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**Progress Report – 1 Dec 2015 – 31 Dec 2015**

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. **I finally completed the code for the geometry routines and am now debugging it. I have found some bugs but nothing to cause a re-structure. The basic notion is that I subdivide a set of edges into 2 sets of edges that are disjoint and whose LatLng boxes are as nearly disjoint as possible. When I have few enough edges, I build a special box and the box is good at answering the “is-it-in,” “crossing,” and “closest point.” This approach has now been seen through, without revision, through compilation. I made a slight change to accommodate the Eurasia; Eurasia has 3 sections; the edges that cross the IDL, those to the right of the IDL, and those to the left. Unless care is taken, the latter two get unfortunately combined, and result in an unnecessarily enormous LatLng box.**
2. **Had some problems with the new islands. The biggest problem was that I have to automatically eliminate small islands that a new island surrounds or crosses. Wrote that code, ran it, and finally got the new SimLand out. Had a few problems with that because of bug I introduced while debugging the rest.**
3. **With Art Allen’s help I got my ESS code to work as he and Jack expect it to. This was a refinement of the computational part of the program that I wrote earlier, and that Jack and Art have looked at.**
4. **Problem with my installers arose; I started over and rebuilt the scripts that Advanced Installer uses. Now they work fine except that I have to use, for my (supposedly ignored) default install-dir, a directory that at least exists on the target machine. I’ll work that out later.**
5. **Struggled with Windows 10. Eventually, I completely gave up, and I now have my old Windows 7 box in my office; I remote desktop to it when I run SAROPS. I couldn’t even get an installation of SQL 2008, arcmap 10.2.2, and Sarops on a Virtual Box with Windows 7 to work. My new box is much faster for my own development though.**
6. **Fixed a bug; a voyage with just a departure location and then no additional information, would hang. Now it is treated just as an LKP or an area.**
7. **Finished exporting the LOB-set-to-ellipse code to a DLL. Had a few bugs there that got worked out. A little back and forth there to iron out how the xml should be, and how to react to a bad set of LOBs.**
8. **This time, it appears as if Didier and I finished getting the Track/Trace issue resolved. John has said that he successfully ran a scan and found no problems. We had been checking ourselves too quickly; later in the code, there was an override of what we had fixed. That’s gone now.**

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| **Name** | **Activity Worked** | **Hours Worked** | **Hourly Cost** | **Total Cost** |
| Kratzke | Coding/Doc/Travel | 136 | 282 | 38352 |
| Vergamini | Coding/Doc/Travel | 4 | 282 | 1128 |
| Stone | Doc | 0 | 223 | 0 |
| L White (Tech Writer) |  | 0 |  | 0 |
|  |  |  |  |  |
| **Totals** |  | 136 |  | 39480 |
|  |  |  |  |  |