

Oracle Mobile User Assistance Testing

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Abstract. In order to create a set of Oracle Mobile Applications patterns and guidelines that would reflect the needs of customers both in the US and other global areas, we conducted a set of user feedback sessions on messages with mobile application users in both the UK and the US. Participants were asked to consider scenarios that covered how they expected notifications to work, collaboration scenarios, how messages might display, specific wording alternatives for messages, and expectations for confirmation messages. The information gained from these interviews and sessions was used to validate assumptions, previous research findings, and anecdotal evidence, as well as to explore wants and needs for future releases of mobile applications for enterprise users. This information was then used to create a new set of patterns for mobile messaging, as well as to create guidelines for content of messages for our development teams.

Keywords: Mobile, Messaging, User Assistance, patterns, guidelines.

1 Introduction

In early 2009, the Oracle Mobile User Experience team developed and tested a set of mobile design patterns for Oracle mobile applications. Because there has been a significant surge in smart phone usage and in smart phone technologies, the Oracle Applications User Assistance decided to revisit some of the previous findings, as well as test new areas around message language and management. The Oracle User Assistance group was also interested in seeing whether there was a difference between user preferences in the UK and the US. A set of 11 semistructured interviews was conducted in the Oracle Usability Lab in Thames Valley Park (TVP), Reading, UK. A second set of 10 interviews was conducted during the Oracle Usability Lab sessions at Oracle OpenWorld (OOW) 2010. Participants were asked to consider scenarios that reviewed the following:

- Notifications
- Collaboration scenarios
- Message display options
- Specific wording alternatives
- Confirmations

The information gained from these interviews and sessions was used to validate assumptions, previous research findings, and anecdotal evidence, as well as to explore wants and needs for future releases of mobile applications for enterprise users. This information was then used to create a new set of patterns for mobile messaging, as well as to create guidelines for content of messages for our development teams.

All of the sessions were semistructured interviews in which participants were shown mock-up designs and asked to discuss their feelings and preferences about notifications, collaboration, message display options, wording, and confirmations. The screens were low-fidelity designs. Participants were asked to focus not on how their phone worked, but how they wanted an application on a phone to work.

2 Participants

A total of 21 participants were recruited for participation in the studies in the UK and the US. All participants were smart phone users who used some type of application on their phones for work (in addition to email and internet browsing applications). Table 1 shows participants from the UK, including their job titles and mobile devices.

Table 1. Participants from the UK

Role	Devices and Operating Systems
Oracle HR Support and Delivery Manager	iPhone 3gs
Master Principal Sales Consultant	iPhone 3gs
Principal	Palm Treo Pro (WinMobile 6.1)
AMS Manager	Palm Treo Pro (WinMobile 6.1)
Automation Director, Customer Intelligence, Global Support	HTC HD2 (WinMobile 6.5)
Group Leader Networks and Communications	HTC HD2 (WinMobile 6.5) Blackberry 8707
Group Vice President	Blackberry
VP, Corporate Communications EMEA	Nokia N97 (Symbian 9.4)
Architect	HTC Desire (Android 2.1)
Business Development Manager	Google Nexus One (Android OS 2.0)
Director, Product Management	HTC Desire (Android 2.1)

Table 2 shows the job titles and devices of participants in the US study.

Table 2. Study participants from the US and their mobile devices

Role	Devices and Operating Systems
HCM Systems Manager	iPhone 3gs
Sr. IT Business Analyst	iPhone 3g
Director, Information Systems	iPhone 3g
Sr. Oracle Apps DBA	iPhone, iPad
Managing Partner	iPhone 4
CTO & Founder	iPhone 4/Motorola Droid (Android 2.0)
Chief Information Officer	iPhone, iPad, Droid (Android 2.0)
Executive Director, Product Development	iPhone, Blackberry Bold
Senior Consultant	Blackberry + iPod Touch
CEO	Blackberry Bold

3 Tasks and Findings

3.1 Notifications

Notifications inform users that some event has occurred in their applications or at the level of the phone system. For example, an alert about a missed call or new voice mail is a type of notification. In this study, we were interested in better understanding how users of Oracle products wanted to receive notifications of activity from an Oracle mobile application.

Participants in the study were shown three design alternatives for notifications about events in an Oracle mobile application. In the first scenario, participants were shown a set of universal notifications, where anything that happened on the phone appeared in a single location (for example, missed calls). In the second scenario, all Oracle mobile application notifications appeared grouped together by application, but separated from other activity on the phone (for example, new voicemail). In the third scenario, Oracle mobile application notifications appeared only in the specific application. In this scenario, the user would have to open the specific application in order to see the notification.

In this set of scenarios, we found a difference in user preference by region. Participants in the UK primarily preferred the option to have all notifications grouped in a single location. On further discussion, the UK participants indicated that they wanted a single Oracle notification line in the global list that would drill down into just the Oracle notifications (essentially a combination of A and B).

