

BlackBerry PlayBook Tablet

Version: 2.1



UI Guidelines

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Designing applications

Welcome to application design for the BlackBerry PlayBook tablet! The BlackBerry PlayBook tablet provides you with a new opportunity to create a dynamic experience for your users. By creating a visually rich application, you can engage users in a powerful way. And yet, by using a simple navigational model, you can create essential business applications that can be used in a highly secure environment.



This document contains core design principles and best practices for designing applications for the BlackBerry PlayBook tablet. As you start designing applications, consider how you can incorporate these core design principles. In addition to these principles, consider the attributes that are important to the majority of your users. For example, most game enthusiasts want to play games that are entertaining, visually appealing, and challenging. In contrast, organizations want utility applications that increase efficiency and productivity.

The design process involves evaluating choices and making decisions. As designers, you shape the user experience by balancing user goals with the data, environment, and usability requirements of the application. The best way to find out if your application successfully integrates the most important attributes and requirements is to evaluate it with users.

UI characteristics of the BlackBerry PlayBook tablet

- 7 inch (17.8 cm) screen size

- Multi-touch capacitive screen that supports up to four simultaneous touch points
- Landscape-oriented display with support for portrait display
- On-screen virtual keyboard and optional external keyboard

Display specifications

Design the UI for your application to be independent of screen size. If future versions of the BlackBerry PlayBook tablet have different screen sizes, you can avoid rework by designing applications that are flexible enough to fit a range of screen sizes.

Screen resolution	Aspect ratio	Pixel density	Dot pitch
1024 x 600 pixels	17:10	170 pixels per inch (66.7 px/cm)	0.15 mm

Related information

[Make your application touch-centric](#), 12

[Screen design](#), 14

Constraints of designing for mobile devices

Strive to provide a balance between the best possible user experience, a long battery life, and efficient connections to the wireless network. When you design your application, consider the differences between mobile devices and computers. Mobile devices have the following characteristics:

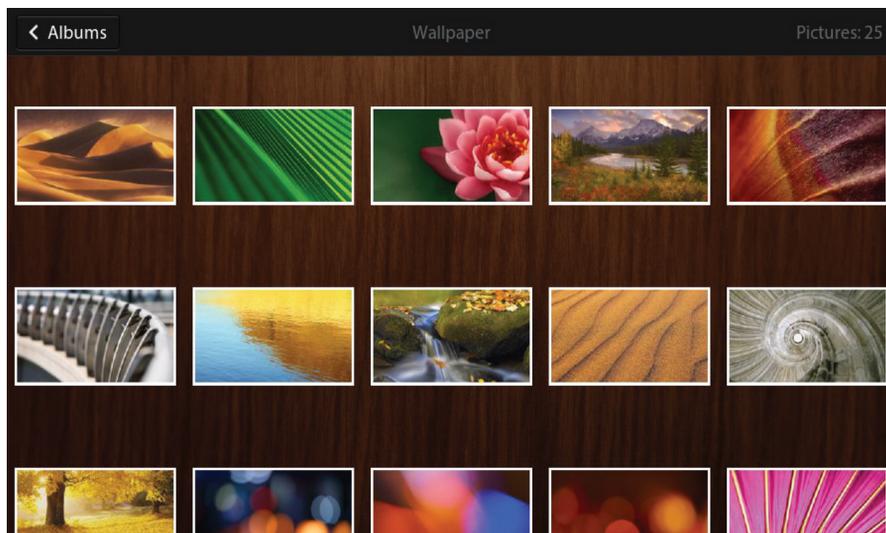
Characteristic	Guideline
Smaller screen size	Stay focused on the user's immediate task. Display only the information that users need at any given moment. For example, a customer relationship management system can provide a massive amount of information, but users only require a small amount of that information at one time. Design the UI so that users can perform tasks easily and access information quickly.
One screen appears at a time	Use a single screen if possible. If your application requires multiple screens to be open at the same time, use a split screen or rethink the flow of your application.
Shorter battery life	Try to handle data transmission efficiently. The less often the device needs to transmit data, the longer the battery lasts.
Wireless network connections	Try to simplify how your application creates network connections. Compared with standard LANs, longer latency periods that are inherent in some wireless network connections can influence how quickly users receive information that is sent over the network.

Characteristic	Guideline
Slower processor speeds	Avoid processor-intensive tasks where possible. Slower processor speeds can affect how users perceive the responsiveness of an application.
Less available memory	Free up as much memory as possible. For example, while an application is not being used, try to keep it from using memory.

Design principles

Design for a limitless screen

If you are used to designing for a smartphone, you might have organized the screens in your application in a hierarchy. Try to avoid this approach when you design applications for the BlackBerry PlayBook tablet. Instead of creating an application with a hierarchy that users have to navigate, create an application that has a flat structure. Think of the screen as a window into your application instead of a container for the entire application. For example, if the number of photo albums does not fit on the display area of the screen, show part of a photo album at the edge of the screen so that it is obvious to users that they can view more albums by swiping up or down on the screen.



Use a canvas strategy

The large area of a typical computer interface allows you to present an application with a mix of content and UI components. The same application that is created for the BlackBerry PlayBook tablet requires a different strategy. In most situations, your application should make use of the entire screen, use gestures to control workflow, and access additional options only when necessary.

If you have a large amount of information to present, try to think of the screen as a frame that contains a small view of a large canvas. Users can move the view by dragging a finger in any direction, or by swiping to move the view quicker or a greater distance. For example, you might use this type of interaction when navigating within a map or large image.

