

VATM 2024 - CPE gateways for Open Access Networks and the outperformance of 5G FWA

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Today's topics



Introduction



**Fast and reliable
connection**



Wi-Fi coverage



Is 5G FWA a threat

Icotera at a glance



High quality and Scandinavian design

- ✓ Lifetime of 8 years and FFR of <0.5%
- ✓ High quality software solutions
- ✓ Distinctive Scandinavian design



Superior customer service

- ✓ Tailormade & cost-efficient solutions
- ✓ 24/7 technical support service option
- ✓ High quality help centre



Technological leadership

- ✓ Vendor independency
- ✓ Access to updates & new features
- ✓ Quick adaptation of new tech



Best-in-class user experience

- ✓ Test-winning Wi-Fi performance
- ✓ Best-in-class fiber connectivity
- ✓ Ease of use & installation

Fiber Termination



Full portfolio from Gigabit P2P, over various GPON to full range XGS-PON

Wi-Fi Router



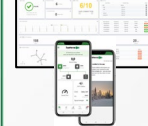
Truly best-in-class Wi-Fi 6 routers with extensive software support

Wi-Fi access point



Performance optimised Wi-Fi access solution for extending Icotera Wi-Fi networks

Network Monitoring



Software for ISPs and end-users to monitor network communication, connected devices, etc.

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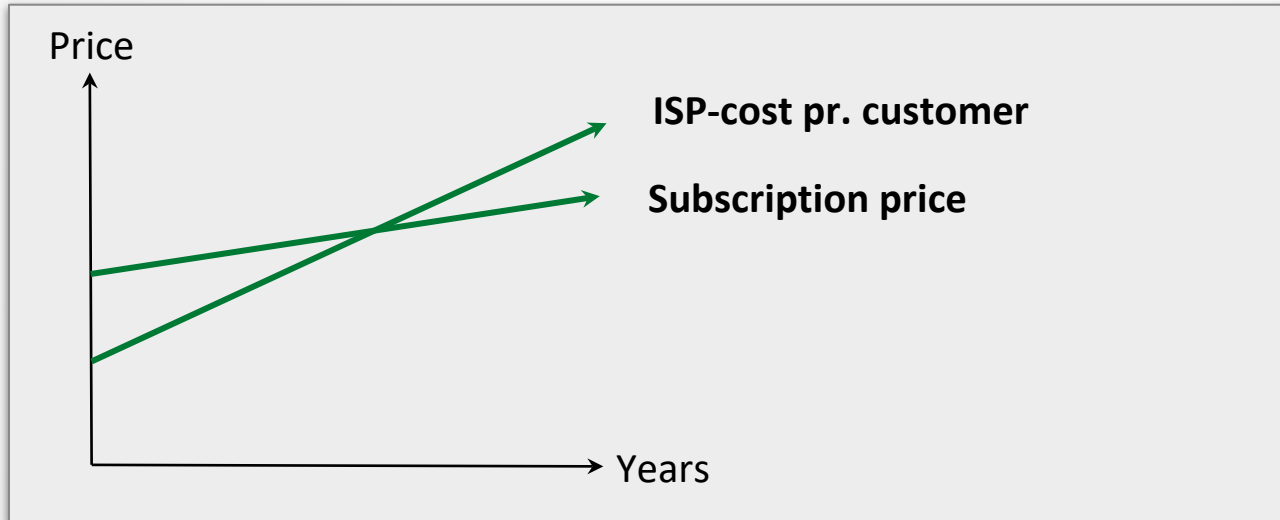


Is 5G FWA a threat

Market trends

Increased cost is challenging the ISP business model

- Increased throughput by using new technologies -> increased cost
- Subscription-price is expected to be “on-par” with older technologies



