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Method For Determining the Set of Acceptable Project Portfolios of a Company with Limited Resources*

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Abstract

The dynamic growth of businesses and the increase in market competition is causing organisations to increasingly choose to diversify the ventures they pursue. Such an approach inherently forces decisions to select for implementation ventures that are not only in line with the company's strategy but are also profitable. To maximise the return on ongoing ventures and ensure their alignment with corporate strategy, project portfolios are created to streamline project and programme management. The selection of a project portfolio based on J identified projects is, in the general case, not a trivial task. Firstly, of all the possible project portfolios ($2^J - 1$), as a rule only some of them meet the required business criteria. Secondly, due to the limited resources a company can allocate to these projects, not all project portfolios meeting the business criteria can be realised. This paper proposes a method for determining the set of acceptable project portfolios of an enterprise, i.e., such subsets of the indicated set of projects, each of which meets the required business criteria, and it is possible to allocate all the resources (from among the enterprise's resources) required for its implementation.

Keywords: project, project portfolio, resources, graph, Boolean function.

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