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DevTalk - Enterprise Keyboard and the Enterprise Keyboard Designer

Darryn Campbell

SW Architect, Zebra Technologies

18th November 2020

DevTalk - Enterprise Keyboard and Keyboard Designer

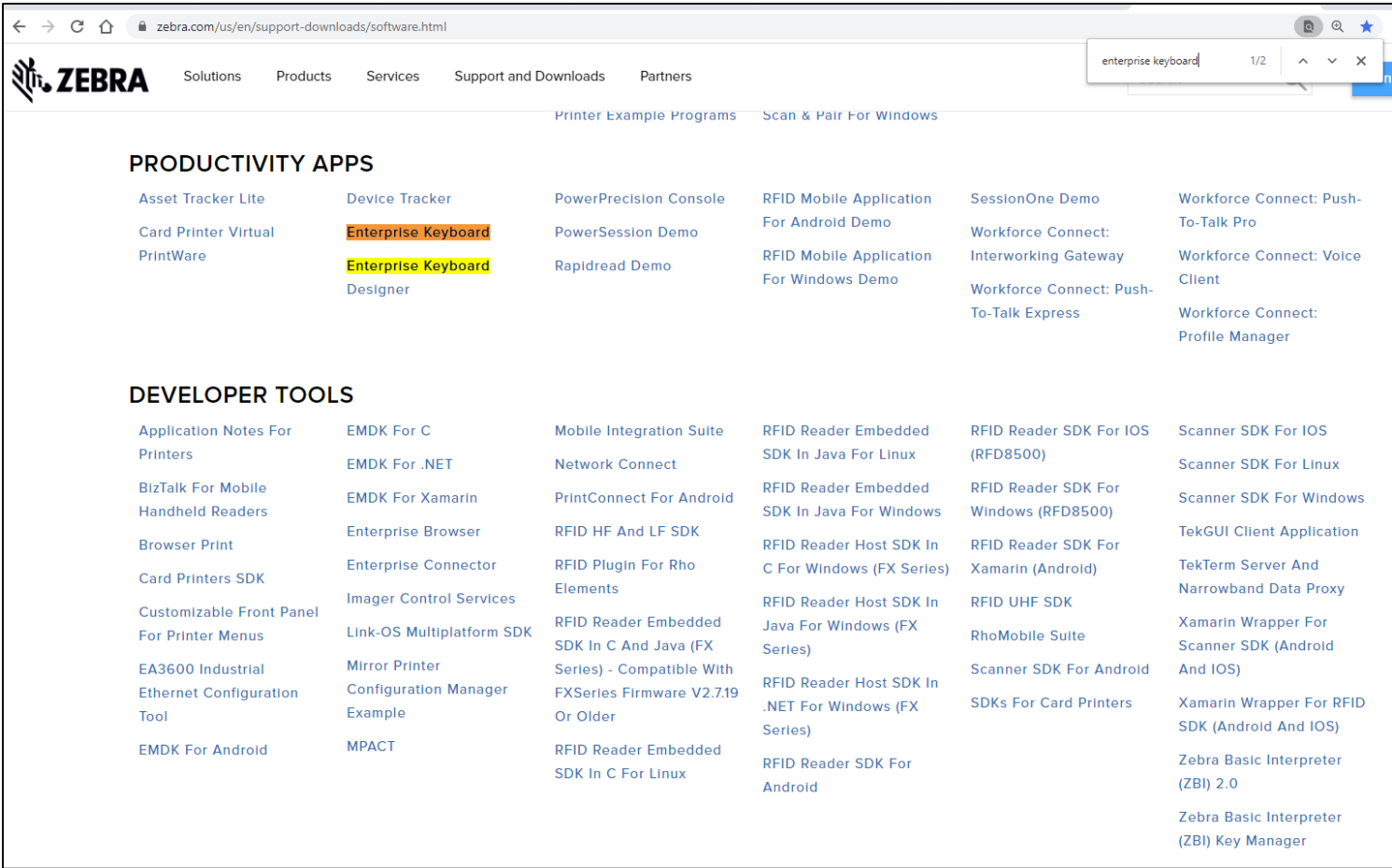
Agenda

- Enterprise Keyboard (EKB) Overview
- EKB Keyboard on-device demo & available settings
- EKB mass configuration settings
- EKB API
- EKB API Demo
- Switching between Gboard & EKB
- EKD (EKD) Overview
- EKD Demo

