Greywale Insights

The Battle for the Residential Edge
Part 1: The Battleground and The Front Lines

Today, there are battle fronts so important the future of many communication service providers, Telco, Cable, Mobile (NetCo's) is at stake. The front lines in this battle, in order of most interesting, are the Residential Edge, The Industrial Edge, The Vehicle Edge (IoV) and the Enterprise Edge. There are other front lines worth analysis as well. In all these markets the NetCo provides, at a minimum, best effort connectivity. The battle revolves around many issues such as what does the NetCo offer beyond this, what's their fair, and just, role in the value ecosystem and what's their brand status. The stakes are high for both sides. Yet, the stakes for the NetCo are much higher with a battle loss leading to a commodity connectivity business or the proverbial "dumb pipe". A loss to the WebCo means they have business as usual which is actually pretty good.

This article is the first in series that articulates the dynamics and presents a logical ecosystem wide solution for the Battle for the Residential Edge.

To understand the battleground let's take a look at a simplified ecosystem. In this ecosystem there are three entities: Web Companies (WebCo's), The Network Service Provider (NetCo's) and People & Things (P&T). Two entities in the ecosystem want to buy access and one entity sells access. Microeconomics 101…Kapow…equilibrium. Not so fast.

To begin we must define access. Greywale Insights defines it as People and Things Accessing the Cloud and Each Other. People want *access* to the cloud, movies, music, applications, resources, the web et al and also each other. Things "want" *access* to the" Big Data" Base, the cloud-hosted application, et al and also each other. The WebCo's want *access* to people and things.

The NetCo's and the WebCo's each face a complex, competitive and dynamic battleground. See Figure 2 for an illustration of a simplified view of the battleground. While the big battle is for the edges, or front lines, they also have a serious battle on their flanks. This battle is between NetCo and NetCo and WebCo and WebCo. This is the usual competition to capture the same customer in a truly zero-sum market. Yet, this is a mere skirmish on each of their flanks. NetCo's must also fight in unison against a large, cash rich, aggressive army of "web companies" such as Google, Amazon and Apple (WebCo's). Adding even more to this battle is the fine line between collaboration (legal) and collusion (illegal). At the same time they are facing a perfect storm of disruptive innovation forces, with virtualization, open source and IoT/OTT being the big three. The result presents executives at both entities a complex dynamic N-dimensional problem space. No one ever said it would be easy.

