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# New Native Windows UI Possibilities in Cincom® ObjectStudio®

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# Topic

- Non-rectangular windows
- Taskbar Notification
- Monitor(s)
- WindowPlacement
- Security Identifier
- Filename
- Workspace
- And much more

# Non rectangular windows - Region

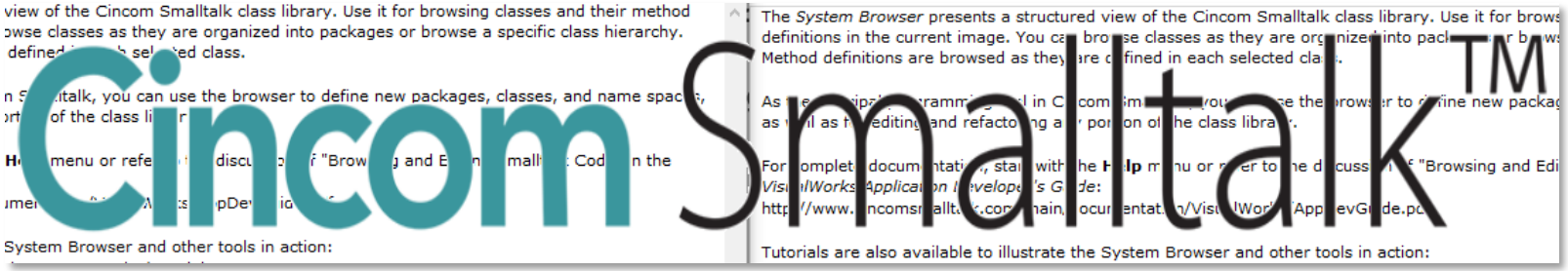
Create a non-rectangular Window using a Region

A region is a rectangle, polygon, or ellipse (or a combination of two or more of these shapes) that can be filled, painted, inverted, framed, and used to perform hit testing (testing for the cursor location).

# Non rectangular windows - Transparency

Create a non-rectangular Window using transparent Window.

Using an image with transparent areas, the window can assume any shape or form

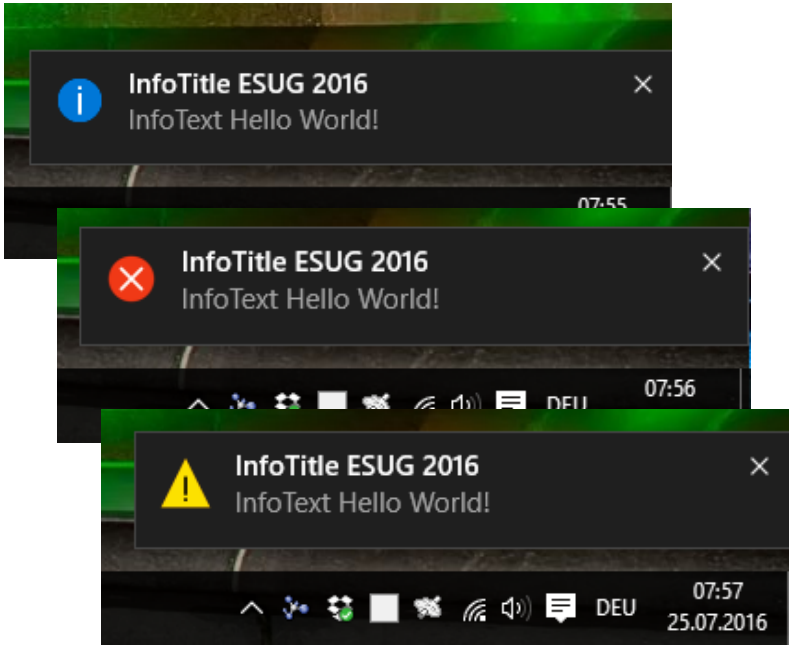


# Taskbar Notification

The notification area is a portion of the taskbar that provides a temporary source for notifications and status.

It can also be used to display icons for system and program features that have no presence on the desktop, such as battery level, volume control, and network status.

