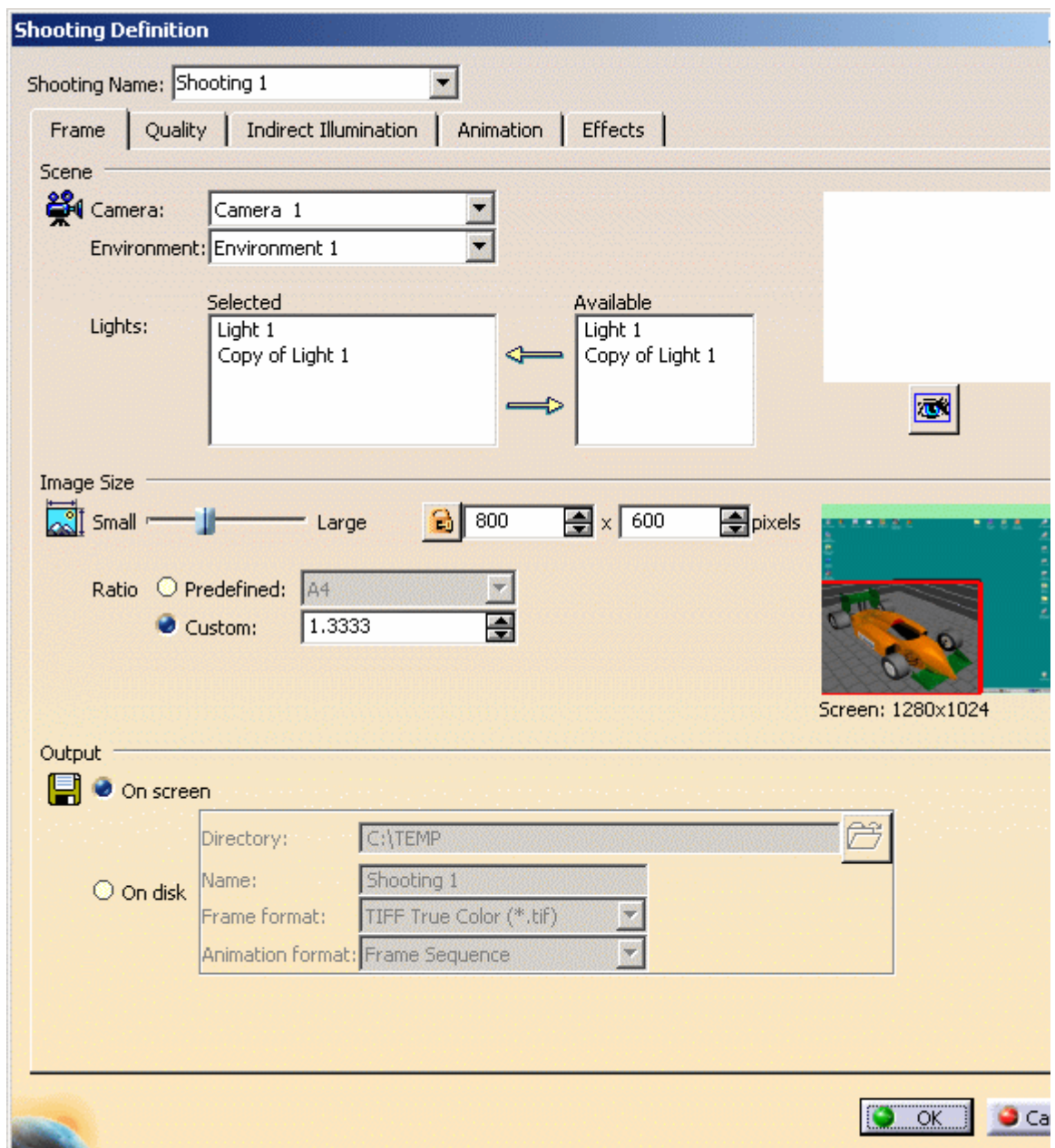# Setting Image Frame and Quality Parameters

This task shows how to define the rendering style and quality parameters.

