Subject: Re: time measurement :: RTIMING, TimeStop, GetTickCount
Posted by cbpporter on Wed, 09 May 2012 13:26:09 GMT
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The real problem with GetTickCount is the resolution. I find it way too low for most practical purposes, because two close measurements will almost always return 0, 15 or 16 ms.

I don't have a proper solution at hand right now, but this should work fairly well:

```
class HRTimer {
private:
   LARGE_INTEGER start;

   LARGE_INTEGER stop;

   double frequency;

public:
   HRTimer() {
      frequency = GetFrequency();
   }

   double GetFrequency();
   void StartTimer();
   double StopTimer();
};

double HRTimer::GetFrequency(void) {
   LARGE_INTEGER proc_freq;

   if (!::QueryPerformanceFrequency(&proc_freq)) {
      ASSERT(0);
   }

   return proc_freq.QuadPart;
}

void HRTimer::StartTimer(void) {
   DWORD_PTR oldmask = ::SetThreadAffinityMask(::GetCurrentThread(), 0);

   ::QueryPerformanceCounter(&start);

   ::SetThreadAffinityMask(::GetCurrentThread(), oldmask);
}

double HRTimer::StopTimer(void) {
   DWORD_PTR oldmask = ::SetThreadAffinityMask(::GetCurrentThread(), 0);

   ::QueryPerformanceCounter(&stop);
```

```
    ::SetThreadAffinityMask(::GetCurrentThread(), oldmask);

    return ((stop.QuadPart - start.QuadPart) / frequency);
}
```