Designing User Experience of Mobile Operator Apps

May 31, 2012

Abstract

This paper provides information about designing Metro style device apps for mobile broadband for Windows 8 operating systems. It provides user experience design guidelines to design apps for end users to manage their mobile broadband account and service. It assumes that the reader is familiar with mobile broadband technology, Windows mobile broadband networking, and the Metro style app platform.

This information applies to the following operating systems:
   Windows 8 Release Preview

References and resources discussed here are listed at the end of this paper.

The current version and resources discussed here are maintained on the Web at:
   Designing User Experience of Mobile Operator Apps

Disclaimer: This document is provided "as-is". Information and views expressed in this document, including URL and other Internet website references, may change without notice. Some information relates to pre-released product which may be substantially modified before it's commercially released. Microsoft makes no warranties, express or implied, with respect to the information provided here. You bear the risk of using it. Some examples depicted herein are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred.

This document does not provide you with any legal rights to any intellectual property in any Microsoft product. You may copy and use this document for your internal, reference purposes. You may modify this document for your internal, reference purposes.

© 2012 Microsoft. All rights reserved.
## Document History

<table>
<thead>
<tr>
<th>Date</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 28, 2012</td>
<td>First publication</td>
</tr>
<tr>
<td>May 31, 2012</td>
<td>Introducing terminology for mobile operator app</td>
</tr>
</tbody>
</table>

## Contents

- Introduction .................................................................................................................. 4
- Key UI scenarios ........................................................................................................... 4
- App organization ............................................................................................................ 4
- Landing page ................................................................................................................ 5
  - Designing the landing page of your app ................................................................... 6
  - Usage overview – show an overview or link .............................................................. 6
  - Operator messages – show an overview or link ......................................................... 7
  - Links to other key pages .......................................................................................... 7
  - App navigation ............................................................................................................ 7
  - Operator branding .................................................................................................... 8
  - Quick summary .......................................................................................................... 8
- Useful links .................................................................................................................. 9
- Branding ....................................................................................................................... 9
  - Quick summary .......................................................................................................... 11
  - Useful links .............................................................................................................. 11
- Account balance and usage info .................................................................................... 12
  - Designing account balance and usage info ............................................................... 12
  - Postpaid plans .......................................................................................................... 12
  - Prepaid plans ........................................................................................................... 13
  - Quick summary .......................................................................................................... 14
  - Inappropriate design for showing account information ............................................. 14
  - Useful links .............................................................................................................. 14
- Messages ....................................................................................................................... 15
  - Quick summary .......................................................................................................... 16
  - Useful links .............................................................................................................. 16
- View and pay bills, recharge, and refill ........................................................................ 16
  - Design of billing pages .............................................................................................. 16
  - Quick summary .......................................................................................................... 17
  - Useful links .............................................................................................................. 18
- Purchase flow ................................................................................................................. 18
  - Quick summary .......................................................................................................... 21
  - Useful links .............................................................................................................. 22
- Help and support ............................................................................................................ 22
  - Designing the help and support page ........................................................................ 22
  - Quick summary .......................................................................................................... 23
  - Useful links .............................................................................................................. 23
- Services and goods .......................................................................................................... 23
  - Design of the services and goods page ...................................................................... 23
  - Quick summary .......................................................................................................... 24
  - Useful links .............................................................................................................. 24
Integration with other Windows components .......................................................... 24
Settings charm ........................................................................................................ 24
Error UX .................................................................................................................. 24
  General .................................................................................................................. 24
  Errors in data usage ............................................................................................. 25
App views ................................................................................................................ 26
Launch points ......................................................................................................... 27
  Launching from the connection manager ............................................................. 29
  Automatic launch from connection manager during a captive portal purchase
  flow ....................................................................................................................... 29
  Launch from tile on start screen ......................................................................... 29
Tile and toast notifications ..................................................................................... 29
  Examples of operator notifications and alerts ....................................................... 31
  Useful links ........................................................................................................... 32
Splash screen .......................................................................................................... 32
Resources ............................................................................................................... 32
Introduction

Windows 8 introduces Metro style mobile operator apps. This document provides guidelines for designing the user experience for a mobile broadband service and account management app. To learn more about building a great Metro style app in general, watch 8 traits of great Metro style apps.

