1. Reverse Engineering Applied to CMS-Based Web Applications Coded in PHP: A Proposal of Migration

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Abstract: Increasingly, organizations experience the necessity of migrating their legacy Web applications to new platforms which meet better their needs. For these reasons, these organizations demand reengineering processes that enable this migration in an automatic and standardized way minimizing costs. In the last years, Architecture-Driven Modernization (ADM) has acquired great relevance since it solves most of the problems of traditional reengineering. This is specially crucial in the reengineering of CMS-based Web applications. At time of writing there are no methods that could be used in that context. Hence, we defined an ADM-based method for migrating this kind of Web applications composed of three phases: reverse engineering, restructuring and forward engineering. This method is the framework of the work presented in this paper which is focused on its reverse engineering phase defined by three tasks: 1) knowledge extraction, 2) generation of KDM models and 3) generation of the CMS model. In this paper we explain the implementation of these tasks defining text-to-model (T2M) transformations implemented by a model extractor and model-to-model (M2M) transformations defined in ATL. We use a real example of a CMS-based Web application coded in PHP to show the feasibility of the approach. © Springer-Verlag Berlin Heidelberg 2013. (30 refs)
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