

Resource Allocation and Levelling in Experimental Projects in a Geographical Neighborhood

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ABSTRACT

Resource allocation and leveling are the top challenges facing in the construction field nowadays. This can be minimized using the heuristic procedure and by using management software solution. One of the major problems that all the construction companies facing now is labor migration. Due to this, apparent labor scarcity occurs. Mobilization of new laborers with proper skill set is a major problem for all companies irrespective of their status. Projects get delayed due to non-availability of laborers. In most of the midsize projects, the planning is done manually which is time consuming and error prone. Very often laborer lay off also occur due to want of work. This is due to ill scheduled projects, which do not have a proper utilization plan of the laborers. Hence, there is a need for developing software tools that can predict the manpower requirements and to provide continuous work for them in this particular region. The main purpose of this work is to make use of the human resources to attain a sustainable work schedule all over the year and to retain them. The present study has been done with three live projects located in the region by assigning the resources with the help of Work Breakdown Structure (WBS), using the 'resource tool' present in Primavera software, along with MSP AutoCAD and Microsoft Excel. This study thus explains "less work more gain" concept how to maximize utilization of resources in construction projects using software tools. On doing this type of work the labor gets more benefited by reducing their movement and stress relief by getting job in the same or nearby place. Further study also explains the labor stress to make relief from stress and welfare for them.

Keywords: *Management; Planning; Budget, Engineering & Work Breakdown Structure.*