision support (within and across system boundaries where it is supported by structured messaging).
- Better aggregation of information available for population health/epidemiology, policy, strategy, research and education purposes.

The AMT v3 Model

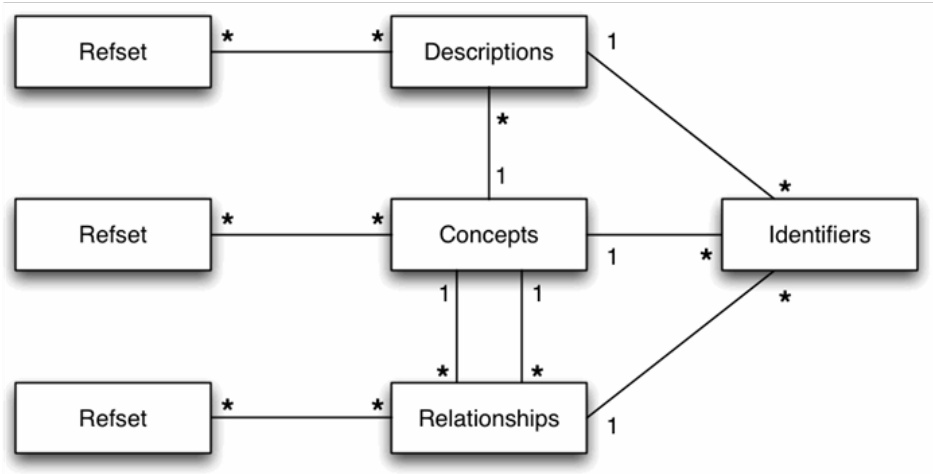


Core product concepts (and examples) included in the AMT v3 model are shown at left. They represent :

- Both the medicinal (generic) and trade products.
- Different levels of granularity, i.e. ingredient, strength, dosage form, pack size, container type to support different use cases.

The basic data model is shown below.

- A relational model that consists of concepts, descriptions and relationships.
- Contains reference sets that extend information about certain components.



History of the AMT

- **2005** – Early development of the AMT model and editorial rules. This work used and further developed previous work undertaken prior to the establishment of NEHTA including:
  - Australian Medicines and Devices Terminology developed by the DoHA in conjunction with HL7 Australia and New Zealand;
  - UK Dictionary of Medicines and Devices (dm+d);
  - Australian Catalogue of Medicines, with input from the Medicines Coding Council of Australia; and
  - *SNOMED CT User Guide* by IHTSDO.
- **March 2007** – Establishment of first external stakeholder Medicines Reference Group (superseded by AMT Support Group in April 2009).
- **December 2007** – AMT v1.0 released nationally to licensed SNOMED CT users for test and evaluation purposes only – not for clinical use.
- **June 2009** – AMT v2.0 released nationally for clinical use according to the AMT Statement of Purpose as developed following independent stakeholder review and evaluation.
- **2009** – AMT Model Review project underway to address issues raised during ongoing stakeholder engagement around the complexity of the model.
- **November 2009** – AMT v3 model agreed nationally.
- **November 2010** – First state-based implementation of AMT v2 achieved in Victoria.
- **February 2011** – AMT v3 alpha released to a limited audience.
- **March 2011** – First reference sets released to align with the new IHTSDO SNOMED CT RF2 specifications.
- **February 2012** – AMT Implementation kit released for evaluation (including v3 test preview data).
- **March 2012** – AMT Roadmap published.
- **February 2013** – AMT v3 Beta release and stakeholder feedback/training period begins (ten weeks).

  Some key objectives for the AMT v3 model were to:
  - Simplify the AMT model to make it easier to understand and implement.
  - Align to SNOMED CT Release Format 2 (RF2) technical specifications to become fully machine-processable.
  - Allow easier integration into SNOMED CT-AU.
  - Ease the internal build/maintain/test release processes.
  - Create a sound foundation that can be expanded to realise the longer-term AMT product development.

Key AMT implementations (both completed and under development) have provided further feedback to assist in the development of AMT v3.

AMT v3 Beta

Why a Beta release?

The primary focus of this AMT v3 Beta release is for current and prospective AMT users† to:

- Preview the AMT v3 release files.
- Evaluate and test the data against their clinical use cases.
- Determine the impact (if any) to current mappings, algorithms and systems required to extract and implement AMT v3 data.
- Provide feedback to the National Clinical Terminology Information Service (NCTIS) on any bugs or implementation barriers with the current model structure and release format.

What are the changes from AMT v2?

The overall logical structure of key AMT medicinal components remains consistent between the two versions.

The principal changes from AMT v2 to v3 include:

- Simplification of the model to support easier implementation.
- Alignment to SNOMED CT RF2 technical specifications.
- Amended v2 components.
- Inactivation of v2 components that did not have a valid use case or have been replaced by the reference set mechanism.
- New v3 components.
- Relationship changes between MPP, CTPP and TPP product concepts.
- The history mechanism is per RF2 specifications.
- Components include only active and inactive statuses.
- Every component is assigned an effectiveTime value per RF2 specifications.

