

# **Project:Possibility SunSPOT Project**

## **Meeting Agenda**

6:15 P.M. – 8:15 P.M. March 11<sup>th</sup>, 2008

### **Attendees:**

Irina Abramova  
Nikhilesh Kruthiventi  
Sean Bachelder  
Praveen Kansara  
David Woollard  
Winnie Yip

### **Minutes From Last Meeting:**

Dave discussed the comments that the management made about the Concept Document (Status Update). The main comments that we need to address in the PDR are hardware issues and definition/constraint of gestures.

Dave suggested a schedule for the next week leading to PDR. He suggested that the prototype team work on the hardware issues that are described in further detail in the management plan and address the questions posed RE hardware in the reviews of the Status Update. These efforts should result in a prototype status document that we can reference at PDR.

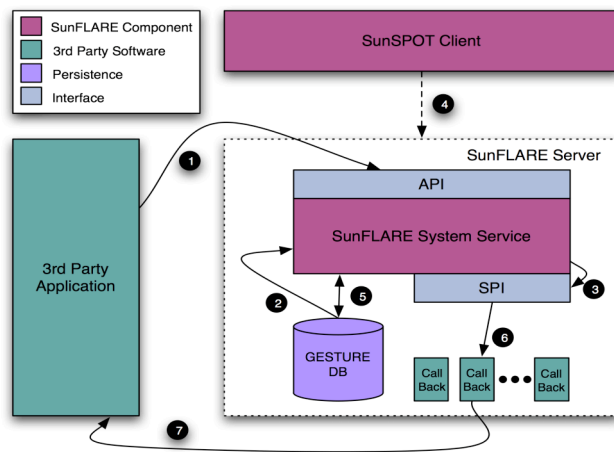
Dave suggested that the team members not on the prototype team be responsible for generating slides for the design section of the PDR. These slides should be generated by the end of the weekend. Next Tuesday, we will do a dry run of the presentation. While the presenter lineup has not been established, it makes a certain amount of sense that the slide contributors talk to their slides.

The group discussed the definition of a gesture and the methodology for specifying gestures. Dave proposed the following elements be combined in order to formulate gestures: lines, anchor points, anchor points with rotations, and anchor points with shaking. We decided that it did not make sense to allow more than two or three of these elements to be combining into gestures or the resulting gesture would be too hard to recreate.

We decided that there are two options for the user to specify gestures: assistive, based on the allowable gestures, and via a mouse. Depending on the abilities of the user, it is possible that an “assistance” that is capable of using a mouse be able to draw out the gestures that the user will make and associate the gesture with an action. For PDR, we will explore both of these options and create mockups and event sequences for both options. We might only be able to develop one option during the project, but we will design for both.

The team also discussed the need for the user to attempt the gesture multiple times before it is successfully stored as a gesture. After a gesture is describe via one of the two methods discussed above, the user will need to attempt the gesture and then the SunFLARE system service will need to figure out a scoring method that will: determine if the user can consistently repeat the gesture, determine that the gesture is identifiable via the gesture ID algorithm, and determine that is sufficiently different from other previously programmed gestures.

Dave discussed the Service Provider Interface design pattern that he proposed to use for the architecture of the plug-in components. Dave’s drawing is reproduced below:



Dave proposed that Irina work to understand the SPI pattern and generate slides for each of the applications that we will develop in order to illustrate the callback interface. The three applications that we proposed to develop are: a virtual keyboard, a game (adaptation of one of the SS12 games), and a physical therapy program. Additionally, we will develop the API of the call-back to include both a method that returns a description of the action the callback implements and the a method to execute the action.

Nikhilesh gave a status update and discussed his research into the Hibernate framework vs. XML storage. Dave looked over the slides that Nikhilesh produced and decided to post them as an internal document of record on the wiki. Dave asked Nikhilesh to produce a side-by-side comparison on a single slide for the PDR.

**Open Action Items:**

Num	Description	Assignee
2	Become familiar with the software packages described in the Development Software Deployment Document	All
3	Install SunSPOTs Hardware	All

- |   |                             |          |
|---|-----------------------------|----------|
| 8 | Finish infrastructure setup | Woollard |
| 9 | Get Gamepipe remote code    | Praveen  |

**Agenda:**

- |                          |                |
|--------------------------|----------------|
| 1. Review PDR Materials  | (Woollard)     |
| 2. Assign speaking roles | (Woollard)     |
| 3. PDR Run-through       | (Woollard/All) |

**Action Items Closed In This Meeting:**

Num	Description	Assignee
11	Development of trade study slide	Nikhilesh
12	Development of mockups & sequence slides	Sean
13	Development of 3 <sup>rd</sup> party application slides w/ call-back specs	Irina
14	Answer hardware issues and write up prototype status update	Prototype team
15	Compile draft of PDR	Woollard

**Action Items Resulting From This Meeting:**

Num	Description	Assignee
16	Practice PDR Sections	All

**Meeting Minutes:**

The team went through the PDR draft. Dave suggested talking points for each slide and everyone reviewed the sections they had contributed. We decided that there was no additional material that we should add, though everyone was concerned with the current length.

Dave suggested that we plan to present approximately 20 slides in depth. In order to cut down on the number of slides presented, the team went through the design section and annotated several slides with “documentation only.” Dave went over the rationale for documentation only slides: The slides as printed would still be complete for reviewers, but we would be able to make the time requirements for our presentation all the same.

Finally, Dave suggested a presentation breakdown. Praveen volunteered to take a bigger role in CDR, so he will not present at PDR. The rest of the slides broke down like this:

- Slide 1-9: Winnie
- Slide 10-15: Sean
- Slide 16-18: Nikhilesh
- Slide 19-20: Dave

Slides 21-24: Irina  
Slides 25-37: Dave

We decided that we would practice our individual parts this evening and meet again at 6:15 pm tomorrow in Mudd Hall to do a run through prior to the general meeting.