SUNDIAL

Sundial Usability Test Report

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Introduction

Sundial serves as a cost-effective solution for rostering staff and capturing time & attendance for small businesses.

I conducted three onsite usability tests using a prototype version of Sundial on a mobile device and laptop. The prototype was presented on a mobile device using Figma Mirror and on a laptop using Principle. Some of the participant's face and reactions were captured by camera, while comments were written down in a note pad. The laptop sessions using Principle captured all the participant's navigation choices and task completions.

Executive Summary

I conducted three onsite usability tests each with two separate locations on August 15th and 16th, 2018. The purpose of the tests was to assess the usability of the application interface design, information flow, and information architecture.

Two of three participants are full-time supervisors and one of three is an owner of a fast food chain company. The tests have three similar tasks to ensure stable results. Each individual session finished within approximately 15 minutes.

In general, all participants found Sundial to be straightforward but have its own share of interface design flaws.

The test identified a few problems including:
- Confusion over few action buttons
- Lack of graphic interface design consistency
- Lack of budgeting information on creating template screen
- The lack of categorization of features on a screen
- Lack of time management information on employee cards
- Condensed information on a screen
- Inconsistencies of themes and layout throughout the entire prototype
- Lack of recently saved schedule template on the creating schedule screen.

This document contains the participant feedback, satisfactions ratings, task completion rates, ease or difficulty of completion ratings, time on task, errors, and recommendations for improvements. A copy of the scenarios and questionnaires are included in the Attachments' section.

Methodology

Sessions

I recruited participants from Bobatime, Eagle Rock and Panda Express, Atwater Village. I sent out text messages to Bobatime's manager/owner and Panda Express supervisors for their availability, test logistics and participation. Each participant responded with an appropriate date and time. During the session, I explained the test session and asked the participant to read the task scenarios. Each individual session finished within approximately 15 minutes.

After each task, I asked the participants to rate the interface on a 5-point Likert scale with measures from Strongly Disagree to Strongly Agree. Post-task scenario subjective measures included (see Attachment B):
- Ease of use
- Learnability - how easy it would be for most users to learn to use the prototype
- Information facilitation – how quickly participant could find information
- Look & feel appeal – application's content makes me want to explore it further
- How easy it was to find the information from the screen.
- Ability to keep track of their location in the screen
- Accurateness of predicting which section of the application contained the information.

In addition, I asked the participants the following overall questions:
- What the participant liked most.
- What the participant liked least.
- Recommendations for improvement.

See Attachment C for the subjective and overall questionnaires.

Participants
Two of three participants are full-time supervisors and one of three is an owner of a fast food chain company.

Two supervisors were scheduled on August 15th, while the owner was scheduled on August 16th. Both Supervisors are well over the age of 40, while business owner is 38 years old—All of which are somewhat computer literate. Two of them were males and one female.

Evaluation Tasks/Scenarios
Test participants attempted completion of the following tasks (see Attachment A for complete test scenarios/tasks and each participant completed a self-directed task (i.e., a task of their choice):
- Message an employee on the Daily Scheduler screen
- Request a trade shift
- Create and post a shift

Results

Task Completion Success Rate

All participants successfully completed Task 3 (Create and post a shift). Two of the three (67%) completed Task 1(Message an employee on the Daily Scheduler screen). And the same number of participants (67%) completed Task 2 (Request a trade shift)

Task Completion Rates

Participant	Task 1	Task 2	Task 3
1	√	√	√
2	-	-	√
3	√	√	√
Success	2	2	3
Completion Rates	67%	67%	100%

Task Ratings
After the completion of each task, participants rated the ease or difficult of completing the task for three factors:
* It was easy to find my way to navigate from the start point to the end of the task.
* As I was navigating my way to the screens, I was able to keep track of where I was in the prototype.
* I was able to accurately predict which buttons to click next.

The 5-point rating scale ranged from 1 (Strongly disagree) to 5 (Strongly agree). Agree ratings are the agree and strongly agree ratings combined with a mean agreement ratings of > 4.0 considered as the user agrees that the information was easy to find, that they could keep track of their location and predict the section to find the information.

Ease in Navigating
All participants agreed it was easy to find my way to navigate from the scheduler to chat room (mean agreement rating = 4.33). 67% found it easy to navigate through creating a shift. (mean agreement rating = 4.00). And also 67% of participants found it easy to navigate through swapping shifts (mean agreement rating = 3.33).

