Evaluating Performance Factors in System Development

Chandru Mirchandani
Lockheed Martin Space Operations
NASA/Goddard Space Flight Center
E-mail: chandru@kong.gsfc.nasa.gov
Tel: (301) 286-7967

Abstract

The development of unique solutions to processing systems using the new technologies introduces uncertainty of the system working correctly within the schedule for support. This uncertainty can be reduced considerably by evaluating the performance of the system during the development and incremental test stage. This paper describes a method by which the evaluation may be carried out during development so that the system will increase the probability of having the capability in the required time for mission support. This paper will describe methods by which the performance factors are normalized for different system models as they meet the prescribed requirements; and how the analyses identifies areas of high risk. To illustrate the methodology, the paper will briefly examine a case study whereby alternatives to a processing system are evaluated and identify the areas where the analyses could have been performed to have reduced the re-engineering costs.