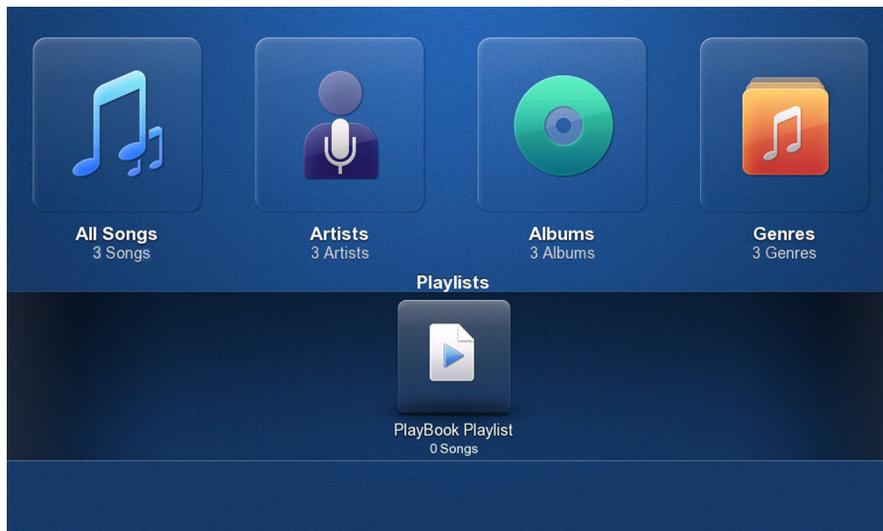


As part of your canvas strategy, you should consider how the content behaves in response to gestures. One way to do this is to categorize your canvas as either continuous or discrete. A continuous canvas contains content that can be arbitrarily subdivided (for example, a map or a building blueprint). A discrete canvas contains content that has obvious, defined subcomponents (for example, a deck of cards, a contact list, or an eBook).

On a continuous canvas, consider allowing users to move (pan) slowly through the content, move quickly, zoom in and out, and perhaps rotate. On a discrete canvas, you should also consider allowing users to move (shift) slowly or quickly through the content, but there are likely some other actions that you might want to enable using gestures. For example, you can flip over a card, navigate within a contact list, or jump to the next chapter in a document.

Focus on content

Create and present content that absorbs and engages users in a way that is similar to how movie-goers get drawn into the cinematic experience of a film. Manage the content with seamless workflow transitions.



Make your application easy to use by taking intuitive action when users interact with the content. Instead of populating screens with UI components such as buttons and scroll bars, try to create an experience where users interact with the content itself. For example, when users tap an album, your application should display the list of songs in the album. Users should also be able to tap an album to open it instead of highlighting the album and tapping a button labeled Open.

You can place frequently used UI components on the main screen, but do so judiciously. Reserve the majority of the screen for users to interact with the content in your application. If you include a UI component, make sure that you give users an unobstructed view of the content. For example, display media player components at the bottom of the screen to allow users a clear view of the list of available songs.

Simplify the functionality

Identify a single purpose for your application. Try to identify the one goal that you want your application to achieve, and then design your application to support that single purpose. For example, the main purpose of an application that manages pictures might be to "remember that moment."



As you identify the goal, you might need to make some tough decisions. For example, if the main purpose of your application is to allow users to view pictures, make sure you limit the functionality that you provide on the screen only to the features that make viewing pictures a fantastic experience for users. Where possible, move the functionality that is not essential to the primary workflow to a menu.

If you are porting an application that is designed for a computer to the BlackBerry PlayBook tablet, simplifying the functionality might be a challenge. Design your application to include the essential features for mobile users. Provide only the features that people really care about.

Support user data input

You should support data input for your users as much as possible. This could be as easy as opening the numeric keyboard for a user to type a phone number in a field or capturing data using other means, such as GPS, a Bluetooth enabled sensor, a camera, or an accelerometer. Limiting the data that users need to input can reduce the burden on users and greatly improve the usability of your application.

Another way to support user data input is to make sure that you combine similar input operations together in the flow of your application, so that users don't need to change input modes or navigate to another screen. For example, a mapping application might allow users to place landmarks on a map. You could allow users to access a menu, choose a landmark tool, reactivate the map content area, and then place the landmark. But a better solution might be to allow users to simply touch and hold the desired map location and have your application place a landmark pin at that location after a few seconds.

Make your application touch-centric

A touch-centric experience on the BlackBerry PlayBook tablet means that users interact with content by using gestural interactions, such as swiping, instead of "poking" UI components. Avoid cluttering the screen with UI components and design your application to take advantage of the gestural interactions. For example, allow users to zoom in to a picture by using the pinch out gesture instead of tapping a button to incrementally zoom in.

Bezel gestures

The BlackBerry PlayBook tablet supports gestures from the device bezel (the frame around the display area of the screen). The "swipe from the bottom of the screen" gesture is a core interaction, which displays the application list. If the application list is displayed already, this gesture displays the open but minimized applications. There are other bezel gestures that are available for you to use as shortcuts to features in your applications. These gestures include the following:

Gesture	Expected result
Swipe from the top of the screen	Displays a menu for settings or options
Swipe from the left or right side of the screen	Switches applications
Swipe from the top corners of the screen	Displays application notifications and status indicators
Swipe from the bottom left corner of the screen	Displays the keyboard

Interactions with content on the screen

If they apply to your application, you can implement the following interactions to allow users to directly manipulate content on the screen.

Gesture	Expected result
Tap	This gesture initiates an action. For example, when users tap an application icon, the corresponding application opens.
Double tap	This gesture focuses on the targeted area of the screen (for example, by zooming in or out).
Drag or swipe	This gesture moves the content on the screen in the direction of the drag or swipe and at the corresponding rate of speed. For example, users can move slowly through a list by dragging a finger on the screen, or they can move quickly through a list by swiping across the screen.

Gesture	Expected result
Touch and hold	This gesture highlights a sequence of characters, a word, a link, or an item, such as an email or picture.
Multi-touch	With two touch points, this gesture highlights a block of text or items. Up to four simultaneous touch points are supported and they can be application-specific.
Pinch out or pinch in	This gesture zooms in to or out from an item.
Pivot	This gesture rotates an item or the view.

Best practices

- Carefully consider where you place UI components. Try to keep a 15-pixel margin around UI components and around the edge of the screen, especially along the top and bottom of the screen. Otherwise, users might inadvertently open a menu or display the application list.
- Use a target area of at least 5.5 mm for custom UI components, or at least 4 mm if the component extends across the full width of the screen. It's a good idea to test the size of the target area with users. Components need to be large enough to touch with a finger, and this size depends on the layout of the screen and the proximity to other UI components.
- Add visual cues to encourage users to explore the gestures in your application. For example, you can add a slider that users can use to adjust a value by dragging a finger across the component.

Screen design

The BlackBerry PlayBook tablet has a landscape-oriented display. In most cases, you should lay out your application in landscape view. When designing your application, think about ways to create a widescreen experience for users. For example, position UI components on the sides of the screen instead of the top or bottom of the screen to take advantage of the additional width.