Open the Shooting.CATProduct document and make sure that **Shading with Material** [icon] is toolbar.

1. Click **Create Shooting** [icon] to open the **Shooting Definition** dialog box the select **Shoo**
   Shooting Name list:

In the **Frame** tab, the Scene area lets you specify the elements to be rendered as we
rendering them. By default, the active environment and any other active source are r

2. In the the appropriate boxes of the Scene area, select the Camera, Environment and
   want to render.

If no light is selected, a default directional light orthogonal to the image plane is used
very few shadows).

As it might take a very long time to compute the preview when working with large mo
displayed by default.

However, you can now click the **Camera View** [icon] button to display a preview of the c
current viewpoint (depending on what you selected in the **Camera** list).

In our scenario, the result looks like this when clicking the **Camera View** [icon] button:
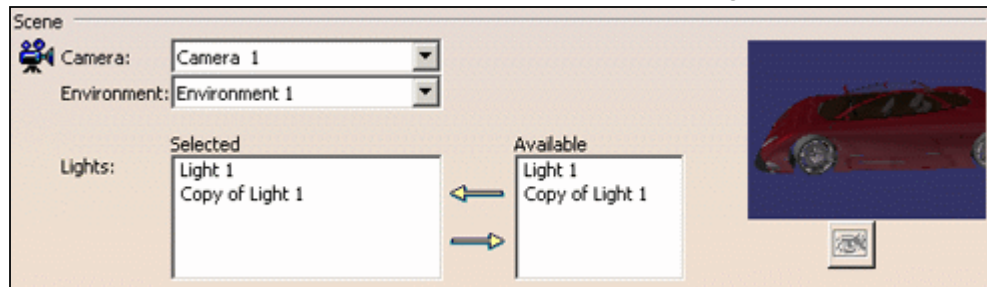
Once the preview is displayed, the **Camera View** [icon] button is grayed out and remain
you select another value in the **Camera** list.

3. In the Image size area, define the size of the rendered image using the slider or man

4. Indicate the ratio between the frame height and width in the **Custom** box.

   By default, the pixel number is locked: [icon]. However, the pixel number and the ratio
   together so that, whenever you change the pixel number, the ratio value is adjusted a

   this number and reciprocally. To do so, click the **Lock Size Ratio** [icon] button (which tu
   [icon]).

   [tip icon] You can also click **Predefined** to retrieve standard ratios. The corresponding rati
   number is then displayed accordingly.

5. In the Output area, select **On disk** to modify the name of the computed image. By def
   temporary folder under the name "CatiaRender.tif".

   The **On disk** option also lets you change the default location. For more information, re
   Pictures task in this guide.

