
Subject: [FEATURE] Setting TopWindow to urgent/flashing state

Posted by [dolik.rce](#) on Thu, 27 Jan 2011 15:50:15 GMT

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Hi everyone

Today I realized that U++ provides no way how to set the window into the "flashing state" that is often used in applications (e.g. IM apps) to attract user attention in an unobtrusive manner (certainly less disturbing than bringing the window to foreground).

So I propose to add methods Urgent(bool b = true) and IsUrgent() to TopWindow. The code is fairly simple:

```
In TopWindow.h:
class TopWindow : public Ctrl {
// ...
bool    frameless:1;
bool    urgent:1;      // added
byte    state;
// ...
TopWindow& FrameLess(bool b = true)      { frameless = b; return *this; }
bool    IsFrameLess() const              { return frameless; }
TopWindow& Urgent(bool b = true);        // added
bool    IsUrgent() const                 { return urgent; } // added
TopWindow& NoAccessKeysDistribution()    { dokeys = false; return *this; }
TopWindow& NoCloseBox(bool b = true)     { noclosebox = b; return *this; }
// ...
}

In TopWindow.cpp:
TopWindow& TopWindow::Urgent(bool b)
{
    GuiLock __;
    urgent = b;
    SyncCaption();
    return *this;
}

In ToWinX11.cpp:
void TopWindow::SyncCaption0()
{
// ...
    wm_hints->flags = InputHint|WindowGroupHint|StateHint;
    if(IsTopMost()) urgent = false;      // added
    if(urgent) wm_hints->flags |= XUrgencyHint; // added
    wm_hints->initial_state = NormalState;
    wm_hints->input = XTrue;
// ...
}

In TopWin32.cpp:
void TopWindow::SyncCaption0()
{
// ...
    if(hwnd) {
```

```

::SetWindowLong(hwnd, GWL_STYLE, style);
::SetWindowLong(hwnd, GWL_EXSTYLE, exstyle);
SyncTitle();
// added:
if(IsTopMost()) urgent = false;
FLASHWINFO fi;
fi.cbSize = sizeof(fi);
fi.hwnd = GetHWND();
fi.dwFlags = urgent?FLASHW_TIMERNOFG|FLASHW_ALL:FLASHW_STOP;
fi.uCount = 0;
fi.dwTimeout = 0;
FlashWindowEx(&fi);
}
// ...
}

```

The behavior should be fairly standard: If you call Urgent(true); then the window title and item in taskbar are flashing until either Urgent(false); is called or the window is taken to foreground. If Urgent(true); is called on active window then it has no effect. The win32 implementation might have some bugs, I didn't test it on windows (and it is not implemented correctly in wine).

If you are wandering why I stumbled upon this, it is because it would be nice if theide would use it instead of popping up on finished builds and when breakpoint is hit when debugging.

Best regards,
Honza

Subject: Re: [FEATURE] Setting TopWindow to urgent/flashing state
 Posted by [dolik.rce](#) on Thu, 27 Jan 2011 19:02:34 GMT
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```

Slight optimalization for SyncCapiion0() in TopWin32.cpp: if(urgent){
  if(IsTopMost()) urgent = false;
  FLASHWINFO fi;
  fi.cbSize = sizeof(fi);
  fi.hwnd = GetHWND();
  fi.dwFlags = urgent?FLASHW_STOP:FLASHW_TIMERNOFG|FLASHW_ALL;
  fi.uCount = 0;
  fi.dwTimeout = 0;
  FlashWindowEx(&fi);
}

```

Honza

Subject: Re: [FEATURE] Setting TopWindow to urgent/flashing state

Posted by [dolik.rce](#) on Thu, 27 Jan 2011 21:16:16 GMT

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Tested on windows Vista and it works fine

Only problem is when compiling with Mingw, there is probably some bug in mingw headers, causing FLASHWINFO to be undeclared. So to fix it, following must be added at the top of

```
TopWin32.cpp:#ifdef COMPILER_MINGW
extern "C"{
    struct FLASHWINFO {
        UINT  cbSize;
        HWND  hwnd;
        DWORD dwFlags;
        UINT  uCount;
        DWORD dwTimeout;
    };
    WINUSERAPI BOOL WINAPI FlashWindowEx(FLASHWINFO*);
}
#define FLASHW_STOP      0
#define FLASHW_CAPTION   0x00000001
#define FLASHW_TRAY      0x00000002
#define FLASHW_ALL        (FLASHW_CAPTION | FLASHW_TRAY)
#define FLASHW_TIMER      0x00000004
#define FLASHW_TIMERNOFG  0x0000000C
#endif
```

Honza
