**Dr. Gates ..continued**

There’s one about colors and stuff like that, I think that’s getting into design. Colors are [inaudible].

**Dr. Pennington**

Colors are important. You know if I’m looking at precipitation I wanted to be blue you don’t wanted to be red or black. Color is always important.

**Dr Gates**

Do you want to be able to download any of the graphs?

**Dr. Pennington**

Yeah, abso lutely.

**Dr. Gates**

And you want to display the graphs in real time. Are they in real time?

**Dr. Pennington**

Yeah, I want to be able to look at the graphs in real time. And if I like something I want to be able to downloaded it and print it out. [inaudible] application.

**Dr. Gates**

What operating system you would like to run on.

**Dr. Pennington**

All of them.

**Dr. Gates**

Mobile? All of them.

**Dr. Pennington**

You know scientists are like everybody else. We have our favorite tools and we don’t want to switch just to use a particular piece of software.

**Dr. Gates**

Do you know of other systems that work similarly to this?

**Dr. Pennington**

Nope not like this.

**Dr. Gates**

[Inaudible] entrepreneurship.

**Dr. Pennington**

Entrepreneurship opportunities.

**Dr. Gates**

Okay, good. Other topics that have been, that you think are important that we haven’t discussed.

**Dr. Pennington**

No, not that I know of.

**Dr. Gates**

I’ll open it up for other questions.

**Student**

So are we gonna show you, display anomalies compare to the data properties. I guess comparing the data properties to the actual data and to see if there’s a spike or anything or and the once we have those anomalies the scientist determine if those anomalies are errors?

**Dr. Pennington**

Absolutely, sure. [Pause] I guess it will be nice when you built this storage, however you store the anomaly information. It might be nice to include in that a way for the scientists to flag it and once they look at it and decide whether it was an error or whether it was a not an error we have to flag it as what it was. I think that will be an important information to collect.

**Student**

Can you kind of explain again what a foot print is?

**Dr. Pennington**

Let me draw a picture, that’s probably the easiest thing. [Inaudible]. So I have some sort of instrument here that’s collecting information and so if it’s located, maybe its located right here on this tower. So here’s the ground. Now the instrument itself, let’s say that it has a special footprint, we called this we’ll say this is one (1) kilometer. I don’t know what it is, maybe it’s [inaudible]. The metadata is going to tell you it’s a got a one (1) kilometer resolution. But maybe what you’re measuring is a; so base on this what is, okay this instrument is collecting information around this area right here base on what the metadata says.

**Dr. Gates**

Well what if the wind is comes; what if there is a strong wind coming this way. Do all of this particles that you’re measuring are being blown.

**Dr. Pennington**

So essentially what ends up happing is you end up collecting information here. Does that make sense? Does that help?

**Student**

Not about this but skipping back to when you said the integration being able to share and all that, how far do you want to be as far as social like do you want have some kind of facebook, twitter or all that crazy chat or you’re looking at do it all in house internet browser and keep all the information inside there [inaudible].

**Dr. Pennington**

Well, it’s an interesting question. Most scientists detest facebook and twitter and those sorts of things. Primarily because they don’t see a point to it. They don’t want to chit chat with each other about…they don’t want to know what they’re doing right now.

**Dr. Gates**

They got their own problems to deal with.

**Dr. Pennington**

They don’t care what you’re doing right now. Unless it’s in this context of the work there’re trying to do.

So having said that if you think of a use case where it will be important for them to have some sort of social networking then it’s important to include it. If it’s just to so that I can be regularly informed of what you’re eating I don’t want it. So if you were going to put something like that in, I think it will be important to scope it in a way that it’s directly tied to what the work you’re trying to get done.

**Student**

[Inaudible] The facebook and all that sort of stuff it’s just idea for us how you want it be within that system. As I’m saying you want to have it set so the scientist when they share it to each other all of them see it and they have that kind of hang out all that discussion within that progress itself instead of trying to bring in facebook and all that.

**Dr. Gates**

I wouldn’t put in facebook, but if you want it..

**Dr. Pennington**

But that kind of thing like if I’m in the field and something happens I might want to notify other people in my research group what’s going on. And I might want have some discussion about it. Yeah.

**Student**

Does the system have some way to tell, what how like if the weather sort of adjusted the usual boundaries of the sensor.

**Dr. Pennington**

The reason this will be kind of important is when I’m designing my properties. I might want to say if the wind is under 10 miles/km, I do miles per hour. 10 miles per hour then I expect something this other data to be here in this range. On the other hand if the wind is you know over 30 miles an hour then I’m like I expect something different. So it’s all about expect settings, articulating what your expectations are.

**Student**

There’re predefined?

**Dr. Pennington**

We have a predefine way. Like I said in most cases we don’t really know what to expect so part of this is going to be using this process to help us understand how things happen.

**Student**

How would you want the system or users to communicate through our system for example if it detects anomaly do you want to per say just throw alerts up on the system send out emails, send out text messages.

**Dr. Pennington**

It’s go back to what I said about sort of the airline thing, I think you need to provide all those possibilities and let each user specify how they want to be contacted and when. And in what way.

**Student**

Would you want any of this preliminary analysis available to the general public in any sort of way or is this all confine to just within scientists?

**Dr. Pennington**

Well, so there’s an interesting move towards what they calling citizen scientists. Where you’re trying to involved people who are non-scientist in your daily collection efforts. And I can imagine that somewhere down the road somebody is gonna come up with some clever way to involve other people in this process, so it could be that it would end up being in the public. I might…so here is a scenario, maybe I set up sensors down in the plaza in downtown El Paso and I’m measuring something and there is some sort of anomaly and I want to engage whoever’s in the vicinity to go down there and check it out for me.

**Dr. Gates**

Sounds like a proposal.

**Dr. Pennington**

A proposal.. [inaudible] Citizen sciences are a really hot topic, because there’s uh, you know data collection takes a lot of time and effort. And if you can get people who are interested in whatever you’re studying to help you with it.

**Dr. Gates**

Good question. Will bring you in. Any other question? So let’s thank our speaker for [inaudible]. I want to thank everyone…

**Student**

I just have one last question, I know it said in the public [inaudible] that will be provided some source code but as far as the interface I don’ know it was mentioned or not and I was wondering if we gonna be able to see it or have someone show us [inaudible].

**Dr. Pennington**

I think that’s…

**Dr. Gates**

So I been thinking about that. In what I’m worried about is what Dr. Pennington talked about earlier is that she really wants it to be science centric. So I was going to show you the interface before but I’m worried that it will take away the creativity. So what I’m gonna tried to do is work with Dr. Salano to provide the information in a way, in a more general way that will help you come up with a new interface environment cause what they need in Tucson. So that’s gonna be a big part of the analysis that we do.

**Dr. Pennington**

I want to thank everyone.