Mobile operator apps are available from the Windows Store, and are automatically downloaded and installed when Windows detects compatible mobile broadband service on your computer. Mobile network operators can customize aspects of the Windows UI including the connection manager through a mobile operator app. Rather than focusing on a mobile broadband adapter, Windows abstracts device specifics and matches based on who the mobile network operator is.

Key UI scenarios

The Metro style mobile operator app should include the following key scenarios:

- **Plan purchase**
  - Purchasing a new subscription to data service
  - Refilling account balance to a plan

- **Account management**
  - Displaying account data, current plan information

- **Viewing data usage**
  - Display of current data usage and billing cycle info
  - Updating Windows with latest data usage

- **Notifications**
  - Display data usage and other important account and service messages

- **Help & Support**
  - Display troubleshooting and customer support contact information

App organization

The following diagram illustrates how the different pages in the app are organized:

- The app has an account overview landing page that provides a summary of a customer’s account and data usage. It also contains links to other pages of the app.
- From the landing page, end users can visit a “hub” page to view billing, plans, services, or help and support details.

- Some “hub” pages lead to task pages and flows such as a purchase checkout flow.

**Figure 1: Overview of some pages in the Metro style device app for mobile broadband**

Note: For prepaid plans, the account overview could link directly to the Make a **Payment** page for refill scenarios.

**Landing page**

The app landing page is the first page the user sees when he or she launches the app (except for certain cases described in **Launch points**).
Designing the landing page of your app

Figure 2: Landing page of the Metro style mobile operator app for a postpaid plan

The landing page should follow Metro style app guidelines for app layout. To encourage simplicity and ease of navigation, it is recommended to fit all contents of the landing page into a single page. The landing page is the central hub of your app. Although it is not a primary navigation method or management page, it showcases your app and its major functionality. The following sections describe some of the content that can be included in the landing page of your app.

Usage overview – show an overview or link

Postpaid plans

Because seeing information about their data usage is important to consumers, it should be highlighted on the landing page if possible. Although an overview is encouraged, it is also fine to provide a link to a separate page in the app that contains more details. Some suggestions for additional details can be found in the data usage section (see Account balance and usage info). Figure 2 shows the Account Overview page for a post-paid plan.

Prepaid plans

For prepaid plans, the data usage shown is simplified. Here a user should also be offered an option to recharge or refill their plan. A button provided to “Recharge now” links to a page with payment options. See Billing for more details. The following image shows a typical overview page for a prepaid plan.
**Account Overview**

**Summary**
- For (42) 555-8800
- Your prepaid balance
  - $10.00
- 1.75 out of 2 GB remaining
  - Updated Monday, 27 April 2012
- 11 MB used while roaming
  - Last updated yesterday

**Messages**
- 9/25/12, 12:00 PM
  - Welcome to the UI. For $1 per MB, you have 25MB of data, then it's $1 per 12MB. $14/MB. $5.96 per MB.
  - Learn more at www.comcast.com/rates/lol
- 9/22/12, 5:00 PM
  - You've used all of your 10 GB data plan. Overage bill: $9.97/GB. See an ad on more sites by upgrading your plan today in the plans page.
- 9/02/12, 3:00 PM
  - You've used 90% of your 10 GB data plan. Any additional data at $9.97/GB. 1GB data is unlimited over Wi-Fi. Learn more in the plans page
- 8/28/11, 1:00 PM
  - Your plan expires on Aug 24, 2012. Renew your plan by going to the plans page.
- 8/16/11, 11:00 AM
  - Great news! Effective immediately, Comcast is increasing the amount of data included in your

**Services**
- Enhance your mobile broadband experience

**Help and Support**
- It’s easier than ever to get the help you need

---

**Figure 3: Landing page of the Metro style mobile operator app for a prepaid plan**

Operator messages – show an overview or link

A list of operator text messages can be highlighted on the landing page as well. Because a number of operator messages are high priority, users prefer having easy access to these. For more information about some of the functionality (such as Read and Delete) that should be included for text messages, see Messages.

Links to other key pages

Links to other key pages can be provided on the landing page. In the previous figure, a tile for Help and Support and a tile for Services are provided.

App navigation

While describing the landing page, it is also important to think about navigation within the app. Your app will have multiple pages with different purposes. Windows 8 has a number of tools that can be leveraged for navigation:

- Back button – The Back button can be used to go back to the previous page in the app. For more information about the Back button styling, see Quickstart: styling controls.

