# Recent changes in the world of unified collaborative communications, consumerization and related technologies

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Here at the IMCCA people often ask us about Unified Communications. *"If the promise of UC is so fantastic"* they ask, then *"why is it still so complicated and difficult?"* Why indeed. Unified Communications is the only technology that has been 'launching' for 16 years. There are many answers to this question. Some have to do with the need to breakdown silos in organizations (when the people who run those silos don't really want their kingdoms broken-down.) Some have to do with manufacturers not making solutions available that really work very well. Some have to do with little or no focus on technology adoption planning. A lot of it, however, has to do with the dramatically changing landscape in technology itself.

For one example, just a few years ago our industry was buzzing with the then, brand-new concept of *telepresence* because we all felt we needed to simulate an 'in-person experience.' Now we think video is passé if we can't get it on our iPad. Why the changed attitudes? In order to answer that question one needs to understand consumerization and where technology is headed as a whole.

## The change in consumerization trends

In past articles we've written about the 'consumerization of the enterprise.' Big businesses are no longer the primary force behind advances in technology. This leverage has now completely shifted to the general consumer, who has a flat panel TV in his house and expects one at his office; and has videoconferencing on his tablet with no difficulties at home and can't understand why he can't have that in his office. The trends in technology that are shaking up the consumer world are beginning to shake-up the enterprise. For a view into these trends we can look to the annual Consumer Electronics Show run by the CEA, and their senior analyst, Shaun DuBravac.

At their just concluded event he explained four of these key trends.

1. We are now in the 'post smartphone era' as mobile connectivity is becoming less about telephones. These devices aren't just phones anymore, they're hubs for all our peripheral services. Think about how many things we used to buy as hardware that are now just apps (cameras, GPSs, etc.) Think about how many new hardware products are being introduced that no longer need controls or status displays (moisture sensors, health monitors, tracking devices, etc.) Our smart devices have become our control hubs and viewfinders for all technology we interact with. This is a key insight for collaborative conferencing, as it marks the beginning of the end of our hardware centric industry as it changes to a software centric one. Eventually the smart device and the appropriate peripherals are the only hardware we will be buying.

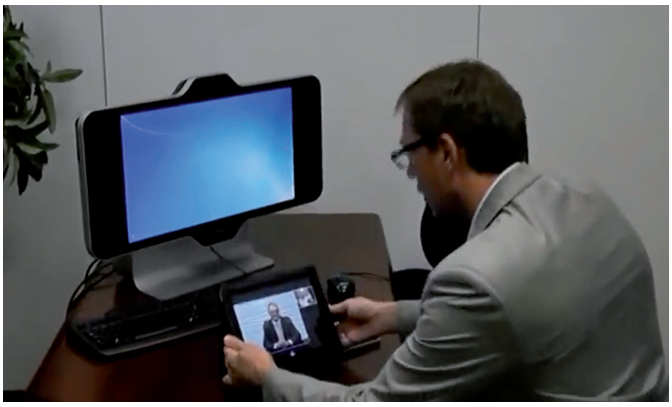
2. We are also in the age of algorithms. Our devices are connected to 'sensors,' and are being supplied with intelligent algorithms to not only report what is happening to us (read the news, deliver an email, etc.) but to understand what that data means. They can provide recommendations, perform optimization, allow for self-driving cars, provide medical advice, etc.

3. The above now allows for what is being called *contextual connectivity*. A 'smart' device no longer just means that it is connected to the internet. It now means that the device can act appropriately based on the data it receives. Instead of just getting a notice that a condition exists, our devices can now understand that condition and act appropriately. For example, a wireless headset no longer just sends and receives audio, it reports where you are, if you're wearing it, what room you're in, who you want to be able to reach you, etc. If you put it on it can now change your presence on other systems. Smart devices are now ones that can act appropriately based on context.

4. We're experiencing the *changing flow of storytelling*. It's no longer just an email or video chat while we watch events on TV. The new concept of the 'second screen' is showing that we have become content omnivores – we expect and manage simultaneous feeds of data on multiple screens – playing games, watching programming, monitoring smart devices, absorbing related information, etc. – all simultaneously. Some modern conference rooms following this trend no longer have just one main screen for everyone to view, but rather give participants individual screens on which to display and interact with data.

