What's with those blank taskbar buttons that go away when I click on them?

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Raymond Chen

Sometimes you'll find a blank taskbar button that goes away when you click on it. What's the deal with that? There are some basic rules on which windows go into the taskbar. In short:

- If the WS_EX_APPWINDOW extended style is set, then it will show (when visible).
- If the window is a top-level unowned window, then it will show (when visible).
- Otherwise it doesn't show.

(Though the ITaskbarList interface muddies this up a bit.) When a taskbar-eligible window becomes visible, the taskbar creates a button for it. When a taskbar-eligible window becomes hidden, the taskbar removes the button. The blank buttons appear when a window changes between taskbar-eligible and taskbar-ineligible *while it is visible*. Follow:

- Window is taskbar-eligible.
- Window becomes visible ? taskbar button created.
- Window goes taskbar-ineligible.
- Window becomes hidden ? since the window is not taskbar-eligible at this point, the taskbar ignores it.

Result: A taskbar button that hangs around with no window attached to it. This is why the documentation also advises, "If you want to dynamically change a window's style to one that doesn't support visible taskbar buttons, you must hide the window first (by calling ShowWindow with SW_HIDE), change the window style, and then show the window." Bonus question: Why doesn't the taskbar pay attention to *all* windows as they come and go?

Answer: Because that would be expensive. The filtering out of windows that aren't taskbar-eligible happens inside USER32 and it then notifies the taskbar (or anybody else who has installed a WH_SHELL hook) via one of the HSHELL_* notifications only if a taskbar-eligibie window has changed state. That way, the taskbar code doesn't get paged in when there's nothing for it to to.

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