HP aims to "Reinvent" Mobile

This article also appeared in Techpinions

HP recently announced its new Elite X3 convertible smartphone that can become a notebook computer or a desktop through use of smart adapters and wireless technology. Running Windows 10, it's targeted at enterprise users who want portability but are not totally able to get all their work done on a smartphone form factor. It sports some impressive technology, including the latest Qualcomm Snapdragon 820 processor with 4GB of memory, a huge 4150 maH battery, a Gorilla Glass 4 9.6" edge to edge high res display, full Cat 6 LTE modem, dual SIM capability, and Mil Std 8 durability. To compliment and extend the core device, HP has created a desk docking solution that allows the phone to rest in a dock and provide connectivity via Display Port and Ethernet to a full size display and keyboard as well as corporate networks. HP also created a mobile extender (called ME-Dock) that essentially coverts the device into a 12.5 laptop.

HP is going for the Swiss Army Knife approach with this device. It believes that users would prefer a single device that can be configured "on the fly" to the user's needs and circumstances. Such handheld convertible approaches have been tried before (all the way back to Palm days), with limited success. HP is betting that this time is different, driven by the adoption and standardization on Windows 10. But there are a few challenges to this strategy.

"…HP recently announced its new Elite X3 convertible smartphone that can become a notebook computer or a desktop… It is encouraging that HP is trying to regain its reputation of innovation of years past... But acceptance (and success) is not assured..."

First, Windows 10 is not all that good at legacy apps. To fix this, HP includes a VDI environment it OEM's from Citrix, which it calls HP Workspace. This is more than just Microsoft continuum, as it is a full VDI solution that can run any Windows app that can be loaded on the virtual server. However, and this is a major issue, it only works in an on-line scenario. If users want to interact with a legacy app, say on an airplane with no WiFi, they cannot. This may be the kiss of death for some users wanting to work with legacy corporate apps, as they can't be natively loaded on the device (Windows 10 running on a Qualcomm chip only supports the newer Windows 10 native universal app environment).

Second, HP has not announced pricing for any of this yet. Given the high performance features of the device, it appears it will be fairly expensive. And given that a user would have to buy multiple components to make it into both a smartphone and a desktop/notebook replacement, it may be cost prohibitive. HP is betting that it will still cost less than buying a feature rich smartphone and a business-class 2 in 1 or Ultrabook class machine.

Third, the size of the device puts it squarely into the upper end of the phablet

range, and not as a replacement for the popular smartphones in the 5-6 inch range. While phablet class devices are picking up in popularity, especially with business users who can utilize the bigger screen, the majority of users still purchase a smaller, more "svelt" device. Can a device sized in the range of smaller tablets, be competitive as a smartphone communications device with users?

Fourth, many users of Smartphone devices rely on a growing list of apps available from the various app stores. Running Windows 10 means that this device will have access to far fewer apps, both for business and personal use. This has been a shortcoming of Windows phones for some time, and it is likely many potential users would not find this an acceptable substitute for their iOS or Android devices. Even if this is primarily targeted at enterprise users, the availability of personal apps is still a driving factor for device selections (hence the whole BYOD movement).

Finally, to take full advantage of the benefits of Windows 10 requires that new apps be compliant across all form factors. However few companies have redesigned their apps for this new universal app requirement. Given the history of business apps, it will take many years before the majority of such enterprise apps are available, hence the need to HP Workspace. But will companies want to deploy yet another infrastructure product, even if it is relatively easy to do?

HP is taking a gamble on an approach that might have appeal to the growing number of users who are burdened with having to use several devices to get their jobs done. Clearly, this is not a device for the mass consumer market. But the price and performance of this product will have a major impact on acceptance.

Bottom line: It is encouraging that HP is trying to regain its reputation of innovation of years past. But this tablet size device may just be too big for a majority of users replacing their smartphones. Further, the need for convenience apps so prevalent in the Android and iOS ecosystem will be a limiting factor for many mobile users. Clearly this is innovative and a major addition to HP's product line. But acceptance (and success) is not assured.

