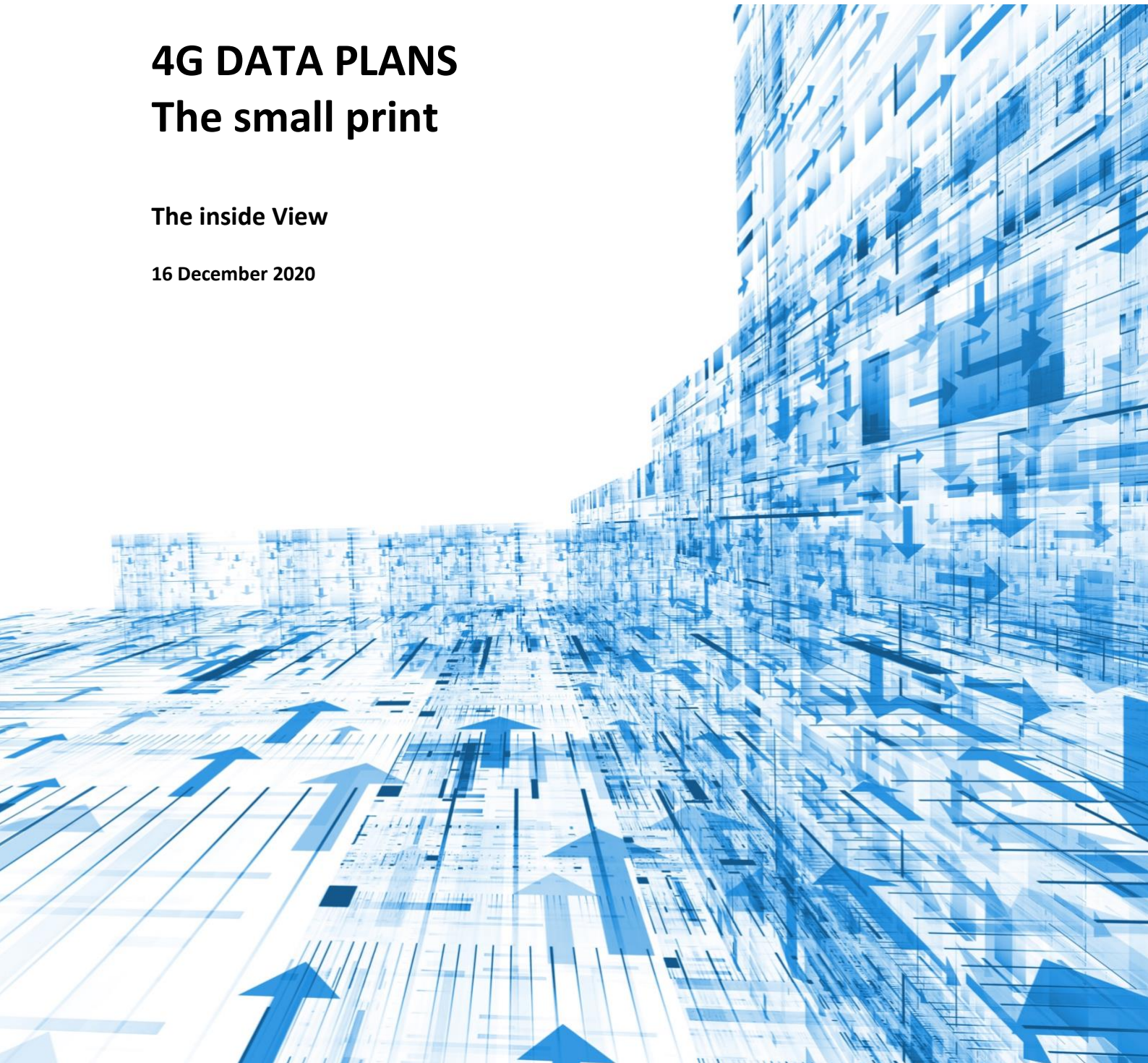


4G DATA PLANS

The small print

The inside View

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The difference between a Personal User and a Commercial User

A **personal user** is a single person using a single smart phone. A **commercial user** is where multiple users are sharing a single data connection such as in an office.

A large yacht is a commercial user.

Is Unlimited Data really unlimited?

Our answer is always, **“Truly unlimited data plans do not exist without a caveat”**. As to whether an unlimited data plan means you really can use as much data as you like, the answer is, to all intents and purposes, yes. However, as with so many things in the world, things aren’t so black and white. There are caveats and each network operator has some small print in their Terms and Conditions explaining how they can change the data delivered.

Firstly, **unlimited plans are only designed for personal use**. There is no such thing as a commercial unlimited data plan offered from any network operator. A superyacht is always a commercial user.

The network operators know that a SIM with an unlimited service, designed for a personal smartphone user, can actually be used in a commercial router. In the process of designing their services they have defined what is **acceptable usage** and have then built-in protection to make sure

that when the **limit of acceptable usage** has been exceeded the performance deteriorates therefore limiting the data usage.

Fair Usage is one of the commonly used protection policy terms. On unlimited data plans some networks apply what's called a 'fair usage policy', which aims to clamp down on people who abuse their unlimited data allowance.

Fair usage policies are the only way network operators can prevent people from using plans that are intended for personal use for commercial/yachting purposes instead.

Speed restriction is another protection policy. While some networks will put no restrictions on the amount of data being used, it may decide to slow down the connection speed as part of its fair usage policy.