DevTalk - Enterprise Keyboard and Keyboard Designer

Enterprise Keyboard Overview

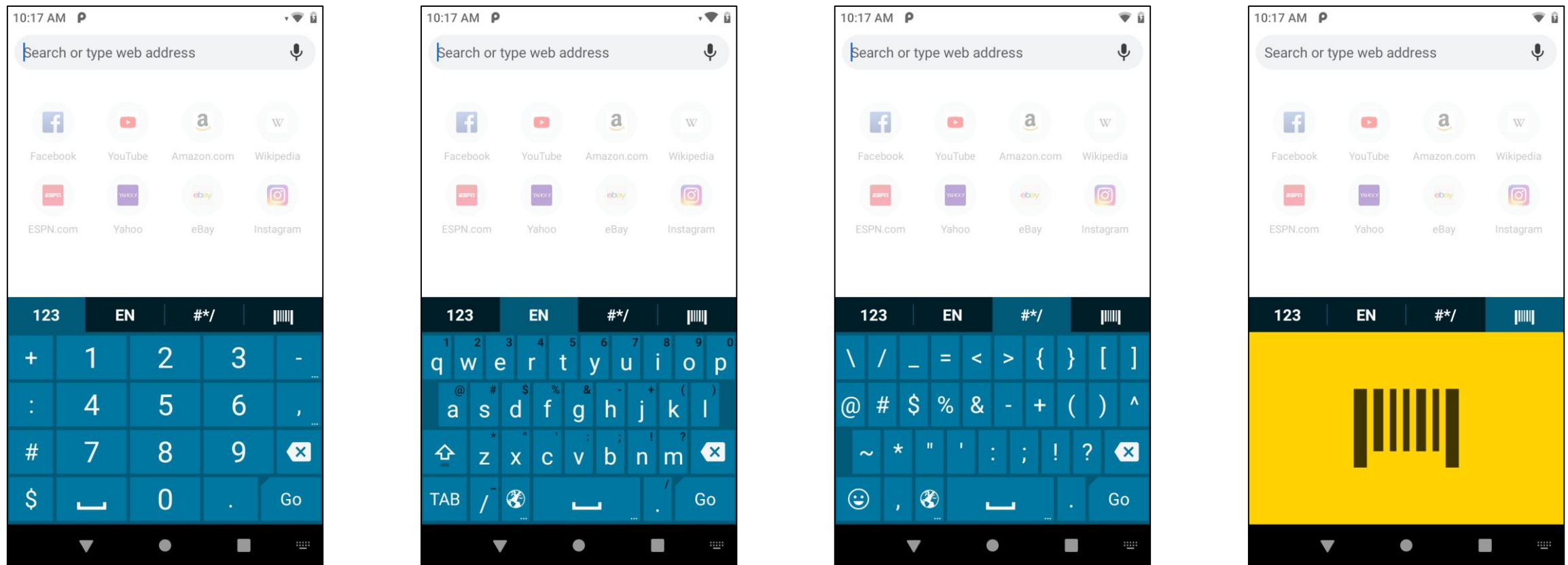
- Maybe pre-installed on your device but you can download the latest version from:
<https://www.zebra.com/us/en/support-downloads/software/productivity-apps/enterprise-keyboard.html>



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Enterprise Keyboard Overview

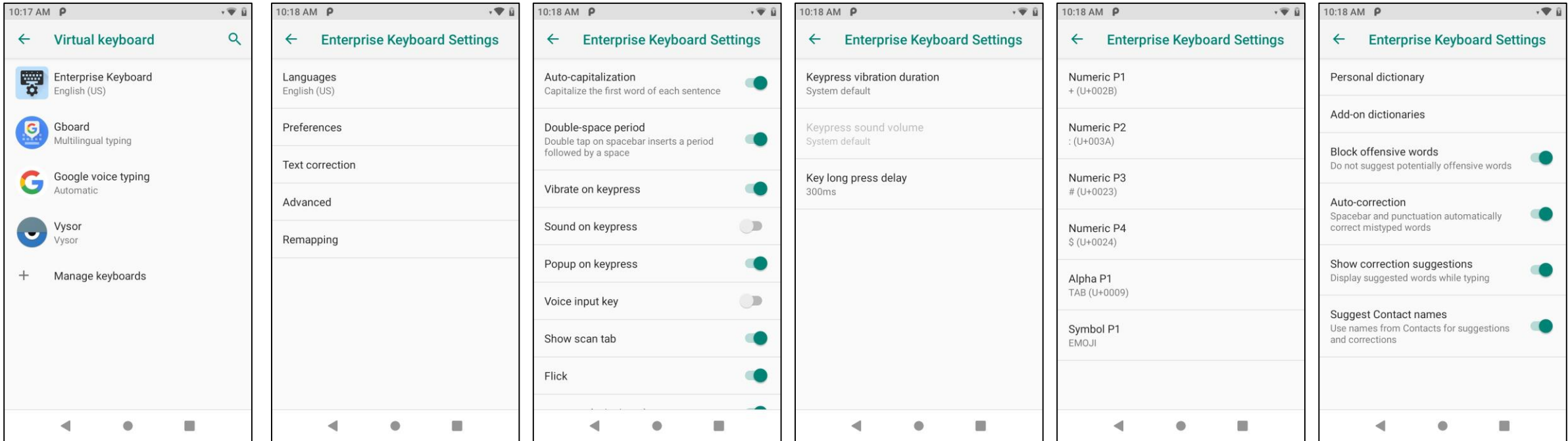
- Swipe between layouts



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EKB On-device demo & available settings

- Enterprise Keyboard on-device demo & available settings
 - Settings → System → Languages & input (→ + Manage keyboards)



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EKB Mass configuration settings

- Techdocs: <https://techdocs.zebra.com/mx/enterprisekeyboardmgr/>

The screenshot shows the StageNow web interface for configuring an Enterprise Keyboard. The top navigation bar includes 'Settings', 'Help', and 'About'. The current IP is 192.168.0.2, and there are links for 'Change Password' and 'Log out'. The user is logged in as 'XpertConfig: ekb' with Profile Id: 63 and Profile Status: Incomplete. The main navigation bar has three tabs: 'StageNow Config', 'Review', and 'Publish'. Below this, there is a section for 'EnterpriseKeyboard' with a count of 1 and an 'ADD / EDIT' button. The main content area is titled 'EnterpriseKeyboard' with a description: 'Configure Enterprise Keyboard preferences'. It features a 'Create New Setting' section with a checkbox for 'Save Setting for Re-use'. Below this are five settings, each with a 'Do not change' button and 'Turn on'/'Turn off' buttons: 'Auto capitalization', 'Double-space period', 'Vibrate on keypress', 'Sound on keypress', and 'Popup on keypress'. A 'Continue >' button is at the bottom right.

