**Interview II Transcript:** Minutes 17 - 32

[Dr. Salamah Salamah]

One thing that I want to clear, uhm, I was hoping that you would be [sound distortion], when we say not time dependent, right, those are the type properties that we are explaining today. Not time dependent and when you see the example, we are saying here at the daytime of May twelve, that well that’s time right, but that’s not the time we are talking about. Time dependent, we are talking within the property itself. So the property holds most of most of the times, a certain number of times. That’s the time dependency that we are talking about. Of course we didn’t give any of these example today, cause we did it with an on time dependent. But it doesn’t mean there is no time associated with the scope, because the scope has to be built with some sort of a time stamp over reading. So don’t let that confuse you. Not time dependent doesn’t mean that the property will not have any time in the textual description of it. Is that clear? Ok. Alright.

[Dr. Gates]

Quick questions, so, we will open some questions. First questions, out of the, from what Dr. Salamah said, and then we will go back and ask questions off from your interview questions. So you have a question.

[Student]

From the start, what I will be using. Are we able to assume that the scientist will be using this program are gonna know these terms? Or at what level of collaborate..

[Dr. Salamah Salamah]

That’s a very good question. I think that is what Dr. Gates was talking about. That’s something that you probably need to investigate and see. The most important thing is for you to understand what this mean, right? And then try to interpret it and put it in a language for the scientist. Is more appropriate for the scientist.

[Dr. Gates]

So the scientists, as Dr. Pennington was saying last time, do not want to use these words. So when you study HCI, you’ll notice that you always have to look at the different levels of users. You have the novice you know. So you end up trying to develop this where you, someone doesn’t have a background, maybe other pople are thinking they are all expertise and maybe want to very easily say, oh this is an asset. And maybe that is, you won’t know that in the interview, you know, and the scientist. And you start developing prototypes and see how that works. That is a really good question.

[Student]

Just to add more stuff, for the responsive relations between multiples, Is that gonna be over two? Or is it only gonna be used in sensors?

[Dr. Salamah Salamah]

At the time its two. At the time its two. At this time is two.

[Dr. Gates]

So desing change. Let’s remember to put it as a principle. So we are sticking it too.

[Dr. Salamah Salamah]

And I’m gonna add to that point. If you notice this list of items that we have, which is not final by any mean, this is different from what you got, last two weeks or so. So, this, after you develop the system, this, oh, this set of panels may expand and change continuously, so it is not for the set of pairs to be.

[Student]

With response, should there be a time delay? Like allowed to be the change between both of them, or let’s say temperature this, or this should be immediate to the reading?

[Dr. Salamah Salamah]

It’s again, at this time, its immediate to the next reading. Right? But.

[Dr. Gates]

That’s a really good question. And we are expanding the patterns so we can, we are gonna be looking at the time. That’s something that’s gonna come next week. That you can say, within the next ten readings, but it’s a more complex one, so we’ll give you that.

[Dr. Salamah Salamah]

But if you are asking these questions that means that you are reading, yeah.

[Dr. Gates]

Any questions.

[Dr. Salamah Salamah]

So you can be quizzed on pattern systems?

[Dr. Gates]

This is a harder concept than we realized. Trust me, because we are working on it. And we keep finding problems with things that we need to consider. What if this, there are a lot of what ifs. And you are gonna be stating to ask. This is what requirements elicitation is about. There’s a lot of assumptions. You know we talked about that. You are developing software. You are making assumptions that you understand it. And so you are gonna do properties. There are assumptions that you make when you define properties. So you have a sensor her, and you have a sensor here. Right? Dr. Salamah already talk about some of the assumptions that is that are calibrated. As we are looking at it, we are looking at the same one. This one and this one, they are recording at the same time, or time interval. That is an assumption. We should be thinking about how do you capture assumptions. How do you, the user. To articulate assumptions. Right, because this is about exactness. So I haven’t really heard any one asked about the readings themselves. Ok, I’m gonna open it up for questions. I’m gonna start with team one. Team one, what questions on your interview do you want to ask that hasn’t been answered. [13 seconds pause. No response from Team one] Ok I’m gonna move to team two. I’ll come back to team one.

[Student]

Uhm, how much accuracy does you need to be in the system in comparing the collective data properties to the properties created before the system.

[Dr. Gates]

What accuracy, right?

[Student]

Like a specific numeric. Is there a point?

