

Do you need to review your communication costs?

The modern luxury yacht thrives on good communication facilities, providing owners with the perfect excuse to spend more time afloat.

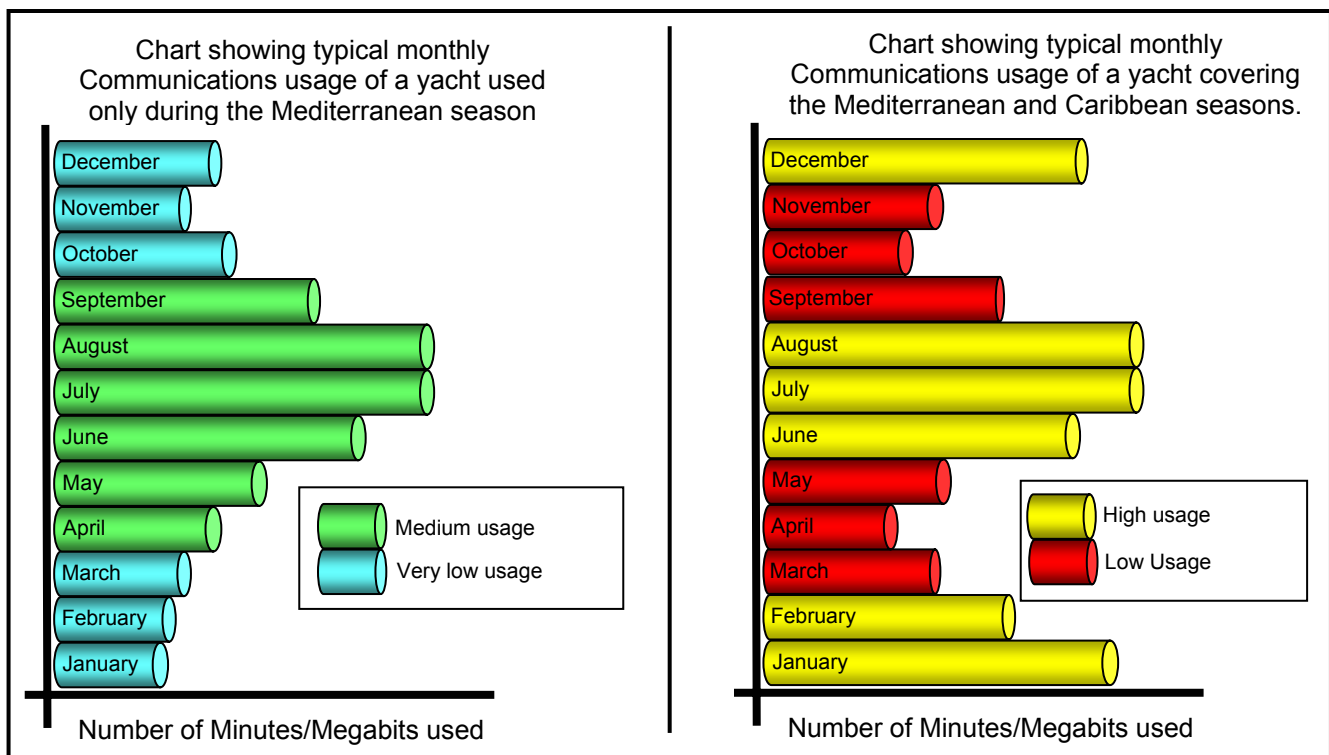
However, the performance of the equipment, and its cost efficiency, has to be analysed very carefully. This is yet another specialist, complex task confronting the already overworked captain and, even for the management company, it can be daunting.

E3 Systems Group, the super yacht marine electronics specialists based in Palma and Antibes, has recently launched its new Airtime Division, after undertaking a two year study of the conventional airtime packages being offered to super yachts.

It became clear during this study that yachts had to make do with airtime contracts designed primarily for the mobile land user or the commercial 24/7/365 merchant ship, when their usage requirements are very different.

As part of the study, E3 Systems Group gathered intelligence from its 1,000 plus client base in order to establish how they currently use their communication systems, and how their usage could be developed with the benefit of improved technology.

For example, a yacht working only in the Mediterranean will use their mobile communications more during the summer season, from April through to September, than it will during the winter months covering October through to March. Alternatively, a yacht working both the Mediterranean and Caribbean season will use their satcom more over a whole year, with less usage in April to May and September to November (see below).



Airtime tailored to your yacht's communication "Profile".

Every yacht has an individual communications "Profile". Communication needs vary from yacht to yacht. Some clients need communications only in the summer months for email and Internet access for the kids. They want to use their own GSM phones and never intend to leave the Med. Others want high speed data access anywhere and depend on it to maintain their business activities. Whereas a high spec charter yacht needs to provide every form of communication service available in all their main charter locations.

The "Profile" can simply be defined by analysing:

- a) What period/s of the year are communications needed?
- b) Where, geographically, will the yacht operate?
- c) What applications are required in those locations? (voice, fax, email, high speed Internet access, VPN, video conferencing)
- d) What communications equipment does the yacht already have?

E3 Airtime have designed a complete range of Airtime products that can be tailored to suit the yacht's "Profile" using any of the communication systems listed below.

