

File 20091126.2135: Grad Student Status Reports are due tomorrow. Here is what I wrote, stored here in case the web user interface to the reporting system eats it:

How many times have you met with Dr Andrew Martin since your last report?

13–20 (16 actual)

Do you have any concerns about the progress of your course over the last reporting period?

No.

Self-assessment of overall progress this term:

The byword for this term is ‘focussing’. I have a more specific plan now for what I need to accomplish before confirmation-of-status at the end of Trinity term 2010. My research direction has focussed towards NIST SP 800-53 and DIACAP as the certification and accreditation (C&A) processes I want to concentrate on. To compare and contrast with my first case study, a Common Criteria example, I have found a second case study being done under SP 800-53 in which both the software developer and the certifier are unfamiliar with the new C&A process. This is precisely what I came to Oxford to study. For a period of 10 days I observed Certification Test and Evaluation (CT&E) Alpha Tests being conducted and I talked with the Test Director, Certification Authority, and Independent Verification and Validation (IV&V) testers, as well as the software developer.

This focusses my research closer on the true problem of C&A of existing systems where the C&A process is new or in flux. By studying SP 800-53 and the application thereof to national security systems under DIACAP, it will be possible to make a significant contribution just when it is needed; there is a desperate need for understanding of C&A after DCID 6/3 right now; 800-53 is the new requirement but no one knows what it means or how to use it. By means of the two case studies I have found, and through the development of a tool, I should be able to answer some important questions during the next 10 months. The answer will be directly useful to a number of practitioners.

Further to performing the case studies and to get access to needed data, I moved to the USA in July 2009. Before moving, Dr Martin and I went over plans for accomplishing the research and producing 3 to 4 published articles or conference papers in the time available. Since moving, I have kept up participation in journal reading group and regular supervisor meetings through video teleconference. I send regular email reports describing what I have accomplished (and what I have not accomplished) each week. I reviewed those weekly reports in preparing this report. Periodically, I go over the schedule with Dr Martin in our regular—approximately weekly—supervisor meetings.

When I got back to the states I wrote a progress report for Lockheed and met with my four line managers there to bring them up to date on my plan for the next year. I need their backing to allow me to work part-time whilst concentrating primarily on research until I am finished. My research will be highly beneficial to them after I graduate, so it is in their interest that I make good progress. I have had some problems this term with Lockheed demanding more of my time on projects; whenever possible I leverage it by arranging projects to do double duty. As an example, last month I responded to a request for proposals from the Air Force with a proposal to fund the development of a larger scale C&A tool that would be an extension of my DPhil research. Should that proposal be accepted, it would provide needed funding for my research. I also got some experience writing grant proposals.

Other activities since my last report: the hoped-for opportunity to interview Dr Ian Levy of CESG turned out to be impossible for legal reasons. I organised a field trip to Bletchley Park by a group of people from the comlab to tour the codebreaking exhibits and Colossus. I submitted a poster to the ACSAC conference in Hawaii but it was rejected; I am looking for another conference to submit it to next. I was a reviewer on the programme committee for the DPhil Student Conference for the second time. I have been invited to give a paper at the Unified Cross Domain Management Office (UCDMO) conference in 2010. I am currently writing a paper for the journal Crosstalk and the methodology chapter for my dissertation; I intend to have both of these finished before the end of 2009. I gave two talks at Lockheed to a combined audience of 250 engineers.

Training attended:

I took the Requirements Engineering (REN) Software Engineering module at the recommendation of Dr Jirotko. It was unlike any other requirements training I have had before. I got some specific tools and techniques out of it that I can use in the two case studies I need for my research. The class was valuable and worthwhile.

I attended the DPhil Writing Workshop in the comlab and have given 2 talks at Lockheed since my last report. The talks were via a live webcast to an audience of software and information security engineers (approximately 250 people).

I attended two days of briefings at the Space and Naval Warfare Systems Centre in San Diego, California. I attended training on DO-178B/C.

I successfully passed the ISSEP certification exam on systems engineering, NIST SP 800-53, and DIACAP. There are 500 people worldwide who have this certification. I am helping run a weekly study group for the ISSEP examination at Lockheed.

Experience writing proposals for government research.

Training required:

I want to improve my time management and estimating skills. I want to get better at writing clearly and concisely and not letting a tendency towards perfectionism slow down the process. I admire skilled public speakers and want to learn how to do that; towards that end I have given several talks this term. I am very short of time and need to concentrate on research results and writing for the next 10 months, however.

Submitting the report now. Next I have to write my weekly activity report. Happy Thanksgiving.

References