Participants from the US at OOW were split between preferring to have all notifications for anything on their phones grouped together and preferring to have all Oracle applications grouped together. Participants who preferred the second option seemed to be generally concerned about the number of notifications that they receive on their phones. These participants were worried about losing their Oracle notifications in the long list of notifications that appeared. These participants felt that they would rather have the Oracle applications notifications separated from their other notifications.

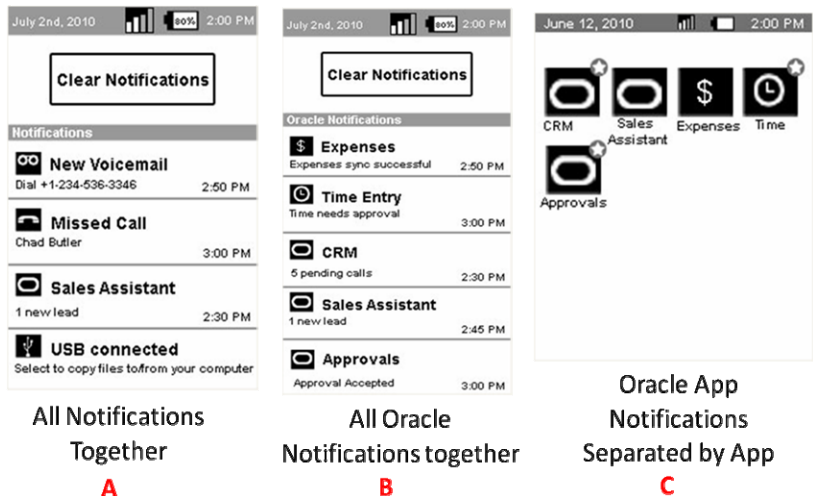


Fig. 1. The three notification scenarios participants evaluated

Our recommendation to our development teams was to surface notifications or alerts from Oracle mobile applications at the level of the system applications. However, if the user has multiple Oracle mobile applications, development should consider a single notification point in the global notifications that the user can drill into in order to see individual application notifications.

3.2 Collaboration

In the case of collaboration alternatives, we were interested in different kinds of collaboration scenarios. In the first scenario, participants had an option to share information with a coworker. In the second scenario, participants were shown an option to share a problem with user support.

Collaborating with a Coworker. In the scenario involving sharing with a coworker, we showed the example of a Customer Relationship Management (CRM) application in which a sales person was able to share information about a particular opportunity with a coworker (see Figure 2). In this particular scenario, it was explained that the

information was more than sharing just a screen from the app, but in fact the act of sharing opened all of the sales opportunity information in the back end CRM system to the coworker.

Participants in both the UK and the US felt that collaborating with a coworker could be useful. However, some participants were unsure whether they would need this functionality for the type of work that they did. Participants felt that the sharing option would be especially useful for CRM, where users have a need to involve coworkers in their work. In addition, participants in the study in both the US and the UK commented that it would be useful to collaborate at a more granular level, such as assigning tasks, adding multiple users, and tagging items or areas for particular users to review.



Fig. 2. A collaboration scenario in which a user would share information (in this case, a sales opportunity) with a coworker from within the mobile application

Collaborating with Support. In the sharing-with-support scenario, when an application error occurred, participants were given the opportunity to share that error with support. Participants in both the US and the UK first wanted a description of the problem to see if they could fix the problem themselves. UK participants preferred setting up a time for support to contact them rather than filing a ticket.

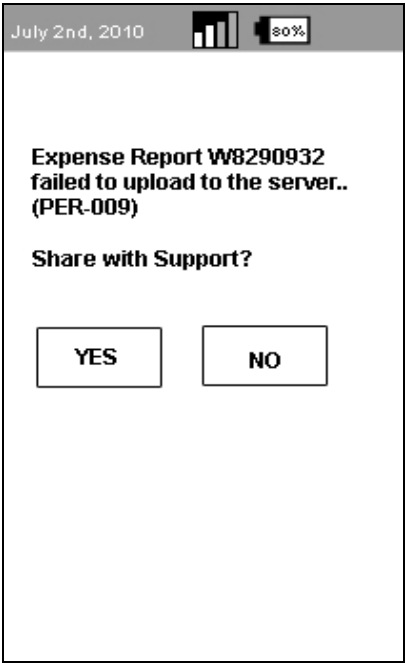


Fig. 3. Collaboration with support

3.3 Message Display Options

Participants were next asked to consider the ways that an error message might appear. In the first case, although there was an inline message with the error information, there was no field-level indication of the error. In option B, there were three different indicators that an error had occurred: a link to the error field, an error icon at the field, and a description of what the user would need to do to correct the error. Participants were asked to consider the usefulness of each of the three error indicators: the error icon, the error text, and the link to the location on the screen of each error.

Participants in both the UK and the US felt the red X error icons and instructional text were useful indications of what the user would need to do to correct the error. However, in both countries, the users in this study did not feel that the link was necessary. Participants indicated that they thought that mobile application screens would not be as long as screens on a desktop, laptop, or web application, and therefore, the link that would take them directly to the error field was not as critical.

