Adaptive Image-space Stereo View Synthesis

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Pipeline

1. Motivation

Today's rendering:
- high resolution
- high framerate
- stereo

Stereo → framerate / 2
- render one view per frame
- for the other use an image-base technique
- avoid a second rendering pass by using an image-based technique

2. Adaptive grid

- grid adapt to disparity discontinuities
- multi-level subdivision
- efficient implementation using the geometry shader

→ second view is generated by morphing the grid

3. Temporal domain

- interleaving left and right-view rendering
- choose optimal view to reduce disocclusion artifacts
- the final view composition based on mesh deformation

→ guaranteed convergence and significant artifacts reduction

4. Performance

5. Results

Find more on: http://mpii.de/resources/AdaptiveStereoViewSynthesis/