Supplementary Material: Scanline Homographies for Rolling-Shutter Plane Absolute Pose

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Figure 1. Facade from St. Peter's Basilica, Pratt Institute of Architecture in Brooklyn and Deloitte building in Christchurch, New Zealand, has been used as the textures for RS1, RS2 and RS3

1. Additional Results

The synthetic experiments are generated with three publicly available textures from the facade of some famous architectures. The three textures, named RS1, RS2, RS3, are shown in Fig. 1. The synthetic RS images generated from them are given in Table 1.

We tested the synthetic data on all parameterisation ($\mathcal{P}$) of polynomial curves and B-Splines. The complete results are given in three parts through Table 1 (for p11111 and p11122), Table 2 (for p22222 to p33333-c66666) and Table 3 (for p33333-c77777 to p33333-c1313131313).

Table 1. The top-most row shows the input RS images while the two rows below shows the rectified image for the parameterisations: p11111 and p11122. Feature correspondences have been marked in green

Table 2. Rectification results from p22222 to p33333-c66666

The accuracy of estimated translation is plotted for one dataset (RS3) in Figure (2). It is important to note that the

$\mathcal{P}$	RS1	RS2	RS3
p33333-c77777			
p33333-c88888			
p33333-c99999			
p33333-c101010101010			
p33333-c111111111111			
p33333-c121212121212			
Bsplinep33333-c131313131313			
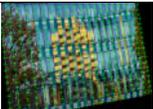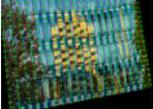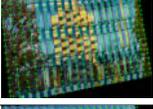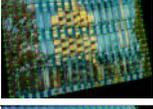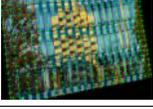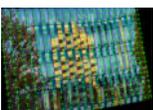
Table 3. Rectification results from p33333-c77777 to p33333-c1313131313

	RS4	RS5	RS6	RS7
RS Images				
Ours				
[2]				
[1]				

Table 4. Rectification of synthetic RS images using automatic correspondences. The input RS images are given in the top row, the rectified images from our method is given in the second row while rectification using commercial softwares [2] and [1] are given in the third and the fourth row respectively

ing cases while the commercial softwares are significantly less accurate in rectification.

References

[1] Microsoft Corporation. Image composite editor, 2015. 2
[2] Adobe Inc. Adobe photoshop cs6, 2012. 2

Figure 2. Estimated and groundtruth translation along X, Y and Z axis for RS3

pose estimation along Z-axis is always less accurate than X and Y axis for all dataset tested upon.

Some other simulated data generated using the Blender software, with correspondences obtained automatically (SIFT) are shown in Table (4). We compare our rectification results qualitatively to those obtained from commercial softwares [2] and [1]. The rectification quality from our approach always recovers the rectangular outline of the template with reasonable accuracy even in the highly challeng-