

Building Android Apps for Google TV

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Speakers

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Summary

Learn how to create new apps or enhance existing Android apps for Google TV. Session includes an overview of the platform, best practices, demos, and discussion about the fantastic opportunities Google TV creates for developers.

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Notes

Thanks.

<http://goo.gl/3uEG> for Q&A

Picture of old phone and then new Android phone

Picture of old tube TV to new TV Google TV boxes.

TV is interesting because more homes still have TVs than mobile devices.

By 2014 more than 1/3 of homes will have "smart" TVs

What's New?

Honeycomb on Google TV later this summer

Android compatibility

Android Market

ADB

Existing Google TV devices will get upgrade

SDK add-on - Emulator + TV specific features

IP Remote protocol

Big Picture

Dev platform, not just devices and boxes

Honeycomb on Google TV

Goal of simplicity

Preview shown with home screen with shortcut bar at bottom and app widgets above

Widgets are the biggest new thing for devs

Home screen and widgets are shown over the live TV display

Showing search interface (devs can integrate their apps into search results)

Designing for the TV

TV is new interaction model for developers - not just a big phone.

TV is big, shared device that is "far" away.

No touch screen

GTV remote has qwerty keyboard, special Android buttons and 5-way nav (i.e. d-pad).

Some devices have media buttons and mouse pads but ...

Ideally just use 5-way nav

Design for "leanback" experience (vs. active engagement)

What does it mean to optimize for d-pad interaction.

Showing typical Android touch-optimized UI

List views stretched out don't look good, so please control length

Scrolling big list view not good for TV with d-pad

Putting important buttons on the button can be very inconvenient to access via d-pad, especially when preceded by list views.

Showing better UI with more columns, better with 5-way remote

Make sure that you pay attention to how the focus moves in your app.

Showing tablet UI for YouTube

Action bar optimized for Google TV is now down the left side

API stays the same but with better layout

The Screen

Android screens are getting bigger and bigger

Chart of screen sizes and densities

Asks where the audience thinks TVs are

TVs are large screen and high density
Shows photo of living showing that TV appears as about the same size as a phone, due to distance!

Perceived resolution of TV screen is very high
Using DPs and allowing Android scaling will show good results
1080p is considered XHDPI and 320 DPI - 960dp X 540dp max logical resolution
720p is considered HDPI and 213 DPI - 960dp X 540dp max logical resolution
Screen size is only considered "Large"

Talk about history and overscan - pixels are not the same as scan size. There's padding. And it differs from TV to TV!

Full canvas might not have quite as many pixels as expected. For example, on 1920x1080 1080p screen you might see a resolution as small as 1692x952. Normal Android practices will compensate. I.e. don't use absolute layouts. Use 9-patches.

Don't lock into portrait mode. TVs can't turn ;-)

Provide assets, layouts that are appropriate for TV configurations

Real World examples

Pandora Internet Radio

Mobile and TV apps are very similar, but TV version has with keyboard support

CNBC Real Time

Similar to mobile app but with added video.

Enabling for Google TV

Android Market coming to Google TV

Today: Honeycomb emulator set to TV resolution and density and different VM heap
Later: A specific TV emulator with specific TV skins

Fishtank program for getting updated GTV devices. Check out their office hours at I/O and pick up a flyer

Use large-hdpi-notouch and largge-xhdpi-notouch resource directories.

Check the PackageManager method for detecting TV

Check for uses-feature "com.google.android.tv"

Check for uses-library for <>

Some additional hardware feature IDs are available: faketouch, location, wifi, tv.

If you do nothing your app won't show up on GTV due to implicit "touch screen" requirement. So specify touchscreen is NOT required or faketouch is required.

App will not show up in Market if you specify NDK, camera, microphones, sensors, etc.

Work is being done to enable those features in the future. No accelerometer, though ;-)

Slide is shown with some more "use-feature" settings to use for GTV apps in the Market.

Extra Capabilities

Google TV remote app for phones and tablet exists now. Source code is being released today! <http://code.google.com/p/google-tv-pairing-protocol/> and <http://code.google.com/p/anymote-protocol/>

Channel listing Content Provider, including a tv URI which can be used to switch to that channel.

More to come in add-on library.

Summary

Some emulator support exists right now
Develop a GTV remote app right now
More sophisticated GTV emulator: soon
ADB and Market: later this summer

More info

More info at <http://goo.gl/Nns9f>
Stack Overflow tag: Google-TV

Q&A

Q: What about international devs? A: Currently focused on US

Q: What about notification on top of live TV? A: Yes.

Q: Will there be a public list of all channel URIs? A: Eventually.

Q: Admob support. A: They think so.

Q: What about Chrome browser? A: Yes.

Q: What about 3D passthrough support, which isn't currently supported. A: They're working with partners and will look into it.

Q: What about XBOX 360 and Playstation controllers A: They think so, because they have ADB Host mode support.

Q: How to get more GTV providers out there. A: They're working on it.

Q: What about multiple user profiles. A: It's on the roadmap.

Q: With adoption of Android 3.1, what about http streaming. A: They're working on it.