StageNow

Settings Help About

Current IP: 192.168.0.2 | Change Password | Log out

XpertConfig: ekb

Profile Id: 63 Profile Status: Incomplete

StageNow Config Review Publish

1 EnterpriseKeyboard

ADD / EDIT

EnterpriseKeyboard

Description: Configure Enterprise Keyboard preferences

Create New Setting

☐ Save Setting for Re-use

Auto capitalization:

Do not change Turn on Turn off

Double-space period:

Do not change Turn on Turn off

Vibrate on keypress:

Do not change Turn on Turn off

Sound on keypress:

Do not change Turn on Turn off

Popup on keypress:

Continue >

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Enterprise Keyboard API

- Techdocs: <https://techdocs.zebra.com/enterprise-keyboard/latest/guide/apis/>
- Enable (Boolean)
 - Allow or prevent EKB from being shown
- Get (Layouts)
 - Retrieve all available custom layouts
- Get (Current Layout)
 - Retrieve the current custom layout in use
- Set (Layout)
 - Cause the specified custom layout to be shown
- Show (Boolean)
 - Show or hide Enterprise Keyboard
- Reset
 - Return to the default layouts that ship with EKB

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Enterprise Keyboard API

- Set (Layout)

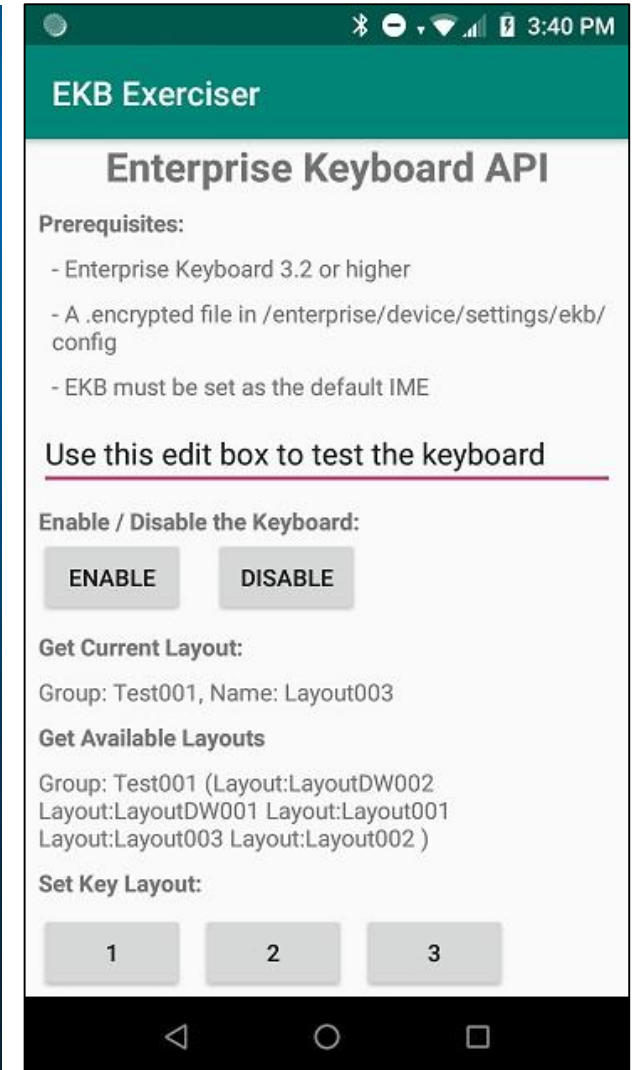
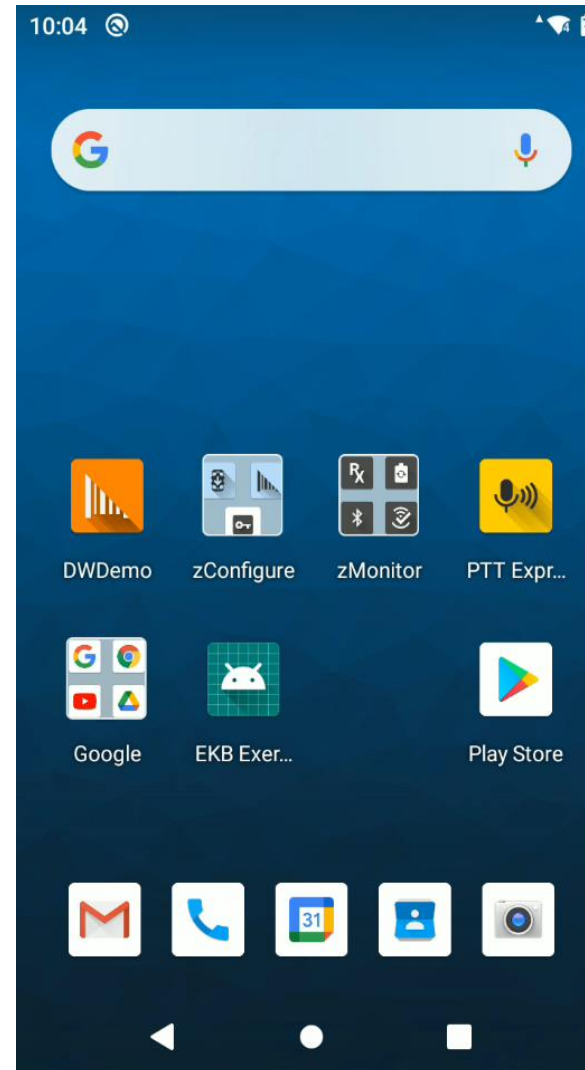
```
private void SetKeyboardLayout(String group_name, String layout_name)
{
    Intent intent = new Intent();
    intent.setAction("com.symbol.ekb.api.ACTION_UPDATE");
    intent.setPackage("com.symbol.mxf.csp.enterprisekeyboard");
    intent.addFlags(Intent.FLAG_RECEIVER_FOREGROUND);
    intent.putExtra("CURRENT_LAYOUT_GROUP", group_name);
    intent.putExtra("CURRENT_LAYOUT_NAME", layout_name);
    PendingIntent piResponse = PendingIntent.getActivity(getApplicationContext(), 1,
        new Intent(this, MainActivity.class), PendingIntent.FLAG_ONE_SHOT);
    intent.putExtra("CALLBACK_RESPONSE", piResponse);
    sendBroadcast(intent);
}

@Override protected void onNewIntent(Intent intent)
{
    super.onNewIntent(intent);
    ProcessEKBResponse(intent);
}
```

