

Ruby - Bug #7758

Ruby on Windows crashes when active codepage is codepage 65001 and outputting unicode character

01/31/2013 05:22 AM - joshc (Josh C)

Status:	Closed	
Priority:	Normal	
Assignee:	nobu (Nobuyoshi Nakada)	
Target version:		
ruby -v:	ruby 1.9.3p374	Backport:
Description		
=begin I have a script that contains the unicode BOX_DRAWINGS_LIGHT_VERTICAL_AND_RIGHT character (http://www.fileformat.info/info/unicode/char/251c/index.htm). When the console code page is set to 65001 (utf-8), both ruby 1.9.3 p125 and p374 crash, but ruby 1.8.7 p357 does not crash (nor does it output the character correctly). When the code page is set to 437, ruby 1.9.3 (both versions) correctly output the character, while ruby 1.8.7 outputs the wrong character again. I don't care about ruby 1.8.7 so much, but I would expect ruby 1.9.3 to output the correct character, especially since the console codepage is set to 65001 (utf-8). Here is my script: -- coding: utf-8 -- <pre>puts "a" puts "┘"</pre> I verified that the file is correctly encoded: <pre>C:\test>od.exe -t x1 test65001.rb 00000000 23 20 2d 2a 2d 20 63 6f 64 69 6e 67 3a 20 75 74 00000020 66 2d 38 20 2d 2a 2d 0a 70 75 74 73 20 22 61 22 00000040 0a 70 75 74 73 20 22 e2 94 9c 22 0a 0a</pre> Note the UTF-8 sequence e2 94 9c Here are the codepage settings in the registry: <pre>C:\test>reg query hklm\SYSTEM\CurrentControlSet\Control\Nls\CodePage /v acp HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Nls\CodePage ACP REG_SZ 1252 C:\test>reg query hklm\SYSTEM\CurrentControlSet\Control\Nls\CodePage /v oemcp HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Nls\CodePage OEMCP REG_SZ 437</pre> On ruby 1.8.7: <pre>C:\test>ruby --version ruby 1.8.7 (2011-12-28 patchlevel 357) [i386-mingw32]</pre> <pre>C:\test>chcp 437 Active code page: 437</pre> <pre>C:\test>ruby test65001.rb a â"œ</pre> <pre>C:\test>chcp 65001 Active code page: 65001</pre> <pre>C:\test>ruby test65001.rb a</pre>		

â"œ

On ruby 1.9.3p125:

```
C:\test>ruby --version
ruby 1.9.3p125 (2012-02-16) [i386-mingw32]
```

```
C:\test>chcp 437
Active code page: 437
```

```
C:\test>ruby test65001.rb
```

```
a
Ã
```

```
C:\test>chcp 65001
Active code page: 65001
```

```
C:\test>ruby test65001.rb
```

```
a
Ãâ€œÃ"test65001.rb:3: [BUG] rb_sys_fail() - errno == 0
ruby 1.9.3p125 (2012-02-16) [i386-mingw32]
```

```
-- Control frame information -----
c:0006 p:---- s:0014 b:0014 l:000013 d:000013 CFUNC :write
c:0005 p:---- s:0012 b:0012 l:000011 d:000011 CFUNC :puts
c:0004 p:---- s:0010 b:0010 l:000009 d:000009 CFUNC :puts
c:0003 p:0023 s:0006 b:0006 l:00215c d:0015b4 EVAL test65001.rb:3
c:0002 p:---- s:0004 b:0004 l:000003 d:000003 FINISH
c:0001 p:0000 s:0002 b:0002 l:00215c d:00215c TOP
```

```
-- Ruby level backtrace information -----
test65001.rb:3:in <main>' test65001.rb:3:in puts'
test65001.rb:3:in puts' test65001.rb:3:in write'
```

```
-- C level backtrace information -----
C:\Windows\SysWOW64\ntdll.dll(ZwWaitForSingleObject+0x15) [0x77bbf8b1]
C:\Windows\syswow64\kernel32.dll(WaitForSingleObjectEx+0x43) [0x772d1194]
C:\Windows\syswow64\kernel32.dll(WaitForSingleObject+0x12) [0x772d1148]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_vm_bugreport+0xf9) [0x62e5c61d]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_name_err_mesg_new+0x17a) [0x62d3a6fa]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_bug+0x2f) [0x62d3b45b]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_sys_fail+0x163) [0x62d3cfb7]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_io_close+0x171f) [0x62d651cb]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_vm_invoke_proc+0x2fe) [0x62e54586]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_funcall+0x59) [0x62e55035]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_io_puts+0x7e) [0x62d5fb7e]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_thread_mark+0x741) [0x62e49ca1]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_vm_invoke_proc+0x2fe) [0x62e54586]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_io_puts+0x200) [0x62d5fd00]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_thread_mark+0x741) [0x62e49ca1]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_vm_call+0x2b2) [0x62e5855a]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_vm_localjump_error+0x1f66) [0x62e4ed8a]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_vm_localjump_error+0x650e) [0x62e53332]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_iseq_eval_main+0x98) [0x62e596f0]
c:\ruby193\bin\msvcrt-ruby191.dll(rb_check_frozen+0x2a89) [0x62d3fed9]
c:\ruby193\bin\msvcrt-ruby191.dll(ruby_run_node+0x48) [0x62d41ff4]
[0x0040136f]
[0x004010b9]
[0x00401284]
C:\Windows\syswow64\kernel32.dll(BaseThreadInitThunk+0x12) [0x772d339a]
C:\Windows\SysWOW64\ntdll.dll(RtlInitializeExceptionChain+0x63) [0x77bd9ef2]
```

```
-- Other runtime information -----
```

