The Magic of Mobile Cloud

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It's like unicorns…and rainbows! #mobile

Mark my words, the term "mobile" is the noun (or is it a verb? Depends on the context, doesn't it?) that will replace "cloud" as the most used and abused and misapplied term in technology in the coming year.

If I was to find a pitch in my inbox that did not someway invoke the term "mobile" I'd be surprised. The latest one to catch my eye was pitching a survey on the "mobile cloud". The idea, apparently, around this pitch involving "mobile cloud" is the miraculous capability bestowed upon cloud deployed services to automagically perform synchronization and storage tasks.

The proliferation of mobile devices has created demand for services that allow users to access personal data and content from any device at any time. Mobile cloud services are emerging that synchronise data across multiple mobile devices with centralised storage in the cloud.

While the statement regarding demand is true, the follow-on assertion is at best inaccurate, at worst it is false. There are no services, in the cloud or anywhere else, that can synchronize data across multiple devices. Oh, services may be emerging that *claim* to do so, but they can't and don't. Without fail, services "in the cloud" are invoked from the client – each individual client, mind you – and without that initiating event a cloud service would no more be able to synchronize data than previous incarnations of mobile services when we called them hosted applications.

SERVICE-SIDE PUSH

This is because the underlying technology used to access these services is still, regardless of the interface presented, the web. It's an API. It's HTTP. It's a client-server paradigm that hasn't changed very much since it rose to ascendancy as the preferred application architectural model back in the last century. The reason SPDY has started to gain attention and mindshare is not necessarily because it's faster (that's a plus, mind you, but it's not the whole enchilada) but because of its bidirectional communication capabilities. SPDY can *push* to clients in a way that HTTP has never really been able to do, though many have tried. They've come close with approximations and solutions that to the untrained user appear to be a "push" but in reality they are little more than "dragging out a pull response." And yet SPDY is still constrained in the same way as traditional HTTP: the client must initiate the connection.

The capability to push from the service-side does not and will not imbue "cloud services" of any kind with the ability to initiate actions, because the "cloud" cannot push to a client **unless a connection is already established**. And who initiates connections? That's right, *clients.*

The only entity that could make a claim that it could initiate anything on a mobile device would be a service provider. That's because they are the only ones who can actually find and connect to a device on-demand – and then it's only *their* devices on *their* mobile networks. And then they'd best only do that if it's (1) part of their terms of service or (2) the user specifically checked a box allowing them (or their service) to do so.

But consider the impracticality of "service-side push" to clients to synchronize data. Client devices are, well, mobile. That means their connectivity is not assured. "Always on" is a misnomer. Yes, the device is always on in a way the PC has never been, but it's also in stand-by mode, which often means the radio – its means of communication – is off. This little fact is a problem for performance-focused IT, and it's even more troublesome to those who'd like to create a service-side "push". So Bob uploads a photo to a "cloud storage" service and the service wants to synchronize it with Bob's other (configured by Bob, of course) devices. So the service starts sending out messages to try to connect to Bob's other devices.

Right. One is turned off and the other is in flight mode to prevent his three-year old from purchasing God only knows what apps through the Android market and the third? It's in standby, the radio is off.

That's not the way it works today and it certainly shouldn't be the way it works in the future. It's a waste of processing power, of bandwidth, of resources in general. The client will eventually be online and will open a session with the "cloud service" and ask it for updates.

MOBILE CLOUD

Whether applications use web technologies because of the reality that clients are not "always on" or because it's the model (client initiated and more importantly to them, controlled) most familiar and acceptable to consumers, reality is that mobile devices and clients leverage web technologies to store, share, and synchronize data across services. The "mobile cloud" and its alleged ability to "synchronize data across devices" is little more than cloud washing, as is the term "mobile cloud" itself which some have tried to claim is defined by the way in which a device accesses its services. From differentiation between network type (wired versus wireless) to the client-model (thin client browser versus thick client application), some continue to try to make the case that there exists some "mobile cloud" that is completely different than that of the "regular old cloud."

There is not. The web is the web, the presentation layer of an application (thick or thin) does not define its server-side technological model, and service-side push (and control) remains yet another marketing phrase used to describe capabilities that is not technically accurate and which ultimately sets unrealistic expectations for consumers – and in the enterprise, IT.

The notion that you'd build a "mobile cloud" that is somehow separate from the "regular cloud" is preposterous precisely because it contradicts the purported purpose for building it: synchronization and "access from anywhere." It's that "anywhere" requirement that makes a mobile cloud as realistic as unicorns. If I upload a photo to I should be able to access – and thus synchronize – from any device, and that includes my laptop or desktop PC, the latter of which is certainly not "mobile".

These assertions that a mobile cloud exist only serve to reinforce the heretofore unknown Clark's Third (and a half) Law: Any sufficiently advanced web technology is indistinguishable from cloud in the eyes of the marketing department.