

Meeting 54

11/07/2018 8:15pm - 9:30pm (1.75 hours)

Agenda:

- Check safety on message on Nuget
- The resubmission of LCAM
- The Monday talk about our projects
 - Joshua keen on making a video and just giving Jim a link
- Network security stuff, how are we re-writing. I want it gone, or right
 - Had to re-write UDP security because of a vulnerability, but the rewrite is very difficult. Joshua wants to keep going on fixing Security on top of other workload.
- Need to pick a time to have weekly meetings
- Should we move ICOM back an iteration?
- Need to start figuring out what we're doing in next two weeks
- Need to start making iteration docs, and push to wiki
- We can take an extra week or two at the end of the session
- Figure out how to submit LCAM

Minutes:

- Welcome back to second session!
- Made a new Meeting Minutes document
- We got the 9pm slot on Wednesday for our meetings with Jim
- Confirmed we've said "WIP"/Work In Progress in the title of the Nuget package
- Confirmed Joshua to continue work on Security
- Confirmed we're not initially keen on doing an extra Construction phase, will revisit later if we need to
- Plans for next two weeks
 - Rewrite the Raft Consensus class, improving code quality/flow
 - Do better unit testing of classes
 - Security
- Agreed we need to make an iteration plan from today for the next two weeks
- Wrote the iteration plan
- Added iteration plan to wiki
- Added Engagement Task of resubmitted LCAM to wiki, no changes

Meeting 55

14/07/2018 10:00am - 9:00pm (10 hours)

Agenda:

- Joshua unblock his Teamviewer
- Go through with Sean the code changes
- Refactor as much as possible in Consensus
- Continue on rebuilding unit testing

Minutes:

- Go through code changes
- Created some slides for the presentation, outlined what to say
- Then worked on code for the rest of the day
 - Sean worked on unit testing
 - Joshua worked on refactoring consensus

Meeting 56

21/07/2018 10:00am - 9:00pm (10 hours)

Agenda:

- Joshua unblock his Teamviewer
- Go through with Sean the code changes
- Refactor as much as possible in Consensus
- Continue on rebuilding unit testing

Minutes:

- Joshua found unblocking his teamviewer too cumbersome. Will set a reminder to do it during the week
- Sean continued working on full coverage unit testing
- Joshua continued refactoring the Consensus code, finished but there is currently a bug
- Joshua put an hour into working on the bug, but can't crack it so will look at it next week. The issue a ManualResetEvent isn't triggering across threads, zero idea how to debug that.

Meeting 57

25/07/2018 7:00pm - 9:30pm (2.5 hours)

Agenda:

- Joshua updated iteration
- Sean updated iteration
- Discuss how we'll do beta testing
- What will our manual look like?

Minutes:

- Updated iteration plan 8 added links to commits etc
- Updated interact Wiki
- Created iteration plan 9
- Conduct UAT with some acceptance tests on prototype...
 - Added object to consensus
 - Take out a node
 - Bring a node back to life
 - Blah blah blah sort of testing
- User manual should look something like the [JUnit5](#) documentation

Meeting 58

28/07/2018 10:00am - 9:00pm (10 hours)

Agenda:

- Both going to look over new code to hunt bug
- Joshua to finish debugging Consensus
- Sean to finish writing unit tests

Minutes:

- Resolved the bug in the Consensus class, refactor complete
- Recompiled new Nuget package and published
-

Meeting 59

28/07/2018 10:45am - 9:00pm (10 hours)

Agenda:

- Joshua to finish debugging Consensus
- Sean to finish writing unit tests
- Fix bug in Nuget push
- Working on adding the dynamic cluster membership
- Add ability to reply directly to AppendEntryResponses

Minutes:

- Had to invent new way to catch debug information at sub millisecond resolution! (Named Pipes into a separate program)
- Can't buffer since it won't write when the code pauses in VS, can't write because it takes 5ms for 2GB/s SSD and 3ms for RAM drive write. So we wanted to send it to a separate program which could buffer all it wanted. We use every 500ms to write the buffer on the other side instead of entries, meaning we'd never have anything waiting to be written out.
- We debugged the issue, solved the issues, thought we'd solved the issue, had the same issue, traced it back after hours to having not solved it originally. Had to do with passing in variables by reference into a separate thread versus using properties which won't execute until the thread begins
- Pushed all code changes to Bitbucket

