

How to host an IContextMenu, part 8 – Optimizing for the default command

 devblogs.microsoft.com/oldnewthing/20041001-00

October 1, 2004



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There is a small improvement that can be made to [to the program we wrote last time](#). It involves taking advantage of the last parameter to [the IContextMenu::QueryContextMenu method](#):

CMF_DEFAULTONLY

This flag is set when the user is activating the default action, typically by double-clicking. This flag provides a hint for the shortcut menu extension to add nothing if it does not modify the default item in the menu. A shortcut menu extension or drag-and-drop handler should not add any menu items if this value is specified. A namespace extension should add only the default item (if any).

As the text from MSDN indicates, this flag is a hint to the IContextMenu implementation that it should worry only about the default command.

```

void OnContextMenu(HWND hwnd, HWND hwndContext, UINT xPos, UINT yPos)
{
    IContextMenu *pcm;
    if (SUCCEEDED(GetUIObjectOfFile(hwnd, L"C:\\Windows\\clock.avi",
        IID_IContextMenu, (void**)&pcm))) {
        HMENU hmenu = CreatePopupMenu();
        if (hmenu) {
            if (SUCCEEDED(pcm->QueryContextMenu(hmenu, 0,
                SCRATCH_QCM_FIRST, SCRATCH_QCM_LAST,
                CMF_DEFAULTONLY))) {
                UINT id = GetMenuDefaultItem(hmenu, FALSE, 0);
                if (id != (UINT)-1) {
                    CMINVOKECOMMANDINFO info = { 0 };
                    info.cbSize = sizeof(info);
                    info.hwnd = hwnd;
                    info.lpVerb = MAKEINTRESOURCEA(id - SCRATCH_QCM_FIRST);
                    pcm->InvokeCommand(&info);
                }
            }
            DestroyMenu(hmenu);
        }
        pcm->Release();
    }
}

```

With this change on my machine, the time taken by the call to `IContextMenu::QueryContextMenu` dropped from 100ms to 50ms. Your mileage may vary. It depends on how many context menu extensions you have and how well they respect the `CMF_DEFAULTONLY` flag.

(And this exercise highlights how important it is that people who implement the `IContextMenu` interface pay attention to the flags. If your context menu handler doesn't respect the `CMF_DEFAULTONLY` flag, then you're part of the problem.)

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