

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Integrated Applications End-to-End Solutions (1)

Author: Mr. Xiu Mao

Beijing Institute of Satellite Information Engineering, China Academy of Space Technology (CAST),
China, maoxiu198412@163.com

Mr. Jixin Duan

Beijing Institute of Satellite Information Engineering, China Academy of Space Technology (CAST),
China, jixin_duan@163.com

Dr. Mo LIN

China Academy of Space Technology (CAST), China, linmo_cast@yahoo.cn

Mr. Xinrong Wang

Beijing Institute of Satellite Information Engineering, China Academy of Space Technology (CAST),
China, xinrong.wang@163.com

Mr. xingwang zhou

Beijing Institute of Satellite Information Engineering, China Academy of Space Technology (CAST),
China, zhouxw200@163.com

BROADBAND COMMUNICATION AND INFORMATION SOLUTION FOR ISLANDS BASED ON
SATELLITES

Abstract

After detailed analysis of difficulties confronted by islands communication and information, such as limited backbone data throughput to the outside, narrow bandwidth between islands, adverse environment for optical fiber lay, etc., which cumber the information application and development in many sectors of the corresponding countries including telecommunication internet, tourism, exploitation, mass media and surveillance, the article proposes that the special communication satellite application system is designed for islands based on the current satellites in order to realize the high-quality communication of wide coverage, deep pervasion, high individualization, and broad bandwidth, and finally achieves communication operation and abundant sector services. The system contains the VSAT Subsystem, the TV broadcasting Subsystem, the Integrated Switch and Operation Subsystem, and the Sector Information Service Subsystem. The advantages of the whole system include the wider bandwidth, the seamless combination of the satellite communication and the traditional communication methods to suit the special conditions on the islands, the abundant sector services around the islands activities, and the collective business operation of all kinds of services. Also, the deficiencies of the current communication satellites are analyzed when serving the islands, such as the inadequate coverage, the limited transponders, and the limited power. New generation communication satellites for islands are introduced to move up the communication and information performance in these districts.