- Loaded script: test65001.rb
- Loaded features:

```
0 enumerator.so
1 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/enc/encdb.so
2 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/enc/iso_8859_1.so
3 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/enc/trans/transdb.so
4 c:/ruby193/lib/ruby/site_ruby/1.9.1/rubygems/defaults.rb
5 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/rbconfig.rb
6 c:/ruby193/lib/ruby/site_ruby/1.9.1/rubygems/deprecate.rb
7 c:/ruby193/lib/ruby/site_ruby/1.9.1/rubygems/exceptions.rb
8 c:/ruby193/lib/ruby/site_ruby/1.9.1/rubygems/defaults/operating_system.rb
9 c:/ruby193/lib/ruby/site_ruby/1.9.1/rubygems/custom_require.rb
10 c:/ruby193/lib/ruby/site_ruby/1.9.1/rubygems.rb
11 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/enc/utf_16le.so
12 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/enc/trans/utf_16_32.so
13 c:/ruby193/lib/ruby/1.9.1/i386-mingw32/enc/trans/single_byte.so
```

You may have encountered a bug in the Ruby interpreter or extension libraries. Bug reports are welcome.

This application has requested the Runtime to terminate it in an unusual way.
Please contact the application's support team for more information.

```
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_io_puts+0x78) [0x62d60484]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_vm_mark+0x54d) [0x62e49b85]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_vm_invoke_proc+0x2fe) [0x62e5498a]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_io_puts+0x248) [0x62d60654]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_vm_mark+0x54d) [0x62e49b85]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_vm_call+0x2b2) [0x62e5882e]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_vm_localjump_error+0x1f84) [0x62e4f1b0]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_vm_localjump_error+0x6496) [0x62e536c2]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_iseq_eval_main+0xd7) [0x62e597ef]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(rb_check_frozen+0x2a85) [0x62d4055d]
c:\Ruby193p374\bin\msvcrt-ruby191.dll(ruby_run_node+0x48) [0x62d42688]
[0x0040136f]
[0x004010b9]
[0x00401284]
C:\Windows\syswow64\kernel32.dll(BaseThreadInitThunk+0x12) [0x772d339a]
C:\Windows\SysWOW64\ntdll.dll(RtlInitializeExceptionChain+0x63) [0x77bd9ef2]
```

-- Other runtime information -----

- Loaded script: test65001.rb

- Loaded features:

```
0 enumerator.so
1 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/encdb.so
2 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/iso_8859_1.so
3 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/trans/transdb.so
4 c:/Ruby193p374/lib/ruby/site_ruby/1.9.1/rubygems/defaults.rb
5 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/rbconfig.rb
6 c:/Ruby193p374/lib/ruby/site_ruby/1.9.1/rubygems/deprecate.rb
7 c:/Ruby193p374/lib/ruby/site_ruby/1.9.1/rubygems/exceptions.rb
8 c:/Ruby193p374/lib/ruby/site_ruby/1.9.1/rubygems/defaults/operating_system.rb
9 c:/Ruby193p374/lib/ruby/site_ruby/1.9.1/rubygems/custom_require.rb
10 c:/Ruby193p374/lib/ruby/site_ruby/1.9.1/rubygems.rb
11 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/utf_16le.so
12 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/trans/utf_16_32.so
13 c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/trans/single_byte.so
```

[NOTE]

You may have encountered a bug in the Ruby interpreter or extension libraries.

