July 2024

What's News...

Drone Detection System Secures Austrian Grand Prix

At the 2024 Formula 1 Austrian Grand Prix, organizers prioritized protection against illegal drones to ensure safety using the AARTOS DDS system from Aaronia, a mobile version installed in a Mercedes Sprinter van. The system provided real-time positioning of drones and operators, identifies most commercial drones, and could, if necessary, take control and land them.

Source: Aaronia AG

Switzerland Ends FM Broadcasts

Switzerland will shut down analog FM broadcasting at the end of the year, instead focusing on a transition to Digital Audio Broadcasting Plus (DAB+), a more advanced version of the original DAB technology. The government expects DAB+ receivers to be accessible to nearly the entire population and analog FM signals already account for less than a tenth of all radio transmissions in the country. The EU mandated in 2020 that digital radio receivers must be standard in all new vehicles and automakers are apparently well ahead of schedule, installing only DAB+ radios. Leading the way was Norway that in 2017 became the first nation to completely phase out FM.

Source: Barry M.

Raytheon Gets $237 Million for Ku-band RF Sensor

The U.S. Army has awarded Raytheon $237 million to provide unmanned aircraft systems countermeasure solutions, equipping the military with Ku-band Radio Frequency Sensors (KuRFS) and advanced Coyote effectors to detect and neutralize drones. The KuRFS uses a 360-deg. radar to identify and track airborne threats, from traditional artillery and rockets to modern unmanned aerial vehicles of all sizes. The system uses a Ku-band AESA radar to provide beam steering and can reportedly identify threats as small as a 9 mm bullet in flight.

Source: Raytheon

Device Sends Data at 300 Gb/s at 300 GHz

DOCOMO, NTT, NEC, and Fujitsu have demonstrated a device capable of delivering 100 Gb/s at 100 GHz and 300 GHz over a distance of 100 m. The companies have been working on sub-terahertz devices as the next generation of cellular communications will likely operate in this region of the spectrum. Going forward, the companies will conduct R&D into sub-terahertz telecommunications, leveraging each company's strengths in various initiatives to contribute to 6G standardization.

Source: Barry M.

A Word from Sam Benzacar

Is DOCSIS 4.0 Too Little, Too Late for Cable?
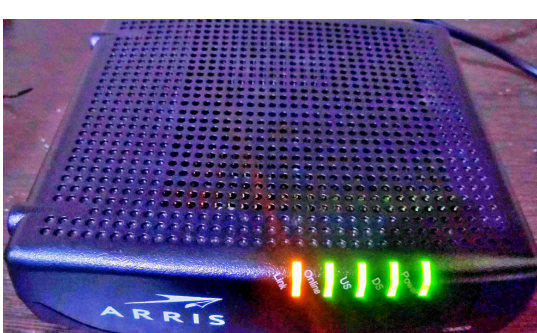
By Sam Benzacar

DOCSIS 4.0, the latest iteration of the Data Over Cable Service Interface Specification, is a long-overdue upgrade that has the potential to make cable a near-peer competitor to fiber. Cable's most obvious (and long-standing) issue has been the enormous difference between the technology's high downstream data rates and those of the upstream path that are far slower. This and high latency have been deal-breakers for gamers and negatively affect the viewing experience and other applications.

Too bad they took decades to solve, because cable providers must now invest heavily in upgrading their infrastructure to support DOCSIS 4.0, and its deployment will be gradual, likely taking years to reach widespread availability. And by the time this occurs it may no longer matter because fiber will have reached more neighborhoods than ever and 5G-based fixed wireless access will have long begun using millimeter-wave frequencies for broadband delivery that will make it competitive in performance to fiber—without the need for truck rolls for installation and complete elimination of street infrastructure. In short, fiber and fixed wireless access (FWA) are where the future of broadband lies, and impressive though DOCSIS 4.0 may be, it may be too late to save cable.

Despite these challenges, it would be premature to write off cable entirely. The vast existing infrastructure and the potential for incremental upgrades mean that cable will likely remain a significant player in the broadband market for years to come. DOCSIS 4.0 may provide enough of a performance boost to keep many customers satisfied, particularly in areas where fiber deployment remains economically unfeasible.

Ultimately, the success of DOCSIS 4.0 will depend on how quickly and effectively cable operators can deploy the technology, and how well they can market its benefits to consumers. While it may not be the long-term solution that fiber represents, DOCSIS 4.0 could provide cable operators with valuable bridge technology, buying time as they plan for eventual fiber transitions.

So, while DOCSIS 4.0 is a significant technological advancement for cable internet, it enters a market where fiber and FWA have already gained momentum. And while it offers a viable alternative for areas with existing cable infrastructure, its late arrival, and the need for substantial investment in upgrades pose grave challenges. The success of DOCSIS 4.0 will ultimately depend on cable providers' ability to deliver on its promises, compete on price and performance, and convince consumers of its value in a rapidly evolving broadband landscape.

Source: ARRIS CM820B

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