TRANSNATIONAL PROJECTS:

Currently Initiated and Running Projects

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Margit Schwab

Currently Initiated and Running Projects

- **Partner:** *University of Toronto, Department of Computer Science*

  Project: **The $i*$ Method Conceptualization for & Implementation in ADOxx®**

  done

- **Partner:** *Universitat Politècnica de Catalunya, Llenguatges i Sistemes Informàtics*

  Project: **Involving Standards in the ADOxx® Metamodelling Compiler – The iStarML Integration**

  ongoing

- **Partner:** *Universidad Nacional de La Plata UNLP, Facultad de Informatica*

  Project: **ADOxx® Meta-Modelling Compiler: Modelling Methods for Robotic Systems**

  started

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The $i*$ Method Conceptualization for & Implementation in ADOxx®

Objectives:

*"…conceptualization of an **existing modelling method** in this $i*$ case for the later realization on a meta-modelling platform."*
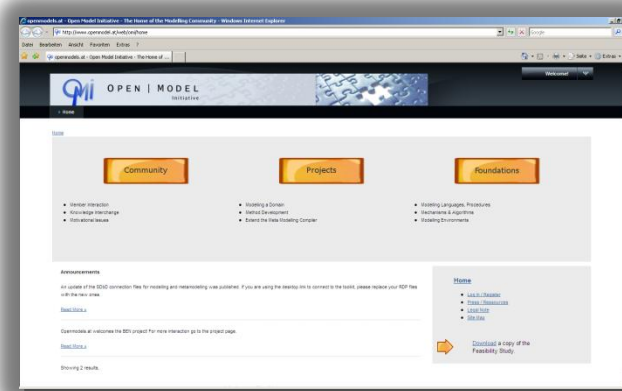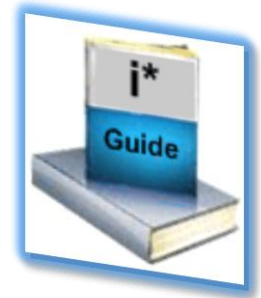
University of Toronto

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The *i** Method Conceptualization for & Implementation in ADOxx®

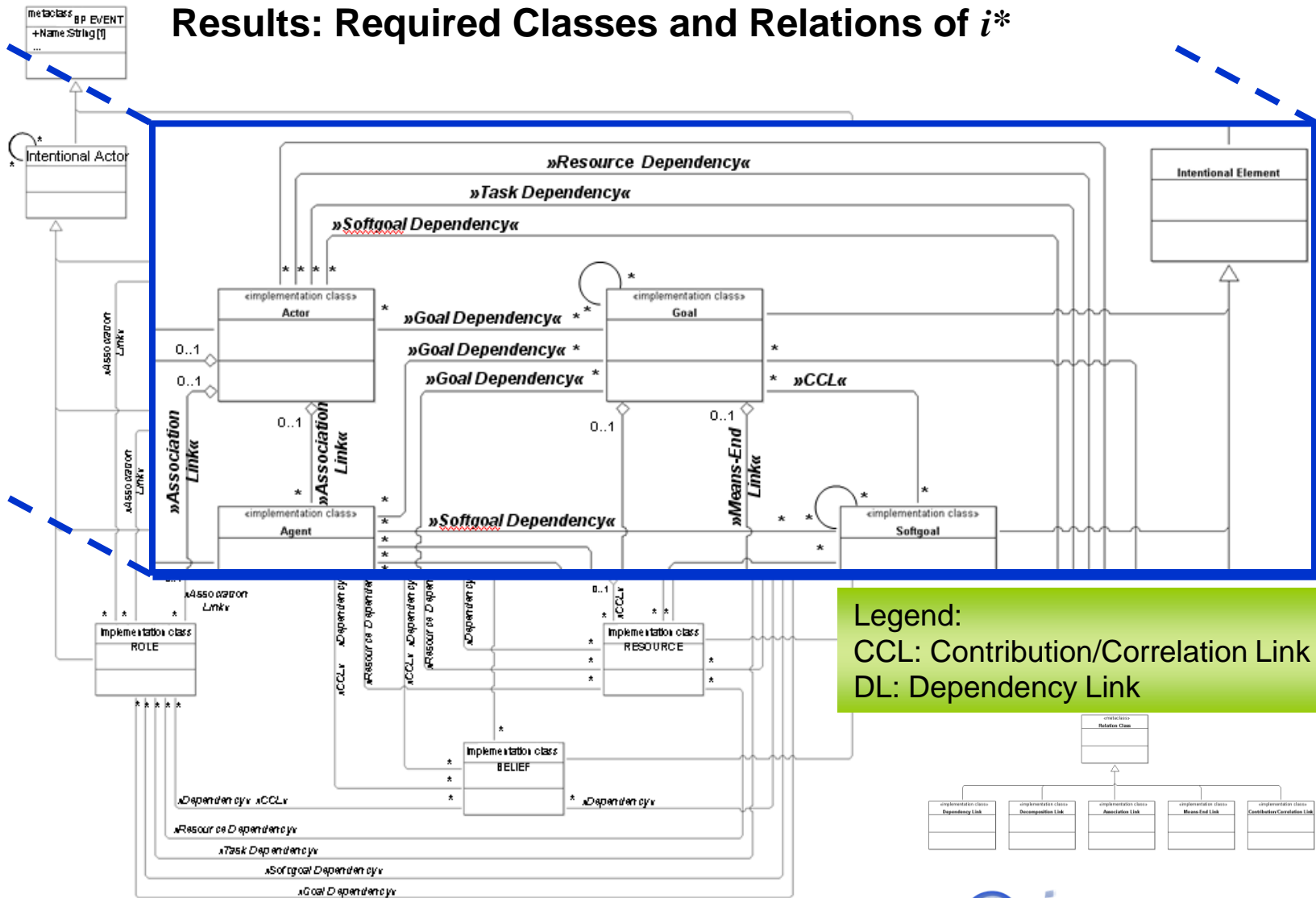**Starting Point and Partners' Project Work Interaction:**

