Sowing seeds

Unexpected journeys through the digital divide.

http://www.flickr.com/photos/ricephotos/2678931029
It’s been an interesting few years!
...this is all well and good, but is any of it trickling down to people with more limited resources?
UK Government Spends Thousands Developing iPhone Apps

Do you like this story?

1,063
Tweet

103
Share

Slapped with a Freedom of Information (FOI) request, the UK government revealed that the cost of development of these apps was £81,000. The numbers may not sound too high, but BBC was forced to put some apps, as UK Home Office declined to give the information.

Furthermore, the numbers are significant given the fact that the cost per user on web development. It spent £94 million ($143 million) on websites and £32 million on web staff in 2009 – 2010, which prompted it to hike its websites.

Right now, the future for government-approved iPhone apps is unsure. Government froze spending on all marketing and advertising, and this includes iPhone applications.

BBC iPhone applications postponed

The BBC’s plans to launch iPhone apps for its news and sport content have been put on hold by its governing body.

The BBC Trust has asked the BBC to postpone its plans while it looks into the business case for the new services.

The free applications were due to be released in April but have met with criticism from groups who say they will skew the market for news apps.

Several newspapers including the Guardian and Daily Telegraph already offer both free and paid-for apps.

A spokesperson for the BBC Trust said that the body had decided to launch an assessment of the apps after "representations from industry".

One of the most vocal opponents has been the Newspaper Publishers Association (NPA), which said that the corporation would "damage the nascent market" for apps.

The trust’s investigation will decide whether the apps constitute an extension to the BBC’s existing services or are an entirely new offering.

At launch, the BBC executive told the trust that the apps fell under the terms of its existing BBC service licence.

If the trust finds this is not the case, they will undergo a more lengthy public value test.
“The digital divide refers to the gap between people with effective access to digital and information technology, and those with very limited or no access at all.”

- Wikipedia

http://www.flickr.com/photos/featheredtar/3081108482
so why is technology (and more specifically mobile) so important?
increasing access to mobile technologies is one thing...but ensuring this technology is useful depends on many factors
challenges to mobile usage

- low cost devices
- infrastructure
- fast networks
- cheap data
- open ecosystem
- standards
- browsers
- regulations
- local skills
- usability
- capacity
- local content
- literacy
- security
- electricity
- capacity
- local content
- regulations
- browsers
- standards
- open ecosystem
- cheap data
- fast networks
- local skills
i’m going to look at three of them...
Access to...

1. low-cost mobile handsets
2. a free standards-compliant browser
3. sustainable and locally relevant services and information
Access to...

1. low-cost mobile handsets
2. a free standards-compliant browser
3. locally-created web services and information

cheaper and more accessible than a desktop computer
Access to...

1. low-cost mobile handsets
2. a free standards-compliant browser
3. locally-created web services and information

- web content is simple and cheap to create, and update
- cheaper and more accessible than a desktop computer
Access to...

1. low-cost mobile handsets
2. a free standards-compliant browser
3. locally-created web services and information

the most relevant content is local
and the web is an ideal vehicle to disseminate information

cheaper and more accessible than a desktop computer

web content is simple and cheap to create, and update
A bit of context...
4,600,000,000
number of mobile subscriptions

68% of the population at the beginning of 2010 – source: U.N. Telecommunications Agency
many people have multiple SIMS--especially in emerging economies – source: Tomi Ahonen Consulting
which is *roughly 1/2 the number of people living here*

*2009 estimates put the population around 6.79 billion inhabitants...
smartphone sales are rising, but are still only 17%* of devices worldwide

<table>
<thead>
<tr>
<th>Region</th>
<th>Market share 08</th>
<th>Market share 09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>50%</td>
<td>52%</td>
</tr>
<tr>
<td>N. America</td>
<td>21%</td>
<td>25%</td>
</tr>
<tr>
<td>W. Europe</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>EEMEA</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>APAC</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Lat. America</td>
<td>3%</td>
<td>5%</td>
</tr>
</tbody>
</table>

source: Morgan Stanley, Smartphone shipment share 08-09
...most people, own a mobile that looks something like this...

http://www.flickr.com/photos/kiwanja/3169478287
this is still primarily due to cost, even in developed economies...
American smartphone owners are nearly **twice as likely** to earn...

