

Vista API Implementation on Windows XP and Windows Server 2003
"VAIOXP" & "VAIO2003"

Documentation Revision 4

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Revision History

November 08, 2006 (r0)

- Initial document release.

November 09, 2006 (r1)

- Added manifest note for 64-bit operating system users
- Added Application Note for Windows Sidebar
- Added additional required installation step
- Added additional note on MUIs in Usage section

November 10, 2006 (r2)

- Added Prerequisites section
- Added additional item in Windows Sidebar Application Note section

November 11, 2006 (r2)

- Revised Windows Sidebar Application Note section

November 18, 2006 (r3)

- Added installation step (4).
- Revised last note in Windows Sidebar Application Note section

January 14-18, 2007 (r4)

- Added Windows Media Player, Wireless LAN API prerequisites
- Added additional Application Notes (Texas Hold'Em, Windows Sidebar Styler 2.0)
- Revised Installation/Uninstallation sections
- Added font notice to Windows Sidebar Application Note

Prerequisites

- Microsoft Visual C++ 2005 Redistributable Package
<http://www.microsoft.com/downloads/details.aspx?FamilyID=32BC1BEE-A3F9-4C13-9C99-220B62A191EE&displaylang=en>
- Microsoft Internet Explorer 7
<http://www.microsoft.com/windows/ie/downloads/default.msp>
- Wireless LAN API (KB918997) (VAIOXP users only)
<http://www.microsoft.com/downloads/details.aspx?familyid=52A43BAB-DC4E-413F-AC71-158EFD1ADA50&displaylang=en>
- Windows Media Player 11 (Windows Sidebar users)
<http://www.microsoft.com/windows/windowsmedia/player/download/download.aspx>

Installation

1. Double-click the provided MSI to begin the installation process. Follow the on-screen prompts.
2. Log out/in or restart your computer.



Windows Explorer will **not** inherit the new environmental changes made until it is restarted. Logging out and back into Windows is the easiest solution for end users.

Upgrade (from build 1)

1. Shutdown all applications utilizing VAIO libraries (e.g. Windows Sidebar).
2. Unregister the shell extension by executing **regsvr32 /u %VAIO%\vshellex.dll** in a command prompt window.
3. Remove the **VAIO** environmental variable.
4. Remove any references to the **VAIO** environmental variable or path in the **PATH** environmental value.
5. Remove all generated .manifest files for applications patched and executed by VAIO (e.g. Windows Sidebar).
6. Remove entire VAIO installation directory (including its contents).
7. Log out/in or restart your computer and install using above instructions.

Un-installation

1. Navigate to the Add/Remove programs applet, click VAIOXP or VAIO2003, and click the Change/Remove button. Follow any and all on-screen prompts.
2. Log out/in or restart your computer.



The environmental changes **will** remain in memory until the user logs out or the machine is rebooted.

Usage



The use of VAIO is still undergoing **major** research by the team. User feedback in this area is greatly needed and appreciated in advance.

VAIO does not have any user interfaces. VAIO extends the options available to users in the context menu via the use of a Windows Explorer shell extension. There are three different sets of options the extension may display upon file right-click, based upon file type:

- **Executables**
Patch and Run Vista Executable...
Run Vista Executable
- **Screen Savers**
Patch Vista screensaver...
- **Dynamic Link Libraries**
Patch Vista library...

Upon clicking one of the patching-based actions, the shell extension will modify the right-clicked file to be compatible with the host operating system. VAIO, however, does **not** alter any executable code in the file (only headers, etc.)!

Upon clicking the run action (for executables), the patching subsystem of the shell extension is bypassed and immediately executed. This is useful for files previously patched and is script-friendly¹.



Most Vista applications **require** additional resources from their MUI files (e.g. located in en-US). These resources must be present at patch time to be correctly merged into the target executable.

¹ Examples can be provided on-demand.

