Stewart Lee: OK, I’ve learned a lot here. I have learned that delegation means many things to many people, like all of these words we use, and I would hope that somebody will launch a piece of research that will try and encompass all of the meanings, or a closed set of the meanings that delegation has. We have been using delegation as a sort of portmanteau, we could well have used some of the meanings of reliance for instance where we said delegation, and so on. And very often we were talking about delegation without worrying about the side effects: who is liable once we delegate, what happens to the liability when we do the delegation.

And very often we were delegating to what amounts to automata, very simple things, something like a printer server, and I’m not at all sure we’ll ever get much beyond that. I delegate things to people but then I have a mutual trust relationship with the person I’m delegating. I don’t have that kind of mutual trust relationship with things inside the computer so I pick only very simple things to delegate to. I think if we want to involve ourselves with delegation, then we might worry about protocols that are intended to do delegation, rather than delegation bolted onto protocols that were really intended to do something else. I don’t know if there are any protocols that were inspired originally to do delegation and if there are, what should they do.

Finally I come back to something I said previously, that we have a system with a lot of stuff inside it and, because we all do research (in some context), we tend to concentrate on all this inside stuff because we get publications out of it and it’s a difficult problem and so on and so on, versus producing something that is sufficiently simple that the typical brain-damaged user can use it versus who pays for it and what are the tariffs that we will use for it and how do we deploy those tariffs. These are all deep interconnected arrangements which we have to begin to look at.

Roger Needham: It’s interesting for me to recall that when Abadi, and Lampson and Wobber and such people were putting together all this stuff on the subject of delegation they were in fact always talking about things like print servers. They were talking about rather down to earth questions like if I have got permission to access somebody’s file (because it’s Tuesday) how do I print it, what causes the print server to be able to have access to it. They were not thinking whatsoever about delegation in any human context at all, and I think they’ve been interpreted as saying something much beyond what they did say, in just the same way as Burrows Abadi and I were interpreted as having said something about belief when all we actually did was to give a name to a symbol so that we could pronounce it - laughter - when what the symbol was used for was defined by a set of rules. I have been accused of engaging in doxastic logic - laughter - I’m using very posh words, they sent me for the dictionary and I
don’t get sent for the dictionary very often and it actually turned out to mean
a logic concerned with opinions. And we might think that the CERT crew on
delegation and so forth have had their words used in an inappropriate context
in the same way.

Joan Feigenbaum: We’ve heard a lot of interesting stuff about credentials
and policies and trust and delegation and all these words that we haven’t nailed
down completely which actually is fine with me, I don’t think we need to have
some mathematically precise definitions for all these things, but I think it’s
really time to get started. This is unfortunately not the first workshop I have
been at over the last couple of years where I’ve heard a lot of really stimulating
and impressive talk about certificate mechanisms and trust and policies, and
I’m pretty impatient, I’d like this stuff to get used. Rafi asked me, what would constitute evidence that what I’ve been working on with trust management is
a good idea. I said, well I’d like to see this extrinsic, syntactic, application-
independent notion of proof-of-compliance used in multiple applications, that
conclude that it actually adds value or that it doesn’t. That somehow really
try to test this notion of an application-independent compliance technique. So
I want to generalise that and say, for all the interesting trust mechanisms and
trust policies and all the interesting stuff we’ve heard talked about during this
workshop, I’d really like to see some serious commercial use of this stuff. So that
in future we won’t be having such an a priori and abstract discussion about
what is delegation and what is trust and what is authorisation and what is it
like. I think some of this will become quite clear when the stuff is used and it
either works or it doesn’t work or there’s some grey area in between. If some
of this stuff is used and it obviously does not work then we probably will have
answered some of our questions. It’s really time to use some of this stuff in
some industrial-strength applications and I hope that happens before the next
Cambridge workshop.

William Harbison: And then we can reverse engineer the implementation
to get the specification and that will give us our definitions -laughter-.

Joan Feigenbaum: Yep, yep, I think that’s often what happens. Some of
the things we’re talking about are inherently wrong or inherently misguided, I
think that will become clear if there’s an industrial-strength trial of this stuff.

I think Dieter’s boundary between inside and outside is a really useful way
to look at trust and delegation, I think that it dovetails very nicely with what
Bill said much earlier, you have to have a trust policy if you want to authorise
something that you don’t understand. It only comes to the whole question of
certificated policies and credentials when you need to trust something that you
really don’t understand and you don’t have any direct authority over it but it
needs to get done. There’s a point when you don’t understand what you authorise
but you have to do it.

William Harbison: It was when I was talking about delegating trust and
effectively saying we’re passing off our own uncertainties to somebody else.

Joan Feigenbaum: Yes and that really has to be done, and it’s done all the
time in the world of commerce. But maybe in particular when you cross that