

# Software Evaluation Guide for Autodesk\* 3ds Max\* 2009



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## About this Document

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This document is a guide measuring performance of the Intel® Processors on application software. The primary audience for this document includes individuals, publications, OEMs and technical analysts whose goal is to test or evaluate the performance benefits and features of the Pentium Processor. If there are questions that are not answered here on software application performance evaluation of the Pentium Processor, please contact your Intel representative.

Each software application test measures different aspects of processor and/or system performance. While no single numerical measurement can completely describe the performance of a complex device like a microprocessor or a personal computer, application tests can be useful tools for comparing different components and systems. The following results and procedures give a glimpse of the performance of certain software applications, however your own usage of each application may vary from what is shown here. The only totally accurate way to measure the performance of your system, is to test the actual software applications you use, in the way you use them, on your computer system. Test results published by Intel are measured on specific systems or components using specific hardware and software configurations, and any differences between those configurations (including software) and your configuration may make those results inapplicable to your component or system.

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# Chapter 1

## Processor Performance on Autodesk\* 3DS Max\* 2009

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### 1.0 Software Description

Autodesk\* 3DS Max 9 is a popular animation modeling, and rendering solution for film, television, games and design visualization. It contains the essential high-productivity tools required for creating eye-catching film and television animation, cutting-edge games, and distinct design visualizations.

For more information about Autodesk\* 3DS Max2009, visit <http://www.Autodesk.com/>

### 1.1 Workload Description

The workload used in this document is called Dragon\_Character\_Rig.max. The workload consists of a scene of a Dragon\_Character\_Rig.max rendered at 1920x1080. One frame is rendered. The render options set are Atmospheric, Effects and Displacement. The advanced lighting options are also set.

## Chapter 2

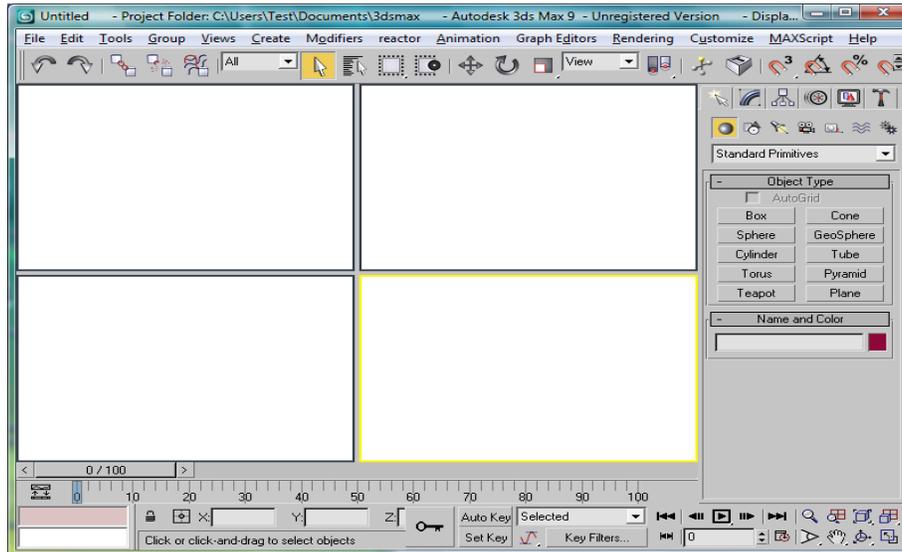
# Procedure for evaluating processor performance

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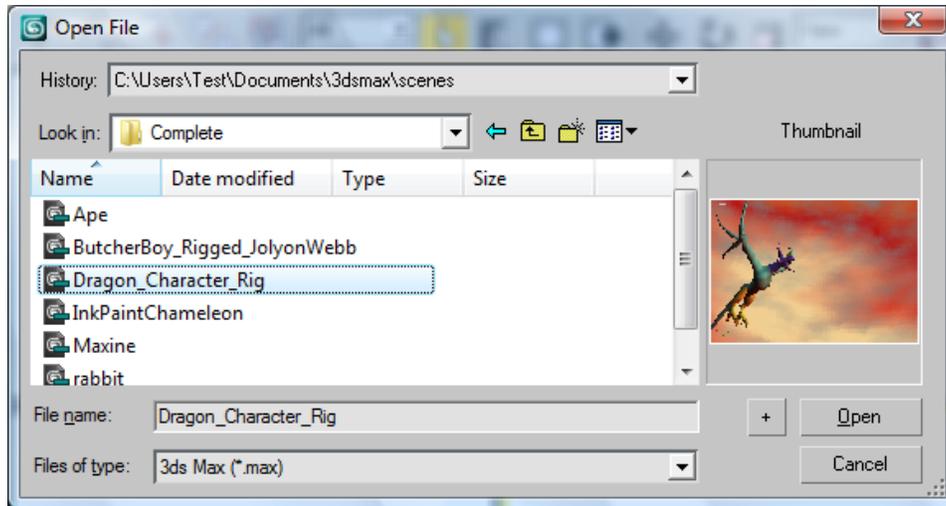
The following is a procedure for evaluating processor performance while creating 3D images using Autodesk\* 3DS Max\* 2009. Run this test on a system running *Windows\* VISTA*.

