

DIGITAL PHOTOGRAMMETRY FOR PRESERVATION OF CULTURAL HERITAGE

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ABSTRACT

The Buddhist temple (KELANY VIHARA) described in the paper lies mainly in the Gampaha District of the western province in Sri Lanka. There are a lot of unproved stories regarding the origin of the temple. But most of the people believed that, it is belonged to Great Lord Buddha's era. Anyway it is very sacred place among Buddhist as well as other religious all over the country. Therefore this place is considered as national heritage as well as world heritage.

There are number of evidences that the country was invaded by several foreign nations in ancient time. This was badly affected to the temple as they demolished it. But every time the ancient skilled persons rebuilt it with the help of mental pictures that were having in Buddhist monks who lived in at that time.

As the country is moving rapidly towards the new technology, the paper is aimed to described the way of converting mental picture to a three dimensional model in digital form. Recently taken (say year 2000) aerial photographs at the scale of 1:8000 used for this purpose. Photographs were scanned to resolution 12.5 microns and after completion of necessary calculations, stereo model was created at digital workstation in VirtuoZo environment. Information was extracted on screen digitising in Microstation environment according to the 1:2000 data dictionary.

Contours with 1m intervals were generated in ground area and along the particular buildings (VIHARA & STUPA). Finally material was assigned (Microstation software provides this facility) to the wire mesh, which has accurate 3 dimension coordinates in every point. In this way 3 dimensional model can replace mental picture.