Description

is conducting a study to validate proposed concept models and interaction patterns for the running watch. The proposed user testing is the first effort to evaluate these designs. During these sessions, a moderator will gather feedback from users. Following testing, we will summarize the results and use them as a guide in further developing concept models for the watch.

Goals of the Study

The goals of the study are:

- To determine which interactions (swiping, tapping, etc.) users prefer when interacting with the watch;
- To determine which functionalities are important to users in the running application;
- To elicit feedback about the existing Casio interface;
- To elicit feedback about proposed navigation methods;
- To determine if users can begin and end a run; and
- To determine if users can access data about their run while running.

Location of the Test Sessions

Testing will take place at the MMF offices.

Materials Used During the Test Sessions

- Paper prototypes of key screens from the proposed concept models;
- Casio running watch prototype;
- Motorola MotoACTV watch; and
- Qualitative Survey

Methods

At the office, a moderator will conduct testing sessions with six participants. Observers will be present during the sessions to take notes as well as photos of the session. While the spirit of the session is primarily exploration of interaction methods as well as exploration of the rough concept models created during this design cycle, we will include some assessment of the overall watch user experience.

Each session will last approximately 45 minutes. During the session the moderator will:

- Explain the structure of the test, including a description of what the participant will be doing (interacting with watches on the treadmill, interacting with paper prototypes of

rough concepts), as well as the expectations of the participant (honest opinion, running commentary);
- Explain the concept of "Thinking Aloud";
- Run the participant through a series of tasks using the Casio and Motorola watches while on the treadmill;
- Run the participant through a series of tasks using paper prototypes of the rough concepts;
- Conduct a brief interview with the participant about his or her running habits as well as the devices he or she currently uses while running; and
- Distribute a quantitative experience survey measuring the participant's judgement of the quality, likeability, and overall ease of use of the designs.

Limitations of Study

Due to time constraints and the current stage of the design process, this will not be a validation of specific task flows but rather an investigation into the general likeability of the rough concept models as well as an investigation into preferred methods of interacting with the watch (e.g. swipe, tap).

The goal of this testing is to identify potential interaction issues with the proposed design concepts as well as to jumpstart design ideas based on participant behavior and feedback during the test sessions. We expect to uncover a majority of findings with a sample size of six participants. However, it is important to keep in mind that with a small sample we cannot assign any statistical significance to the results of the test, and the findings are not meant to be generalized to an entire user population.

Session Script

Introduction (Estimated Time: 5 minutes)

The moderator will provide an overview of the test session based on the following text:

Thank you for participating in this user research session. We are exploring different designs for a new running watch and your input will help us decide what to improve. We will take photos during the session. They are for our internal use only and will be used for research and not public promotion. There will also be other design team members observing this session.

Today I am going to ask you to perform some of the tasks you might usually do with a running watch.

As you move through the tasks in this session, please think aloud. That is, I want you to say out loud whatever crosses your mind; doing this will help me understand what you're looking for, where you think you should find it, what you expect to happen as you interact with the watch, thoughts you have about what you're seeing, etc. I'd like you to imagine you are really using the watch, and complete the tasks the way you really would.

At the end of the session you'll have the opportunity to give me any opinions or suggestions you have, but while doing the tasks, what I'm really looking for is your thoughts while figuring out what you need to do.

Remember, we value your honest opinion during this session. You are not going to hurt anyone's feelings if you are critical of what I show you. If you see something that doesn't make sense or doesn't appeal to you for any reason, please let me know. I want to emphasize that I am not testing you or your abilities here. Because this is a paper prototype, or a "work in progress," you may come to some places that don't do what you expect. When that happens, I'll ask you what you expected to happen.

I might give you hints if you get completely stuck, but if I don't answer a question it's because I think you're on the right track, and I want you to explore a little more.

I will also ask you questions from time to time. If at any time you think it's necessary to stop the session, please let me know.

Do you have any questions before we begin?

Pre-Interview

First I am going to ask you a few questions about devices and your running habits.

How long have you been a runner?

How many times a week do you run?

What do you typically have with you while you are running?

(If they carry devices) What devices are they? What features do you typically use? Are there any features you like or dislike? Do you only use the device for running?

Do you use any running apps on your phone or running apps/websites on your computer? If so, when do you use them? (before, after?) Are there any features you like or dislike?

Do you have a route pre-determined before you begin running?

What information do you like to know while on a run? (distance? directions? pace?)

Is there anything you typically do post-run? Use any websites or apps?