These speed restrictions are applied when the network considers an unreasonable amount of data has been used or if the network operator suspects the SIM is being used for unauthorised commercial/yachting purposes.



This is also known as **De-Prioritisation**. You may find language from a network operator in their Terms and Conditions that resembles:

Customers may experience reduced speeds at times of network congestion.

Translates to: *If the network gets busy, we might slow you down.*

This slowing down of your data is due to **De-Prioritisation** which essentially means that your carrier can slow down your data speeds in favour of either, other customers with higher-tiered plans than yours, or customers who have not used their allotted full-speed data.

It is a trend for the major operators to offer multiple tiers of "unlimited data". Some lower-tiered plans (depending on the operator) can be de-prioritised whenever there is heavy data congestion.

What you may be paying for, in the higher tiers of “unlimited” plans, is a guaranteed amount of full-speed data before de-prioritisation.



4G Network Congestion is a random feature to be avoided

We are all familiar with road congestion, and most of us will have experienced a congested network and will have been frustrated by unusable data speeds. Unlike road traffic, it's impossible to know when network congestion is going to take place. Typically, it will take place at the least expected and the most inconvenient time, such as when the yacht's owner is wanting to send a crucial email, in the middle of a video conference, or when a goal is about to be scored.

This is not what owners or charter guests expect on a large yacht.

How do you know what the limitations are in Unlimited Plans?

If you are being offered an Unlimited Plan do your due diligence and ask the questions I have outlined above. If you are told there are no limitations be suspicious and ask for the name of the service provider so you can check it out yourself.

If you are uncertain, it's easy enough to search on-line for "is unlimited data actually unlimited?". You will find a lot of references for **personal data plans** on UK and USA networks but no **commercial plans**. You can also contact the service operator and ask.

Another point to be wary of is to make sure roaming is blocked to countries outside those included in the plan, otherwise you could have some very large bills.



Other plan types that are subject to random interruption

Another type of service with unexpected consequences is one that offers a full speed service from a finite data pool that will stop once the pool runs dry. This is otherwise called a "fleet service". The success of such a service is dependent on the contract negotiated by the reseller with the service provider. If there is no overage, then simply due to the random nature of the data use by the other yachts, the pool could run dry at an inconvenient time and the integrator cannot refill it. There is also a danger of the integrator diluting the maximum amount of data promised to each yacht by overselling the number of SIMs that can dip into the pool.

Successful and reliable 3G/4G aggregation depends on bandwidth availability

The amount of bandwidth available when aggregating multiple 3G/4G connections is dependent on a number of factors:

- Bandwidth may be randomly restricted by the service provider when using **Personal Unlimited Data Plan** SIMs. It is recommended always to use **Commercial Data Plan** SIMs with no Fair Access policies.
- Signal Strength. Distance to the nearest cellular tower and the quality of the signal.
- Backhaul Bandwidth Availability. Not enough backhaul bandwidth is provided and what is available is saturated.
- Device contention at the tower. The number of subscribers on the same service that are connected to the cellular tower at any one point.

Additional cellular connections can provide the end user with a larger share of the available bandwidth at the tower but not in straight multiples. So be aware that when you add a second cellular connection it doesn't mean a doubling of bandwidth, especially if both connections are from the same service provider.

Choosing **Commercial Data Plan** SIMs for multi-SIM routers will provide much improved aggregated performance. Also, only one contract is required for all the SIMs in a multi-SIM router when using **Commercial Data Plan** SIMs, rather than paying for a separate contract for each **Personal Data Plan** SIM. This provides a better return on investment in the multi-SIM aggregator environment.



Always provide the quality that your Owners and Guests expect

To meet the high standards and expectations of yacht owners and their guests, we suggest you only offer **commercial/yachting grade data plans** that have uninterrupted, unlimited data and unrestricted bandwidth. This is based on the experience we have gained over the last 25 years. Take the benefit of that experience to make your job easier by providing the owner and guests with rock solid reliability with the unknowns removed. Why compromise?

Why pay for GB you don't use?

With an **unlimited personal data plan**, you pay a fixed price per month whether you use it or not. Truly **unlimited commercial services** cost more per GB, because of the quality, but in addition there is no waste. You never pay for what you don't use, so **in the end you can end up paying less** and have no surprise speed restrictions when everyone on board is using it.

A commercial integrator provides **24/7 support** from a team, as we do in our Support Operations Centre (SOC) together with our on-line portal showing you your data consumption and much more. We also provide professional billing which is MOSS and credit card (PCIDSS) certified and approved against fraud. But most of all, you will be supported by a knowledgeable and passionate team who care about the quality of all the services we provide whether it is 4G, VSAT, TV or IT.





References – how to check the facts

Search on Google for “is unlimited data actually unlimited?” and you will find a lot of references for **personal data plans** on UK and US networks. Here are some examples as of the date of this paper.

3: no data limit or speed restriction in UK but 20GB/m data limit when roaming.

O2: no data limit or speed restriction in UK but 25GB/m data limit when roaming.

Vodafone UK: no data limit but speed restriction on Unlimited Lite and less restriction on Unlimited Plus in UK but 25GB data limit when roaming.

You will see references to cases with AT&T and Verizon in the USA.

From our own practical Med experience here are some **personal data plan** examples:

Vodafone Spain: unlimited with 300GB limit before speed reduction.

Vodafone Italy: unlimited using personal data plan with speed restriction at 1,200GB/m. However, subject to bill shock as does not restrict non-EU Med roaming.

SFR France: speed restriction at 900GB when in France. Limited to 100GB when roaming.