

Converting the mobile to an enterprise device: a paradigm shift for organizations

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A carefully considered mobility strategy and implementation is becoming a necessity rather than a choice in today's globally connected and competitive atmosphere for both governing bodies and profit run businesses today. According to a latest Gartner study "mobile centric applications and interfaces" is going to be a strategic technology trend for FY 2012. 'Contextual and social user interface' is also going to be topping the charts for developing technologies. This is a clear indication to the burgeoning need of enhancing consumer support and experience on the mobile.

The mobility space is evolving rapidly and due to technological disruptions there are plenty of tools and techniques developing gradually, however there is lack of standardization of these tools and technologies. Governing bodies have realized this and there are discussions going on towards building common frameworks and tools to improve efficiency and cross-platform compatibility. Another important parameter that influences how the market is evolving is the user behaviour. While there are trends that can be understood by market data analysis a clear picture is yet to emerge. This poses considerable challenges for companies when strategic decisions have to be made with respect to mobility. The following discussion attempts to unravel some of the trends in the market. Here are a few technology /solutions that will be in focus in the next coming years:



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Short term

- Greater adoption of mobile web apps and hybrid apps
- Comprehensive security solutions for smart phones
- Location based service becoming a norm (GPS based)
- Indoor location based services (signal finger printing based)
- Voice driven applications

Medium term

- App stores aimed at enterprises
- Mobile solutions as SaaS, development and hosting as PaaS
- Memory Business Intelligence and Cloud based analytics
- Smartphones extending their role as more than a communication device -- The adoption of NFC, device control etc., are live examples Voice driven applications

Long term

- Wide use of HTML5
- Extensive use of web sockets revolutionizing the internet taking it to be a real time data source.
- Solutions that work seamlessly on all devices, not just Smartphones

Fragmented Technology landscape

Current trends indicate that the platform market will be dominated by Android from OHA and iOS from Apple in the next couple of years. We feel that Android and iOS will gain share against Nokia/Symbian and RIM/BlackBerry platforms. Microsoft is likely to emerge as a strong third player in the market. All the three would have strong presence in both the smartphone as well as the tablet market. The other dark horse could be the BADA OS from Samsung particularly in the Asian market. However, what is clear is the devices such as smartphone and tablets will continue to dominate the market and these devices will employ multiple different operating units. For obvious reasons, mobile internet and GPRS is the driving force for this technology.

Emergence of the Mobile Web

While the platform war rages on, there is another emerging trend. This is nothing much but the mobile web. In the last two years web is emerging as platform for mobile development. The two fundamental reasons for this are:

1. Companies have existing web based assets that they want to reuse
2. HTML5 is removing a lot of limitations that are associated with the current web implementations

The mobile web offers developers and publishers other major benefits in comparison to native OS development like

- Larger primed up market
- Established and broader distribution channels
- Lower cost of development and maintenance

Web has also come to be a part of the user behaviour over the last several years. It is said that there would be a seamless slide over from desktop web to browsing on the smart phone, particularly for a lot of older generation users. With the increasing device and browser capabilities the user experience on a smartphone is very similar to that of the desktop.

The development tools and libraries have evolved in the last two years to make mobile web application faster and have a high degree of interactivity with the user. With data plans becoming cheaper due to the sheer volumes of business, the gap between the native app and mobile web is decreasing. However, it is unlikely that native app development will die. There are certain things that only a native app will be capable of doing -- like device management. Hence, in the long run the two competing technologies will co-exist based on their relative merits and developments in the respective areas.

The other variation of mobile web that is emerging strongly is that of the Hybrid apps. These are apps that are via media between the web apps and the native apps. Hybrid apps can use the native device capabilities while the UI is coded in HTML5 and the content is pulled from a web server. In terms of look and feel these apps would be as good as native apps. They can be delivered via the app stores and monetized similar to native apps. If the bulk of the content coming from the network their device footprint also tends to be lower. The popular facebook app is a classic example of a hybrid app. There are popular development platforms like Phonegap, appmobi, appcelerator

and worklight that help build hybrid apps that are device agnostic thus increasing the total cost of building and maintaining.

In this case, what is recommended is:

- Reuse your web assets -- Mobile web: This will help Lower TCO, increase ROI, quicker time to market
- Native app enables working on Lesser than two platforms, high performance, highly interactive, rich UI, MDM
- Hybrid applications lets one reuse web based content, have basic device capabilities, power of HTML 5
- Mobile platform can be high investment/Large deployment, enterprise features, legacy integration

What is the right mobility strategy for you?

If you are a SMB starting to use the mobile channel for your business the first one to look for is corporate email access via mobile devices. Extending access to your employees and partners of the crucial data while on the move is secondary. This could be sales and marketing data, analytics etc.; if you are a larger enterprise you might have this already in place. The extension could be business workflows and dashboards exposed via mobile clients to help decision making on the move. For SMBs who may not have standardized ERPs and CRMs this could mean building custom applications with their IT developments teams or vendors. For larger enterprises the existing infrastructure and scale can help in moving forward but there would be larger capital expenditure involved.

Depending on the complexity and scale of your IT enabled business processes they are two distinct approaches. On one end you can build custom solutions and manage them internally or with a vendor assisted team. On the other end you could choose a middleware approach and use mobile enterprise application platforms (MEAPs) available in the market. While there are many such tools in the market not all of them may be full scale MEAPs. You should evaluate and choose the right one carefully. Some of the prominent MEAP vendors are Sybase, Antenna, Worklight and Pyxis.

Security is the most important consideration for enterprises as the employees of organization access corporate and customer data over smart phones that are owned and partially or not managed by the corporate IT. Again the recommendation here would be take the mobile web route to avoid device footprint and to take advantage of the already mature web security protocols.

What is important is to find and implement solutions which have a built-in innovative mobile web framework and which are secure that allows web based application/sites to be mobile enabled with zero impact to the existing IT systems thus giving quicker time to market and lower TCO.

To conclude just like migrating to cloud, adapting to mobile and converting data to suit all mobile platforms is not an option but a necessity for enterprises. However, this move has to be well planned and strategized to make the most of this platform.

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