

GravidPluss
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App development: what, how, and for whom

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Outline

- History
 - from Internet to mobile Apps
- Mobile phones
 - from phone to Internet access to
 - my personal representative
- Applications
 - Web versus App
- App development
 - Native versus common
- Medical applications
 - Privacy, Security
- Discussion and recommendations for Gravid Pluss



- Research and Education at Kjeller
- The building where the Internet (Arpanet) came to Europe in June 1973



1971 (at which point 23 hosts, at universities and government research centers, were connected to the ARPANET); 29 by August, 1972, and 40 by September, 1973.

At that point, two satellite links, across the Pacific and Atlantic Oceans to [Hawaii](#) and [Norway \(NORSAR\)](#) had been added to the network. From Norway, a terrestrial circuit added an IMP in London to the growing network.

Source: Wikipedia



From Internet to Mobile Apps

- 1973 - The Internet (Arpanet) came to Europe
- 1991 - Linux by Linus Torvalds
- 1993 - GSM networks - Opera starts Web browser (launched 1996)
- Jun2007 - iPhone, Jul2008 App Store
- Oct2008 - Android device by HTC
- ... Jan2014 - mobile Apps browsing bypass PC web browsing



ANDROID





Help - I need an App...



[source: Marcel Vries, 2013, slideshare]

App development Web versus App



- works on all phones
- works on all devices
- immediate update
- privacy:
no data on the phone

- specific «look and feel»
- integrated with phone
- access to sensors
- off-line usage



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App development Native versus HTML5



Web-based
html5

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[source: Appcelerator, Jan2013]

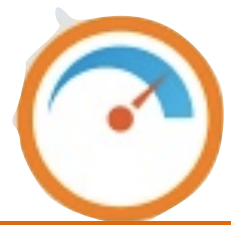


what to prefer?

Native versus HTML5



User Experience



Performance



Fragmentation



Monetization



Security



Availability of programmers



Cross platform



New OS innovations



Updates Distribution



App development

Native versus Cross Platform

- Native app

- costly (develop for each platform)
- specific programmer experience



- Cross platform

- develop once, use on all platforms
- reduced user experience

[picture: Sachin Dixit, MobilePundits, from Slideshare]

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Cross-Platform Tools for App development



Note:
An app can be
a web page



[picture: Sachin Dixit, MobilePundits, from Slideshare]

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Steps for App creation

A. Parameters

- user experience, performance, price

B. App internal pages and functionality

- which content in pages
- which links to other pages

C. prototype as text: «wireframe»

D. select core functionality

- Bluetooth measurement
- links to outside information

E. develop set of pages

F. readjust size, font, colour

G. create all pages





Our needs for Gravid Pluss

1. A questionnaire for iPad
 - 3 versions at W30, W36, and after birth
 - W30: with randomiser
2. App for Pregnancy support
 - with Bluetooth measurement
3. Web page
 - A. for us
 - B. for study participants



Bluetooth? ..

3.A.



3.B.



Our need for Your Help



- WLAN access at hospitals
 - Tablets need to be online
- Blood sugar measure
 - Bluetooth interface
- What else?





Discussion and Conclusions

- App development is all about chaos management
 - technology dimension: web, mobile web, app, native app
 - social dimension: user interaction, user experience
- How perfect do we need to be?
 - how often do we update pages in the project?
 - how well-looking is the result on Android and iOS?
- Privacy concern
 - user feedback is not stored on a device, but on the web
 - we are (one of) the first with mobile apps and personal data
- It will be fun
 - what if a user does not behave like we thought?
 - we will learn a lot, but have the best project ever :-)

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