Bug reports are welcome.

For details: <http://www.ruby-lang.org/bugreport.html>

This application has requested the Runtime to terminate it in an unusual way.

Please contact the application's support team for more information.

Based on the line c:/Ruby193p374/lib/ruby/1.9.1/i386-mingw32/enc/iso_8859_1.so it makes me think ruby is looking at the registry for the active code page (cp1252) instead of calling GetConsoleOutputCP to see which codepage it should be using, but that is just a guess.

=end

History

#1 - 01/31/2013 06:18 AM - luislavena (Luis Lavena)

- Status changed from Open to Feedback

- Assignee set to luislavena (Luis Lavena)

Can you tell us more about the specific version of Windows that you're using?

Nowhere in your output says which version of Windows is.

Have you tried this against Ruby 2.0 too?

#2 - 01/31/2013 12:12 PM - phasis68 (Heesob Park)

I confirmed this bug occurs on Windows 7 with ruby 1.9.3p374 and 2.0 trunk.

I tested with MinGW32 gcc compiled version(mingw32) and MSVC++ compiled version(mswin32).

When the windows console font is a console with raster font, this bug occurs only on mingw32.
But when the windows console font is a true type font, both mingw32 and mswin32 works fine.
So this is a mingw32 specific bug.

I found the main cause of this bug is `_write` function behavior.
The `_write` call in `rb_w32_write` function works differently on mingw32 version from mswin32 version.

Here is a workaround patch:

```
diff --git a/win32.c b/win32.c.new
index 984e03b..b99e6ba 100644
--- a/win32.c
+++ b/win32.c.new
@@ -6052,6 +6052,9 @@ rb_w32_write(int fd, const void *buf, size_t size)

     if ((_osfile(fd) & FTEXT) &&
        (!(_osfile(fd) & FPIPE) || fd == fileno(stdout) || fd == fileno(stderr))) {
+msgiddef __MINGW32__
+    _setmode(fd, _O_BINARY);
+msgidendif
     return _write(fd, buf, size);
 }
```

#3 - 02/09/2013 05:44 AM - luislavena (Luis Lavena)

- Status changed from Feedback to Assigned

- Assignee changed from luislavena (Luis Lavena) to usa (Usaku NAKAMURA)

#4 - 02/09/2013 05:46 AM - luislavena (Luis Lavena)

Usa, do you agree in resolution?

I haven't tested this against trunk or ruby_2_0_0 branch to confirm it happen too, but most likely.

#5 - 02/13/2013 04:30 PM - usa (Usaku NAKAMURA)

- Assignee changed from usa (Usaku NAKAMURA) to mame (Yusuke Endoh)

Sorry for late reply, luis.
Please commit it to trunk.

mame-san, this is reproducible SEGV bug.
So I think we need to backport it into ruby_2_0_0 (and ruby_1_9_3).

#6 - 02/13/2013 07:28 PM - mame (Yusuke Endoh)

- Assignee changed from mame (Yusuke Endoh) to luislavena (Luis Lavena)

Usa-san, thank you for the information!

Luis, could you please commit it to both trunk and ruby_2_0_0 branch?

--

Yusuke Endoh mame@tsg.ne.jp

#7 - 02/14/2013 10:17 AM - h.shirosaki (Hiroshi Shirosaki)

phasis68 (Heesob Park) wrote:

```
diff --git a/win32.c b/win32.c.new
index 984e03b..b99e6ba 100644
--- a/win32.c
+++ b/win32.c.new
@@ -6052,6 +6052,9 @@ rb_w32_write(int fd, const void *buf, size_t size)

     if ((_osfile(fd) & FTEXT) &&
        (!(_osfile(fd) & FPIPE) || fd == fileno(stdout) || fd == fileno(stderr))) {
+msgiddef __MINGW32__
+    _setmode(fd, _O_BINARY);
+msgidendif
```

```
return _write(fd, buf, size);
}
```

Above patch will change newline from CRLF to LF. Is it good to change?

ruby 2.0.0dev (2013-02-14 trunk 39231) [i386-mingw32] with the patch.

```
$ miniruby.exe test65001.rb |od -t x1
00000000 61 0a e2 94 9c 0a
00000006
```

I was not reproduce SEGV on my windows xp machine for some reason.