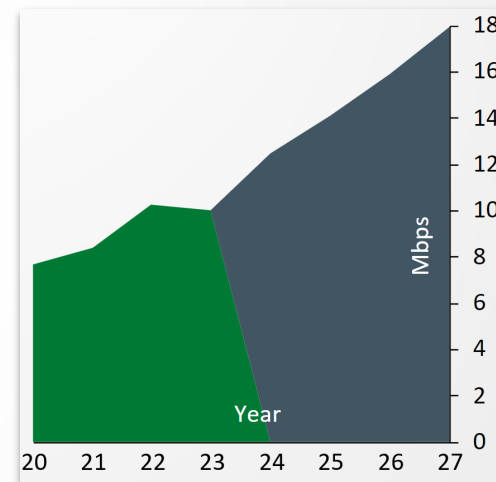
Market trends

Connection speeds vs. actual needs

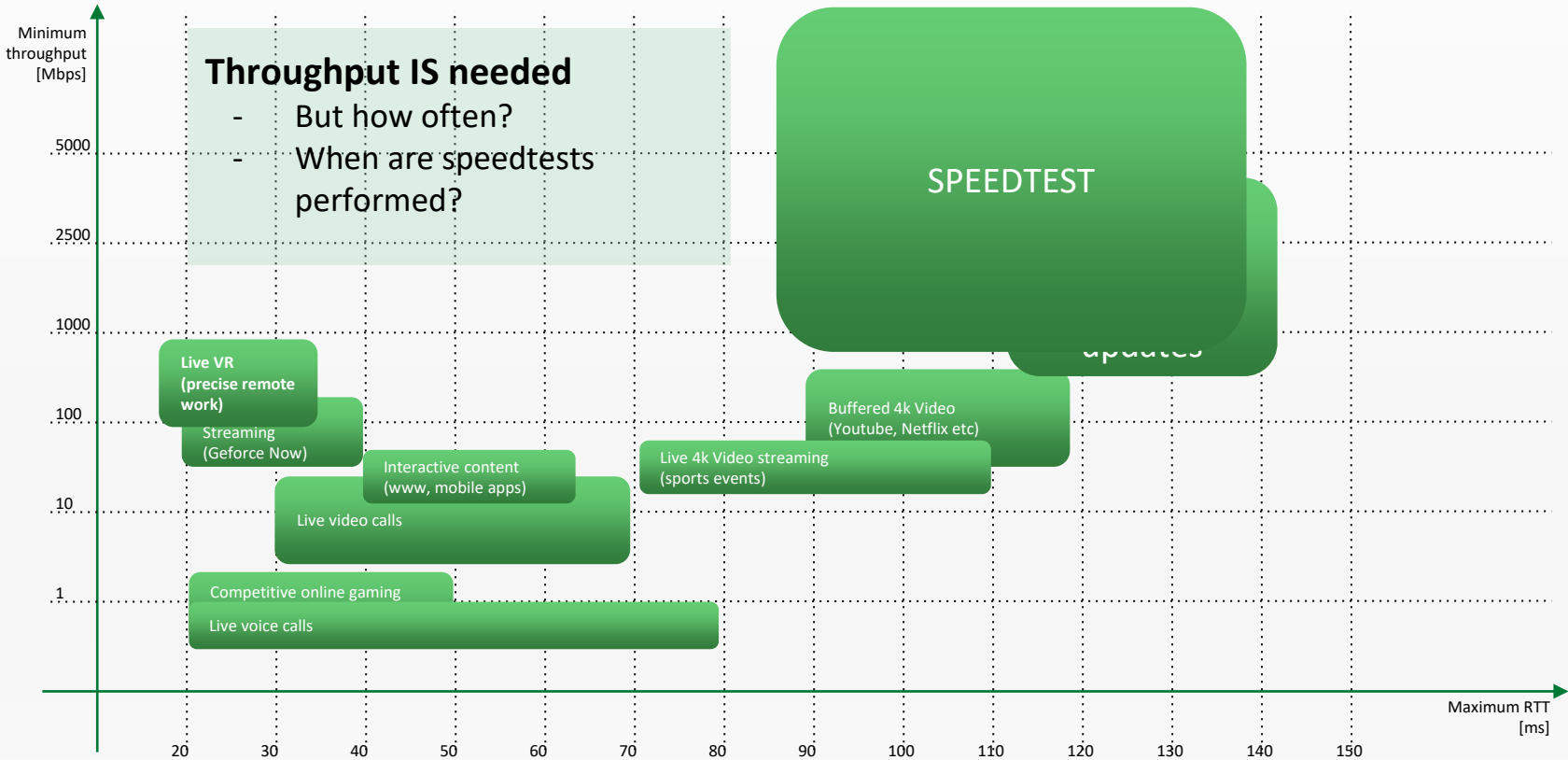
- UK-operator recently shared their real and forecasted Throughput.
- Only 18 Mbps in 2027! (average use during in peak-hours)

Why do we talk so much about throughput?

