Integrating SNOMED CT-AU and the Australian Medicines Terminology (AMT)

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THE AUSTRALIAN E-HEALTH RESEARCH CENTRE | ICT CENTRE
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Australian Medicines Terminology

Developed to be fit for the purpose of unambiguously identifying, for clinicians and computer systems, ...

- **... commonly used medicines in Australia**
  [as of July 2011]
  - *includes all PBS/RPBS, TGA AUSTR and a range of AUSTL items.*
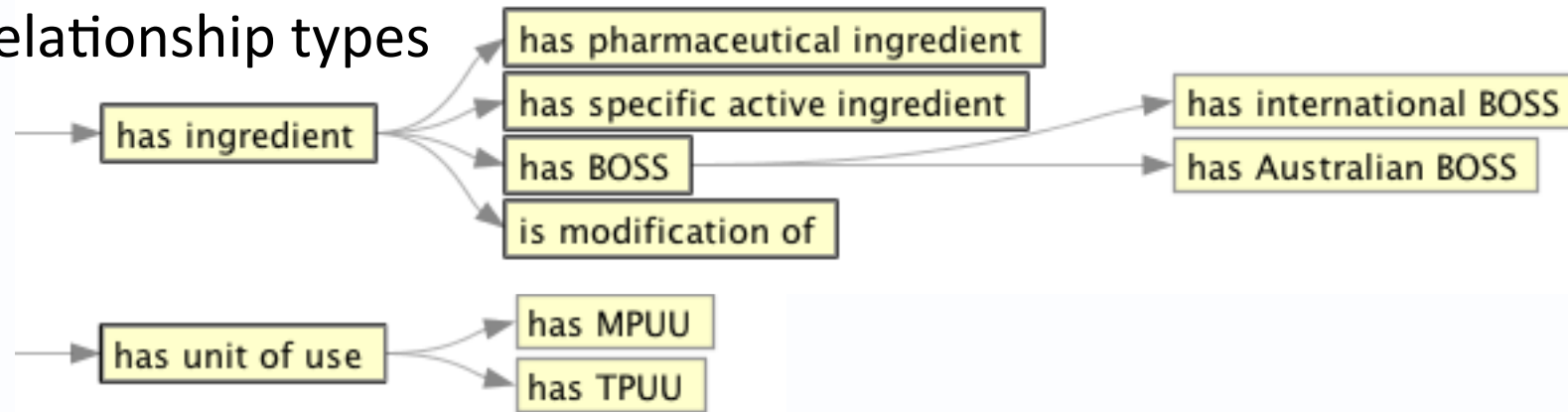
... for the following activities:

- Prescribing
- Recording
- Review
- Issue – including dispense
- Administration and
- Transfer of Information

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AMT High-level Structure (of interest)
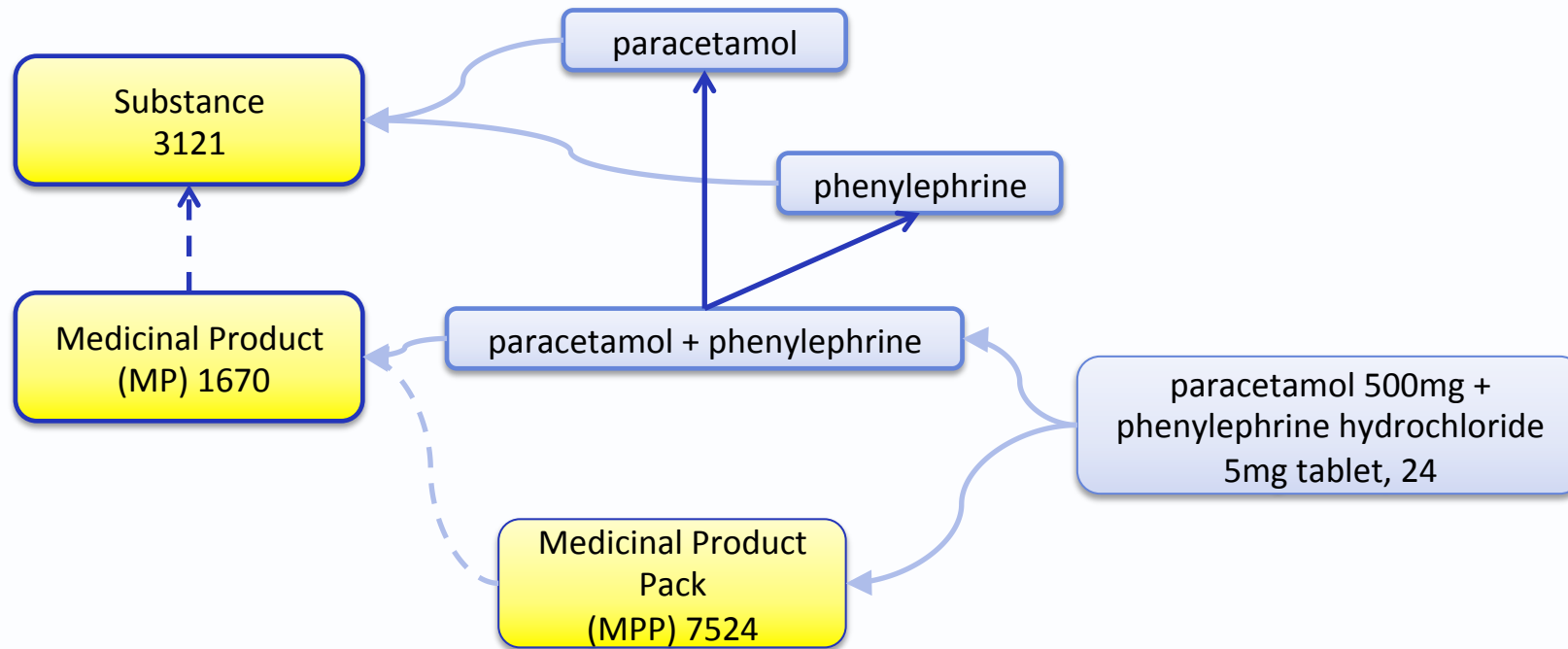
The AMT V2 Model