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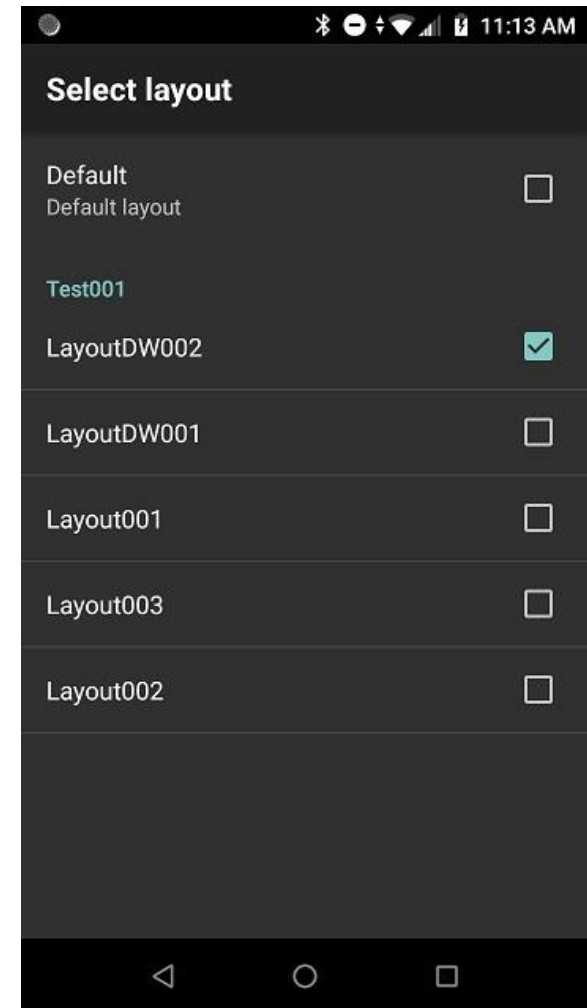
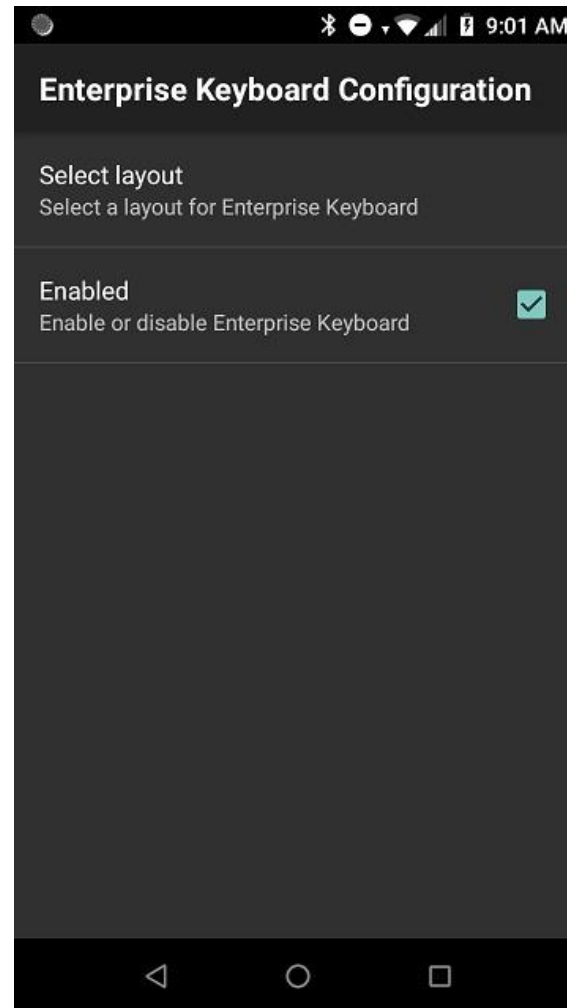
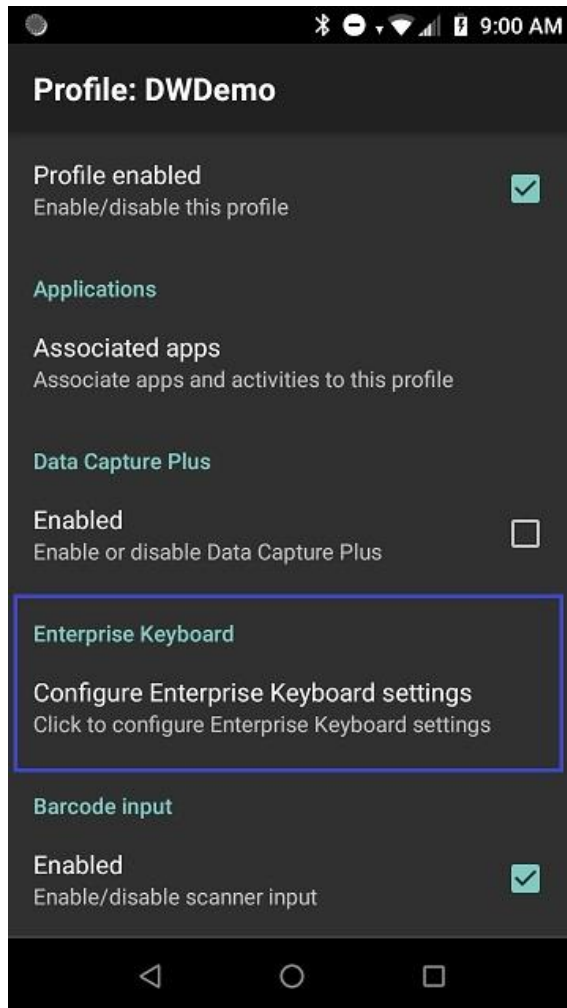
Enterprise Keyboard API Demo

- Enterprise Keyboard API Demo
 - https://github.com/darryncampbell/Enterprise_Keyboard_Exerciser



