Weekly Status Reports

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **02/04/2010**

Overview

Jan. 29th I met with Dave Ausband re: requirements for 30 minutes
Jan. 31st I wrote up meeting notes and scanned in requirements document that Dave provided as well. 30 min.
Feb. 1st Met with Dave again to make sure the requirements document was good to go, then sent the documents to Corri for a formal write-up. 30 min.

Requirements:

As of 2/3/2010, these are the distilled requirements from the meeting notes with Dave Ausband. The first points are critical things that the system must accomplish, while the second list are things that we should keep in mind while moving on in the development process.

The box must:

- Save recordings as .WAV
- Broadcast .mp3 or .WAV
  - Speakers should broadcast > than 1 direction
  - 90-100 dB within 3-5 ft
- Be able to record after broadcast for user specified time
- Be able to broadcast multiple times a day (currently morning and night) as input by user
- Hibernate after broadcast/record session is over until next scheduled broadcast/record

Ideally the box will:

- Be able to stay in the field for a MINIMUM of a week
- Keep within $2500 budget per unit, or $10,000 to build 4 more
- Maximize portability for easier fieldwork

--Corri.olson 00:08, 4 February 2010 (UTC)

Products

Feb. 2nd Explained the customer's requirements in class, provided feedback during UI design process.
Feb. 4th More UI design in class. Compared 2 UI designs and chose best features from each:

Features:

- Upload any .WAV or .MP3 format for playback
- Record Files on .WAV format
- Create/Edit/Delete Events in Scheduler

- Traverse the Calendar to create Events on Specific Dates
- Create a Tree of Categories and populate the tree with different audio files for easy organization
- Allow playback only and/or record only or both playback/record

Schedule

On schedule for this week.

Plan

Corri and I are meeting with Dave Ausband again 02/05/10 to go over the UI to make sure it meets the requirements.

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **02/11/2010**

Overview

Feb. 5th Corri and I met with Dave Ausband with the prototype UI. Dave approved the UI, as they met all the requirements, with some minor changes: Dave would like to see copy/paste functionality with the specific day's/week's schedule. 30 min

Products

Feb. 8th Designing UI in class. Discussed changes that Dave requested: copy/paste functionality. Everything else was up to specification.

To be added:

- Copy/Paste functionality on Scheduler UI

Schedule

On schedule for this week.

Plan

I am meeting with Dave Ausband on 02-17-10 to discuss the changes made and make sure they meet the requirements.

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **02/18/2010**

Overview

Feb. 17th I met with Dave Ausband to discuss the copy/paste functionality changes and make sure they were up to specification. Dave agreed to copy/paste functionality change. Below is an outline of the notes we made in class on 02/16/10 to discuss with Dave:

What do you do when you bring laptop out there?
-Details on pushing/pulling data
-What do you like/dislike?
Explain constraints
-Shutdown for mic/speaker
-Do you like that?
-Will that be a problem?
Won't be able to make anything but minor changes
-If you see anything major that needs changed, speak now

Showed UI to user

Requirements:

-Do all audio files have similar audio volume?
-Need all audio files normalized before they are put on the box.

Meeting notes for the Feb. 17th meeting, formally written-up by Corri in **Meeting Notes 2-17.docx**, here is an overview:

Currently using USB drive to upload and download config files (emailed to confirm this)

- Likes:
  - Don't have to carry laptop into the field
  - Easy to use
- Dislikes:
  - Not worried about losing files in the field
  - No way to troubleshoot if the pull is automatic
  - Possible data corruption
  - If no computer is brought, you could encounter problems

Doesn't matter if we need to shut down the box to use a new microphone or speaker. Speaker volume is constrained by current hardware at 35-70db, whereas the requirements are >90db.

30 min

Products

Feb. 18th:
Mic/Speaker setup
- decided on "can you hear me?" method

Talked about Feb. 17th meeting notes
- Requirements:
  - Dave would like the ease of a simple USB upload/download
    - Discussed Likes/Dislikes of current system (see above)

XML problem
- no native library in Ubuntu
- tinyxml

-Can use USB key to remove audio files
-Talked about testing interface and XML files

New Functionality:
- Copy/Paste Events from a day(s) to another set of equal day(s)
- Upload audio files from categorized tree view

Schedule

On schedule for this week.

