Islander July 2015

Technology Update

Blue is Back in the Volvo Ocean Race

It was great to see the SCA female crew win the Volvo Ocean Race (VOR) Leg 8 from Lisbon to Lorient leg 8 this week. In second place came Team Vestas. Team Vestas has been at the back of the fleet ever since they had a major encounter with a coral reef in the Indian Ocean during Leg 2 and wrote off 95% of the boat. SCA have sailed every leg and have generally started well but finished badly. Hence, they were lying second to last before leaving Lisbon.

We were invited to Lisbon for the start of the 8th leg. The photo shows the yachts on the dock in overall scoreboard order with the last nearest. So, what a fantastic turn around with SCA being first and the new Team Vestas second. Both teams have put in a fantastic amount of work in two completely different ways to achieve the result in this last leg.

The SCA team, skippered by Sam Davies said, “It’s a reward for all the hard work we’ve done. It’s a great confidence booster. We’ve had a mountain to climb to get here.”

Chris Nicholson, skipper of Team Vestas was hoping for fourth or fifth at the best and was over the moon with second. They rebuilt their boat over 6 months using 5% of the kit from the original boat and have had it on the water for only two weeks before the start of leg 8.

We were guests of Inmarsat, who are providing the airtime for all the satellite communications during the race via the two Fleet Broadbands and an iSat phone that all the yachts carry. The two domes are very neatly mounted on the transom above the two life rafts. Unfortunately, one of the yachts had the Fleet Broadband 500 swiped off the yacht mid Atlantic by a large wave.

HEAD OFFICE
Palma de Mallorca, Spain
TEL +34 971 404 208
FAX +34 971 404 431
www.e3s.com
info@e3s.com

Jean-Claude Van Damme "Epic Split" Video

In the VOR village in Lisbon, Volvo had an exhibition of their technology, cars and trucks with some fantastic virtual experiences. The best one was driving a digger sitting in the cab with the outside world projected on the windows and the cab bucking as you dig into the ground in front of you. Great fun for children of all ages!

If you haven't seen Volvo's Jean-Claude Van Damme commercial with him doing the splits between two Volvo FM trucks reversing at 30mph then take a look at this:

https://www.youtube.com/watch?t=11&v=M7FIvfx5J10

The commercial is to illustrate the trucks new dynamic steering system that combines conventional hydraulic power steering with an electric motor fitted to the trucks steering gear. The electric motor receives 2,000 signals per second from the trucks on-board sensors, allowing for more precise steering. The trucks go backwards as everyone knows that going in reverse is a bit more difficult than going forward. "Van Damme's feet are not secured to the mirrors," video director Andreas Nilsson said, "but we had him rigged so that if he would fall off he wouldn't die, obviously. We didn't want to be responsible for killing the Muscles from Brussels."

New 3G/4G single SIM European data roaming service

We have just launched a new "roaming SIM" that has been universally welcomed by our existing loyal and many new customers. Up to now we have provided excellent value options for the most popular countries around the Med on a country by country basis.

Now, due to our history of service and the value that we add, our partners at Vodafone Spain have come together with us to put together an offering that provides a single SIM with various monthly data allowances that will work in Spain, Portugal, Netherlands, Italy, Malta, Greece, Turkey and Egypt with a single invoice – we can even include San Marino, on the off chance that a yacht ends up an Italian mountainside!

When combined with our national services for France, Monaco and Croatia, we can provide complete Mediterranean coverage wherever yachts want to cruise.

Launch of Inmarsat's third Global Xpress satellite delayed

As I mentioned last month the third satellite to complete Inmarsat's GX constellation was to be launched at the end of May, but as a result of another failure on May 16th by the Proton Breeze M

launcher from Baikonur Cosmodrome whilst launching the Centenario satellite, it has been delayed.

Rupert Pearce, CEO of Inmarsat, speaking about the planned ILS launch of Inmarsat-5 F3, said “This incident involving a failed Proton launch from Baikonur Cosmodrome is extremely unfortunate and will inevitably delay our launch plans for our third Global Xpress satellite.”

The second satellite launched earlier this year will be in position shortly and we hope to undertake some beta tests with yachts towards the end of the year with GX coverage from the Caribbean to SE Asia.

SpaceX to begin satellite broadband testing in 2016

In the March edition I wrote about Elon Musk’s SpaceX. It has a plan to build and launch a constellation of approximately 4,000 satellites. They will be in Low Earth Orbit (LEO) and will provide worldwide access to broadband with a latency of 20 to 30 milliseconds, close to that of fibre optic cable, in five years’ time.

In early June, SpaceX took a significant step towards launching its own global satellite broadband network, having made a formal filing with the US Federal Communications Commission for a licence to begin a test programme starting in 2016.

3D printing is taking hold

3D printing is transforming the way things are manufactured. It’s enabling applications that would have been prohibitively expensive to do before.

Recently I witnessed a great application for 3D printing in a naval architects office. It was being used to print a small 3D model of the yacht every time a design adjustment was made for the owner to view the change and then to compare to the previous model. What a fantastically simple application that was never an option before!

3D printing is an efficient method of manufacturing as it adds material rather than traditional methods that involve taking a larger amount of material and cutting out what is needed and discarding the rest. 3D printing is computer generated and makes an object layer by layer.

In the communications industry I have seen antenna arrays being digitally printed, antennas being made by 3D printing conductive ink on glass and I have even heard of a stabilised antenna development using 3D printing as the manufacturing method to get the price down. Because the manufacturing process is digitised, production can double while production costs reduce exponentially.

Just recently a company called Carbon 3D have discovered a way to print 25 to 100 times faster compared with traditional 3D printing. The technology is called Continuous Liquid Interface Production and it creates smooth objects in second as they emerge from a container of liquid.

This technology will proliferate everywhere.

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