The notification area has been known historically as the system tray or status area.



# Deferred-Move-List

Class UIDeferredMoveList allows to move several Windows in one fell swoop, which can reduce flicker in contrast to moving each window individually.

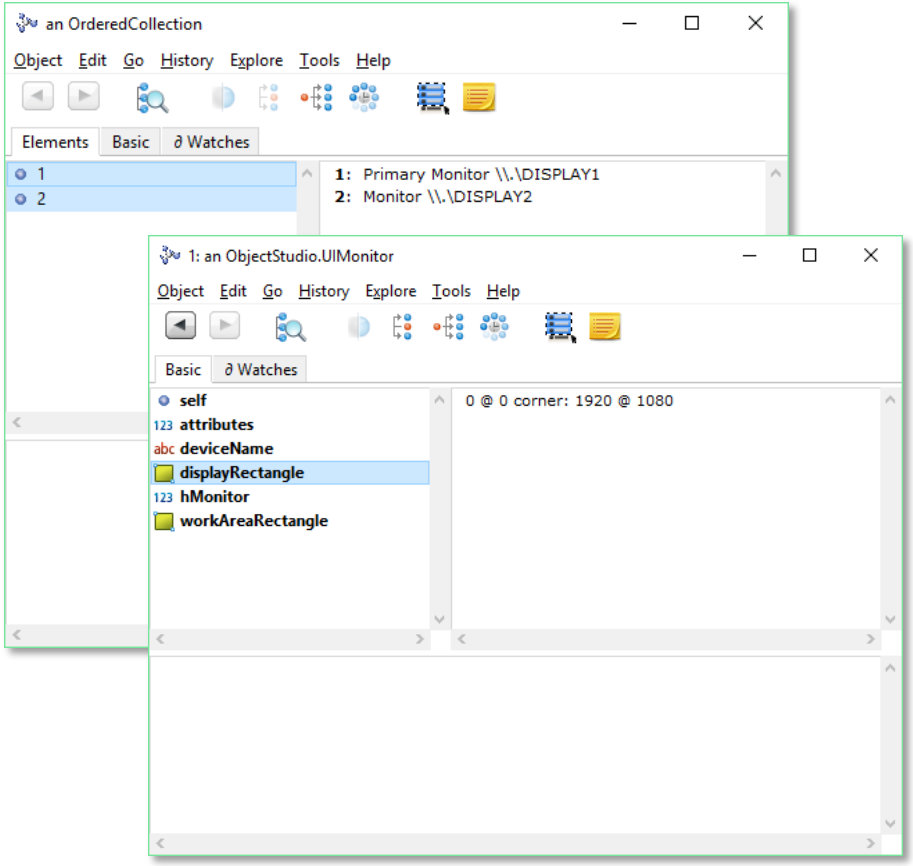
Simply add the Windows to the list, together with the target rectangle and any possible flags.

