Ruby master - Bug #967

Results of const_missing are being cached incorrectly

01/02/2009 03:05 PM - headius (Charles Nutter)

<table>
<thead>
<tr>
<th>Status:</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority:</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee:</td>
<td>ko1 (Koichi Sasada)</td>
</tr>
<tr>
<td>Target version:</td>
<td>1.9.1 RC2</td>
</tr>
<tr>
<td>ruby -v:</td>
<td>Backport:</td>
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</tbody>
</table>

Description

=begin
Ruby 1.9 sped up constant lookup by adding an inline cache, cleared by a global serial number incremented when any constant is set. This works well for normal constants, but unfortunately 1.9 is also caching the result of const_missing. For example, the following output:

```ruby
ruby1.9 -e "def Object.const_missing(sym); Time.now; end; 5.times { p XXX; sleep 1 }"
```

```
2009-01-01 23:59:33 -0600
2009-01-01 23:59:33 -0600
2009-01-01 23:59:33 -0600
2009-01-01 23:59:33 -0600
2009-01-01 23:59:33 -0600
```

The result of const_missing is being cached at the lookup site for XXX. Here's what the output should look like, with incrementing seconds:

```ruby
ruby -e "def Object.const_missing(sym); Time.now; end; 5.times { p XXX; sleep 1 }"
```

```
Fri Jan 02 00:02:09 -0600 2009
Fri Jan 02 00:02:10 -0600 2009
Fri Jan 02 00:02:11 -0600 2009
Fri Jan 02 00:02:12 -0600 2009
Fri Jan 02 00:02:13 -0600 2009
```

Note that this also affects colon2 and colon3 constant lookup:

```ruby
ruby1.9 -e "def Object.const_missing(sym); cls = Class.new; cls.class_eval 'Foo = Time.now'; cls; end; 5.times { p XXX::Foo; sleep 1 }"
```

```
2009-01-01 00:02:44 -0600
2009-01-01 00:02:44 -0600
2009-01-01 00:02:44 -0600
2009-01-01 00:02:44 -0600
2009-01-01 00:02:44 -0600
```

```ruby
ruby1.9 -e "def Object.const_missing(sym); Time.now; end; 5.times { p ::XXX; sleep 1 }"
```

```
2009-01-02 00:03:06 -0600
2009-01-02 00:03:06 -0600
2009-01-02 00:03:06 -0600
2009-01-02 00:03:06 -0600
2009-01-02 00:03:06 -0600
```

The result of const_missing should never be cached, since doing so would break code that expects const_missing to keep firing (some DSLs for example).

This was run against the just-released Ruby 1.9 RC.

=end

Associated revisions

Revision a3a45afa3d7df3ea1a406847abef1b4aaa07bf1 - 01/15/2009 03:31 PM - ko1 (Koichi Sasada)

- vm.c (rb_vm_inc_const_missing_count, ruby_vm_const_missing_count): added.
- vm_insnhelper.fr: ditto.
- variable.c (rb_const_get_0), insns.def: Constants should not be cached if const_missing is called. [ruby-core:21059] [Bug #967]
- bootstrap/test/test_class.rb: add a test.

Revision a3a45faf - 01/15/2009 03:31 PM - ko1 (Koichi Sasada)

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Revision 21536 - 01/15/2009 03:31 PM - ko1 (Koichi Sasada)

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Revision c923eaf17621dc19c46c508f8a53083852834bc - 01/15/2009 04:32 PM - yugui (Yuki Sonoda)
merges r21536 from trunk into ruby_1_9_1.

- vm.c (rb_vm_inc_const_missing_count, ruby_vm_const_missing_count): added.
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Revision c923eaf1 - 01/15/2009 04:32 PM - yugui (Yuki Sonoda)
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git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby_1_9_1@21574 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

**History**

### #1 - 01/03/2009 07:43 AM - yugui (Yuki Sonoda)
- Target version set to 1.9.1 RC2

```text
=begin
=end
```

### #2 - 01/16/2009 12:37 AM - ko1 (Koichi Sasada)
- Status changed from Open to Closed
- % Done changed from 0 to 100

```text
=begin
Applied in changeset r21536.
=end
```