In some cases, displaying an application in portrait view offers distinct benefits and provides a better experience for users. For example:

- Typing: It's easier for users to type with their thumbs when they are holding the tablet in portrait view.
- Reading: Users are familiar with the layout of content in portrait view, and it provides a shorter width of each line in a paragraph.
- Navigating long lists: Users can see more list items in portrait view.

Identify the primary orientation in which users will interact with your application and whether the other orientation offers distinct benefits. You can lay out your application in portrait view, landscape view, or both views. The BlackBerry PlayBook tablet is designed to transition seamlessly if users switch between views.

Best practices

- Place important information near the top of the screen. Think top-down when laying out your screen.
- Avoid placing content where common interactions too often obstruct it.
- Position UI components close to where users' thumbs would be when holding the tablet.
- Use BlackBerry UI components where possible, so that your application can inherit the default behavior of the component. Users do not have to learn new behaviors for the components that you implement in your application. If future versions of the BlackBerry PlayBook tablet have different screen sizes, you can avoid rework by using existing BlackBerry UI components. For more information, see the "UI Components" section.
- Avoid displaying a splash screen unless your application is resource-intensive and takes a long time to open.

Related information

[UI components](#), 21

Menus

The role of a menu is to move UI components, such as buttons and fields, off the main screen of your application. A menu can contain functionality that you want to hide to maintain a simple main screen, or settings and options that users less frequently access. If you implement a menu, users should access it using the "swipe from the top of the screen" gesture.



Text

Text is used to label items, provide instructions, and convey simple concepts. As simple as that may seem, text is one of the most important aspects of an effective UI. Designers, writers, and developers should work together to create effective text. If the text doesn't seem quite right, this can signal a design problem.

Best practices

- In general, all text on the UI should use friendly language and a conversational tone.
- Avoid wordiness. Too much of an explanation discourages reading and is inconsistent with the UI of the BlackBerry PlayBook tablet. If a complex concept must be explained, consider adding it to a Help screen.
- Avoid using trademarks or other symbols on the UI. Add these to an About screen instead.
- Place labels to the left of UI components in most languages. The only exceptions are check boxes and radio buttons, which should have the labels to the right.

Fonts

Myriad is the default and preferred font for the BlackBerry PlayBook tablet, because it is designed for easy reading for most users. Your application can use other fonts, but you should use co-ordinated typefaces and be consistent.

Best practices

- Use a font size of 21 pixels for normal text and 36 pixels for titles. You can use other font sizes, but avoid using any font smaller than 15 pixels.
- Use the standard font width for general purposes. The semi-condensed font width should be reserved for places where there is limited space.
- Use italic for emphasis. For example, you can use italic to emphasize a word, a short phrase, words in a foreign language that readers might not be familiar with, or titles of things or events.
- Avoid underlining text, except when you are creating a hyperlink within a longer string of text.
- Use a paragraph spacing of 2.5 times the font size. For example, with a font size of 21 pixels, use 53 pixels (21 x 2.5) paragraph spacing.

Capitalization and punctuation

Consistency is the most important aspect of text capitalization and punctuation. You should pay close attention to the usage of particular terms, phrases, and abbreviations, and make sure they always appear identical.

Best practices

- Do not use colons to terminate labels. Colons don't add any value when a label is adjacent to its UI component. Instead, vertically align multiple labels to the left, leaving space between the labels and the related UI components.
- Avoid unnecessary end punctuation. Complete sentences end with a period, but short phrases and lists typically do not.
- Avoid using all uppercase characters. Uppercase text can make users feel like you are shouting at them.
- Use bold when you refer to an alias or user-defined name for an object. For example, when users delete a bookmark, the name of the bookmark appears in bold (for example, "Are you sure you want to delete World News?").
- Avoid using ellipses (...) except to indicate truncated text.
- Use title case capitalization for all UI component labels except check boxes, radio buttons, or labels that might read like a sentence. Capitalize the first word, the last word, and all other words except articles or prepositions with fewer than four letters.

Word list

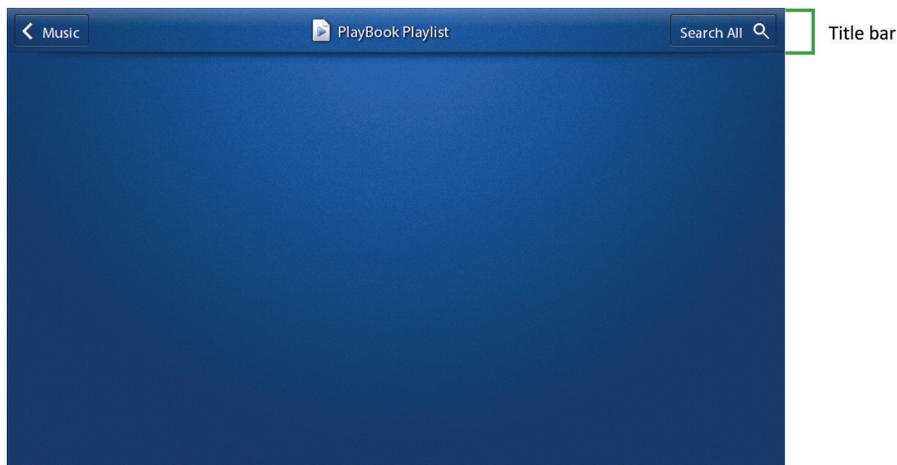
Term	Comment
abort (v)	Use "end," "quit," or "stop" instead.
alert (n)	Use "notification" instead.

Term	Comment
alert (v)	Use "notify" instead.
app (n)	Use "application" instead to avoid using jargon.
cancel (v)	Use to give users the option not to proceed with the associated action, or to stop an action in progress.
category (n)	Use "panel" to refer to a category of applications on the home screen.
close (v)	Use if there is no associated action other than to dismiss a dialog box.
continue (v)	Use "continue" so users know when the steps in a process or procedure are not complete.
e-mail (n)	Use "email" instead.
E-mail (n)	Use "email" instead.
email program (n)	Use "email application" instead.
ensure (v)	Use "verify," "make sure," "provide," or "check" instead.
erase (v)	Use "delete" instead.
hang (v)	Use "stop responding" instead.
image (n)	Use in the context of the browser and HTML messages. Use "picture" in the context of the camera and media applications.
keypad (n)	Use "keyboard" instead.
memory card (n)	Use "media card" instead.
navigator (n)	Use "multitasking view" to describe the section of the home screen that displays open but minimized applications.
nuke (v)	Use "delete" instead (for example, "delete all tablet data").
picture (n)	Use in the context of the camera and media applications. Use "image" in the context of the browser and HTML messages.
please (adv)	Use "please" if you ask users to repeat an action or if users need to wait.
ribbon (n)	Use "home screen" instead.
reboot (v)	Use "restart" instead.