The Great Enterprise Mobile App Challenge

This article appeared in [Computerworld](#)

Enterprises face a real mobile app dilemma. They want their users mobilized, but are having a huge problem keeping up with the demand for the apps needed to satisfy their smartphone and tablets users. I have spoken with many enterprises, and the backlog of requested and/or user desired mobile apps is staggering. I estimate that no more that 15%-20% of proposed mobile apps actually get created and deployed, and in some companies the number is far less. There is no question that this has a negative impact on an organization's need to maximize worker productivity.

"…Although not perfect, apps created by these tools can be perfectly usable and enhance worker productivity. And they can be deployed in a matter of hours or days, rather than the months needed for a typical IT coding project. The potential ROI to the organization can be huge!. …

This problem is a direct result of the difficulty in creating mobile apps. I see three major hurdles that most enterprises face. First, most companies are not adequately staffed with "mobile developers", and using more traditional desktop developers doesn't work very well as mobile app development usually requires a specialized skill set. Second, even if companies want to develop more mobile apps, most currently face a general lack of IT resources due to the reductions that have taken place over the past few years. Most IT organization resources go to maintaining existing production systems rather than creating new ones Finally, and this is no small issue, the time to deployment of production mobile apps cannot take 12-18 months as is typical in the desktop world. It must be done in a matter of days or weeks to create true value for line of business needs.

There are several tools available that provide desktop and web "conversion" to mobile apps (see my previous post). But what's really needed is a way to enable the line of business units to create any needed apps quickly and without (or at least with minimal) IT resources.

Most knowledge workers have been creating their own documents, presentations and spreadsheets for many years. Indeed, most companies would probably cease to function if we had to go back to the old days where admins were the only ones that had desktop publishing tools and individuals had to write things out on paper and present them to the admin pool for creation. But this is the situation in most companies today when it comes to identifying and creating mobile apps, just substitute programmers for admins.

Microsoft (among others) is trying to challenge that process, the same way it did when it provided Office to end users and brought desktop publishing to the masses. Its first step is with its PowerApps product. Although certainly not perfect, it is bringing us a step closer to the day when individual users and LOB can create mobile apps as needed, when needed, with an ability to modify them at will (or start from scratch on a new one). Patterned after the very familiar Office interface, with an ability to create reusable app templates and workflows, PowerApps goes a long way to "democratizing" the creation of mobile apps. However PowerAppst is currently fairly Microsoft infrastructure centric. It requires a Windows device to use the tool and the back end uses Azure and Sharepoint. Microsoft does promise a full browser-based system in the near future.

Of course Microsoft is not alone in this quest. Companies like SkyGiraffe have a very similar approach to Microsoft's. And Kony has a creation tool (Visualizer) that attempts to dramatically speed up the process of mobile app development. And there are others as well (too many to list here). But the key is that all try to take the development process to the knowledge worker at the line of business – the one who knows what is needed to get the job done and needs to get the app completed and deployed in days or weeks. Simply throwing it over the wall to a development team in IT no longer cuts it when agile companies need to be able to adapt in mobile time!

So what's the bottom line? Unless you have an app that needs to be consumer focused (e.g., banking, retail), this is a much better approach for enterprise needs than custom app development. Although not perfect, apps created by these tools can be perfectly usable and enhance worker productivity. And they can be deployed in a matter of hours or days, rather than the months needed for a typical IT coding project. By raising the productivity of workers through targeted mobile apps, the potential ROI to the organization can be huge!

GPUs as a Service

"…We expect to see a major new market emerge for GPU as a Service over the next 2-3 years. This should greatly benefit both the traditional GPU makers (AMD, Nvidia) as well as the mobile oriented vendors that are ARM based (ARM, Qualcomm)......"

The Graphics Processor Unit (GPU) has a long history. Its started out primarily as a peripheral supplementing the central processing unit (CPU) in a PC and optimized to support graphical operations (something that a CPU of its day did not do very well). Fast forward to today, and we find that most general purpose CPU chips powering the typical PC have more than enough graphics capability to process normal apps and video operations (although some high end apps like gaming and VR/AR still need an external GPU for maximum performance).

Despite a troubled market for PC makers in general and with dwindling share of device attach rates for GPUs, the major players (AMD, Nvidia) have attempted to innovate and stay relevant in GPUs. Much of that has been focused around a small but important segment of the PC market optimized around high performance gaming. But despite the more limited prospects over the past couple of years, things are now starting to change.

