

Walkthroughs of Cubic Panorama Sequences with Virtual Augmentations

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This demo will illustrate our system for introducing augmented-reality enhancements to a panoramic sequence. Each frame in our sequence comes from an image taken by the Point Grey Ladybug panoramic camera [1]. The images are converted into a cubic representation. The cubic panorama images allow a viewer to look in almost any direction around the point of capture. By using a sequence of these panoramic images, a viewer can move along the path of the captured images with the freedom of looking in any direction.

We have developed a post-capture *authoring* system which allows us to place virtual augmentations into the photographic panoramic scenes. The authoring tool uses natural features from within the scene, and does not require the addition of any physical markers. The types of augmentations allowed include planar images and text, three-dimensional models, or live video. The author navigates to a panorama at which to place the augmentation, then selects a planar region onto which to anchor the augmentation using a simple point-and-click interface. The system then automatically propagates the augmentation in a perspective-correct manner to nearby panoramas.

This demo will show the augmentation placement process, as well as sequences with pre-added augmentations. This work was done as part of the NAVIRE [2] project at the University of Ottawa.

REFERENCES

- [1] <http://www.ptgrey.com>.
- [2] <http://www.site.uottawa.ca/research/viva/projects/ibr/>.



Fig. 1. A typical cubic panorama. It provides a near-complete view around the camera position.

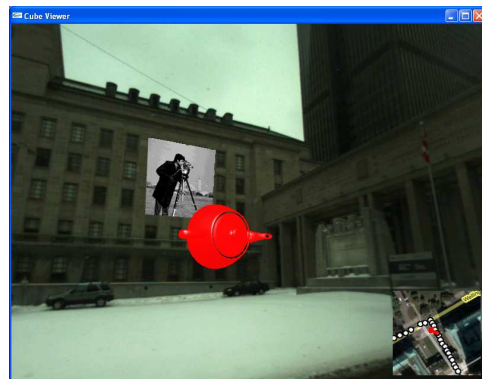


Fig. 2. An example of augmentations inserted into a panorama. The cameraman image and teapot were added onto the wall.

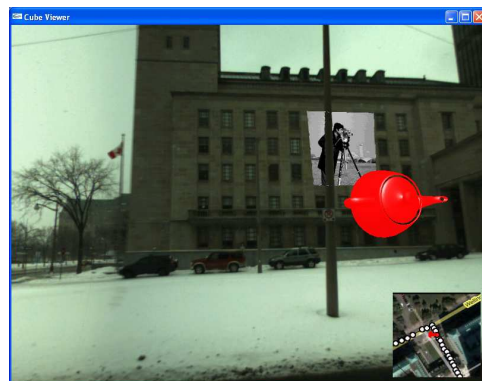


Fig. 3. The authoring tool automatically propagated the augmentations into this panorama.