- Drop-down affordance with header text – The header text can be used as a drop-down affordance for navigation between multiple pages within an app. In the previous sample image, clicking Account Overview results in a drop-down list of pages in the app that can be navigated to, as shown in the following figure.
Figure 4: Navigating between app pages

Some references on app navigation can be found here:

- [Supporting Navigation Part 1](#)
- [Supporting Navigation Part 2](#)
- [Drop down list box](#)

Operator branding

Windows 8 Metro style mobile operator apps offer plenty of opportunities for operators to customize their app to suit individual branding style. With numerous customizations, operators can make their app unique and easily recognizable. For more information on operator branding, see [Branding](#).

Quick summary

**Appropriate design for the landing page:**

- Do show information at a glance that users will primarily need your app for.
- Do use a simple layout to improve readability.
- Do follow Metro style app guidelines, especially content over chrome.
- Do disable the Back button if this is the first time the user is visiting the app.

**Inappropriate design for the landing page**

- Do not have scrolling on the landing page. Try to restrict all content to a single page.
• Do not have management functionality on the landing page.

Useful links
• Various layouts – grid, list, and so on
• Design checklist
• Use templates and built-in controls
• Metro look and feel
• Design for handling errors
• Splash screen
• Tile and toast notifications

Branding
Some ways in which Metro style apps encourage branding are:
• Customization of colors and fonts – This includes being able to customize background colors and font colors. Operators are provided with the opportunity to use their corporate/brand font colors in the app to differentiate as well as their secondary brand colors.

• Use brand imagery – The Windows 8 connection manager uses logos provided with metadata to allow users to connect. While using imagery, however, simplicity is encouraged to keep the overall look and feel of the app inviting. Brand imagery can be used on the splash screen and on the start screen tiles.

The following list enumerates the different places an operator app can use branding:
• Start screen tile 1x1

![Figure 8: Start screen small tile with brand icon, color, and name](image)

• Start screen tile 2x1
Figure 6: Start screen large tile with brand icon, color, and name

- **Settings charm** shows brand name
- Uninstall UI on the Start menu shows an icon and name
- Toast

Figure 7: Toast with branding color and icon

- Task manager with brand icon and name
- Mobile broadband info in PC settings (shows operator name)
- Splash screen

Figure 8: Splash screen with brand icon, name, and color

- Connection manager
Figure 9: Brand icon and name in connection manager

For more information about Windows 8 branding guidance, see Plan for branding.

Quick summary

**Appropriate design for operator branding:**
- Do use corporate primary and secondary brand colors in your app for backgrounds and fonts
- Do use brand icons appropriately to avoid compromising simplicity and Metro style app design guidelines

**Inappropriate design for operator branding**
- Do not try to fill up white space with icons and images

Useful links
- Splash screen
- Settings charm
- Tiles and toast
Account balance and usage info

Designing account balance and usage info

Post-paid plans

Summary

for (425) 555-0100

225 out of 250 MB used
10% remaining

18 of 28 days left
Next bill cycle Oct. 10, 2012

11 MB used while roaming
Last updated yesterday

Figure 10: Showing account balance and usage info for postpaid plans

End users will primarily use your app to view relevant account balance and usage information. Account balance and usage information should be easily visible on the app’s home screen (the first screen visible to the end user after the app’s splash screen is shown).

Relevant account information shown here includes:

- Mobile phone number of account
- Account balance remaining
- Data used, roaming data used, and usage remaining
• Billing period or plan expiration date

At a glance, end users can clearly understand how much data they’ve used, how much data they have left, and when the billing cycle ends (for monthly accounts).

Prepaid plans

Summary for (425) 555-0100

Your prepaid balance

$XX.XX

Recharge now

1.75 out of 2 GB remaining
Expires Monday, 27 April 2012

11 MB used while roaming
Last updated yesterday

Figure 11: Showing account balance and usage info for prepaid plans

End users will primarily use your app to view relevant account balance information. Account balance should be easily visible on the app’s home screen (the first screen visible to the end user after the app’s splash screen is shown).

Relevant account information shown here includes:

• Mobile phone number of account

• Account balance remaining

• Button to Recharge Now (links to Make a Payment page)
• Data used and remaining

• Plan expiration date (if it exists)

At a glance, end users can clearly understand their account balance and usage information.

Quick summary

Appropriate design for showing account info:

• Do show relevant account information.

• Show when data was last updated.

