Abstract

Incompleteness and delays are the main problems facing software development projects for a long time. And yet, many organizations are still complaining and suffering from these problems. The aims of this research are to minimize project management problems and difficulties, reduce software development complexity, and help project managers to perform their responsibilities to overcome incompleteness, delays, and the poor quality in software development.

This thesis presents a prototype tool (SoftProMT) to reduce problems, attempts to ensure project quality, and to allow a better software project management. SoftProMT focuses on several topics such as managing the human resources as a major element of project success, analysing and comparing projects, tracking the change in project requirements, tracking and monitoring a project's progress, providing an example on integrated system, reducing some complexity, and reducing the acquisition time for suitable equipment. The tool also generates reports to help managers make a better decision. Survey results are also presented in this thesis.

The main research contributions are: project management tool should be integrated with software development for better tracking and controlling the project, analysing and evaluating problems in current and past projects can help in project estimation, tracking and controlling the effects of changes in project requirements can reduce delays and incompleteness, linking a project with the chosen methodology can reduce some project complexity, facilitate assigning people based on certain criteria in software project management tool will certainly ensure the quality of a project, reduces problems, and makes accurate project estimation.