

47th SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE
ACTIVITIES (D5)

Ensuring quality and safety in a cost constrained environment: which trade-off? (1)

Author: Mrs. Dan Wu

China Academy of Aerospace Systems Science and Engineering, China, christina.wud@gmail.com

Mr. rui wang

China, hustwr@yahoo.com.cn

Dr. Gang ZHANG

China Academy of Aerospace Systems Science and Engineering, China, zhanggangcasc@vip.sina.com

Mrs. YINI WU

China, 47024047@qq.com

THIRD PARTY INDEPENDENT TESTING & VERIFYING TECHNOLOGY OF FIELD
PROGRAMMABLE GATE ARRAY IN FUTURE SPACE AVIONICS

Abstract

FPGA(Field Programmable Gate Array) is using in space avionics systems more widely because of it's flexibility and fault tolerant. Meanwhile, it brings the new challenge for testing and verifying technology of system using FPGA. In China aerospace industry, quality assurance of design in FPGA is treated as software. Life cycle of design in FPGA is managed in the method of software engineer. However, As the quantity and complexity of design in FPGA is increasing, more quality issue is brought on by FPGA design fault. So China aerospace industry rule that FPGA design must be tested and verified by third party independent institute before used in whole system. The article presents Third Party Independent Testing Verifying Technology of FPGA In Future Space Avionics. And, we face the challenge of new technology and the resolvable method.