Calling #moveAll will then move all those Windows to their desired location

# Monitor(s)

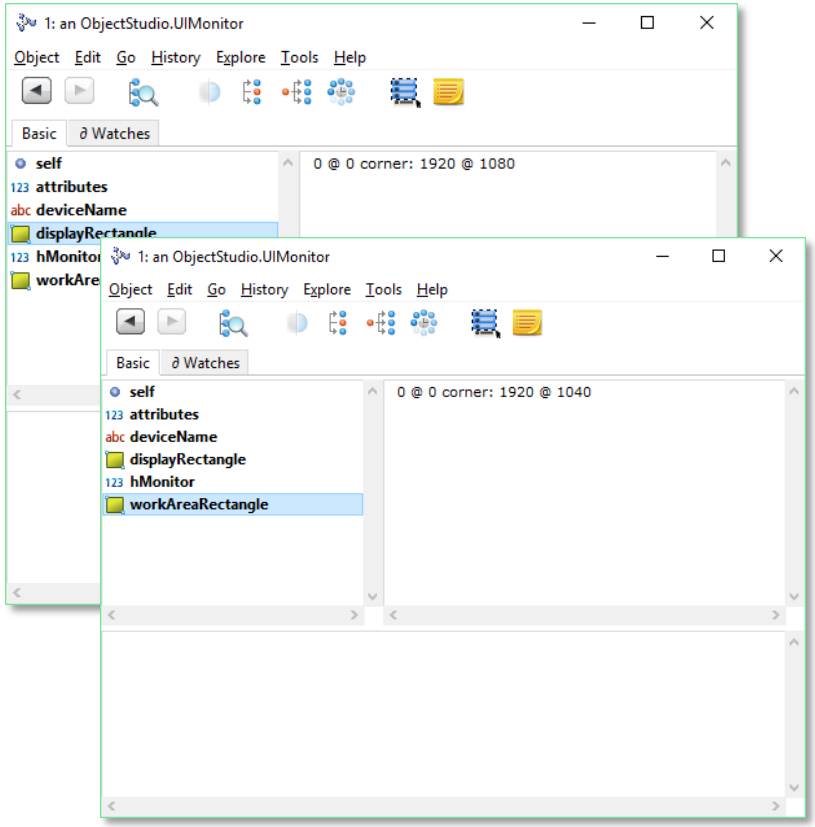
Class UIMonitor returns all available monitors, currently attached to the computer.

The display rectangle  specifies the display monitor rectangle, expressed in virtual-screen coordinates.



# Monitor(s)

Work area rectangle specifies the work area rectangle of the display monitor that can be used by applications, expressed in virtual-screen coordinates. Windows uses this rectangle to maximize an application on the monitor. The rest of the area in rcMonitor contains system windows such as the task bar and side bars.



# TitleBar-Info

Class UITitleBarInfo contains the size (rectangle) and state for the TitleBar and each button on it, e.g. Minimize/Maximize/Help/Close

States are one or more of the following values

- Focusable
- Invisible
- Offscreen
- Unavailable
- Pressed

# WindowPlacement

Class UIWindowPlacement Contains information about the placement of a window on the screen.

- Current show state of the window: maximized/minimized/hidden
- The coordinates of the window's upper-left corner when the window is minimized.
- The coordinates of the window's upper-left corner when the window is maximized.
- The window's coordinates when the window is in the restored position.

(Perfect way to store the current state of a window and restore later)

# Security Identifier

Class WndSID wraps the Security Identifier (SID) of a user/group/computer account.

A SID is a data structure of variable length that identifies user, group, and computer accounts. Every account on a network is issued a unique SID when the account is first created.

Internal processes in Windows refer to an account's SID rather than the account's user or group name.

(Check, if the process is running with Admin rights, if those rights are needed or not recommended)

# Filename

Extensions to class PCFilename

- Added known folders, e.g.
  - Desktop
  - Documents
  - Music
  - Pictures
  - Program Data
  - Program Files
  - Temp
  - Videos

# Filename cont’d

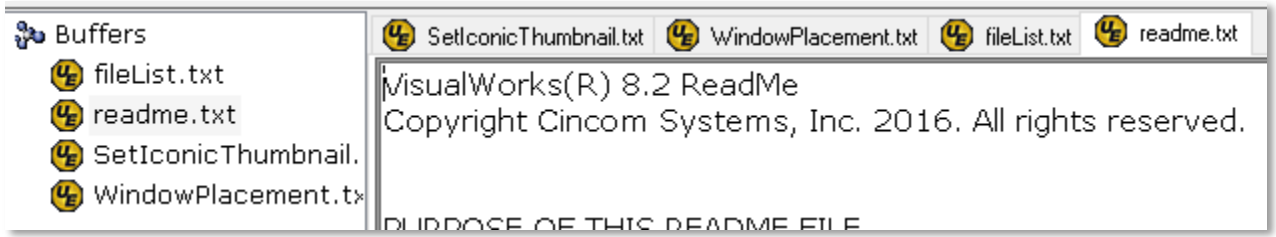
Extensions to class PCFilename

- Added known folders, e.g. Desktop, Documents, Music, Pictures, Program Data, Program Files, Temp, Videos
- Create a temporary file in a certain folder (preferably the Temp folder), with a certain prefix and

# Filename cont’d

Extensions to class PCFilename

- Retrieve the name of and handle to the executable (.exe) file associated with a specific document file.
- Extract the system icon for a file



# Power State

Class PowerState provides access to Windows power management features.

