Ruby - Feature #16282

Add "call data" wrapper IMEMO object so inline cache can be updated

10/28/2019 11:26 PM - tenderlovemaking (Aaron Patterson)

Status:	Open	
Priority:	Normal	
Assignee:		
Target version:		

Description

Hi,

Currently the compactor will invalidate all inline caches. I would like to update references in inline caches so we don't have to invalidate. Most inline caches are reachable from instruction sequences, but one cache is not:

https://github.com/ruby/ruby/blob/6147fa82a923e7318f493857023006801ed25eb5/internal.h#L2395

This static variable can't be reached from the GC. I'd like to introduce a new IMEMO object that wraps this cache, then the GC can reach the cache and update the value.

I've attached a patch that implements the new IMEMO object, and also removes the restriction on GCC so that all compilers get the cache hit.

Does this seem OK shyouhei, ko1?

History

#1 - 10/28/2019 11:38 PM - tenderlovemaking (Aaron Patterson)

- File 0001-Wrap-call-data-with-an-IMEMO-object.patch added

#2 - 10/28/2019 11:38 PM - tenderlovemaking (Aaron Patterson)

- File deleted (0001-Wrap-call-data-with-an-IMEMO-object.patch)

#3 - 10/29/2019 12:01 AM - tenderlovemaking (Aaron Patterson)

Actually, I think this makes performance worse because it removes the "define". So there will be only one. I will fix it to maintain the macro.

#4 - 10/29/2019 12:13 AM - tenderlovemaking (Aaron Patterson)

- File 0001-Wrap-call-data-with-an-IMEMO-object.patch added

#5 - 10/29/2019 12:13 AM - tenderlovemaking (Aaron Patterson)

- File deleted (0001-Wrap-call-data-with-an-IMEMO-object.patch)

Files

0001-Wrap-call-data-with-an-IMEMO-object.patch 3.9 KB 10/29/2019 tenderlovemaking (Aaron Patterson)

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