

A Business Process Modelling Driven Approach for Legacy Systems Evolution

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Abstract—Precise identification of current system requirements is crucial for successful legacy system maintenance and re-engineering. Failure to understand the requirements of legacy system indicates that rational choices about how to adapt the software cannot be made. Therefore, a new approach to utilize business process models in evolving legacy systems is proposed in this paper. The proposed approach adopted the extended Role Activity Diagram notation to bridge the gap between business process models and automated systems. This facilitated the reverse engineering of use case models of legacy systems as a basis for further system maintenance and/or re-engineering. The process of cancer registration in Jordan is used to demonstrate the proposed approach and show its ease and timeliness. Finally, further work is planned to validate and evaluate the effectiveness of the proposed approach using a number of legacy systems of different application domains.

Index Terms—Software requirements, reverse engineering, business process modelling.