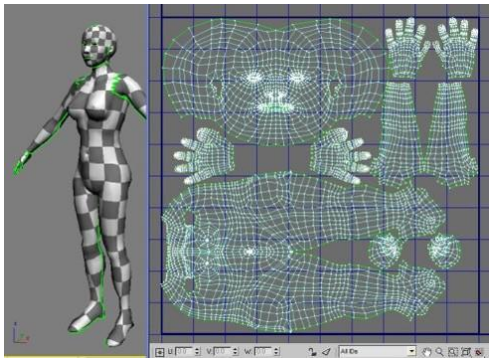
1.4 UV How to Match Recognition Image

1.4.1 The concept of UV

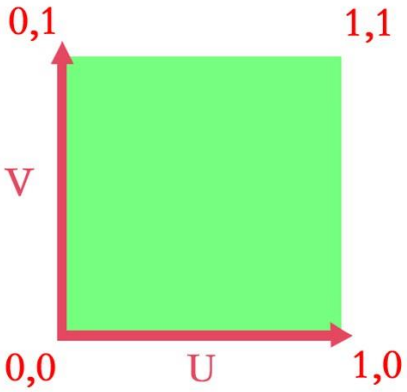
UV is the corresponding relationship of three-dimensional model in two-dimensional space. Simply speaking, the three-dimensional model is spread out completely on the plane as a shell. It can be analogous to the plot in the film "Painted Skin". The fox demon is only a model, and the unfolding skin is UV.



Why should we spread out the three-dimensional model into UV plane, because the model itself is only coordinate information in three-dimensional space, it can not have color itself. The color on the model needs to be rendered by the plane mapping. In order to correctly render the required color on the model, it is necessary to

correspond the points in the three-dimensional space to the positions on the two-dimensional mapping.

Compared with the world coordinate system (x, y, z), the complete coordinate of UV is actually (u, v, w). The concept of W is generally not used in normal operation, and the more intuitive is the UV coordinate. So we call this plane coordinate system UV. The relationship between the position of the model and the plane is also called UV.



Unlike ordinary coordinates, in model mapping, the range of UV is only square from (0,0) to (1,1). No matter how high the resolution of the texture is, or whether it is square or not, when the texture enters the UV, it matches the four corners to the square area of the UV.

The process of dividing the model into UV is to find the right position on the model, cut the epidermis along the edge of the model, and then flatten these surfaces and put them in the right

position.