x64 mingw: test_at(TestTime) failure

x64 mingw has the following failure. [ 5/65] TestTime#test_at = 0.00 s
1) Failure: test_at(TestTime) [c:/Users/hiroshi/work/ruby/test/ruby/test_time.rb:194]:
<-146138510344> expected but was .

I guess Time.at(large value) fails for the following reason.

Time.at calls FileTimeToSystemTime() in localtime_r().
https://github.com/ruby/ruby/blob/trunk/win32/win32.c#L6565

Time limit is 0x8000000000000000 which is a little smaller than 8bytes(= time_t)(= long long).

Instead, using __localtime_64s() seems to work fine. I changed to use __gmtime_64s() for consistency. I added declarations since mingw-w64 doesn't have these declaration.

I attached a patch.

Associated revisions
Revision ce2a1e10 - 07/28/2012 07:36 AM - shirosaki
win32/win32.c: fix localtime_r() on x64-mingw

- win32/win32.c (gmtime_r): use __gmtime64_s() with x86_64-w64-mingw32.
- win32/win32.c (localtime_r): use __localtime64_s() with x86_64-w64-mingw32. Since FileTimeToSystemTime() seems not work with large value under x64. Mingw-w64 doesn't have these declaration.

[ruby-core:46780] [Bug #6794]

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History

#1 - 07/26/2012 09:02 AM - h.shirosaki (Hiroshi Shirosaki)
- Subject changed from x86 mingw: test_at(TestTime) failure to x64 mingw: test_at(TestTime) failure

#2 - 07/28/2012 09:02 AM - luislavena (Luis Lavena)
- Category set to core
- Status changed from Open to Assigned
- Assignee changed from luislavena (Luis Lavena) to nobu (Nobuyoshi Nakada)
- Target version set to 2.0.0
- % Done changed from 0 to 50
Thank you Hiroshi,

I can confirm patch works:

Finished tests in 0.085005s, 764.6609 tests/s, 7411.3287 assertions/s.
65 tests, 630 assertions, 0 failures, 0 errors, 0 skips

ruby -v: ruby 2.0.0dev (2012-07-27 trunk 36551) [x64-mingw32]

Reassigning to Nobu for final consideration.

#3 - 07/28/2012 11:05 AM - nobu (Nobuyoshi Nakada)
Seems working fine.
Please check in.

BTW, 32bit mingw doesn't have 64s() family?

#4 - 07/28/2012 04:36 PM - Anonymous
- Status changed from Assigned to Closed
- % Done changed from 50 to 100

This issue was solved with changeset r36556.
Hiroshi, thank you for reporting this issue.
Your contribution to Ruby is greatly appreciated.
May Ruby be with you.

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#5 - 07/28/2012 05:27 PM - h.shirosaki (Hiroshi Shirosaki)
Thank you. Checked in.

BTW, 32bit mingw doesn't have 64s() family?

It seems that gcc 4.6.1 (tdm gcc 32bit) doesn't have _localtime64_s.
gcc 4.6.3 (rubenvb-4.6.3) i686-w64-mingw32 (32bit) has _localtime64_s.
The following page's example worked with rubenvb-4.6.3.

Files
0001-Fix-localtime_r-with-large-value-on-x64-mingw.patch 1.81 KB 07/26/2012 h.shirosaki (Hiroshi Shirosaki)