Concept 1 - Rod

Scenario 1 – Starting a Run

Estimated completion time: minutes

Scenario Overview

Participant has just purchased a new running watch and is going for a run for the first time. They have a account and have set up the device.

Key Participant Activities

- User uses start/stop hard key
- User sees that a run has been started

Scenario Test Goals

- User is able to successfully begin a run

Moderator Activities

- Prompt when necessary
- Follow up questions

Task 1 – Begin a run

Moderator Script

You have just purchased a new running watch and are eager to try it out. You already have an account with , and have set up the device to sync with it. Use your watch to begin the run.

 Work Flow

- Moderator presents the Lock screen.
- User taps the start hard key.
- Moderator presents the Settings screen.
- User taps Start.
- Moderator presents the Run screen.

Scenario 2 – View Stats

Estimated completion time: minutes

Scenario Overview

Participant is in a run and wants to see his heart rate.

Key Participant Activities

- User swipes horizontally to access run stats.

Scenario Test Goals

- User is able to successfully navigate between different stats.

Moderator Activities

- Prompt when necessary
- Follow up questions

Task 1 – Check Heart Rate

Moderator Script

Now that you have been running for a few minutes you decide that it would be a good idea to check your heart rate. Using the watch, check your heart rate.

 Work Flow

- Moderator presents the Run screen.
- User swipes left on Elapsed Time.
- Moderator presents Run screen displaying heart rate.

Scenario 3 – View Map

Estimated completion time: minutes

Scenario Overview

Participant is in a run and wants to see his current location on the map.

Key Participant Activities

- User swipes vertically to display map.
- User taps to display map full screen.

Scenario Test Goals

- User is able to successfully access map.
- User is able to successfully return to default state of Run screen from Map.

Moderator Activities

- Prompt when necessary
- Follow up questions

Task 1 – View Map

Moderator Script

Now you would like to see where you are in your run. Find your current location on your route.

 Work Flow

- Moderator presents the Run screen.
- User swipes up from the bottom of the watch.
- Moderator presents Run screen displaying the half-screen map.

Task 2 – Make Map Full Screen

Moderator Script

You see your current location on the map and decide you would like to see more detail. Expand the map to see it full screen.

 Work Flow

- Moderator presents the Run screen displaying the half-screen map.
- User taps the map.
- Moderator presents the full screen Map.

Task 3 – Return Run Screen to Default State

Moderator Script

Now that you've seen the map full screen you decide that you want to make the map half size again. Make the map half size.

Work Flow

- Moderator presents the full screen map.
- User taps the map.
- Moderator displays Run screen with stats and map.

Scenario 4 – Receive Notification

Estimated completion time: minutes

Scenario Overview

Participant is in a run and receives a notification.

Key Participant Activities

- User taps notification to dismiss.

Scenario Test Goals

- User is able to successfully dismiss a notification.

Moderator Activities

- Prompt when necessary
- Follow up questions

Task 1 – Dismiss Notification

Moderator Script

You run a little more and see this pop up on screen.

 Work Flow

- Moderator presents the Run screen with notification.

Moderator Script

Now that you have read this message, you decide you don't want to see it anymore. Get rid of this message.

Work Flow

- Moderator presents the Run screen with notification.
- User taps the notification.
- Moderator displays the Run screen with stats and map.

Scenario 5 – Stop Run

Estimated completion time: minutes

Scenario Overview

Participant is in a run and stops run.

Key Participant Activities

- User presses stop/start button to pause run.
- User taps End Run to stop the run.

Scenario Test Goals

- User is able to successfully stop a run.

Moderator Activities

- Prompt when necessary
- Follow up questions

Task 1 – Stop Run

Moderator Script

Now that you have been running for awhile, you decide to stop the run.

 Work Flow

- Moderator presents the Run screen with stats and map.
- User presses the start/stop hard key.
- Moderator presents Run Paused screen.
- User taps End Run.

Now I would like you to answer a few questions about the screens you have just seen. Circle the dot that best describes your answer. Please do not leave any question blank.

How easy is it to find specific information using this product?

Not at all easy   **Very easy**

●   ●   ●   ●   ●

How satisfied are you with this product?

Not at all satisfied   **Very satisfied**

●   ●   ●   ●   ●

How frustrated did you feel while using this product?

Not at all frustrated   **Very frustrated**

●   ●   ●   ●   ●

How confused did you feel while using this product?

Not at all confused   **Very confused**

●   ●   ●   ●   ●

How well do you think you learned to use this product?