Term	Comment
remove (v)	Use only to refer to removing software. Otherwise, use "delete" instead.
terminate (v)	Use "stop" instead.
uncheck (v)	Use "clear" instead.
user name (n)	Use "username" instead.
voicemail (n)	Use "voice mail" instead.
web site (n)	Use "website" instead.

Title bars

Use title bars sparingly. Only include title bars when users navigate hierarchical data in your application. For example, a title bar can show users where they are in relation to where they have been. Avoid including a title bar for an application with only one screen.



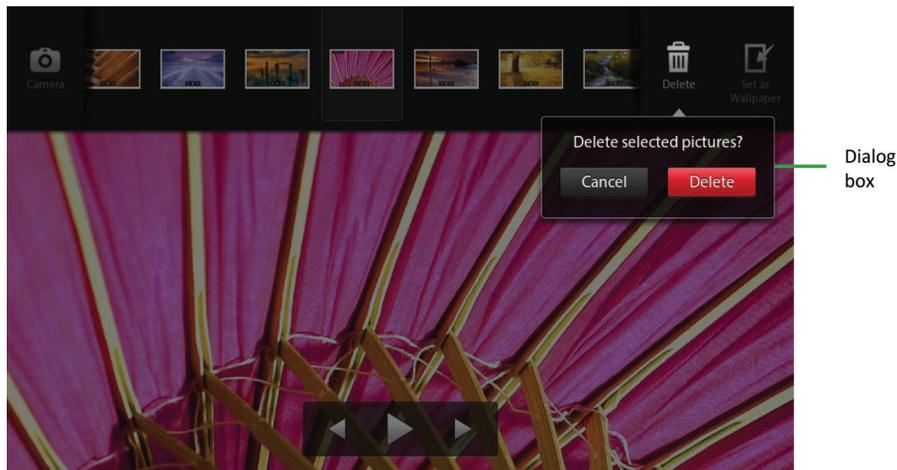
Dialog boxes

Dialog boxes should be used sparingly because they interrupt user workflow. Instead, provide information in line with a specific item where possible. For example, if a user doesn't complete a required field in a form, your application should identify the incomplete field instead of displaying a dialog box that describes the error.

You can use the same approach with progress information. For example, when a user downloads an application, your application can display the progress information in the current context. This approach allows users to complete other tasks while the action is in progress.

Best practices

- Use dialog boxes sparingly. Restrict dialog boxes to the following situations:
 - To inform users of urgent information or the status of important actions
 - To warn users of unexpected conditions or situations where there is the possibility of data loss
 - To present users with multiple options for choice or disambiguation
 - When a user action is required for your application to proceed
- Use an implicit save model where possible. For example, when setting options, apply each setting as the user changes it. Some exceptions exist. For example, if a user chooses to close a document that is being edited, you can use a dialog box to prompt the user to save changes.



Notifications and indicators

Application notification icons appear in the top-left corner of the home screen. These notifications inform users about application-specific events, such as a new email. You can trigger an application notification when a new event or new information is available that users might want to know about.

Status indicators appear in the top-right corner of the screen. These indicators display status information that applies across applications, such as battery power level and wireless connection.

When an application is running, users can view the notifications and indicators by swiping from the top-left or top-right toward the center of the screen. Users can access the details of a notification by tapping the icon at the top of the screen.



Best practices

- Use application notifications judiciously. Try to determine the types of events that users want to be notified of. Test your notification strategy with users to avoid unnecessary distractions or interruptions.
- Do not use application notifications to provide feedback to users, such as providing confirmation of a specific user action.
- Avoid using ellipses (...) to indicate progress. Ellipses should be used only to indicate truncated text. Instead, provide other visual indicators, such as activity or progress indicators.

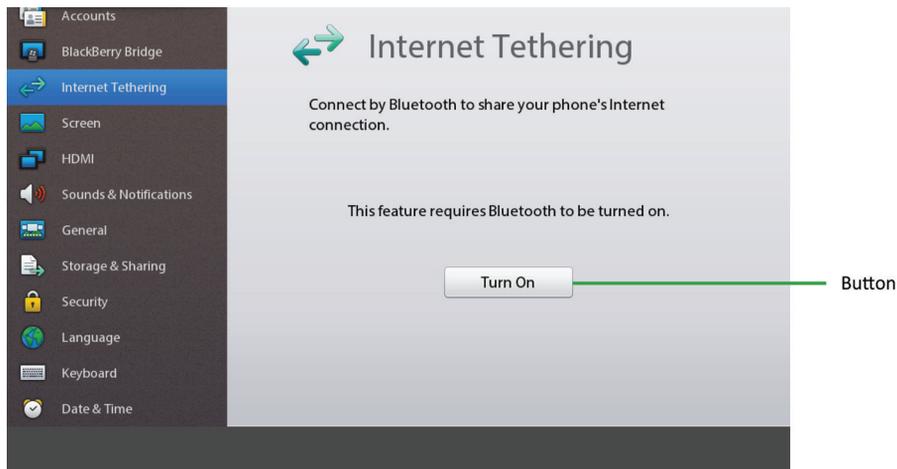
Related information

[Activity indicators and progress indicators](#), 29

UI components

Buttons

Use buttons to initiate actions. Users tap the button to initiate the action.



