Technical Report

Get GPU and System Info
Microsoft provides the IDXDiagContainer COM interface to query for graphics hardware and system properties. This demo provides a wrapper for the interface. The wrapper takes care of initialization and simplifies the query mechanism so that only a few lines of code are needed to retrieve specific properties. An IDirect3DDevice9 object is not needed to gather the information, so the interface is very easy to instantiate and use.

Most notable among the information that can be retrieved are the amount of physical memory on the video card, the amount of system memory, and whether or not AGP is enabled on the user's system. Microsoft has lumped PCI-Express status into the AGP information fields, and there is no way, through this interface at least, to determine whether a user has an AGP or PCI-Express system.

The wrapper class, DXDiagNVUtil, provides several built-in functions to query a few useful properties. All other properties can be queried using the various GetProperty(...) functions. Consult the supplied “IDxDiagContainerNames.txt” document for a list of typical IDXDiagContainer node and property names. In that list, for entries such as:

```
DxDiag_SystemInfo : prop "dwOSMajorVersion"
DxDiag_DirectSound.DxDiag_SoundDevices.0 : prop "szDriverDateEnglish"
```

You would use the wrapper interface like so:

```cpp
wstring out_wstring;
DXDiagNVUtil::GetProperty( L"DxDiag_SystemInfo", L"dwOSMajorVersion", &out_wstring );
DXDiagNVUtil::GetProperty( L"DxDiag_DirectSound", L"DxDiag_SoundDevices.0", L"0", L"szDriverDateEnglish", &out_wstring );
```
Notice

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.

Information furnished is believed to be accurate and reliable. However, NVIDIA Corporation assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use. No license is granted by implication or otherwise under any patent or patent rights of NVIDIA Corporation. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. NVIDIA Corporation products are not authorized for use as critical components in life support devices or systems without express written approval of NVIDIA Corporation.

Trademarks

NVIDIA and the NVIDIA logo are trademarks or registered trademarks of NVIDIA Corporation. Other company and product names may be trademarks of the respective companies with which they are associated.

Copyright

© 2005 by NVIDIA Corporation. All rights reserved