For Immediate Release

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NeWave's Wave® RFID Antenna Evolved from New Horizons Satellite Development

Plain City (Columbus), Ohio-July 22, 2015. On July 14th, after traveling 3 billion miles for more than 9 years," NASA's New Horizons spacecraft shot past Pluto, capturing the first clear images of the planet and its moons. Those images of the icy dwarf planet will be relayed back to Earth — a process that should run smoothly thanks in part to the work at Ohio State University (OSU) a decade ago." [1]The space probe to Pluto launched in 2006. Dr. Den Burnside, the former Director of the OSU ElectroScience Laboratory, led the development of the anechoic chamber that was used for the testing and in 2007 as Chief Technology Officer for NeWave Sensor Solutions, LLC, he invented a revolutionary new RFID antenna, now patented as the Wave® antenna. The only antenna designed specifically for item-level RFID.

As stated in a recent OSU article," a little-known fact about the New Horizons' space mission story is that the probe's most prominent feature was partially enhanced and tested at The Ohio State University's ElectroScience Laboratory. Beginning in 2002, researchers at the OSU ElectroScience Laboratory (ESL) began assisting Johns Hopkins University/Applied Physics Laboratory (APL) engineer Ron Schulze, in the testing and calibration of the high gain dish antenna design for the New Horizons probe. "[2] High gain antennas provide focused and narrow radio wave beam widths, allowing for more precise targeting of radio signals. Schulze said the project also gave him the unique opportunity to work alongside his mentors as a peer. From 1989 to 1991, Schulze earned his MS degree at Ohio State, studying under the academic guidance of Dr. Walter Dennis (Den) Burnside."[2]

Dr. Burnside, current Chief Technology Officer for NeWave Sensor Solutions, advised: "The knowledge and experience used in developing the New Horizons satellite was also used to develop our unique Wave antenna that is designed specifically for RFID item level applications. This antenna is also incorporated in our portal, Smart Shelf and SIMS products. So many of today's RFID antennas are oriented to long distance reading and we sensed a real need as RFID item-level applications expanded."

About ESL at The Ohio State University:

The Electro Science Laboratory (ESL) is a center-of-excellence in the Department of Electrical and Computer Engineering and one of the largest radio frequency and optics research laboratories in the world. Since 1942, ESL has consistently maintained a national and international preeminence in electromagnetics, influencing radio research like no other institution in the world. ESL faculty, research scientists, and students are involved in all aspects of electromagnetic and RF technologies, including, satellite and ultra-wide-bandwidth communications; optics; remote sensing; ground penetrating radar systems; antenna engineering; electromagnetic compatibility and interference; and computational methods and measurements. A variety of emerging areas are also being pursued, such as those related to bioelectromagnetics, metamaterials, polymers and packaging; micro-device modeling and multi-physics engineering.

About NeWave® Sensor Solutions:

NeWave Sensor Solutions is a leading provider of optimized solutions for today's most challenging item-level Radio Frequency Identification (RFID) problems. The company develops industry-standard RFID technology based on the patented Wave Antenna that sets a new standard for accuracy, versatility and efficiency. The Wave is the first and only antenna specifically designed to be used only for item-level RFID solutions. NeWave's core technology was developed by the world-class ElectroScience Laboratory (ESL) of The Ohio State University, a pioneer in RF research and development under the direction of NeWave's Chief Technical Officer (CTO), and is produced in partnership with Wistron NeWeb Corporation (WNC), the Taiwan-based global leader in antenna manufacturing. NeWave's management team leverages a strong technical and international business heritage in a variety of industries for accomplishing its mission of providing optimized solutions to today's greatest RFID challenges. For more information, please visit us at www.newavesensors.com.
*NeWave®, Wave® and Smart Shelf™ are trademarks of NeWave Sensor Solutions, LLC Plain City (Columbus), Ohio USA

References:

1. Maria Devito. "Pluto finally gets its close-up," *Columbus Dispatch*, July 12,2015.

2. The Ohio State University Department of Electrical and Computer Engineering. *Ohio State ECE and the New Horizons mission to Pluto.* Posted June 29,2015

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