Multi-Project Resource Allocation: The State of the Art

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Abstract: The traditional project network techniques have been extended to address the problem of resource allocation in a multi-project system. Because of the excessive computational effort required by even the best of the analytic approaches, heuristic programming has been favoured for the multi-project, multi-resource problem. The programmes developed use a combination of priority rules based on time or resource usage to minimise project slippage while achieving good cost performance and resource utilisation. Exciting potential exists at the Project Management/Economic Planning interface. This paper discusses that the extension of project network techniques could be used to complement the conventional economic planning techniques in developing countries by facilitating the development and efficient execution of feasible public sector investment programmes which require careful integration of several mutually dependent projects.

Keywords: Multi-project, resource allocation, project network, integration