

Ruby - Bug #17042

Times with timezones return incorrect week numbers

07/22/2020 02:08 PM - timcraft (Tim Craft)

Status:	Closed	
Priority:	Normal	
Assignee:		
Target version:		
ruby -v:	ruby 2.8.0dev (2020-07-15 master 79d06483a8)	Backport: 2.5: DONTNEED, 2.6: REQUIRED, 2.7: REQUIRED
Description Times with timezones return incorrect week numbers from strftime. For example: <pre>\$ irb -r tzinfo irb(main):001:0> Time.utc(2020, 7, 22, 12, 0, 0).strftime('%U %V %W') => "29 30 29" irb(main):002:0> Time.new(2020, 7, 22, 12, 0, 0, TZInfo::Timezone.get('America/New_York')).strftime('%U %V %W') => "00 00 00"</pre> Follow up to #17024		

Associated revisions

Revision 8ed687a4d7b7a77f30f8e937f58aae74bfb699b6 - 07/23/2020 02:33 AM - nobu (Nobuyoshi Nakada)

Test for weeknumber with timezone [Bug #17042]

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Test for weeknumber with timezone [Bug #17042]

Revision 8ed687a4 - 07/23/2020 02:33 AM - nobu (Nobuyoshi Nakada)

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Revision afacf85e443cc64dd41c248659b65476434b4175 - 07/23/2020 02:35 AM - S_H_ (Shun Hiraoka)

Merge pull request #3352 from S-H-GAMELINKS/bug/17042-strftime

Fix Time#strftime with timezone [Bug #17042]

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Revision afacf85e - 07/23/2020 02:35 AM - S_H_ (Shun Hiraoka)

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Fix Time#strftime with timezone [Bug #17042]

Revision caf565f7bf9b279449c893b9e812c466a26e8f4b - 07/23/2020 02:52 AM - nobu (Nobuyoshi Nakada)

Ensure time object meets a given condition [Bug #17042]

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Revision caf565f7 - 07/23/2020 02:52 AM - nobu (Nobuyoshi Nakada)

Ensure time object meets a given condition [Bug #17042]

History

#1 - 07/22/2020 05:56 PM - S_H_ (Shun Hiraoka)

Same behaviour in 2.7 & 2.6(changed 2.7.1, 2.7.0, 2.6.6, 2.6.5).

#2 - 07/22/2020 06:43 PM - S_H_ (Shun Hiraoka)

Apparently the calculation result `ret = ((timeptr->tm_yday + 7 - wday) / 7);` is negative(`timeptr->tm_yday` is negative).

```
static int
weeknumber(const struct tm *timeptr, int firstweekday)
{
    int wday = timeptr->tm_wday;
    int ret;

    if (firstweekday == 1) {
        if (wday == 0) /* sunday */
            wday = 6;
        else
            wday--;
    }
    ret = ((timeptr->tm_yday + 7 - wday) / 7);
    if (ret < 0)
        ret = 0;
    return ret;
}
```

#3 - 07/22/2020 07:15 PM - S_H_ (Shun Hiraoka)

This code resolve this behaviour.

```
static VALUE
time_strftime(VALUE time, VALUE format)
{
    struct time_object *tobj;
    const char *fmt;
    long len;
    rb_encoding *enc;
    VALUE tmp;

    GetTimeval(time, tobj);
    if (tobj->vtm.yday == 0) {
        VALUE zone = tobj->vtm.zone;
        if (!NIL_P(zone)) zone_localtime(zone, time);
    }
    MAKE_TM(time, tobj);
    StringValue(format);
    if (!rb_enc_str_asciicompat_p(format)) {
        rb_raise(rb_eArgError, "format should have ASCII compatible encoding");
    }
    tmp = rb_str_tmp_frozen_acquire(format);
    fmt = RSTRING_PTR(tmp);
    len = RSTRING_LEN(tmp);
    enc = rb_enc_get(format);
    if (len == 0) {
        rb_warning("strftime called with empty format string");
        return rb_enc_str_new(0, 0, enc);
    }
    else {
        VALUE str = rb_strftime_alloc(fmt, len, enc, time, &tobj->vtm, tobj->timew,
            TZMODE_UTC_P(tobj));
        rb_str_tmp_frozen_release(format, tmp);
        if (!str) rb_raise(rb_eArgError, "invalid format: %"PRIsVALUE, format);
        return str;
    }
}
```

`tobj->vtm.yday` seems to be 0.

So, these code resolve.

```
if (tobj->vtm.yday == 0) {
    VALUE zone = tobj->vtm.zone;
    if (!NIL_P(zone)) zone_localtime(zone, time);
}
```

#4 - 07/22/2020 07:32 PM - S_H_ (Shun Hiraoka)

Created patch.

<https://github.com/ruby/ruby/pull/3352>

#5 - 07/23/2020 02:35 AM - nobu (Nobuyoshi Nakada)

- Status changed from Open to Closed

Applied in changeset [git|8ed687a4d7b7a77f30f8e937f58aae74bfb699b6](https://github.com/ruby/ruby/commit/8ed687a4d7b7a77f30f8e937f58aae74bfb699b6).

Test for weeknumber with timezone [Bug [#17042](#)]

#6 - 07/23/2020 02:59 AM - nobu (Nobuyoshi Nakada)

- Backport changed from 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: UNKNOWN to 2.5: DONTNEED, 2.6: REQUIRED, 2.7: REQUIRED