

APPENDIX 3. IMAGE PRE-PROCESSING, STITCHING, AND RENDERING WORKFLOW

1. Scan/digitize the images
2. Evaluate/browse the images, choose images to be processed
3. Pre-processing
 - lens correction (barrel distortion, de-vignette, rotate, save as)
 - DXO, Photoshop CS3
 - color space management
 - nb: always work on a copy, not the original file
4. Stitch
 - REALVIZ Stitcher, QTVRAS, PTBatch, VRWorks, etc.
 - PTMac (creates .txt file to tell itself how to batch - requires precise production)
 - Enblend, blending software
 - batch this step, if desired
5. Render/Export
 - spherical .tif
 - batch rendering
 - convert w/CubicConverter (batchable)
 - render to cube faces
 - stencil/alpha masks to remove undesirable objects
 - remove tripod in nadir
 - add graphical copyright or watermark
6. Edit images
 - remove dust, sun flares
 - fix stitching errors (aliasing, jointed areas, ghosting)
 - convert back to spherical to fix seams
 - HDR compositing
 - lengthen skirts or blur faces for cultural or legal requirements
 - nb: when editing digital images in Photoshop, always modify layers and copies, never the original image
7. Add hot spots and links
 - embed MD and watermarks
 - sprite tracks
 - apply zoom limitation
 - set initial view

8. Convert panorama into final formats
 - multiple files and formats for access and preservation
 - file size and window size
 - resolution
9. Back-up