

Microwave Surfing

Are We There Yet?

■ Rajeev Bansal ^{ib}

If the world should blow itself up, the last audible voice would be that of an expert saying, “It can’t be done.”

—Peter Ustinov, as quoted in *They Laughed at Galileo* [1].

Five years ago, my colleagues and I developed a course for our seniors in electrical and computer engineering where they have to research and write about an emerging technology in its broad societal context. Students can choose a technology on their own, or they can pick one from the list the instructors compiled. As I recently updated my course materials for the start of this fall semester, I looked over the list of topics to see if any should be dropped because they no longer represented emerging technologies but rather

technologies that have been already fully realized.

Package delivery by drones? I keep reading reports in the media about pizzas being delivered by drones in such and such city in New Zealand or about medicines being transported by drones in some remote part of Africa. However, my own Amazon packages still arrive by the U.S. Postal Service or by a UPS truck. So I guess it is still an emerging

technology and can be left on the list for the time being. Nuclear fusion for renewable power? Supersonic jets? Again, there have been reports of impressive breakthroughs [2] for the first and major airlines placing orders [3] for the latter. And yet, I do not expect that nuclear fusion will solve the energy crisis gripping Europe anytime soon. Nor do I have hopes of booking a supersonic commercial flight in the near future. So once again, these technologies remain emerging in my estimation.

Taking a longer view, I looked at some of the emerging technologies that I have written about in my columns [4] over the decades. I wrote about the potential of RFIDs for inventory control about 20 years ago, and it seems [5] that Walmart will be using it even at the store level soon. So that is no longer an emerging technology.

What about one of my favorites: the search for extraterrestrial intelligence (SETI)? Well, our search is constantly expanding, but so far, we have drawn a blank in every direction. In their entertaining book *Soonish* [6] on emerging technologies, the authors Kelly

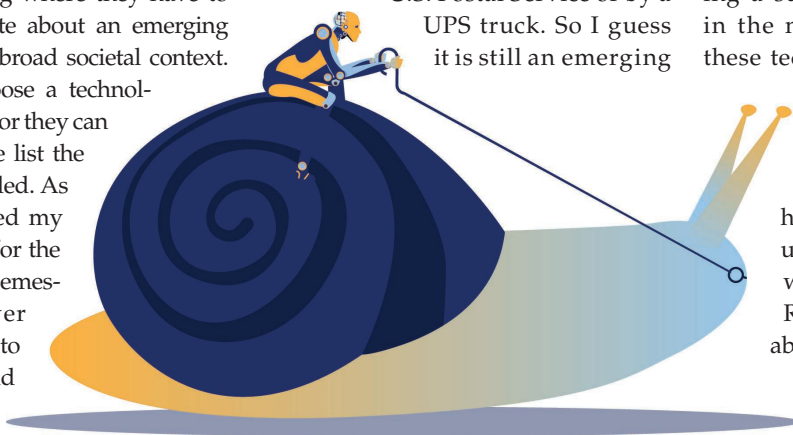


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and Zach Weinersmith make the following observation:

L. P. Hartley wrote in *The Go-Between* that “the past is a foreign country.” If that’s true, the future is a foreign country too. We’re in a little, landlocked nation called The Present, and as far as we can see, eventually the curve of the future turns away and down, leaving us only the narrow band of horizon.

But what a horizon!

Lest we should despair in our inability to accurately chart the course of future technological developments, we can draw some comfort from the fact that this phenomenon is nothing new, and technological innovations have often been appraised with a skeptical eye by contemporary observers. I conclude with a story about the early development of the radio [1].

Within a year Marconi was able to send and receive electronic signals over a distance of 1.5 miles, both around hills and through buildings. Convinced of the value of his invention, particularly to the military and the telegraph companies who were busy stringing wiring all over the world, Marconi wrote to Pietro Lacava, the Italian politician who had become the Minister for Post and Telegraphs in 1889, outlining his ‘wireless telegraph’ and requesting funding. Marconi never received a reply, although the document did turn up much later at the ministry with the words ‘to the Lungara’ scrawled across the top; a reference to the infamous lunatic

asylum on Via della Lungara in Rome.

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