

Australian Medicines Terminology v3 Model Implementation Process and Guidance for Vendors v1.0

Purpose

The purpose of this document is to provide an overview for vendors and AMT implementers of the steps required to integrate AMT v3 within their products and clinical systems.

Scope

This guidance is applicable to the following types of implementations:

- Greenfields CIS implementations
- Existing CIS implementations
- State-wide catalogues
- Local catalogues
- Third party knowledge bases
- Data management and mapping ownership

Acronyms

Acronym	Meaning
ARTG	Australian Register of Therapeutic Goods
CDA	Clinical Document Architecture
CIS	Clinical information system
IHTSDO ¹	International Health Terminology Standards Development Organisation
NCTIS	National Clinical Terminology and Information Service
PBS	Pharmaceutical Benefits Scheme
PCEHR	Personally controlled electronic health record

¹ IHTSDO®, SNOMED® and SNOMED CT® are registered trademarks of the International Health Terminology Standards Development Organisation.

Implementation process overview

1. Understand the business driver	2. Obtain a licence & AMT data	3. Determine product requirements
<p>The decision to implement the AMT will be influenced by an understanding of relevant business drivers.</p> <p>These may include external factors such as interoperability to support sending and receiving medicines information for national e-health programmes or internal factors relating to product development to support required CIS functionality.</p> <p>If needed, specific information sessions can be arranged with an NCTIS representative.</p>	<p>Access to AMT data requires a current <i>SNOMED CT Affiliate Licence</i> [1] and <i>Australian National Terminology Release Licence</i> [2].</p> <p>Vendors with AMT-integrated products must comply with the obligations stated within these licence agreements.</p> <p>CIS vendors that do not release AMT as part of their CIS, but allow a healthcare organisation to maintain and upgrade to new terminology releases, will deliver documentation to the healthcare organisation outlining their obligations to obtain and comply with these licence agreements.</p> <p>The AMT v3 data is structured according to the AMT v3 model and the IHTSDO Release Format 2 specification. It is provided to users within the following text files:</p> <ul style="list-style-type: none"> • Concepts • Identifiers • Descriptions • Relationships • Reference sets 	<p>A decision to implement the AMT requires an understanding of AMT and its role within existing data structures and CIS application functionality.</p> <p>There is also a need to understand the AMT's product coverage to support system interoperability, including CDA and non-CDA information exchanges within medications management.</p> <p>By defining your business drivers you can develop specific requirements for:</p> <ul style="list-style-type: none"> • Interoperability with AMT and non-AMT contents within clinical solutions. • Exchanging AMT coded information within CDA documents and the PCEHR. • Change management.
	<p>Resources <i>AMT v3 Model Diagram</i> [3]</p>	<p>Resources <i>AMT v3 Technical Implementation Guide</i> [4] <i>AMT v3 Editorial Rules</i> [5] <i>AMT v3 Overview and Detailed Business Use Cases</i> [6]</p>

4. Assessment against requirements

Review the AMT documentation produced by NEHTA and determine how the AMT can meet defined requirements:

- What concepts are required?
- Are descriptions required for the display as well as creation of messages?
- Are relationships between concepts required to support use of the terminology within an application, for example, to identify active ingredients or dosage forms.

An assessment of the scope of product coverage within the AMT and possible gap with local requirements will be required and the need for the addition of local content considered.

If needed, specific information sessions can be arranged with an NCTIS representative.

Resources

AMT v3 Overview and Detailed Business Use Cases [6]

AMT v3 Editorial Rules [5]

5. Implementation planning

When designing your applications to utilise the AMT and implement relevant AMT data items, the following tasks should be undertaken:

- Analysis to identify gaps between required terminology functionality and what the AMT can provide.
- Development of local extensions of AMT to support identified gaps.
- Utilise NEHTA-developed guidelines and seek guidance to assist in mapping local medicine data dictionaries to the AMT, undertake ongoing quality reviews and issue management as part of AMT maintenance.

