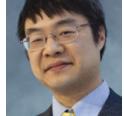


# Using the TAB key to navigate in non-dialogs

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 [devblogs.microsoft.com/oldnewthing/20031021-00](http://devblogs.microsoft.com/oldnewthing/20031021-00)

October 21, 2003



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The IsDialogMessage function works even if you aren't a dialog. As long as your child windows have the WS\_TABSTOP and/or WS\_GROUP styles, they can be navigated as if they were part of a dialog box. One caveat is that IsDialogMessage will send DM\_GETDEFID and DM\_SETDEFID messages to your window, which are message numbers WM\_USER and WM\_USER+1, so you should avoid using those messages in your window procedure for some other purpose.

These changes to our scratch program illustrate how you can use the TAB key to navigate within a non-dialog.

```

HWND g_hwndLastFocus;
void OnSetFocus(HWND hwnd, HWND hwndOldFocus)
{
    if (g_hwndLastFocus) {
        SetFocus(g_hwndLastFocus);
    }
}
void OnActivate(HWND hwnd, UINT state,
                HWND hwndActDeact, BOOL fMinimized)
{
    if (state == WA_INACTIVE) {
        g_hwndLastFocus = GetFocus();
    }
}
// Just display a messagebox so you can see something
void OnCommand(HWND hwnd, int id, HWND hwndCtl, UINT codeNotify)
{
    switch (id) {
    case 100:
        MessageBox(hwnd, TEXT("Button 1 pushed"),
                   TEXT("Title"), MB_OK);
        break;
    case 101:
        MessageBox(hwnd, TEXT("Button 2 pushed"),
                   TEXT("Title"), MB_OK);
        break;
    case IDCANCEL:
        MessageBox(hwnd, TEXT("Cancel pushed"),
                   TEXT("Title"), MB_OK);
        break;
    }
}
BOOL
OnCreate(HWND hwnd, LPCREATESTRUCT lpcs)
{
    HWND hwndChild =
        CreateWindow(
            TEXT("button"), /* Class Name */
            TEXT("Button &1"), /* Title */
            WS_CHILD | WS_VISIBLE | WS_TABSTOP |
            BS_DEFPUSHBUTTON | BS_TEXT, /* Style */
            0, 0, 100, 100, /* Position and size */
            hwnd, /* Parent */
            (HMENU)100, /* Child ID */
            g_hinst, /* Instance */
            0); /* No special parameters */

    if (!hwndChild) return FALSE;
    g_hwndLastFocus = hwndChild;
    hwndChild =
        CreateWindow(
            TEXT("button"), /* Class Name */
            TEXT("Button &2"), /* Title */

```

```

WS_CHILD | WS_VISIBLE | WS_TABSTOP |
BS_PUSHBUTTON | BS_TEXT,           /* Style */
100, 0, 100, 100,                /* Position and size */
hwnd,                          /* Parent */
(HMENU)101,                     /* Child ID */
g_hinst,                        /* Instance */
0);                           /* No special parameters */

if (!hwndChild) return FALSE;
hwndChild =
CreateWindow(
TEXT("button"),                  /* Class Name */
TEXT("Cancel"),                 /* Title */
WS_CHILD | WS_VISIBLE | WS_TABSTOP |
BS_PUSHBUTTON | BS_TEXT,         /* Style */
200, 0, 100, 100,               /* Position and size */
hwnd,                          /* Parent */
(HMENU)IDCANCEL,               /* Child ID */
g_hinst,                        /* Instance */
0);                           /* No special parameters */

if (!hwndChild) return FALSE;
return TRUE;
}

// Add to WndProc
HANDLE_MSG(hwnd, WM_COMMAND, OnCommand);
HANDLE_MSG(hwnd, WM_ACTIVATE, OnActivate);
HANDLE_MSG(hwnd, WM_SETFOCUS, OnSetFocus);
// Add blank case statements for these to ensure we don't use them
// by mistake.
case DM_GETDEFID: break;
case DM_SETDEFID: break;
// Change message loop
MSG msg;
while (GetMessage(&msg, NULL, 0, 0)) {
    if (IsDialogMessage(hwnd, &msg)) {
        /* Already handled by dialog manager */
    } else {
        TranslateMessage(&msg);
        DispatchMessage(&msg);
    }
}
}

```

One subtlety is the additional handling of the WM\_ACTIVATE and WM\_SETFOCUS messages to preserve the focus when the user switches away from the window and back. Notice also that we picked Button 1 as our initial default button by setting it with the BS\_DEFPUSHBUTTON style.

Observe that all the standard dialog accelerators now work. The TAB key navigates, the Alt+1 and Alt+2 keys act as accelerators for the two buttons, the Enter key presses the default button, and the ESC key pushes the Cancel button since its control ID is IDCANCEL.

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