The future of the Internet

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Credit: Wikipedia

The current buzzwords that one might hear flung across the boardroom

tables of internet and telecommunications companies might include, "the cloud", "ubiquitous computing", "internet of things", "pervasive computing", "distributed systems", "Wi-Fi drones", "big data", even "ambient intelligence". The list goes on. Some of these are essentially synonyms, some have been used for years, others are emerging concepts. Either way, the internet as we know it is evolving into something much bigger, something way beyond the social imaginings of that twee paradigm we so coolly used to know as Web 2.0.

Writing in the International Journal of Space-Based and Situated Computing, Rubem Pereira of the School of Computing and Mathematical Sciences, at Liverpool John Moores University and Ella Pereira of the Department of Computing, at Edge Hill University, UK, survey the ICT landscape to disentangle the threads of the future internet. They point out that online has driven forward commercial interactions at a staggering rate, but the advent of mobile has accelerated that still further while sensor networks and connectivity for non-traditional ICT devices has allowed technology to seep into almost every niche of our lives.

Much is yet to be done in the realm of big data, cloud computing and the "internet of things", but we are beginning to see the virtualisation of much more human endeavour while concomitantly those devices and technologies previously off-grid are being assimilated into the realm. The analysis of this activity can be descriptive, predictive or prescriptive whether in the realm of healthcare, the environment, scientific research, finance…almost any sphere. There are many benefits, there are some risks, there are challenges and problems to address and decisions to be made about personal, national and international security, privacy, and such.

How do we gain the most from the cloud, what are the limits and drawbacks of all our technologies being interconnected (and hackable)

24/7? How do we make all this work in concert? And, how do we analyze and utilize all that data?

"The future of the internet brings a myriad of possibilities," the team says. "Most people, certainly the younger ones, have now come to expect that social interaction, educational material, commercial transactions, entertainment (games, videos, and TV) are all networked and available anywhere and anytime." They add that, "The substantial challenges posed by massive computing and storage requirements to analyse terabytes of data produced by various, heterogeneous data sources, are only part of the problem." However, there exists the great promise of analytics becoming a widespread service for businesses, governments, local authorities, regulatory bodies, even individuals.

More information: "Future internet: trends and challenges." *International Journal of Space-Based and Situated Computing*. List of Issues. Volume 5, Issue 3. DOI: 10.1504/IJSSC.2015.070952