

# moForte's Experience Porting to Android

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This deck can be found at: [moforte.com/aes-2014](http://moforte.com/aes-2014)

AES Los Angeles 2014

Game Audio Track Event G13

Sunday, October 12, 9:00 am — 10:00 am (Room 408 B)

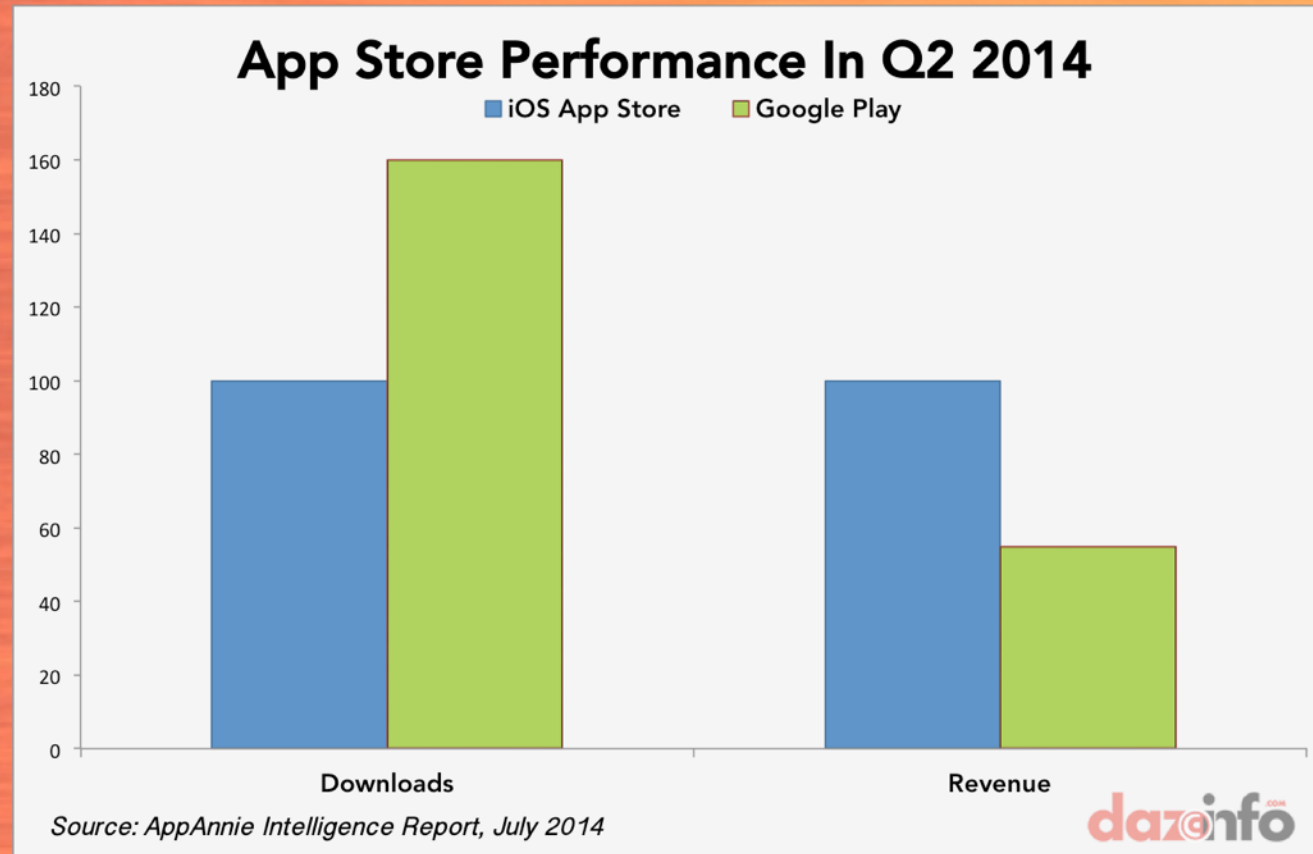
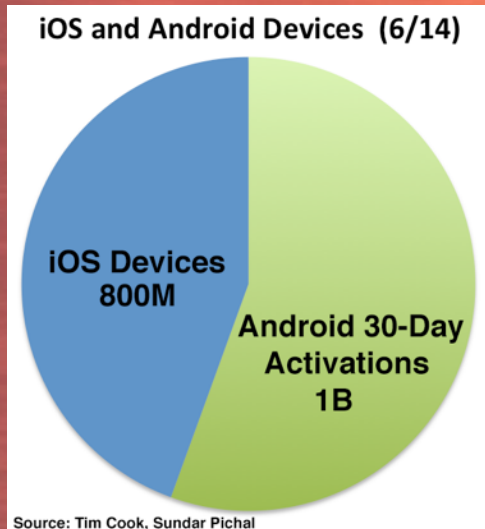
Game Audio: G13 - MIDI: Still Strong After 30 Years – New Advances with Web Browsers, Bluetooth, and More