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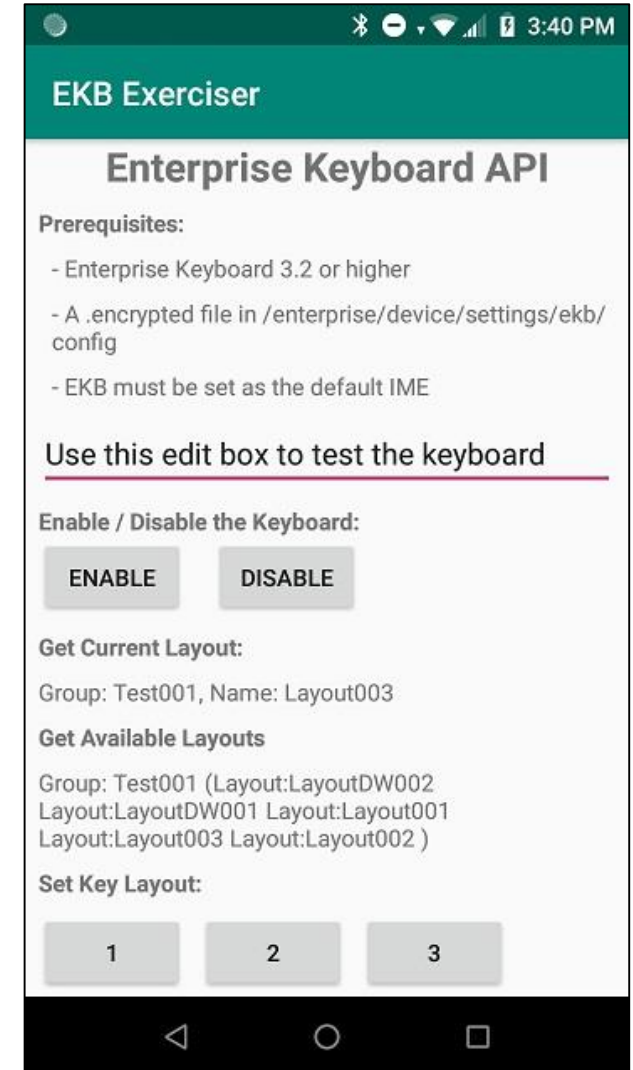
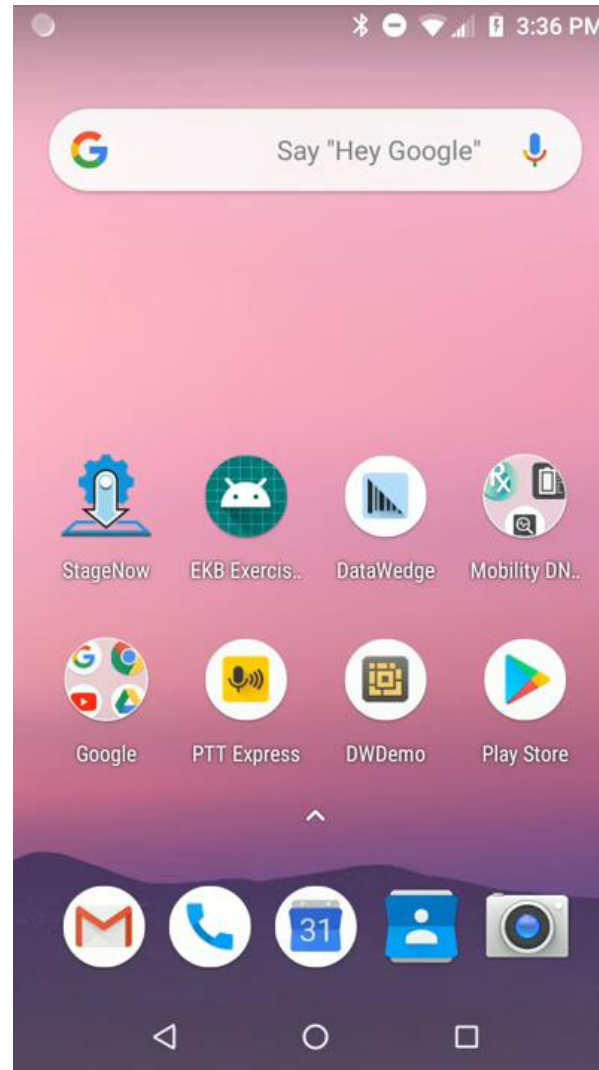
Enterprise Keyboard Via DataWedge



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Enterprise Keyboard API Demo

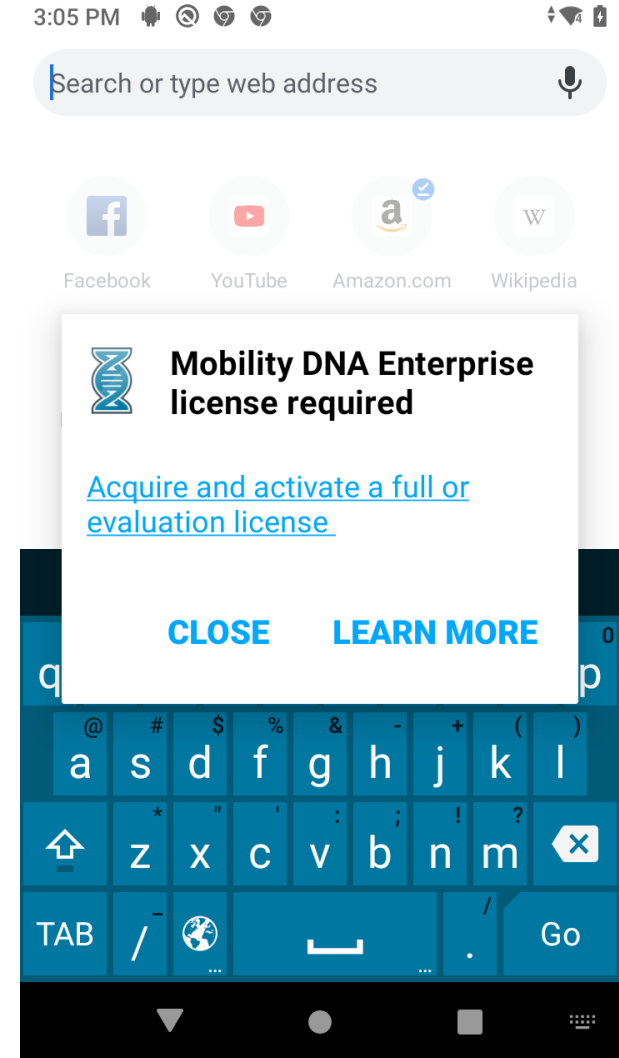
- Enterprise Keyboard API Demo
 - https://github.com/darryncampbell/Enterprise_Keyboard_Exerciser



