

Strategies for coping with Device fragmentation

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Droidcon UK



Me



- Mobile developer 2001 - present
- Run a development shop
- Netherlands based

Itude Mobile develops client facing apps for companies



Native iOS



Mobile websites



Native Android



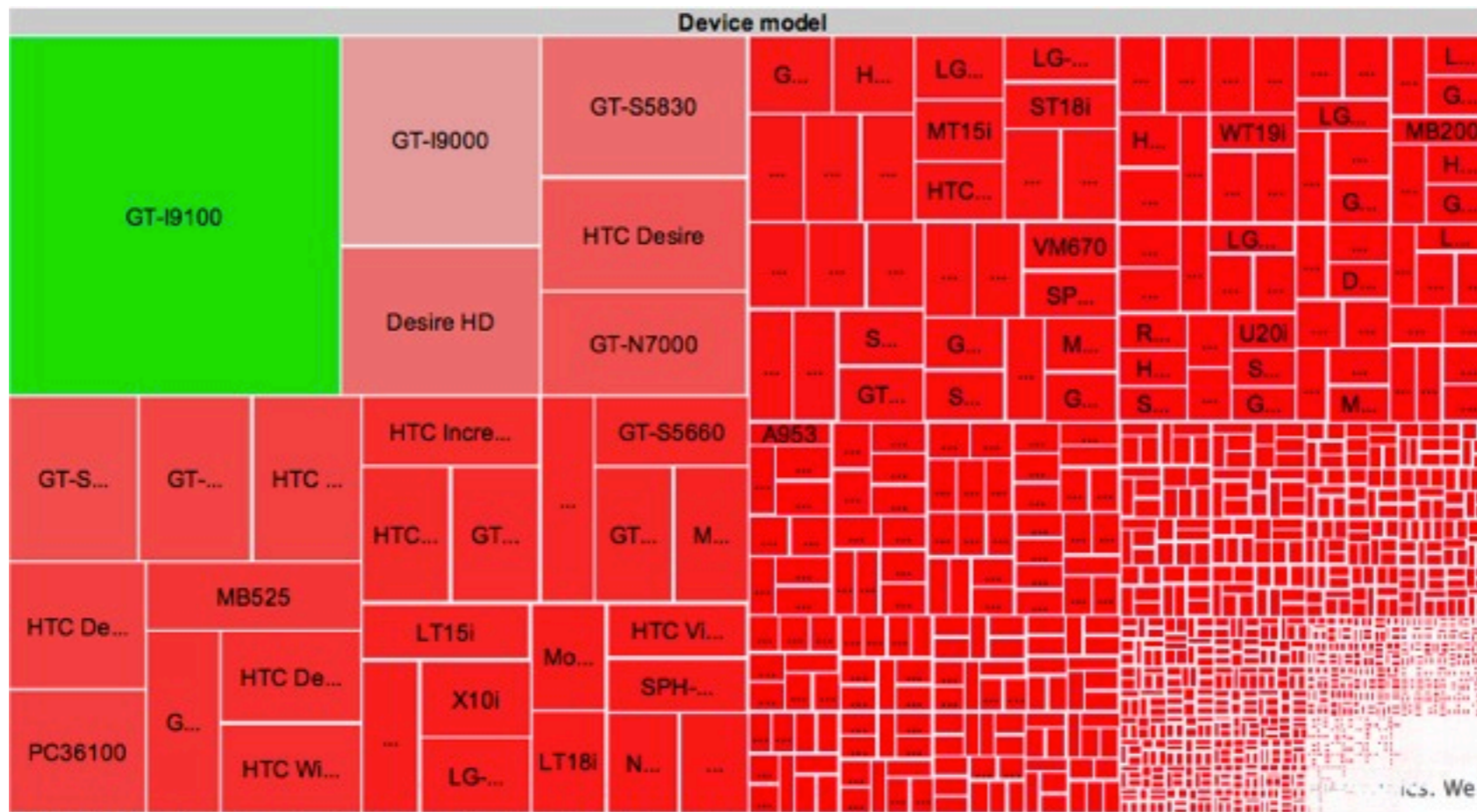
Mobile webapps



Agenda

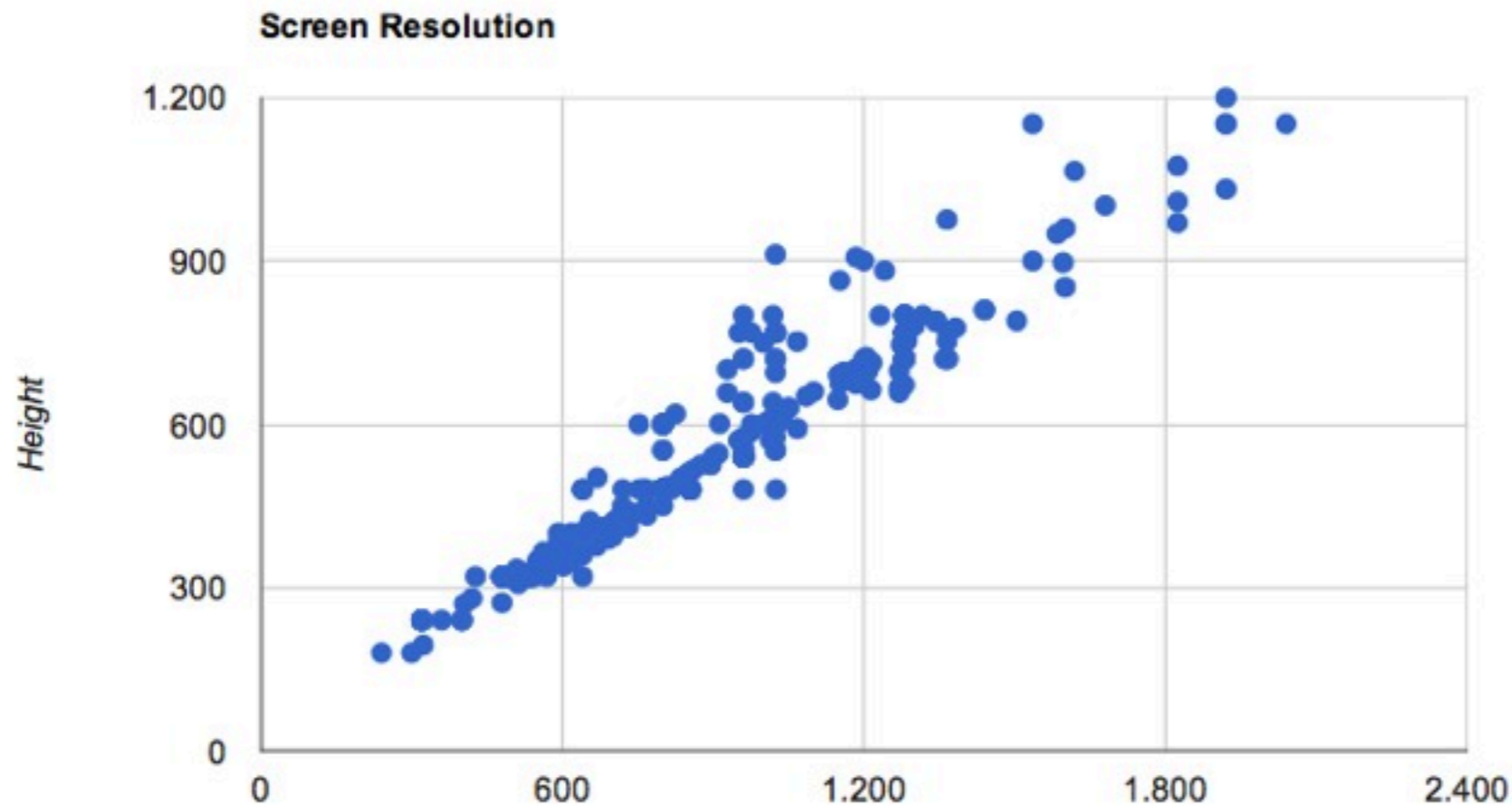
- What is device fragmentation?
- How to deal with it

The problem



www.opensignals.com

The problem (2)



Yes, this is just
Android
Almost 4000
device types in
the wild

www.opensignals.com

It will get worse

- 2009 - 2011 was a period of convergence
- Now its fragmented business as usual, the market is differentiating
- Small tablets, large tablets, cheap phones, high-end phones
- Learn how to cope!