Plan

- Continue communication with customer as need arises

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **02/25/2010**

Overview

Feb. 18th:

Emailed Dave Ausband regarding current process with data retrieval/upload

- He informed us that the current process is bringing a USB key out to upload/download audio files/schedule
- He is okay with having to bring out laptop if need be, but would prefer some USB key functionality
    - Not a requirement to have USB key as of yet

Products

Feb. 23rd:

Box wake-up time

-2 min

Status Updates

-Testers
-Requirements
-Hardware
-Software

Drew Diagram to figure out missing pieces:

Have (in order):

-Scheduler UI
-Zip folder
    -Contains XML and Sound files
-Zip is in USB key
-**When plugged in, runs script (Thomas)**
    -Box on
    -Check USB
        -If in: Get schedule/unzip
        -Signal
    -StartScheduler
-**Internal Scheduler Application running as a daemon**
    -Decompression (Dayton)
    -XML Parser(Gene)
        -Parse to discover next event
        -Set event object
            -Current
            -Next
        -If start time < 5 mins,
            -Delay until start time of current event
            -"Do" Event (play/record)
        -Else
            -Set wake event
            -Sleep

-Talked about killing daemon process
    -Pros/cons
-Final Decision:
    -Check interval
        -If high interval,
            -Power down
        -If low interval,
            -suspend to RAM
- **New Requirements:**
    -If light is on, box is on
        -If on, wait til it powers down first
    -If light is off, box is off
        -Once light is off, safe to plug in USB key, then power back on
        -Once signal goes off, remove USB key
    WARNING: DO NOT LEAVE USB KEY IN AFTER SIGNAL!

Schedule

On schedule for this week.

Plan

- Continue communication with customer as need arises
- Write User Manual Documentation

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **03/04/2010**

Overview

Feb. 26th:

- **Met with Corri Olson (other requirements team member) to discuss and plan the User Manual.**
    - Wrote up User Manual outline with some pointers from other well-tuned user manuals and a link we found on good user manual writing.

Mar. 2nd:

- **Group meeting:**
- Budget for printing "dead tree" (paper) user manual
- Went over user manual outline (req and design)
- **Joel spoke with Joe Fangui**
    - Wants working product for Dave Ausband
    - If we could do this from scratch:
        - What hardware would we need
        - How to do this with current team
            - Jesse Skrivseth will attempt this
    - Give him tech spec and price
    - Simple arm processors or android mobile device/embedded devices
- **Went over testing cases and defects**
    - Found a few minor errors in the GUI:
        - If you hit Repeat without hitting Copy, causes error
        - Can cut/paste invalid data into play/record field
- **Went over the internal system:**
    - XML Parser problems
        - Gene Stipe put on Subversion for troubleshooting
    - **Completed Thus Far:**
        - Logger
        - Play/Record
        - **Structure for main file:**
            - Need to define interfaces
            - Need confirmation on design
- **Went over basic structure for main file driver**
    - See "Helpful Links"
- **Requirements:**
    - Where archive files are found
- **Went over scripts**
    - **Where to put root folder location when installing program**
        - Opt folder is a good spot, maybe
        - Thomas Osborne will email us when he finds a good spot to put root folder
        - Need everyone to know where the folder location is
    - Keep schedule folder and sound folder in separate areas
- **Hardware:**
    - Working on USB mounting/unmounting
- **GUI:**
    - Prevent play/record overlap

- **Schedule:**
    - Software on schedule/ahead of schedule
    - Hardware issues taking time

Helpful Links:
http://www.asktog.com/columns/017ManualWriting.html
http://wiki.cs442.info/index.php?title=Main_Driver_Program

Products

- **New Requirements:**
    - Make sure user knows where Archived Files are located for manually downloading recorded audio files data.

