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METHODS AND EXPERIENCE OF SOFTWARE ENGINEERING IN GREAT SPACE PROJECT

Abstract

Software is widely used in modern space project, there are hundreds of software and programmable logic devices (eg. FPGA, ASIC, CPLD) in great space project. In order to ensure the steady progress of software development and to assure software quality, special methods, such as systems engineering methods, are applied in the software engineering work. The methods include: 1) carrying out spacecraft information system design and software overall design, 2) developing the software engineering specifications system, 3) establishing software organization system at all levels and all the software related organization should get the specific certification, 4) processing the software engineering management orderly and coordinately, 5) carrying out software special inspection. The software developing organizations and testing organizations in China lunar exploration project carried out the software engineering work on these ideas, and got much valuable experience.