6. The **Quality** tab lets you specify rendering, shadow and accuracy parameters, all of th
   rendering computation duration.
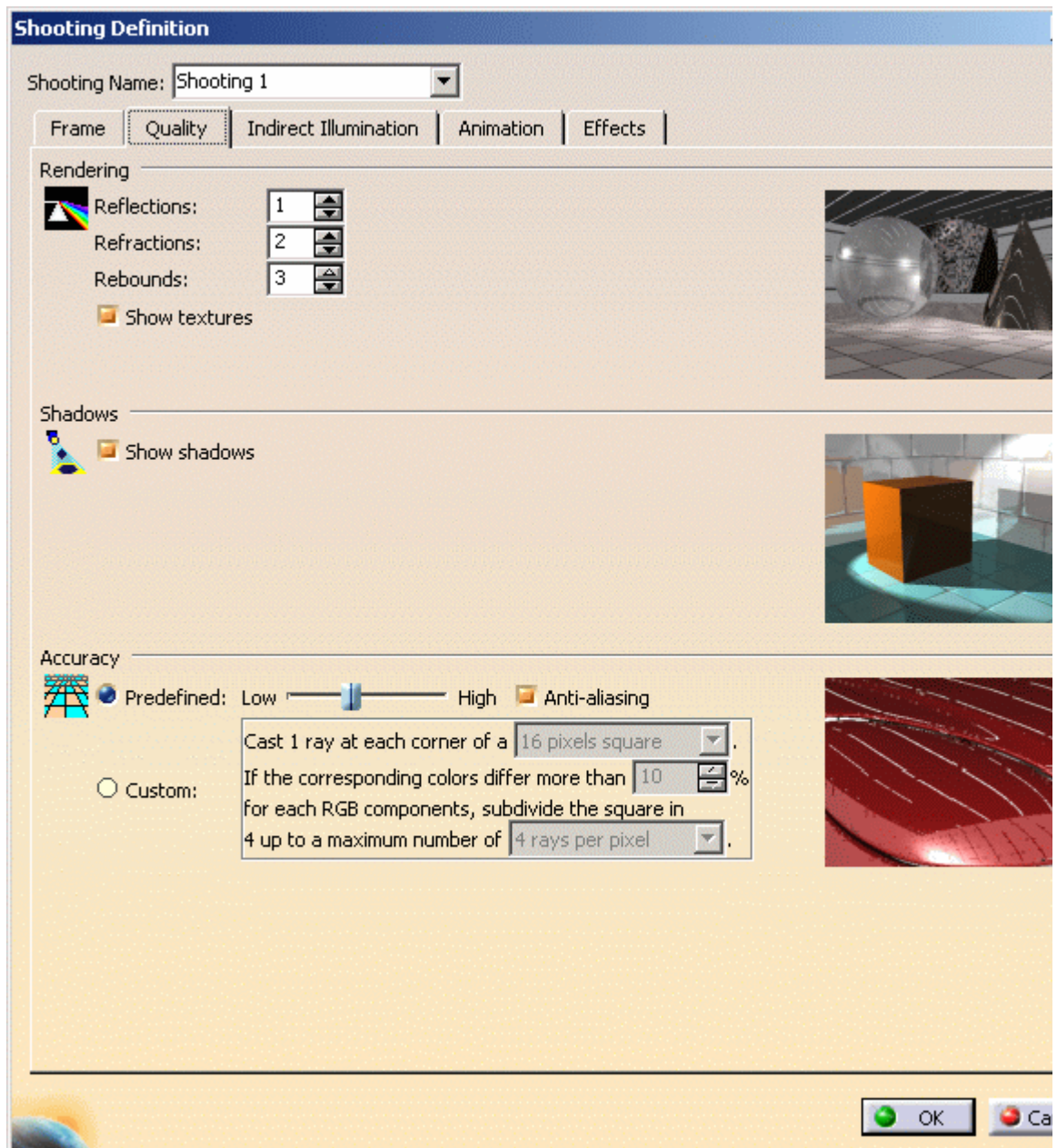
7. Indicate the maximum number for:

   ✦ Reflections

   ✦ Refractions

   ✦ Rebounds (the maximum number of times a ray, either reflected or refracted, can
     a surface).

   For instance, if you choose 2 reflections and have two parallel mirrors in your scene,
   the reflections of the reflections in each mirror ; choosing 1 instead, you will not see
   reflections.

   Note: the number of rebounds cannot exceed the sum (Reflections + Refractions) an
   lower than 1.

   ⓘ No texture rendering means that only the material lighting characteristics is take
     account for the rendering and the environment wall texture are not rendered as
     option can be used to speed up rendering at early stage for example.

     If you select the **Show shadows** check box, only the shadows produced by the a
     are rendered, otherwise no shadows are computed. This can be useful to speed

   Now, let's define the accuracy parameters that control the oversampling of the final i

8. Select the accuracy type.

    Predefined: sets a fixed sag value for calculating tessellation on all objects.