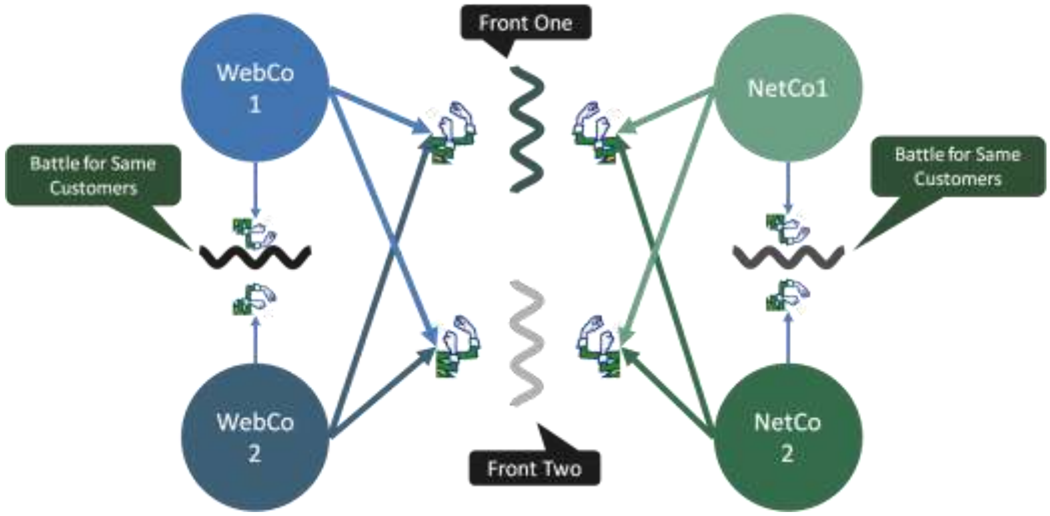


Figure 2
The Battleground

The Front Lines Defined

Philosophically, metaphorically, and physically the interface between one entity and another is more interesting. This same is true in the war between the NetCo's and the WebCo's. These are the front lines. We refer to these interfaces in many ways such as peering points, interconnects, and Network-to-Network Interfaces (NNI's). These aren't the interesting ones as there's little contention. The interesting front lines are at "The "Edge". The edge refers to the infinitesimally thin boundary between the NetCo and the WebCo. It's the point where the NetCo's realm ends and their responsibility ends and the WebCo's begins. The location of this line is the Battle for the Residential Edge.

Historically, the edge has been called the demarcation or De-mark (Dee'-Mark). Examples of this include the CSU/DSU and the Network Interface Device (NID)s. The latter being the gray box on the outside of your home. Where, other than E911, their responsibility ends. If the central office loop-back works it's an inside problems and for a fee they'd be happy to address it. A long time ago companies developed a CSU/DSU on a router blade. Makes sense, one less box to manage, lower cost, et al. However, the market never adopted them en masse since it was in effect putting a blade that the NetCo managed into a router that the enterprise managed. Thus, this de-mark was embedded in a CPE device, the edge router. So de-marks do mean something.

The Battle for The Residential Edge

More specifically, the front lines in the battle for the residential edge revolve around Over the-Top (OTT) and the Internet of Things (IoT). Both fronts are connected strategically but are at different stages. [For a discussion on why OTT and IoT impact the ecosystem in the same way see ott-iot-impact-ecosystem-same-way .] Controlling one or both of these edges gives the winner a wide array of smart homes billable services, trusted and preferred brand status and access to a slew of consumer data to monetize. While the front lines for OTT and IoT are interconnected in many ways they are being fought separately as illustrated in Figure 3.

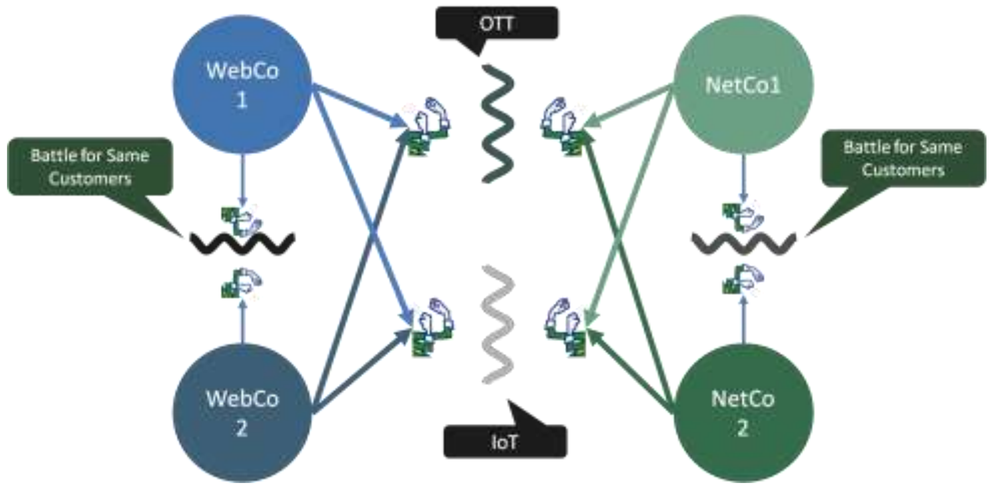
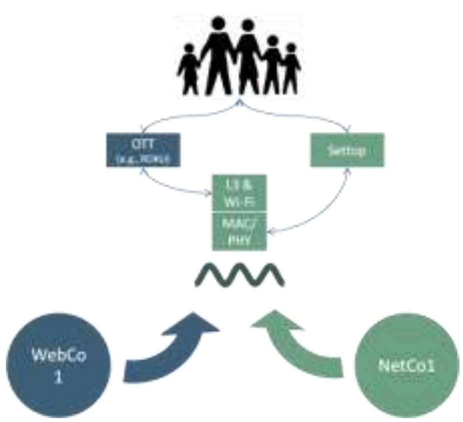


