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RESEARCH ON NETWORKING COMMUNICATION TECHNOLOGY BASED ON SMALL SPACECRAFT

Abstract

Small spacecrafts have many advantages such as distribution area controllable, flexible, easy networking and co-optimal allocation of resources. The distributed collaborative networking technology can make several small spacecrafts to co-ordinate and work together as a whole. The technology has good prospects in the aerospace field and has obtained wide attention, for it can achieve communication transmission, space exploration, decision-making tasks and other functions. This paper proposes a collaborative networking solution based on small spacecraft, focusing on the research of key technologies such as networking method, communication protocols, synchronous communication and interference. This paper designed a collaborative network communication system solution, developed a prototype and verified the feasibility of the solution through simulation analysis and prototype testing. This paper also suggested the ideas and methods to improve future collaborative network communication system.