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CONTINUITY OF PERSPECTIVE IN PANORAMA WHEN PROJECTION'S SURFACE IS APPROXIMATED BY MULTIPLE PLANES

This paper discusses the effect of continuity of a perspective of straight lines in panorama, when the traditional projection's surface is approximated by multiple planes. Discussed will be the relationship between the angle at the contact point for a horizontal straight and the angle between two adjacent projection's planes.

This is an important issue when a panorama is composed from individual images taken with a traditional camera, where – as commonly known – the projection's surface is flat plane and this produce kolinear perspective.

Images shown below presents a half-panorama (field of view 180°) in three cases: a panorama composed from 6 images, from 12 images and a panorama digitally composed using a PTGui software, which automatically adjust given images to create a proper panorama. All three cases differ in form of their projection's planes, which are the side surface of a hexagonal prism, dodecagonal prism and a rotational cylinder.

Fig. 1 Half-panorama assembled from 3 images



Fig. 2: Half-panorama assembled from 6 images



Fig. 3: Half panorama assembled by the PTGui software

