

FRINGE 96**Vexcel/Gamma 3D Satellite SAR Ground Processing System**

John C. Curlander Vexcel Corporation

Urs Wegmuller Gamma Remote Sensing

Abstract

The Vexcel/Gamma 3D Satellite SAR Ground Processing System is a low-cost system for reception, capture and processing of spaceborne SAR data. The system produces map registered image and topographic data products. It features a programmable Level 0 processor for data capture of the raw downlink from any of the spaceborne SAR satellites (i.e., Radarsat, ERS, JERS) and output to a disk array. This Level 0 processor will plug into existing X-band ground stations for SPOT and Landsat or any ERS and JERS stations. The Level 0 processor output is a frame synchronized product in the RAW CEOS format. The SAR processor has the capability for image formation, stereo and interferometric SAR digital terrain model production and orthorectification of the image to a variety of map projections. It will operate on any UNIX workstation and handles data from all spaceborne SAR satellites. The system is operated from high level graphical user interfaces. It is the first operational SAR ground station to produce GIS compatible products from spaceborne SAR data.

Keywords: