

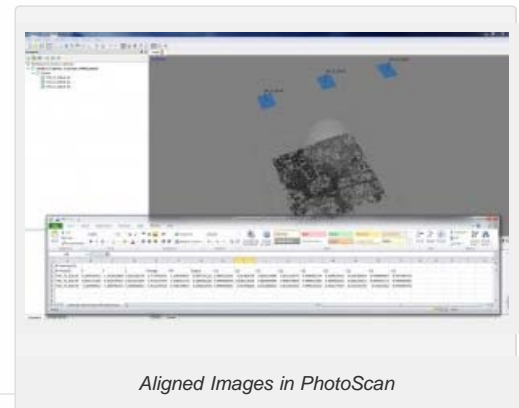
Geospatial Modeling & Visualization

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Image Processing and Block Triangulation Documentation for Close-Range Photogrammetry

In order to extract three dimensional points from two dimensional images, it is necessary to perform a triangulation with at least two images (a stereo pair). When more than two images are used in a triangulation, we refer to the group of images as a 'block'. To perform a triangulation, we must measure a sufficient number of tie, control, and/or check points throughout the block. Constraints may also be placed on certain sets of points to enforce angular, linear, and/or planar properties. Once a triangulation is successful, image exterior orientation parameters (along with estimate for accuracy) should be available to the user. These are important pieces of information for downstream deliverables and should be documented. The table below describes the appropriate documentation for this process. Download a printable form in PDF format [here](#) or in a spreadsheet (.xlsx) format [here](#).



Entry	Description
For each block:	
Name and version of the software	Include all details of the software name, manufacturer, version, and build used for image processing and file format conversions.
Description of image processing	Describe and image processing and/or file format conversions performed and the settings used.
Name and version of the software	Include all details of the software name, manufacturer, version, and build used for triangulation.
RMSE values	Root Mean Square Error (RMSE) for control and check point measurements, indicating whether the RMSE is for control points only, check points only, or all points.
Constraints on object points	List of constraints used during processing.
For each point:	
Point ID	ID or name used for the point.
Point type	Tie, Control, or Check point.
XYZ priori and a priori	If available, provide the XYZ coordinates before and after bundle adjustment (control and check points only).
Covariance matrix a priori	If available, provide the covariance matrix.
Image coordinates and residuals	A list of images on which the point is indicated. For each image on the list, provide the uv coordinates and residual.
For each image:	
Exterior orientation	List exterior orientation parameters for each image.



You are reading the series: [Close-Range Photogrammetry Documentation](#)
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<http://gmv.cast.uark.edu/photogrammetry/software-photogrammetry/photomodeler/metadata-photomodeler/image-processing-and-block-triangulation-documentation-for-close-range-photogrammetry/>. [Date accessed: 27 April 2013]. [Last Updated: 14 February 2013]. *Disclaimer: All logos and trademarks remain the property of their respective owners.*

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