**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>
</tr>
</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 a 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 the 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.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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  [Feature #6199][ruby-core:43592]