

IAF SPACE SYSTEMS SYMPOSIUM (D1)  
Interactive Presentations - IAF SPACE SYSTEMS SYMPOSIUM (IP)

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## SYSTEM CONCURRENT ENGINEERING OF A PEOPLE TRACKING SATELLITE, A CASE STUDY

**Abstract**

Developing satellite systems involves managing the challenges that come with the complexity of the technological aspects of these systems and their very dynamic manufacturing and business organization. In such a challenging environment, the success of this development is dependent on the capacity to shorten development cycle time, reduce cost, manage risks and, at the same time, define product and organization requirements and solution that satisfy the stakeholders' needs. Traditional development approaches provide only a partial identification and understanding of the elements of this environment and their interactions, therefore, to achieve a satisfactory result it is recommended to develop such complex systems using a combination of methods from different approaches. Loureiro (1999) proposed a framework and method that extends the application of the System Engineering process to life cycle processes and their performing organizations and applies Concurrent Engineering at all levels of the hierarchical product breakdown structured in order to help on development of complex products. This paper presents the integrated System Engineering and Concurrent Engineering steps for the case study of a development of a People Tracking Satellite using Loureiro's approach. The feasibility of this methodology as well as its capacity to addresses the needs for a scope of a People Tracking Satellite development, for the integration of product, process and organization and for complexity management are demonstrated.