KOMPSAT-1 Imagery of European Cities: Geocoded Archive and Web-Services Access

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In the framework of the well established scientific and technological collaboration between the Korean Aerospace Research Institute (KARI) and the Austrian Research Centers (ARC) a KOMPSAT-1 (Korean Multi-Purpose Satellite) archive of High-Resolution geocoded images (approx. 140 images) of some 60 European Cities, has been established at ARC. This paper describes the geocoding process applied, the European ground control feature data used, the archive management system and its user service interfaces. All developments have been performed with future extensions for the upcoming KOMPSAT-2 mission in mind. A knowledgebase is now available at ARC about Ground Control Point and feature information over a wide geographical and institutional range in Europe. It addresses the very heterogeneous situation of available geo-reference data and focuses on publicly offered, online resources. The archive system development of the KOMPSAT-1 Regional Application Archive (KERAA) at ARC delivered a state-of-the-art user service system, including the possibility to search, view, and order available data and derived products. The developments have been fully based on international standards (ISO, OGC) and interoperability guidelines utilizing latest technological trends (XML, SOAP, WSDL, etc.). The OpenSource WebMapServer (WMS) of the University of Minnesota, which already provides a WebFeatureServer (WFS) and a WebCoverageServer (WCS), together with the spatially enabled PostGIS/PostgreSQL database has been chosen and extended to the special needs of KERAA and the user service system.