

STATEMENT OF

**Steven N. Urchuk
Chief Technology Officer
Analogic Corporation**

**BEFORE THE
SUBCOMMITTEE ON SECURITY
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
U.S. SENATE**

**CONCERNING
PROMOTING SAFE SKIES THROUGH SCANNING AND SCREENING:
OVERSIGHT OF AIR CARGO SECURITY**

**PRESENTED
FEBRUARY 24, 2020**

Ranking Member Markey, on behalf of Analogic Corporation, thank you for the opportunity to testify before the Senate Commerce Subcommittee on Security, and for your support of Massachusetts businesses and technology development. I am very pleased to appear before you to discuss Analogic Corporation's long, proud history of aviation security equipment design and manufacturing and present our future technology roadmap to improve aviation screening. Based north of Boston, Analogic employs over 570 technical, manufacturing and administrative workers in Massachusetts and has approximately 900 employees overall. In my current role as Chief Technology Officer, I am responsible for technology strategy and advance technology development at Analogic. Previously, I led Analogic's CT product development efforts for both medical and aviation security applications.

For over 40 years, Analogic has been a technology leader in the medical imaging field. We currently sell subsystems and full systems to X-ray, Magnetic Resonance and Computed Tomography (CT) Original Equipment Manufacturers (OEMs). Over the last 20 years, we pioneered the application of CT to explosive threat detection. In the U.S., through our partner L3Harris, we have delivered over 900 eXaminer 3Dx CT systems to the TSA for checked baggage screening. More recently, Analogic has deployed over 10 of our new ConneCT checkpoint CT systems to several U.S. airports, including Miami, Tampa and Detroit, for checkpoint screening in partnership with TSA and American Airlines. Delta Airlines also recently informed Analogic of their decision to deploy ConneCT to their ongoing terminal improvements in Atlanta, Los Angeles and New York's LaGuardia airports.

Analogic's focused commitment and years of experience with CT technology has allowed us to bring to market the next generation in 3D X-ray imaging in the form of the ConneCT. Key

Analogic innovations include compact, rugged system designs that eliminate the complexity and cost associated with conventional CT systems and advanced algorithm and networking capabilities to support threat detection and remote screening. Of particular interest for today's discussion, Analogic has extended the ConneCT technology platform to include a new 1000 item per hour, 1 meter wide by 0.8 m high tunnel system that shares the same simplified design as its smaller checkpoint sibling, but is particularly well suited for the screening of the air cargo carried on passenger aircraft. In these environments, threat detection, efficiency, and cost-effectiveness are at a premium. Dedicated passenger aircraft cargo screening systems generally do not need the high throughput requirements normally associate with the premium checked baggage systems used at large airports and in the ultra-high-speed screening of packages carried by delivery service companies on freight aircraft. They do, however, require low cost of ownership, upgradeability, and the effective, accurate threat detection that, so far, only CT can provide. Leveraging the latest technology and system designs, air cargo CT can be provided in an extremely cost-effective manner. Analogic is committed to delivering high-quality CT technology for this critically important market.

Looking to the future, it's worth noting that unlike conventional X-ray systems, 3D imaging lends itself to automatic threat detection, which allows the equipment to be certified to TSA's air cargo standard and can be used to find prohibited items and other anomalies using machine learning algorithms. We expect remote screening, via locally and regionally networked workstations, to be an important component of air cargo screening. Connecting a geographically diverse set of systems to central locations should improve operational efficiency and ensure quality control of the screening process. There is also the potential to integrate secondary threat detection and analytics into the process, providing an additional layer of detection capability and operational awareness.

The ability to integrate with different vendor solutions using an open platform is another emerging requirement in aviation security that should carry over to air cargo screening. The use of standardized data formats, such as DICOS for image data and threat reports, will be important. Similarly, third party algorithms, developed in cooperation with the equipment vendors will be needed. Finally, we expect that certain vendors may specialize in providing networking and image review services. Analogic welcomes these initiatives and anticipates there to be considerable technology and business model innovation as air cargo screening is modernized.

Over the very near term, Analogic looks forward to working with the TSA and our trial partners to gain approval and then qualification of our 1000 bags hour screening system on TSA's Aviation Cargo Screening Technology List (ACSTL). We and our industry partners welcome the opportunity to develop screening solutions that meet the needs of the aviation security community. It is our hope that together we can define new screening methods that improve the security of our transportation system.

I appreciate having this opportunity to share our views, and I look forward to answering your questions.