'Conceptualization' of the *i Method - A Three Step Approach:**

1. **Analysing & Studying the *i** Method**

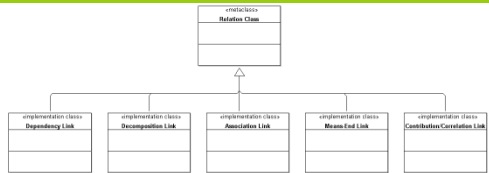2. **'Conceptualization' for the ADOxx® Platform**

3. Implement & Run

Results: Required Classes and Relations of $i*$

Legend:
CCL: Contribution/Correlation Link
DL: Dependency Link

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The i^* Method Conceptualization for & Implementation in ADOxx®

Outlook: Algorithm for Analysing Interdependency Graphs

Implementing the rules for the evaluation of interdependency graphs by means of AdoScript.

```
CC "Core" GET_MODEL_INFO modelid:(int_modid)
        #      --> RESULT ecode:intValue  modelname:strValue

CC "Core" GET_CLASS_ID classname:(g_Softgoal)
        #      --> RESULT ecode:intValue classid:intValue isrel:intValue
        SET idClassSG:(classid)

CC "Core" GET_ALL_OBJS_OF_CLASSID modelid:(int_modid) classid:(idClassSG)
        #      --> RESULT ecode:intValue objids:list
        SET lst_idSG:(objids)

            FOR idSG in:(lst_idSG)
            {
                SET idSG:(VAL idSG)

                CC "                        (idSG) in
                                       intValue objids:strValue
```
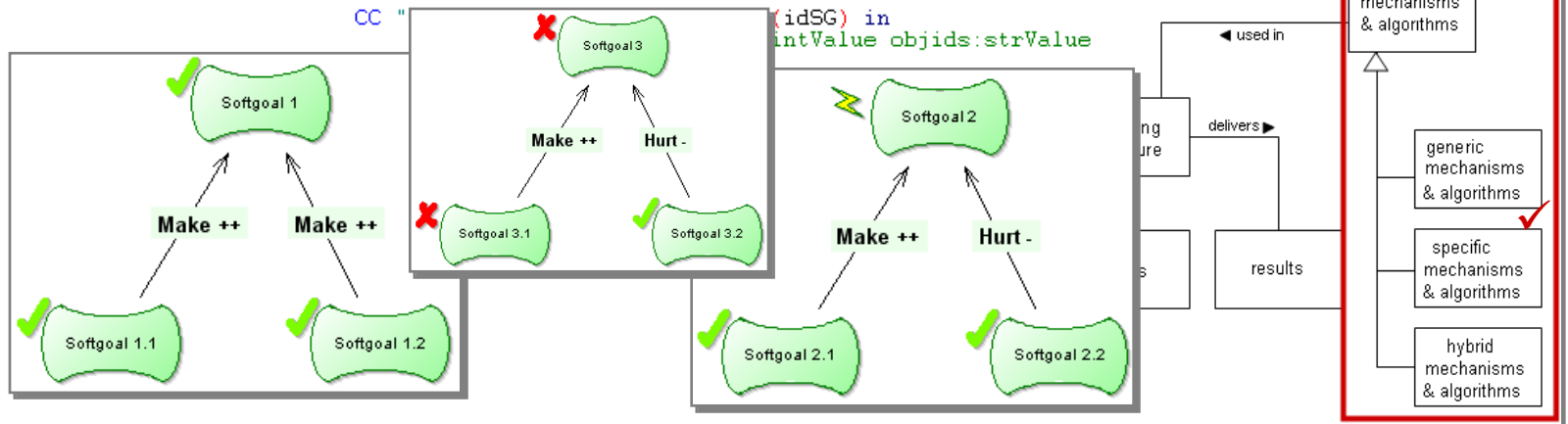
Applicable Propagation Rules