Resources

AMT v3 Technical Implementation Guide [4]

AMT v3 Mapping Guidelines [7]

AMT v3 Development Approach for Reference Sets [8]

AMT PBS FAQs [9]

6. AMT implementation

7. Guidance available

This step covers design of the application to include the AMT and implementation of relevant AMT data. Considerations include:

- Display of the AMT Preferred Terms and Synonyms.
- Term length implications.
- Alignment of the AMT concepts with existing local database structures.
- Functionality testing.
- Validation of displaying the AMT content.
- Validation of key AMT relationships.
- Validation that appropriate local concept identifiers are associated with AMT concepts and general content validation.
- Appropriate display of AMT terms within selection lists.
- Appropriate search strategies.
- Appropriate data storage to facilitate interoperability requirements.
- Appropriate linkage to other data, for example, PBS data, the ARTG, and decision support information.

If a mapping implementation is to be undertaken, a roadmap towards a native adoption of AMT may be worth considering.

An NCTIS representative can provide specific implementation guidance as required.

NEHTA has developed guidance for healthcare software systems implementing the AMT.

This guidance deals with healthcare software system behaviour. It will assist in giving users confidence that an implementation will behave as expected, perform functions in a known manner, has interfaces or formats that adhere to agreed specifications and is likely to operate with other similar implementations where the guidance has been followed. Tests are also available to assist with acceptance and functionality testing.

Resources

AMT v3 Technical Implementation Guide [4]
AMT v3 Mapping Guidelines [7]
AMT v3 Development Approach for Reference Sets [8]
AMT PBS FAQs [9]

Resources

Clinical Terminology – Guidance for Use in Healthcare Software [10]
Clinical Terminology – Guidance for People and Processes [11]
Clinical Terminology – Use of Medical Nomenclatures in Information Exchange [12]
Clinical Terminology – Tests for Use of Medical Nomenclatures in Information Exchange [13]

8. Data maintenance	9. AMT technical & content support	10. AMT capability development
<p>Following implementation of the AMT, updates to the AMT are released by NEHTA on a monthly basis. Licence holders are notified at the time of a new release.</p> <p>Release documentation includes information on relevant issues and key changes to the AMT.</p> <p>Ideally, application data should be updated as soon as possible after an AMT release to ensure information is current.</p> <p>If mapping is done internally:</p> <ul style="list-style-type: none"> Initial cost and effort will be influenced by the number of entries to be mapped and complexity of dataset Regular maintenance may be required each time the source or target systems are updated. <p>AMT viewers are available to users and allow AMT content to be browsed.</p> <p>NEHTA can provide guidance on what products are available.</p>	<p>Help for AMT implementers is available through the NEHTA Help Centre, via email (help@nehta.gov.au) or telephone.</p> <p>Issues with AMT data content can also be logged through the Help Centre. Issues are prioritised for resolution by the AMT team.</p> <p>FAQs covering both general AMT data and the AMT data contained within the Pharmaceutical Benefits Schedule are available.</p> <p>Additional content not currently included in the AMT but within its scope can be requested via a submission process accessible from the NEHTA website.</p> <p>If required, specific information and education sessions can be arranged with an NCTIS representative.</p> <p>For technical and content support for AMT please contact an NCTIS representative.</p>	<p>NEHTA has developed a roadmap for AMT development.</p> <p>Changes to the roadmap may occur as the need for additional AMT functionality is identified and scheduled for development. This information will be made available through notifications to licence holders or via the NEHTA website.</p> <p>Vendors should monitor these notifications and assess potential impact.</p> <p>Projects currently in progress include Dose-Based Prescribing and Clinical Interface Descriptions projects.</p>
<p>Resources</p> <p><i>AMT v3 Data (Monthly Release)</i> [14]</p> <p><i>AMT Monthly Release Note</i> [15]</p> <p><i>Minnow Browser</i> [16]</p>	<p>Resources</p> <p><i>AMT PBS FAQs</i> [9]</p> <p><i>NCTIS Request Submission Page</i> [17]</p>	<p>Resources</p> <p><i>AMT Survey Results and Roadmap</i> [18]</p>

Contact

Email help@nehta.gov.au for further information, or to arrange a session with an NCTIS representative to discuss your organisation's requirements.

