1. Additional real-world experiments

We ran our algorithm against two publicly available datasets [1, 3] to further demonstrate the effectiveness of our method. Both datasets offer RGB-D frames, whereas the RGB images have resolutions of $1280 \times 1024$ px$^2$, $1296 \times 968$ px$^2$ and $640 \times 480$ px$^2$, respectively and the depth images come with a resolution of $640 \times 480$ px$^2$. Additionally, the corresponding multi-view reconstructions based on each of the methods described in [2, 4] are provided.

Figures 1, 2, 3, 4 show that our method provides good depth estimates on each of the additional datasets. Even in the case of cast- or self-shadows we are able to recover fine details of the depth without inducing too strong bias from the companion color image, see Figure 2 the cast-shadow of the camera or Figure 4 the self-shadows. Our method also seems to be robust to more complex lighting, see Figure 3 that the upper-right area of the RGB image is much darker compared to the well illuminated lower-left area of the image.

References

Figure 1: Augustus dataset of [3]
Figure 2: Lucy dataset of [3]
(a) RGB input

(b) Depth input

(c) Result of the multi-view approach [4]

(d) Our result using a single RGB-D frame

Figure 3: Relief dataset of [3]
Figure 4: Gate dataset of [1]