# For Context: moForte

moForte creates apps that **enable everyone to make and share musical experiences** using moForte's proprietary interactive audio modeling technology and back-end social framework.

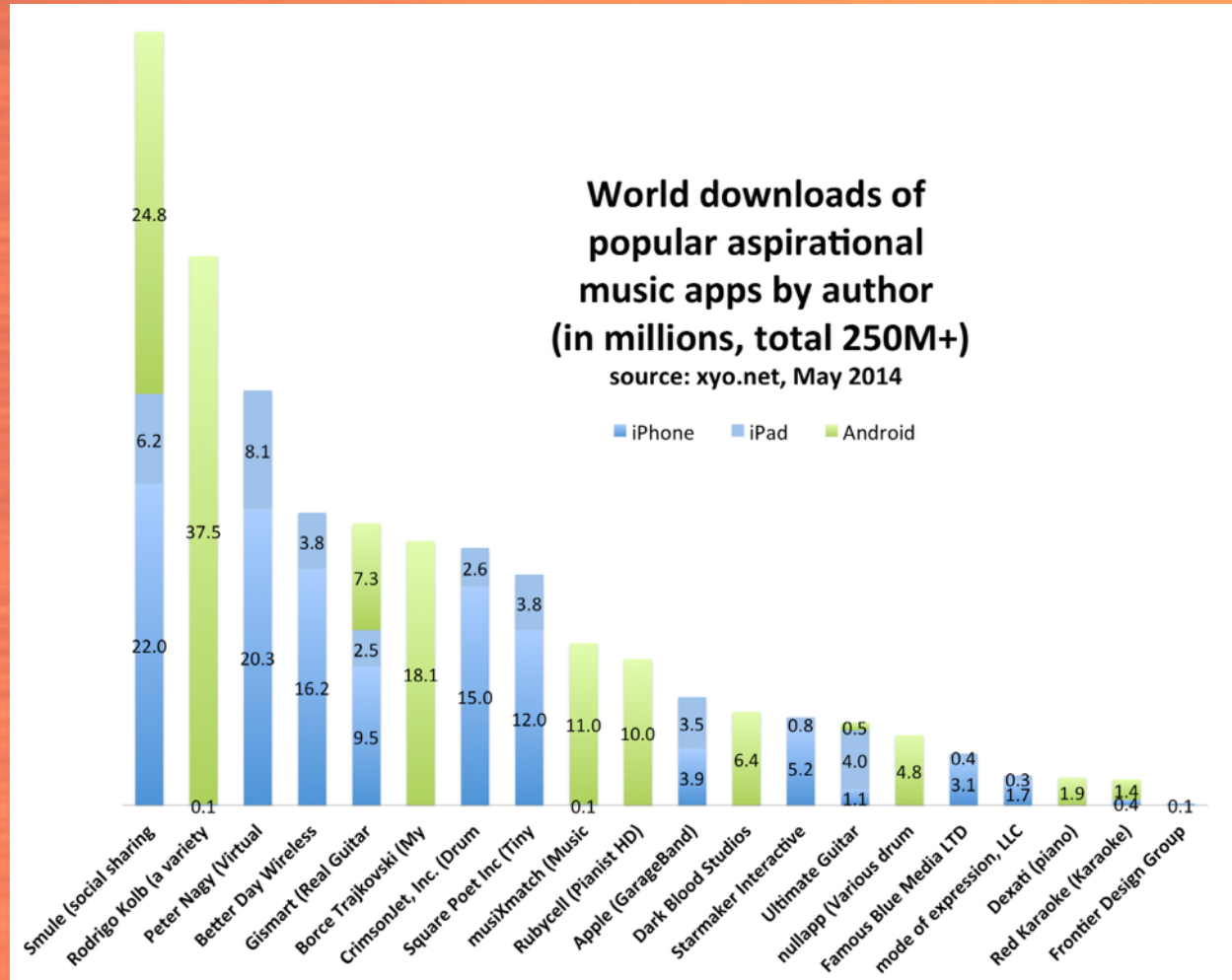
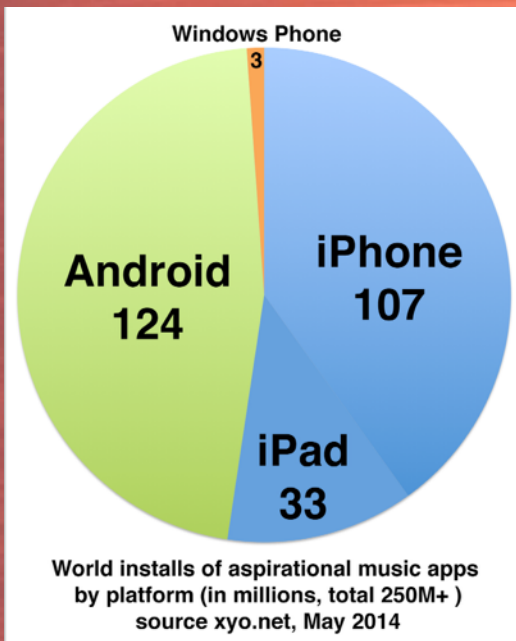


