Despite #642 being merged I still see pes that are sending messages blocked waiting on some shared resource in smp builds. Attached is a communication torture test based on PME in NAMD that illustrates the problem quite clearly. It is desirable for the sending pe to do anything that the communication thread does not absolutely need to do itself, but it shouldn't get stuck doing nothing. Note that in the attached timeline screenshot the pink entries all send the same number and size of messages.

History

#1 - 02/21/2017 02:52 PM - Jim Phillips
On further research it appears that verbs/net-ibverbs only uses the comm thread for receiving so there is clearly some sort of send contention but possibly not in the Charm++ code.

#2 - 03/07/2017 11:35 AM - Eric Bohm
- Assignee set to Bilge Acun

#3 - 03/07/2017 04:06 PM - Bilge Acun
- Assignee changed from Bilge Acun to Karthik Senthil

Re-assigning it to Karthik since he's going to do the projections/performance tests.