2 May, 2018

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**Progress Report – 1 Apr 2018 – 30 Apr 2018**

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. **Many meetings. Plus 2-day IPR. I made several presentations at the IPR.**
2. **Cleaned up the post processing rounding. At least, I got Young’s case to work.**
3. **Worked a lot on onMars. It is difficult to create a case so it is difficult to debug this except one case at a time, and Judy provided a case to me. The trick is that I must provide a box and a pattern in the output, when I really have no parameters to build this from; I cannot use the duration because I want to make a generic box, and using the duration could create, if the generic box is small, too many legs. It’s trickier than it sounds, but perhaps it does sound tricky because I had suggested that I say “onMars” and let others figure out what to display. Judy is now passing back only “onMars” whereas before she was sending back the bogus box that I had sent to her for display purposes only. Anyway, I think we have all of that straightened out.**
4. **Worked quite a bit on comparing planner cases. I am moving forward with the assumption that he “key file” for a planner case is the dashboard tables file and have written quite a bit of code comparing those. The idea is that we will compare the dashboardTables files for planner cases just as we compared the particles.nc files for sim cases. It is not enough to simply compare the numbers in the two versions of that file because the optnScore is the critical value for optn (including getInitial) cases, and the rest of the numbers are critical for Eval cases. Therefore it is necessary to consider the plan.xml as well. Furthermore, values corresponding to frozen PatternVariables (Old Srus) must be compared even in optn cases. What this means is a valid Planner compare must have the plan.xml and the dashboardTables file in the base directory and the dashboardTables file in the ORIG directory. Furthermore, the names of the object types are not available from these, which would make the report of the comparisons difficult to read. Hence, it is useful to have the sim.xml in the base directory as well. But I’m not sure that will be considered acceptable so I make that optional. However, if it is not supplied, I won’t be able to give a readable name to the Object Type references.**
5. **Did some land manipulation. It is easier for me if I click all of the inputs into Google Earth. This has several advantages; 1. There are no errors. 2. The data will correspond to the operations that I have prescribed. 3. The Google Earth editor allows me to stop and come back and edit previous paths and polygons. 4. The Google Earth editor produces fils that have the correct format. By using GE, I don’t have to hand-edit the files that I receive.**
6. **More land manipulation; the Florida inlets case had two issues;**
   1. **1. South Fort Pierce must be processed before North Fort Pierce; North Fort Pierce’s correction would overlap an existing polygon and all would be lost; we must move South Fort Pierce southward to get it out of the way before moving North Fort Pierce southward.**
   2. **This one is hard, and I had always said that this is *not* a simple modification; we created a new inlet. By this, I mean I specified a water polygon that splits a land polygon into two polygons, one of which must be created. I gave up and wrote code that would do this. As a note, I did not have this ability when I processed Sacramento, and therefore I had to create many new datafiles and write quite a bit of code. Florida (Haulover Inlet) was the 2nd time this problem came up, and I bit the bullet and wrote the code. Hence, the available operations NOW are:**
      1. **ADD\_POLYGON**
      2. **DELETE\_POLYGON (with 3 variations)**
      3. **MODIFY\_POLYGON (Clatsop Spit and Oahu)**
      4. **(NEW) ADD\_WATER\_AREA (for creating a new inlet)**
      5. **(NEW) ADD\_LAND\_AREA (for creating a dam or isthmus).**
7. **In SimLib, I’ve always tried to provide the path, the TS box, and the Buffer box. These are no longer being ignored, but there was a bug in the Buffer box; I was actually returning a 3rd box that I need to compute, but is being ignored. Jim caught this and even identified the flip-flop in my C++ code. Fixed that.**
8. **Answered questions from Jack on River, and several other issues**
9. **Some red herrings that I tracked down.**
10. **Started work on some cleanup; SruNameId vs SruName vs SruId… Will work with Judy on this.**
11. **While in VA Beach, I worked with Young to show her what could be done to gather information about an ArcMap crash that may or may not be my fault. As of May 2, 2018, Young has not been able to re-create the crash. But there are tracing capabilities built into my code that are normally turned off. If we do get a case that crashes consistently, we should at least have something to try in order to gather information.**

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| **Name** | **Activity Worked** | **Hours Worked** | **Hourly Cost** | **Total Cost** |
| Kratzke | Coding/Doc/Travel | 172.39 | -- | -- |
|  |  |  |  |  |
| **Totals** |  | 172.39 |  |  |
|  |  |  |  |  |