Not at all well   **Very well**

●   ●   ●   ●   ●

Concept 2 – Bolt

Scenario 1 – Starting a Run

Estimated completion time: minutes

Scenario Overview

Participant has just purchased a new running watch and is going for a run for the first time. They have a account and have set up the device.

Key Participant Activities

- User uses start/stop hard key.

- User sees that a run has been started.

- User can access settings.

Scenario Test Goals

- User is able to successfully begin a run

Moderator Activities

- Prompt when necessary

- Follow up questions

Task 1 – Begin a run

Moderator Script

You have just purchased a new running watch and are eager to try it out. You already have an account with, and have set up the device to sync with it. Use your watch to begin the run.

 Work Flow

- Moderator presents the Lock screen.

- User presses the start/stop hard key.

- Moderator presents the Run screen.

Task 2 – Access Run Settings

Moderator Script

Now that you have started your run, you decide you would like to change your route. View the settings for your run.

Work Flow

- Moderator presents Run screen.

- User taps the Run screen.

- Moderator presents the Settings screen.

Moderator Script

Now go back to the screen with your run stats.

- User taps the Settings screen.

- Moderator presents the Run screen.

Scenario 2 – View Map

Estimated completion time: minutes

Scenario Overview

Participant is in a run and wants to see his current location on the map.

Key Participant Activities

- User swipes horizontally to display map.

- User double taps to make map interactive.

- User pans map.

- User returns map to default state.

Scenario Test Goals

- User is able to successfully access map.

- User is able to successfully return to default state of Run screen from Map.

Moderator Activities

- Prompt when necessary

- Follow up questions

Task 1 – View Map

Moderator Script

Now you would like to see where you are in your run. Find your current location on your route.

 Work Flow

- Moderator presents the Run screen.

- User swipes horizontally.

- Moderator displays Notification screen.

- User swipes horizontally.

- Moderator displays Map screen.

Task 2 – Make Map Full Screen

Moderator Script

You see your current location on the map and decide you would like to see more detail. Expand the map to see more detail.

 Work Flow

- Moderator presents the Map screen.

- User double taps

- Moderator presents Map screen.

Task 3 – Return Run Screen to Default State

Moderator Script

Now that you've seen the map in more detail, you decide you want to go back. Go back to the Stats screen.

 Work Flow

- Moderator presents the full screen map.

- User presses the Back hard key.

- Moderator displays the Map screen.

- User swipes left.

- Moderator displays Notifications screen.

- User swipes left.

- Moderator displays Stats screen.

Scenario 3 – Receive Notification

Estimated completion time: minutes

Scenario Overview

Participant is in a run and receives a notification.

Key Participant Activities

- User sees notification.

Scenario Test Goals

- User is able to successfully view a notification.

Moderator Activities

- Prompt when necessary

- Follow up questions

Task 1 – Dismiss Notification

Moderator Script

You run a little more and see this pop up on screen.

 Work Flow

- Moderator presents the Stats screen.

- Moderator presents the Notifications screen.

Scenario 4 – Access Menu

Estimated completion time: minutes

Scenario Overview

Participant is in a run and access the menu.

Key Participant Activities

- User swipes vertically to open the menu.

Scenario Test Goals

- User is able to successfully open the menu.

Moderator Activities

- Prompt when necessary

- Follow up questions

Task 1 – Open Menu

Moderator Script

Now you decide you want to use the stopwatch to time yourself for 30 seconds. Find the stopwatch.

 Work Flow

- Moderator presents the Notifications screen.

- User swipes vertically from the bottom.

- The menu is displayed.

Task 2 – Close Menu

Moderator Script

Close the menu.

Work Flow

- Moderator presents the Menu screen.

- User swipes vertically from the top.

- Moderator displays the Notifications screen.

Scenario 5 – Stop Run

Estimated completion time: minutes

Scenario Overview

Participant is in a run and stops run.

Key Participant Activities

- User presses stop/start button to pause run.

- User taps Stop Run to stop the run.

- User taps Save Run to save the run.

Scenario Test Goals

- User is able to successfully stop a run.

Moderator Activities

- Prompt when necessary

- Follow up questions

Task 1 – Stop Run

Moderator Script

Now that you have been running for awhile, you decide to stop the run.

 Work Flow

- Moderator presents the Notifications screen.

- User presses the start/stop button.

- Moderator presents the Run Paused screen.

- User taps the Stop Run button.

- Moderator presents the Save Run screen.

- User taps Save Run.

- Moderator presents the app landing screen.

Now I would like you to answer a few questions about the screens you have just seen. Circle the dot that best describes your answer. Please do not leave any question blank.

