

SPACE SYSTEMS SYMPOSIUM (D1)
Lessons Learned in Space Systems (5)

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SPACE SOFTWARE QUALITY ASSURANCE - ISRO SATELLITE CENTRE EXPERIENCE

Abstract

ISRO Satellite Centre (ISAC) of the Indian Space Research Organisation is the lead centre in India in the development and operationalisation of satellites for earth observation, communication, navigation and scientific research applications . The present day satellite systems are highly advanced processor based systems and mission functions are achieved through software. As a result , software has become a critical element for mission success. The Software Quality assurance department of ISAC formulates and enforces end to end verification and validation strategies which are rigorously followed during the entire software development process . This paper in its first few sections gives an account of the current R&QA practices followed in ISAC and how it evolved over the years based on lessons learned from the past . Today the product assurance plans enable to achieve the quality goals set by projects which is very well demonstrated by the orbiting Indian spacecrafts including the Chandrayaan-1 spacecraft .

The remaining sections address ISAC's future plans .The major challenge is that many ambitious spacecraft programs are in the offing which need to be realized within short development time This calls for planning of methodologies to enhance productivity and reduce delivery time without compromising Quality and Reliability goals . Plans to meet future challenges based on experience gained till now is also elaborated