1 Aug, 2013

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**Progress Report – 1 Jul 2013 – 31 Jul 2013**

Contract Number: HSHQDC-06-D-00022

Contract Number 7500097279

Order Number: HSCG23-07-J-TED150

Task Order – Performance Work Statement (PWS) 1.12

Attachments: (1) SAROPS subcontractor financial reports

1. **SAROPS Systems Component Services Tasks**
   1. **Activities completed:**
      1. **Prepared for and took part in a Rivers conf call on Jul 1. Had dug through the code to prepare answers to a long list of questions in an email, but these questions were never raised during the conf call. A slide or two was requested by RCN on Sim.properties, that I prepared and presented at the IPR.**
      2. **TWG on Jul 2 focused on the Jul 9 IPR. Prepared slides for it and answered questions. More was needed so an ensuing conf call on Jul 3 took place. Made several revisions to my slides.**
      3. **IPR on Jul 9. Presented 3 main topics:**
         1. **NonRegression Testing**
         2. **Sim.properties**
         3. **New ways of stopping Planner automatically.**

**There was a fairly concrete discussion on (3) and a separate suggestion for a new NonRegression case was given for (1).**

* + 1. **Because of the infinite loop problem of last month, which occurred because 0.1 in single precision is bigger than 0.1 in double precision, I changed all of the parameters in Sim.xml and Plan.xml to double precision. The only single precision numbers stored in memory are the large collections of numbers found in the NetCdf files (environmental and particle). Quite a bit of code change there, but the compiler guided me.**
    2. **Looked at a case that was apparently very simple and routine, but was not working. I chased down the problem and it was that the times in the drifts NetCdf input file are in descending order, whereas my code assumes that they are in ascending order. ASA will ensure that that does not happen so there is no change in my code.**
    3. **In another case, both gshhs and etopo were being ignored. I spent some time checking this out but could not recreate the problem here. Finally, it occurred to me that my web server might have been started before the land and etopo jarfiles were copied over to <SimInstall>/lib. So I suggested my web server be shut down and restarted, so that the land and etopo jarfiles would be recognized. Problem solved.**
    4. **Answered questions about decorrelation and standard deviations. There’s a wrinkle about the latter in rivers that wasn’t covered in the IPR.**
    5. **Pushed “error” about missing river data from sim.out.txt to sim.err.txt.**
    6. **Working on a case where all particles are landed and planner is looking only for adrift particles. After a few discussions, we decided to leave the error message as is.**
    7. **A LOT of work capturing where all of the parameters are coming from. At the IPR, I said that I’d enrich the echo file, but I think that a better output format is simply a slightly different way of presenting the echo-ed properties file. EngineFiles now has separate subfolders for SimEcho, SimInput, SimResult, SimEnv, PlanEcho, PlanInput, and PlanResult. The timing files go in the “Result” folders. verbosePlanResult goes in PlanResult and the SimLog, with ancillary information, goes in SimResult.**
    8. **Answered questions involving POS and SLDMBs.**
    9. **Ran the non-regression tests prior to releasing a new jar file on Jul 19. Actually released 2 of them; a normal one and one that does not write eval (for Planner) or stats (for Sim). The idea was from Jim; get that second one out so the other engineers can find out where the evalLog and stats files are being used. Part of general cleanup.**
    10. **I now clear out gshhs shpFiles and etopo shpFiles before looking to see if I need to write them. Prior to this, I only looked at those directories if there were land or depth considerations. Now if there are not such considerations, I still delete any old directories to avoid confusion.**
    11. **Built new installers for Beta 8 and ran them through non regression tests. These installers include “substitute” jarFiles to allow people to run without the stats file or eval file. This is as far as I can go on the cleanup until we determine where those near-dead files are being used. When that’s determined, and this install will make it easier to determine that, we’ll know what needs to go in other files so that these two files can be discarded.**
    12. **Rebuilt GSHHS files to use the recently released (Jun, 2013) GSHHS files.**
    13. **Chased down a small problem after Beta 8 came out; speedInKts was -2 in the input file and I was crashing (what else could I do(?)). I found the problem in the input file and am now responding better in the err file. The err file still has a lot of verbiage that’s useful only to me, but it’s better. This particular problem will be fixed outside of my code so that only sensible speeds will be given to me.**
    14. **Added and ran a “relative motion” non-regression test provided by Jack. Came out very nicely.**
    15. **Worked on getting SAROPS 1.5 installed on my machine. It has not been a problem since the Engine Files have always been sufficient for me to recreate a problem. However, there will probably be a problem which does not show up in my program and GUI and I will need the full SAROPS to test it. Furthermore, I use ArcMap to view shp files that I write so I’ll want ArcMap installed. I have not been able to get SAROPS 1.5 installed since the install for SQL Server 2008 R2 RTM with Management Tools has been unsuccessful.**
  1. **Travel completed:**
     1. **IPR.**
  2. **Upcoming activities scheduled:**
     1. **Finish installing SAROPS 1.5 and my write-up of the process. If there’s any response to my cleanup effort, I’ll work on finishing the cleanup. Finally, I plan to investigate two problems:**
        1. **A tiny mismatch between alpha and bravo POS values.**
        2. **An easily improved upon plan in one of the non-regression tests.**
  3. **Travel planned:**
     1. **None**
  4. **Concerns or recommendations:**
     1. **Trouble installing SAROPS 1.5 because of SQL Server 2008.**

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| --- | --- | --- | --- | --- |
| **Name** | **Activity Worked** | **Hours Worked** | **Hourly Cost** | **Total Cost** |
| Kratzke (New Contract) | Coding/Doc/Travel | 138 | 255.16 | 35212 |
| Stone | Doc | 0 | 223 | 0 |
| L White (Tech Writer) |  | 0 |  | 0 |
|  |  |  |  |  |
| **Totals** |  | 110 |  | 35212 |
|  |  |  |  |  |