How easy is it to find specific information using this product?

Not at all easy   **Very easy**

•   •   •   •   •

How satisfied are you with this product?

Not at all satisfied   **Very satisfied**

•   •   •   •   •

How frustrated did you feel while using this product?

Not at all frustrated   **Very frustrated**

•   •   •   •   •

How confused did you feel while using this product?

Not at all confused   **Very confused**

•   •   •   •   •

How well do you think you learned to use this product?

Not at all well   **Very well**

•   •   •   •   •

Casio Watch

Moderator Script

I am going to ask you to hop on the treadmill and do a few a things with the watch while running. Put on the watch and take a few minutes first to explore the watch and tell me about your initial impressions of it.

Moderator Script

Now I would like you to open the stopwatch.

Work Flow

- User taps the Lock screen.

- Watch displays menu.

- User taps or swipes Utilities.

- Watch displays Utilities menu.

- User taps Stopwatch.

Moderator Script

Start the stopwatch.

Work Flow

- User taps the Start button.

- Stopwatch starts.

Moderator Script

Stop the stopwatch.

Work Flow

- User taps the Stop button.

- Stopwatch stops.

Moderator Script

Now go back to the previous screen.

Work Flow

- User taps the Back button.

- Watch displays Lock screen.

Motorola Watch

Moderator Script

I am going to ask you to hop on the treadmill and do a few a things with another watch while running. Put on the watch and take a few minutes first to explore the watch and tell me about your initial impressions of it.

Moderator Script

Now I would like you to use the watch to start a run.

 Work Flow

- User presses Power button.

- Watch displays Clock screen.

- User swipes right horizontally.

- User taps the Run screen

- Watch displays Workout menu.

- User taps Run.

- Watch displays Running menu.

- User selects run options.

- Watch displays Run screen.

Moderator Script

You decide you just want to look at calories burned.

 Work Flow

- Watch displays Run screen.

- User taps Calories.

- Calories is displayed full screen.

Moderator Script

Now you decide you want to see those other stats again.

Work Flow

- Watch displays calorie information full screen.

- User taps calories.

- Watch displays default Run screen.

Moderator Script

You decide that some music while you run might be nice. Play some music.

Work Flow

- Watch displays Run screen.

- User presses Back hard key.

- Watch displays Run screen.

- User swipes left.

- Watch displays Clock screen.

- User swipes left.

- Watch displays Music screen.

- User taps Music screen.

Concept Research Overview

We conducted research with six participants, two men and four women. Each participant was asked to peform a few tasks using two different static prototypes on an iPod Nano. They were also asked to perform a few tasks using the Casio and Motorola watches while running on the treadmill.

We looked at the following activities:
- Starting a run
- Run stats
- Viewing a map
- Receiving notifications
- Stopping a run

Concept Research Topline Findings

What devices do people carry on runs?
About half of the participants used a sports watch while on a run. Four out of six carry their phones with them while on runs.

