

## **Tutorial: 3D Seated People**

How to integrate image-based models into geometric scenes

### **What it's all about**

ArchVision's 3D Seated People Collection provides visualization professionals with another important way to add rich detail to their scenes. With image-data available from every point around the Z-axis, this collection maintains the illusion of 3D without the processing overhead required with geometric solutions. This assorted collection of 30 casually and professionally dressed people will help bring scenes from offices to theaters to life like never before.



### **What to watch for:**

Because RPCs are composed of 2D images, there are some issues to be aware of when using this collection. Placement of the RPC relative to the seating surface geometry is especially important so as to maintain the illusion of 3D without the RPC to appear like it's "floating" above the seat surface.

Also, the image-data for each RPC was collected with a standard seat height. We have sized the RPCs to maintain consistency between them. However, for your specific needs, you may need to resize the content to create the desired effect.

Placing your 3D Seated People.

If you need help downloading and setting up your map paths [see below](#).

### **Step 1: Opening SeatDemo1.max and placing a Seated Person.**

- 1) Open [SeatDemo1.max](#) (File: Open: SeatDemo1.max), then, under the Creation Menu Rollout, select "RPC".
- 2) Click on the RPC button. Then, Under Content Type: Select Demo.
- 3) Select the demo content, Cynthia, by clicking on the character's name
- 4) In the top viewport, Place the RPC (Cynthia) by clicking and holding the left mouse button down. Click just before the seat of the chair. It is important that the pivot point of Cynthia is floating just in front of the chair.
- 5) Render the Camera1 Viewport. Cynthia is casually seated in the office chair. You can go ahead and render the 200 frame animation to see how well Cynthia holds position or download a mpeg example here:

<http://www.archvision.com/Tutorials/Seated/images/seat2.m1v>

**Step 2: The problems with mixing image-based content with geometry.**

- 1) Now that you've rendered your first seated person, it's time to address some of the challenges that might occur with seated people content. Go the Display tab and Unhide All (arms will appear on the chair).
- 2) Drag your timeslider to frame 80 and render the Camera1 viewport.
- 3) You will notice that Cynthia is cutting through the arm of the chair. This is a known problem using image-based content. It is a small, almost unnoticeable problem. If this becomes extremely apparent in your scene, you can animate Cynthia to move across the chair until she no longer comes in contact with the chair arm.
- 4) You can download a mpeg of this condition from:

<http://www.archvision.com/Tutorials.cfm?Tutorial=Tutorials/Seated/seated1.cfm>

**Step 3: Having Fun! Making an auditorium.**

- 1) In the top viewport select all of the chair and Cynthia.
- 2) Using the array tool, set up a 2D array (to simulate row seating). Under the Incremental setting, type 30 for the X, 0.0 for Y and 0.0 for Z. Under Array Dimensions, set the 1D count to 5 and the 2D count to 5. Again, under 2D Array Dimensions, Set the Incremental Row Offets to 0.0 for X, 50.0 for Y and 0.0 for Z. Then click OK.
- 3) Render the Camera2 viewport. A theater type seating arrangement is full of people.

You can either render the 200 frame animation of this effect or download a mpeg here:

<http://www.archvision.com/Tutorials/Seated/images/seat3.m1v>

## Assistance setting up map paths.

### 1. Downloading 3D seated people sample from ArchVision website

At ArchVision we believe that it is very important to allow our customers to ensure that our technology is for them before they make the purchase. That's why we make demo versions of our plug-ins and content available for your evaluation. In the case of the new 3D Seated People content, we think that the best way to convince you of its value is to let you give it a try. So we've posted "Cynthia" for you to download and evaluate.

The Cynthia RPC download a one-half resolution version of the regular content. Otherwise it would take an impractically long time to download. As it is, Cynthia is a ??? MB file.

Downloading 3D Seated People sample from ArchVision website

- A. If you do not already own a 3D Seated RPC library, download the sample content from the ArchVision website by following this [link](#).
- B. Once the download is complete, Unzip the file to a local drive. For our demonstration, we'll unzip the file to c:\CynthiaDemo\.
- C. If you do not have the most recent version of the RPC Plug-in, download the most up to date version from [ArchVision's Website](#).
- D. Unzip the rpc.bmi and rpc.dlo into your 3DSMax\Plug-ins directory.
- E. Launch your 3DS product (3DS Max or 3DS Viz)

### 2. Setting Map Paths to the RPC Content

The number one technical question we receive concerns the setting of Map Paths. The RPC content, terrific though it is, can't do you any good if your software can't find it. So, to provide some direction about how to address this issue, we've put together a brief tutorial on identifying where the RPC content resides, and how to communicate that information to 3DS Max or 3DS Viz. If, after trying out these steps you are still having trouble, please call or email our tech support and we'll get you squared away. Setting Map Paths to the RPC content

- A. Map paths are specified directories that 3DS Max or 3DS Viz search when looking for required image files.
- B. In 3DS versions prior to 3.0 you configure the map paths under File:Configure Paths:Bitmaps:Add:C:\CynthiaDemo\
- C. In 3DS VIZ 3.x, map paths are configured under Tools:Configure Paths:Bitmaps:Add:C:\CynthiaDemo\
- D. In 3DS Max 3.x, the map paths are configured under Customize:Configure Paths:Bitmaps:Add:C:\CynthiaDemo\
- E. Close and Restart 3DS Max.