### 2.0 Run Instructions:

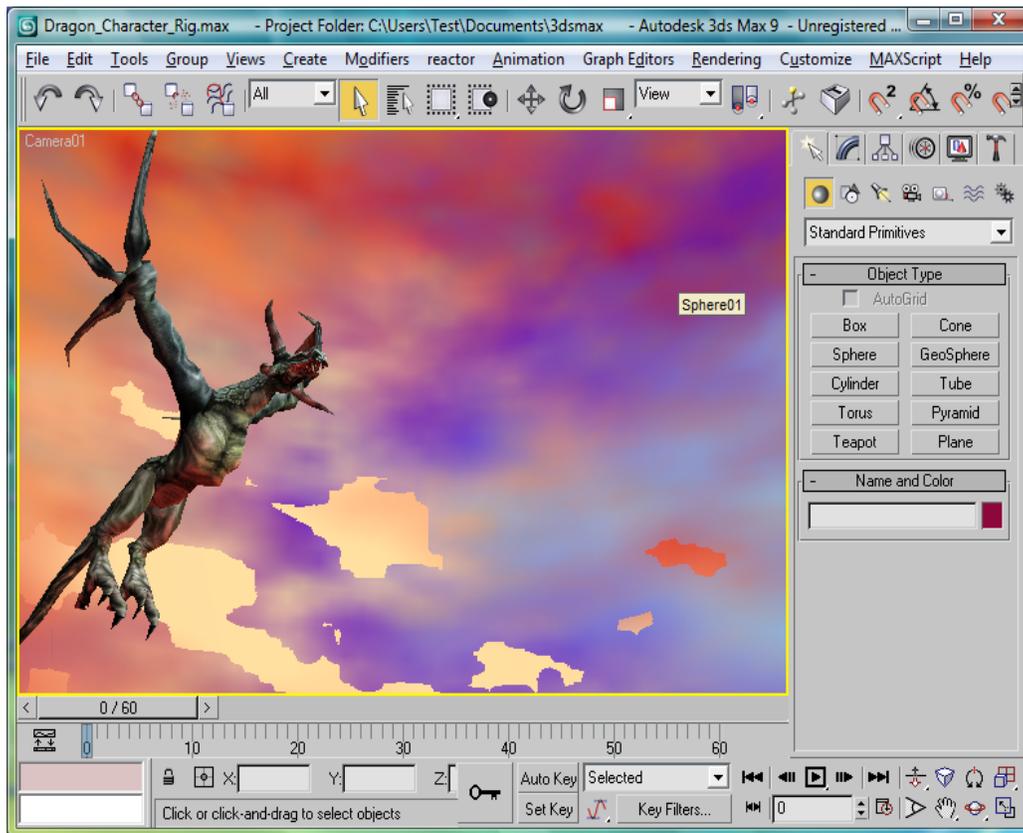
1. Install 3ds Max using default settings.
2. Select OpenGL if prompted for a software driver setting during the install process or if prompted when the application is first launched.
3. After installation is complete, reboot the computer.
4. Double click the icon for 3DS Max to launch the application. The window below should appear.



