

Technology optimist's column from the future...

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2015-08-28

You still can't have a beer with someone remotely, but remote meetings have gotten a lot more natural over the past decade. Ten years ago you were lucky if a multisite video conference worked first time; luckier still if everyone was in frame with no exposure problems. And even if the basic technology worked, meetings were stilted affairs, it was difficult to gauge the mood of the meeting, the social dynamics just weren't there. In fact, not being *there* was the problem—the biggest difference between real life and virtual meetings was the lack of a real sense of presence in a remote meeting.

In 2005 only about 1% of conference rooms had videoconference facilities. Now it seems that only 1% haven't. So what's changed?

The underlying technologies are more efficient and robust, thanks largely to the acceptance of a number of generally accepted open standards, as well as the new massively parallel generation of processors, originally optimised for media processing and gaming. Allied to this, new signal processing approaches ensure that the audio and video quality is always excellent: the sensors (wherever they may be) adapt to the users, predictive machine learning ensures that the picture never switches to the key person a few moments too late.

Affordable, high quality audio and video displays make the immersive world of videoconferencing a productive and fun place to work. Indeed, an increasing problem is the addictive nature of the technology. Combined with the new ways of constructing spaces both for communicating with each other and with data and applications — again deriving directly from machine learning and signal processing — it has become apparent that for many teams the optimal way to work is by using this technology. Even if all members of the team are in the same place.

It used to be said that remote meeting technologies would only take off if there was a travel backlash, due to fear of viruses or terrorism, or maybe an ecological crisis. Not many people believed it would take off because it was a better way to communicate, enabling teams to be more productive, and the process of teamwork to be more enjoyable.

Things aren't perfect: our systems are great at pulling out the right information at just the right time, but sometimes they are still annoying or intrusive. And if the organizational culture into which they are deployed is somehow broken, then these systems can magnify the problems — if there is a lack of trust in an organization, then, as we have seen in some recent cases, a communication environment that can store and interpret every nuance and every modality can be as much a threat as an aid.