

**Project Title:** Multi Agent-Based Cost Estimation and Performance Evaluation Tool for Personal Software Process (PSP<sup>SM</sup>)  
**Project No.:** RG008-09ICT  
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**Abstract:**

Various tools have been produced to assist Personal Software Process (PSP) practitioners in implementing their processes, which require strong discipline from the individual software engineer. Nevertheless, most of the currently available tools still require software engineers to become involved in time-consuming manual processes and offer limited assistance. This research study presents the substantial potential for software agents to be incorporated into PSP automated tools by introducing four new agent-based features. These features are the proactive interface agent, an integrated Gantt chart with sensor-based scheduling, prediction ability, and indirect management through multi-agent deployment. This agent has the additional features of flexibility and privacy. Integrated with the proactive assistant, the proposed tools are capable of collecting and processing accurate PSP data metrics and translating them into informative and meaningful information for both the software engineer and the project manager. The use of agents demonstrated in this research study is meant to significantly help engineers to practice all of the PSP processes effectively and in a timely manner and to get feedback on their performance with a visualisation platform at any time. As for the future research, this tool will be integrated with Team Software Process (TSP) operational framework and Project Manager Body of Knowledge (PMBOK) so that it can support software process at team level and at the same time improving project management aspect for software development project.