

## Considering Partially Developed Artifacts in Change Impact Analysis Implementation

**Authors :** Nazri Kama, Sufyan Basri, Roslina Ibrahim

**Abstract :** It is important to manage the changes in the software to meet the evolving needs of the customer. Accepting too many changes causes delay in the completion and it incurs additional cost. One type of information that helps to make the decision is through change impact analysis. Current impact analysis approaches assume that all classes in the class artifact are completely developed and the class artifact is used as a source of analysis. However, these assumptions are impractical for impact analysis in the software development phase as some classes in the class artifact are still under development or partially developed that leads to inaccuracy. This paper presents a novel impact analysis approach to be used in the software development phase. The significant achievements of the approach are demonstrated through an extensive experimental validation using three case studies.

**Keywords :** software development, impact analysis, traceability, static analysis.

**Conference Title :** ICSDE 2014 : International Conference on Software Design Engineering

**Conference Location :** Zurich, Switzerland

**Conference Dates :** January 14-15, 2014