The power management functions and messages retrieve the system power status, notify applications of power management events, and notify the system of each application's power requirements.

# Power State

- *displayRequired* Forces the display to be on by resetting the display idle timer. **Windows 8:** This flag can only keep a display turned on, it can't turn on a display that's currently off.
- *hibernate/suspend/forceHibernate/forceSuspend* Suspends the system by shutting power down. The system either enters a suspend (sleep) state or hibernation (S4).
- *systemRequired* Forces the system to be in the working state by resetting the system idle timer.

# Memory Info

Class OSMemInfo contains information about the current state of both physical and virtual memory, including extended memory.

- *memoryLoad* A number between 0 and 100 that specifies the approximate percentage of physical memory that is in use (0 indicates no memory use and 100 indicates full memory use).
- *totalPhysical* The amount of actual physical memory, in bytes.
- *availablePhysical* The amount of physical memory currently available, in bytes. This is the amount of physical memory that can be immediately reused without having to write its contents to disk first. It is the sum of the size of the standby, free, and zero lists.

# Memory Info

- *totalPageFile* The current committed memory limit for the system or the current process, whichever is smaller, in bytes.
- *availablePageFile* The maximum amount of memory the current process can commit, in bytes. This value is equal to or smaller than the system-wide available commit value.
- *totalVirtual* The size of the user-mode portion of the virtual address space of the calling process, in bytes. This value depends on the type of process, the type of processor, and the configuration of the operating system.
- availableVirtual The amount of unreserved and uncommitted memory currently in the user-mode portion of the virtual address space of the calling process, in bytes.

# Performance Counter

OSPerformanceCounter

Counters are used to provide information as to how well the operating system or an application, service, or driver is performing.

The counter data can help determine system bottlenecks and fine-tune system and application performance.

The operating system, network, and devices provide counter data that an application can consume to provide users with a graphical view of how well the system is performing.

# Keyboard

Class Keyboard loads a new input locale identifier (formerly called the keyboard layout) into the system.

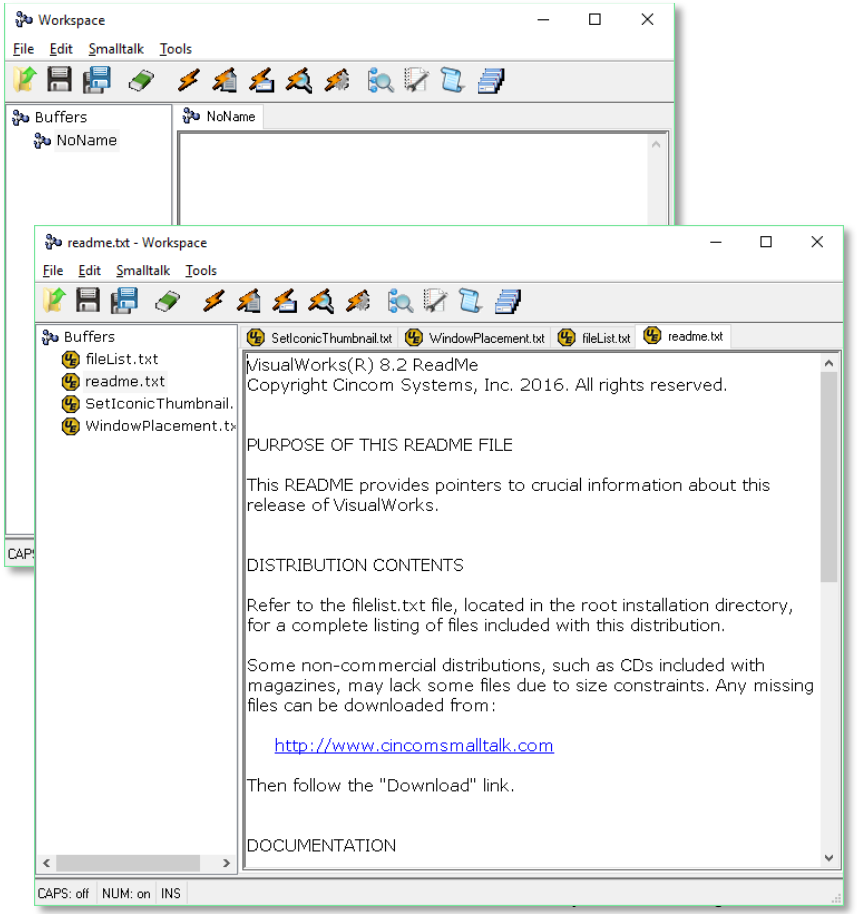
**Prior to Windows 8:** Several input locale identifiers can be loaded at a time, but only one per process is active at a time. Loading multiple input locale identifiers makes it possible to rapidly switch between them.