Relationship types

Essentially everything is *primitive*

- (conservative modelling)

SNOMED CT(-AU) Model

373873005 | Pharmaceutical / biologic product |
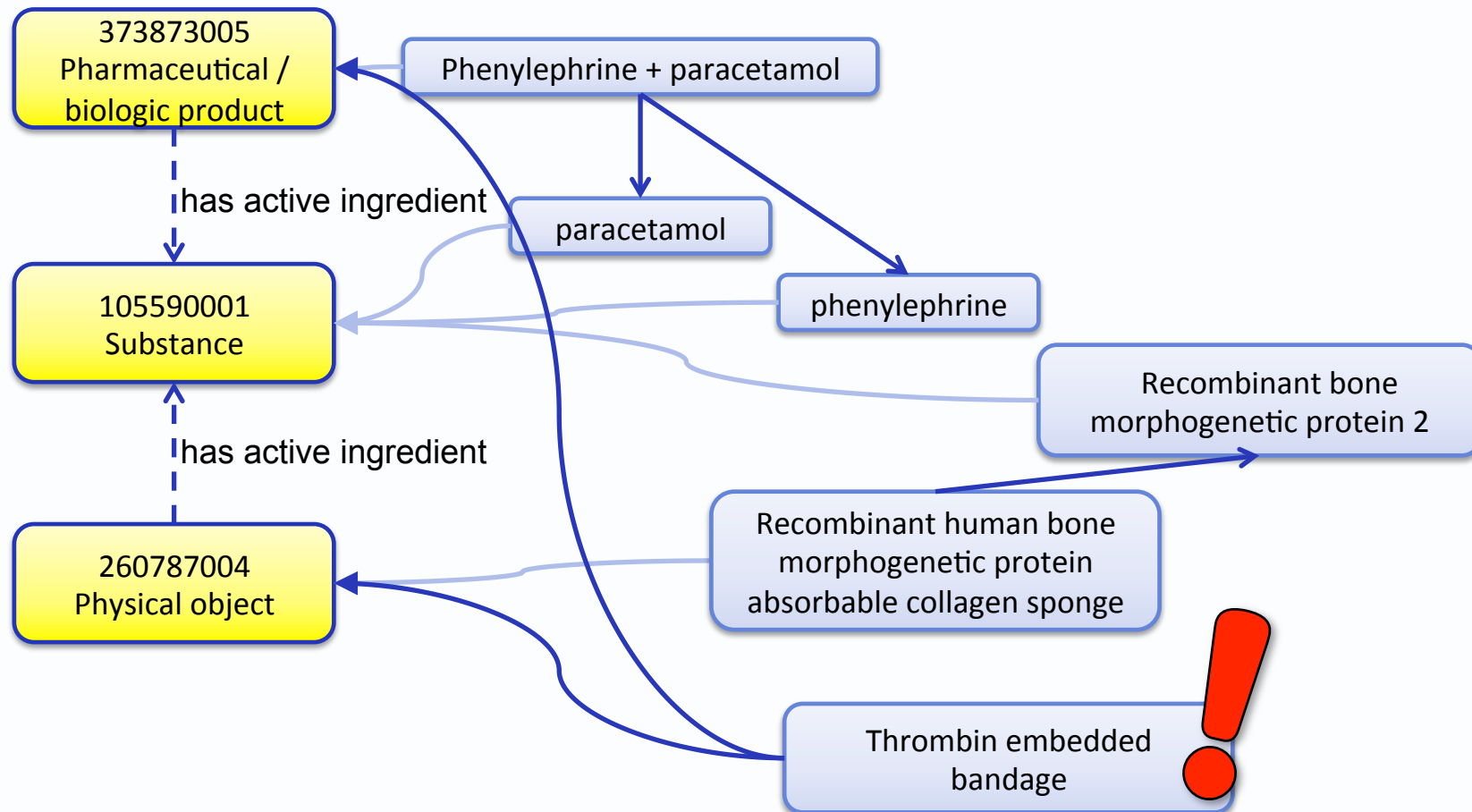
260787004 | Physical object |

