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weekly activity report 130 (loughry)

Joe Loughry

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Attachments:

Weekly activity report no. 20100401.2343 (GMT-7) sequence no. 0130, week -2 TT

I submitted my paper to the VALID 2010 conference in advance of the deadline. The conference organisers keep making changes to the CFP at the last minute, most recently extending the deadline to 5th April because of Easter. On 28th March a new set of Instructions to Authors was posted with requirements for the formatting of references, number of columns (IEEE style) and rules for use of abbreviations in the text. I followed their specifications exactly. Dr Martin read the paper and made suggestions including that I should submit the paper in the work-in-progress category. The organisers encourage submission of work-in-progress papers and said they will be peer-reviewed, will be published in the proceedings, and will require an oral presentation at the conference. Notification is scheduled for 25th April; the conference is in August.

I think the discussion of G's part (anonymised) in the first case study is too abbreviated in what I just wrote. I need to make it more clear that their report of 'not fit for purpose' that scuttled the project was not capricious, it was based on careful analysis with tools that no one else had. They considered the larger system that S was a part of---and the security of that larger system directly impacted the safety of their own armed forces. If my paper gets accepted I will make that change in the final revision, as long as the referees don't mind. I need to ask Dr Martin and Dr Ashbourn for advice: is it ethical to make significant changes to the camera-ready copy of a paper after it has been accepted? The change in this case would be the addition of a sentence or two. The change in meaning is slight, but important.

I met with Dr Martin by video teleconference on Wednesday morning. DIACAP certification of RM 5.0 (my second case study) is proceeding normally. I have talked with three people who have been in Washington, D.C. over the past couple of weeks supporting the Beta 2 testing. NSA is running two labs concurrently: a penetration testing lab at Ft Meade, Maryland and an outsourced IV&V lab in Charleston, South Carolina. CT&E is proceeding exactly as described in my paper.

The government sponsor is reluctant to pay for having a developer representative present on-site the whole time during testing, so Lockheed has flown three different people in and out during this time. The IV&V contractors in Charleston are effectively re-running the Factory Acceptance Tests. They have failed a lot of test procedures (all minor to moderate, nothing to worry about) because they keep attempting to test features of the software that weren't installed. Both testing sites are expressing frustration that they can't test a fully configured system; the developer responded that they never asked for a fully configured system in the first place. The developer is sending another person to D.C. next week to configure the Ft Meade system to be identical to Charleston. NMSO (the Navy funding source in San Diego, California) always waits until the last minute of the last day to provide funds to continue. All of this is the normal way that the relationship between government sponsor, developer, and certifiers on the programme always operates.

I mentioned an interesting paper I found in PLoS Biol. last week. It used a couple of statistical techniques called Egger's regression and Funnel Plots to look for missing data in published studies. The researchers looked at the size of the error bars on published plots of data in 525 studies and compared that to the size of the effects found. The funnel plot (relating variation on the y-axis with effect size on the x-axis) is a cloud of points that ideally ought to have a triangular shape, since as variation decreases along one axis, it is expected that the size of the effect, whether positive or negative, nevertheless converges on the true value along the other axis.

In some of the published studies, however, the entire left side of the triangle is missing. This indicates that more data were collected than were published. The authors predict the existence of 214 experiments that must have been performed but were never reported, because the results were negative or inconclusive, in addition to the 1,359 experiments that were reported.

I am not sure if I can use this method because studies in my field are so primitive statistically that they almost never put error bars on their plots. It is a neat analysis to read about, though, and the authors were very thorough with their statistics. Source: [E.S. Sena, H.B. van der Worp, P.M.W. Bath, D.W. Howells, and M.R. Macleod. Publication bias in reports of animal stroke studies leads to major overstatement of efficacy. PLoS Biol., 8(3):e1000344, March 2010. DOI: 10.1371/journal.pbio.1000344.].

There was an interesting discussion on 31st March 2010 in Bruce Schneier's blog about government software assurance.

I asked Dr Martin for advice on what to concentrate on next, the journal article for Crosstalk or methodology chapter. He said to get the methodology chapter filled-in but not to spend time polishing it now. Then take the material from that chapter and use it to finish the journal article. For the confirmation of status I don't need an absolutely polished chapter, just a preliminary one, but it should be essentially complete. It is more desirable to have a published paper. The journal article will be a longer version of the paper I just finished with new material derived from details in the methodology chapter.

As part of the methodology, I am finalising two lists of people I need to send surveys to: certification & accreditation practitioners, and participants in the first case study. The first thing I need to do now is the practitioner survey questions. That forms part of the methodology chapter so it will give me a pre-written section. I hate talking to people but I have to do it. If I have any doubts about the design of the survey I will run it past Dr Jirotko. I will test the survey on a few tame participants (I have them in mind already) before spamming the entire list.

I have confirmed speaking slots for three talks on consecutive weeks at Lockheed: 9th, 13th, and 20th April on the topics of Cross Domain Systems, DIACAP certification, and my research. I sent an abstract for the first talk to the meeting organiser yesterday.

Regarding the level of language in the paper just finished, Dr Martin said the tone was just about right for this type of contribution. In a dissertation, I want to be a bit more detached. But the writing style calibration process is coming along nicely. I am approaching the right tone.

I am on a roll and not stopping for Easter vacation. Next meeting scheduled for Wednesday, 14th April 2010 at 1400 Oxford time (0700 my time) after Easter.

Current list of tasks in order of priority, highest priority first:

1. Email addresses for practitioner survey and participant survey; enter in SurveyMonkey.
2. Methodology chapter.
3. Survey questions, list of participants extracted from methodology chapter: send out before 15th April.
4. Journal article (based on methodology chapter, VALID 2010 paper and recent talks) to be submitted by 21st April.
5. Update dissertation outline.
6. Begin writing progress report for confirmation of status.
7. Fill out paperwork for UK student visa extension in April for June deadline.
8. Update the schedule.
9. Apply for confirmation of status---I want to submit the forms with written work in June.
10. Development of accreditor information coordination tool.

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End of WAR 0130.

References