> $100,000 a year

source: Nielsen
72% percentage of American population with household income < $75,000

the largest group, at 28% is the $0-$25K category, source: US Census 2005
1. low cost mobile devices
2. a free standards-compliant browser
3. locally created web services and information
Nokia
Samsung
LG
RIM
Sony Ericsson
Motorola
Apple
HTC
ZTE
G’Five
Others

mobile market share in 2010

Worldwide Mobile Device Sales to End Users in 2Q10 (Thousands of Units, total: 324,556.8)
http://www.gartner.com/it/page.jsp?id=1421013
Worldwide Mobile Device Sales to End Users in 2Q10 (Thousands of Units, total: 324,556.8)

http://www.gartner.com/it/page.jsp?id=1421013

lots of newcomers
most new brands from India, China and the APAC region
India

population: 1.17 billion
mobile penetration: 53%
28 local manufacturers now account for 14% of local market share
MicroMax

3rd largest market share in India
(behind Nokia and Samsung)
The average time to market for a MicroMax handset.
Spice
4 million Indian users
Indian manufacturers primarily compete on retail and wholesale price, and the inclusion of relevant local features.

- Dual SIM
- Radio
- Flashlight
- 20-30 day standby
- Dust resistance
- Theft tracking
- Preloaded local content
Multi-SIM capability is the most common feature across all small Indian manufacturers.

(in fact, across all smaller manufacturers regardless of country)
Features are fine tuned to aggressively compete with larger manufacturers.

**Micromax X1i**
€30
- Dual SIM with dual standby
- Both SIMs available at all times
- Enables users to save money by using each SIM for different purposes.

(people love these, operators...not so much)

**Nokia C1**
€30
- Dual SIM with ‘hot-switch’
- Press button to swap from one SIM to another
- Enables family members to share one mobile or easily swap SIMs when traveling

(standby time on this devices is 6 weeks!)

(for more on this topic, see “The Economist: Nokia gets dual-sim religion”)
China

population: 1.3 billion
mobile penetration: 59%
G’Five

portfolio of 300 handsets
sold in (India, Egypt, Saudi Arabia, Nigeria, Kenya, Pakistan, Nepal, Bengal, Peru), 300 handsets, 2 new models launched per week

2 released each month
G’Five also sells handsets around the world including India (where it is the #3 brand).
(if you’re paying attention...MicroMax is also supposedly the #3 brand :-)

Kenya

Peru

Egypt

Saudi Arabia

Pakistan

Nepal

India

Nigeria
Other Chinese manufacturers such as ZTE and Huawei are also shipping devices to the America and Europe.

ZTE sells over a million devices annually in the UK.
Hardware, chips and components for most Indian-designed devices also come from China and Taiwan.
To further reduce costs, manufacturers such as A-Link are now assembling mobiles in Africa.
Say hello to the ever stylish and most desirable “Voda-Pod-Berry”

Shanzhai

“bandit” devices from China

fake Blackberry
fake iPhone OS
fake Opera Mini
fake Vodafone
13% of global mobile phone supply is produced by small unlicensed suppliers i.e. devices with no IMEI

source: Nielsen
Indonesia
population: 242 million
mobile penetration: 80%
25% market share, handsets price range £20-£70
Noticed a pattern yet?
it’s now also much easier to make a smartphone
60 devices, 21 OEMs

as of June 2010
end result...
OPhone, a custom Android variant by China Mobile including handwriting recognition for Chinese characters.
For regional brands, bundling local variants of an app is cheaper than licensing Google’s alternatives, and provides more opportunities for inclusion of local content.

