

# Triangle Strips with Level of Detail

**Francisco Ramos**

Department of Languages and Computer Systems  
University Jaume I of Castellon, Campus Riu Sec s/n  
12100 Castellon, SPAIN  
[Francisco.Ramos@uji.es](mailto:Francisco.Ramos@uji.es)

**Abstract.** One of the main problems of interactive graphic applications, such as computer games or virtual reality, is the geometric complexity of the scenes they represent. In order to solve this problem, different techniques for modelling by level of detail have been developed that attempt to adapt the number of polygons of the objects to their importance within the scene.

Most works have been addressed to the level-of-detail or multiresolution model representation by means of triangle meshes. Nowadays, models that exploit connectivity have been developed; we developed a multiresolution model that uses triangle strips as primitive. This primitive is used both in the data structure and in the rendering stage, decreasing the storage cost and accelerating the rendering time if compared to previous multiresolution works.

Moreover, the model has been improved due to recent advances in graphics hardware which provide new possibilities to successfully integrate and improve multiresolution models.

**Keywords:** real-time rendering, level of detail, multiresolution, triangle strips.