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Carnegie Mellon University AutoCAD / 3D Studio Course 48-568

Camera Matching

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Camera Matching

- 1. Choose File, Open Scene...
- 2. **Choose** CFABLDG.MAX from the C:\TEMP directory.

This is an imported AutoCAD drawing of a roof for the College of Fine Arts building on Carnegie Mellon's campus.

Open File		?
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File <u>n</u> ame:	CFABLDG.max	+ <u>O</u> pen
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These of type.		



CamPoints

Campoints need to be added to the objects in the scene. These will be used to match real points on the background image. You must choose at least 5 CAM points when camera matching - the more the better.

Snapping to a Vertex Point

- 1. **Right Click** on the 3DSnap Icon. \mathbf{e}^3
- 2. **Set** the snap to vertex points.



3. **Left Click** the 3D Snap icon to turn it on.

3D Studio MAX Camera Matching

Assigning a CAM Point

1.	Choose	the Create TAB. —	× 🖉 🔠 🕲 🏋
2.	Choose	the Helpers icon.	● ○ २ ६ <u>□</u> ≈ %
3.	Choose	Camera Match.	— Camera Match
4.	Choose	CamPoint button.	Object Type AutoGrid CamPoint Name and Color

5. **Click** on the following points in the drawing, making note of the name for each. We will need to later match these to the photo of the building.



Adding Photo as a Background

- 1. Choose Views, Viewport Background...
- 2. **Choose** the Files...button.
- 3. Choose the file C:\TEMP\CFAPHOTO.JPG
- 4. **Choose** Match Rendering Output as the Aspect Ratio.
- 5. Click OK.

Viewport Background Background Source Files Devices Current: C:\TEMP\cfaphoto.jpg	? X
Animation Synchronization Use Frame 0 1 To Start at 0 1 S Start Processing © Blank Before Start	30 € Step 1 € ync Start to Frame 0 € End Processing © Blank After End
C Hold Before Start	C Hold After End C Loop After End
Match Viewport Match Bitmap Match Rendering Output	Animate Background Lock Zoom/Pan Apply Source and Display to C All Views C Active Only
Viewport Camera01	OK Cancel

6. **PAN** the drawing down so you can see the photograph's match points in the background.



Camera Match Points

- 1. **Choose** the Utilities TAB.
- 2. **Choose** the Camera Match button.
- 3. **Choose** CamPoint1 from the list of CamPoints.
- 4. **Choose** the Assign Position button.
- 5. **Pick** the corresponding point on the photograph of the building.
- 6. **Choose** CamPoint02 from the list of CamPoints.
- 7. **Pick** the corresponding point on the photograph of the building.
- 8. **Repeat** for the remaning CamPoints.
- 9. Choose Create Camera





View from the Camera

- 1. **Right Click** on the Camera01 setting in the Viewport.
- 2. **Choose** Configure...
- 3. Choose
- a single vewport and Camera02 as the setting.





Environment as a Background

- 1. Choose Rendering, Environment...
- 2. Choose the None button under Environmental Map.
- 3. Click Bitmap as the material type.





Environment as a Background

- 1. Choose Tools, Material Editor...
- 2. Click Material 1.
- 3. **Select** the Maps Rollout.
- 4. **Choose** None beside the Diffuse button.
- 5. Choose Bitmap.

This will produce the Bitmap Parameters rollout.

- 6. **Choose** the blank box beside the the word Bitmap.
- 7. **Choose** C:\TEMP\CFAPHOTO.JPG.
- 8. **Choose** the Environ button under the Coordinates rollout.
- 9. **Set** Mapping to Screen.
- 10. Drag and drop the new material onto the Environment button.

_	Common Paramet	ers
-Background: — Color:	Environment Map: Map #1 [cl	Use Map
- Global Lighting: Tint:	Level:	Ambient:
_	Atmosphere	
Name:	<u>×</u>	Add Delete Move Up Move Down Merge



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Render the Combined Background and Objects

- 1. **Choose** the Render Scene icon.
- 2. **Render** the scene.

