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System Implementation and Operation of WISE-CAPS, data browsing, sharing and analysis platform for lunar and planetary e

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More and more data are produced as the progress of lunar and planetary exploration these days. Also, more and more researchers and engineers are participating for lunar and planetary exploration. These situation demands data analysis and sharing platform in the exploration group.

We developed the system called WISE-CAPS, Web-Based Interactive Secure Environment for Collaborative Analysis of Planetary Science, from this point of view. Its aim is to establish more efficient and smooth data browsing, sharing and analysis.

As the name of system says, all communication between system and user are web-based, via web browser. This means users do not need to install new special tools or software for using WISE-CAPS. The system is web-based, and display of maps and images are made by Web-GIS tools.

Currently, development of data browsing system are actively ongoing on WISE-CAPS, centered on data obtained in lunar exploration. Clementine data are used for base layer, and some image data captured by Kaguya mission can be browsed.

The unique feature of WISE-CAPS is user access control mechanism. Based on user ID and password, WISE-CAPS can understand digital certificates issued by proxy server receiving them. Thanks to this function, users can control access to resource in WISE-CAPS, and also form a group and grant access to the members inside the group. This feature also enables fine data control which is useful for collaborative writing of papers and research which is conducted individually.

Keywords: GIS, lunar exploration, planetary exploration, web, data sharing