File 20100520.1310: Phone call from Larry Brown (in the Huntsville airport). He wanted to talk about a direct port of core RM code to a MILS RTOS without using Linux as a guest OS in between. The result would be simpler, faster (probably), and give real-time response time guarantees, but would not incorporate Formal Methods.

I can't really do FM at this time, and this would be a middle ground between the existing 5.0 and a careful FM implementation. Larry already has a preliminary layout of modules amongst MILS partitions in mind (in his earlier white paper) and his new idea—today—is a variant of the MGIF but with communications APIs, to allow plugging in a new communications channel type, with a C++ or Java API, just like MGIF lets RM call external programmes. This would allow the MILS port (having MGCF?) to plug in ARINC-1553 or ARINC-429 just like a JAR file without having to recertify the software baseline. It could be handled at ST&E instead of CT&E. I think it's a good idea and Told Larry so. I will help cheerlead for it. I think the port to Linux is a necessary thing and we're going to have to do it for the next two or three years, but this MGCF and MILS direct port is important for the five-year timeframe. Otherwise TISS will find itself in 2014 with an obsolete product and nowhere to go.

References