These changes were informed by stakeholder engagement during the Model Review project and alignment with SNOMED CT RF2. A detailed explanation of changes, including a suggested approach to migrating between the two versions, can be found in the *AMT v2 to v3 Migration Guide*.

†Note: Users will need to be SNOMED CT/AMT licence holders to access and download the release files and associated support materials. Please contact terminologies@nehta.gov.au for more information.

AMT v3 Beta (continued)

What are the use cases?

Feedback from users to date indicated that documented guidance on how to implement AMT against their defined clinical use cases has been lacking.

The high-level use cases currently included as part of the AMT Statement of Purpose do not provide the context or necessary information without further clinical input.

Detailed use cases based on clinical scenarios have now been documented (see *AMT v3 Overview and Detailed Business Use Cases*) with the aim to:

- Improve understanding of how AMT may be used in different clinical situations including any limitations.
- Assist vendors in developing against defined use cases.

The initial focus is on supporting vendors and NEHTA initiatives (e.g. PCEHR) where the majority of development activity is occurring. This includes:

- General Practitioners (GP) and Specialists using pack based prescribing.
- Community Pharmacist dispensing.
- Transfer of information between GP Prescribing and Community Pharmacist Dispensing.

Further detailed use case development will continue to prioritise those that support electronic medications management and the AMT Roadmap.

Can AMT v3 Beta be used in a clinical setting?

No, it cannot. AMT v3 Beta release has been made publicly available to SNOMED CT/AMT licence holders for the sole purpose of evaluation and to assist vendors in any initial development planning.

Once again: AMT v3 Beta is **not for use** in a clinical setting.

What is contained in the AMT v3 Beta release?

AMT v3 Beta is available only as a Snapshot release type; it includes data transformed from AMT v2.26. Full and Delta release types are not available at this time.

The data files have undergone extensive testing to ensure structural soundness against documented model requirements. Some minor bugs, including errors in description terms, may be present.

Any known errors and/or deviations against the anticipated production release are documented in the accompanying release note.

Future Developments

Roadmap

A survey of the market in 2012 identified potential areas of improvement in AMT content/product coverage and future evolution.

The survey results were used to prioritise areas for development with two specific use cases identified:

- Dose based prescribing (acute care); and
- Clinical software user interface descriptions (synonyms, display terms).

These use cases, which consist of a number of subcomponents, will be progressed as separate projects during 2013-14 and have therefore not been included in the current release documentation.

For further information refer to *AMT 2012 Survey Results and Development Roadmap*.

Implementation Plan

Future development phases will be planned into NEHTA's AMT work programme following consultation with stakeholders.

The target end state currently documented for clinical systems is fully coded and structured clinical records that support:

- decision support activities;
- information sharing (based on semantic interoperability); and
- a variety of appropriate secondary use purposes.

For further information on the current plan refer to *AMT Implementation Plan 2011-2012*.

AMT v3 Beta Feedback

The NCTIS will be gathering feedback from key stakeholders during a ten week period following the release of AMT v3 Beta.

Feedback and support activities during this period will include:

- An online survey
- Web/teleconferences
- Workshops
- Phone/ email support

A summary report of the survey results will be made available to users.

The main objectives of this feedback are to:

- Confirm that the AMT v3 concept model and components are suitable and sufficient to support our stakeholders' application of AMT v3.
- Determine whether AMT v3 data will support the stakeholders' use cases and to identify any gaps in the v3 model.
- Provide training on the AMT v3 model to increase understanding of the model's structure, components, release format, limitations of terminology and other implementation considerations.
- Evaluate the sufficiency of implementation/technical documentation supporting the release.
- Determine the level of support, training, documentation and communications required to support implementations.

Resources

AMT resources

The following documents are available from the NCTIS website https://nehta.org.au/aht/:†

- *AMT Release Note (v3 model)*
- *AMT Editorial Rules (v3 model)*
- *AMT 2012 Survey Results and Development Roadmap*
- *AMT v2 to v3 Migration Guide*
- *NCTIS AMT Implementation Plan*
- *AMT Reference Set Development Approach (v3 model)*
- *National Clinical Terminology and Information Service Reference Set Library*
- *AMT v3 Overview and Detailed Business Use Cases*
- *AMT v3 Technical Implementation Guide*
- *AMT Mapping Guidelines*
- *AMT Mapping Requirements*

† Note: Access to this website requires free licences. Please contact terminologies@nehta.gov.au for more information.

SNOMED CT resources

- *SNOMED CT Technical Implementation Guide*
  http://www.ihtsdo.org/fileadmin/user_upload/doc/tig/tig_webhelp.html

Other SNOMED CT documentation is available at: http://ihtsdo.org/fileadmin/user_upload/doc/

More Information

Queries and further information

- All questions, feedback and requests for further product support and/or licence applications should be directed to terminologies@nehta.gov.au.
- To receive the latest terminology news from the NCTIS by email, subscribe to the *NCTIS Newsletter* at: http://newsletter.nehta.gov.au/nctis.
- Previous editions of the *NCTIS Newsletter* can be viewed at: http://newsletter.nehta.gov.au/nctis/nctis-archive.

Acknowledgements

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