• Use illustrations such as charts and graphs as appropriate to visualize data.

• When usage remaining is low, show link to the plans page in app to upgrade plan.

Inappropriate design for showing account information

• Don’t show a long paragraph of legal disclaimers next to data usage. This can distract end users from the main focus of the account usage section. Instead, show a link to a separate section of the app that has the full legal disclaimers.

Useful links

• A bar chart can be implemented using a determinate progress bar UI control.
Messages

9/25/12, 12:00 PM
Welcome to the UK. For $5 per day you have 25MB of data, then its $1 per 1MB. SMS is $0.49 per msg. Learn more at www.contoso.com/rates/uk

9/22/12, 5:00 PM
You’ve used all of your X GB data plan. Overage bills @ $Y/Z GB. Save on more data by upgrading your plan today in the plans page.

9/02/12, 3:00 PM
You’ve used 65% of your X GB data plan. Any overage bills @ $Y/Z GB. Tip: Data is unlimited over Wifi. Learn more in the plans page.

8/28/12, 1:00 PM
Your plan expired on Aug 24, 2012. Renew your plan by going to the plans page.

8/26/11, 11:00 AM
Great news! Effective immediately, Contoso is increasing the amount of data included in your

Figure 12: Showing operator messages

Your Metro style app is a convenient way to communicate with your customers about important account information. The app should have a section on the home screen or have a link on the home screen to a separate page where end users can view important account messages received from the mobile operator. While important operator messages should be shown as tile and toast notifications, they should also be shown in app view due to the transient nature of toast notifications and the limited amount of text that can be shown in a tile notification.

User-to-user “chat” text messaging and promotions and advertisements should not be shown in the messages section mixed with operator notifications and alerts because customers may miss important operator notifications. You can display promotions and advertisements within the layout of your app and display user-to-user “chat” text messages in a separate section of the UI instead.
Table 1: Examples of operator messages and alerts

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>International roaming</td>
<td>Welcome to the UK. For $5 per day you have 25 MB of data, and then it’s $1 per 1 MB. SMS is $0.49 per msg. Learn more at <a href="http://www.contoso.com/rates/uk">www.contoso.com/rates/uk</a></td>
</tr>
<tr>
<td>Data usage overage</td>
<td>You’ve used all of your X GB data plan. Overage bills @ $Y/Z GB. Save on more data by upgrading your plan today in the plans page.</td>
</tr>
<tr>
<td>Data usage status</td>
<td>You’ve used 65% of your X GB data plan. Any overage bills @ $Y/Z GB. Tip: Data is unlimited over Wi-Fi. Learn more in the plans page.</td>
</tr>
<tr>
<td>Plan Expiration</td>
<td>Your plan expired on Jan 1, 2011. Renew your plan by going to the plans page.</td>
</tr>
<tr>
<td>Account update</td>
<td>Great news! Effective immediately, Contoso is increasing the amount of data included in your DataPro Tethering plan from 2 GB to 4 GB. The monthly charge for your plan will not change and no action is required by you. Thank you for being a great customer.</td>
</tr>
</tbody>
</table>

Quick summary

**Appropriate design for showing operator messages:**

- Include functionality to view a list of all messages received, view full details of a message, and the ability to delete a message.

- Show important operator messages in a section of the home screen of the app or on its own page in the app.

**Inappropriate design for showing operator messages:**

- Don’t show user-to-user “chat” text messages and promotions and advertisements mixed together with operator notifications and alerts, because end users may miss important operator notifications.

Useful links

- Use [ListView](http://www.example.com) UI control for displaying messages

- Use [app bar](http://www.example.com) UI control for viewing and deleting messages

- [Tile and toast notifications](http://www.example.com)
View and pay bills, recharge, and refill

Design of billing pages

Provide the user with the ability to view their bills and make bill payments. The following picture shows a view that allows the user to view his or her billing summary and history for postpaid plans and provides an entry point to make a payment or recharge his or her plan:

![Billing screen](image)

**Figure 13: A View Bill page**

The **Make a payment** form should adhere to form guidelines described in the purchase flow. This page can be linked to from the **Billing** page for post-paid plans and through the **Recharge now** button on the landing page for prepaid plans.

![Make a payment screen](image)

**Figure 14: Sample layout for a page where a user can make payments**
Quick summary

**Appropriate design for the billing page:**
- Do follow the form guidelines including left alignment, white space, proper grid alignment, and touch friendliness.
- Do use a simple layout to improve readability.
- Do vertical scrolling for long forms because this makes tabbing and using the online keyboard easier.
- Do make the making payments process a simple experience.

