Ruby master - Feature #6199

Organize gc.c a bit

03/25/2012 08:07 AM - funny_falcon (Yura Sokolov)

<table>
<thead>
<tr>
<th>Status:</th>
<th>Closed</th>
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</thead>
<tbody>
<tr>
<td>Priority:</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee:</td>
<td>authorNari (Narihiro Nakamura)</td>
</tr>
<tr>
<td>Target version:</td>
<td>2.0.0</td>
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</tbody>
</table>

**Description**

1. Move immutable fields from struct heaps_slot and struct sorted_heaps_slot into struct heaps_header. One exception is limit field, but it starts to be mutable just before freeing a heaps_header, so that it is not big issue.
2. Embed bitmap into struct heaps_slot
3. Change free_unused_heaps to free_unused_heap, so that it will not be called on every GC round, but only when page should be freed. While free_unused_heaps does not consume much time (it is invisible in profiler), but regular application has no need in calling this function every time.

[https://github.com/ruby/ruby/pull/108](https://github.com/ruby/ruby/pull/108)
[https://github.com/ruby/ruby/pull/108.patch](https://github.com/ruby/ruby/pull/108.patch)

**Associated revisions**

Revision 8a9097e8 - 11/10/2012 03:04 PM - nari

- gc.c: move immutable fields from struct heaps_slot and struct sorted_heaps_slot into struct heaps_header. Based on a patch from Sokolov Yura [Feature #6199][ruby-core:43592]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@37613 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 37613 - 11/10/2012 03:04 PM - nari

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History
Hi,

I'm sorry for late reply. I've just reviewed these. I'm not sure that 3. improves a performance, because it's using binary search each one slot.

I don't like 2.

I will accept 1.

Thank you!

#3 - 11/10/2012 04:52 PM - funny_falcon (Yura Sokolov)

I'm not sure that 3. improves a performance, because it's using binary search each one slot.

Well, free_unused_heaps runs on each GC and does linear scan, and free_unused_heap runs only on heap's freeing. Heap freeing occurs rare in typical long running application, so that it is possibly that linear scan for each GC is overkill.

But I could not prove it :)

#4 - 11/11/2012 12:04 AM - authorNari (Narihiro Nakamura)

This issue was solved with changeset r37613.

Yura, thank you for reporting this issue. Your contribution to Ruby is greatly appreciated. May Ruby be with you.

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