# The Android Opportunity



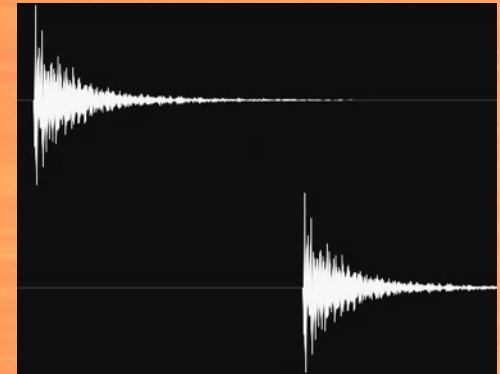


# Aspirational Music Apps



# Challenges

- Latency, jitter and under-runs
- In the past, many developers reported audio latencies of 100-200ms
- Not just Android, we encounter latency issues with iOS, but to a lesser extent
- Variety of HW configurations increases testing and support cost
- Some HW configurations don't work well with low latency audio



# About Latency

- **Event -> Output Latency** - The time between an interaction event (touch or MIDI) and when the sound is heard
- **Round Trip Latency** - The time between audio-in and audio out
- The market will drive all device platforms to target **<10ms for all latency**





# Recent Improvements

- Google has made much progress improving the latency of the audio subsystem
- “Android L” Developer Preview is offering Reduced Latency APIs.  
[Demoed at Google I/O 6/14](#)
- Pundits are predicting an Android L release date to be late October, or early November 2014



# moForte's Most Recent Investigative Port

- Port of our core DSP algorithm: the physical modeling engine for feedback distortion guitar
- Nexus 7, running Android 4.4.1 and 4.4.4
- Significant improvements from Android 4.4.1 to Android 4.4.4; specifically around under-runs
- We are optimistic that when Android L release goes live, the latency numbers will approach a point where our customers can have a good experience on some devices





# Samsung Professional Audio SDK

- Samsung Professional Audio SDK and a music creation app called Soundcamp
- Integrated with Jack2 for inter-app audio
- More info on Nov 12 at the [Samsung DevCon](#)



# Looking Forward

- The market will drive all platforms to <math><10\text{ms}</math> latency
- Developers of audio apps will offer their products on multiple platforms
- Semi-pro/pro market of audio apps that run on mobile/tablet devices



# Where to Find More Information

- This Deck: [moforte.com/aes-2014](http://moforte.com/aes-2014)
- [Google I/O 2013](#)
- [Google I/O 2014](#)
- [Android Latency](#)
- [Samsung Professional Audio](#)