Licensing

VAIO implements the **SLGetWindowsInformationDWORD** function to ensure users do not execute Windows Vista applications they are not specifically licensed to use². For this function to work, policies must be initialized based on SKU. VAIO determines the SKU to mimic by analyzing and validating the product key entered using PidGenX components. After analyzing, the product key is **obfuscated** and **stored** in a flat file **data.bin**. VAIO maintains your privacy by not transmitting license information in any way, shape, or form.



NOTE

Windows Inkball is an example of an application that checks for the **TabletPCInkBall-EnableGame** licensing policy via this function. Windows Inkball will **not** work without a valid license and acceptable SKU.

Technical Considerations/Notes

- ❖ VAIO does not currently support the automatic detection and registration of OLE-based objects or any library dependencies, such as XInput9_1_0.dll for Solitaire³.
- ❖ Some users may receive ATL ordinal errors. We are currently research this issue. If you experience problems with ATL.dll, please file a bug (<http://www.fromvistatexp.com/bugs>).
- ❖ VAIO uses a generic Windows Side-by-Side (WinSXS) assembly manifest for post-patching operations. It may be necessary to edit the **manifest.xml** file to match the configuration of your machine. The manifest included with VAIO contains entries for:
 - Microsoft.VC80.CRT (8.0.50727.42)
 - Microsoft.Windows.Common-Controls (6.0.2600.2180)
 - Microsoft.Windows.GdiPlus (1.0.0.0)
 - Microsoft.VC80.DebugCRT (8.0.50727.42)

² VAIO does not guarantee license violations cannot occur.

³ VAIO does not currently support Solitaire.

Application Note: Windows Sidebar

Windows Sidebar requires additional work to function properly. For Windows Sidebar to locate gadgets properly, it **must** be installed into \Program Files\Windows Sidebar. If you are on a 64-bit platform, use \Program Files (x86)\Windows Sidebar and replace \System32 references below with \SysWow64.

1. Patch the following Windows Sidebar files using the VAIO shell extension (right-click context menu):

- sbdrop.dll
- wlsrv.dll
- sidebar.exe



sbdrop.dll.mui and **sidebar.exe.mui** must exist in a folder matching your locale (e.g. en-US, de-DE) for resources to be correctly merged.

2. Use the included **regtlib.exe** (Tools folder) to register the type libraries in Sidebar.exe by issuing the following command from a command prompt:

- %VAIOTOOLS%\regtlib.exe <path to Sidebar.exe>



If the path contains spaces, enclose it in quotation marks.

3. Copy %SystemRoot%\System32\regsvr32.exe into the folder containing **sbdrop.dll** and **wlsrv.dll**.
4. Copy **manifest.xml** from your root VAIO directory into the directory containing **sbdrop.dll** and **wlsrv.dll**. Rename the file to **regsvr32.exe.manifest**.
5. Execute the following commands, from a command prompt:

- cd "%ProgramFiles%\Windows Sidebar\"
- .\regsvr32.exe sbdrop.dll
- .\regsvr32.exe wlsrv.dll

6. It is **strongly** recommended you install the **Segoe UI** font on your system. You can retrieve these files (segoeui*.tif) from your Windows Vista™ installation media image (WIM) or partition.



Do not omit the **.** in the commands. If you have problems executing this step, ensure the VAIO installation directory was inserted into the **PATH** environmental variable and that the machine was logged out/in (or rebooted) as per installation step 2.

Application Note: Windows Sidebar Styler 2.0

More information about Stanimir Stoyanov's Windows Sidebar Styler can be found at <http://www.stoyanoff.info/blog/code/styler/>. Leveraging new functionalities provided in VAIO Preview Build #2, Windows Sidebar Styler 2.0 is supported in-box and requires no additional work.



NOTE

Windows Sidebar Styler **requires** the Microsoft.NET Framework 3.0 (<http://go.microsoft.com/fwlink/?LinkId=70848>). Be sure to read any and all documentation provided by third party.

Application Note: Windows Ultimate Extra: Texas Hold'Em

Texas Hold'Em requires a Windows Vista™ Ultimate license as well as **XInput9_1_0.dll** in its working directory (or at a location within the system path). Make sure the library is patched before attempting to launch Texas Hold'Em!