W+ equals W+
W- equals W-
W+ or W+ results in ?
W- and any value results in ?
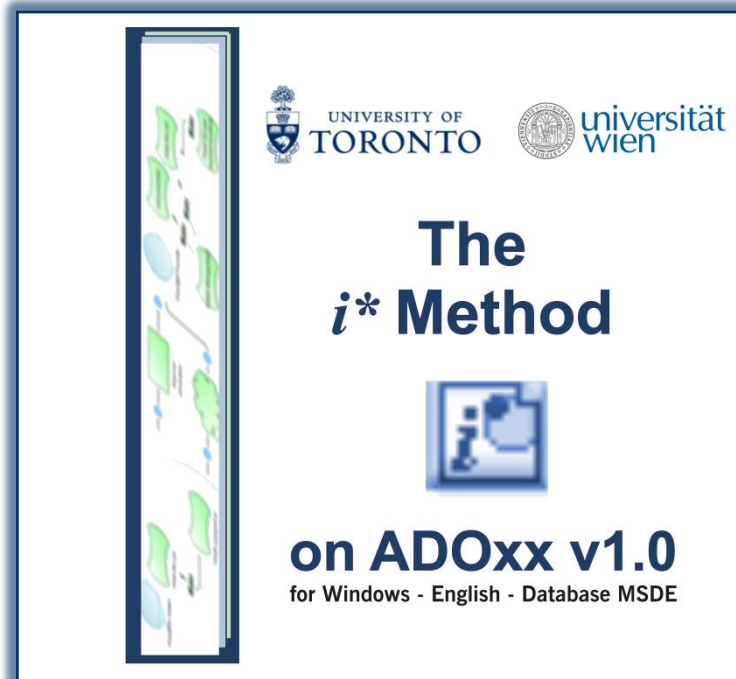...

Examples for "automatic" label propagation

[Chung, Nixon, Yu, Mylopoulos, „Non-Functional Requirements in SE, p76 / p79]

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The *i** Method Conceptualization for & Implementation in ADOxx®
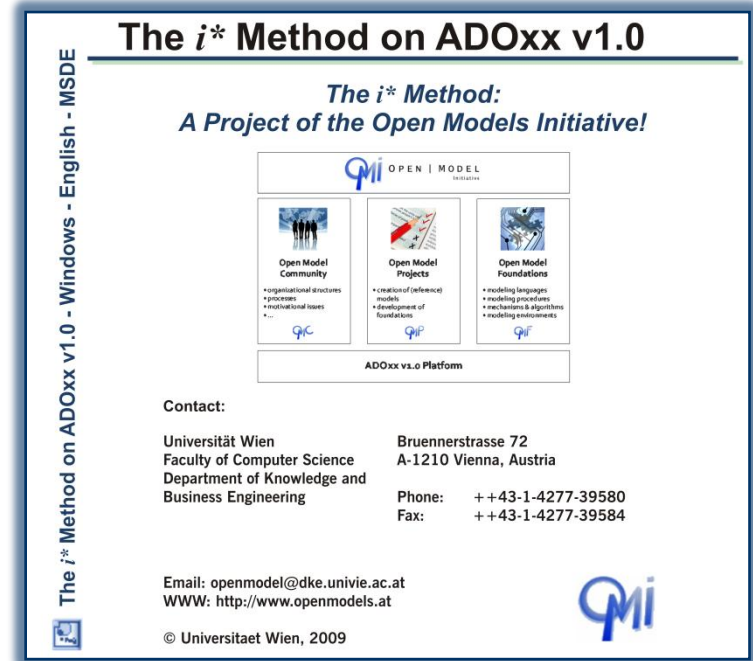
Results: Compilation as a Stand-alone Application

