



SYSTEM TOOLS WITH CINCOM® OBJECTSTUDIO®

By Andreas Hiltner



 Cincom®

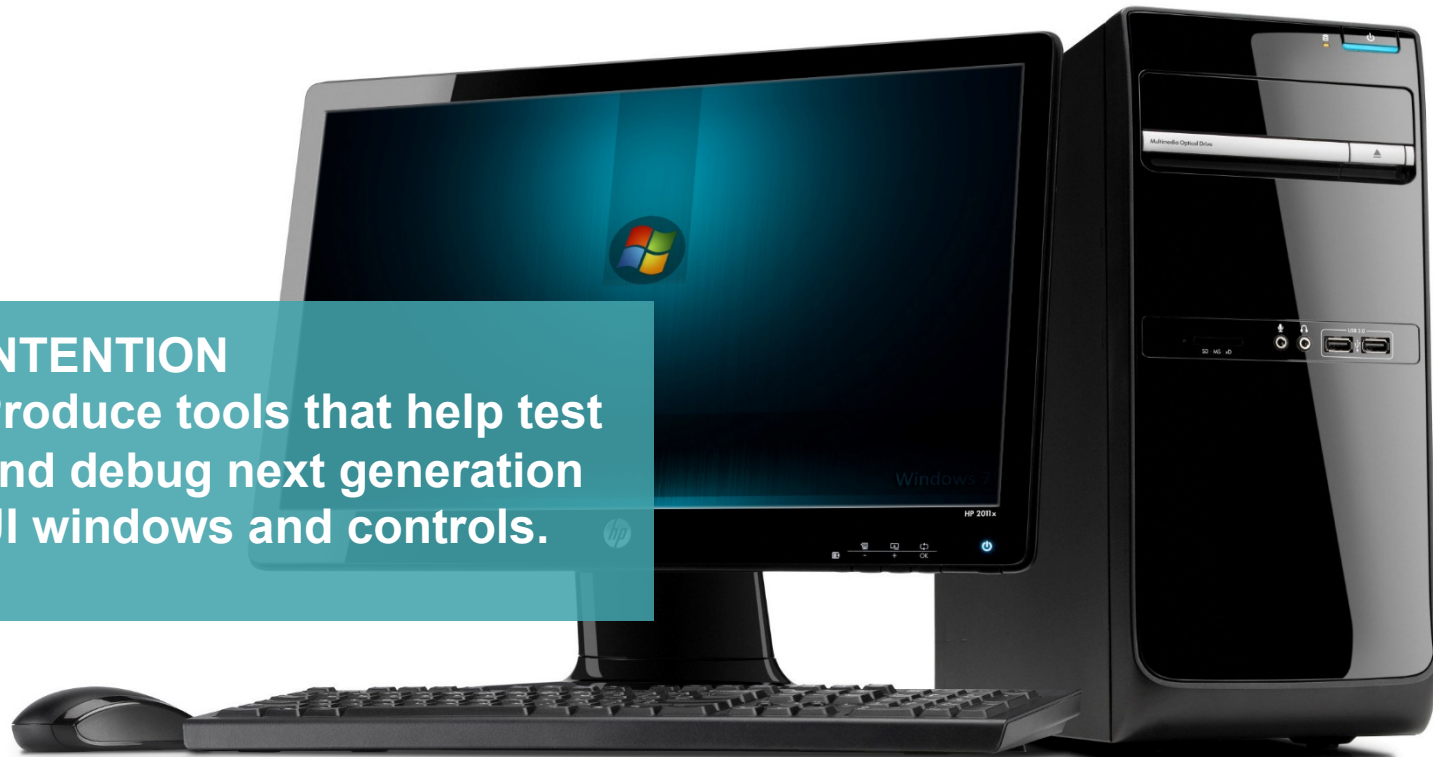


Overview

- **Intention**
- **Power Capabilities / - State**
 - BatteryMeter
- **GUID Generator**
- **Windows**
 - Window Spy
 - Window Finder
- **Processes**
 - Process Explorer
 - GDI Log
- **Questions**

INTENTION

Produce tools that help test
and debug next generation
UI windows and controls.



