Tech Talk
The Internet ©
by John McCarthy

Hello and welcome once again to "Tech talk". After our last outings into the world of smartphones and wearables, today it's something completely different. Completely different yes, but it's thanks to this that you're listening to Englishwaves right now...

You may have felt a twinge of nostalgia there… involuntary memory, like Proust's tea-soaked cake… visions of the mid 90s and the noise of having lived through the beginnings of internet for the general public. Good old Windows 95 and of course the unmistakable din of a modem dialing up a connection with a faraway server. Brings a smile to my face; and of course, this is an area of technology that we rarely, if ever, think about: the noises our technologies make, as much as any music or melody, are the soundtracks to a particular part of our lives. For many, the Beatles, Stones and Kinks are synonymous with the 60s; Pink Floyd, Led Zeppelin and Jethro Tull the 70s and beyond, and a host of other artists with subsequent decades and trends. A Tech analogy would be the clonk of a stylus making contact with the vinyl surface of an EP or LP; the click of a VHS cassette tape and whirring as you fast-forwarded or rewound, so evocative of the 80s; the cacophony of 28, 33 and 56 kilobyte modems represent the 90s; Nokia's famous ringtone, the noughties. For sensitive artists like Proust it was madeleines, church bells and honeysuckled gardens in Méséglise; for geeks it's more a case of techno-aural privileged moments.

Minitel, Olitec... names that roll mellifluously off the tongue. Remember also Infonie, Compuserve, Worldnet, Netscape once-upon-a-time used by 86% of the world's internet surfers and now consigned to oblivion. It's all very well this self-indulgent remembrance of past halcyon days when life was simpler and the world not so cynical, but when the ephemeral involuntary memory and the mists of past time fade, you come crashing back into the present and realise that the early days of internet were in fact the proverbial pain: eternal waits, whimsical connections which could make your computer crash, modems with lots of little wires and cables in those pre wi-fi days, and of course you couldn't dream of legally downloading a Hollywood blockbuster, having a permanent connection, watching digital TV or ringing friends around the world, and all for a modicum sum.

Surfing could be and often was an expensive business as you had to pay both the Internet Provider and France Télécom. The advent of ADSL sounded the death knell for traditional dial-up access - no more quotas, connections no longer metered, and you may remember it was Xavier Niel's moderately-priced Free which popularised internet in France and made broadband available to the common man. Speeds have been multiplied a hundredfold since then and with the latest generation of fibre-optic cable will become even faster yet.

But internet remains to this day limited to the developed world only. 2.7 billion people have access to this technology, which means that 4 billion don't. This could be about to change and there are four companies which could provide fast connections to almost anyone on Earth. The answer, once again, is different technologies...

Globe circling flocks of helium balloons, fleets of solar-powered drones and swarms of relatively cheap low-flying satellites are all being propounded as the panacea of internet connectivity for the developing world and as a far better alternative to our own broadband and fibre-optic cable. This overhead or top-

to-bottom solution seems very sensible. Furnishing the traditional cabling of cities like Paris, London or New York to every domicile on earth is prohibitively dear. Flying above the earth and beaming signals onto the surface of the planet could be a far more economical solution.

While satellites appear a very attractive proposal, some experts believe that they're inherently inefficient. Most of our planet is after all made up of water, so satellites would spend most of their time flying over large swathes of inhospitable ocean. So, cue in social network experts Facebook, who maintain that rather than trying to provide global coverage, it would be more beneficial just to cover the gaps in the existing communications infrastructure. Just a few weeks ago a pilotless plane with a wingspan bigger than a Boeing 737 but weighing less than a car was tested over the UK by Mark Zuckerberg's company. These solar-powered drones are intended to remain in the air for months a time without landing and will operate at altitudes in excess of 60,000 feet - that's way higher than the cruising altitudes of commercial airline flights. Cruising at over 18 kilometres above the earth should also solve problems associated with adverse meteorological conditions.

These drones were developed in Europe by Ascenta, a UK Somerset-based company bought by Facebook last year for a paltry €16.5 million. The idea is that drones will be able to communicate with each other using lasers, relaying data until it can be beamed down to the ground and then on to the rest of Internet. 21 locations have already been selected, notably in Africa, South America and Asia.

Another internet Colossus, Google, is also working on an air-based internet connection solution, which involves using high-altitude helium-filled balloons, similarly relaying data to other balloons. It hopes to send them 20km into the stratosphere, where they can be steered using winds blowing in different directions at different speeds.

If this sounds like pie in the sky, these plans have been devised by hard-headed scientists and will undoubtedly bring fast connections not only to Africa and South America, but also to the more remote previously inaccessible locations in Europe and could conceivably enable the poorer countries eventually to play a more important part in the global economy.