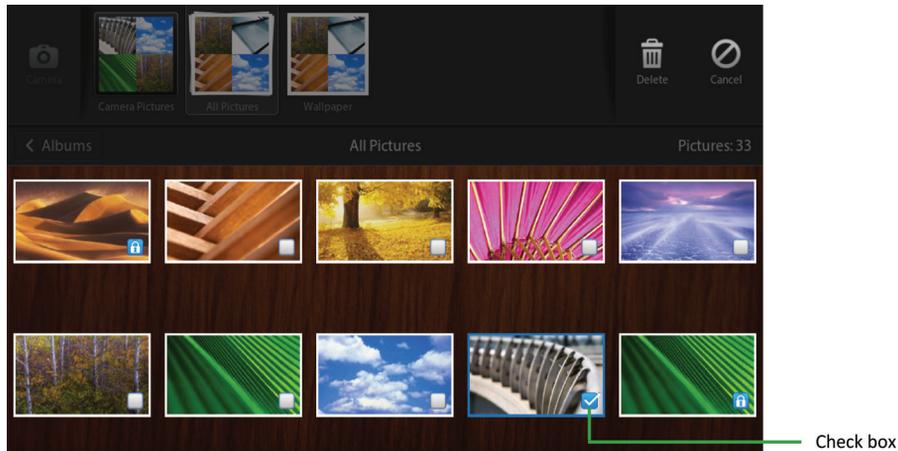
Best practices

- Use clear, concise labels.
- Use single-word labels where possible.
- Use verbs that describe the associated action, such as "Cancel," "Delete," or "Save".
- Use an icon instead of text if space is limited and the icon is easily understandable in the context.

Check boxes

Use check boxes when users can select multiple items or options. Users tap a check box to select or clear it.

You can use check boxes to allow users to select items before applying an action. For example, users can select multiple pictures and then delete them. If you have only a few options to present to the user, consider using toggle switches instead.



Best practices

- Do not start an action when users select a check box. For example, do not open a new screen on the select action.
- Group and order check boxes logically. For example, group related options together or include the most common options first.
- Avoid ordering check boxes alphabetically. Alphabetical order is language-specific.
- Use clear, concise labels. Verify that the label clearly describes what occurs when users select the check box.
- Use positive labels where possible. For example, use "Show" instead of "Hide."
- Place labels on the right side of check boxes.
- Use sentence case capitalization for the individual check boxes in a group. Capitalize the first word and any other word that requires capitalization (such as a proper noun).
- Do not use end punctuation.

Radio buttons

Use radio buttons to indicate a set of mutually exclusive but related choices. Users can select one option in a group. Users tap a radio button to select or clear it.

Best practices

- Use radio buttons for two or more choices when space is not an issue. If space is limited, consider using a drop-down list instead.

- Verify that the content for radio buttons remains static. Content for radio buttons should not change depending on the context.
- Do not start an action as soon as users select a radio button. For example, do not open a new screen when users select a radio button.
- Group and order radio buttons logically. For example, group related options together or include the most common options first.
- Avoid ordering radio buttons alphabetically. Alphabetical order is language-specific.
- Use clear, concise labels. Verify that the label clearly describes what occurs when users select the radio button.
- Place labels on the right side of radio buttons.
- Use sentence case capitalization for the individual radio buttons in a group. Capitalize the first word and any other word that requires capitalization (such as a proper noun).
- Do not use end punctuation.

Segmented controls

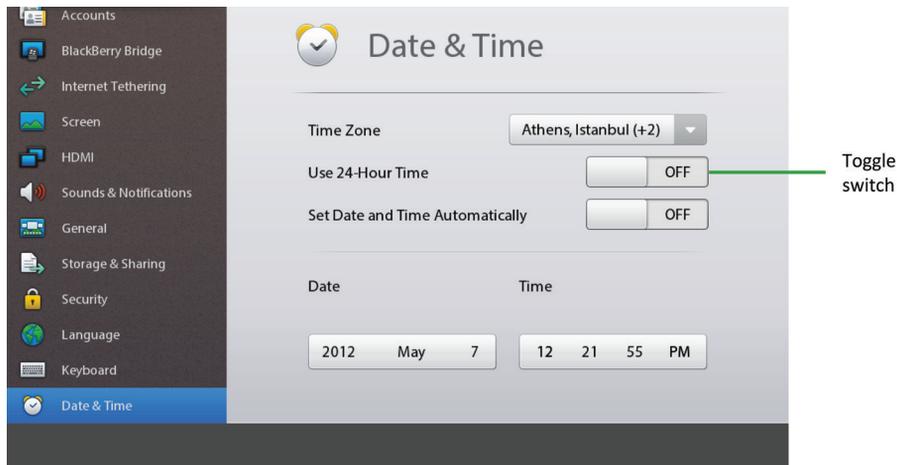
A segmented control is a series of connected radio buttons. You can use segmented controls to allow users to filter or change the content that is displayed on the screen. Users tap a segmented control to see a list of values. Users can tap a value to select it.

Best practices

- Group and order controls logically. For example, group related options together or include the most common options first.
- Avoid ordering controls alphabetically. Alphabetical order is language-specific.
- Use clear, concise labels.
- Use sentence case capitalization for the individual controls in a group. Capitalize the first word and any other word that requires capitalization (such as a proper noun).
- Do not use end punctuation.

Toggle switches

You can use toggle switches for most binary options. For example, you can use a toggle switch for an option that can be turned on and off. Users can tap the alternate option or drag the slider to the left or right to change the state of the switch.



Best practice

- Use terms that identify the state of the option, and not the action required to change the state. For example, "On" indicates the current state, while "Turn on" describes an action.

Text fields

If users need to type in your application, you can include text input fields. You can place the cursor in an editable text field. Users can reposition the cursor by tapping another text field.

Keyboards

A virtual keyboard appears on the screen when users tap a text field. Users can hide the keyboard by touching the screen outside the text field or by tapping the Hide Keyboard icon on the keyboard.

You can display a specific type of virtual keyboard, depending on the type of input that is required. In addition to the default keyboard, you can choose from a selection of keyboards, such as a keyboard designed for typing in an email or a keyboard designed for typing in a browser. For example, if users need to type an address for a website, you can display the URL keyboard, which includes a .com button that lets users type the URL for a website more quickly. For each text field in your application, make sure that the most appropriate keyboard appears when users touch the field.

In a form, users can press the Enter key to move the cursor to the next text field or UI component (for example, a Submit button). This approach makes it easier for users to complete the form. In specific instances, you might consider changing the label of the Enter key. For example, at the end of a form, you could change the label from Enter to Submit.

The virtual keyboard uses technology that is designed to predict words as users type them. Users can tap a suggested word or press the Space key to choose a word from the list.

