

# **Visualization of Ancient Anuradhapura: A Demonstration of Digital Possibilities**

**Prasad Samarajiva<sup>1</sup>, Chandima Ambanwala<sup>2</sup>, Anuradha  
Piyadasa<sup>3</sup>**

Due to human activities and natural processes of decay, many of the past superstructures in Anuradhapura are no more. Only a few remaining structures point to the glory of the past. Visitors are intrigued by the remaining superstructures and ancient foundations. Reading historical texts as well as recent archaeological publications would fill in some of the gaps to the visitor. In addition, the limited replicas of the structures found in museums also help to some degree. But the visitor's visual understanding is still limited.

In the past few years, computer aided three-dimensional (3D) visualization has been generated for some notable sites in the West, such as ancient Rome and ancient Greece. They give a vivid display of these sites, especially when some of these reconstructions are accompanied by virtual reality. The reconstructions present an immediacy which no historical or archaeological text could provide.

As a first experiment, our team has attempted to visualise aspects of ancient Anuradhapura through computer aided 3-D technology combined with global positioning. We have developed the remaining structures using historical texts as well as recent specialised publications. We thus developed 3D models for parts of ancient Anuradhapura using satellite images,

---

<sup>1</sup> Royal Asiatic Society of Sri Lanka, Email: psamarajiva@yahoo.com

<sup>2</sup> Archaeology.lk, Email: chandima@archaeology.lk

<sup>3</sup> Royal Asiatic Society of Sri Lanka, Email: anuradha@ieec.org

photographs, and the commonly available 3D visualization software called Google Sketchup. In addition to computational graphical tools, the combined knowledge of history, archaeology, architecture, art, and engineering was used in this modeling to represent these past structures in the most accurate way. Such direct visualization of ancient heritage sites can be leveraged to better study these places as well as to raise awareness in general on the past Anuradhapura society, as well as to give support for pilgrims and the tourism industry. When transferred to a mobile phone, they could directly act as a guide to visitors on the site. The paper describes the process of computer visualisation and illustrates through a live demonstration our model of Anuradhapura.

**Keywords:** 3D Visualization, Anuradhapura, Google Sketchup, satellite images, photographs