Meeting 60

08/08/2018 8:00pm - 9:30pm (1.50 hours)

Agenda:

- Oversight meeting with Jim

Minutes:

- All going well with Jim, he's happy with our progress
- After the meeting, discussed with Sean that within our time frame the optional performance features are a better addition to the software than dynamic cluster membership

Meeting 61

11/08/2018 10:00am - 9:00pm (10 hours)

Agenda:

- Prototype having issue join the cluster
- Prototype having issues appending to log
- Make changes to iteration plans
- Add ability to throughput test the software
- Add performance enhancements

Minutes:

- The issue with the prototype was multiple programs were trying to join onto the same named pipe as writers for debugging. Named pipe doesn't support that, so we needed to turn the named pipe from a 2 threaded running program to a dynamic N number of threaded program to support as many nodes as needed.
- More issues with the code! Fixed a timeout issue with the leader who was continually sending heartbeats, wild
- Crushed all bugs for prototype after Consensus changes!
- Agreed that we'll use ReadTheDocs for our documentation, Sean to look at through the week
- Agreed we'll focus on performance
- Created a unit test which tests performance, we're aiming for 30 messages/s
- We're hitting 7 something messages per second, not good. Starting to further optimise protocol.

Meeting 62

18/08/2018 10:30am - 9pm (10 hours)

Agenda:

- Start wiki
- Add performance enhancements
- Add persistent log capability

Minutes:

- Confirmed how we're going to do the wiki - Bitbucket and Notepad++ MD plugin
- Added persistent log capability

Meeting 63

22/08/2018 8:30am - 9:30pm (1 hours)

Agenda:

- Do the previous and next iteration documents
- Have the presentation with Jim
- Confirm information for assessment

Minutes:

- Completed the iteration documents
- Discussed with Jim about progress
- Notes from meeting:
 - alpha - show the unit/intergration tests, API doc
 - Prep for BETA
 - UAT beta - form scripts to show the prototype
 - - What are the use cases? Formal scripts/scenarios
 - - No results, but that you coulddd
 -
 - user manual - API manual
 -
 - Transistion and revise docs
 - PRM - Walk through the scripts
 -

Meeting 64

25/08/2018 10:30am - 5:45pm (5 hours)

Agenda:

- Start on ICOM
- Plan out better work items for iteration document

Minutes:

- Added into interface ability for users to use Persistent Log
- Solved a timing bug
- Solved a bug where OnCommitEntry was being re-run
- Starting ICOM, agreed that part 1 sounds like functional/non-functionals
-

Meeting 65

25/08/2018 10:30am

Agenda:

- Start on IOCM
-

Minutes:

- Added into interface ability for users to use Persistent Log
- Solved a timing bug

Meeting 66

1/09/2018 10:30am

Agenda:

- Working on IOCM
-

Minutes:

- Working on individual documents IOCM submission
- PersistentStorage need to be able to pass in bool to establish whether or not to delete existing sqlite db... also write the sqlite db to disk.
- Need to make the maxJoinRertry a default so we don't have to worry about it.

Meeting 67

29/09/2018 11:30am

Agenda:

- Working on PRM

Minutes:

- Reviewed out PRM requirements
- Outlined of programmer documentation
- Discussed upcoming dates to complete required work.
- Sean to finish Prototype this weekend in order for UAT to be conducted.

PRM, 5 component:

- **Implementation Model - (looks like IOCM)**
- **Demonstration - (prototype component ready this weekend)**
- **User Acceptance Testing - (waiting on prototype)**
- **Programmer Documentation**
- **Transition Phase Status Assessment**

29 - Start PRM

- Start on programmer documentation
- Sean to finish MVC by 6th

3 - Meeting with Jim

- Produce the iteration documents, should be the last one?

6 - Continue PRM

- Continue programmer documentation
- Complete User Acceptance testing

9,10,12 - Continue PRM

- Fix the bug, Josh!
- Complete for the above stuff, or progress

13 - Continue PRM

- Contingency for programmer documentation
- Implementation model (should be quick, after getting marks back)
- Demonstration video

14 - Continue and submit PRM

- Status phase assessment

- Convert into PRM document

15 - PRM due