Schedule

On schedule for this week. **No meeting 03/04/10**

Plan

- Continue communication with customer as need arises
- Continue writing **User Manual Documentation**
- Get pictures of equipment and use of peripherals
- Get screenshots of **Scheduler GUI** and specific steps within GUI.

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **03/11/2010**

Overview

Mar. 9th:

- Went over User Manual
- Have GUI Screenshots
- Have photographs of box
- **Need the following:**
- From Thomas:
- Hardware specifications
- Safety guide
- From Testers:
- Troubleshooting guide

- Went over testing

- Went over software
- Parser done
- Event handler done
- Stress tested event handler
- Went over main file overview

- Went over hardware script
- Set wake alarm script almost done, not copying files correctly from USB mount
- Should be done by Thursday, March 11th

- Dayton will put together the pieces
- Need to put all software pieces into Subversion

- Once Thomas is done with box on Thursday, he will hand over to testers so we can begin initial testing

- Need to replicate box 3 more times (4 total)
- Create image file of original disk and push onto other boxes since all hardware is the same

- Need "Success" and "Failure" sound files
- Need to get "Wolf howls" from Dave Ausband

- Need to find out what area this product will be typically be used in
- Is mobile network availability an issue?

Mar. 11th:

Gene: Parsing - Done.
Dayton: Synching Subversion
Still need: Power on/off script - Done
Set Wake Alarm - Done.
Still working on: USB script
Testers: Need to get ahold of hardware and figure out how to test it.

Joel got an email from a Yellowstone wildlife biologist who wants to add video to the box to do more research.
- Is this possible?
- Have enough USB ports
- Power issues?
- When to turn on?
- Motion sensor?
- Night Vision?

Requirements: Walk through entire process with Dave to make sure we all know how to run scheduler and upload onto box and download audio from box:

1. Open Scheduler GUI
2. Create category (categories)
3. Add audio file(s)
4. Create event
   a. play and record
   b. just play
   c. just record
6. optional: copy/repeat similar events to other dates
7. save schedule
8. export schedule to USB
9. attach peripherals
10. turn on box
11. upload schedule from USB to box.
    a. wait for success/failure audio file sound
12. enjoy

Warning: Do not manually unzip Schedule.zip!

Products

XML Parser: Done
Scheduler GUI: In testing
On wake alarm scripts: Done

Schedule

Ahead of schedule

Plan

- Continue communication with customer as need arises
- Continue writing **User Manual Documentation**
- Get more screenshots of **Scheduler GUI** and specific steps within GUI.
- Piece together **GUI screenshots** and **photographs** of **hardware**
- Read **example User Manuals** from Dr. Joel Henry

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **03/18/2010**

Overview

Mar. 16th:

Requirements:

- **Went over software process steps:**
  1. Open Scheduler
  2. Create category (categories)
  3. Add audio file(s)
  4. Create event
     a. play and record
     b. just play
     c. just record
  6. optional: copy/repeat similar events to other dates
  7. optional: save schedule
  8. export schedule to USB
     a. export schedule.zip to desktop
     b. physically move schedule.zip to usb (root folder)
  9. attach peripherals (make sure box is off)
  10. attach usb to box
  11. turn on box
  12. wait for success/failure audio file sound (uploaded from usb automatically)
     a. recorded audio files from box will download to USB key
  13. remove USB key after success audio sound
  14. enjoy

Integration:

- Wake up/Sleep Mode ready for testing

Hardware:

- Scripts on box ready for testers
- Complete USB mount/unmount scripts

Testers:

- Scheduler
- Test Event Firing from scheduler
- Hardware
- Test wake/sleep software on box

Proposal:

- Jesse work on proposal
- High price point
- Low price point

Products

Wake up/Sleep Mode: Done

Scheduler GUI: In testing

Schedule

Nearly finished with initial development.