Power Capabilities

Class PowerCapabilities Contains information about the power capabilities of the system.

e.g.

- is there a system power button
- is there a lid present
- is a battery present
- Is a thermal control present
- (...)

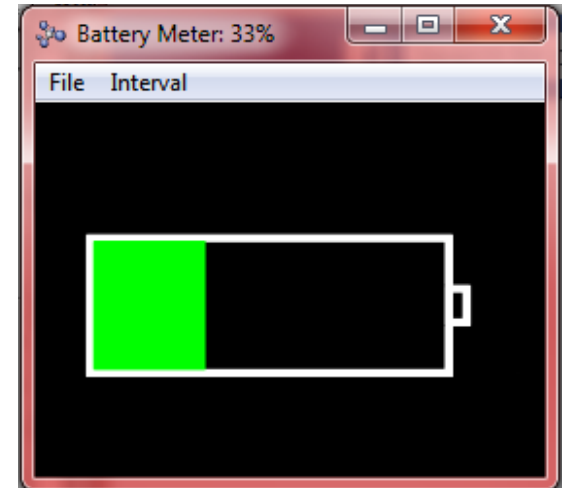
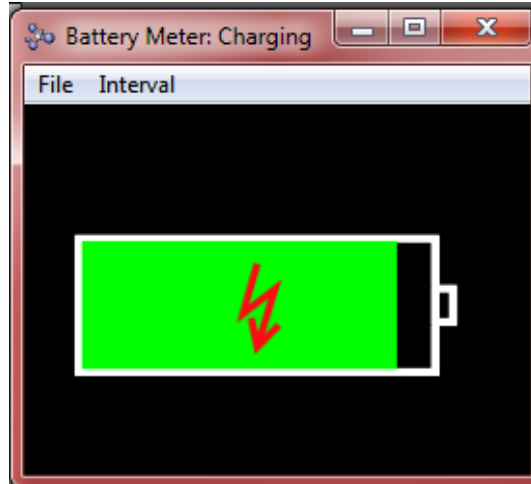
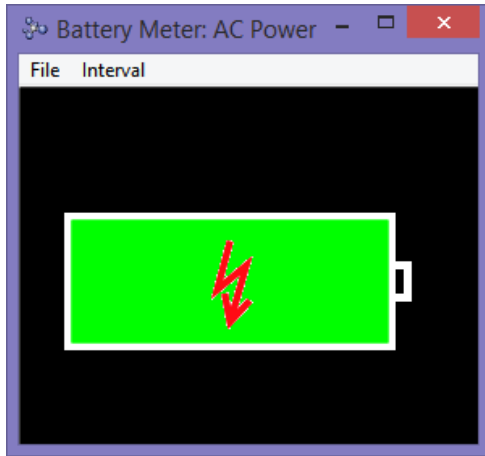
Power State

Class PowerState provides a system-wide set of power management features. The class retrieves the power status, notify the application of power management events and notify the system of the application's power requirements.

Power State (con't)