The *i** Method on ADOxx v1.0

for Windows - English - Database MSDE

The *i** Method on ADOxx v1.0

The *i** Method:
A Project of the Open Models Initiative!

OPEN | MODEL Initiative

Open Model Community	Open Model Projects	Open Model Foundations
• organizational structures • processes • motivational issues • ...	• creation of (reference) models • development of foundations	• modeling languages • modeling procedures • mechanism & algorithms • modeling environments

ADOxx v1.0 Platform

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Please find the solution to download at
http://www.openmodels.at/web/istar/4 - istar modelling environment.

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The *i** Method Conceptualization for & Implementation in ADOxx®

Project Scope and Details:

Project Duration:	1,5 years
Common Workshops:	2 project meetings in total, each 2 weeks of collaborative work
Financed by:	Bilateral agreements
Project State:	done

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Objectives:

*"… achieving **interoperability** between **different interpretations of one modelling method** for the purpose of a model exchange in form of a plug-in for a common platform ...."*

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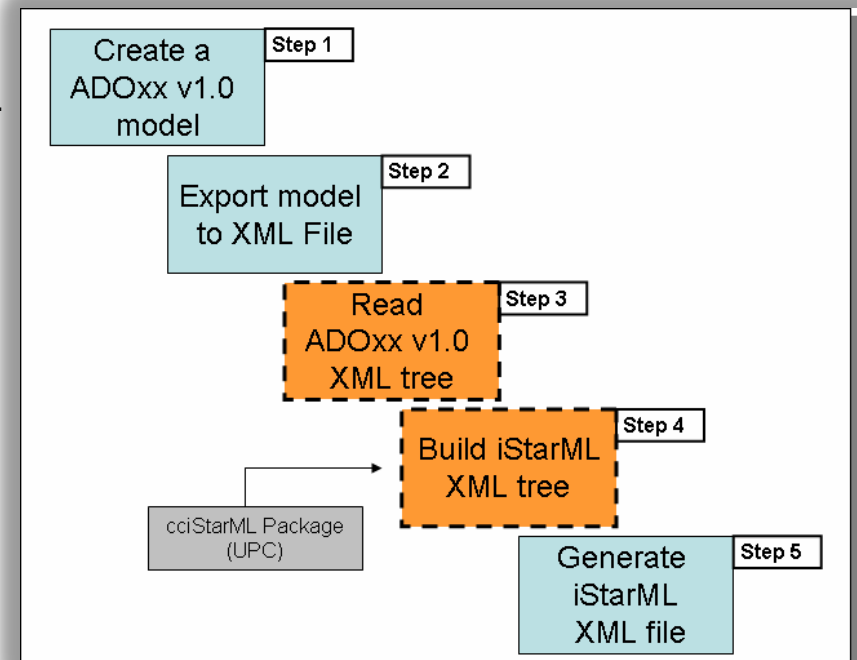
Involving Standards in the ADOxx® Metamodelling Compiler – The iStarML Integration

Objectives: Aimed Project Plan as Submitted

• **Step 1:** $i*$ models are designed by using the $i*$ Method / meta model implemented in the ADOxx v1.0 platform.

• **Step2:** An XML file is exported of the $i*$ models including data. The generated file is of an ADOxx v1.0 specific XML format.

• **Step 3:** Describes the process where the ADOxx v1.0 specific XML is read and the XML tree is built.

• **Step 4:** Is the main transformation process where the new XML tree according to the iStarML definition is built.

• **Step 5:** Once Step 4 is finished, the data is written into a new iStarML file. As a separate file the underlying schema file is stored.