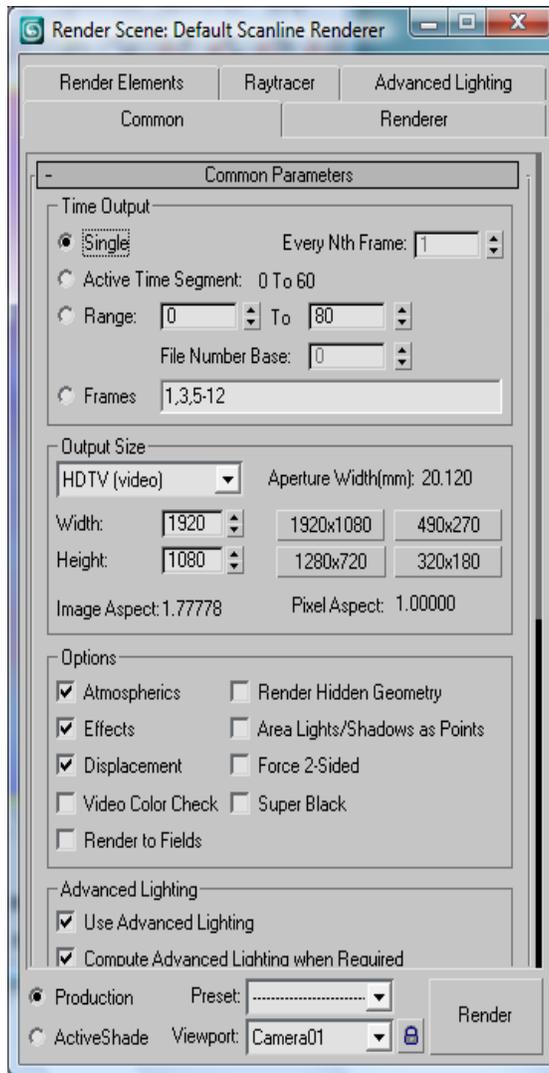
5. From the File menu, go to File → Open. This will open up the dialog below. Under c:\SEGs\3dsmax\Scenes\Characters\Complete, load the scene called Dragon\_Character\_Rig.max. You may need to copy the contents of the Scenes directory manually from your installation cd to c:\SEGs\3dsmax\Scenes\Characters\Complete prior to opening the file.



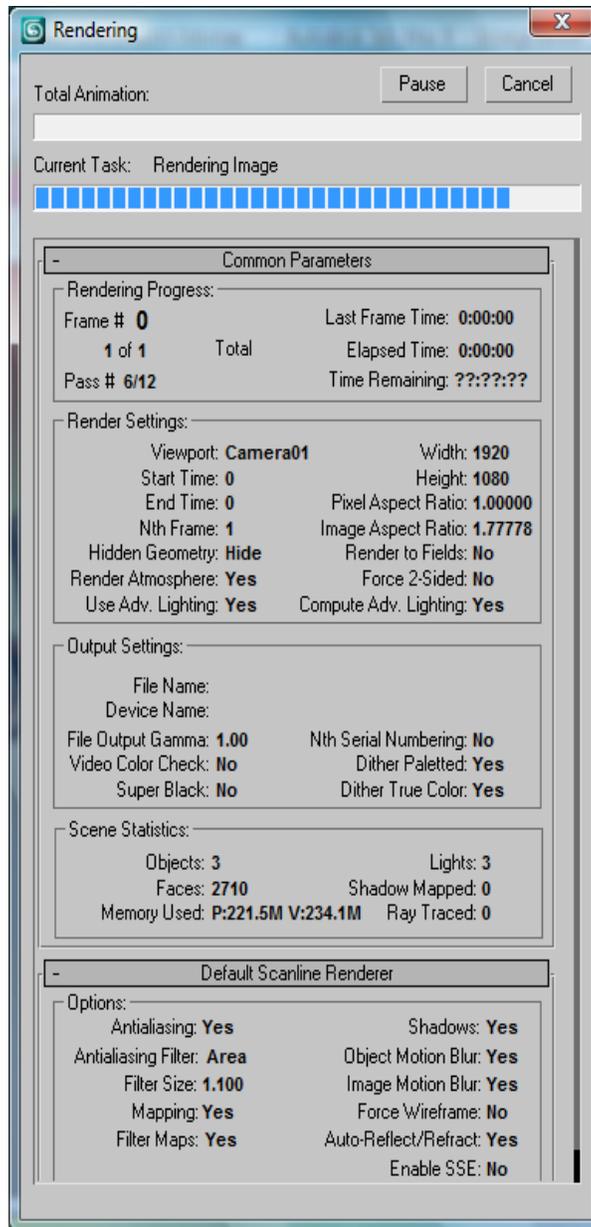
6. This will bring up the window below.



