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## Developing a registration entry and query system within the scope of harmonizing of the orthophoto metadata with the international standards

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**Abstract.** Increase in the number of satellites and the utilization of digital cameras in the aerial photography has spread the use of satellite image and oriented aerial photograph as real or near-real time resolution, accessible, cost effective spatial data. Co-registered images or aerial photos corrected for the height variations and orthogonality (scale) have become an essential input for geographical information systems and spatial decision making due to their integration with the other spatial data. Beyond that, images and photographs compose infrastructure for the other information in usage of spatial data with the help of the access and query facility web providing. Although the issue of the aerial photo orthorectification has been solved long ago, the problems related with the storage of huge amount of photos and images, their management, processes, and user accesses have been raised. These subjects concern the multitudinous private and governmental institutes. Some governmental organizations and private companies have gained the technical ability to perform these works in recent times. This situation has lead to significant increase in the amount of aerial photograph taking and processing in one year for whole country. General Command of Mapping has been using digital aerial camera since 2008 for the photograph taking. The total area covered by the satellite images, purchased for different purposes, and the aerial photographs, taken for some revision purposes or demands of governmental and private institutes, has reached up to 200.000 km<sup>2</sup>. It is considered that, colored and high resolution orthophotos of the whole country can be achieved within four years; provided that the annual production would continue similarly without any increase in amount. From the numbers given above, it is clear and inevitable that the orthophoto production procedure must be improved in order to produce orthophotos in the same year just after the photograph takings. Necessary studies about the storage, management and presentation of the huge amounts of orthophoto images to the users must be started immediately. In this study; metadata components of the produced orthophotos compatible with the international standards have been defined, a relational database has been created to keep complete and accurate metadata, and a user interface has been developed to insert the metadata into the database. Through the developed software, some extra time has been

saved while creating and querying the metadata.

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