Getting worse



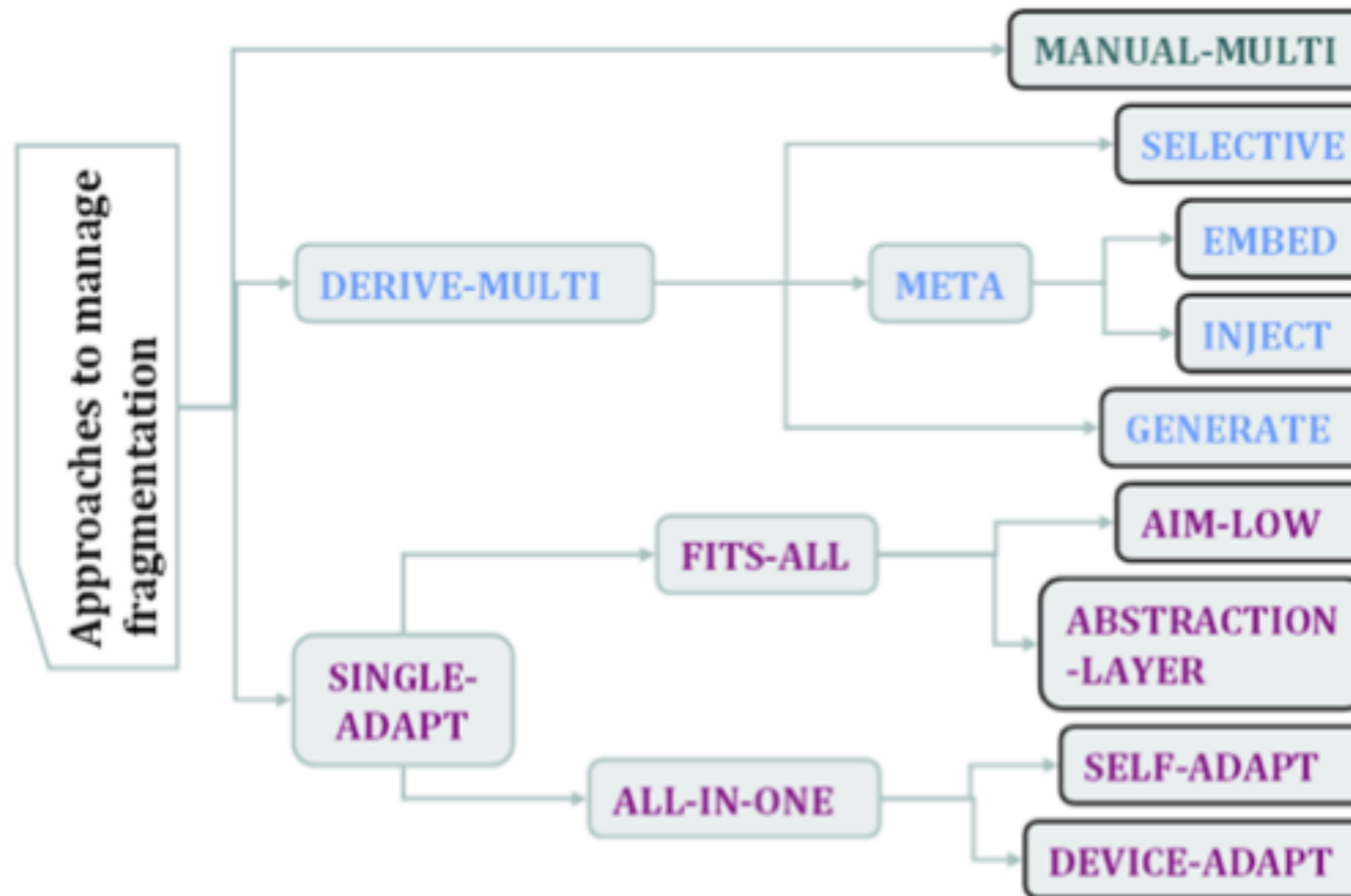
Old problem!

- Windows / Mac / Unix
- Desktop browsers
- JavaME
- Mobile web

Failed strategies

- Handset manufacturers: Users only need one form factor
- Developers: We'll stick to one device
- Developers: We'll go mad and compile 200 versions
- Developers: We'll stick to one strategy

9 strategies



Damith C. Rajapakse, Singapore school of computing (2006)

Most used

- Multi manual: Phone vs Tablet
- Derive multi: Qt, J2ME Polish, Mono Touch,
- Fits All / Aim Low: HTML5 / PhoneGap
- Single adapt: Android dynamic layout, 9-Patches, fragments

