

# SSEI Research Task Summary – T5

Task Number: SSEI/T5

Lead Delivery Organisation : University of York

Project Title : Model-Driven Integration of Software Systems

Research Theme : *Integration of Software Systems*

Version : 3



## Objective of Work (why are we doing it ?)

For software acquisition to be cost-effective, it is sometimes necessary to obtain software systems from multiple, disparate suppliers. In particular, there may be a need to integrate newly purchased software systems with existing legacy systems. Enabling such software systems to interoperate poses a significant integration problem.

A key question is to determine whether integration can even be undertaken. Significant cost savings can be obtained by having an early understanding of the suitability of candidate systems for integration.

The emphasis is on automated checking techniques, which are essential for the techniques to be practical and scalable.

## Nature of Work (what is it?)

This work provides a mechanism through which integration of disparate software can be better understood at an early stage and could be greatly improved.

The research will investigate Model Driven Engineering (MDE) techniques for software systems integration. MDE involves the use of abstract, machine-checkable models for describing software systems. Automated tools can then be used for analysing, transforming, comparing, merging and manipulating models.

The MDE techniques could thereafter be combined with code generation and transformation to support system generation.

## Outcomes (what will it produce/has it produced ?)

This task will produce:

- A state-of-the-art survey of model-driven software systems integration.
- Techniques for checking compatibility between software system models, based on both structural and behavioural models.
- Techniques and tools for model integration.

Timescales 32 month task, July 2008 to February 2011

Partners

Related Work SSEI/T4

Task Lead Professor Richard Paige  
paige@cs.york.ac.uk  
01904 433242