Challenges in Data Communication and Cyber Security of TUSAGA-Aktif (CORS-Tr)

Sedat Bakici, Bilal Erkek, Alper Altekin and Volkan Manti (Turkey)

SUMMARY

CThere are three main activities of General Directorate of Land Registry and Cadastre; Mapping, Land Registry and Cadastre. Geomatic Department is responsible for mapping activities. Since 2005, the most important projects like TUSAGA-Aktif (CORS-Tr), Metadata Geoportal, Orthophoto Production and Orthophoto Web Services and preparation of Turkish NSDI Feasibility Report have been conducted and completed by this department's specialists.

TUSAGA-Aktif (CORS-Tr) System, gives position information at cm level accuracy in Turkey and TR Nortern Cyprus in a few seconds, if adequate numbers of GNSS satellites are observed and communication possibilities are present. Using of ground control points and benchmarks is not necessary in this system. CORS-Tr System has 146 permanent GNSS stations. Station data are transferred online to the main control center located in the Mapping Department of the General Directorate of Land Registry (GDLRC) and Cadastre and to the control center located in the General Command of Mapping. Currently CORS-Tr has more than 10000 users. Most of them are private companies working for governmental organization and remaining are universities, municipalities and GDLRC's regional cadastre offices.

Today technologies became more sophisticated and changes day by day. Consequently, data communication, security alternatives and security mentalities are changes too. In recent years, providing a safe data communication between control center and both GNSS station and users via trusted communication substructure has become an important issue. Additionally, protection of the real time working system and data against cyber attacks from domestic and foreign sources has become important. This paper focuses on data communication and security issues of GNSS network named CORS-Tr.

Challenges in Data Communication and Cyber Security of TUSAGA-Aktif (CORS-Tr) (9287)
Sedat Bakici, Bilal Erkek, Alper Altekin and Volkan Manti (Turkey)

FIG Congress 2018
Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies
Istanbul, Turkey, May 6–11, 2018