ABSTRACT

Implementation of
a Flexible Workflow System
using Extensible Markup Language

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Workflow Management Systems provide a means of automating the traditionally manual
tasks of the business processes. In the modern workplace, Workflow Management Systems
form an integral part of business solutions. The benefits they bring to organizations have
undoubtedly secured them a continuing role in businesses of the future. However, in order for
them to contribute in the emerging business environment, software solutions need to evolve in
order to meet the expectations and requirements of continuously changing business processes.
Unfortunately traditional software, by its very nature, is static and does not naturally
complement these changing processes.

A new technology, Extensible Markup Language (XML), provides a means of accurately
representing these business processes in a manner that can be easily modified without
embedding the processes in the compiled application, thus providing flexibility. In this thesis,
a flexible workflow system is presented using XML and is demonstrated with a case study.
The manner in which the business rules are expressed in the XML workflow language and the
way the system provides software flexibility is discussed. In order to create a truly effective
system, the flexibility must be cascaded throughout the system and is achieved by the
dynamic loading and execution of software components. The workflow language can be
expanded to include more complex process definition, which adds to its flexibility and
facilitates future organizational growth and development.

Keywords: Workflow, Extensible Markup Language, XML, Automating Business
Processes, Dynamic Software Composition