Best practices

- Try to minimize the amount of text that users need to type. Typing on a virtual keyboard can be slower and more difficult than typing on a physical keyboard. Allow users to choose items from pickers where possible. In addition, try to store and display information that users enter so that they don't have to enter the same information again and again.
- If the primary task on a screen is to type text (for example, replying to a message or adding a new contact), then display the virtual keyboard when the screen opens.
- If the BlackBerry PlayBook tablet is connected to a physical keyboard, do not open the virtual keyboard automatically when users need to type text.
- Suppress word prediction in text fields that will probably include text that is not likely to be in the dictionary (for example in password, phone number, URL, email, and name fields). When users are typing, they might be annoyed if the keyboard tries to predict words for these types of fields.

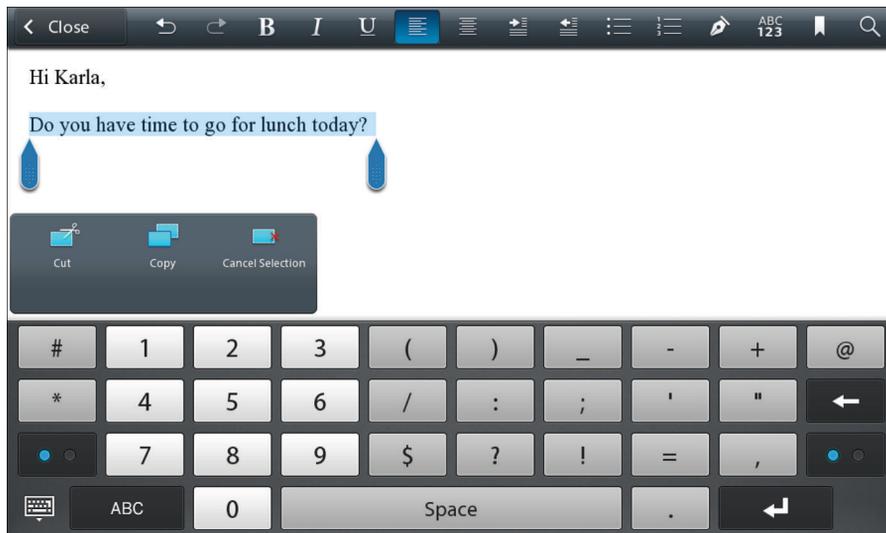
Highlighting text

In some applications, users might want to reuse text, links, or photos. For example, users might want to copy text from an email, save a link as a bookmark, or send a photo to a friend.

Users can highlight items in a couple of ways:

- Tap two fingers on the screen simultaneously.
- Touch and hold one or two fingers on the screen.

If users want to extend the highlighted area, they can drag the handles that appear at the beginning and end of the highlighted text.



When users highlight an item, a pop-up menu appears on the screen so that they can initiate an action, such as cut or copy text.

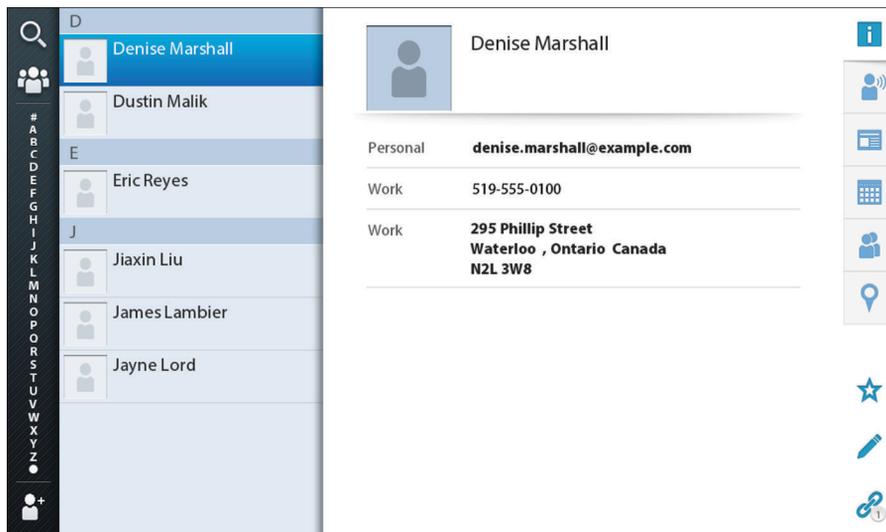
Lists

You can use different types of lists in your application. Users can swipe across the screen to move through a list. Users can tap an item in the list to select it.

Use drop-down lists to provide a set of mutually exclusive values.



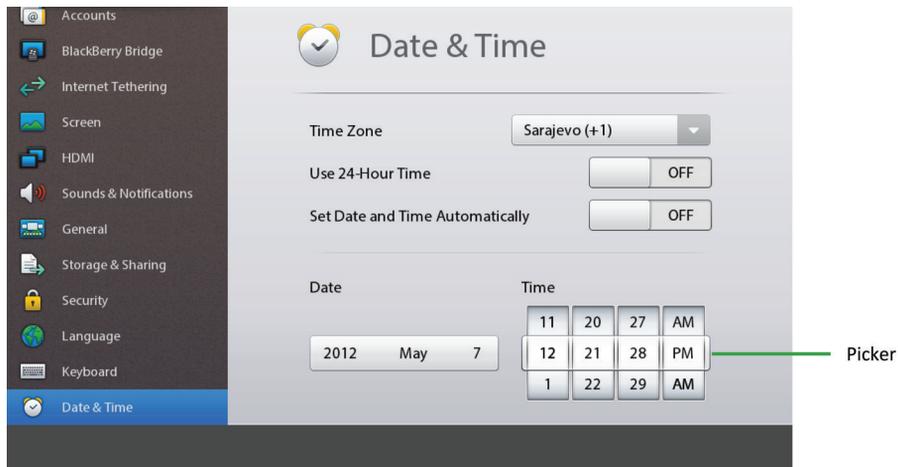
Use section lists to group items within a list. For example, you can group a list of contacts alphabetically.



Use tile lists to organize items in a grid. Use section tile lists to organize groups of items in a grid.

Pickers

You can use pickers to help users easily choose an item from an ordered list. For example, you can use a picker to allow users to change the time or select a birthday. Users can swipe across the screen to move through a picker. Users can tap an item to select it.

