Charm++ - Bug #1639

AMPI MPI_IN_PLACE support is broken

07/20/2017 02:57 PM - Sam White

Status: Implemented
Priority: High
Assignee: Sam White
Category: AMPI
Target version: 6.8.1

Start date: 07/20/2017
Due date: 
% Done: 0%
Estimated time: 0.00 hour
Spent time: 0.00 hour

Description

The MPI standard says that when MPI_IN_PLACE is passed as the sendbuf, the corresponding sendtype and sendcount (and sdispls, if applicable) arguments are also meaningless and the recv ones should be used. AMPI only updates the sendbuf and not anything else, and we fail on a lot of the mpich-3.2 tests because of it.

History

#1 - 07/20/2017 04:03 PM - Sam White

3 things to be careful of when handling MPI_IN_PLACE:
- error checking of send{buf,type,count} has to be aware of MPI_IN_PLACE
- using DDT extent vs size because displs are in terms of recvtypes and recvcounts when using MPI_IN_PLACE
- MPI_COMM_SELF handling, we treat this as a special case in collectives and call copyDatatype() with send stuff

#2 - 07/20/2017 04:52 PM - Sam White

- Priority changed from Normal to High
- Status changed from New to In Progress

https://charm.cs.illinois.edu/gerrit/#/c/2831/

#3 - 07/20/2017 06:25 PM - Sam White

- Status changed from In Progress to Implemented