All these trends mean we're at a tipping point for collaborative communications. Major manufacturers of hardware systems have released or will release products this year that fall in line. We have seen or will see:

- Tablet based UC clients
- Personal tablet control of videoconference room systems
- UC appliances based on universal platforms (Android, Win7) instead of proprietary firmware
- Traditionally hardware based UC infrastructure sold as both a cloud service and as a software package that will run on standard servers.



***"Many modern organizations have moved from the traditional conference room to a newer, more casual, more flexible format"***

While these disruptive trends had been around prior to now, the difference is they are or will now be coming from the traditional 'hardware' firms. They are in essence deciding to begin to cannibalize their past solutions in order to meet the needs of the future. (This is essentially what we predicted in this publication in March of last year[1].)

At the same time that these firms begin to embrace the software world there are a plethora of others beginning to dismantle the traditionally high profit margin of collaboration hardware. Why would one purchase a 15K videoconference appliance when one can purchase a 1K appliance? Is it as good? Perhaps not today, but the 15K unit isn't 15 times better either.

## The three forms of collaboration

We stand by our past predictions for the next few years - video collaboration will take three forms in the enterprise – Immersive, Meeting and Personal. Immersive – meaning what our original definition of telepresence covered; Meeting – meaning when video is used to bring a remote participant into a room where people are meeting (think the video equivalent of the tabletop speakerphone); and Personal – meaning everything from the high-end desktop appliance for high-reliability, high-quality performance, to PC or mobile based video for pervasive team collaboration.

One interesting trend to emerge since we stated that prediction is how the form of that 'meeting' application is presenting itself. Many modern organizations have moved from the traditional conference room to a newer, more casual, more flexible format. These spaces, often referred to as 'collaboration rooms,' can be sofa's that surround a huge dry-erase wall; they can be small half-tables with speakerphones and displays; or they can be open seating where hoteling workers bump into each other and brainstorm on ideas.

The concept is being referred to as 'smarter working.' Its tenets include not just new space design, but also ideas that support collaborative conferencing. 'Work' is not a place people go but rather what people do. If one can do their work from a hoteling space instead of a traditional office then the organization realizes savings in related real estate costs. If that work can be done from a home office then the savings goes up exponentially – measured in tangible numbers such as power and HVAC costs, and in intangibles such as commute time returned both to the employer as productivity and the employee supporting work/life balance.

As organizations shed the dated stigmas about working from home and embrace these modern concepts they realize both monetary savings and create an environment

more conducive to recruiting the younger, more technology savvy people entering the workforce today.

**How many standards does it take to make interoperability**

Finally, in the category of 'the more things change the more they stay the same,' the industry is once again grappling with changing standards and interoperability.

Polycom this past October announced their new suite of solutions would be using 'industry standard SVC.' (SVC refers to H.264 annex G - Scalable Video Coding – as has been widely promoted by firms such as Vidyo.) Polycom insinuated that all other implementations of SVC to date were not standard, but theirs was (which was frankly a difficult claim to make when only one firm will be using it.) However, odds are that by the time you read this Microsoft will also have embraced this flavour of SVC for their Lync 2013 video.

Cisco on the other hand began singing the praises of H.265 encoding mid last year - even before there was an H.265. HEVC or High Efficiency Video Coding was finally ratified by the ITU as H.265 at the end of January. It promises much greater video quality with much lower bandwidth requirements. However, it also requires much more processing power to achieve – putting a strain on general use processors used by PC and tablet based applications.

Meanwhile, those who believe that all of the video manufacturers and suppliers will fall by the wayside in favour of web browser based video were happy to see the advances made by WebRTC. If you're not familiar with it, WebRTC is an open source code being drafted by the W3C (World Wide Web Consortium) to support real time communications via simple browser based Java APIs. It offers the promise of simple, plug-in-free video over the browser. The problems here are that a number of big players (Google, Cisco, Microsoft, others) have vastly different opinions of what the final code should look like, and the incomplete, current draft is functioning in 'experimentation mode' with some but not all browsers. So it's completely universal except for the fact that no one agrees on what it should look like and it's not universally supported.

We here at the IMCCA will continue to stay on top of related trends and Emerging technologies and encourage our members to strengthen and grow the overall collaborative conferencing and unified communications industry. ■

1. 'Recent developments in collaborative communications, telepresence, mobility and the cloud' http://www.worldcommercereview.com/publications/article_pdf/568