

Invited Presentation at CIO Conference on CIO Research in Africa 2009

**Paper:** How do we Manage Mobility?

v1.1

**Date and Time:** 23 October 2009 at 13h45 to 14h15

**Speaker:** Dr DJ Hislop, CTO Korwe Software

**Venue:** CPUT, Cape Town

Distinguished guests, ladies and gentlemen, Mr Chairman:

It is a privilege to be at the first CIO Conference meeting. I think that this is one, amongst a few other initiatives (such as Enterprise Architecture) emanating from members of this community that deserve support. It has been my observation that in South Africa, accountants hold an inordinate amount of power in companies - the aphorism that if the only tool you have is a hammer, everything looks like a nail has been used here already. However, I think that "in the land of the blind, the one eyed man is king" was perhaps more relevant - in a cash strapped society like South Africa the person who controls cash flow will hold sway.

I mention cash as a crude attempt to bring in an aspect of IT in which I am more familiar - that is development. I do not think that the development community has been in a more solid position to seek investment into this community, to generate value. It is very exciting. I hear that the equities market is expected to go sideways for 5 years. I hear that for every 100 shares an investor may have only 20 may be undervalued. This is surely the time for IT to step in and generate value. I will return to this point later.

Today, I will be telling you my views with regards to mobile, and bringing you up to speed with regard to dotmobi. The interesting part of the presentation will be at the end where I plead with you Mr and Ms CIO to support and grow innovation in your IT departments to seize the day with regard to mobile.

We all know what WAP is - that unsuccessful technology circa 2001. That is it was not unsuccessful - it was sold wrong to the wrong audience, but WAP is with us, through MMS and dotmobi. WAP is a fantastic technology. However the world has moved on since 2001, and invented WAP 2.\*, what might be construed as being a dumbed down version of WAP, a technology that looks like html, called XHTML-MP (mobile profile). This is in fact good ol' html, with some rules. The rules are almost self evident, but following the first few rules leads you down a path of no return, away from vanilla web (here I refer to web as PC bound) technologies. First you do away with big images, and then you get rid of Javascript, and so you hack away at the markup and produce something customized for phones through for example WURFL or Device Atlas.

Then you start doing the same with information, hacking away at irrelevant chunks of information, in the (vain) hope that someone will click on it. And so you come to customisation and personalisation as being a critical part of dotmobi. The next step then is

contacts and diary; location based services;

The bottom line of this course of thinking is that mobile is not just browsing on the phones. Dotmobi is an important and different discipline - and discipline it is - no longer can you hide your web sins under layers of Ajax. At first blush the skills look the same - aspx, php, jsp... However to fail to appreciate the sophistication and subtlety of the technology is to make the mistake; to fail to understand the new business flow is as good as wasting your time... However any half decent development shop will understand and finesse appropriately these very mundane aspects of software development.

The point you will perhaps have noticed is that I have not introduced any new domain level components. You will still be using your existing CRM, CMS, or what have you. However, now you will need to juice it all together on the Application level. The beauty of dotmobi over for example J2ME is that content is generated server-side. While device customisation is needed, it can now be done by partitioning the thousand plus devices into classes. The signing step of J2ME has been removed and replaced by in-house testing. If you believe in IP ring tone - that non-trivial applications are connected – J2ME is just a container. It may be slightly better in some regards over the embedded browser (for example it may have access to location and contacts API's), but is a whole lot easier to deploy. You do not have to get your clients to update or download jars.

However there is more: there are changes planned for mobile browsers that go far beyond their desk bound brethren. The fact that mobile browsers can now render arbitrarily complex pages is not the point. I believe that the mobile browser will become a considerably different beast to what we have now - I expect to see future mobile desktops to be built around the browser - that the browser is the desktop. I think this is the Apple design pattern and I expect to see it with Google's Android.

As for Symbian - Symbian is far too complex for the majority of users and businesses. The obvious strengths of Symbian are not relevant for many enterprise functions. There will always be a need for Symbian apps. But in terms of getting enterprise data out there, this is not useful. Symbian is intended for low latency and powerful applications.

I believe that the killer application dreamt about by Nokia in 2001 never was: I think it is all about convenience, interoperability and productivity. (As developers, developing for Forum Nokia or Apple App Store is not a good idea - there are a few companies that make a lot of money, but the majority do not; their applications are copied in no time at all; the margins scale by uptake, and that wave crests really quickly, when the next wave washes by.) As an IT shop you are not in control of your own supply line.

Reformatting proxies are an anathema to me - the idea that you drop an existing web page onto a phone is contrary to the path to true enlightenment outlined above. To me to think that the workflow on a 1024 x 1280 device cannot be the same on a 320 x 240. (Of relevance here would be questions regarding page latency - typically the latency lies in the signalling in the network - the size of the payload is not that significant.)

Another thing is that XHTML is important, because the phone does not have many CPU cycle to render a page, it needs to know the page layout in advance hence the X in XHTML. You find that complicated pages degenerate into a tag soup under HTML.

If you look at indices reflecting South African's ICT performance, it does not look good on paper. This is in sharp contrast to the innovation we see small companies.

Here is the kicker: dotmobi in Africa is a potential for being extremely successful. The so called "Digital Divide" has resulted in PC penetration into the African market to be eclipsed by mobile phones. The African online universe is very different to the Western European or US markets - you know your customers far better than the Google. But further, there are technologies and ideas out there that will bring IT out of the basement and allow people to interact with it in their ordinary everyday life, bring value to them. Exactly what these innovations are I can speculate - but it will involve a solid and rigorous development program; interoperability with other services will be the hallmark.

In terms of the agenda for the dotmobi community going forward:

- (1) Location services
- (2) Msisdn for auth
- (3) Wifi and Wimax coverage
- (4) Femtocells
- (5) Industry must use local innovation
- (6) Dotmobi White pages
- (7) Steaming media
- (8) FICA and RICA compliance of your mobile
- (9) Mobile Money
- (10) Micropayments
- (11) Near Field Technologies

I think that IT is a potent area for future investment, especially in mobile in Africa. I can see real opportunities for growth, which are only stifled by an immature community, unable to manage software assets and frame a proper research program, in which investment will predicate growth. (I said I would come back to this.)

In conclusion, you, Mr and Ms CIO, are within a hair's breadth of providing mobile presence in your enterprise. You have the existing skills and data. However do not be deceived by appearances of simplicity. Invest in delivering what your user wants or needs in a technologically transparent way. Use local insights and innovation. Developing and maturing the dotmobi market will require subtlety and sophistication on an industry wide basis.