Spice Mi300
Malaysia

Local mapping service

Android store and local ‘Blueberry’ app store

shipping with local applications
regional models range from £70-£100
(compared to £200-300 for devices by larger brands such as Samsung)

Huawei IDEOS
worldwide*

Spice Mi300
India, Malaysia

Nexian A890
Indonesia

and lower price points

*IDESOS designed with Google especially for low-cost market.
So everyone will be buying Android devices soon?
Um...no...
While a £70 smartphone is great, devices at the lowest end of the market are still very basic, yet remain unaffordable to many consumers.

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone 150</td>
<td>$15</td>
</tr>
<tr>
<td>Nokia 1280</td>
<td>$30</td>
</tr>
<tr>
<td>USED Nokia 3210</td>
<td>~$4</td>
</tr>
</tbody>
</table>

Cheap and functional for voice, SMS, some include a flashlight...but no browser.
Android may however create interesting unintended consequences...
As the freely available and high quality mobile operating system becomes workable on most phones, the Chinese knock-off phones are now much more likely to be using Android/OPhone. It is the low-hanging fruit option.

...those knock off phones are the present reality of many targetable markets today, including East Africa’s. Android fragmentation is replacing complete fragmentation. - ICTWorks.org
1. low cost mobile devices
2. a free standards-compliant browser
3. locally created web services and information
1,802,330,457
number of internet connections in the world

26% of the world’s population at the beginning of 2010 – http://www.internetworldstats.com
1,300,000,000
number of mobile internet users

includes WAP and ‘real web’ browsing
500,000,000

number who access internet only on mobile

that’s 29% of the world’s internet use of 2009
last year, Nokia did something many thought was mad...
OMG...

they acquired a company called Novarra

http://www.flickr.com/photos/richardmoross/1413692087
Vodafone in mobile web storm

by Mike Butcher on September 21, 2007

57 Comments

An almighty row is breaking out between Vodafone and mobile startups, who claim the giant is hobbling the mobile web for its own gain.

The chorus of disapproval is being lead in the main by Luca Passani (pictured), the architect behind an open source mobile project known as WURFL.

In a long public statement written yesterday, he and four other leading mobile web players who have backed the statement – allege that Vodafone UK is abusing its position by making many third-party mobile sites unusable. He is also carrying a "Vodasucks" logo on his site.

Specifically, Passani and his backers say Vodafone is stripping out device identification information that mobile phones send to content providers, in order to "customized content for each user's device."

The statement damns the act as being...

"Perpetrated by a large company in a dominant position again and against its own customers. An abuse that is damaging the whole industry and is a case of also using..."...some background...
but proxy servers aren’t all bad...
mobile proxy browsers

proxy browser

rendered + optimised on proxy server...

limited + costly data

free + unlimited data

proxy server

bbc.co.uk
Advantages of proxy browsers...

1. dramatically lower data costs*
2. web pages load 2-3x faster over 2G networks
3. can instantly provide support for modern web technologies (e.g. HTML 5) on older devices

*Opera Mini for example compresses data up to 90 percent.
UC Browser

60% market share in China

or any JAVA MIDP 2 and CLDC 1.0+ device
browser adoption with 'Chinese characteristics'

Source: Statcounter
iPhone  
Android  
Symbian  
Blackberry  
Windows

or any JAVA MIDP 2 and CLDC 1.0+ device

LIGHTNING FAST MOBILE BROWSING
- Loads complete web pages in seconds
- Patented navigation and display technologies get you where you're going faster

WATCH. CONNECT. SURF.
- View streaming flash or HTML5 videos from sites like YouTube, MySpace and MTV
- Easily switch between multiple sites with tabbed browsing
- Enjoy streamlined access to web apps with BOLT’s widget platform
- Post to your Facebook or Twitter account directly from BOLT while you browse
- Shop securely

UNCOMPROMISED WEB EXPERIENCE
- Full desktop PC-style browsing on all types of mobile phones
- Run Web-based applications, like Mafia Wars and Google Docs
- Web content is never reformatted, repurposed, or removed
- Browse any site with the best page rendering available

Bolt
5% market share in India
no plans to support S60 3rd Edition, S40, Java or featurephones in general, BlackBerry support postponed
Ovi Browser

aimed at the 100+ S40 featurephones
A good proxy browser can breathe new life into old or lower-spec devices.