Multi Manual

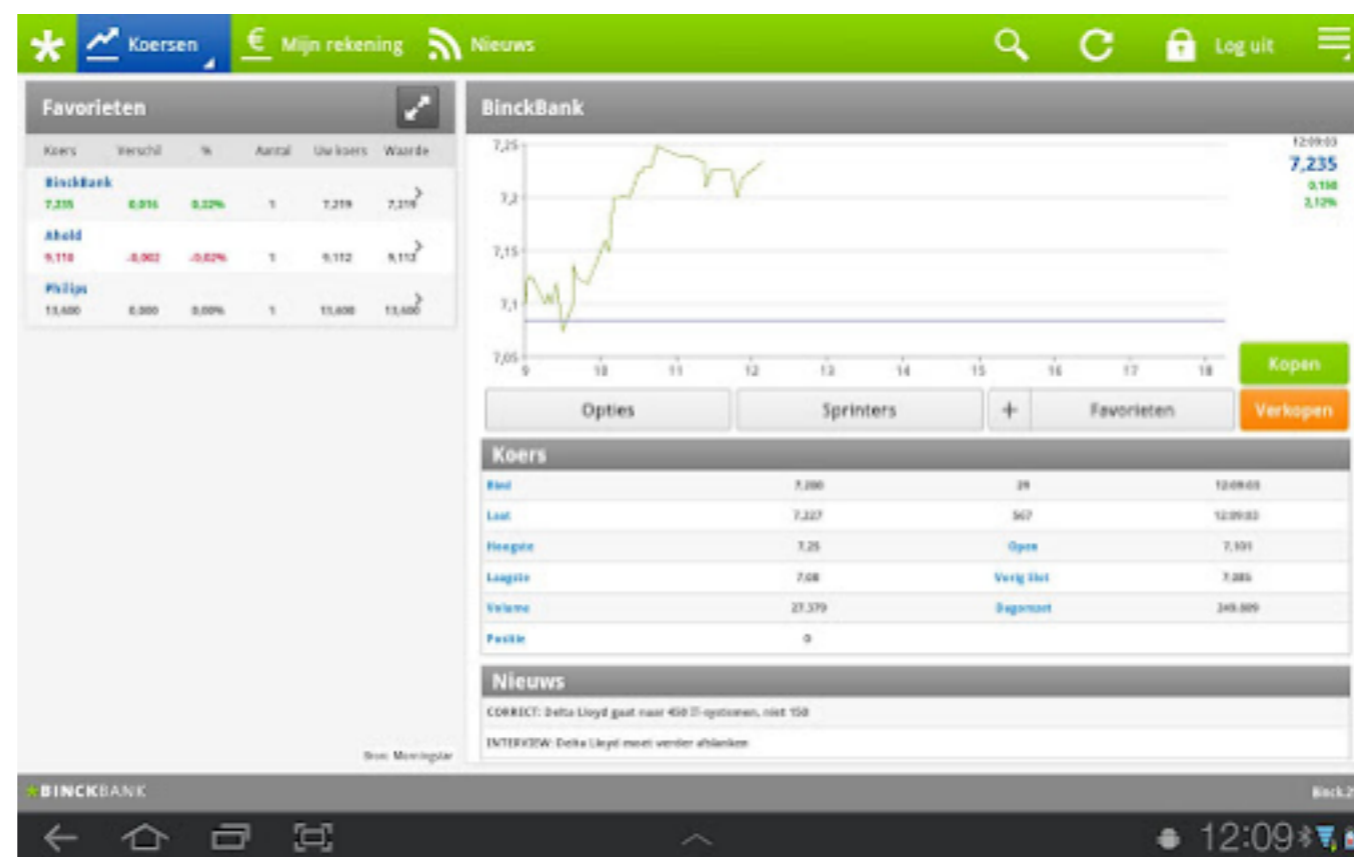
Phone vs Tablet

Multi design in addition to multi code

AEX Fondsen

Koers	Vershill	%	Bied	Laat	Slot
AEGON					
3,265	-0,020	-0,61%	3,264	3,267	3,285
Ahold					
9,154	0,085	0,94%	9,149	9,154	9,069
Air France - KLM					
3,280	0,003	0,09%	3,280	3,285	3,277
Akzo Nobel					
37,700	0,100	0,27%	37,685	37,720	37,600
Aperam					
9,029	-0,021	-0,23%	9,023	9,036	9,050
ArcelorMittal					
11,150	0,020	0,18%	11,140	11,155	11,150
ASML					
38,190	-0,385	-1,00%	38,170	38,200	38,575
Boskalis					
25,440	-0,110	-0,43%	25,420	25,450	25,700

BINCKBANK Binck.252



Derive Multi

- Pseudocode and Generate!
- Post-compile / injection
- Examples: Qt, J2ME Polish, Mono Touch

Fits all / aim low

- Code for the lowest common denominator
- Examples:
 - Webkit and HTML5 based apps /
 - PhoneGap
 - etc.

Single adapt

- Code knows about the device and adapts
- Works within the Android space
 - On the same form factor

If you've got a hammer



Everything looks like a nail

You need freedom To choose a strategy

- Multi manual
- Derive multi
- Fits All / Aim Low
- Single adapt

- There is no silver bullet! Pick and mix

Please Google

- Ensure relevant device information is available in the android runtime
- Reliably!
- so developers can maintain a single code base
- and choose how to cope with device differences

Which strategy will you choose?

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