

ACCESSIBILITY ON ANDROID

WITH EXAMPLES FROM AARP

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BOTTLE ROCKET

LINKS

- ☐ [HTTP://DEVELOPER.ANDROID.COM](http://developer.android.com)
 - ☐ DEV GUIDE -- DESIGNING FOR ACCESSIBILITY
- ☐ [HTTP://CODE.GOOGLE.COM/P/EYES-FREE/](http://code.google.com/p/eyes-free/)
- ☐ [HTTP://WWW.ANDROIDACCESS.NET](http://www.androidaccess.net)
 - ☐ BROWSE APPS, READ REVIEWS, SUBMIT YOUR OWN
- ☐ [HTTP://HOMIBORG.BLOGSPOT.COM/](http://homiborg.blogspot.com/)
 - ☐ GET THIS PRESENTATION

DIFFERENCES FROM iOS

- ☐ REQUIRES TRACKBALL OR D-PAD
- ☐ CONTROLS HAVE A FOCUSED STATE
- ☐ AVAILABLE FROM 1.6 ONWARD (NOW 98% OF DEVICES)
- ☐ DOES NOT CHANGE INTERACTION FOR OTHER USERS

PHONETICS

- TEXT-TO-SPEECH READERS DON'T ALWAYS PRONOUNCE THINGS ~~CORRECTLY~~ LIKE 'MERICANS



<string name="my_aarp">My AARP</string>

<string name="my_aarp_phonetic">My A A R P</string>

CONTENT DESCRIPTION

- ☐ USE ON NON-TEXT VIEWS

```
<ImageButton ...  
    android:contentDescription="@string/my_aarp_phonetic"  
/>
```

- ☐ BE CAREFUL! TEXT CONTROLS MAY IGNORE THIS
 - ☐ DO YOU WANT TO PATCH TO AOSP?

FOCUSABLE

- ADD TO `ImageView` OR OTHER THINGS THAT DON'T NORMALLY GET FOCUS

```
<ImageView ...  
    android:contentDescription="@string/join_aarp_phonetic"  
    android:focusable="true"  
    android:focusableInTouchMode="false"  
>
```

- `android:focusableInTouchMode` PREVENTS THE CONTROL FROM GETTING FOCUS WHEN YOU TOUCH IT

FOCUSABLE

- CUSTOMIZE NAVIGATION WITH "NEXTFOCUS" ATTRIBUTES

```
android:nextFocusDown = ...  
android:nextFocusLeft = ...  
android:nextFocusRight = ...  
android:nextFocusUp = ...
```

- DON'T FORGET TO CHECK BOTH DIRECTIONS!

STATE_SELECTED

- ADD TO `<selector>` ITEMS, AS FOCUSED MAY NOT ALWAYS WORK

```
<item android:state_selected="true"  
      android:drawable="@drawable/ic_topics_member_on" />
```

```
<item android:state_focused="true"  
      android:drawable="@drawable/ic_topics_member_on" />
```


DISPATCH POPULATE ACCESSIBILITY EVENT

- ❑ MOTHERLOAD OF ACCESSIBILITY IN ANDROID
- ❑ SYSTEM CALLS THIS ON EVERYTHING WHEN ACCESSIBILITY ENABLED

@Override

```
public boolean dispatchPopulateAccessibilityEvent(AccessibilityEvent event) {  
    Context ctx = this.getBaseContext(); // this.getContext();  
    String message = getResources().getString(R.string.my_aarp_phonetic);  
    event.setClassName(getClass().getName());  
    event.setPackageName(ctx.getPackageName());  
    event.getText().add(message);  
    return true;  
}
```

DISPATCH POPULATE ACCESSIBILITY EVENT

□ DERIVE YOUR OWN CLASSES FOR BUTTONS

```
private static String mAccessibilityText;
```

```
public void setAccessibilityText(String text) {  
    mAccessibilityText = text;  
}
```

@Override

```
public boolean dispatchPopulateAccessibilityEvent  
    (AccessibilityEvent event) {  
    event.setClassName(getContext().getClass().getName());  
    event.setPackageName(getContext().getPackageName());  
    event.getText().add(mAccessibilityText);  
    return true;  
}
```


GOTCHA!

- IF NOT GETTING SOUND, YOU MAY NEED TO USE YOUR CONTEXT CLASS NAME

```
event.setClassName(getContext().getClass().getName());
```

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