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Death, Taxes, and -- Technology

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"The only sure things are death and taxes."

When it comes to people, this seems to have been a mainstay throughout history. Yet most of us don't think how 'death' also applies to technology, even though this is evident all around us: Wax cylinders no longer store recorded sounds; long ribbons of tape no longer store our music, and even theater quality video is beginning to leave the world of celluloid. If we look around, there are many similar examples of one technology replacing another, and the old one withering away and dying. Even once-groundbreaking technologies go to their resting place with nary a whimper.

Consider, for example, a 162-year old, continental-and-beyond communications network. Its wires crisscrossed continents and oceans; it employed 14,000+ couriers. It implemented the very first electronic "instant messaging," collapsing the time it took to communicate from days or weeks, to fractions of a second. This year it died.

On Feb. 3, 2006 the Western Union Telegram officially died in the U.S. As described in the Feb. 3, 2006 [BBC News](#), where once millions of telegrams crossed the singing wires each year, 2005 saw but twenty thousand messages. And where once receiving a telegram for an event, such as a graduation, was a special grand tradition,

"Recent generations [don't] receive telegrams -- [they don't even] know you could send them!"

(While the telegram is dead in the U.S. for all but a few special circumstances, it does continue to live in other parts of the world. But as the cell phone and the Internet continue to make global inroads, it's clear to me that, even globally, the telegram is on life support.)

Few of us sent or received telegrams once long distance phone service became affordable. And now fax and Email have firmly nailed the lid down onto the telegram's coffin. But we should remember that in 1844 (when the first intercity telegraph link was established) it was mind-boggling amazing to be able to send a message instantly across vast distances. The commercialization of the telegram was a world (and business) changing event.

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Yes, it was expensive. Yet those businesses that appreciated the value of this new technology, and that changed their business practices to benefit from this new instant communication, developed competitive advantages that represented a quantum leap over any communications-challenged competitors.

Of course this was hardly the first technological development that "changed the rules" for business. Consider how ever-better metallurgy for swords, shields, and more benefited the business of warfare. And consider how new technologies have steadily and dramatically improved the yield per acre for the farmer. Regardless of the industry and the century, the bottom line is that "businesses" that chose to embrace new technologies had a far better chance of success than their "Luddite" brethren.

It's easy to see this looking backwards, but the birth and death of pervasive technologies continues today. Consider, for example, that the Internet is fostering change that will (is!) affecting far more than the telegram.

The Death Throes Of Another.

The Internet is a marvelous medium for communicating information at a distance. But although it started primarily as a way to communicate text and graphic information, it didn't take long for "rich media," such as voice and video, to enter its fray.

A case in point is my son spending a semester abroad in Spain. Just a very few years ago he would have been basically incommunicado for the several months of his stay (we know how many letters children write home, and more than a rare phone call would have been prohibitively expensive.) Today though, I spend any amount of time we wish face to face at essentially zero cost by videoconferencing over the Internet using services such as SightSpeed. In fact, since he has a WiFi router he can carry his notebook and camera around as he gives me a tour of his apartment or let's me soak up some of the sights and sounds in the square outside his balcony. Oh, what a change.

But the change goes even deeper. On those occasions when his Internet connection is down, he can still talk to me from Spain through an Internet-based calling card service for 3-cents per minute. Or I can call him via Vonage for a mere 6 cents per minute.

I checked with "the phone company," AT&T, for their basic rate on a traditional daytime international call to Spain. Their "[International Direct Dialed Basic Service Guide](#)" lists it as \$4.48-per-minute!

That's obscene by comparison, considering that even without using free PC services my son could have called me and talked for two-and-a-half-hours for the price that AT&T charges for just one minute!

I suspect that not many people choose to use such a service when they know about the new technological alternatives.

Reach Out And Touch Someone. Really.

Speaking of reaching out and touching, videoconferencing is certainly a far "richer" experience than voice alone. But especially for my wife, that isn't enough -- the lack of her being able hug our son during his extended travels is a great loss. But that too may change...

Researchers at Singapore's Nanyang Technological University have demonstrated a method of transmitting the feelings of contact, across the Internet. Using a chicken for their early experiments, they've demonstrated that the chicken can feel the heat, pressure, and texture of being stroked in real time by someone far away over the Internet. (Can you say "PoultryNet?")

It works like this. At "home," the chicken wears a sensor-rigged coat and is observed by a video camera. The combination of these two types of data is sent over the Internet to "the office" where a model of the chicken mimics the real chicken's movement. In a similar way, people at the "office" can pet the moving model chicken. It analyzes the touch, stroke, etc. and transmits it back to actuators embedded in the real chicken's special coat, enabling it to physically feel the appropriate pressure, heat, motion, etc of those stroking the remote chicken model.

Next up? If the technology improves from crude chicken coats, how about extending this to the sensations of "remote hugs" between a traveling parent and her kid back at home? (See [here](#) and [here](#).)

If such ersatz physical contact over distance does catch on, it could be seen as an evolution beyond videoconferencing. In the same way that videoconferencing is to contemporary inexpensive phone calls. As today's Internet-based phone calls are to yesterday's very expensive international calls. As telegrams were to stage coach, pony express, and sailing ship physical letters. Just a few examples of the never-ending dance as newer technologies catch on and often spell the death knell for their predecessors.

Expensive-to-inexpensive, and voice-to-video-to-touching are just examples of a plethora of the constant imperatives for change that new technologies bring.

New technologies' far less expensive ways of accomplishing the status quo, and their creating entirely new capabilities, are marginalizing the "traditional" route to reaching out and touching someone. We already see the established players having to embrace these new technologies (such as "Voice over Internet Protocol," or VoIP) so that they don't quietly fade into the gentle technological night. And there are so many more examples.

The Opportunity.

As we listen to the haunting dying notes of the "*Dirge To The Telegraph*," we should remember that virtually every person, and every technology-affected business, organization, and government faces a similar fate. Unless, that is, they keep a very sharp eye on the rapid technological changes that could enable them to leverage their assets and move fast, and first, into new waters where their competitors fear to (or cannot) tread.

The telegram is dead. Email and Instant Messaging are its successors. Today. But what about Tomorrow...?

"The text of Samuel Morse's first telegram to his partner Alfred Vail, was 'WHAT HATH GOD WROUGHT?'

If only he knew..."

Don't Blink!

This essay is original and was specifically prepared for publication at Future Brief. A brief biography of Jeff Harrow can be found at our main [Commentary](#) page. Other essays written by Jeff Harrow can be found at his [web site](#). Jeff receives e-mail at jeff@theharrowgroup.com. Other websites are welcome to link to this essay, with proper credit given to Future Brief and Mr. Harrow. This page will remain posted on the Internet indefinitely at this web address to provide a stable page for those linking to it.

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