



Islander August 2014

Technology Update

FIFA World Cup TV Viewing Disrupted by the BBC and ITV Move

The reduced coverage for **BBC** and **ITV** services on **Sky** and **Freesat** has been a real issue over the last couple of months for viewers wanting to watch the FIFA World Cup. On Thursday 6th February 2014, the BBC services were transferred to a new permanent home on Astra 2E and 2F (28.2E). ITV and Channel 4 followed shortly after that.

The satellites Astra 2E and 2F have a slightly tighter and more powerful coverage, which means that UK households now get a slightly stronger signal at the expense of the original overspill areas. As a result, viewers outside the UK have found it hard to receive them. Ashore in Mallorca, service has been uninterrupted when using a 2 metre dish, but the largest, average stabilized antenna used on yachts is 1 metre. Dishes of this size have been unable to receive these popular freeview channels, especially unfortunate for those of you who wanted to watch all the FIFA World Cup matches with commentary in English.

Early Preview of a New Solution for Future Sporting Events.

A new solution to watch BBC, ITV and the other freeview channels is just around the corner. It is a very simple and cheap IPTV solution that will work anywhere in the world. It requires a reasonable internet connection with a minimum connection speed of 600kbps for low resolution through standard resolution to 3Mbps for full HD. I am testing one on my home Telefonica slow ADSL line at the moment very successfully, and clearly it will work on most 3G, every 4G and wi-fi connection and, at 600kbps for low resolution, can also be used on satellite systems.

It includes a very small black box that connects to the Internet by cable or wi-fi and an HD cable to the TV. It will have a low purchase price and a small monthly subscription.

The English-language channel subscription includes 50 UK channels, 5 Irish channels and over 50 radio channels. There is also a Scandinavian 43-channel subscription available including Swedish, Norwegian, Danish and 5 UK channels, and a Russian channel subscription with 43 Russian channels. All the channels are freeview channels from each of these countries. If you, like me, are a subscriber to Sky UK, I'm sure that the vast majority of the time you find yourself watching good quality programme content on the freeview channels. Recent major sporting events, including the

HEAD OFFICE

Palma de Mallorca, Spain

TEL +34 971 404 208

www.e3s.com

FAX +34 971 404 431

info@e3s.com



FIFA World Cup, Wimbledon, The Open and the Commonwealth Games have all been or are about to be on the freeview channels. Sadly, this is a bit late for the FIFA World Cup but I will let you know when this system is fully tested and available.

The European Commission put weight behind 5G, but what is 5G?

After writing last month about Google's plans to make more data available to the world via 100 plus LEO (Low Earth Orbit) satellites, the EC has now put its weight behind the development of 5G, saying in a memo that the technology will be "a leap, not a step, forward".



What is 5G? At this moment in time no-one knows! It has not been defined. The performance standards have been hinted at with figures being plucked out of the ether with suggestions such as being able to download an HD movie in 1 second. In a recent interview, Dr Paul Jacobs, CEO and President of Qualcomm stated when asked about 5G answered, "What would it take to build a wireless system that would make you feel comfortable enough to place your pace-maker controller in the cloud? I think those sort of things are where 5G ought to head." So clearly he doesn't know either, but has a pretty major vision!

Neelie Kroes, the vice president of the European Commission, said 5G will be more than just the next step beyond 4G networks now being rolled out, as it "offers totally new possibilities to connect people, and also things – being cars, houses, energy infrastructures. All of them at once, wherever you and they are".

The roadmap of the 5G Public-Private Partnership, initiated by the EC and industry players last December year, suggests that 5G standards will boost wireless capacity so that it is 1,000 times higher than in 2010, and will bring about energy savings per service of up to 90 per cent. I am intrigued as to how this will work, and have not been able to find out any detail in this regard.

The Partnership also claims it will support more than seven trillion connected devices and seven billion people. The European Union invested €50 million in 5G projects nearly two years ago and the Public-Private Partnership on 5G was launched by the Commission with an indicative budget of €700 million.

In February, Kroes called for a global consensus on 5G by 2015, and in the meantime the EC has just partnered with South Korea to work towards a global definition of 5G and cooperate in research around the technology.

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info@e3s.com



The EU has also earmarked €16 million to fund the Ericsson-coordinated METIS project, which is defining the architecture for future 5G networks by driving the pre-standardisation and regulation processes.

Ericsson's CTO Ulf Ewaldsson said in early July that there was a risk of exaggerating what 5G can achieve, but suggested the technology can deliver on expectations with speeds exceeding those on fixed networks.

Realistic predictions suggest that the earliest we may see 5G is 2020 but is more likely to be 2025!

4K Ultra-HD TV to redefine the data paradigm

Ultra-HD TV, otherwise known as 4K TV will become the driver of a high quality video market within the next decade and is set to change the data delivery algorithm.



With four times the resolution of 1080p HD, and ramped up color, contrast and frame rate, Ultra-HD has become the next big focus, and is widely acknowledged as the next evolution of video. Citing Ericsson, IHS and other sources, a recent SES report said industry forecasts project more than 1,000 Ultra HD channels broadcasting, more than 500 million Ultra HD screens sold, and more than 400 million High Efficiency Video Coding (HEVC) set top boxes (STBs) installed by 2025, about the time that 5G will be with us!

The report notes that two thirds of consumers say they want to have an Ultra-HD screen once they have seen one, and that 25 percent of consumers would willingly pay for HD or Ultra-HD. What is needed, and currently in development is the content for viewers to watch.

While HD and Ultra-HD are high-end services, the changing media landscape risks creating a new digital divide. With the onset of Ultra-HD and a massive surge in video content imminent, decision makers will have to take this information into consideration as they form new policies that affect the industry. Neelie Kroes clearly seems to be taking the initiative already in the EC with the investment in 5G, as indeed are all the various satellite operators are, including Inmarsat, Intelsat, Eutelsat, SES, Viasat and others, not to mention Google and Facebook, the new arrivals in the satellite business.

As always, interesting times ahead.

HEAD OFFICE

Palma de Mallorca, Spain

TEL +34 971 404 208

www.e3s.com

FAX +34 971 404 431

info@e3s.com



Roger Horner of e3 Systems

For further information on any of the above, please contact us.
email on info@e3s.com and website www.e3s.com

Tel: +34 971 404 208

HEAD OFFICE

Palma de Mallorca, Spain

TEL +34 971 404 208

www.e3s.com

FAX +34 971 404 431

info@e3s.com