PROMES
Process Component: Refactoring & Traceability

SUMMARY

Problem: Embedded Software commonly suffers from “bad smells” like long method size and lack of cohesion that lead to low understandability, reusability and modularity.

Solution: A method and tool to resolve the long method “bad smell” by decomposing a long method into smaller ones. As a result, the method’s size is reduced, its cohesion is boosted, and thus code understandability, reusability & modularity are enhanced.

Future directions: The development of traces between different software artifacts, can preserve the achieved levels of quality and ease future maintenance.

OBJECTIVES
- Reuse existing components.
- Resolve code “bad smells”.

BUSINESS VALUE
- Reduced time-to-market.
- Opportunity to reuse the modularized methods.
- Cost saving, due to reuse and maintainability.
- Improved understandability, reusability and modularity.

EXPECTED RESULTS
- A method for identifying “bad smells”.
- A method for identifying refactoring opportunities and a tool that automates this process.
- A traceability approach aiming at preserving the quality of the refactored system.

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