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Enterprise Keyboard Licensing

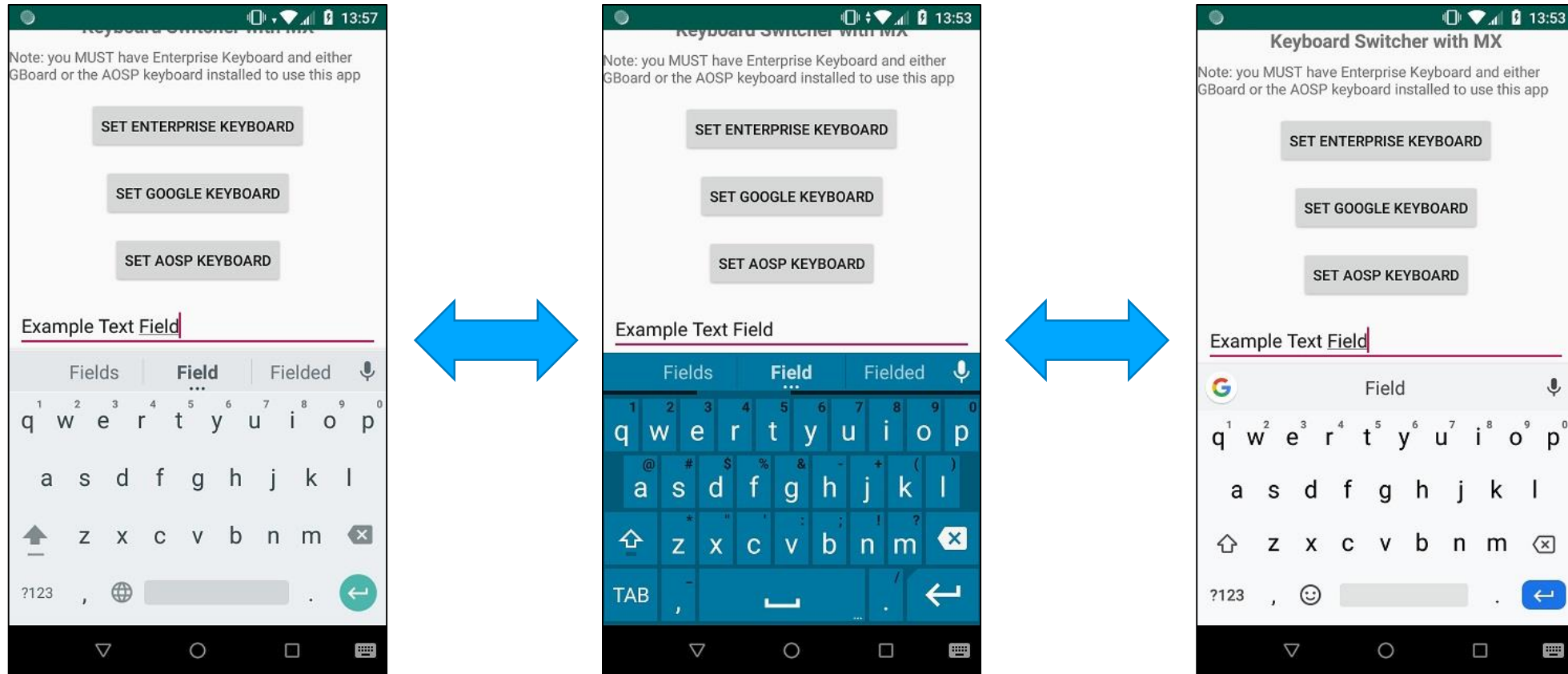
- MDNA License
 - For the majority of our portfolio (so called Enterprise devices), EKB will be **free to use**
 - Beginning with EKB 3.9, an MDNA Enterprise license is required to use Enterprise Keyboard on Zebra Professional-series devices, including the TC21 and TC26. These devices arrive with a non-functional EKB “dummy” client, which must be replaced with the functional EKB v3.9 (or later) client after purchasing a Zebra MDNA Enterprise license.
 - When unlicensed, EKB displays a “license required” prompt (see below) whenever app focus comes to a text input box, but is otherwise fully functional.
 - <https://techdocs.zebra.com/enterprise-keyboard/3-9/guide/about/#mdnaenterpriselicense>