Our recommendations for errors were to indicate the number of errors with an error icon and informational text in proximity to the field that needed to be corrected.

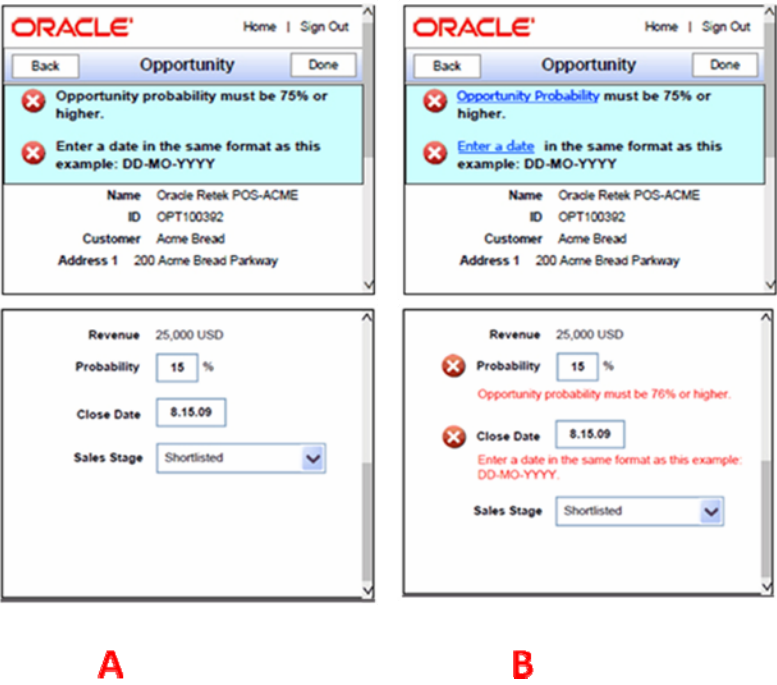


Fig. 4. The error message display option scenarios

3.4 Wording

Participants were asked to consider five different options for the wording of a confirmation message. The options included more active and passive phrases, different details, and different levels of formality (see Figure 5.)



Fig. 5. The five wording alternatives presented to participants

None of the participants liked the use of “you” and “your” (“You submitted your expense report TVP-12345 for 212.01 USD for approval”). Several commented that this wording seemed too “cute” or informal for an enterprise mobile application.

UK. Participants in the UK were split on the need for the word “successfully” as part of the message. Some felt that it did add a sense of confirmation that the action completed, while others felt that the expense report number was a more important confirmation that the report had been sent to the server.

Overall, UK participants preferred options A and B, about equally. They felt that the most essential information was the report number and the amount.

US. Half of the participants in the US preferred option E (“Expense report submitted”), while the rest of the participants were split across the other options. The majority (7/10) felt that the word “successful” was important to include in the message. These participants were split on the need for the report number to be included in the message.

According to one participant, “*Successfully* means it was accomplished; that’s important.”

3.5 Confirmations

Users were asked to consider two different styles of action confirmation. In option A, the confirmation appeared as a pop-up message, while in option B, the confirmation appeared as an inline message.

Both the UK and US participants preferred inline confirmations. The participants said that it was useful to see the data and the message at the same time and preferred that the message remain persistent because it matched the way that they use their phones.

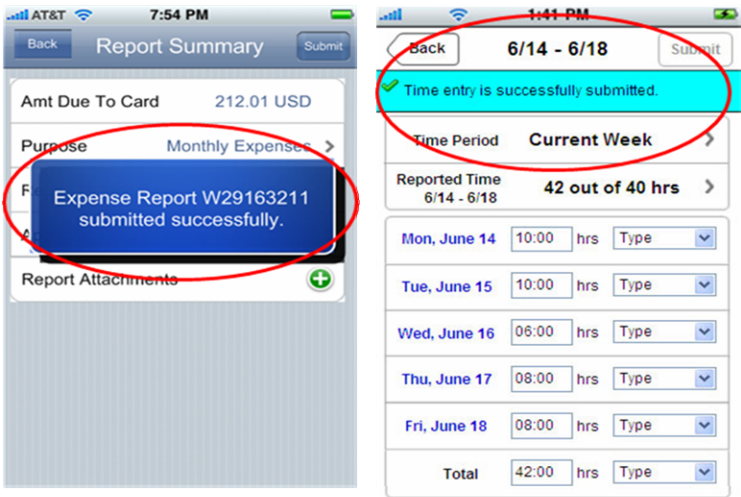


Fig. 6. Pop-up versus inline confirmation message options

4 Conclusion

Overall, this study found few differences between participants in the UK and the US in their preferences in mobile applications. The results were used to update and extend mobile messaging patterns and guidelines for Oracle mobile applications. In addition, further research is under consideration for other areas of Europe and Asia Pacific to ensure that these patterns and guidelines represent the needs and wants of a more global audience.