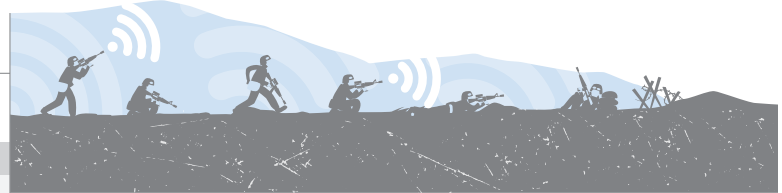# CPE WEAPONS ON THE BROADBAND BATTLEGROUND

ZyXEL

The days of deploying the cheapest possible service termination device are over! Customer internet usage is growing exponentially and networks are speeding up to address their demands, making the end-user's broadband experience the new battleground. Whether it's speed or coverage, the subscriber's broadband experience via their service gateway will define and drive their customer satisfaction. To attract and retain broadband customers, many companies are deploying highly integrated, feature-rich devices. The list of weapons is growing quickly for improved positioning on the broadband battleground.

GIGABIT Wi-Fi

Device hardware and software features have expanded, giving service providers a technological tactical advantage:

- 802.11ac
- Higher power Wi-Fi (400mW or greater is a must)
- More antennas: 1x1 or even 2x2 is no longer enough. 3x3 or 4x4 is the trend, but some believe that 8x8 will ultimately be required
- Dual band (2.4 GHz and 5 GHz) Wi-Fi capability
- Integrated Wi-Fi testing tools and mobile applications
- Multi-user MIMO will improve performance considerably for households with lots of client devices
- Wireless IPTV video capabilities, hosting multiple wireless set-top boxes and removing the requirement and the cost of external wireless bridge devices
- Gigabit Ethernet ports and lots of them; 10/100 ports won't suffice
- Gigabit WAN ports that can be utilized as you upgrade from xDSL to FTTH to stretch the life of the CPE investment
- Sleeker device housings with internal antennas to reduce support calls for antenna placement and breakage
- USB ports for print sharing or storage applications

SMART HOMES

Device applications for the Smart Home and beyond are providing reinforcement revenue and limiting the instance of customer mutiny in the heat of battle:

- 37% of broadband customers show intent to purchase one or more smart home devices in 2015 according to Parks Associates
- Digital health will grow to be a $21 billion industry by 2019
- As broadband homes start adopting more smart home devices, interoperability among them will become crucial, potentially resulting in more support issues for service providers
- CPE, with sophisticated remote management and monitoring technology offer a convenient hub for smart services. CPE vendors also have the technological expertise to manage interoperability among different devices

DATA ANALYTICS AND PERSONALIZATION

Personalization is a key maneuver to holding your ground and ultimately winning the broadband war:

- It will help service providers compete with the likes of Google and Amazon
- CPE with sophisticated TR-069 features can collect useful usage information to help service providers personalize services for subscribers, improving customer satisfaction and reducing churn

CHOOSE YOUR WEAPONS WISELY

Several CPE vendors have taken integration a step further to merge GPON ONTs with Ethernet routers. Since Wi-Fi standards evolve faster than GPON, some companies have decided to utilize a simple GPON media converter connected to a separate high-end Ethernet router. This gives them the option to upgrade the Ethernet router for faster Wi-Fi every few years without having to replace a more expensive integrated ONT RG gateway. Other companies view the ONT/RG gateway combination as a way to simplify their operations and feel that the highly integrated device provides the best protection against competitive threats. Therefore, the vote is still out on the merits of this solution. Relevant questions when making a decision to deploy an integrated ONT/RG versus a separate ONT and residential Ethernet gateway (RG) include: ▶▶▶▶▶▶▶▶▶▶▶▶

Evaluation Criteria	ONT/RG	ONT+RG
Number of boxes on premise	?	?
Wi-Fi Speeds/Longevity	?	?
Replacement & Refurbishment	?	?
Cost	?	?
Competitive Offerings	?	?
Support	?	?
Customer Experience	?	?
Premise Wiring/Re-Wiring	?	?
Alternate Architectures & MDU Strategies	?	?

PREPARE FOR BATTLE

802.11ac is expected to account for roughly 77% of the wireless DSL CPE market by the end of 2016 according to Infonetics Research. While 802.11ac Wave 2 devices are already taking off quickly among service providers, even faster specifications are working their way through standardization. Add this to Multi-User MIMO improvements, additional antennas, with higher power and it's evident that service providers will need to be ready to advance their CPE strategies and lead the charge for a broadband victory.

Long gone are the days of the single port internet router. The highly integrated CPE gateway is here to stay and is quickly becoming the weapon of choice for the broadband battleground. Are you prepared for battle?