**Inappropriate design for the billing page:**
- Do not try to fill up white space unnecessarily.
- Do not use an iframe to host the flows. Instead build flows directly into the app experience.
- Do not make the user wait long times without providing user with visual feedback.
- Do not link to external sites outside of the app.

Useful links
- Views and [layouts](#)
- [List view](#)
- Design guidance for [handling errors](#)
- Form [accessibility](#)
- Use [built-in controls](#)
- Touch input [guidelines](#)

Purchase flow
Your app may have a purchase flow for users to be able to purchase plans. Avoid using an iframe to host the following flows in your app.
The purchase flow is useful for users to easily be able to purchase plans. For first-time purchases, support your purchase flow over the web. Here are some standard recommendations for the purchase flow:
1. Show users the plan details, allowing them to pick a plan before launching them into a complete purchase flow, as shown in the image below.
Figure 15: Show plan details first

2. Optional - Provide a data breakdown for users to be able to estimate the amount of data they will require. This could help the user in choosing the right plan to purchase. An example is provided here.

Figure 16: Optional data breakdown to help user select plan

3. If your purchase flow contains forms, follow these guidelines:

- Allow vertical scrolling in form pages.
- Make sure to have all form fields left aligned.
• Because the app needs to be compatible with multiple form factors, touch-friendly spacing between form fields is encouraged.

• Leave plenty of white space to promote simplicity and not detract from the purpose of the page.

• Follow best practices for form support. This includes but is not limited to providing proper support for address, number, and credit card fields.

• Ensure that the input scope is defined for form fields so that the appropriate touch keyboard shows for fields—for example, number, text, and so on.

• Ensure that the form has all controls and fields properly aligned.

• Try to minimize the number of clicks and fields the user has to deal with.

A sample form is shown here.
Figure 17: An example of a form layout for when a user purchases a plan

4. After the user enters his or her info, allow the user to review the order before completing the purchase. If the order is placed and activation is quick, continue with activation and redirect the app to the landing page. If activation is expected to take longer, a placeholder page for activation progress can be included after this page with a progress control to indicate that activation is happening.
Review and place your order

Payment and Billing Information
- Credit card: Visa
- Billing info: Melissa Macbeth, 4367 Main St, Buffalo, NY 14202-0002
  - (425) 555-4530

Customer agreement
- I agree to the full Zensys Customer Agreement

Confirmation Email
- Email: someone@example.com

Plan
- $30.99: Week Pass (250MB)
- $6.00: Taxes and Other Charges
- $36.99: Total

Figure 18: An example of an order review page

Some other scenarios that you might want to support include but are not limited to plan changes and upgrades.

Quick summary

Appropriate design for the purchase page:
- Do follow the form guidelines including left alignment, white space, proper grid alignment, and touch friendliness
- Do use a simple layout to improve readability
- Do vertical scrolling for long forms because this makes tabbing and using the onscreen keyboard easier.
- Do let users review and choose plans before launching the purchase flow.
- Do support purchase over the web as well for first-time purchase.

Inappropriate design for the purchase, recharge, refill, and billing page:
- Do not have horizontal scrolling for long forms.
- Do not try to fill up white space unnecessarily.
- Do not use an iframe to host the flows.
- Do not make the user wait long periods of time without providing visual feedback.
- Do not link to sites outside the app.

May 31, 2012
© 2012 Microsoft. All rights reserved.
Useful links

- Views and layouts
- List view
- Design guidance for handling errors
- Form accessibility
- Use built-in controls
- Touch input guidelines

Help and support

![Help and Support sample page](image)

**Figure 19: Help and Support sample page**

Designing the help and support page

Customers encountering issues using your mobile broadband service will go to the help and support page. Recommended information to show in the help and support section includes:

- Instructions, tutorial videos for using mobile broadband service
- FAQs about mobile broadband hardware and service
- Online chat with customer support
- Customer support telephone number
- Hardware and software diagnostics information
Quick summary

**Appropriate design for help and support page:**
- Displaying help and support content doesn’t require an Internet connection. The customer may not have Internet access because they’re having issues connecting to your service. Displaying help and support content should not require Internet access.

