

Accepted Manuscript

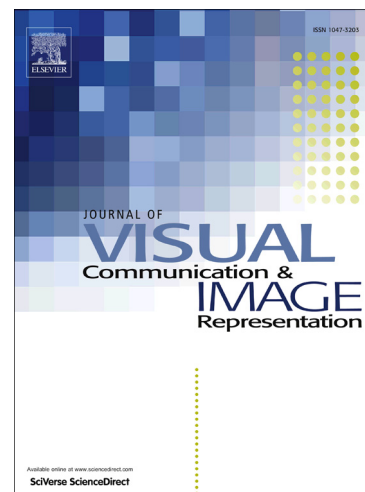
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PII: S1047-3203(16)30176-6
DOI: <http://dx.doi.org/10.1016/j.jvcir.2016.08.017>
Reference: YJVC 1846

To appear in: *J. Vis. Commun. Image R.*

Received Date: 11 April 2016
Revised Date: 25 July 2016
Accepted Date: 23 August 2016



Please cite this article as: Z-Y. Chen, W-C. Lin, C-F. Tsai, S-W. Ke, 3D Model Retrieval by Sample Based Alignment, *J. Vis. Commun. Image R.* (2016), doi: <http://dx.doi.org/10.1016/j.jvcir.2016.08.017>

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3D Model Retrieval by Sample Based Alignment

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Abstract—In 3D model retrieval, preprocessing of 3D models is needed, in which alignment is a key factor that significantly affects retrieval performance. In particular, the anti-rotation image feature can obtain the alignment effect of 3D model views. In practice, the focus of many users of 3D models is not just on retrieval performance, but the use of aligned models for different purposes. In this paper, we propose a method, namely Sample Based Alignment (SBA) for better 3D model alignment and retrieval. In SBA, given a class, a sample model is used as the target for alignment, after which each 3D model in this class is then aligned one by one, i.e., the 3D model is actually rotated. Our experimental results, based on two 3D model datasets and performance comparisons with other methods, demonstrate the superiority of the SBA method over state-of-the-art methods in terms of 3D model retrieval and classification.

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