

TITLE OF MASTER THESIS

Exploring of the consequences of human resources multitasking in industrial automation projects: a tool to mitigate impacts.

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ABSTRACT

Each industrial automation project includes tasks strongly depend on human factor many of which may belong to the critical path or chain of the project. Multitasking affects significantly human productivity. This reduction in productivity has as a direct result the delay of the primary task which may cause an overall delay to the project with cost and time overruns. A project should be seen in a global environment that of the company, where resources are shared among its portfolio of projects. Although multitasking might have negative results, it is something that cannot be eliminated, but it can be mitigated by project managers. This work presents the effects of multitasking in human productivity, especially when the tasks are complex, like PLC/SCADA software development. Using the Analytical Hierarchy Process (AHP) method, a simple tool is created to be used by project managers, in order to assist them in decision making. Criteria that influence these decisions are referenced and their priority vectors are proposed. Also, some real examples are given.

KEYWORDS

Multitasking; Task switching; Industrial automation projects; Project manager decision making; AHP; Project management tool;