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PRESS RELEASE

Demand for DAS Training on the Rise

Curious as to reasons for the increased number of attendees in the Distributed Antenna Systems (DAS) hands-on course during ETA® International's annual Education Forum, the trade association turned to industry's leading expert sources in DAS to explain why communications professionals need to obtain this valuable training. The job demand for skilled people in DAS communications technology has never been greater since public space building owners must meet consumer demand for better mobile data usage along with industry standards for public safety response requirements and green energy building codes.



Greencastle, April 23, 2019: [ETA International](#) recently hosted the largest hands-on training leading to ETA certification in [Distributed Antenna Systems \(DAS\)](#) in [Education Forum](#) history. ETA turned to DAS trainer Ira Wiesenfeld, PE, CETms(RF), of IWA Technical Services Inc., to

ask why there is such a huge interest, as of late, from wireless communications professionals for DAS training and ETA accredited certification.

"To put it quite simply," he said, "the same new green energy building codes that keep out cold air in the winter and heat in the summer are also blocking radio transmissions for public safety professionals and private cell phone usage, so DAS professionals must learn how to design, install and troubleshoot DAS properly to manage this situation."

Technology has evolved and indoor cell phone and data usage has increased, putting pressure on building owners by end users to offer better coverage from mobile operators. At the same time, building owners must follow the National Fire Protection Association (NFPA) standards¹ for public safety radio systems, and the International Green Construction Code (IgCC) standards².

DAS solutions are quickly becoming a necessity for businesses and buildings with coverage challenges and those that are being retrofitted to meet the updated governmental standards and new green energy building codes. Any building where people require reliable communication is a candidate for DAS, such as hospitals, casinos, transits, stadiums, universities, convention centers, and office buildings.

"Today, a building cannot be occupied without providing sufficient radio transmission coverage for the public safety agencies," Wiesenfeld said.

Today's DAS design should meet performance standards demanded by government regulations, participating wireless providers, the building owner as well as the end user.

According to the DAS Forum Definition, a Distributed Antenna System, or DAS, is "a network of spatially separated antenna nodes connected to a common source via transport medium that provides wireless service within a geographic area or structure."

Top-tier DAS equipment is built by design to be able to handle a wide range of frequency bands and technologies, allowing for broader use by wireless service providers with

modern 4G/LTE and 5G. The types of DAS solutions can be generally classified into three different categories: passive DAS, active DAS, and hybrid DAS. A typical system consists of bi-directional amplifiers (BDAs, or signal boosters) relaying and amplifying the RF signal traffic and a network to distribute the signal to every corner of the desired coverage area.

A DAS tutorial by Harris Communications, states that the bidirectional amplifier is a very important component in a DAS solution. "Without it, the RF signals would continue to grow weaker as they traveled a farther distance from the donor antenna. With the bidirectional amplifier, the signal is increased, or amplified, as it travels, so that the RF signal stays strong throughout the system and site."

Depending on the type of system, the signals are transported via coax or fiber optic cables to compact remote antennas which can be placed discretely in an indoor environment. With the aid of remote antennas, the RF signals are distributed to places they could not directly reach without the DAS.

"Because of the anticipated infrastructure shift being driven by both capacity growth and 5G, DAS technologies that are fiber-optic-driven are the natural choice," as stated in the article "*In-Building Coverage Verification*" of the April-May 2019 publication of *Mission Critical Communications*.

If overlooked or ignored, an improperly designed DAS results in degraded performance, unnecessary cost increases, and reduced public safety. Prompt and effective emergency response depends on reliable emergency services communications, which in turn, depends on qualified DAS professionals.

An ETA-certified DAS professional has acquired the skills to build the proper DAS solution for each particular client. DAS professionals know how to gather information regarding the building's construction materials (which will affect a signal's ability to travel), evaluate the RF reception in each area, determine the locations for each component of the system, and plan the fiber optic/coax cables routes to ensure successful communication in all targeted areas. Once a DAS is constructed, the ETA-certified DAS professional must follow the 2019 NFPA 1221 Fire Code which requires compliance testing and record keeping as part of the project management.

To find expert industry DAS training with an emphasis on bi-directional amplifiers at an affordable price that leads to an accredited industry certification, plan now to attend ETA's Education Forum 2020, co-locating again with the [International Wireless Communications Expo \(IWCE\)](#), in Las Vegas March 30-April 3, 2020. Here, attendees can participate in hands-on labs with the industry's most respected training providers and become qualified to sit for ETA's accredited DAS certification exam. To find other training opportunities prior to Education Forum, ETA will gladly share contact information to the industry's most respected DAS training providers. Call ETA at 800-288-3824 or email eta@eta-i.org.

1.) The National Fire Protection Association 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems 2019 provides procedural and physical criteria for the installation, performance, operation, and maintenance of public emergency service communications systems and facilities. NFPA 1221 establishes minimum signal requirements in buildings and structures on two-way radio communications enhancement systems used by public safety agencies.

2.) The International Green Construction Code frames the essential sustainable construction building blocks on which future resilient initiatives can develop and expand and envisions a new era of building design and construction that includes environmental health and safety as code minimums. Green building strategies reinforce societal health/life/safety benefits that building codes offer, providing resilience to natural disasters, climate change, resource consumption/management, and service interruptions due to unforeseen events.

About ETA – Since 1978, ETA has delivered over 200,000 certification examinations successfully. Widely recognized and frequently used in worker job selection, hiring processes, pay increases, and advancements, ETA certifications are often required as companies bid on contracts. ETA's certifications are personal and travel with the individual, regardless of employment or status change and measure competencies of persons, not products or vendors. All ETA certifications are accredited through the International Certification Accreditation Council (ICAC) and align with the ISO-17024 standard. www.eta-i.org

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