

5.2: Improved algorithms for 2D-3D image conversion

Public Executive Summary

2D-3D conversion consists in turning into 3D any 2D content. The input of such a process is a set of uncompressed 2D images, and the output is two movies corresponding to the left and right eyes.

Doremi has developed with 3DLized a proprietary technique of 2D-3D conversion for which the first step consists in segmenting images in order to define the independent elements within a scene.

These elements are supposed to be deformable over time, and contours can be tracked along sequences. For now, this task is mainly done manually. This makes the workflow very heavy and the cost is high. Once the segmentation is done, retrieving depth and rendering are quite simple, but the quality of these 2 tasks is proportional to the segmentation quality. Improving 2D-3D workflow will mainly consist in improving the segmentation process. We started this study by applying some algorithms from the state of the art in order to evaluate, on real images, if a fully automatic segmentation is feasible. We then propose a workplan to achieve an interactive method.

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