Figure 3
The Residential Edge Front Lines

The OTT-Residential Edge

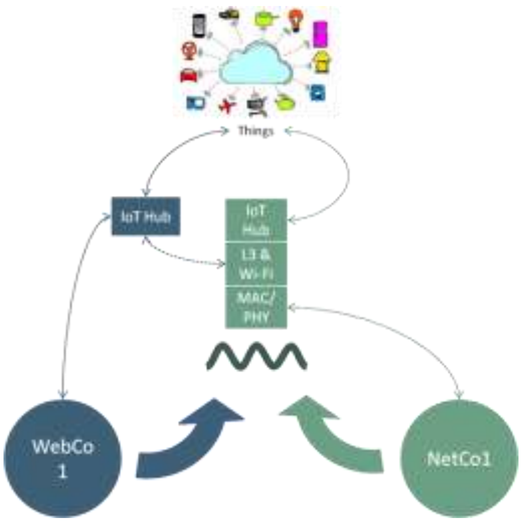
The battle for the OTT Residential Edge has been waging for some time. Early victories in OTT Video go to the WebCo's who moved fast and captured the premium high ground. Netflix is the poster child for OTT video success combined with an inexpensive Roku Box. Apple TV and Google TV are viable competitors and should not be under estimated. This dynamic is illustrated in Figure 3. In the OTT case the NetCo's are providing best effort connectivity only. CDNs (Content Delivery Networks) help solve congestion issues in the public internet core or backbone. However, when the CDN ends (in NFL Cities typically) the last 50 miles through the NetCo's metro and access networks is best effort.



This battle is far from over. The NetCo's are regrouping and planning a counter attack. They believe traditional linear video and "appointment TV" are not dead, particular live sports and live news. If they can incorporate OTT video offerings directly into the managed video offering they can reclaim their lost ground. Yet, if they do nothing even live sports and news will be usurped by the OTT WebCo's leaving the NetCo's as bandwidth providers.

Lessons can be learned from this battle. First, speed wins, those that move fast and offer consumers a compelling and cost effective services will gain early victories and market share. Second, those that capture the customers receive elevated brand preference. For a proof point compare the number of people that identify their TV experience with Netflix verse those who identify their experience with Xfinity.

The IoT Residential Edge



The battle for the IoT Residential Edge has already started. You could also call it The People & Thing Edge. In any case, I'm not sure if either side realizes the battle is on and the stakes are high. The skirmishes are masked in a narrative of smart home, home security, smart lighting and home energy management. When each is discussed individually as "hot" markets you miss the bigger picture. The four skirmishes noted would require four separate applications and management consoles. This could be four separate entities with four unique brands.

The battle for the IoT Residential Edge revolves squarely on who controls, what is commonly referred to as, the IoT Hub. There are two primary outcomes, one where the NetCo's wins and one where the WebCo's win. To the winner, all the upside revenue for the next decade and the trusted and preferred brand status across all their product lines.

Conclusion

The Battle for the Residential Edge between NetCo's and WebCo's is real and is being fought over OTT and IoT. The OTT battle has been waging for some time with early victories to the WebCo's. This battle is not over as the NetCo's are regrouping and rearming with new solutions that integrate OTT with traditional linear or managed video services. The IoT battle is nascent with both sides executing probing raids to test the battlefield. The stakes are high in both battles, yet the battle for the IoT edge will have wide ranging ecosystem-wide implications as it will have a more significant impact on consumers' lives.

While the stakes are high for both sides they are higher for the NetCo's with a battle loss leading to a commodity connectivity business or the proverbial "dumb pipe". A loss to the WebCo means they have business as usual which is actually pretty good. Good thing there is a solution for the IoT Residential Edge which gives the NetCo's their fair share of the value chain, strengthens their brand and provides their executives a much more interesting business to manage.

Note: This is Part I of a multi-part discussion on the Battle for The Residential Edge

If you would like to discuss this article or future articles please contact me via gwhelan@greywale.com

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