

PRESS RELEASE Brignais, 20th September 2016 – for immediate release

VISION SYSTEMS OPENS A NEW BUSINESS UNIT, SMART LITE, DEDICATED TO DIMMABLE SOLUTIONS

As a world leader in superior solar protection and to meet the growing demand for dimmable solutions in its current markets, Vision Systems has set up **a new division devoted to the design, production and marketing of electronically dimmable solutions**. The company was until now divided into two business units, one dedicated to aeronautics and the other one to the land transport and marine industries. This newly created 3rd Business Unit will serve most particularly the yacht, rail, motor-home, truck, specific vehicle and coach/bus markets. The implementation of a competence center committed to the development of complete dimmable solutions including the cinematics and electronics, such as panoramic roofs, sliding systems, bay windows and very large openings, will allow the company to better respond to the specific needs of its customers for the integration of these solutions in complex environments.

Smart Lite was inaugurated at the beginning of September with the visit of Research Frontiers CEO Joseph M. HARARY: "I was honored to have been invited to this major development for the SPD-SmartGlass industry. With approximately 40 people working in this division, and an equal number of support staff, Vision Systems' new Smart Lite division marks the largest team ever assembled in the world that is specifically dedicated to the SPD-SmartGlass business. When one considers the launch customers that Vision Systems now has in each of its major market segments, their success with our technology has clearly made them a world leader in innovative shading products."

Carl Putman, CEO of Vision Systems, noted at the event: "The dimmable solutions are the company's flagship products. Originally designed for the demanding aviation industry, they are now spreading swiftly to the land transport and marine markets. This new business unit will help us remain at the forefront of the competition with in-house expertise and a network of partners with specific skills that are complementary to our own."

Vision Systems' electronically dimmable solutions allow passengers to tune the tint of their window from clear to dark in order to regulate daylight, glare and heat entering in, while preserving the view. They enhance visual, thermal and acoustic comfort for a greater wellness atmosphere.

Vision Systems' Electronically Dimmable Windows (EDWs) are unique on the market today and offer **many** advantages over other systems.

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Based on SPD technology (Suspended Particle Device), these EDWs provide infinite variable shading from fully clear to an extremely dark state (over 99.9% light blockage) and instant response time. They contribute to a reduction of air conditioning consumption and automatically switch to their darkest possible state when unpowered, maximizing heat rejection and keeping the interior cooler, with a reduction of inside temperature up to 10°C/18°F. These solutions block more than 99.9% of harmful UV light, 99.9% of IR with an additional integrated anti-IR film, and their fabrication involves noise barriers to keep the interior quieter.

The Vision Systems EDWs offer many other benefits. They deliver a weight reduction of about 30% compared with motorized shades, and do not add weight in comparison to a window with a manual shade. Furthermore, they have no moving parts as the electronics are fully integrated, reducing maintenance costs and downtime.

They can be incorporated into flat or curved surfaces (2D, 3D), use plastic, glass or composite glass, offer an unprecedented optical quality, and have no orb effect present with other EDWs. All these solutions can come as a whole to replace the entire window. The installation is often limited to a simple mechanical operation which is also very advantageous for the aftermarket.

Vision Systems' dimmable solution range also includes privacy and partition solutions. Originally intended for passengers to improve their flying experience, these systems have expanded to now being considered for the drivers or pilots, not only in the form of a dimmable sun visor but also as an add-on solution covering the entire side windows.

A partnership with Research Frontiers Inc. allowed Vision Systems, through a license, to use the SPD film in its solutions. Vision Systems has made a substantial investment in Research and Development and built on its expertise to define the right technology for its first dimmable window to see the light of day at Aircraft Interiors Expo in 2010. Further work enabled the development of different dimmable solutions, to be controlled with a touch panel directly on the window, a personal tablet, through the attendant panel for master control from the staff, automatically with integrated light sensors or by gestures (touchless). Vision Systems' dimmable concept operating automatically with light sensor won the DAME (Design Award METS) in 2012. It took two years to industrialize the product. Two years ago, the company developed a new concept, the first self-powered photovoltaic dimmable window that was nominated as finalist of the Crystal Cabin Award 2014. Lastly, in 2015 the touchless multi-zone dimmable solution reached the finals at the Apex Best Achievement in Technology Award.

Each year, new concepts around dimmable solutions are created and more and more products are installed in aircrafts, helicopters, trains and different type of vehicles.

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Some of Vision Systems' **customer references** for dimmable solutions include: Dassault, Epic, Airbus Helicopters, RUAG, HondaJet, Silver Arrows Marine, Goiot Systems, Notin, Merford, Stadler, Safra, Bombardier, Hymer, Marcopolo, SigmaCabins, Cabines Denizet... and there are currently new projects under way in different market segments.

In addition to the creation of this new business unit, a new graphic charter and a new web site come and strengthen the position of Vision Systems as a major international Group, strong, innovative and high-end, offering customized solutions, to convey more impact and modernity.

Visit our new web site

Please enjoy Vision Systems' new video on EDWs

Pictures attached:

Vision Systems top executives Carl Putman and Catherine Robin welcome Research Frontiers CEO Joseph
M. Harary to the grand opening of their Smart Lite business unit and their showroom of products for the aircraft, marine, transit and automotive industries using SPD-Smart light-control technology.
Smart Lite Business Unit people

Headquartered near Lyon, France, with a production and sales unit in Florida, USA, and a trade office in Singapore, Vision Systems is a tier-one system supplier in the aeronautic, land transport and marine industries, designing and producing bespoke solutions for specific market segments in complex environments. The company's genuine expertise in solar protection places it today as the world leader in this area and the development of customized entertainment & connectivity solutions allows it to rank as a competitive challenger in embedded systems.

Vision Systems combines complementary skills in electronics, mechanics and composite to provide ever more innovative solutions for cost reduction, heightened safety and improved comfort.

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