

Working with Photomodeler Lite

Notes by Stina Lane-Cummings for Nancy Cheng's Placetools project
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Photomodeler software helps you create textured 3D computer models from multiple photographs. Approximate forms of existing buildings, historical structures or proposed architectural models may be made with Photomodeler. A shareware version, Photomodeler Lite for Windows, can be downloaded from <http://www.photomodeler.com/>. Below are some recommendations for taking pictures for use in Photomodeler.

Taking Digital Photos of Buildings to Use in Photomodeler

- Take all photos using the **same camera**. Scanned pictures likely won't work.
- All photos must be in the **same orientation**, either portrait or landscape.
- **How many photos** to take:
 - For a **square or rectangular building** in an open, un-landscaped field, you will need a minimum of **eight pictures**; four pictures of the facades, and four taken at 45-degree angles to show the connections between facades. You'll use the pictures of the facades for texture mapping.
 - For a **building in an urban setting**, where you can't fit the whole façade into the viewfinder, take pictures from the corners only.
 - To work with a façade only (a one-sided object), take at least three photos: one of the façade head-on, one from the left side of the façade, and one from the right side of the façade. {insert dwg from help file here}. For **interesting facades** that have recesses such as doorways, you'll need extra photos. <see picture from help file> For each major point in the recess (such as the upper corner of the doorway, you'll need two pictures.
- Try to get photos that show the whole building. Don't show details yet.

It's helpful to give the image files descriptive names, or at least see which photo has which number. When you set up a file in Photomodeler, the thumbnails are often too small to know which files you're including.

See also these tips from the online Photomodeler Help File:

- Guideline 1: Get Good Camera Angles
- Guideline 2: Take at Least Three Photographs
- Guideline 3: Get Good Horizontal and Vertical Separation
- Guideline 4: Get Good Photograph Overlap
- Guideline 5: Take Many Pictures, Use Only Those Needed
- Guideline 6: Measure the Distance Between Two Points

Taking Photographs of Architectural Models:

- If you're shooting a model, use a **contrasting background** so it's easy to see the all-important corners.
- Take photos with the **camera sitting on the table at the same level** as the model to minimize distortion. You want a two-point perspective photo, not a three-point perspective. But also take aerial photos (this is recommended by the Photomodeler Help File) so you can get a better bead on the angles in use.
- Get the **camera as close as possible** so the pictures have good resolution in Photomodeler.

Marking and Referencing Pictures with Photodeler

- Start by opening **just three pictures**. You can add more later.
- Mark at least six points on each photo, though Photodeler will complain if you only mark six.
- Initially, mark points in a cube formation around the model. **Be very simple in your markings**. Ignore openings such as windows and doors for now. You can come back later to refine the points.
- Even though you mark a point, it won't appear on the 3D model until that point has been referenced on more than one picture.
- Because you need at least six points marked in any photo, **a façade picture will require marks** at each of the four corners plus at least two other marks that are shared by other pictures.