What's the most important data do people want to know while on a run?
The top three stats people pay attention to while running are Pace, Heart Rate, and Distance. Others mentioned were splits, elevation, gait, stride rate, elapsed time. Most wanted to be able to customize what was displayed and liked the interaction of tapping or swiping to cycle through a display of stats.
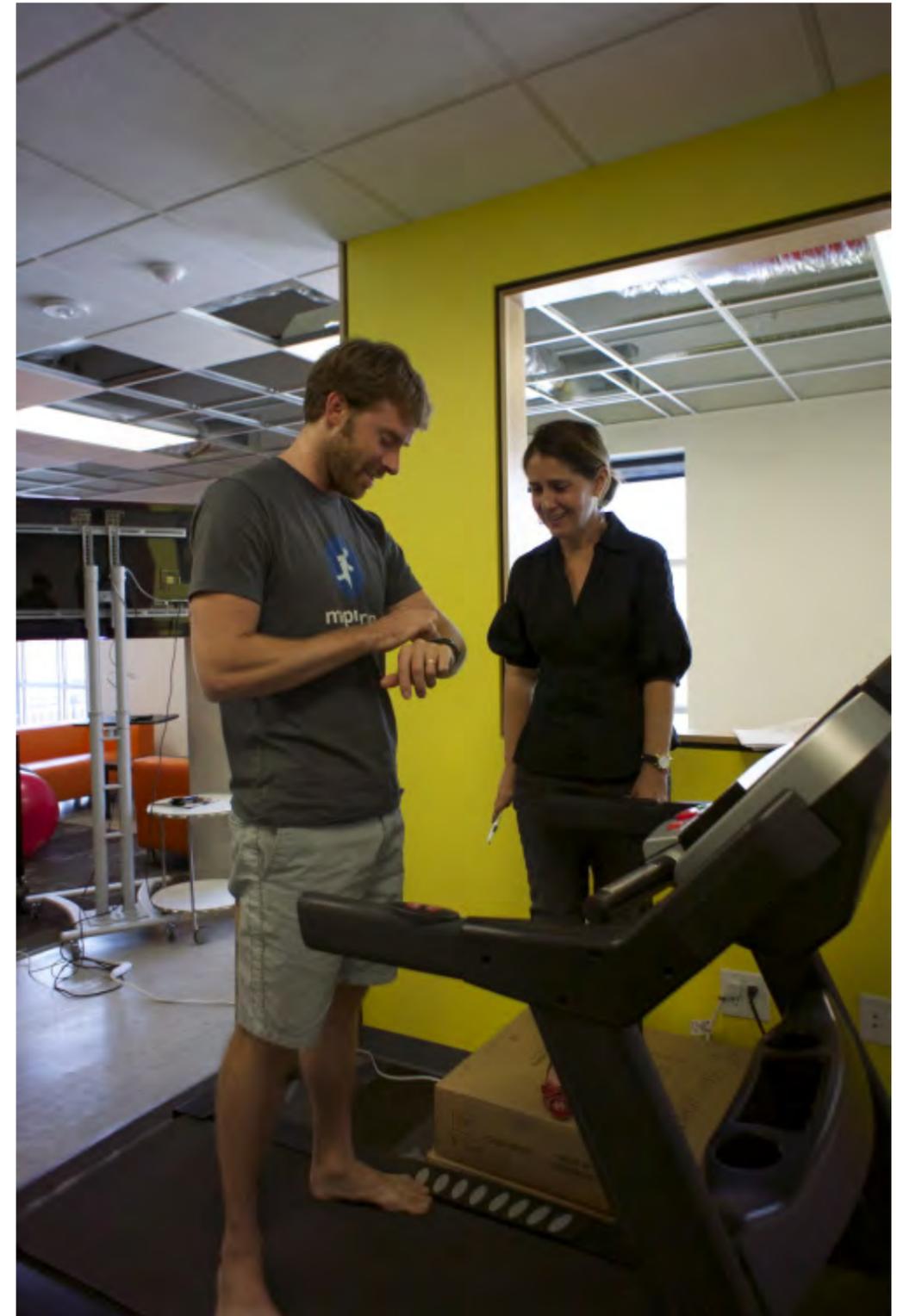
Concept Research Topline Findings (cont)

Which interactions do people prefer?
In general, people found tapping and swiping to be easy gestures to perform on the watch, provided that the targets were big enough. A couple commented that swiping felt like a natural gesture on the watch, however the tolerance for the number of swipes to access something was low. Also noted was the need for some kind of affordance for a swipe gesture.

Do people want notifications?
We showed people a couple of different types of notifications. About half would be interested in seeing upcoming landmarks on the route such as bathrooms or water fountains. Most people were not interested in seeing social notifications. A notification that displayed and then disappeared was the preferred method of interaction, though people also said they would tap or swipe to dismiss it.

Concept Research Topline Findings (cont)

How large do elements need to be on screen?
One word: Big. We tested the Casio and Motorola watches with people on the treadmill. Nobody could identify which stat was which on the Moto watch stats screen without studying the watch. The navigation buttons on the Casio watch also provided difficulty. Most people had to tap or swipe several times before they were able to successfully open a menu. The same was true for the Back button on the Casio device. It took most people several tries before they could acquire the target.

What are people's expectations of the hard keys on the device?
There was no real consensus among people as to what they thought the hard keys might do. Using one of the buttons to start/pause a run was something people liked and made sense. There was no real consession about what the bottom button might do.

Concept Research Topline Findings (cont)

How do people want to engage with social activities while on a run?
About half of people said they do or would share out details about their runs to social networks. Several mentioned wanting explicit control over which runs to share and which details to share about those runs. For example, someone mentioned they wouldn't want to share details about a 'bad run'. People also mentioned that serious runners want to choose which stats to share about a run.

How do people use maps?
People in general liked swiping to get to a map; several said it felt more natural. They also want to be able to multi-touch to zoom in and out. Most felt like a full screen map zoomed into your current location would be the most useful, but several questioned whether or not they would even use a map while on a run. Most did not like the half map concept. Many said they have a route in mind and would probably only consult a map if lost.