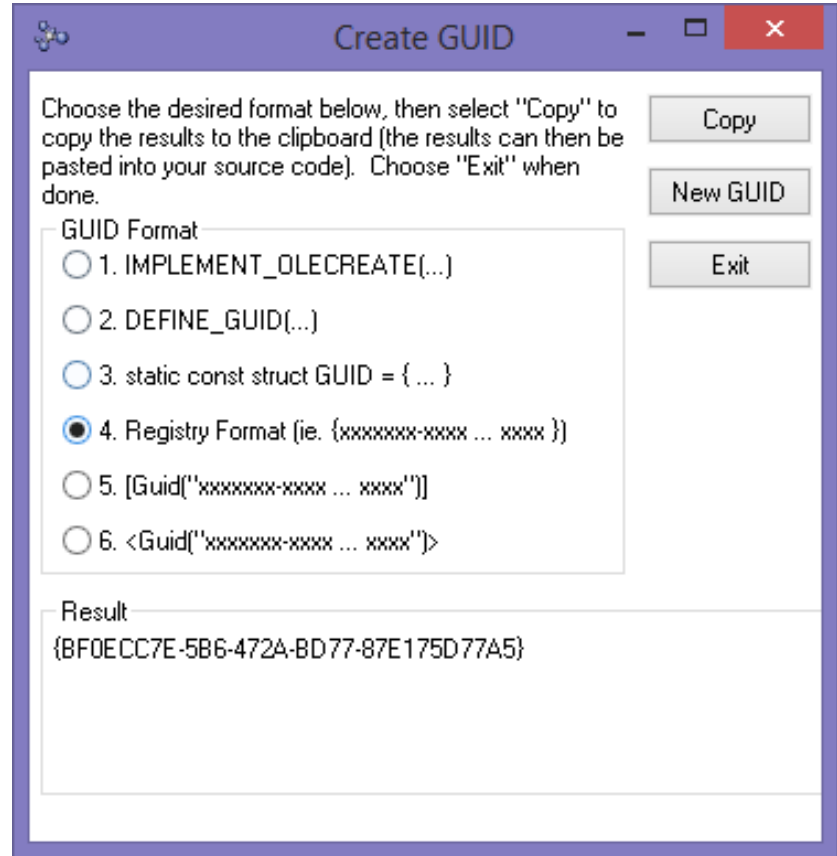
- Away Mode required
- Display required
- System required
- Suspend / Hibernate
- Announcements for
 - Suspend operations
 - Resume from Suspend
- Battery state (charging/high/low/critical)

Battery Meter



GUID Generator

Generate GUIDS
with different styles.



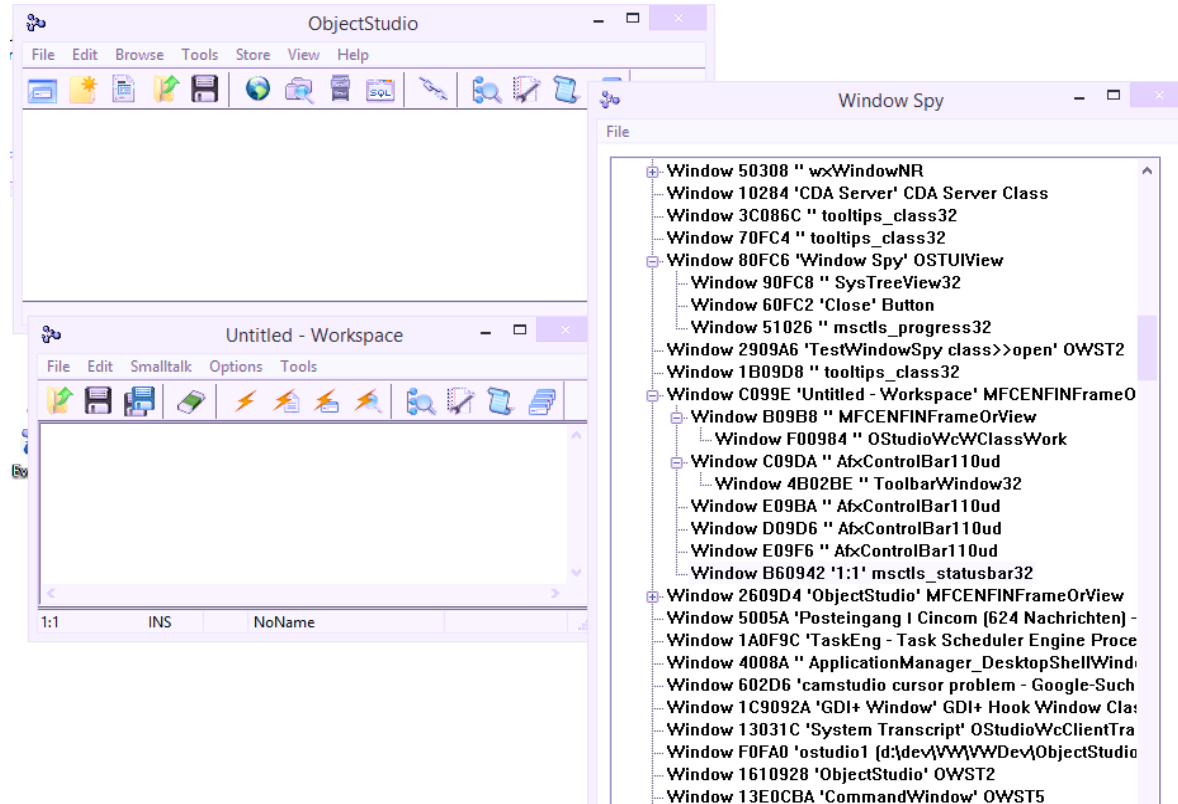
Window Spy

Window Spy shows **all** registered windows, that exist at the present time in a hierarchical view.