Plan

- Meet with Dave Monday March 22nd to review step-by-step process by which this software is utilized.
- Continue writing User Manual

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **03/25/2010**

Overview

Mar. 22nd:
Met with customer to show him the steps to creating a schedule and putting it on the box. The final version of the process:

1. Open Scheduler
2. Create category (categories)
3. Add audio file(s)
4. Create event
   a. play and record
   b. just play
   c. just record
6. optional: copy/repeat similar events to other dates
7. optional: save schedule
8. export schedule to USB
   a. export schedule.zip to desktop
   b. physically move schedule.zip to usb (root folder)
9. attach peripherals (make sure box is off)
10. attach usb to box
11. turn on box
12. wait for success/failure audio file sound (uploaded from usb automatically)
    a. recorded audio files from box will download to USB key
13. remove USB key after success audio sound
14. enjoy

Mar. 23rd:
Testers: Found some errors. Need to test the latest release before break. Should be finished before break or 1-2 days over the weekend.
Developers: Integration complete, functionality in place, needs testing now. There was no deviation from the original design.
Hardware: Almost done with USB mounting scripts, init_d is correct.

Current Issues: Having issue with daylight savings time and Unix.
Possible Solution: Use GMT.

Products

Hardware/software in testing phase.

Schedule

Ahead of schedule, in testing phase

Plan

- Continue writing User Manual

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **04/15/2010**

Overview

Apr. 6th:
Hardware: Uploading USB scripts tonight, need to grab other 2 boxes to upload software, 1 box has drive failure
Testing: 1 box in testing, testing play/record, usb script once uploaded
Requirements: Need to get hard drive replacement from customer. 80gb 2.5 inch ide interface

Summary of where we are on the boxes:
- need new drive for one
- test until stable
- configure other 3
- install for scheduler
- documentation
    - user manual

Apr. 13th:
Testers: Tested box, having issues with wake up script, having issues with microphone record levels
Hardware: Testing box hard drive failed, having some misc. hardware issues, usb bash scripts, bash scripts for installation directories and init_d

directories:
make:
/opt/hoot/source
/opt/hoot/var/recordings
/opt/hoot/var/play
/opt/hoot/var/xml
/opt/hoot/var/logs
/opt/hoot/backup

init_d:
create links to ./hoot
run level 3

Software: Fixing wake up bug, writing bash script

Need from Dave:

2 more boxes w/ power adapter
any more microphones?
new hard drive

Products

Hardware/software in testing phase.

Schedule

In testing phase

Plan

- Continue writing User Manual

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **04/22/2010**

Overview

Apr. 20th:

Testers: Can't get microphone to pick up sound, can't get software to compile on box

Software: Need to create executables

Hardware: Scripts configure everything but grub

Requirements: Can only play .WAV audio files (need to manually convert .WAV files out of .MP3s)

Future: Need linux-compatible motion detectors

Status at this point:

Need software on box to test

- Put software on box through shell
- Test software

Status by Thursday:

- Have an install on the box (thumb drive installation)
- Test boxes

Status by next week:

- Complete configuration of all boxes
- Test all boxes

Status by May 6th:

- 4 configured working boxes

Products

Hardware/software in testing phase.

Schedule

In testing phase

Plan

- Continue writing User Manual

Weekly Status Report

Name **Blair Gemmer** Week Ending Thursday **04/30/2010**

Overview

Apr. 27th :

Testers: Everything working, except box doesn't turn on automatically with USB scripts

Need to test:

- < 10 minutes between events

- > 10 minutes between events

Hardware: Has working USB scripts, code was commented out accidentally, trouble with installation script

Software: Uninstall script location, keeping it in same directory as installation script

Apr. 29th:
Hardware: USB Transfer working, but needs better workaround

Overview:
Met to fix installation, USB mounting, and startup issues.

Outline of Presentation:

- Requirements
    - Limitations
- Scheduler
    - Gui
    - Schedule.zip
- init.d script
- Hootd
- Testing
- Demo Current
- Future
- Relation to Schedule
- OS
- Hardware

Products

Hardware/software in testing phase.

Schedule

In testing phase

Plan

- Finish designing User Manual