The Crew Report – Issue 61

Keeping up with Technology – the ETO's Task

It is becoming ever more challenging for today's crew to keep up with the increasing complexity of electronic technology on board the modern super yacht.

Sophisticated technology is now used in every area of life on board, from the most obvious such as communications, IT, navigation systems, AV and safety, to the less obvious such as comfort and health. We, the human species, have invented technology that runs all our lives and we have become alarmingly dependent upon it. That's all well and good until something goes wrong. Whether you are an engineer on a yacht, an IT manager in an office or a parent at home, how many times have you been asked "when will the wi-fi be back on?" If it's your kids, that's already bad enough, but what if it's your boss?

On a yacht, it's usually the Electronics Technical Officer (ETO) who deals with the technology, though not every yacht has an ETO; there are a large number of yachts out there which still have a traditional engineer, and still more which have a dual role captain/ engineer.

The ETO's role is relatively new and has developed mostly on yachts over 50 metres, due firstly to the proliferation and growth of electronics and, secondly, because the yacht is large enough to justify one crew member being fully-employed to maintain these systems. The typical profile of an ETO is an IT-savvy, university-qualified, bright and quick learning person, who quite often has no prior experience of marine technology. His or her primary role is to look after the communications, networks, AV, TV and IT with a considerable amount of lesser responsibility relating to anything else that has any electronic component.

The role of an ETO has become an established profession that has been created due to demand. However, currently, there is no professional career path for an ETO. Mechanical engineers on yachts start at Marine Engine Operator License (MEOL) with a career progression onto Y4 and onwards to Y1, but most ETO training is on the job, via self-learning and/or a brief handover from the person they are replacing. Unfortunately, yachting often lags behind other shore-based professions when it comes to training, and there is a severe lack of Continuous Professional Development (CPD) schemes.

Jerry Parr, ETO of motor yacht *Talitha,* agrees that the position is one today's industry does not provide for. "The position of ETO is very sparsely catered for in terms of training and certification. In general it's a hard position to break into because for the most part the only yacht-specific training you get is on the job itself. That's generally the best kind, but it's hard to snag an ETO position if you've never done it before. A background in the discipline of

electronics is probably a must, even if it's only hobby electronics, as it's a way of thinking first and foremost, but a hardcore ETO course covering the myriad systems on a modern yacht would be extremely beneficial to any would-be yacht geek. I think perhaps the lack of such training courses up to now is largely because the ETO doesn't legally have to be certified, and we are still quite accustomed to flying someone in should the poor feller start scratching his head."

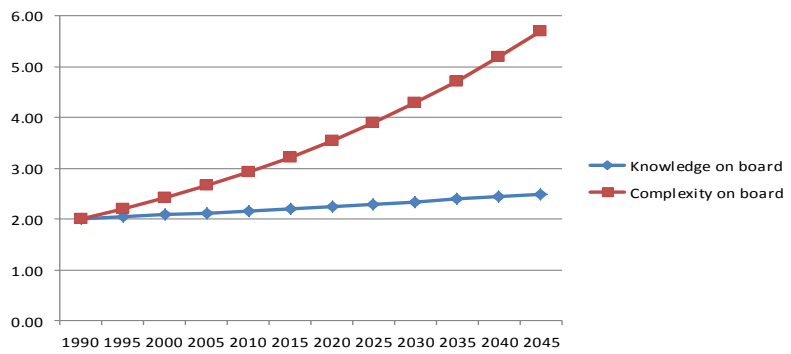
What does the future hold?

In the middle of October 2012, Strategy Analytics reported that the "billionth" smart phone had been activated 16 years after the first one was sold,; they predict the two billionth will be reached in the next three years. On 6th September 2012 Google reported they were activating 1.5 million Android phones every day, whilst five million iPhone 5s were sold over the first weekend after launch. All of which suggest Cisco were on the right track when, at the start of 2012, it predicted there would be a sixteen-fold increase in the demand for data over the next four years.

We often see large yachts using 30Gb per day of data during high season. This demand is bound to increase, as each individual coming on board brings his or her own devices, and expects immediate connectivity. It's already two years since a leading charter company informed us at the Antigua Charter Show that they will not consider listing a yacht which cannot provide broadband for charter guests.

The widening gap

The graph below, though not scientific, serves to make a point. The Y axis shows numbers from 0 to 6 which represent a "unit of technical complexity," the red line serves to illustrate the growth in complexity of technology on board yachts over time, and the blue line to illustrate the increase of technical knowledge on board. The increasing gap between the lines illustrates the current and impending problem that faces our industry: technology is evolving faster than our on-board knowledge of it.



So, what is the solution? ETOs cannot be expected to cope alone with the technology and the changes, but there is still a way the ETO can improve his or her role on board. He or she should utilise telephone support (the most conventional and common aid to an ETO), access to self-help on the internet, use remote support to provide online diagnostics, advice and instructions, and facilitate their own improvement via training. In a nutshell, the ETO needs good shore-based support to help with the first three. For the last item, the ETO needs a planned combination of self-learning together with both on-the-job and off-the-job training.

Some companies invest heavily in the training and development of their own engineers, and are fully aware of the needs of the ETOs. A few years ago, e3 started classroom-based VSAT Operators, TVRO basics, ECDIS and IT training courses, together with advanced technician courses for stabilised antennas, which have proved very popular. The benefits of such courses are obvious: quality of service to owner and guests is improved, maintenance and airtime contract costs are lower due to increased knowledge of systems, safety is improved, the recruitment and retention of ETOs is improved, and as such reduces recruitment costs as well as improving crew longevity.

However, there are challenges surrounding the training of an ETO, Attending a training course means time away from the yacht: will the yacht support this and give paid time off? Must the ETO take training time as holiday? Can a gap be found in the yacht's itinerary? Additionally, the training course needs to be paid for: does the yacht or the ETO pay? And can this be linked to recruitment and retention, with creative remuneration packages to attract high quality ETOs? Alternatively can an agreement be reached whereby the ETO agrees to pay back the cost of the course should he leave the yacht's employment within a certain time frame?

Technology is moving at such a pace that the industry cannot ignore the need for continuing professional development of ETOs, if the owner and guests are to receive the level of service that they expect and need. It is not just the ETOs who need training, but also all those involved in ensuring that this level of service is delivered: decision makers such as chief engineers, captains and technical fleet managers need familiarisation training to best understand what can be achieved and the costs involved.

The question is no longer "can the yacht afford to pay for ETO training?", but "can the yacht afford not to?"

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