**Beginning in Windows 8:** The input locale identifier is loaded for the entire system. This function has no effect if the current process does not own the window with keyboard focus.

# Workspace

New Workspace with multiple tabs.

Text- or Class-Files can be dropped on the Workspace and are opened in any available buffer or a new buffer is created.



# Workspace

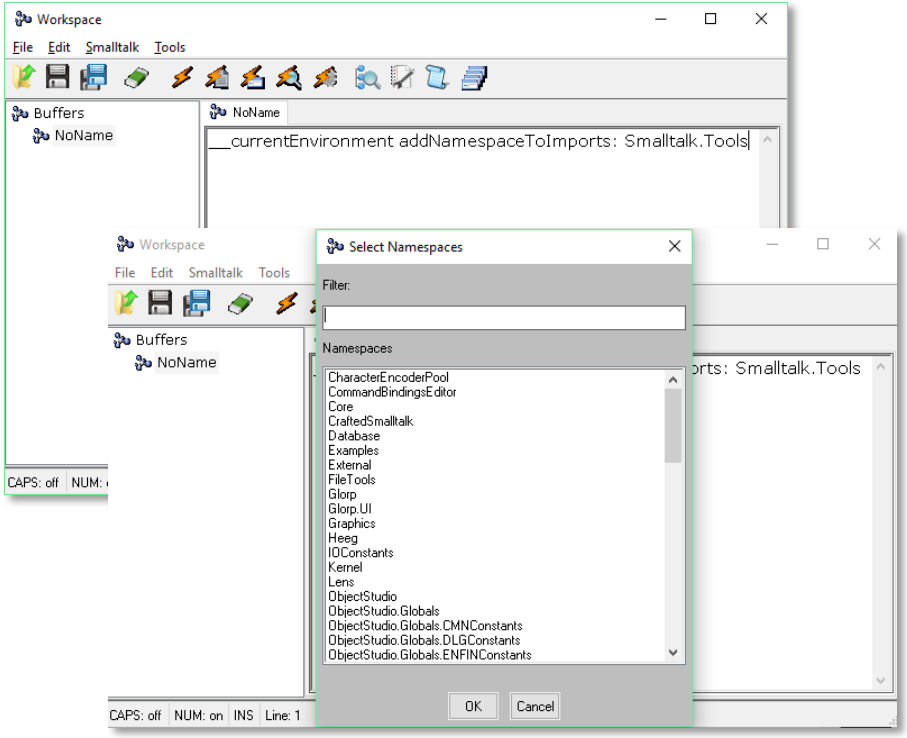
Namespaces can be imported into Workspace scripts.

- Script
- Dialog

Various pre-defined variables

- #__currentEnvironment
- #__currentEditor
- #__currentBuffer

Each tab/buffer has its own set of imports.



# Questions?

# Thank You

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