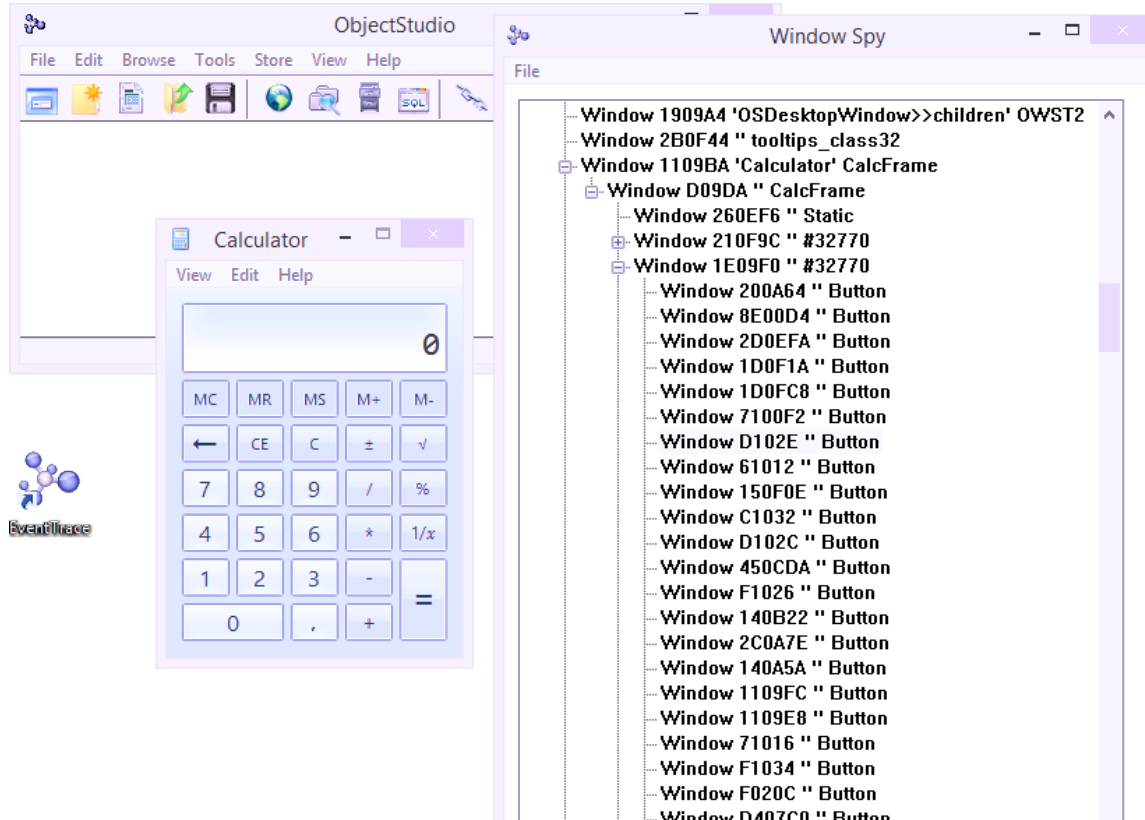
Not just of its own Smalltalk process, but **all** existing processes, starting with the Windows Desktop.

Window Spy also retrieves information about the process, the window belongs to.

