ANATECH ELECTRONICS INC

AT THE CENTER FREQUENCY

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What's News...

FCC Ups "Acceptable" Broadband Speeds

The FCC has increased its official definition of minimum acceptable broadband data rates to 100 Mb/s upstream and 20 Mb/s downstream rather than 25 Mb/s and 3 Mb/s, which it defined as acceptable in 2015. During the usual debates that occur when the FCC makes decisions, this one was contested. Providers offering fiber to the home (FTTH) that is inherently symmetrical stated that "an asymmetrical standard implies that entertainment use is more important than productivity uses that require more upload bandwidth." That, in turn, was contested by the Wireless Internet Service Providers Association (WISPA), which primarily serves rural areas, and Starlink, which said the FCC definition was fine, not surprising as neither offers symmetrical data rates.

A Word from Sam Benzacar

5G Broadcast is Finally Coming

By Sam Benzacar

Even though “5G broadcast” was standardized in 2017 in 3GPP Release 14, nothing much has come of it, but this appears likely to change soon as it gives carriers the ability to provide targeted advertising and content to users based on their preferences and location, an enormous potential new revenue stream. It also makes it possible to stream multimedia content such as high-definition videos and virtual reality, even in places where hundreds or thousands of people are using their phones or other devices at the same time.

In a nutshell, 5G Broadcast makes it possible to deliver high-bandwidth content to a massive audience concurrently without compromising network performance. Its transmission model departs from the conventional "unicast" model that streams data to individual users,

Tiny Transmitter Tracks Hummingbirds In Real-Time

A diverse group of scientists and students have developed a way to track hummingbirds, some of the smallest birds in the world. At the Las Joyas Scientific Station in Mexico's Sierra de Manantlán Biosphere Reserve, they aimed to determine whether a BlūMorpho 2.4-GHz radio could safely be attached to the back of these birds. The project will result in a handbook that should help determine the birds' habits and their potential for becoming endangered, which some already are. The team successfully deployed 11 BlūMorphos on five species of hummingbirds. The transmitters weigh only 0.06 g and are powered by a solar panel. When attached to a special lightweight harness, the final weight was ab out 0.1 g, less than 3% of the weight of the hummingbirds to be tested.

instead using a one-to-many model, transmitting content simultaneously to many devices. As the standard transmission model isn't designed for this, it would result in spectrum congestion and unacceptable performance. 5G Broadcast can operate in either spectrum used by over-the-air TV stations, or the frequencies used by cellular services. The concept has been tried before, but it never took off, as MediaFLO, LTE Broadcast, and DVB-H were never widely accepted. Verizon, a big proponent of LTE Broadcast, ended its go90 streaming video service in 2018.

However, this time may be the charm because, unlike earlier attempts, it doesn't rely on wireless carriers to be its sole providers. Media companies or broadcasters can operate their own networks independent of a wireless operator using existing broadcast towers and UHF broadcast spectrum. Over-the-air TV has been making a comeback of late thanks to the rollout of ATSC 3.0, which essentially defines OTA TV as we know it by combining over-the-air signals with broadband.

5G Broadcast relies on Single-Cell Point-to-Multipoint (SC-PTM) transmission, which optimizes signal distribution to any device that can receive 5G Broadcast. As it doesn’t usually require an active SIM card, it can be used by devices without a cellular subscription.

5G Broadcast won't be available in the next year or so because device manufacturers will need to integrate 5G Broadcast capability into their products, and network operators will have to upgrade their infrastructure. A likely timeframe is sometime in 2025 or 2026, although first responders may get it sooner.

Source: David La Pluma

Source: Wikipedia

CTIA Says Cable Industry Fighting Fixed Wireless Access

Wireless industry trade association CTIA claims the cable industry is lobbying against the allocation of 5G spectrum in an attempt to slow the adoption of fixed wireless access, which is primarily offered by the three major wireless carriers as a replacement for cable and fiber. "For more than 40 years, cable benefited from local government policies that shielded them from competition," noted the CTIA. "But today, they face a competitive threat in the form of 5G home broadband. They noted that 5G has captured more than 95% of new broadband additions over the past two years, and about 20% of new 5G FWA subscriptions are new to broadband. "Cable's reaction to a significant loss in market share is to cut off access to the raw material that would supercharge competition—dedicated licensed spectrum," the CTIA concluded.

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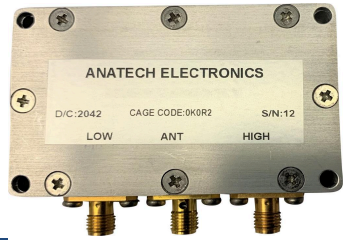

Groups Say Tesla Can Be Hacked

Researchers have shown it’s possible to conduct a Man-in-the-Middle (MiTM) phishing attack on some Tesla vehicles, unlocking and starting them. The security researchers registered a new 'phone key' that could access a Tesla using a device called Flipper Zero. It also noted that the same could be done to other devices, from laptops to Raspberry Pi or Android smartphones. According to the group, a hacker at a Tesla supercharger could deploy a W-Fi network with the SSID “Tesla Guest.” Once connected to the spoofed network, they are given a fake Tesla login page. Testa disputed the claim, stating that the test used a version of Testa firmware that has since been replaced.

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Source: Turbospok & Wikipedia

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