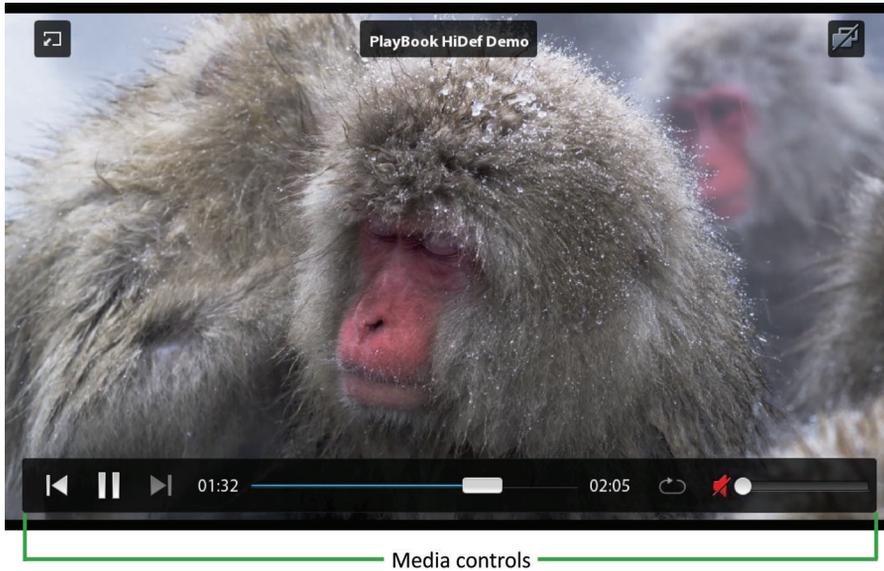


Media controls

You can add media controls to your application to let users interact with media, such as songs or videos.

Users can play, pause, or move to the next or previous song or video by tapping the specific control. Users can fast-forward or rewind a song or video by dragging a finger over the slider. Similarly, users can adjust the volume by dragging a finger over the volume slider.

You can also use a slider to allow users to adjust a value within a finite range (for example, the brightness or size of an item).



Best practice

- Don't allow the screen to turn off while users are watching a video.

Activity indicators and progress indicators

Activity indicators and progress indicators show users that their BlackBerry PlayBook tablet is performing an action, such as searching for items or connecting to a Wi-Fi network. Users cannot interact with these indicators.

If you can determine the duration of an action, use a progress indicator.



If you want to show that your application is working but you cannot determine the duration of the action, use an activity indicator.



Best practices

- Always indicate progress when an action takes more than 2 seconds to complete.
- Provide useful progress information. For example, if users are downloading an application, indicate the percentage of data that has been downloaded. Be as accurate as possible with the progress information.
- For progress indicators, use concise, descriptive text to indicate what the action is (for example, "Loading data" or "Building an application list"). If an action takes a long time and you want to communicate what is happening at each stage, provide text that describes each stage (for example, "Downloading" or "Installing").

- Use sentence case capitalization. Capitalize the first word and any other word that requires capitalization (such as a proper noun).

Application icons

Designing an icon for your application gives you the opportunity to showcase your application to BlackBerry PlayBook tablet users. In the BlackBerry App World storefront, an icon is the first introduction that users have to your application. The icon also appears on the home screen as the way for users to open your application.

It's important that your icon is visually interesting. At the same time, it's also important that the icon maintains consistency with the design of existing BlackBerry application icons. You want the icon to fit in the application list and not be either too bland or too conspicuous.



Best practices

- Make sure that the icon has the following properties:
 - Size: 86 x 86 pixels. If the icon is smaller than 86 x 86 pixels, it could appear out of place next to other icons. Any icon larger than 90 x 90 pixels will not be displayed on the screen.
 - Resolution: 72 pixels per inch (PPI)
 - Mode: RGB color
 - Type: PNG
- Keep the main graphical elements of the icon within a 77 x 77 pixel area, which allows for a buffer zone. If the main graphical elements occupy the entire 86 x 86 pixel area, the icon will look too large in the application list. You can accessorize outside of the 77 x 77 pixel area, but the main graphical elements should stay within this area.
- Position the icon image 2 pixels from the bottom of the 86 x 86 pixel area. The position aligns the baseline with the other icons in the application list, and the base shadow, which is automatically created, will look correct.
- Make sure the perspective of the icon is one point viewed head on (no rotation). The perspective is the angle that the icon is viewed from.
- Use rounded rectangles with a corner radius of 20 pixels.
- Apply lighting that is top-down and strikes the middle of the icon. This effect also makes the icon look correct over the base shadow.

Localization

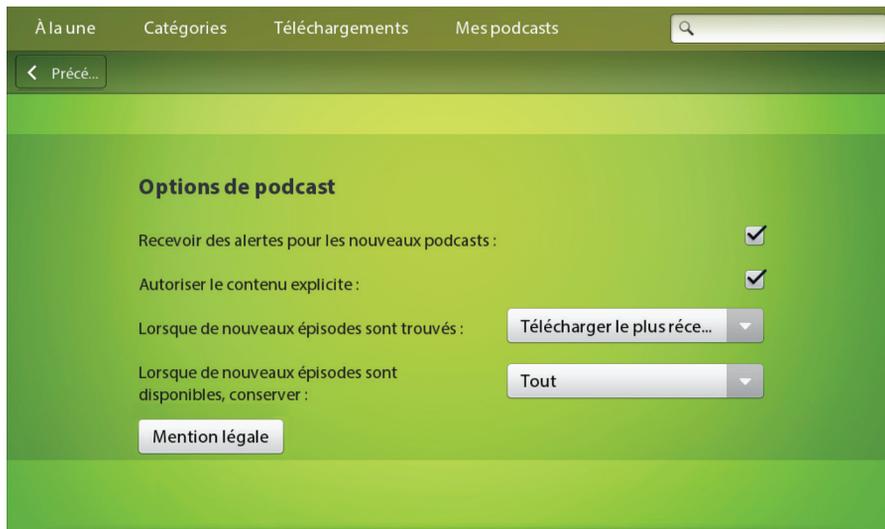
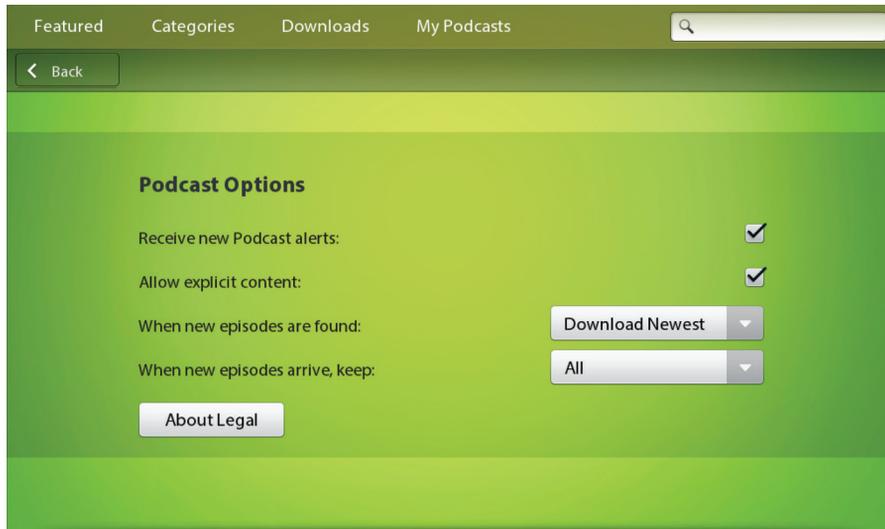
Localization is the process of adapting software to meet the requirements of local markets and different languages. Internationalization is the process of designing an application so that it can be adapted to various languages and regions without engineering changes. Localized applications should reflect correct cultural and linguistic conventions that the target market uses. Localization and internationalization make it possible for you to create a localized version of your software.