Window Spy (con't)



Window Spy (con't)

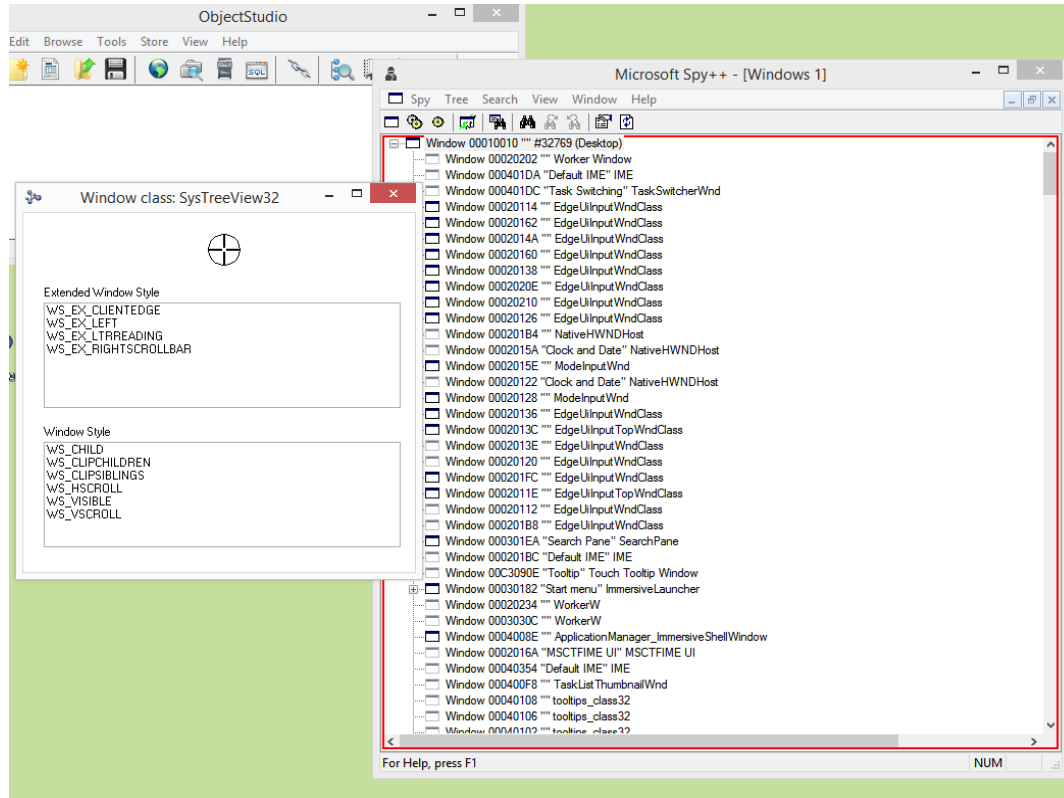


Window Finder

Window Finder locates and retrieves styles and extended styles of any open window in the system.

It works in conjunction with Window Spy.

Window Finder (con't)

