Airborne Interferometric Radar Mapping In Support of British Flood Modeling and Defence

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Airborne Interferometric Radar Mapping In Support of British Flood Modeling and Defence Hugh MacKayInternational Business Development ManagerIntermap Technologies Corporation2 Gurdwara Road, Suite 200Ottawa, CanadaK2E 1A2hmackay@intermap.ca(613) 226-5442Intermap Technologies recently completed airborne nation-wide Interferometric Synthetic Aperture Radar (IFSAR) mapping of Great Britain. The IFSAR mapping provided two spatial data sets; a digital elevation model (DEM) and an orthorectified radar image (ORI). These data sets are now in use for a wide range of applications, including flood mapping and modeling, landslip modeling, transportation and utility corridor modeling, 3-D scene visualization, topographic mapping, and many other applications. This presentation examines the flood mapping and modeling application, which is in wide use by both the private and public sectors in support of flood defence in Britain. Flood insurance in Britain is the responsibility of the property owner; there is no government-sponsored flood insurance program. The insurance industry creates models to examine flood risk to their property portfolios. A key component of these models is terrain information, both land cover and topography. This presentation will review the development of a River Thames Flood Risk Analysis System and a Nation-wide Flood Risk Model on behalf of the private sector insurance community. The Environment Agency of England and Wales, as well as the Scottish Environmental Protection Agency, are responsible for the creation and distribution of indicative flood plain maps of Britain. These indicative flood plain maps are created to support both coastal and river flood defence, at both national and local scales. Terrain information, particularly topography, is critical to the accuracy of the maps. The presentation will review the use of the IFSAR data for creation of a new generation of flood maps.Independent validation and verification studies of the airborne IFSAR data sets will also be presented, including the independent studies conducted by the University College of London and the Environment Agency.