105590001 | Substance |

Relationship types:

- 127489000 | Has active ingredient |

- 411116001 | Has dose form |

A lot of primitive and un-modelled concepts

SNOMED CT High-level Structure

Model alignment

AMT	SNOMED CT
Substance	Substance
Medicinal Product	Pharmaceutical / biologic product
container type, form (Australian qualifier)	Physical object
has Ingredient, ...	Has active ingredient

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Substance mapping

Details in *"Development approach for reference sets"*, 2012-08-31

Domain of use: decision support

- potential allergies
- drug-drug interaction
- drug-disease interaction

Scope: AMT Substances actually used in an AMT Product

Result:
RF2 Reference Set

...	referencedComponentId	valueId	stringValue
	2447011000036100	Equivalent	385544005
	2448011000036100	Equivalent	421559001
	2449011000036100	Equivalent	395823000
	2450011000036100	Equivalent	409159000
	2451011000036100	Generalise	409159000

Building the map

Snapper demo

Building the integrated terminology

Building the integrated terminology

Steps

1. Convert RF2 file into a set of additional relationships entries
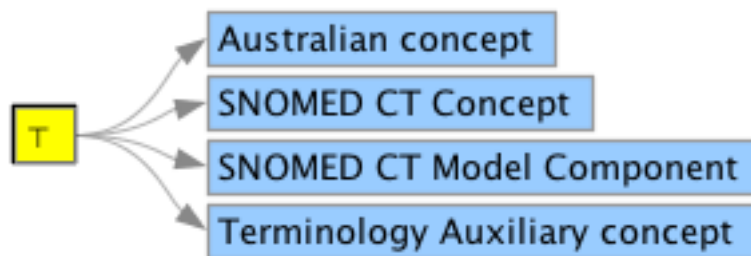2. Convert to all relationships to DNF - classification

Snorocket

Performs the classification step

OntoServer

Index for searching & lookup

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The Result - demo

http://aehrc.com/snapper/minnow
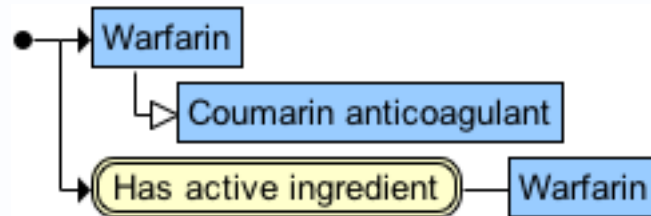
Discussion

Bugs

- ? 412546005 | Sodium citrate |

- plant product
  - mapping relationship is wrong

- not caught by mapper review (see poster)

- flagged as a result of classification

Discussion - 2

Limitations

- primitives concepts limit value of map
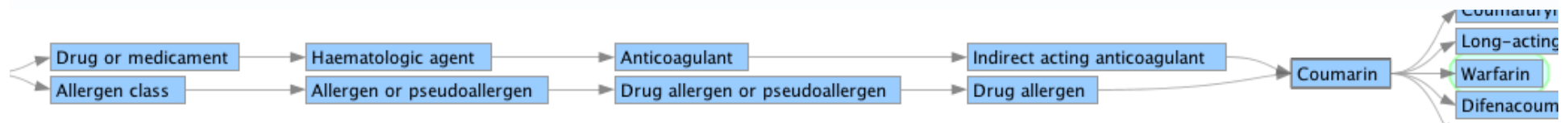 - substance mapping doesn't help with product integration

- example

Other

- bandages etc as substances / products

Warfarin modelling

Excess primitives & under-modelling

Future

AMT V3

- Medicinal Products will be fully defined

- Include strength etc (Concrete Domains)

With a mapping of relationship types and some high-level product concepts, some integration of product hierarchies will be inferrable

Thank you

Australian e-Health Research Centre   **See us at booth 9**

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