Cultural Heritage Restore using Spatial Information Surveying Data

Wonho Lee and Jae Bok Kim (Republic of Korea)

SUMMARY

It is our inevitable duty to preserve and hand down lots of existing cultural inheritance to the next generation. We have appointed many kinds of cultural treasures newly and have behind in managing and preserving them. But because of lagging behind in managing and preserving cultural treasures, the data for preservation and management are insufficient. so not only the acquisition of accurate measurement data but also analying them are very meaningful to record the data but also analying them are very meaningful to record the development and present state of accurate measurement methods by using accurate digital data in order to manage and restore to the original state

Recently, Cadastre also has been expanding its area up to including the management of heritage buildings by accumulating a three-dimensional data such as spatial information of "Myeongdong Catholic Church" using LiDAR as a way of one of basic steps to establish 3- dimensional cadastre. LiDAR survey makes it possible to form exactly measured drawings of baseline data that might be used in various cases of restoring damaged heritages or artifacts. Furthermore, it can promptly design reverse engineering including layout and longitudinal drawing for necessary parts which were broken caused by diverse disasters

In this study, by obtaining a three-dimensional point cloud data of the building and initiating reverse engineering, we will draw up the original draft.

Finally, the study suggests the feasibility of LiDAR technology in restoring injured heritages by comparing and analyzing between precisely measured plan by reverse engineering methods and actually measured data.