An End-To-End Software Traceability Tool in an Industrial Context

Hazeline Asuncion
Institute for Software Research
University of California, Irvine
Irvine, CA 92697-3425
hasuncion@ics.uci.edu

Frédéric François
Wonderware Corp.
Frederic.Francois@wonderware.com

Richard N. Taylor
Institute for Software Research
University of California, Irvine
taylor@ics.uci.edu

ISR Technical Report # UCI-ISR-06-16
October 2006

Abstract:

Traceability is a critically important aspect of software development that is often required by various professional standards and government agencies. Yet, current approaches do not adequately address end-to-end traceability. Consequently, many industry projects become entangled in process overhead and fail to derive much benefit from current traceability solutions. This paper presents a successful end-to-end software traceability tool developed at Wonderware, a software development company and a business unit of Invensys Systems, Inc. Our process-oriented approach achieves comprehensive traceability and supports the entire software development life cycle by focusing on both requirements traceability and process traceability. This paper offers general traceability guidelines that have emerged from the experience of implementing and deploying this traceability tool within actual company constraints. We discuss encouraging preliminary results and point to the advantages gained in using our approach.