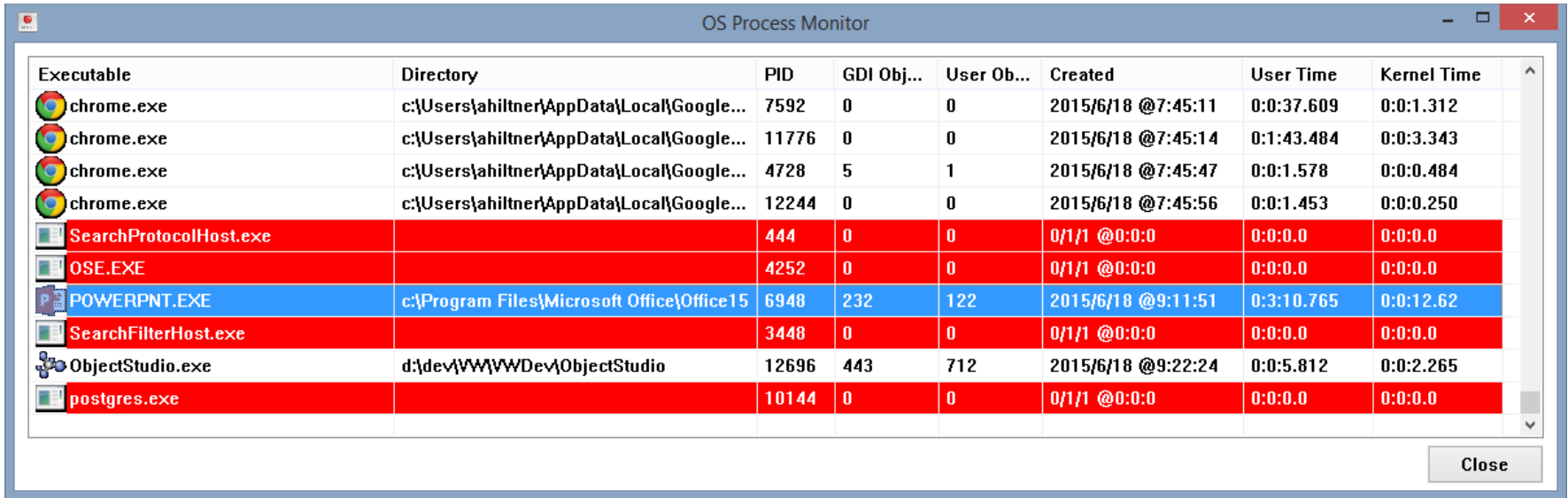


Process Explorer

Process Explorer displays all existing processes and information about

- Process ID (PID)
- Number of GDI objects
- Number of User Objects
- Creation time
- Time spend in User Mode
- Time spend in Kernel Mode
- Search for the Executable Name

Process Explorer (con't)



The screenshot shows the 'OS Process Monitor' window with a table of running processes. The table has columns for Executable, Directory, PID, GDI Obj..., User Ob..., Created, User Time, and Kernel Time. The 'POWERPNT.EXE' process is highlighted in blue, while others are in red or white. A 'Close' button is visible at the bottom right of the window.

Executable	Directory	PID	GDI Obj...	User Ob...	Created	User Time	Kernel Time
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	7592	0	0	2015/6/18 @7:45:11	0:0:37.609	0:0:1.312
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	11776	0	0	2015/6/18 @7:45:14	0:1:43.484	0:0:3.343
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	4728	5	1	2015/6/18 @7:45:47	0:0:1.578	0:0:0.484
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	12244	0	0	2015/6/18 @7:45:56	0:0:1.453	0:0:0.250
SearchProtocolHost.exe		444	0	0	0/1/1 @0:0:0	0:0:0.0	0:0:0.0
OSE.EXE		4252	0	0	0/1/1 @0:0:0	0:0:0.0	0:0:0.0
POWERPNT.EXE	c:\Program Files\Microsoft Office\Office15	6948	232	122	2015/6/18 @9:11:51	0:3:10.765	0:0:12.62
SearchFilterHost.exe		3448	0	0	0/1/1 @0:0:0	0:0:0.0	0:0:0.0
ObjectStudio.exe	d:\dev\VV\VVDev\ObjectStudio	12696	443	712	2015/6/18 @9:22:24	0:0:5.812	0:0:2.265
postgres.exe		10144	0	0	0/1/1 @0:0:0	0:0:0.0	0:0:0.0

Process Explorer (con't)

The screenshot displays the OS Process Monitor application. The main window shows a table of processes with columns for Executable, Directory, PID, and GDI Obj... The 'Loaded Modules' window is open over the process list, showing a list of DLLs loaded by the selected process. The 'Kernel Time' window is also open, showing a table of kernel times for various processes.

Executable	Directory	PID	GDI Obj...
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	7592	0
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	11776	0
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	4728	5
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	12244	0
SearchProtocolHost.exe		444	0
OSE.EXE		4252	0
POWERPNT.EXE	c:\Program Files\Microsoft Office\Office 15	6948	232
SearchFilterHost.exe		3448	0
ObjectStudio.exe	d:\dev\VV\VVDev\ObjectStudio	12696	443
postgres.exe		10144	0

Loaded Modules

- ADVAPI32.dll
- bcryptPrimitives.dll
- cfgmgr32.dll
- chrome_child.dll
- chrome_elf.dll
- chrome.exe
- combase.dll
- COMCTL32.dll
- COMDLG32.dll
- CRYPT32.dll
- CRYPTBASE.dll
- DEVOBJ.dll
- dwrite.dll
- GDI32.dll
- IMM32.DLL
- IPHPAPI.DLL
- KERNEL32.DLL
- KERNELBASE.dll
- MSASN1.dll
- MSCTF.dll
- msvcr.dll
- NSI.dll

