

Opportunities Overlooked – Fiber To The Future

By [Chris Hoare](#), [James Ratzner](#), [Jonathan Chaplin](#) and [Russell Waller](#) | March 22, 2022

The New Street and BCG Global Infrastructure Conference is a week away. The line-up is fantastic. If you haven't registered yet, please do so [here](#). Registration for most of the small group and one-on-one meetings has closed; however, we still have some availability with companies that may not be as well known to you all. Some of these companies have important perspectives to share on issues that affect the larger, better-known companies, and some of them are just great investment opportunities in their own right. It is worth giving them another look.

All the companies listed here will be presenting – it will be well worth catching their sessions live (schedule [here](#)). For those of you that have a clash, we will have replays available for registered attendees after the event. And to register for one-on-ones with them, please click [here](#).

The Real Fixed Wireless Broadband Threat

Perhaps the most common question we have fielded over the course of the last quarter asks what impact we think fixed wireless broadband (FWB) will have on Cable and Fiber broadband companies. Fears about the impact of FWB weighed heavily on the sector after Verizon's analyst day.

Our response: there are two versions of fixed wireless broadband. One is more threatening than the other.

Benign FWB. The first version is delivered over a mobile network on frequencies below 6GHz. This is what Verizon and T-Mobile are doing, for the most part^[i]. This is the version everyone is worried about at present.

We think this product is inferior to Cable and Fiber and won't meet the needs of most households. We assume it will claim 8% of the broadband market over time, though going from 0% to 8% could prove painful for the established operators in the near-term.

Threatening FWB. The second version is delivered over a network designed to deliver fixed broadband using millimeter wave frequencies. **Starry** is doing this today. They will target 19MM homes and hope to capture 1.4MM subs by 2026. Even if they are successful, it would be immaterial to the overall broadband market (1% market share in five years).

Starry's model could be a much more material threat to Cable and Fiber companies if acquired or copied by one of the big national wireless carriers. **Starry** has millimeter wave spectrum ranging from 200MHz to 600MHz in 37 states covering ~100MM POPs (~40MM households). In addition, they are capital constrained. The three national carriers *each* have as much as 1000MHz of millimeter wave spectrum nationally, and they have the resources to deploy it.

Starry may not do much damage to the fixed broadband market on their own, but if they are successful in capturing 1.4MM subs they will build a valuable business. 1.4MM subs would put them on par with Mediacom, which is probably worth \$8BN. Starry is going public through a SPAC transaction that is due to close soon.

Chet Kanojia, Starry's CEO, will be presenting at 8:45 ET on March 29th. Please click [here](#) to register for the event and to sign up for a one-on-one with Chet.

Chorus is another company that can deliver insight on how the FWB market may evolve – they are effectively operating in the future. New Zealand is an advanced fiber market with FTTH covering almost 90% of the market. FWB, which in New Zealand is being offered over 4G, has claimed 13% of the market and penetration continues to rise.

If the US were to follow this path it would be far worse for Cable and Fiber companies than the scenario underwritten by the market today. It will be important for investors to understand what lessons from New Zealand can and can't be applied to the US.

JB Rousselot, Chorus' CEO will be presenting at 14:20 ET on March 29th. Please click [here](#) to register for the event and to request a one-on-one with JB.

Should All Cable Companies Be Upgrading to FTTH Now?

We started getting this question when Altice started deploying fiber, and interest escalated when Liberty Global announced that they would start replacing HFC with fiber in a number of their markets in Europe.

We don't think there is a simple answer to this question. It depends on the market, the competitive threat, and the current state of the operator's plant. **Shentel** and **TDS** both have markets that they serve with Cable and markets that they serve with fiber. In some cases, they are replacing HFC with Fiber, but in others they are upgrading the HFC. They are among the best positioned in the US to give investors an unbiased perspective on when it makes sense to upgrade HFC and when to replace it with fiber.

Edward McKay, Shentel's COO and **Jim Butman**, TDS Telecom's CEO, will be participating in a panel together at 11:50 ET on Match 29th. Please click [here](#) to register for the conference or for one-on-ones with either of the management teams.

Liberty Global is also upgrading HFC in some markets while replacing it with fiber in others. We think the different cost architectures seem to be the major factor determining their choice on where they upgrade to FTTH and understanding these nuances will shed light on whether Comcast and Charter's strategy is sound.

Interestingly, rather than shutting down the HFC network, for the time being Liberty Global seem to be keen to then run both architectures in parallel. Given the higher operating costs involved with this, we will be interested to understand what drives this decision.

Enrique Rodriguez, Liberty Global's CTO, will be delivering a keynote at 14:55 ET. Please click [here](#) to register for the event or to request a one-on-one with Enrique.