Although gaming will remain a key market for higher end GPUs, the share of the market that segment demands is about to plummet, not because it is declining, but because there are major new opportunities emerging for GPU vendors. One is the expected growth over

the next 1-2 years of Virtual Reality (VR), and not just in gaming. Solving real world problems and providing new ways of interacting with information is emerging.

To this end, AMD and AP are collaborating to bring immersive experience to news and storytelling. This can significantly enhance the ability to get information to viewers of content, while also providing a more concise way to impart information, including the ability to see multiple perspectives, exhibit full dimensional accuracy, get a better sense of time, etc. Although still a niche market, this will help accelerate the adoption of VR clients (e.g., Oculus Rift, HTC, Microsoft HoloLens).

In addition to VR clients, the need to process immersive information means that there will be a significant need for graphics processors – not only at the server level, but available in the cloud. GPUs as a Service will expand greatly over the next 2-3 years, and will eclipse the PC GPU market in sheer numbers of units. Much like rack-based CPUs powering the web and the cloud, similar GPU powered blades will be used for all manner of processing, and attached to major cloud hubs from Amazon, Google, IBM and Microsoft. Based on their massively parallel processing capability, GPU as a Service will be used for augmented reality, but also able to handle massively parallel complex app problems like encryption (or decryption), weather forecasting, business intelligence graphical displays, big data comparisons, etc. far better than standard CPU systems.

This means that the traditional GPU providers (AMD, NVidia) and major competing entrants (Intel) will ultimately power the GPU as a Service industry for high functionality products. But there will also be a lower end market, much like the difference in CPUs between Intel x86 processors and ARM based chips. Companies that provide graphics processors for the current mobile market (e.g., ARM Mali, Qualcomm Adreno, Imagination Technologies PowerVR) will be able to produce large numbers of lower end system components powering a blade based GPU environment. We expect that many companies will have such systems installed in their own data centers for complex visualization solutions in data analysis and forecasting, as well as security.

Bottom Line: We expect to see a major new market emerge for GPU as a Service over the next 2-3 years. This should greatly benefit both the traditional GPU makers (AMD, Nvidia) as well as the mobile oriented vendors that are ARM based (ARM, Qualcomm). As new apps become available optimized for these services, companies will need to upgrade to obtain the benefits that such highly parallel processing power can bring. Enterprises should start planning for these upgrades coming in the next 2-3 years.

Recent Research

Contact us to request the following research reports:

Market Studies
- **The State of Enterprise Mobile Management (EMM) 2015**
- **Mobile E-Commerce: Friend or Foe?**

2015 Emerging Technology Trends
- Highlights our key emerging trends for the next 2-3 years

Commentary and Analysis
- Apple and IBM in Enterprise: Joined at the Apps

Technology Reports
- Your PC has an Identity Crisis: Saving the cost of hacks and other benefits of enhanced identity
- Replacing Enterprise PCs: The Fallacy of the 3-4 Year Upgrade Cycle
- Keeping Notebooks Past Their Prime: A Study of Failures and Costs

Whitepapers
- A Heuristic Approach to Mobile Security
- MDM- Where Do We Go From Here?

J.Gold Associates, LLC
6 Valentine Road
Northborough, MA 01532 USA

Phone:
+1-508-393-5294

Web:
www.jgoldassociates.com

Research, Analysis, Strategy, Insight

About J.Gold Associates, LLC.

J.Gold Associates provides advisory services, syndicated research, strategic consulting and in-context analysis to help its clients make important technology choices and to enable improved product deployment decisions and go to market strategies. We work with our clients to produce successful new product strategies and deployments through workshops and reviews, business and strategic plan coaching and reviews, assistance in product selection and vendor evaluations, needs analysis, competitive analysis, and ongoing expertise transfer.

J.Gold Associates provides its clients with insightful, meaningful and actionable analysis of trends in the computer and technology industries. We have acquired a broad based knowledge of the technology landscape and business deployment requirements, and bring that expertise to bear in our work. We cover the needs of business users in enterprise and SMB markets, plus focus on emerging consumer technologies that will quickly be re-purposed to business use.

We can provide your company with a trusted and expert resource to maximize your investments and minimize your risk. Please contact us to see how we can help you.