

SPACE SYSTEMS SYMPOSIUM (D1)  
System Engineering Tools, Processes and Training (1) (3)

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A TOOL FOR RAPID AND EARLY SCHEDULE ESTIMATES

**Abstract**

The schedule, a document resuming Projects time line and the critical path associated to the work development execution, has always represented a fundamental reference for Tendering and Project Management process. Decision Makers challenge is to run Projects within nominal time constraints and technology road maps: a good planning leads to optimum logistic solution and, even more important, to effective cost containment according with the scientific needs. The Space sector is characterized by long development programmes, often driven by innovation, technical uncertainties, and international political constraints: this is the main difference between the Space business and other types of Industries, such as the Off Shore, where the work is standardized, technologies are matured, contingencies are effectively reduced. An early estimate of Space Projects schedule then becomes a fundamental step for a proper programmatic assessment. Starting from the assumption that changes in Programmatic might heavily affect the overall Project price, this article describes the model that has been developed for an objective and rapid Space Projects master schedule simulation: the methodology here described provides a standard way of schedule evaluation and independent estimation, thought for avoiding any bias led by personal judgements. Thus, this article's aim is to describe a potential solution for Space Projects optimum schedule simulation, a powerful instrument for cost engineering support to early phase studies, Tender Evaluation Boards, management/programmatic panels, and cost risk assessment consolidation.