Create a ADOxx v1.0 model	Step 1
Export model to XML File	Step 2
Read ADOxx v1.0 XML tree	Step 3
Build iStarML XML tree	Step 4
cciStarML Package (UPC)	
Generate iStarML XML file	Step 5

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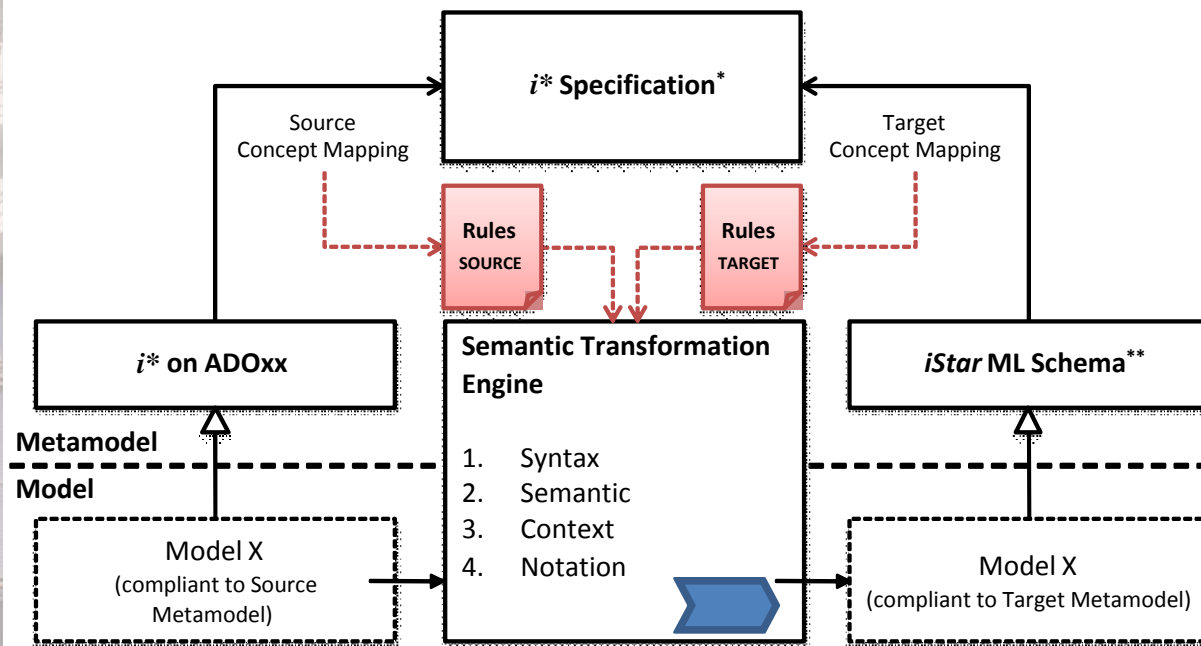OPEN | MODEL
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Involving Standards in the ADOxx® Metamodelling Compiler – The iStarML Integration

Starting Point and Partners' Project Work Interaction:

Two variants of the $i*$ Method realized as two different metamodels in two different technologies:

- Implemented on the metamodelling platform ADOxx®,
- The iStarML Markup Language.

* Yu, E.: 'Modeling Strategic Relationships for Process Reengineering'. In: Yu, E.; Giorgini, P.; Maiden, N.; Mylopoulos, J. (eds.), Social Modeling for Requirements Engineering., MIT, 2011, pp 11-152.

** Cares, C.; Franch, X.; Perini, A.;Susi, A.: iStarML Reference's Guide, Technical University of Catalonia, Report LSI-07-46-R, http://www.essi.upc.edu/~ccares/papers/ccistarml_v0.6.pdf, Last Access 2011-04-20.

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Involving Standards in the ADOxx® Metamodelling Compiler – The iStarML Integration

