
Subject: Time callbacks when ticks overlap
Posted by [Zbych](#) on Fri, 23 Jul 2010 09:03:38 GMT
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Hi,

I have a problem with time callbacks. They use `GetTickCount` which overlaps every ~50 days and do all calculations on 32-bit variables. Unfortunately `Ctrl::TimerProc` doesn't work correctly when `(GetTickCount + delay)` overlaps.

For example when `GetTickCount` returns `0xFFFF0000` and I want to set time callback to 2 minutes (`0x1D4C0` ms), `TimeEvent.time` is set to `0x0000D4C0` and `Ctrl::TimerProc` executes callback every time (because this statement "`list->GetNext()->time < time`" is true). This situation is more likely to happen on posix, because `GetTickCount` returns ticks since the Epoch, not system power on.

My proposition is to change time comparison:

old:

```
while(list->GetNext() != list && list->GetNext()->time < time) {
```

new:

```
while(list->GetNext() != list && ((int)(time - list->GetNext()->time)) > 0) {
```

Casting to a signed number is a must.

and to remove this (I think it is unnecessary):

```
if(e->time > 0x80000000)  
    e->time = 0;
```