EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Data Management Systems (4)

Author: Dr. Hyeon-Cheol Lee
Korea Aerospace Research Institute (KARI), Korea, Republic of, hlee@kari.re.kr

BLOCK GAIN VECTOR QUANTIZATION FOR SATELLITE SAR RAW DATA COMPRESSION

Abstract

SAR payload used in Satellite transmits ground station its SAR raw data by wireless datalink for post processing, then efforts of reducing large size of Satellite SAR raw data have been studied much. In this paper, we introduce Block Gain Vector Quantization (BGVQ) which reduces its data size effectively, it is applied to real/imaginary SAR raw data type and magnitude/phase SAR raw data type, then compared with BGVQ applied to natural image type by SNR. The natural images are clear even at compression ratio 64:1, however real/imagery SAR raw data is clear at compression ratio 16:1, magnitude/phase SAR raw data is clear when compression ratio is decreased to 4:1.