- Because it's the main tangible layman parameter
- Market push from HW-vendors and chipset manufacturers



Market trends



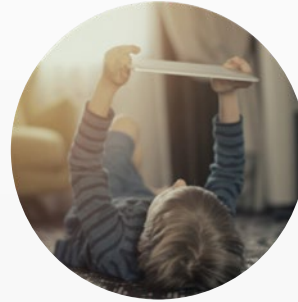
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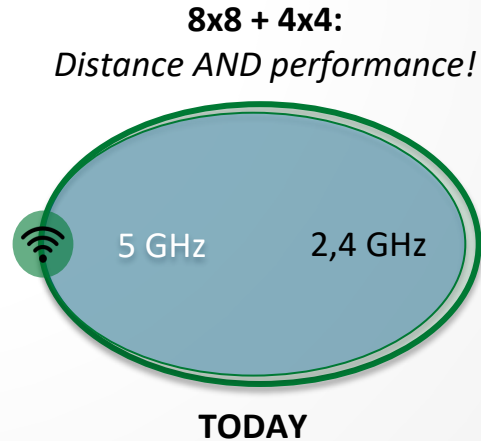
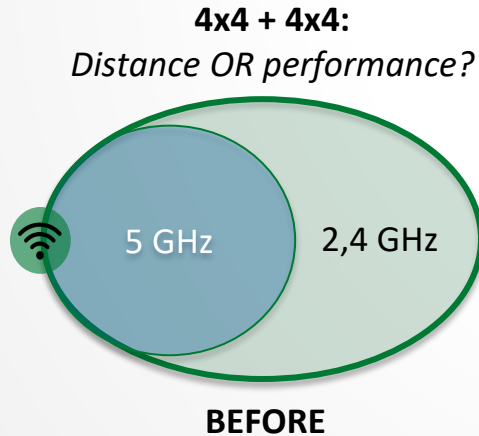


Is 5G FWA a threat

Why DSL routers sometimes outperforms FTTH routers



- The history of the analogue phone
- Digging and installing FTTH and why two box is not only about open networks
- Focus on the Acxxxx and Axxxx does not matter
- Design matters – just ask Telenor



Icotera Wi-Fi 6 solution - proof of excellence

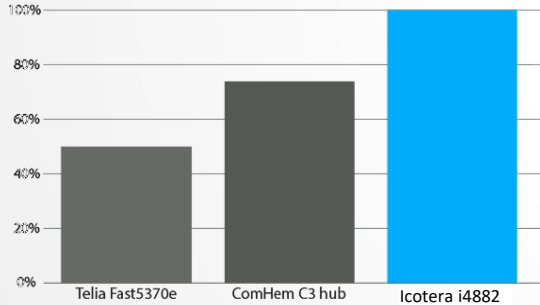
“Latest reports present a decreasing trend in number of support calls related to our CPE products”

“After deploying our new i4882 Wi-Fi 6 routers in the Danish market, our benchmarking on support calls compared to our other routers shows a decrease in support calls by as much as 60%”

“... I’m also glad to inform that XX last months have hit All time high on selling fiber broadband to our customers – one of the key factor of this is our change in hardware/software/design position. For that we are grateful”

“ We actually experience that all the customers we ask tell about a better Wi-Fi experience than they came from. The Wi-Fi range in particular gets praise from customers. This also means that we see a lower call rate on issues around Wi-Fi performance and Wi-Fi range when a customer has the i4882 router.”

