File 20110707.0835: Notes from meeting with Dr Martin, 0800 (1500 BST) today:

Dr Martin did not show up on Skype, so I called him by dialling 011 44 1865 283 605 (from the US) on the landline. He was unable to hear me because of a loud buzz on the line, but then Skype came up, and we switched to video. Video quality was rubbish; he told me my image kept freezing, but we were able to get through the call. I installed the latest Skype patches a few days ago, which seem to have improved Skype's detection of my camera, but possibly not connection quality.

We started off talking about the new computer security blog, *Trust Us*. Dr Martin thinks my idea for for cooperating radio devices will not work because all the little independent Chinese manufacturers will not follow the guidelines; I actually disagree with that because they all buy their PHY from the same few suppliers, and it's those chipmakers you need to sign up. The mobile phone and tablet and video game manufacturers will have to implement the polite cooperation protocol in their firmware, true—and that might be the real problem. Look at the man pages for ethernet cards in FreeBSD and Linux; they are full of complaints about corner-cutting NIC manufacturers who make life difficult for device driver writers by incompletely or incorrectly implementing standard interfaces and protocols, claimed features that do not work on the card, and firmware changes without different version numbers. From that example, maybe this kind of non–end-user-visible feature is unlikely to be successful. On the other hand, I thought Dr Martin's suggestion to catch non-compliant devices at airport security checkpoints was a good one.

Dr Martin encouraged me to write articles for the blog, not just comments. 'But not until you have written your chapters.' So, back to work.

I complained about the grounded theory methodology again. It's just not scientific, I raged. It should be called grounded theory hypothesis making-up method. I have found a way to live with it, and I will do it: by considering the grounded theory hypothesis to be something that can be tested later by an experiment, but it's not a theory at the end of the GTM. Perhaps I can write that in Chapter 2.

Anyway, I have three basic ideas in my thesis:

1. The tenure of project managers, empirically, seems to be more important than I thought. It was an identified factor in my case study №2 and it was specifically called out in the recommendations of the FiReControl auditor's report. Compare to the lessons learnt in [1].

2. The most visible consequence (and this should really be number 1, not number 2) is that the cost and time overruns in certification and accreditation of cross domain systems come from the repeated re-testing of the same test procedures (often written by the developer, being the best qualified to write test procedures, and having written them anyway, so it represents an enticing cost savings) by the same people (usually the same team of IV&V contractors, again appearing to be a cost savings because they are already trained on and familiar with the system) demanded by the mutually distrustful data owners at different and often non-comparable security levels, inherent to any cross-domain system installation.

3. The key to resolving this, it is claimed, is to establish controlled communication channels amongst accreditors at different security levels through which they can exchange information about assurance without violating the global security policy, which in the case of military and national security systems is Bell–LaPadula. I have a proposed method for implementing these channels, which I can and should talk about in future work.

So we talked about framing the thesis statement. I expressed concern about making unsupported assertions, and Dr Martin told me that's all right; you start off with an unsupported assertion, then support it. He thought that my problem was deeper, in framing the problem. I disagreed that framing the problem is my difficulty—I have a good frame, I just need to write it down clearly in a thesis statement in Chapter 2. He will be reading that in a few days, and will see.

Put the thesis statement up front.

I have twenty-seven weeks left before submission. That's enough time, but I must get through confirmation of status first.

Next meeting set for 1500 BST (0800 MDT) Friday, 15th July. I shall deliver Chapter 2 before Dr Martin's morning of the 14th, which is midnight my time, Wednesday 13th July, so he can read it before we talk on Friday. Dr Martin is working at home Thursday, and he intends to read my Chapter 2 that day.

Call ended 0833.

References

[1] Clark Weissman and Timothy E. Levin. Lessons learned from building a high-assurance crypto gateway. *IEEE Security & Privacy*, 9(1):31–39, Jan–Feb 2011.