2 Feb, 2018

Robert Trzeciak

Program Manager

Northrop Grumman IS

468 Viking Drive

Virginia Beach, VA 23452

757-498-5544 work

757-635-2628 mobile

**Progress Report – 1 Jan 2018 – 31 Jan 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. **Jira meetings, e.g. Sprint Planning, Sprint retrospective, etc. Lots of meetings. Even more now that we’re having more Standups. Robert pointed out that there is kind of a dead period before and after each meeting. I noticed that too. To avoid working right though a meeting (especially the short stand-ups, and I’ve done this), I now have a policy that if I come up from work “for air” 10 minutes before a meeting is to start, I dial in then and simply wait for the meeting to start.**
2. **I created a first version of the xml standard for multi-sensor cases. Modified this quite a bit. This involved thinking through the problem until it became well-defined, and this means that the gui and “CONOPS” had to change. In the following, I abbreviate “lateral range curve” by “LRC,” and each “sensor” has a single LRC. Here are some bullet points that result from this:**
   1. **Each sensor is an Up/Dn (ie up-down) sensor or a Lt/Rt (ie left-right) sensor; it’s one or the other.**
   2. **If it’s Up/Dn, then there must be min and max limits for leftRange, rightRange, leftLkAngl (ie left-look-angle), and rightLkAngl in the xml. Similarly with Up/Dn. The xml should never provide both an Up/Dn limit and a Lt/Rt limit, and it should provide all limits for one type. These limits are collectively referred to as a “filter.”**
      1. **Filters render displayScale and the ess limit parameters obsolete.**
   3. **For a PatternVariable/ObjectType combination, there is now a *set* of sensors. Previously there was a single LRC. I call this new construct LrcSet.**
   4. **The sensors within an LrcSet act independently of each other.**
   5. **An LrcSet can*not* be treated as a single LRC; for example, an LrcSet is not necessarily Up/Dn or Lt/Rt; it can have both types of LRC’s as members.**
   6. **An LrcSet *does* have a sweep-width and *can* evaluate an SRU-path/particle-path combination; in this sense it behaves very much like a regular LRC.**
   7. **The computation of an LrcSet’s sweep-width is straightforward if all of the sensors are Up/Dn or all of them are Lt/Rt. For a mix, it’s harder. Hence, I had to dust off the numerical integration code and apply it to the cases “Left is Down” and “Left is Up.” Then average the two results.**
   8. **All of this was discussed with Art Allen.**
   9. **The filter became the tail wagging the dog in the CONOPS. I felt bad about that at first, but perhaps it’s better to start with a coherent statement of the problem that I have to solve; Art seemed to think so.**
   10. **I’ll have more details in next month’s report, especially for MBeta.**
3. **Sailboat voyages seem to work for two cases. Big improvement. Revamped some of the assumptions as per Art. This motion model is so complex that I haven’t been able to validate that some of the considerations are being used.**
4. **Made a lot of progress on transits. The only known issues are that I’m not handling bad cases very well; must clean up some OnMars code.**
5. **Took 3 days off.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Activity Worked** | **Hours Worked** | **Hourly Cost** | **Total Cost** |
| Kratzke | Coding/Doc/Travel | 159.54 | -- | -- |
|  |  |  |  |  |
| **Totals** |  | 159.54 |  |  |
|  |  |  |  |  |