References

1. International Health Terminology Standards Development Organisation. *SNOMED CT Affiliate Licence Agreement*. Copenhagen: IHTSDO; 2009. Available from: <http://www.nehta.gov.au/our-work/clinical-terminology/registering-for-a-license/license-agreements>.
2. NEHTA. *Australian National Terminology Release Licence Agreement*. Sydney: NEHTA; 2009. 25159043v1. Available from: <http://www.nehta.gov.au/our-work/clinical-terminology/registering-for-a-license/license-agreements>.
3. NEHTA. *AMT v3 Model Diagram*. Sydney: NEHTA; 2014. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-v3-common>.
4. NEHTA. *Australian Medicines Terminology v3 Model Technical Implementation Guide*. Sydney: NEHTA; 2013. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/EP-1719-2014/NEHTA-1237-2013>.
5. NEHTA. *AMT v3 Model Editorial Rules*. Sydney: NEHTA; 2014. v2.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-v3-common>.
6. NEHTA. *Australian Medicines Terminology v3 Model - Overview and Detailed Business Use Cases*. NEHTA; 2013. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
7. NEHTA. *AMT Mapping Guidelines*. Sydney: NEHTA; 2012. v1.1. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
8. NEHTA. *AMT v3 Development Approach for Reference Sets*. Sydney: NEHTA; 2014. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
9. NEHTA. *AMT PBS FAQs*. [Internet]. [cited 2014 Oct 27]. Available from: <http://www.nehta.gov.au/our-work/clinical-terminology/australian-medicines-terminology/amt-pbs-faqs>.
10. NEHTA. *Clinical Terminology - Guidance for Use in Healthcare Software*. 2014. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
11. NEHTA. *Clinical Terminology - Guidance for People and Processes*. 2014. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
12. NEHTA. *Clinical Terminology - Use of Medical Nomenclatures in Information Exchange*. 2014. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
13. NEHTA. *Clinical Terminology – Tests for Use of Medical Nomenclatures in Information Exchange* [Internet]. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.
14. NEHTA. *AMT Monthly Data Release*. [Internet]. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology>.
15. NEHTA. *Australian Medicines Terminology v3 Model - Release Note*. Sydney: NEHTA; 2014. Updated monthly. Available from:

- <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology>.
16. Australian E-Health Research Centre. *Minnow*. [Internet]. Available from: <http://aehrc.com/research/health-data-management-and-semantics/clinical-terminology-tools/minnow/>.
 17. NEHTA. *NCTIS Request Submission - Content Changes to our Terminology Products*. [Internet]. Available from: <http://www.nehta.gov.au/our-work/clinical-terminology/snomed-clinical-terms/request-submission-product-content-changes>.
 18. NEHTA. *AMT 2012 Survey Results and Development Roadmap*. Sydney: NEHTA; 2012. v1.0. Available from: <http://www.nehta.gov.au/implementation-resources/ehealth-foundations/australian-medicines-terminology-common>.

Publication date: 5 November 2014

Contact for enquiries

Telephone: 1300 901 001 or email: help@nehta.gov.au

Disclaimer

The National E-Health Transition Authority Ltd (NEHTA) makes the information and other material ('Information') in this document available in good faith but without any representation or warranty as to its accuracy or completeness. NEHTA cannot accept any responsibility for the consequences of any use of the Information. As the Information is of a general nature only, it is up to any person using or relying on the Information to ensure that it is accurate, complete and suitable for the circumstances of its use.

Copyright © 2014 National E-Health Transition Authority Ltd

This document contains information which is protected by copyright. All Rights Reserved. No part of this work may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without the permission of NEHTA. All copies of this document must include the copyright and other information contained on this page.

Acknowledgement

The National E-Health Transition Authority is jointly funded by the Australian Government and all State and Territory Governments.