Fastest router



Best performance

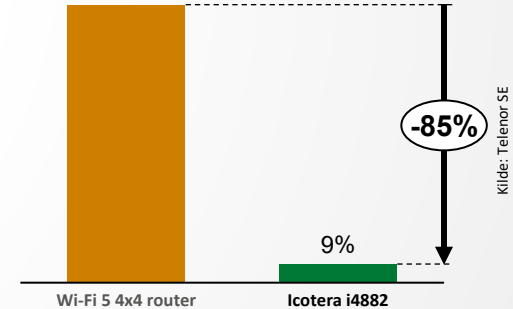
The table below shows how often the different user scenarios were successful for each gateway.

Gateway	Success rate of Wi-Fi test scenarios		
	Video conferencing	Streaming media	Online gaming
Keen FA7500	96%	83%	83%
Technicolor X2	96%	100%	83%
Telia	96%	100%	83%
Keen AP2400TN	92%	76%	83%
Telcel	92%	100%	83%
ZyXEL E3300	90%	100%	83%
Huger	90%	100%	83%
Sagemcom DR	92%	100%	100%
YouSee	92%	100%	100%
Icotera i4882	92%	93%	96%
FastSpeed	92%	93%	96%
ZTE MC801A	87%	71%	83%
Telia	87%	71%	83%
Huawei H138	82%	90%	83%
Sagemcom F@ST580v3	100%	83%	83%
TDC-NET	100%	83%	83%
Huawei H122	83%	86%	83%
YouSee	83%	86%	83%
Icotera i4882	92%	100%	100%
Telcel	92%	100%	100%

Legenda

Success rate	User experience
(95 - 100%)	Excellent
(75 - 95%)	Average
(65 - 75%)	Below average
60%	Unusable

Lower CO2 footprint

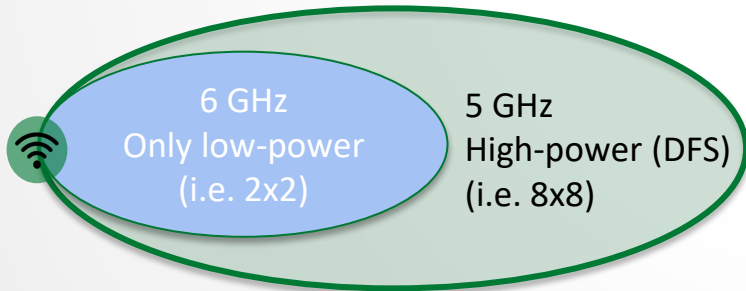
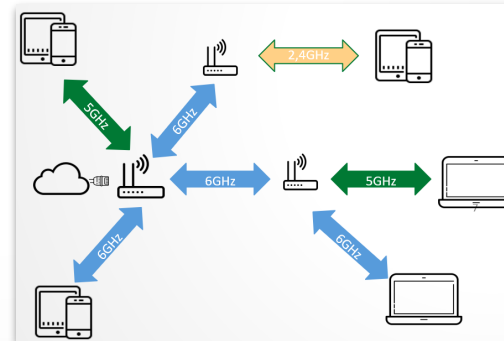
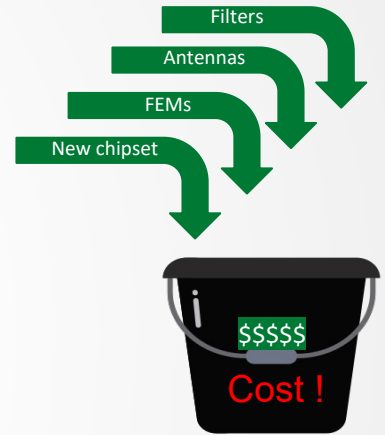


Higher throughput | Lower TCO | Lower CO2 impact | Higher CSAT | Lower Churn | Lower Opex

But does Wi-Fi 7 not solve all of that?

Definitely not!

- Wi-Fi 7 comes with loads of improvements
- We just need to be aware of the current limitations (**and the price-tag!**)
- "On-par" price -> Lower performing CPE's



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5G FWA

No doubt 5G FWA is the new “DSL”

- **Lower cost to serve to leverage network**

But

- **Bandwidth sharing**
- **Good coverage in cities (Nordic statement) but expensive router solutions**
- **Comes at an energy cost vs fiber**

= lower performance and higher CO2 impact

Thank you!

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