length. Number of images was 450 frames and image resolution was 720x405 [px]. Tracking worked in 14.9 [FPS] when average number of matched points was 122.4 points. In the proposed system, S3D MR-PreViz shooting and disparity examination are repeated quickly because there is no preparation except stereo camera calibration.

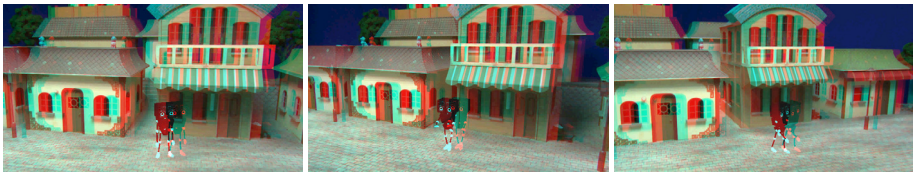

Fig. 5. Results of S3D MR-PreViz using the proposed system (Red-cyan color anaglyph)

5 Conclusion and future work

In this paper we presented a new MR-based PreViz shooting system for S3D films, which includes real-time 6-DOF stereo camera tracking using ICP algorithm. Our previous work required offline preparation but the process is accomplished in real-time using stereo vision in the proposed method. MR composite video was displayed in S3D properly. However, the proposed system suffered from tracking in a full-scale filming set due to short baseline setting for shooting scenes in S3D and convergence angle is not considered for simplifying stereo matching. Therefore, future work will include accuracy improvement of the tracking method and implementation of convergence examination.

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