

Mobile Apps. New Game, New (and Old) Rules



Don MacVittie, 2012-24-04

For my regular readers: Sorry about the long break, thought I'd start back with a hard look at a seemingly minor infrastructure elements, and the history of repeating history in IT.

In the history of all things, technological and methodological improvements seem to dramatically change the rules, only in the fullness of time to fall back into the old set of rules with some adjustment for the new aspects.

Military history has more of this type of “accommodation” than it has “revolutionary” changes. While many people see nuclear weapons as revolutionary, many of the worlds’ largest cities were devastated by aerial bombardment in the years immediately preceding the drop of the first nuclear weapon, for example. Hamburg, Tokyo, Berlin, Osaka, the list goes on and on. Nuclear weapons were not required for the level of devastation that strategic planners felt necessary. This does not change the hazards of the atomic bomb itself, and I am not making light of those hazards, but from a strategic, war winning viewpoint, it was not a revolutionary weapon. Though scientifically and societally the atomic bomb certainly had a major impact across the globe and across time, from a warfare viewpoint, strategic bombing was already destroying military production capability by destroying cities, the atomic bomb was just more efficient. The same is true of the invention of rifled cannons.

With the increased range and accuracy of rifled guns, it was believed that

the warship had met its match, and while protection of ships went through fundamental changes, in the end rifled cannons increased the range of engagement but did not significantly tip the balance of power. Though in the in-between times, from when rifled cannons became commonplace and when armor plating became strong enough, there was a protection problem for ships and crews.

And the most obvious example, the tank, forced military planners and strategists to rethink everything. But in the end, World War II as a whole was decided in the same manner other continental or globe spanning conflicts have throughout history – with hoards of soldiers fighting over possession of land and destruction of the enemy. Tanks were a tool that often lead to stunning victories, but in the cases of North Africa and Russia, it can be seen that many of those victories were illusory at best. Soldiers, well supplied and with sufficient morale, had to hold those gains, just like in any other war, or the gains were as vapor.

Technology – High Tech as we like to call it – is the other area with stunning numbers of “This changes everything” comparisons that just don’t pan out the way the soothsayers claim it will. Largely because the changes are not so revolutionary from a technology perspective as evolutionary. The personal computer may have revolutionized a lot of things in the world – I did just hop out to Google, search for wartime pictures of Osaka, find one on Wikipedia, and insert it into my blog in less time than it would have taken me to write the National Archives requesting such a picture after all – but since the revolution of the Internet we’ve had a string of “this changes everything” predictions that haven’t been true. I’ve mentioned some of them (like XML eliminating programmers) before, I’ll stick to ones that I haven’t mentioned by way of example. SaaS is perhaps the best example that I haven’t touched on in my blog (to my memory at least). When SaaS came along, there would be no need for an IT department. None. They would be going away, because everything would be SaaS driven. Or at least made tiny. If there was an IT version of mythbusters, they would have fun with that one, because now we have a (sometimes separate) staff responsible for maintaining the integration of SaaS offerings into our still-growing datacenters.

Osaka Bomb Damage – source Wikipedia

The newest version of the “everything is different! Look how it’s changed!” mantra is cell network access to applications. People talk about how the old systems are not good enough and we must do things differently, etc. And as always, in some areas they are absolutely right. If you’ve ever hit a website that was designed without thought for a phone-sized screen, you know that applications need to take target screen size into account, something we haven’t had to worry about since shortly after the browser came along. But in terms of performance of applications on cellular clients, there is a lot we’ve done in the past that is relevant today.

Originally, a lot of technology on networks focused on improving performance. The thing is that the performance of a PC over a wired (or wireless) network has been up and down over the years as technology has shifted the sands under app developers’ feet. Network performance becomes the bottleneck and a lot of cool new stuff is created to get around that, only to find that now the CPU, or memory, or disk is the bottleneck, and resources are thrown that way to resolve problems.

I would be the last to claim that cellular networks are the same as Ethernet or wireless Ethernet networks (I worked at the packet layer on CDMA smartphones long ago), but at a 50,000 foot view, they are “on the network” and they’re access applications served the same way as any other client. While some of the performance issues with these devices are being addressed by new cellular standards, some of them are the same issues we’ve had with other clients in the past. Too many round trips, too much data for the connection available, repeated downloads of the same data...

All of these things are relative. Of course they’re not the only problems, but they’re the ones we already have fixes for.

Take NTLM authentication for example, back when wireless networks were slow, companies like F5 came up with tools to either proxy for, or reduce the number of round trips required for authentication to multiple servers or applications. Those tools are still around, and are even turned on in many devices being used today. Want to improve performance for an employee that works on remote devices? Check your installed products and with your vendor to find out if this type of functionality can be turned on.

How about image caching on the client? While less useful in the age of “Bring Your Own Device”, BYOD is not yet, and may never be, the standard. Setting image (or object) caching rules that make sense for the client on devices that IT controls can help a lot. Every time a user hits a webpage with the corporate logo on it, the image really doesn’t need to be downloaded if it has been once. Lots of web app developers take care of this within the HTML of their pages, but some don’t, so again, see if you can manage this on the network somewhere. For F5 Application Acceleration products you can, I cannot speak for other vendors.

The list goes on and on. Anyone with five or ten years in the industry knows what hoops were jumped through the last time we went around this merry go round, use that knowledge while assessing other, newer technologies that will also help. The wheel doesn’t need to be reinvented, just reinforce – an evolutionary change from a wooden spoke device to a steel rim, maybe with chrome.

While everyone is holding out for broad 4G deployments to ease the cellular device performance issue, specialists in the field are already saying that the rate of adoption of new cellular devices indicates that 4G will be overburdened relatively quickly, so this problem isn’t going anywhere, time to look at solutions both old and new to make your applications perform on employee and customer cellular devices.

F5 participates in the Application Acceleration market. I do try to write my blogs such that it’s clear there are other options, but of course I think ours are the best.

And there are a LOT more ways to accelerate applications than can fit into one blog, I assure you. A simple laundry list of tools, configuration options, and features available on F5 products alone is the topic for a tome, not a blog.

Now for the subliminal messaging: *Buy our stuff, you’ll be happier.* How was that? Italics and all. 😊

If you can flick a configuration switch on gear you’ve already paid for, do a little testing, and help employees and/or customers who are having performance problems quickly while other options are explored, then it is worth taking a few minutes to check into, right?

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