Will Labor and Supply Chain Constraints Dash the Aspirations of Companies Deploying Fiber

The companies we track have plans to more than double the pace of fiber deployment from 4.8MM new locations in 2021 to 10.6MM new locations in 2023. If they succeed, it will be the fastest pace of fiber deployment ever in the US. Furthermore, it is not happening in isolation.

\$42.5BN will be invested by the federal government to get broadband to 14MM unserved homes. This is part of a \$1.2Tn federal infrastructure investment that will draw on many of the same labor resources used to deploy fiber.

Finally, the Cable companies are kicking off an upgrade to their HFC, the three national wireless carriers are in the midst of deploying 5G across their networks, and Dish is in the midst of building a new nationwide wireless network. These too draw on common resources.

Can the industry pass ~11MM fiber locations per year? If not, which operators are mostly likely to hit their targets, and which are mostly likely to fall short? Will costs rise to the point where some of the upgrades become uneconomic? Are deployment targets at risk because of supply chain constraints? If so, how long are these likely to last?

Dycom builds and maintains networks for most of the most prominent companies deploying fiber and upgrading HFC networks in the US. Their largest customers include AT&T, Comcast, Lumen, Verizon, and Frontier. They are among the best positioned companies to shed light on how the industry will cope with the massive acceleration in communications infrastructure deployment. They are also very well positioned to capitalize on it.

Steven E. Nielsen, the CEO of Dycom, will be presenting at 16:15 ET on March 29th. Please click [here](#) to register for the event or to request a one-on-one with Steven.

Corning manufactures and sells the fiber that is feeding these fiber deployments. They are well positioned to provide insight into the magnitude of demand and how much of it the supply chain will likely be able to accommodate. They are also perfectly positioned to shed light on how the capabilities of fiber networks are likely to evolve over the next decade. Corning is also well positioned to capitalize on this explosion in demand for fiber.

Dr. Jeffrey Evenson Corning's CSO, will be presenting at 13:45 ET on March 29th. Please click [here](#) to register for the event or to request a one-on-one with Dr. Evenson.

How Might Regulation Play Out in Fiber Markets

Outside of the US, one of the longer-term questions we then field from investors is how regulators might look at FTTH networks in the future and whether they will allow companies a fair bet on the higher level of capital they are currently deploying, even when they start to accrue the benefits from shutting down the legacy copper network.

Chorus find themselves at the center of this debate. After building out a full fiber network, the New Zealand regulator is trying to impose a ROCE threshold of only 5.5%. This has obviously caused concern among early investors in the fiber project.

While this isn't necessarily representative of what might happen in the rest of the world, it should be a flashing light on the dashboard for all fiber investors – whether incumbents or challengers – of how a fiber market elsewhere in the world could look 5-10 years from now.

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Upgrading Networks Drives Higher Margins

Altice has argued for some time that replacing HFC with fiber will drive lower opex and maintenance capex. Liberty will be able to speak to this also for markets where they are replacing HFC with fiber. We have heard estimates of savings of roughly \$25 / home passed / year from replacing HFC with fiber. This might boost the FCF margins of a large Cable company by ~200bps – meaningful but not life changing. The savings come from eliminated power and maintenance costs that come from removing active elements from the network (mostly amplifiers).

Tele2 will talk to something different – cost savings that come from upgrading HFC infrastructure rather than replacing it with fiber. By upgrading its HFC network to a Remote-PHY architecture, Tele2 has achieved 70% less power consumption and 30% lower maintenance costs in pilot areas (with 10x downstream capacity and 25x upstream capacity).

Comcast too is moving to a Remote-PHY architecture. They haven't discussed savings associated with this transition yet, but it is plausible that they will see similar savings to Tele2.

Yogesh Malik, the CTIO of Tele2, will be presenting at 8:45 ET on March 29th. Please click [here](#) to register for the event or to request a one-on-one with Yogesh.

The Endgame for Telcos – Completing the Fiber Upgrade and Decommissioning Copper

AT&T surprised investors last week by announcing plans to decommission half their copper infrastructure, giving customers FWB instead. Shuttering copper infrastructure could drive material savings.

Orange will be in a position to decommission copper plant too, but for a different reason. Their FTTH rollout is now 80% complete. This gives Orange one of the largest FTTH footprints globally. They have been planning for an imminent copper switch-off, that they expect will help to drive opex down.

Yves Bellego, the Director of Network Technical Strategy of Orange, will be presenting at 9:55 ET on March 29th. Please click [here](#) to register for the event or to request a one-on-one with Yves.

[i] Verizon is offering FWB over millimeter wave to 2MM locations today. This constitutes just 4% of their FWB addressable homes. The vast majority are being targeted with 4G and 5G on frequencies below 6GHz

Full 12-month historical recommendation changes are available on request

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