Keeping Track of Location in Screen
All participants found it easy to keep track of their location in the prototype while navigating from Scheduler to chat box (mean agreement rating = 4.33). Only 67% found it easy to keep track of their location in the prototype while requesting a swap (mean agreement rating = 3.67) And 67% found it easy to

keep track of their location in the prototype while creating a shift (mean agreement rating = 3.67).

Predicting the Next Button
All participants were able to accurately predict which buttons to click next while creating a shift (mean agreement rating = 4.33). 67% were able to predict which buttons to click next to get to chat box (mean agreement rating = 3.33). And only 3.33% agreed they could predict where to click next to request a swap mean agreement rating = 3.33).

Test 1 – Mean Task Ratings & Percent Agree

Task	Ease – Navigating	Location in Screen	Predict Next button	Overall
1 – Message an employee on the Daily Scheduler screen	4.3 (100%)	4.3 (100%)	3.3 (67%)	4.0
2 – Request a trade shift	3.3 (67%)	3.7 (67%)	3.3 (33%)	3.4
3 – Create and post a shift	4.0 (67%)	3.7 (67%)	4.3 (100%)	4.0

*Percent Agree (%) = Agree & Strongly Agree Responses combined

Time on Task
The testing software recorded the time on task for each participant. Some tasks were inherently more difficult to complete than others and is reflected by the average time on task.

Task 3 required participants to create and post a shift, this took the longest time to complete (mean = 76 seconds)

Time on Task

	P1	P2	P3	Avg. TOT*
Task 1	29	35	31	31.7
Task 2	49	55	64	56.0
Task 3	50	76	**102**	**76.0**

Errors
I captured the number of errors participants made while trying to complete the task scenarios.

In Task 1, participant 2 made a critical error by not tapping the contact icon. Thinking it was going to initiate a phone call instead. Participant 1 and 2 made a non-critical error of navigating directly the menu to send a message.

In task 2, participant 2 made a critical error by tapping to a pending swap request instead of tapping a date in calendar. Participants 1 and 3 clicked the following month instead of dates in calendar. Participant 3 did not know the employee cards were horizontally scrollable. All participants didn't see the list

of employees underneath the calendar, and thus, pausing and think what to do next.

In task 3, Participant 3 made a non-critical error dragging the employee icon towards the calendar instead of clicking.

Summary of Data
The table below displays a summary of the test data. Low completion rates and satisfaction ratings and high errors and time on tasks are highlighted in red.

Summary of Completion, Errors, Time on Task, Mean Satisfaction

Task	Task Completion	Errors	Time on Task	Satisfaction*
1	2	3	32	4.00
2	2	7	56	3.40
3	3	2	76	4.00

* Satisfaction = Mean combined rating across three post-task measures: ease of finding the information, ability to keep track of location in site, and site information prediction accuracy.

Overall Metrics

Overall Ratings

After task session completion, participants rated the site for seven overall measures (See Attachment B). These measures include:
- Ease of use
- Learnability - how easy it would be for most users to learn to use the prototype
- Information facilitation – how quickly participant could find information
- Look & feel appeal – application's content makes me want to explore the it further
- How easy it was to find the information from the screen.
- Ability to keep track of their location in the screen
- Accurateness of predicting which section of the application contained the information.

All participants strongly agreed the looks and feel of the application's content makes them want to explore the it further (mean agreement rating = 5.00), 100% of the participants also found it easy to keep track of where they were (mean agreement rating = 4.33). 67% of the participants thought the prototype was easy to use (mean agreement rating = 4.33). 67% also found it easy to find the information from the screen (mean agreement rating = 4.00). 67% also though most people would learn to user the prototype quickly (mean agreement rating = 4.00). 67% found it easy to predict which section of the prototype contained the information (mean agreement rating = 3.67). 67% also thought they can get information quickly (mean agreement rating = 3.33)

See table below.

Post-Task Overall Questionnaire

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean Rating	Percent Agree
Thought prototype was easy to use				1	2	4.67	100%
How easy it was to find the information from the prototype			1	1	1	4.00	67%
Found it easy to keep track of where they were in prototype				2	1	4.33	100%
Thought most people would learn to use prototype quickly			1	1	1	4.00	67%
Can get information quickly		1		2		3.33	67%
Scheduler's content makes me want to explore the prototype					3	5.00	100%
Accurateness of predicting which section of the prototype contained the information	1			1	1	3.67	67%

Percent Agree (%) = Agree & Strongly Agree Responses combined

4.6.2 Likes, Dislikes, Participant Recommendations
Upon completion of the tasks, participants provided feedback for what they liked most and least about the prototype, and recommendations for improving the prototype.