#8 - 02/14/2013 04:59 PM - phasis68 (Heesob Park)

I think the above patch is problematic.

Here is another possible patch:

```
diff --git a/io.c b/io.c.new
index a50d362..e393691 100644
--- a/io.c
+++ b/io.c.new
@@ -1326,7 @@ do_writeconv(VALUE str, rb_io_t *fpPtr)
 static long
 io_fwrite(VALUE str, rb_io_t *fpPtr, int nosync)
 {
+long n;
 #ifdef _WIN32
     if (fpPtr->mode & FMODE_TTY) {
         long len = rb_w32_write_console(str, fpPtr->fd);
@@ -1333,8 @@ io_fwrite(VALUE str, rb_io_t *fpPtr, int nosync)
     }
 #endif
     str = do_writeconv(str, fpPtr);
-    return io_binwrite(str, RSTRING_PTR(str), RSTRING_LEN(str),
+#ifdef __MINGW32__
+    if (fpPtr->mode & FMODE_TTY) {
+        setmode(fpPtr->fd, O_BINARY);
+    }
+#endif
     n = io_binwrite(str, RSTRING_PTR(str), RSTRING_LEN(str),
                     fpPtr, nosync);
+#ifdef __MINGW32__
+    if (fpPtr->mode & FMODE_TTY) {
+        setmode(fpPtr->fd, O_TEXT);
+    }
+#endif
     return n;
 }

 ssize_t
```

#9 - 02/15/2013 01:38 PM - nobu (Nobuyoshi Nakada)

- File win32-bug-7758.diff added

Although I can't reproduce it at all, I think it would be in win32/win32.c but not in io.c.

#10 - 02/15/2013 02:29 PM - phasis68 (Heesob Park)

Here is an equivalent patch for win32.c:

```
diff --git a/win32.c b/win32.c.new
index 984e03b..70af7f8 100644
--- a/win32.c
+++ b/win32.c.new
@@ -6052,6 +6052,14 @@ @@ rb_w32_write(int fd, const void *buf, size_t size)

     if ((_osfile(fd) & FTEXT) &&
        (!(_osfile(fd) & FPIPE) || fd == fileno(stdout) || fd == fileno(stderr))) {
+#ifdef __MINGW32__
+ if (rb_w32_isatty(fd)) {
```

```

+     setmode(fd, O_BINARY);
+     ret = _write(fd, buf, size);
+     setmode(fd, O_TEXT);
+     return ret;
+ }
+#endif
+     return _write(fd, buf, size);
+ }

```

#11 - 02/15/2013 05:07 PM - nobu (Nobuyoshi Nakada)

Seems nice.

#12 - 07/08/2013 07:35 AM - luislavena (Luis Lavena)

Hello,

I missed this entire thread a few months ago, sorry about that.

Picking up this, is not clear to me if both `io_fwrite` and `win32 rb_w32_write` needs to be patched together.

Heesob Park, can you confirm?

Thank you.

#13 - 07/08/2013 10:06 AM - phasis68 (Heesob Park)

The patch for `io_fwrite` is equivalent to the patch for `rb_w32_write`.

Only `rb_w32_write` needs to be patched.

#14 - 10/23/2015 09:36 AM - arcandros (Vassilis Rizopoulos)

Has this patch been applied?

Because I'm getting pretty much the same crash on 32bit 2.1.7p400 running on Win7 64x and I can reproduce.

#15 - 10/30/2015 12:37 PM - luislavena (Luis Lavena)

- Assignee changed from *luislavena (Luis Lavena)* to *nobu (Nobuyoshi Nakada)*

#16 - 02/26/2021 10:50 PM - jeremyevans0 (Jeremy Evans)

- Status changed from *Assigned* to *Closed*

I cannot reproduce this bug on Windows 10 using Ruby 1.9.3, Ruby 2.0, Ruby 2.1, or Ruby 3.0. Windows 7 is now out of support. If you think this is still an issue with a supported version of Ruby and Windows, please reopen.

Files

win32-bug-7758.diff	2.54 KB	02/15/2013	nobu (Nobuyoshi Nakada)
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