Results: iStarML Integration & OMI*Tool
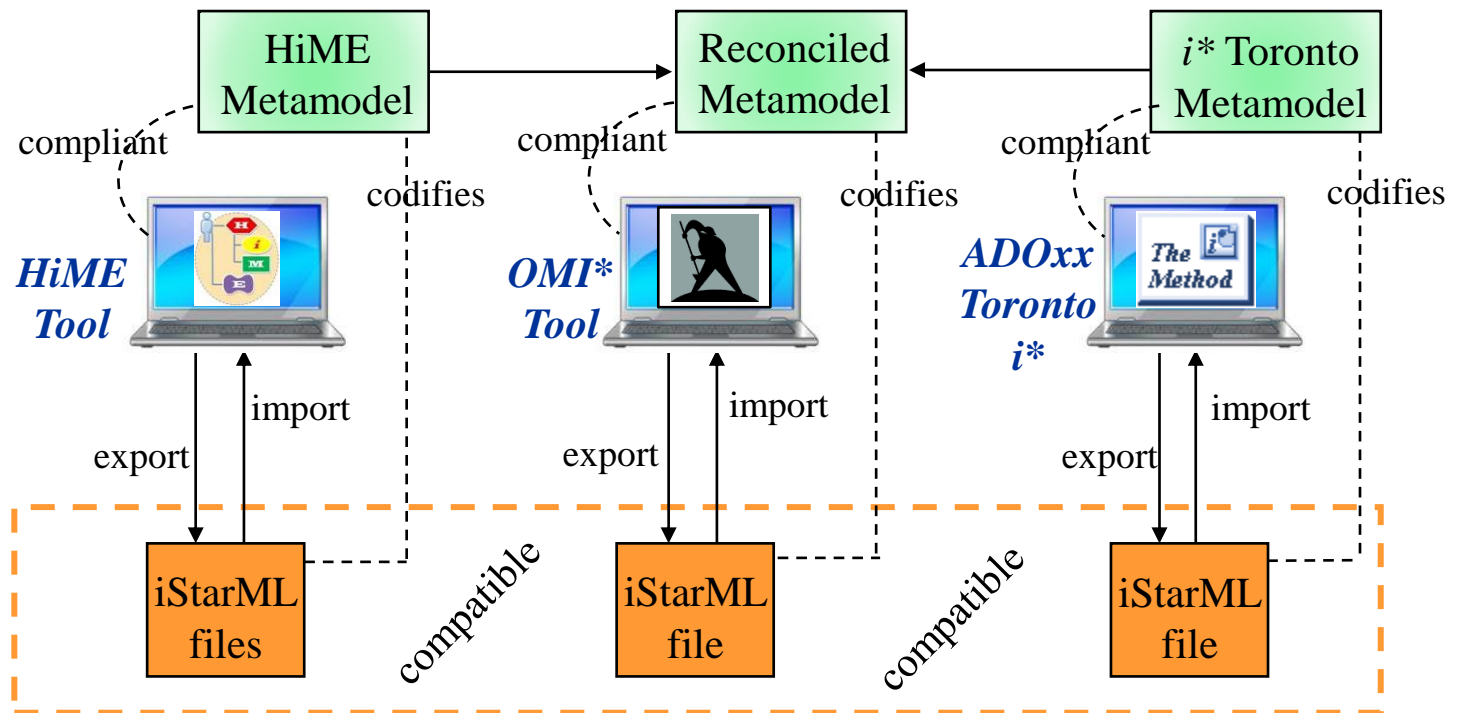
Involving Standards in the ADOxx® Metamodelling Compiler – The iStarML Integration

Project Scope and Details:

Project Duration:	2 years
Common Workshops:	4 project meetings in total; i.e. 2 weekly meetings each year of collaborative work.
Financed by:	Travel & Accommodation costs are funded by the Austrian Federal Ministry of Science and Research.
Project State:	ongoing

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ADOxx® Meta-Modelling Compiler: Modelling Methods for Robotic Systems

Objectives:

" … the rigorous development of a **modelling language for a new domain**, i.e. specific to the robotics area and a software tool, i.e. based on ADOxx®, supporting the creation of models for the technological education platforms …"

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Pons, Claudia; Giandini, Roxana; Perez, Gabriela; Baum, Gabriel; 'A Two-Level Calculus for Composing Hybrid QVT Transformations,' Chilean Computer Science Society (SCCC), 2009 International Conference of the , vol., no., pp.105-114, 10-12 Nov. 2009

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ADOxx® Meta-Modelling Compiler: Modelling Methods for Robotic Systems

Project Scope and Details:

Project Duration:	2 years
Common Workshops:	2 project visits in total; i.e. 1 monthly research visit for each project partner each year. This is about 6 to 8 weeks of collaborative work each year.
Financed by:	Travel & Accommodation costs are funded by the Austrian Federal Ministry of Science and Research.
Project State:	started

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Thank You!

Questions?