

Current Research

Table of contents

1 PhD Research Topic.....	2
2 Research Group.....	2
3 Abstract.....	2

1. PhD Research Topic

Model Driven Design of Distribution Patterns for Web Service Compositions

2. Research Group

I work with [Dr Claus Pahl](#) in the [School of Computing](#) at [Dublin City University](#).

3. Abstract

Increasingly, distributed systems are being constructed by composing a number of discrete components. This practice, termed composition, is particularly prevalent within the Web service domain. Here, enterprise systems are built from many existing discrete applications, often legacy applications exposed using Web service interfaces. There are a number of architectural configurations or distribution patterns, which express how a composed system is to be deployed. However, the amount of code required to realise these distribution patterns is considerable. In this paper, we outline our novel Model Driven Architecture, which takes existing Web service interfaces as its input and generates an executable Web service composition, guided by a distribution pattern modeled by the software architect. The creation of the model can be partially automated when semantic representations, such as OWL-S descriptors, of the discrete Web services are provided. Additionally we consider a novel mechanism which enables the automated deployment of the generated executable Web service composition.