

3D Modeling of Kilistra Ancient City Buildings with Terrestrial Laser Scanning

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SUMMARY

The ancient city of Kilistra which have similar characteristics to natural rock formation and architecture of Cappadocia and Ihlara's formations is located 45 km southwest of Konya. The history of the region dates back to the Bronze Age and the first settled life begins in the Hellenistic and Roman period (2nd century BC - 3rd century BC). The area has been established in five different locations parallel to natural rock formation. When viewed from a distance, the interior of the settlements, which looked like a natural rock, was carved into large spaces, the lighting and ventilation were camouflaged and provided with potholes and chimney openings. In addition to these formations, chapels, churches, monasteries; social dwelling, cistern, winery, workshop, fountain, tomb; defense and security purposes buildings (watchtower, garrison, police station and shelters) are found too.

The Ancient Cities have become centers of attraction for tourists whose wondering about the traces of different civilizations. Beside the fact of that the ancient city of Kilistra is an open air museum, the region also has an important place for tourists in terms of religious tourism, because the travels of Saint Paul (whose name is given to an ancient church in Kilistra), and the Lystra region and its surroundings were familiar with Christianity.

In this study, The Cross Church (Haç Kilisesi) , Ceramic Workshop (Seramik Atölyesi), and Başpınar Cistern (Başpınar Sarnıcı) in the ancient city of Kilistra have been scanned by a Terrestrial Laser Scanner and the 3D models have been obtained of the scanned data. When the terrestrial laser scanning is compared with conventional measurement techniques, it is a measurement technique where 3D point information can be obtained at very high speed. Particularly, the terrestrial laser scanning technique provides for fast data acquisition and evaluation steps for 3D modeling in indoor measurements. Also, in this region It is the first study

which is making with modern 3D modeling techniques.

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