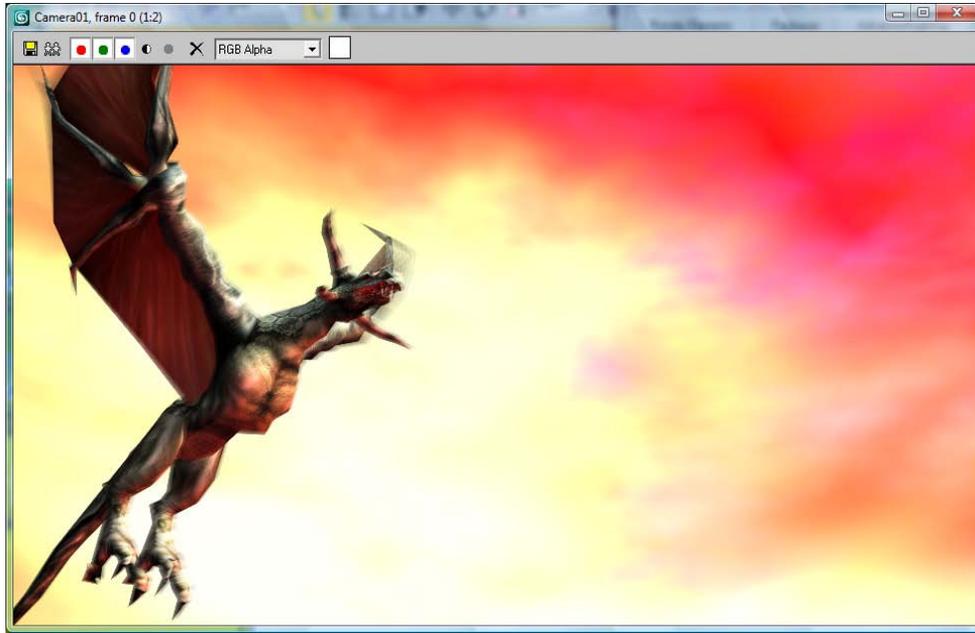
7. In the Render menu, choose the item for Render options. This will bring up the dialog below. Set the time output to Single and set the output size to be HDTV (video) which is 1920 x 1080. The options should appear as shown in the dialog below.



- Next, Click the Render button in the bottom right corner of the dialog. The render progress dialog below will then appear.



9. Once rendering is finished, you will see the finished output in the window below.



- Go to the File menu and click on Summary Info to get details of the scene just rendered. Look at the value under the heading Rendering where it says Last Animation Time. That is the time taken to render the scene. Record this value.

Summary Info (at Frame 0)

| Scene Totals |    | Mesh Totals |      | Memory Usage |                  | Rendering             |         |
|--------------|----|-------------|------|--------------|------------------|-----------------------|---------|
| Objects:     | 62 | Vertices:   | 2227 | Physical:    | 631.2M / 2045.2M | Last Frame Time:      | 0:00:46 |
| Shapes:      | 0  | Faces:      | 3826 | Virtual:     | 580.1M / 4096.0M | Last Animation Time:  | 0:00:46 |
| Lights:      | 3  |             |      |              |                  | Last Video Post Time: | 0:00:00 |
| Cameras:     | 1  |             |      |              |                  |                       |         |
| Helpers:     | 9  |             |      |              |                  |                       |         |
| Space Warps: | 0  |             |      |              |                  |                       |         |
| Total:       | 75 |             |      |              |                  |                       |         |

Description

Motion Blur Preview Demo File

This file is great for showing the preview ability with the new Multi Pass motion blur. Select the camera and hit preview.

BTW, all the sliders in the viewports are not hooked up. I didn't get around to it but they still look pretty cool. It's good

Summary Info (at Frame 0)

| Name            | Type     | Verts | Faces | Cast Shadows | Receive Shadows | Motion Blur | Hidden | Frozen | Generate Caustics | Receive Caustics | Generate Global Illumination |
|-----------------|----------|-------|-------|--------------|-----------------|-------------|--------|--------|-------------------|------------------|------------------------------|
| Particle box    | Box      | 8     | 12    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Dragon          | Editable | 1151  | 2102  | Yes          | Yes             | No          | No     | No     | No                | Yes              | No                           |
| Camera01.Target | Target   | -     | -     | Yes          | Yes             | No          | No     | No     | No                | Yes              | No                           |
| Sphere01        | Editable | 154   | 304   | Yes          | Yes             | No          | No     | No     | No                | Yes              | No                           |
| Bone-pelvis     | Bone     | 41    | 54    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Bone-tail1      | Bone     | 9     | 14    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Bone-tail2      | Bone     | 25    | 34    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Bone-tail3      | Bone     | 25    | 34    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Bone-tail4      | Bone     | 25    | 34    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Bone-tail5      | Bone     | 25    | 34    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |
| Bone-tail6      | Bone     | 9     | 14    | Yes          | Yes             | No          | Yes    | No     | No                | Yes              | No                           |

### Running the Test Using a Script (Optional)

- You also have the option of running this workload with an automated script.

- Before running the script, set up the application and workload similar to how it is set up for a manual run. Then close all of the application windows.
- The workload input folder named 3dsMax\_scenes should be placed in c:\SEGs.
- It's also recommended to run the script once manually as a cross check on your script times. The script timing measures the same function as measured in hand-timing and is expected to be very close to the stopwatch time.
- Minimize or close other open windows before running the script.
- Double-click on the script .exe to start execution.
- When the script is finished running a dialog will pop up displaying the time in milliseconds.