    * a low value means that a very fine mesh is used to render surfaces, but the draw
      that pre-processing and rendering will take more time

    * a high value means that a very coarse mesh is used, but the advantage is that pr
      processing and rendering will take less time.

    Custom: these parameters are defined through three values: a minimum number of s
    maximum number of samples and a threshold.

    * minimum sample: specifies the minimum number of samples, i.e. minimum num
      rays taken at each corner of a pixel square to measure the color. In our example
      have chosen a minimum of 1 ray at each corner of a square of 4×4 pixels

    * threshold: specifies the percentage over which an oversampling is done if the cor
      in any RGB component between the currently calculated pixels and the neighbori
      pixels weighted by their sum is greater than this threshold.
      The lower this value, the more oversampling and the longer the rendering time

    * maximum sample: specifies the maximum number of samples, i.e. rays, per pixe
      In our example, we have chosen a maximum of 1 ray per pixel.

    The preview area to the right shows you the effect of each setting.

    (i) Anti-aliasing sets a better oversampling by modifying the appearance of lines in
        the jagged edges look smoother. To do so, the square pixels composing the line
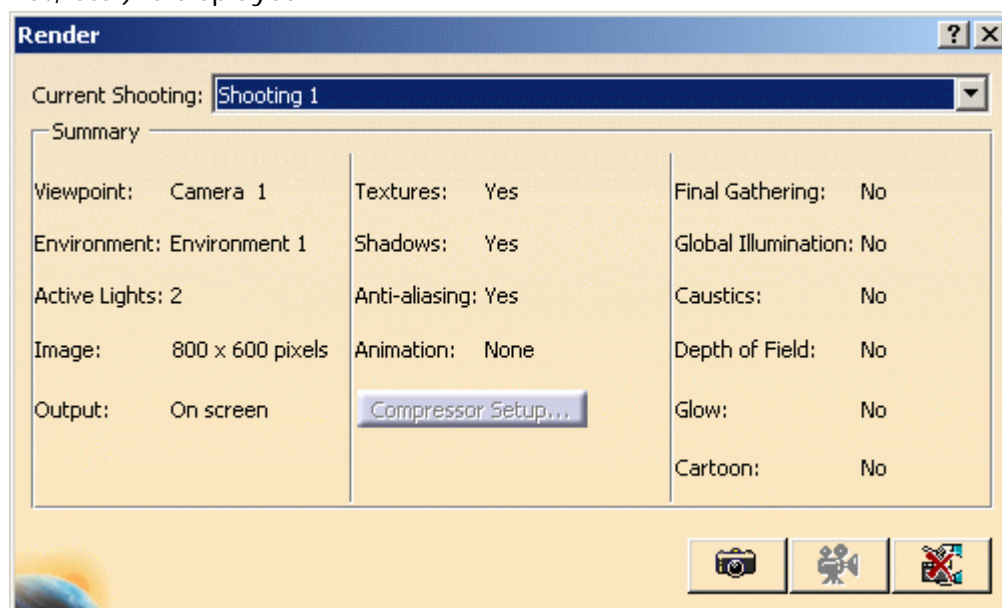   shades of gray or in-between color.

9. Click the **Animation** tab to define the animation parameters. For more information on
    the Defining Animation Parameters task in this guide.

10. Click **OK**.

    The next step is to render the shooting you have defined.

11. Click **Render Shooting** to open the **Render** dialog box.

    A summary of the selected scene characteristics (viewpoint, number of active lights, s
    not, etc.) is displayed.

Render	? X
Current Shooting: Shooting 1	▼

Summary

| Viewpoint:	Camera 1	Textures:	Yes	Final Gathering:	No
Environment:	Environment 1	Shadows:	Yes	Global Illumination:	No
Active Lights:	2	Anti-aliasing:	Yes	Caustics:	No
Image:	800 x 600 pixels	Animation:	None	Depth of Field:	No
Output:	On screen	Compressor Setup...		Glow:	No
				Cartoon:	No

12. Select a shooting then click the **Render Single Frame** 📷 button or the **Render Anin**
depending on the type of render you want to create.