[Dr. Gates]

So that is, an excellent question. That should be answered by Dr. Pennington, or any scientist. I think that from manipulation point of view you need to know how you store information. I think the question becomes also, one that the scientist should be thinking about when arriving to properties. And knowing how to set up your instrumentation. So the instrumentation is, uhm , the instrumentation is done through something called the data logger, and the data logger uh, will store that information and you can as some one out in the field, you can be saying: I want to collect in an hour, or in a hour minute. What about that last time, do you make it seconds? Do you make it go even microseconds? But that is a decision made by the scientist for the data they are collecting. So I would imagine that the system will have to be, that this will be left to the scientists. When you are setting up the properties. I think of some of the examples that you can see.

[Dr Salamah Salamah]

I think at the time.

[Dr. Gates]

The first one. What has date and time. It has hours and minutes.

[Dr. Salamah Salamah]

And seconds.

[Dr. Gates]

So if you look at the handout, that one is going to be minutes and seconds. And then they talk about the calibration. You know, where they calibrate actually. Check to see if they are in sequence. The sequences being. As you know, this is where it is coming from. If you don’t calibrate it properly in seconds, and the seconds are not quite accurate, you get an accumulation of errors then pretty soon you are way off. So I would like to talk about the story, I might have give you this already. We were working in a system where we were storing different data, this was with the army, so we they were storing at different levels of accuracy. So when a message will go from the army to the air force, and then the air force send it to the marines, then back to the army. Same reading. It will get truncated and it will get back to the member who made the decision and then we will go back until we will actually see the arrow pointing in the simulator flying and it will drop, we didn’t know why. And it was a calibration precision error. What I will suggest is that this is what you are gonna do. You are gonna be writing down the answers as you heard it. And then you are gonna be validating. This is where the V&V comes into place. You are gonna be validating with the scientists and Dr. Salamah. You are gona be reading and interpret this accurately. Because once you start running your requirements, we have to trace them back to what we heard. So every time you say, the system shall do this and then you pass back to something in the interview of memo or correspondence. So, capturing this accurately is really important. And that’s why we are documenting everything. So that was a really good question. That that’s one that its gonna go back and validated with the scientist. Ok, team three.

[Student]

We talked about the time dependent, is there anything we should know about the time dependant data?

[Dr. Gates]

We are gonna cover time dependant. It’s a little more complicated. It’s so, what we are trying to do right now, is we are trying to look at ways to simplify it. So we are gonna do another pass with Dr. Pennington, and then we will get that on Thursday. So we all hear about time dependants.

[Dr. Salamah Salamah]

We’ll give you examples. But again with the time, it mostly means repetitions. A certain number of times. Or to pass after a certain number of figures, so that is the time we are talking about.

[Dr. Gates]

And duration. How long to make it last.

[Dr. Salahma]

Yes.

[Student]

A second question, just for clarity. Doing data maps and data existence, in the formal definition you have both saying the Boolean statement it never goes over scopes as hold. Is it never suppose to be never hold for both of them?

[Dr. Salamah Salamah]

That case is a mistery.

[Dr. Gates]

Very good question.

[Dr. Salamah Salamah]

Acces is never hold.

[Student]

Yes, because I was reading and I was thinking that was a little off to calibrate. Thank you.

[Dr. Gates]

Yeah, and when we start looking at multiple scopes, somebody asked that question, when we have more than one scope, you know it goes back to being very careful, because we have to say, how are we getting that, it could be and AND or an OR. Well is not holding so we are saying it doesn’t hold on temperatures over this scope. When we talk about two scopes.

[Dr. Salamah Salamah]

That would be more to relations.

[Dr. Gates]

But I might not have heard that in your questions. I mean when you have two different sensors, the scope, I mean we assume that they are in sync.

[Student]

So they are parallel scopes.

[Dr. Gates]

Yes.

[Dr. Salamah Salamah]

And the Boolean statement might have one single statement. It’s a combined statement. The first part might be applicable to the first scope. The second part might be applicable to the.

[Dr. Gates]

In a more complicated. So maybe the case. So yes that is a really good question.

[Dr. Salamah Salamah]

But yes there is a type here. I’m not sure for which. For the existence. The formal definition should be: the Boolean statement should hold at some reading within.

[Dr. Gates]

We’ll correct it and post it on piazza. Who is team one. Ok. Well questions.

[Student]

For these sensors, is it just one gigantic reading for one to the next, or is it one discrete intervals that it reads.

[Dr. Gates]

Scientists will set it up. So a scientist can say: “We are gonna collect data on the hour, we are gonna collect it continuously”.