

15 YEARS OF URBAN AND REGIONAL APPLICATIONS OF VHR IMAGERY IN POLAND

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ABSTRACT:

The first two applications of VHR imagery occurred in 1993 simultaneously in Warsaw and Gdansk. Warsaw case - was a research project carried out by prof. Romulad Kaczynski of Institute of Geodezy and Cartography, Gdansk case - was a response to practical needs of city administration related to land inventory. In both cases KVR-1000 imagery have been applied, which could be bought directly in Moscow. Knowledge of Gdansk GIS Team on existence of Russian KVR-1000 imagery came through USAID funded mission and contacts with PADCO consultancy from Washington DC. Orthorectification, overlapping of vector layer, consisting of 989 digitized maps of cadastral parcels, merging, linking with textual attributes of ownership of land was done, due to necessity of creating of ownership structure of land (dynamically changing). Transfer of legal rights of land ownership from State to City property - was proceeding with pace of more than 100 parcels/day, totalling to more than 30 000 real estates in less than 3 years time. Application proved to be very successful, due to its low price (less than 20 000 US\$) at the same time allowing to manage land resources of ca 750 million \$ value (in prices of 1993 year). Then time have come for usage of scanned aerial photos, captured for Poland in timeframe on 1995-1999, for almost 300 000 km sq. Then the use of IRS 1C/1D imagery and production of IRS orthophoto of whole Poland (2000-2002 timeframe), which have been applied for regional planning and maps updating. Integration of Poland into EU structures required the fulfillment of IACS/LPIS programs requirements and therefore, for border areas (with Russia, Belarus, Ukraine, Slovak and Czech Republics), where airplanes could not fly, a IKONOS-based orthophotomap project have been executed for 1/6th of Poland, i.e. for 50 000 km sq. with strict orthorectification, that resulted in very good (subpixel) accuracies for the most of the area. Since cooperation with external providers of VHR imagery did not go too well.

TOPIC: Remote sensing applications

ALTERNATIVE TOPIC: Remote sensing applications