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Laminar Research Integrates Dynamic Non-Linear Displays (DNLD) into X-Plane 12.4, Expanding Pilot Training and Simulation Capabilities

Montreal, Canada – Cert Center Canada (3C) is proud to announce that Dynamic Non-Linear Displays (DNLD), developed under the leadership of Dr. John Maris, are now included in the latest release of X-Plane (version 12.4) by Laminar Research. This milestone marks the first time the innovative cockpit display technology has been made widely accessible to pilots, instructors, and aviation enthusiasts through a globally recognized flight simulation platform.

DNLD was created to resolve the conflicting requirements of electronic flight instrument systems (EFIS) and head-up display (HUD) tapes: achieving dynamic legibility, wide scale range, and precise resolution simultaneously. Unlike conventional tape displays, DNLD altimeters and compasses remain fully legible at extreme aircraft rates, never go out of range, and continuously present the complete span of feasible values (such as all 360° of a compass).

The technology has been validated at Technology Readiness Level 7 (TRL-7) through flight evaluations conducted by Canada's National Research Council, showing DNLD's ability to improve all three levels of pilot situational awareness—perception, comprehension, and prediction—as defined by Endsley.

By integrating DNLD into X-Plane 12.4, Laminar Research provides users with the opportunity to experience and evaluate this groundbreaking display concept in realistic flight scenarios. This will support pilot training, academic research, and continued development of next-generation cockpit display standards.

“Making DNLD available in X-Plane means that pilots, students, and instructors everywhere can now experience firsthand a new way of visualizing flight parameters,” said Dr. John Maris, CEO of Cert Center Canada. “This is an important step toward operational adoption, and we are thrilled to partner with Laminar Research to bring DNLD into the hands of the global aviation community.”

About Cert Center Canada

Cert Center Canada (3C) is a Montréal-based, independent flight test and certification company delivering services to aerospace manufacturers, operators, and regulators worldwide. 3C combines deep engineering and operational experience with a strong focus on **R&D** and **IP**

development, tackling some of the industry's most complex flight test challenges and creating next-generation aviation technologies.

About Laminar Research

Laminar Research is the creator of the X-Plane flight simulator, recognized worldwide for its realism and accuracy in flight dynamics, aircraft modeling, and global aviation training applications.

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