**BlackBerry 8520**
circa 2009

**5130 Xpress Music**
circa 2007

**Nokia N70**
circa 2005

*Based on review of Opera Mini and AdMob usage statistics*
Micromax embeds Opera Mini on many devices. UC has recently signed a deal with Indonesian manufacturers and operators to pre-install its browser on their local devices.
...or simply lower data costs on your favourite smartphone

source: Opera State of the Mobile Web July 2010
1. low cost mobile devices
2. a free standards-compliant browser
3. locally created web services and information
finding examples of locally created content and services proved challenging...

(so I will unfortunately generalise quite a bit in this section...)
and varied **hugely** by region...
(and particularly by country)
finding content from global brands was fairly easy
there were also many local news and marketplace sites
...and a growing number of useful services offered by NGOs and philanthropic commercial organisations in the area of education, agriculture, health and commerce.
the most popular services however used ‘older’ technologies such as voice or SMS

http://www.flickr.com/photos/kiwanja/3169449583
Africa

mobile services still poor overall
but lots of informal innovation

http://www.flickr.com/photos/kiwanja/3169413435
Major challenges to the development of services include poor infrastructure, high device and airtime costs, and lack of ecosystem maturity (e.g. number portability, taxation, standards, policy.)

http://www.flickr.com/photos/kiwanja/3170244160
There are however many successful initiatives around m-payments and m-transactions using ubiquitous technologies such as SMS and USSD.
Services such as M-Pesa, initially developed as a mobile money transfer platform have also been ‘adapted’ by consumers for other uses such as saving money, paying bills and buying goods.
APAC
very high mobile penetration
vibrant market with local
content and services

http://www.flickr.com/photos/gianvc/3544721938
In this region, the heavy colonial influence has resulted in good infrastructure, early ICT usage, and a strong level of brand and marketing awareness.
Terrestrial telecommunications have however remained poor. In Jakarta, home ADSL costs close to $100/mth. By comparison unlimited mobile data on a pay as you go Blackberry costs only ~$17/mth.
The proximity to China (and the presence of large ethnic Chinese communities throughout the region) means low-cost (and knock-off) devices have been available from the very start.
Use of social media in APAC is huge....
Indonesia’s social media habits are now somewhat legendary.

#1 Twitter and MyGamma user base
#2 Opera Mini user base
#3 Yahoo Go, Taptu and Facebook user base

http://www.flickr.com/photos/basibanget/3726248376
services from more developed regional economies also have high usage

Mig33 is primarily from Singapore
initiatives such as 0.facebook are reducing usage costs for consumers

- Agreement between Facebook and >50 operators worldwide.
- Available in 70 languages.
- Specifically optimised to render on low-end devices.
- No data charges when browsing the site itself.
ok, but what does Facebook have to do with improving people’s lives?
High social media use is helping improve communication during elections, natural disasters and social initiatives.
In the Philippines use of SMS, blogging and social media are extensive and often used to keep in touch with family members working overseas.

http://www.flickr.com/photos/ricephotos/2679751654/
In fact economic migration has been one reason for the increase in social media usage worldwide.
As in Africa, mobile capabilities in APAC remains lowest in rural areas.

http://www.flickr.com/photos/ricephotos/382239538
A final perspective
the digital divide affects developed economies as well
4%

iPhone market share in EU5
(U.K., France, Germany, Spain, Italy)

Source: Comscore
Yet some of our most important services are being created for a minority of users.

source: Mashable, mocoNews
Targeting only the iPhone (and Android) will miss populations that are most in need.
thank you

hello@yiibu.com

Photos Creative Commons By Attribution courtesy of Flickr