**Inappropriate design for help and support page:**
- Avoid displaying links that open a web page in an external web browser. For the best user experience, all help and support content should appear inside the app and the end user shouldn’t need to switch between apps.

Useful links
- Use built-in controls
- Developing a Metro style device app for Mobile Broadband

Services and goods

Design of the services and goods page

The Windows 8 Metro style device app can also be used to publicize other related services. Use the recommended layouts to organize the various services you would like to promote through the Windows store. An example of service promotion with an organization into categories is provided here.
**Figure 20: Services and goods page**

Quick summary

**Appropriate design for the services page:**
- Do follow the grid layout for the services page.
- Do use pictures and brief headings to describe each service.
- Do make use of the Windows store for cross promotion.
- Make use of natural panning and zooming as well as horizontal scrolling.

**Inappropriate design for the services page:**
- Do not link to external sites outside of the app

Useful links
- [List view](#)

**Integration with other Windows components**

There are a number of other UI surfaces that can be used to enhance the overall experience of your app. Some of these are described in this section.

For additional Metro style user experience design guidelines for layout, navigation, commanding, animations, touch interaction, snapping and scaling, contracts and capabilities, tiles and notifications, UI controls, app roaming to the cloud, and fundamentals, see [UX guidelines for Metro style apps](#).

**Settings charm**

The [Settings charm](#) can be used to include settings for your apps configuration. Some examples of these are:
- Log in/log out
- View/edit your profile
- Change billing address
- Payment options
- Marketing preferences
Error UX

General
An Metro style device app for mobile broadband can have a number of error cases that should be dealt with gracefully. Some common examples are:

- Device is missing or unplugged—this error could appear when a device such as a SIM or a dongle is missing or unplugged. A notification bar error is recommended for such cases – see Figure 21.

- Locked device—this error could appear when a connected device is locked to the end user. Again, a notification bar error style is recommended here.

- Internet connectivity lost—this error could appear when no network connection is detected, either mobile broadband or wireless. Again, because some sections of the app will still be usable, it is recommended that you use the notification bar.

- Multiple devices are plugged in—this could happen when an in-built adaptor and an external dongle are plugged in. Use the notification bar here as well.

- Form field validation errors—if a user enters incorrect information into a form, validation errors should be shown inline so the user is immediately aware of what each error is associated with.

For guidance on how to present errors for these error cases and others, see Choosing the right UI surfaces. An example of an error on the overview page appears in the following figure. A bar at the top of the screen is used in this case.

![Account Overview](image)

**Figure 21: Using a notification bar to show errors in the app**
Errors in data usage
The following error cases on the overview page should be handled as follows:

- *When the user is near plan expiration:* Use a bar on the top of the screen to indicate to the user that he or she is near plan expiration.
- *When usage is over the data cap:* The data bars should be full. There should also be an inline message describing the issue and telling the user what he or she can do about it. Alternatively, like plan expiration, the over data cap usage message could also be in a notification bar on the top of the page.
- *When the plan is expired:* Use a bar on the top of the summary box describing the issue and what the user can do about it. For this case, data usage, billing cycle, and roaming information is removed.
- *International roaming:* Indicate at the bottom of the summary section.

App views
Your app should be adaptive and be able to fit a number of layouts. This includes:

- Landscape
- Portrait
- Snapped
- Filled
- Keyboard up

For more details on the first four of these views, see [Designing flexible layouts](#). When the touch keyboard is up, ensure that elements such as form fields scroll appropriately. Here are examples of how some pages in the app would look in snapped view.
Another aspect of app views involves making sure your app is accessible. This includes high-contrast mode and screen reader readiness. Some additional resources on making your app accessible can be found in Accessibility in Metro style apps using JavaScript.

Launch points

Your Metro style app is available to end users as a tile on the Start screen, in the connection manager, or through a toast notification.
Figure 24: Entry points to launch the Metro style mobile operator app
Launching from the connection manager

![Image of connection manager interface](image)

**Figure 25: Launching from the connection manager**

The connection manager includes a link for users to view their account by launching your Metro style device app. Your app should open to the landing page with account and data usage information.

**Automatic launch from connection manager during a captive portal purchase flow**

When connected to a captive portal network where web traffic is redirected, Windows provides mobile network operators the option to automatically launch their app if it’s installed. The app should open to the plans page with information on how to purchase Internet access.