The **Rendering Output** window opens and displays the rendering result.

ⓘ You can also render an animation or a single frame by right-clicking the desired
tree then selecting **Render Animation** or **Render Single Frame**.
The background colour of the **Rendering Output** window depends on the backgr
Options > **General** > **Display** > **Visualization**.

After selecting an animation as the current shooting, the **Compressor Setup...** butto
the type of compressor from the **Choose Compressor** dialog box:
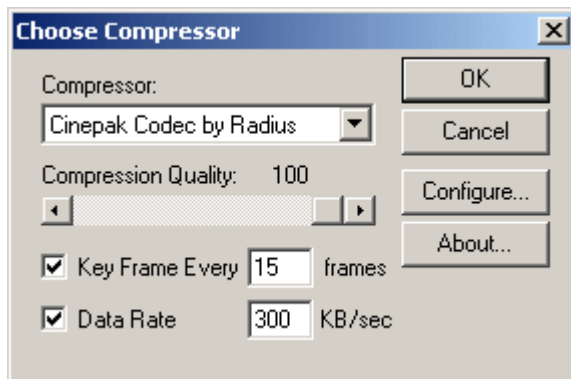
This dialog box allows you to choose a CODEC from the list of CODECs installed on yo
it. The role of the CODEC is to compress your video files.

Installing Version 5 does NOT install CODECs on your computer. The list of CODECs d
another. For information about how to configure the CODEC, refer to the CODEC supp

On Windows, the Compressor list contains several options among which "Full Frames
this option prior to recording has the following effects:

✦ the resulting video file is larger (because it is not compressed)

✦ but performance during the recording is enhanced (because each frame is not com
recorded).

Note that if you installed DirectShow on your computer, you will be able to use all CO
options provided by the DirectShow multimedia architecture. Therefore, additional CC
Compressor list.

The following images illustrate different types of rendering:
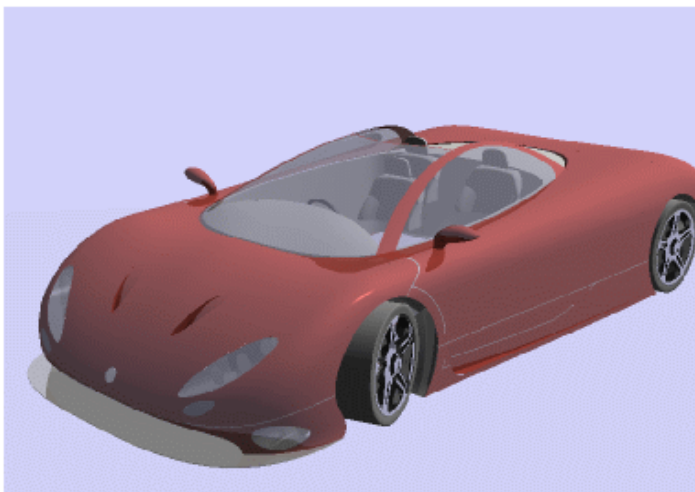
Textures off, two active lights, shadows off and an   Textures on, two active lights, shado
average accuracy   anti-aliasing off and the lowest accu

Textures on, two active lights, shadows on   Textures on, two active lights, shado
and the lowest accuracy   and an average accuracy

In the specification tree, the ![icon] icon identifies the most recently rendered shooting, the

being identified by the ![icon] icon.

Click **Redo Render** ![icon] if you want to redo the last render performed, whether it wa
or an animation.

Once a shooting has been defined, you can edit its parameters afterwards by re-accessing
Definition dialog box. To do so, right-click the shooting to be modified in the specification
Shooting object > Definition.