BlackBerry PlayBook tablets are sold all over the world and BlackBerry applications are translated into many languages, including languages that are not based on a Latin alphabet. Early in the design process, consider whether your application might require localization. If your application does not require localization now, consider designing your application so that it would be easy to localize it in the future. Be aware that even if your application might not be localized, some users might want to type text in other languages in your application.

Best practice: Designing applications for different languages and regions

Guidelines for layout

- Leave enough space in your UI for translated text. The height and the width of text might expand when translated from English to other languages. For labels and other short text strings, prepare for up to 200% expansion. For lengthy text (more than 70 characters), prepare for up to 40% expansion. Where possible, place labels above the associated field. Leave blank space at the end of each label.



- Try to avoid displaying truncated text. The meaning might be unclear to users if the most important text does not appear. First, try to reduce the size of the text. If you reduce the size but you cannot read the text easily, try wrapping the text onto two lines instead. If you cannot wrap the text, consider using an abbreviation. Otherwise, use an ellipsis (...) to indicate that the text is truncated.
- Make arrangements for displaying the position of a contact's title, full name, and address on a per-language basis. These items display in a different order, depending on the language (for example, title, first name, last name, or last

name, first name, title). In some countries, the zip/postal code can appear before the name of the city and contain letters as well as numbers.

- If users have the option to change display languages, display the name of the language in that language. For example, display "Italiano" instead of "Italian."
- Test translated UI to verify the layout of the UI.
- During testing, type a pangram in the target language. A pangram is a sentence that uses each character in the alphabet. Pangrams are useful because they include diacritics that can appear above, below, or beside a character.

Guidelines for color and graphics

- Be aware that colors, graphics, and symbols can have different meanings in different cultures. If you are designing an application for a specific market, carefully consider the cultural implications of your design choices.
- Avoid text and numbers in icons and images because they require localization.
- Avoid using national flags to identify languages, user IDs, or countries. Use text instead.

Best practice: Coding for different languages and regions

- Store text strings in separate resource files and use unique identifiers (string IDs) for each text string.
- Avoid concatenating partial strings to form a sentence. When translated, the strings might not produce a logical sentence. Create a new string for the sentence instead.
- Avoid using variables in place of nouns (for example, "The <X> is locked."). Instead, create a specific string for each noun. Even if the sentence appears correctly in English, in some languages, if a noun is singular or plural and masculine or feminine, the rest of the string might need to change. Only use variables for strings that can only be known at runtime (for example, file names).
- Avoid making part of a sentence into a link. When translated, the words in the link might appear in a grammatically incorrect order. For example, use "For more information, click the following link: <link>" instead of "Click on <link> for more information."
- Avoid using a common string if the context of usage differs. Depending on the context, a word could require different translations. For example, the word "new" might require a different translation depending on the gender of the noun.
- Avoid hard-coding spaces, punctuation marks, and words. Include these items in translatable strings instead. This approach allows translators to make changes according to the rules for each language.
- Avoid hard-coding strings of any kind, including weekdays and weekends. Verify that the start of the week matches the convention for each locale.

Guidelines for numbers

- Make arrangements for singular and plural nouns on a per-language basis. Nouns in some languages can have one form for both singular and plural, one form for singular and another form for plural (for example, "1 day" and "2 days"), or multiple forms, depending on the number of items (for example, one item, two items, a few items, and many items).
- Avoid hard-coding number separators. For example, 1,234.56 appears in United States English but 1 234,56 appears in French.
- Avoid hard-coding the number of digits between separators. For example, 123,456,789.00 appears in the United States but 12,34,56,789.00 appears in India.
- Avoid hard-coding the display of negative numbers. For example, negative numbers can appear as -123, 123-, (123), or [123].
- Provide options for currencies. For example, currencies can appear as \$12.34, 12,34€, or 12€34. In addition, some currency symbols require more space.
- Verify that numbers, measurements, dates, and time formats reflect the locale of your users.

Best practice: Writing for different languages and regions

- Include subjects where possible. For example, use "the list that appears when you type" instead of "the list that appears when typing".
- Include articles where possible. For example, use "press the Power button" instead of "press Power".
- Use relative pronouns where possible. For example, use "the email address that you use" instead of "the email address you use".
- Use terms consistently throughout the UI and try to use terms that are consistent with other applications on the BlackBerry PlayBook tablet. Using consistent terms improves the accuracy of the translations.
- Avoid using slang, idioms, jargon, colloquialisms, and metaphors in your UI. These terms can be difficult for translators to translate and for users to understand.
- Avoid references to ethnicity, religion, culture, and gender.
- For references to countries, use the political name of each country. For example, use "People's Republic of China" instead of "Mainland China."
- Verify that translated text uses local language conventions where possible.

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