DevTalk - Enterprise Keyboard and Keyboard Designer

Switching between Gboard & Enterprise Keyboard

- Switching between Gboard & Enterprise Keyboard

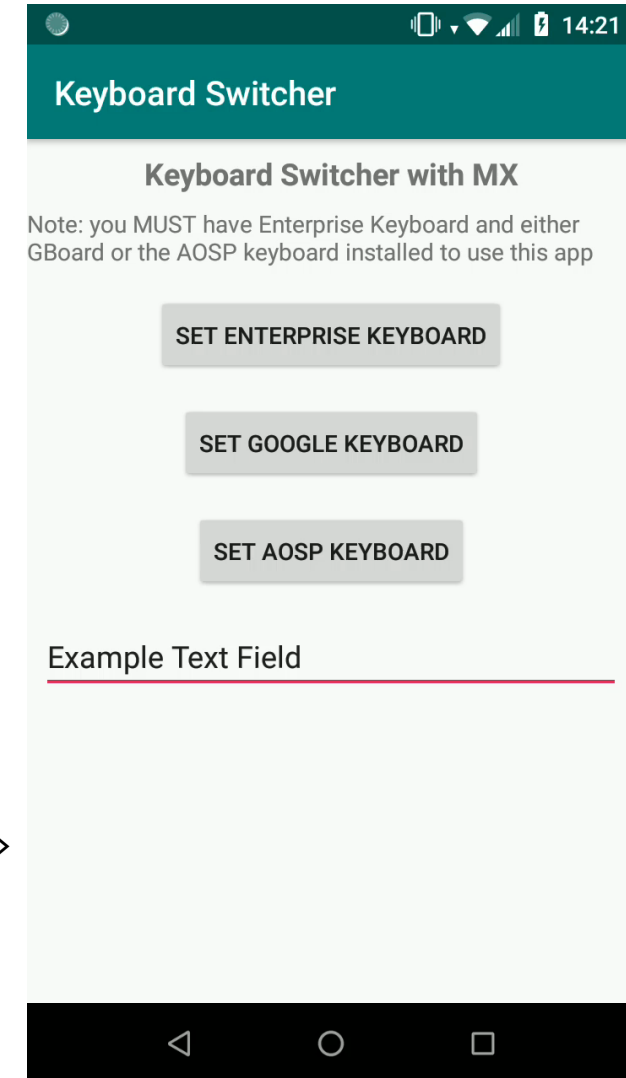


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Switching between Gboard & Enterprise Keyboard

- Switching between Gboard & Enterprise Keyboard
- Sample app: <https://github.com/darryncampbell/KeyboardSwitcher>
 - Uses MX Profile Manager to set the InputMethod through the UIManager CSP

```
<characteristic type="Profile">
  <parm name="ProfileName" value="KeyboardEKB"/>
  <parm name="ModifiedDate" value="2020-01-16 13:38:32"/>
  <parm name="TargetSystemVersion" value="4.4"/>
  <characteristic type="UiMgr" version="4.3">
    <parm name="emdk_name" value="ekb"/>
    <parm name="InputMethodAction" value="1"/>
    <characteristic type="InputMethodDetails">
      <parm name="InputMethodOption" value="4"/>
      <parm name="InputMethodPackageName" value="com.symbol.mxmfcsp.enterprisekeyboard"/>
      <parm name="InputMethodClassName" value="com.android.inputmethod.latin.LatinIME"/>
    </characteristic>
  </characteristic>
</characteristic>
```



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Switching between Gboard & Enterprise Keyboard

- Switching between Gboard & Enterprise Keyboard
- More detail: <https://developer.zebra.com/blog/dynamically-switching-keyboards-zebra-android-devices>

Keyboard Name	Package Name	Class Name
Enterprise Keyboard	com.symbol.mxmfcsp.enterprisekeyboard	com.android.inputmethod.latin.LatinIME
Gboard	com.google.android.input.method.latin	com.android.inputmethod.latin.LatinIME
AOSP Keyboard	com.android.inputmethod.latin	com.android.inputmethod.latin.LatinIME

DevTalk - Enterprise Keyboard and Keyboard Designer

Enterprise Keyboard Designer Overview





Create Layout

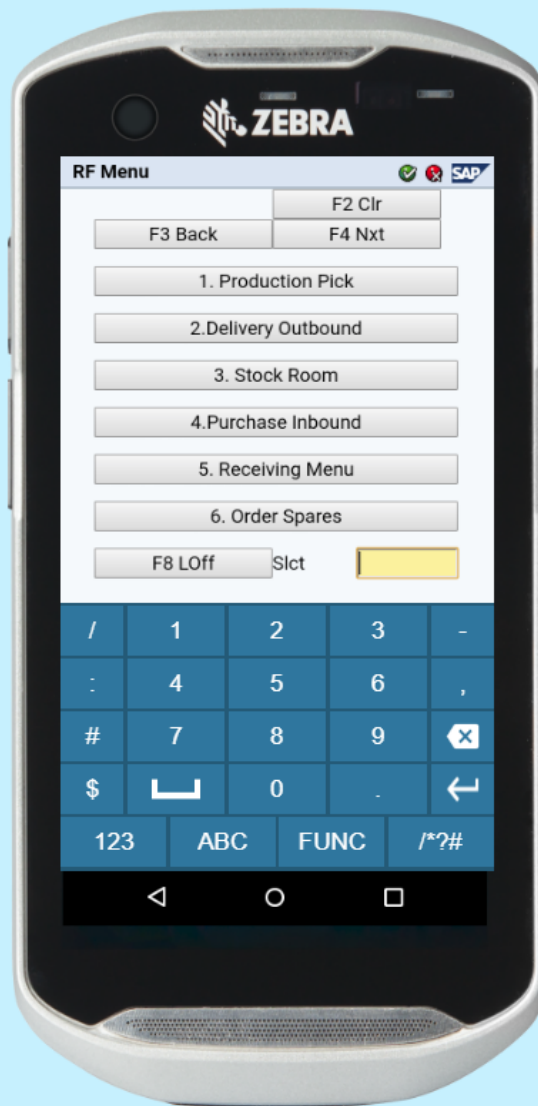
- ☐ Create Manual Layout
- ☐ Create Grid Layout

Layout Properties

▼ Style:

Background color: Transparency:

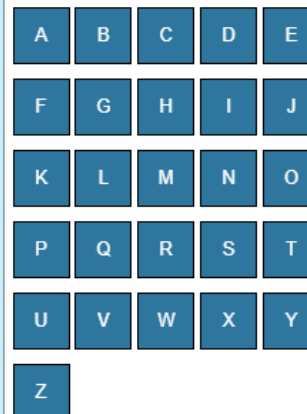
▼ Device Screen Properties:

Status Bar: hidden ☒ shownSystem Bar: hidden ☒ shown

Keys

Text InCaps Text Numeric

Special Function



Button Properties

▼ Layout Properties:

Left: Width: Top: Height:

▼ Text:

Text: Font Size: Text Color:

Text Style: Normal

Secondary Text:

▼ Action:

Press Action: Long Press Action: Action Down: Action Up:

▼ Style:

Preview: True

Transparency: Button color: Color Pressed: Image: Image Pressed:

▼ Feedback:

Haptic Feedback: OFF

Duration: ms

DevTalk - Enterprise Keyboard and Keyboard Designer

Enterprise Keyboard Designer Overview



- New in EKD 1.4 (will need to update EKB also):
 - Support for canned text
 - Support for a default layout
- New in EKD 1.9:
 - Repeat keys function
 - Macros feature
 - Undo
 - Deploy button
 - **Sample Layouts** (<https://techdocs.zebra.com/ekd/1-9/samples/>)

1	2	3	4	5	6	7	8	9	0
Esc	F1	F2	F3	F4	PgUp	^	PgDn	-	
Tab	F5	F6	F7	F8	<	v	>	✕	
Ctrl	F9	F10	F11	F12	Alt	.		←	
123	ABC			FUNC			/*?#		

1	2	3	4	5	6	7	8	9	0
Esc	F1	F2	F3	F4	PgUp	^	PgDn	-	
Tab	F5	F6	F7	F8	<	v	>	✕	
Ctrl	F9	F10	F11	F12	Alt	.		←	
123	ABC			FUNC			/*?#		

/	\	-	=	<	>	{	}	[]
@	#	\$	%	&	-	+	()	^
~	*	"	'	:	;	!	?	✕	
123			ABC			/*?#			

1	2	3	4	5	6	7	8	9	0	123
Esc	F1	F2	F3	F4	PgUp	^	PgDn	-		ABC
Tab	F5	F6	F7	F8	<	v	>	✕		FUNC
Ctrl	F9	F10	F11	F12	Alt	.		←		/*?#

/	1	2	3	-	
:	4	5	6	,	
#	7	8	9	✕	
\$	←	0	.	←	
123	ABC	FUNC	/*?#		

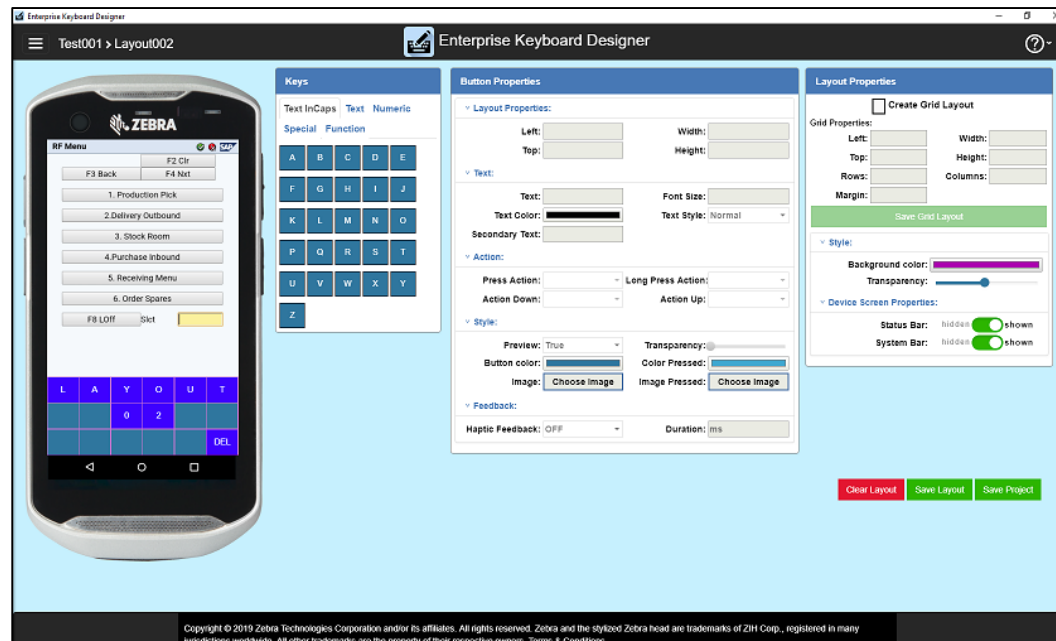
/	1	2	3	-	123
:	4	5	6	,	ABC
#	7	8	9	✕	FUNC
\$	←	0	.	←	/*?#

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Enterprise Keyboard Designer Demo



- Download from <https://www.zebra.com/us/en/support-downloads/software/productivity-apps/enterprise-keyboard-designer.html>
- Create new custom keyboard
- `adb push name.encrypted /enterprise/device/settings/ekb/config/name.encrypted`
- Easiest to use DataWedge to demonstrate the layouts but could also use the Layout API.



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Resources

- Download:
 - <https://www.zebra.com/us/en/support-downloads/software.html>
- Techdocs:
 - Mass configuration: <https://techdocs.zebra.com/mx/enterprisekeyboardmgr/>
 - Using EKD: <https://techdocs.zebra.com/ekd/latest/guide/usage/>
- Exploring the Enterprise Keyboard API:
 - <https://developer.zebra.com/blog/exploring-enterprise-keyboard-api>
 - https://github.com/darryncampbell/Enterprise_Keyboard_Exciser
- Dynamically Switching Keyboards on Android devices:
 - <https://developer.zebra.com/blog/dynamically-switching-keyboards-zebra-android-devices>
 - <https://github.com/darryncampbell/KeyboardSwitcher>



Questions?

<http://developer.zebra.com>



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