File 20120329.0913: Notes from Skype call with Dr Fléchais this morning.

Dr Martin was tied up in interviews but I talked with Dr Fléchais on Skype shortly before 0900 this morning. As always, doing so lowered my stress level.

I admitted getting distracted, and that I did not initiate contact for the past few weeks. Dr Fléchais asked about my funding levels, and I reported that I'm OK for now. I just want to finish. My supervisors have been talking between themselves about possibly being able to negotiate another term of extension for me. They both think it would be in my best interest, loathe for me to be forced to write up before the science is done. Dr Fléchais asked for an estimate of exactly how long it will take me to wrap up coding of CS-1; I reported 2.5 weeks. For CS-2, I am less confident of the estimate, but reported 4 weeks. Six weeks of intensive work is impossible to complete before 20th April, but an extension would require agreement from DGS and my college; I warned that both parties have been insistant about 20th April being a completely immovable deadline. I agree with Dr Fléchais that I should not submit an incomplete analysis to the examiners. CONFIDENTIAL: I am in a bind between the University, in the person of Dr Ashbourn and DGS, insisting I must submit before 20th April, and not having my analysis complete enough for the examiners to evaluate. I do not want to suggest to Dr Ashbourn in any way that it was my idea to ask for another extension. My supervisors floated the idea, not me. (END CONFIDENTIAL)

Dr Fléchais asked about the HAZOP idea and how it related to my analysis. I explained that I'd read several books on the subject recently, after it occurred that HAZOP's systematic method for examining process and instrumentation diagrams, asking of every flow and valve, 'what would happen if this reactant were too high, too low, stopped, reversed, or the wrong material?' could be applied to a software development process, not just the chemical process plants it was originally intended for. The insight came from remembering events on the second case study—an unsuccessful Common Criteria evaluation, you may recall—as I was coding the events of the first case study, where the events went right. Process flow in the certification and accreditation realm is not dissimilar to a chemical plant; there are batch processes, and continuous reactions, and the flow of status updates from developers to project managers mimics in some ways a reactor. There are further parallels: scale-up is not necessarily linear in view of heat transfer and cube-square laws; some operations must be run near the explosive limit, and changing to a nonflammable solvent is analogous to selecting a programming language with type safety and bounds checking. A few safety principles, minimisation for example ('what you don't have can't leak'), seem to have no software development parallels; others, such as the crucial difference between instructions, which enable rule-based behaviour, and training, which leads to knowledge-based behaviour, are identical in applicability across fields.

The HAZOP idea has leaked into my mindset while coding case studies, and may form a useful part of the analysis even if I have not the time to completely develop the analogy with safety critical systems. At the very least I need two of my case studies, but Dr Fléchais and I have talked about possibly dropping the third. Two well-done analyses would still be a sufficient contribution. Dr Fléchais is mainly concerned because he has not seen my scientific analysis yet, and so cannot evaluate it. He asked me to send to him my analysis so far, just as messy as it is in progress, without cleaning it up first. I had anticipated that he might ask, so I had it ready. I will send it now along with these meeting minutes.

If they negotiate an extension, I will need to write a short status letter to the attention of DGS, etc., putting in writing that I have six weeks of analysis to finish.

CONFIDENTIAL: They both want me to finish. They think my analysis is good and my science is excellent. I can't submit an incomplete analysis to the examiners; it would be a waste of the examiners' time.

(Previous notes from last night before meeting with supervisors this morning:

- I got distracted, went off and read a couple or three books I shouldn't have. I am now inserting the contents of two papers I wrote into the dissertation and making them fit.
- It sucks being all the way out here, isolated. I can't see you.
- No humour, no apologies, just determination. Pure determination.

Those were my notes in preparation for today's phone call.)

Duration of call: 00:19:13.

References