1. **Inmarsat Services:** airtime charged by time and/or data used.
 - Inmarsat B: Near Global Voice, Fax, ISDN 64kbps, GMDSS
 - Inmarsat M: Near Global Voice, Fax & Data (4.8kbps)
 - Inmarsat Mini-M: Spot Beam Voice, Fax & Data (2.4kbps)
 - Inmarsat C: Telex & Data only. GMDSS
 - Inmarsat F77: Near global Voice, Fax, Data, MPDS, ISDN, (GMDSS Voice)
 - Inmarsat F55: Near global Voice, Spot Beam Fax, Data, MPDS & ISDN
 - Inmarsat F33: Near global Voice, Spot Beam Fax & Data (9.6kbps / 38.4kbps)
2. **Iridium:** airtime charged by time.
 - True Global Voice and Data (2.4kbps) this data rate can be improved with compression software.
 - Handheld and fixed maritime equipment options – low cost and small.
 - Paging and SMS capability.
 - Low cost calls.
 - Fax not supported.
3. **Globalstar:** airtime charged by time.

Globalstar has recently been bought by ICO the global telecommunications company. They are rolling out their Voice and Data service in strategic areas throughout the world. This includes the Mediterranean and Caribbean seas.

- Wide coverage area but not global.
- Uses satellites and GSM networks.
- Voice and Data capabilities.
- Handheld and fixed maritime equipment options – low cost and small.
- Low cost calls.

4. **Sea Tel 4003 Wavecall service (VSAT):** airtime charged by data used.

This is a very new product to hit the communications market. It offers data rates at 128kbps transmit and 256kbps receive, and it can go faster. It can also handle Voice over IP (phone calls via the Internet). E3 installed the first working mobile system at the end of June this year and were very impressed. This is going to have a large impact on the mobile high-speed data market.

- Wide coverage area but not global.
- Supports Voice over IP and Data.
- Data rates very fast 128kbps transmit and 256kbps reception (can go faster).
- First viable VSAT solution for Superyachts.
- Very competitive data rates.
- Always on connection.
- 1.2 meter radome antenna.

5. **GSM and GPRS:** airtime charged by time and/or data used.

GPRS stands for Global Packet Radio Service and is the latest data service on GSM. It is not new but this season has seen the first influx of mobile maritime users. This will be replaced later by G3, the 3rd generation GSM system; this will be rolled out throughout Europe over the next 2 years.

- Inshore coverage (on average 30 miles off the coast).
- Supports Voice, Fax, GSM Data and Packet Data.
- Data rates on average 38.4kbps (depending on phone and network).
- Handheld and Fixed maritime equipment options including tri-band – low cost and small.
- Cost effective Voice Fax and Data calls.
- Very, very low E3 GSM to E3 GSM call costs e.g. yacht fixed to handheld.
- Works in Europe, USA and some Caribbean Islands

6. **WiFi (Wireless Networking):** airtime charged by data used.

WiFi or wireless networking is a new service that's being installed in most of the major yachting marinas. E3 have recently completed the installation of a WiFi network covering Golf Juan marina in France.

- Data only or Voice over IP.
- Inshore coverage (mainly in marinas).
- High speed data 128kbps or faster.
- VPN compatibility.
- Cost effective option - low cost components and small.

7. **Data via one-way Satellite:** airtime charged by time and data used.

This system works as follows, the user connects to the Internet by whatever means available. When an Internet page is requested the actual data sent back to the PC is sent via a satellite and is received onboard using a stabilised satellite TV antenna.

- Supports Internet Data only.
- Limited footprint.
- Very High-speed data throughput.
- Requires onboard Satellite TV antenna.
- Cost effective High Speed solution.

Some finer airtime considerations

The use of voice and fax has not changed much in recent years other than with the advent of the ability now to consider Voice over IP (voice calls over the Internet) and fax via data as cheaper options.

When a yacht is operating in GSM regions consider an airtime contract for all phones on board within the same contract. Calling to and from the yacht to other phones on the same contract can show serious savings.

However with the more prolific use of data applications it is essential that your IT systems on board are configured correctly and that you look at your airtime service carefully to avoid huge bills.

Firstly, be aware of connection charges on the packet data element of airtime contracts. A number of yachts that have distributed email systems that connect every few hours to retrieve and send emails have received very large bills that comprise almost exclusively of connection charges.

Secondly, if you have a LAN or wireless network on board, make sure there are system controls that limit who and what can access the Internet. This is not just a case of limiting who can access the net but there are now many software products that could be sitting on any PC that now wake up and decide to access the Internet for an update.

Thirdly, careful Virus and Trojan control is imperative as certain varieties can install software that can initiate calls. Make sure you have up to date virus protection and a firewall.

Communication Options?

With all the new communication services available E3, combining their Systems and Airtime experience, are providing a service, together with either the owner, captain and/or management company, to reassess their yachts communication systems and running costs. Mobile communications are no longer very expensive, and there is a range of services out there that are more cost effective and have better performance than the traditional systems.

E3 Systems Group has a team of dedicated staff with over 30 years experience of working in the Marine communications and IT market. With the introduction of the new Airtime Division e3 Systems Group can now offer their customers a complete communications solution, Sales, Installation, Airtime and Service / Support. For further information on any of the above services or details on our airtime contracts please contact Jason Abbott on Tel:+34 971 404208 Fax:+34 971 400738 or email airtime@e3s.com