**Launch from tile on start screen**

If your app was suspended or already running, it should show the last page used. If your app wasn’t already running or suspend information is not available, your app should open to the landing page.

Your app should support the scenario of end users with multiple simultaneous accounts (for example, using two external USB mobile broadband adapters). When your app is launched from a tile, your app should enable end users to select which account they want to use.

**Tile and toast notifications**

In the Start screen, **tiles** are the primary representation of an app. Users launch their apps through those tiles, which can display new, relevant, and tailored content to the user through notifications. This makes the Start screen feel vibrant and allows the user to see at a glance what’s new in their world. An app can also communicate time-critical events to the user through **toast notifications** whether the user is in another
app, on the Start screen, or on the desktop. The methodology to design and deliver toast closely parallels that of tiles, lowering the learning curve.

Figure 26: Start screen tile

Figure 27: Toast notification for operator messages

A toast notification can contain text and images but secondary actions such as buttons are not supported. Think of toast as similar to a Windows balloon notification arising from the taskbar’s notification area. Like those notifications, a toast appears in the lower-right corner of the screen. When a user taps or clicks on the toast, the
associated app is launched in a view related to the notification. It is the only mechanism by which one app can interrupt a user in another app. Toasts can be activated, dismissed, or ignored by the user. The user can also choose to disable all toasts for an app.

A toast notification should only be used for information considered of high interest to the user, typically involving some form of user opt-in; therefore, it is a good choice for incoming email alerts, IM chat requests, and breaking news. However, it is extremely important that when you consider using a toast notification, you realize that, due to its transient nature, the user might never see it. When using toast notifications for data usage overage or roaming alerts, consider showing the information on your tile and within your app views in case the end user misses the toast notification.

**Examples of operator notifications and alerts**

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>International roaming</td>
<td>Welcome to the UK. For $5 per day you have 25MB of data, then it’s $1 per 1MB. SMS is $0.49 per msg. Learn more at <a href="http://www.contoso.com/rates/uk">www.contoso.com/rates/uk</a></td>
</tr>
<tr>
<td>Data usage overage</td>
<td>You’ve used all of your X GB data plan. Overage bills @ $Y/Z GB. Save on more data by upgrading your plan today in the plans page.</td>
</tr>
<tr>
<td>Data usage status</td>
<td>You’ve used 65% of your X GB data plan. Any overage bills @ $Y/Z GB. Tip: Data is unlimited over Wifi. Learn more in the plans page.</td>
</tr>
<tr>
<td>Plan Expiration</td>
<td>Your plan expired on Jan 1, 2011. Renew your plan by going to the plans page.</td>
</tr>
<tr>
<td>Account update</td>
<td>Great news! Effective immediately, Contoso is increasing the amount of data included in your DataPro Tethering plan from 2GB to 4GB. The monthly charge for your plan will not change and no action is required by you. Thank you for being a great customer.</td>
</tr>
</tbody>
</table>

**Quick summary**

**Appropriate design for showing operator notifications:**

- Use both toast and tile notifications to alert users of important and high-interest messages related to the subscriber’s account and service plan.

- Customize toast and tile background colors and logo based on your brand guidelines.

- Important SMS or USSD operator notifications and alerts related to the subscriber’s account and service plan should be included directly on the landing page.

**Inappropriate design for showing operator notifications**

- Don’t show toast notifications for information that is not real time (such as promotional advertisements). Toast notifications are transient; use a tile notification instead.
Don’t show user-to-user “chat” messages and promotions and advertisements mixed with operator notifications and alerts, because end users may miss important operator notifications.

Useful links

Splash screen
A splash screen is a great tool to promote branding. For more information about the splash screen, see [Adding a splash screen](http://msdn.microsoft.com/en-us/library/windows/apps/hh465427(v=VS.85).aspx). A splash screen example appears here.

![Contoso Wireless](ContosoWireless.png)

**Figure 28: Splash screen example**

Resources

//BUILD keynote video - 8 traits of great Metro style apps

**Designing Metro style apps**

**UX guidelines for Metro style apps**

**Overview of Mobile Broadband in Windows 8**
[http://go.microsoft.com/fwlink/?LinkId=242052](http://go.microsoft.com/fwlink/?LinkId=242052)
Preparing to Develop Mobile Operator Apps
http://go.microsoft.com/fwlink/?linkid=242057

Development Guide to Creating Mobile Operator Apps
http://go.microsoft.com/fwlink/?linkid=242058