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weekly activity report 142 (loughry)

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Attachments:

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This has been an extremely busy week. I had a meeting with the programme manager for the Radiant Mercury CDS, Mr Olav Kjono, in Denver on Monday. He is based in San Diego near the government sponsor (U.S. Navy SPAWARSYSCEN Pacific) but was in Colorado on a business trip, and I grabbed him. I went into the meeting well-organised with an agenda and a list of specific questions about RM's funding relationship through Lockheed Martin and the government sponsor. I wanted to ask how the costs of CT&E time and effort are allocated, and about the overall cost and budget of the programme. An impedance mismatch quickly became apparent in the specialised terminology of government contracting. I understand where the RM programme is in the systems engineering life-cycle, but not in the acquisition life-cycle, and that is important. We found it impossible to communicate without a glossary; the language of acquisitions is so idiosyncratic (example: 'the wrong colour money') that I could not get my questions across. I got this much: the reasons why the O&M sustainment phase is fee-for-service and not fully funded can only be explained in the context of the acquisition life cycle; specifically, where the RDT&E money that is used for beta testing comes from. Under the fee-for-service model, sites needing an RM system pay a combination cost of price + 'tax' for overhead in addition to a yearly support fee, in contrast to a fully funded programme such as an aircraft acquisition where the end-users receive a certain predetermined number of aircraft but pay no amount monetarily. The RM programme is not fully funded, even for the baseline.

The programme manager recommended that I study the acquisition life cycle training material at the Defence Acquisition University (dau.mil) in order to better understand the right questions to ask. I have requested access to the training and was also referred to some articles by an author in the Lockheed systems engineering organisation on the subject of 'affordability' (another overloaded term that has a specific, non-obvious meaning in the acquisition life cycle). Mr Kjono encouraged me to come back and talk to him again after I have learnt the language. [Editorial note: so this is what those people on the business side of the house do. From my experience, engineers are largely unaware of it. They know vaguely that a specialised language exists but rarely hear it, as it is considered a 'business ops' function. Engineers tend to be more aware of the Federal Acquisition Regulations (FAR) because of compliance training that engineers receive, but FAR is about controls, not acquisitions. What I discovered on Monday is that talking to the programme manager is impossible without the vocabulary.]

Going through the Basic training series, Fee-for-Service module, and O&M Support module at dau.mil is supposed to take 56 hours; the training materials are free. I have not begun it yet because I am working on the ACM workshop paper, due in a few days. On the subject of different accreditors measuring different levels of risk in a CDS, and hence making different judgements about the risk mitigation measures that they will insist must be put in place, the concept of 'moral hazard'

keeps coming up. Everett U. Crosby wrote about risk assessment in the context of fire insurance and fire protection measures in factories in the late 19th and early 20th century. It led to the formation of societies that were sponsored by insurance companies for the purpose of encouraging and requiring---later enforcing---risk mitigations that had been shown actuarially to reduce payout costs. What they found was that reducing the actual danger of fires sometimes led to a paradoxical increase in the number of fires, although the new fires were smaller. In this analogy, accreditors are the fire marshals, data owners are the insurance companies, and CDS installers are the factory owners. Some entities play more than one role, so I am still deciding whether this analogy holds any water. Another related reference is Akerlof (1970), on the 'market for lemons'. In that paper, he shows how parties extract information about what price to pay for commodities from other parties that have the information but do not want to give it up. They do it through tricks. In my thesis, I am trying to apply it to knowledge about the true level of risk in a CDS accreditation amongst the community of accreditors, who sometimes want to cooperate, sometimes do not, and sometimes want to cooperate but are constrained by security clearance rules.

Looking for more history on the CT&E and ST&E of cross-domain systems in the intelligence community, I found a new book by Richard J. Aldrich this week about GCHQ (London: Harper Press, 2010). With this book together with Bamford (2002), Richelson (2007) and possibly Bamford (2008) I hope to find a reason for the oft-cited difference in risk tolerance positions between US and UK accreditors. I have heard the philosophical difference expressed on different occasions by evaluators on both sides of the ocean, so anecdotal evidence suggests it is a real phenomenon. Other than by reading between the lines of their respective standards, though, if I cannot find a primary source for the policy differences I may be reduced to quoting the opinions of practitioners in the area. Fortunately, I have at least two good sources of such opinions: opinionated individuals who have been willing to give me their opinions on the record. Not as good as citable published sources in the literature, but once again I come up against the dearth of published sources (other than standards and policy documents) in the cross-domain accreditation field. To this end, I am continuing to angle for an invitation to attend the next meeting of the CDTAB in Washington, DC. The person I asked about it referred me to two other people and the current plan seems to be to make it a combined delegation to the CDTAB (Cross Domain Technical Architecture Board), DSAWG (Defence Security Accreditation Working Group), and the Unified Cross Domain Management Office (UCDMO) conference in early August. The programme manager is trying to get the PMO to provide funding. I may have to pay my own way.

I talked with Mingqiu Song this week by email more about security certification requirements by the US Department of Defence under DOD Instruction 8570.1, particularly the CISSP and what it covers. I offered to endorse her application if she wants to get the certification for the purpose of getting security managers to talk to her. We talked about what the examination covers, various study guides that are available, and changes that were introduced in the requirements around 2004 that made the certificate much more difficult to obtain.

I spent some time this week reading articles in the Times Higher Education about PhD education, supervision, and the time pressure imposed by the nominal three-year duration of a UK PhD as compared with nearer seven years elsewhere. I am thinking about it because of the need pretty soon to stop researching, drive a stake in the ground, and say 'I will write a dissertation about \$x\$.' All the stories about poor graduate students in those articles make me want to validate with Dr Martin that

he thinks I am generally still on the right track and not doing too many of those behaviours that annoy supervisors and delay finishing. I have a meeting with Dr Martin tomorrow and I will ask him about it.

Tasks (in priority order, most urgent priority first)

Immediately:

1. ACM workshop paper draft due 28th June. 2. Waiting for visit request to get into CDTAB. 3. Accreditor survey more new questions. List of email addresses for known accreditors. 4. Transfer list of accreditor meeting attendees and email addresses into a searchable text file. 5. Finalise list of email addresses for the other two surveys. 6. Finish methodology chapter (waiting on final survey questions). 7. Crosstalk journal paper.

To be done as soon as possible:

8. Still waiting on UK student visa application. 9. Update dissertation Table of Contents. 10. For Chapter 3 or 4, start writing the interpretation of the first case study results and second case study preliminary results. (This will be needed for both confirmation of status and for answering questions in France.) 11. Document the codes I used in a new appendix for de-anonymising of all study participants. It is a university requirement. 12. Begin writing progress report for confirmation of status. 13. Update the schedule. 14. Apply for confirmation of status.

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End of WAR 0142.

References