

DANIEL BURRUS'

TECHNO TRENDS

THE BIG IDEAS THAT ARE
CHANGING EVERYTHING

In This Issue

Humanizing Digital
Communications

Un-Hackable Computers

World's Largest Air Purifier

Curing Blindness with
Algae

Making Autonomous
Vehicles More Affordable

Wind-Powered Trains

Soft Artificial Heart

Rapid Self-Repairing
Material

World's First Hydrogen
Bike



www.burrus.com



Humanizing Your Digital Communications

By Daniel Burrus, CEO of Burrus Research

Video conferencing has been around for a long time. The equipment is usually kept in a special room filled with expensive equipment that's always booked by executives because of the high value they derive from using it to enhance their communications and collaborations.

Visual communications on the other hand, is very different by my definition. Visual communications can take place using your laptop, your tablet, your smartphone and even your watch, the software is free and the quality of the video today is quite good.

Skype and Apple's FaceTime are good examples of this and they both offer services that are now reliable enough that companies have begun using them as a primary means of communication. They are rapidly becoming simpler and better in quality to the more traditional video conferencing systems I referred to earlier. They also offer relatively good security assurance.

In fact, Microsoft recently announced that it would be replacing its own communications and web conferencing service, Lync, with Skype for Business in Office 365. This move has a lot of implications for businesses, which I will get to in a moment.

Yet again, digitization is disrupting our everyday business activities. But this isn't exactly a surprise; as I've said and continue to say, digital disruption comes in waves, and every single industry, from agribusiness to IT security, will be disrupted. If your industry

would react readily with oxygen to form free radicals, which are instrumental in joining small molecules into larger ones to create plastics – a process known as polymerization. What they came up with was a resin made of organosulphuric compounds (called thiols) and hydrocarbons (called alkenes).

To test the new resin, they sandwiched a 1-millimeter thick layer between two pieces of plastic (also 1-millimeter thick) and shot it with a rifle at point blank range. High-speed video revealed that the material rapidly transformed into a solid polymer plug to seal up the hole in less than one second.

For information: Timothy Scott, University of Michigan, Chemical Engineering, 2300 Hayward Street, Ann Arbor, MI 48109; phone: 734-763-3493; fax: 734-763-0459; email: tfscott@umich.edu; Web site: www.umich.edu

World's First Hydrogen Bike

A French bicycle manufacture recently unveiled their Alpha Bike, the first commercial electrically-assisted bike to be powered by hydrogen. With a range of 100 kilometers (62 miles) it boasts a longer battery life than traditional electric bikes, but the real benefit is in the time it takes to charge. The hydrogen cells can be recharged at special hydrogen stations in about five minutes, compared to three or four hours for other types of electric bike batteries. And Alpha Bike is virtually carbon neutral with the only emissions being pure water. Even the charging stations are run by solar and/or wind power.



Alpha Bikes will be officially released for sale to the public later this year, however the French postal service

has reportedly expressed an interest in ordering an entire fleet. The company plans to build 100 bikes in 2016 and will be ramping up production to 1,000 in 2017. The price will be comparable to currently available, high-end electric bikes at around €2,300 (\$2,500US).

For information: Pragma Industries, 665 rue de Bassilour, Bidart, France; phone: +33-(0)559-512755; fax: +33-(0)559-230798; email: contact@pragma-industries.com; Web site: www.pragma-industries.com

Humanizing Digital Communications

continued from page 1

hasn't yet been digitally disrupted, it will soon be; if it's been disrupted, expect wave after wave of new disruptions as well as opportunities.

Back to the realm of communication: While Skype offers companies the possibility of integrating their desk phones with the Skype network, this is merely a transitional service. In fact, Skype offers more opportunities than traditional methods of communication could – and savvy companies recognize this.

In an increasingly globalized work environment, it is not always possible to meet clients face to face... or at least, that was the case for the last several decades. Companies relied on telephones as a means of connecting with far-away clients if they didn't have access to a video conferencing system.

But now, with visual communications, we've come full circle. Ironically and pleasantly enough, digitization hasn't taken us to an even more abstract, conceptualized means of communication; it's actually given communications a human face.

I've talked before about what I call the Both/And

Principle. The new doesn't replace the old. In fact, recognizing the interplay between the new and old is an incredibly useful first step in developing an entrepreneurial mindset. With Skype, we see both online and in-person interactions mixing together.

But beyond this, Skype also offers a more flexible network than traditional communications could. Through Skype, you can be linked to both clients within your network and anyone within the wider Skype user community.



This reflects and incorporates the more dynamic interactions companies have in today's business environment. It allows for on-the-fly additions to conferences and opens up businesses to new interactions in a safer and secure space.

Audio and visual quality are now at a higher level, making online conferences more efficient. This, of course, is only one aspect, albeit a major one. There are still more possibilities to discover in the field of visual communications.

Developers are still testing the ways in which visual communications can be pushed further.

The recording of all communications over these platforms, their easy accessibility for analysis and troubleshooting are one area to continue tweaking.



Undoubtedly, digitization opens up visual communications to the benefits of big data. Digitization also provides businesses with easy access to support systems. Tech support can easily access a company's network to fix any issues. This streamlines a process that once involved sitting on hold for hours with an external customer service center.

One thing is certain, that the exponential advances in processing power, digital storage and bandwidth, what I have called the Three Digital Accelerators, will continue to provide new and powerful functionality to all forms of visual communications as this highly personal method of dialogue and discourse becomes an even more dominant, prevalent means of communication with businesses around the globe.



*Technotrends is published 12 times a year by Burrus Research, Inc., a research and consulting firm that monitors global advancements in science and technology and their direct impact on business and consumers. Mary Norby, Editor P.O. Box 47, Hartland, WI 53029-0047. To subscribe, call **262-367-0949** or email office@burrus.com. ©2015 Burrus Research, Inc.*

Burrus
Research