Liked Most
The following comments capture what the participants liked most:
- Ease of use
- Large buttons
- Presented essential information
- Yellow color scheme
- Presentation

Liked Least
The following comments capture what the participants liked the least:
- Too much features in one screen
- Not enough time management information
- Some action buttons are confusing
- Light color scheme
- Inconsistent layout
- Where are the saved templates?

Recommendations for Improvement
- Categorize and present less information on a screen
- Create a more unified layout of the screens

- Present more summary after each task
- Add "see all" on horizontal scrollable cards
- Further develop the timesheet and payroll feature
- Add a catalog for saved templates

Recommendations

The recommendations section provides recommended changes and justifications driven by the participant success rate, behaviors, and comments. Each recommendation includes a severity rating. The following recommendations will improve the overall ease of use and address the areas where participants experienced problems or found the interface/information architecture unclear.

Message an Employee on the Daily Scheduler Screen (Task 1)

Change	Justification	Severity
• Change Contact action buttons	Participants 2 made a critical error by not tapping the contact icon. Thinking it was going to initiate a phone call instead.	High

Request a trade shift (Task 2)

Change	Justification	Severity
• Add additional Instructional text on Swap Requests • Add a transition when a date has been picked on Date Picker to show employee lists on Swap Requests	Participants rated the ease of navigating through swapping shifts with 3.33 (out of 5) and only 67% agreed that it was easy to navigate All participants didn't see the list of employees underneath the calendar, and thus, pausing and think what to do next.	

Create and post a shift (Task 3)

Change	Justification	Severity
• Add additional Instructional text on Create and post shifts • Add Ellipsis menu icon on top of Horizontal Menus • Add a Catalog page for saved templates • Add a Floating Action Button on Scheduler Screens • Add a transition when a date has been picked on Date Picker to show employee lists on Templates	Participant comments also included categorizing funding in a more concise manner so it is easier to find. Participant 2 asked where to find the saved template, and suggested a catalog for the saved items. Participant 3 did not know the employee cards were horizontally scrollable. All participants didn't see the list of employees underneath the calendar, and thus, pausing and think what to do next.	High

Conclusion

All participants found Sundial to be straightforward, easy to use and has an appealing look, but have its own share of interface design flaws. Presenting essential information in a categorized manner is key to many if not all of the participants. Implementing the recommendations and counting to work with users (change Contact action buttons, add Ellipsis menu icon on top of Horizontal Menus, add additional Instructional text on Create and post shifts and Swap Requests, add a Catalog page for saved templates, add a Floating Action Button on Scheduler screens, and add a transition when a date has been picked on Date Picker to show employee lists on Templates, Scheduler and Swap Requests screens) will ensure a continued user-centered product.

Attachment A

TASK SCENARIO:

TASK 1: **Message an employee on the Daily Scheduler screen**

You are in the Daily Scheduler page and you want to message John Appleseed. Navigate from Daily Scheduler page to the application's chat box

TASK 2: **Request a Swap**

You are Peter North, and you need to request a swap (trade shift) on your September 1 shift for John Appleseed's September 2 shift

TASK 3: **Create and Post a Shift**

Create a morning shift roster for September 1, and select the following employees:

Manager—John Applessed

Cashier—Joyce Jimenez

Back End—Maui Taylor and Diana Zubiri

Review, save and post your schedule.

POST-TASK QUESTIONAIRE:

5 – Strongly Agree   4 – Agree   3 – Neutral   2 – Disagree   1 – Strongly Disagree

Ease of Use

Thought prototype was easy to use

5	4	3	2	1

Learnability

how easy it would be for most users to learn to use the prototype

5	4	3	2	1

Information Facilitation

how quickly participant could find information

5	4	3	2	1

Look and Appeal

application's content makes me want to explore further

5	4	3	2	1

Find Information

How easy it was to find the information from the screen

5	4	3	2	1

Know your Location

Ability to keep track of their location in the screen

5	4	3	2	1

Predicting What's Next

Accurateness of predicting which section of the application contained the information

5	4	3	2	1

Attachment C
POST-SESSION QUESTIONAIRE:

WHAT DID YOU LIKE THE MOST?

WHAT DID YOU LIKED THE LEAST?

ANY RECOMMENDATIONS?