



Business Process Management Research Group
Faculty of Science and Technology
Queensland University of Technology

BPM Seminar Series

Clone detection in repositories of business process models

Marcello La Rosa

BPM Group, Queensland University of Technology

m.larosa@qut.edu.au

THU, 14 April 2011, 2.00-3.00pm, QUT, 126 Margaret Street, Level 13, Room 1310

Abstract As organizations reach to higher levels of business process management maturity, they often find themselves maintaining repositories of hundreds or even thousands of process models, representing valuable knowledge about their operations. Over time, process model repositories tend to accumulate duplicate fragments (also called *clones*) as new process models are created or extended by copying and merging fragments from other models. This calls for methods to detect clones in process models, so that these clones can be refactored as separate subprocesses in order to improve maintainability. This presentation introduces an indexing structure to support the fast detection of clones in large process model repositories. The proposed index is based on a novel combination of a method for process model decomposition (specifically the Refined Process Structure Tree), with established graph canonization and string matching techniques. Experiments show that the algorithm scales to repositories with hundreds of models. The experimental results also show that a significant number of non-trivial clones can be found in process model repositories taken from industrial practice.

Speaker Marcello La Rosa is a Senior Lecturer with the BPM research group at the Queensland University of Technology, Brisbane, Australia, and a Research Fellow at NICTA Queensland. He obtained his PhD in Computer Science with the BPM research group in 2009. His research interests embrace different topics in the BPM area, such as management of large process model collections, process modeling, configuration and automation. Marcello is a senior trainer for professional education courses on BPM and service-oriented architecture topics.