Kernel Time

Kernel Time
0:0:1.312
0:0:3.343
0:0:0.484
0:0:0.250
0:0:0.0
0:0:0.0
0:0:12.62
0:0:0.0
0:0:2.265
0:0:0.0

Process Explorer (con't)

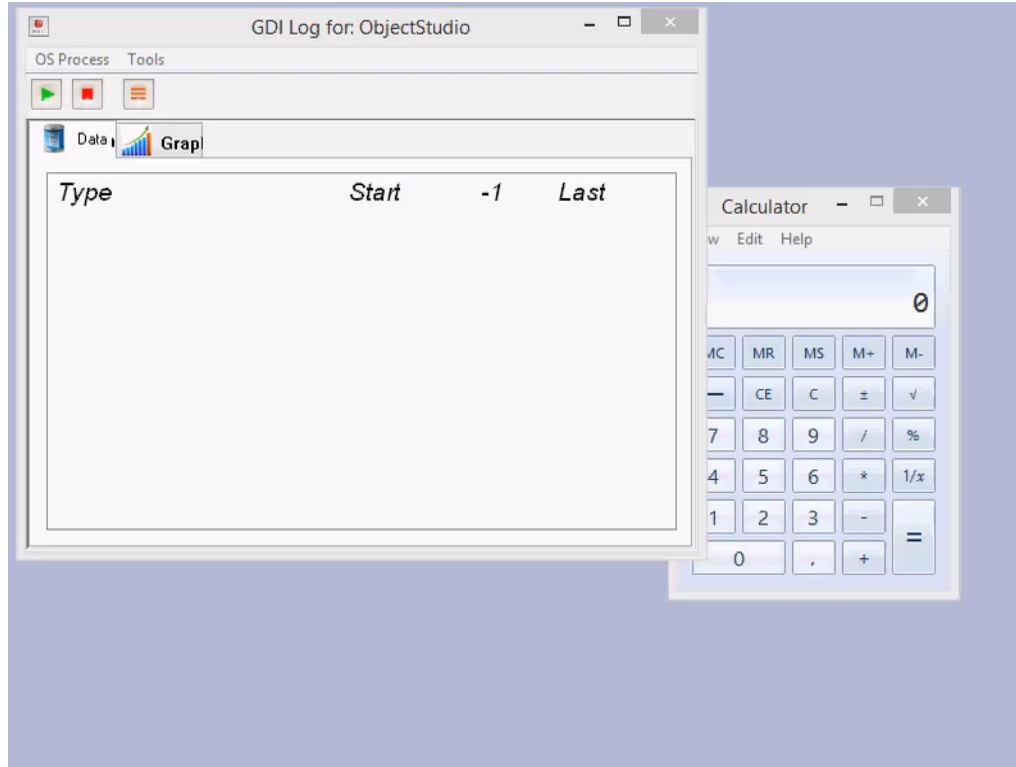
Executable	Directory	PID	GDI Obj...	Usr ^
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	7592	0	0
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	11776	0	0
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	4728	5	1
chrome.exe	c:\Users\ahiltner\AppData\Local\Google...	12244	0	0
OSE.EXE		4252	0	0
POWERPNT.EXE	c:\Program Files\Microsoft Office\Office15	6948	265	118
ObjectStudio.exe	d:\dev\VV\VVDev\ObjectStudio	12696	474	714
postgres.exe		10144	0	0
livecomm.exe	c:\Program Files\WindowsApps\micro...	12548	9	3
Recorder.exe	c:\Program Files [x86]\CamStudio	8268	182	97
chrome.exe		9700	0	0
svchost.exe		13100	0	0
SearchProtocolHost.exe		11896	0	0

Close

GDI Log

GDI Log shows the usage of the various GDI resources over time. It can help to identify resource leaks and indicate, which resources are used during operations.

GDI Log (con't)



Questions?

Contact Information

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