

## Aviation Partners FlexSys to Commercialize Wing Morphing Technology

**Las Vegas, November 16, 2015...** On the eve of the NBAA Business Aviation Convention & Exhibition two world leaders, one in advanced winglet technology and the other in shape-adaptive structures, announce they are entering into a joint venture. Seattle, Washington based Aviation Partners, Inc. is in the final stages of forming a JV with FlexSys, Inc. of Ann Arbor, Michigan. The new company, Aviation Partners FlexSys (APF), is being founded to commercialize the patented 'wing morphing' technology which FlexSys, Inc. has been working on since its formation in 2000. FlexSys' FlexFoil™ variable geometry control surface mechanisms were recently test flown on a Gulfstream business jet.

***"With over 6,300 shipsets of Blended Winglets in-service Aviation Partners has a long history of success when it comes to certification and marketing of performance improvements for business and commercial aviation,"*** said Joe Clark, API Founder and CEO, ***"We are excited to write a new chapter in aerodynamic design through the formation of this JV with Dr. Kota and his FlexSys team."***

FlexFoil™ variable geometry surface mechanisms leverage the natural flexibility of aerospace-grade materials to continuously reshape the external form. The proprietary internal joint-less skeletal configuration of the system is optimized to achieve desired aerodynamic shapes on demand when actuated, while also meeting the aircraft design requirements of: strength, lightweight, high fatigue life, reliability and low maintenance. Importantly, the multifunctional seamless surface is uniquely capable of delivering desired camber change and span-wise twist at high rates for drag reduction, load alleviation, noise reduction, etc.

***"Replacing conventional multi-jointed flaps and other control surfaces with smooth seamless surfaces has been an elusive goal for the aerospace industry for decades. After 15 years of R&D, and successful flight-testing, the FlexFoil™ variable geometry control surface mechanism ushers in a new frontier in aircraft design,"*** said Sridhar Kota, Founder and President of FlexSys, ***"We are thrilled to enter into a joint venture with Aviation Partners who, under the dynamic leadership of Joe Clark, has a proven track record of transforming innovative ideas into successful aviation products with benefits to the global marketplace."***

Commercial opportunities being studied by APF for this revolutionary technology in the near future include flight controls, leading/trailing edge devices, anti-icing and active winglets. APF plans to offer the technology for both retrofit and new production applications. An example of the FlexFoil™ test article, as flown beneath White Knight, can be seen in-operation at the API booth (#C8113) during NBAA. For more information contact Gary Dunn, API Vice President of Sales & Marketing, at [gdunn@winglets.com](mailto:gdunn@winglets.com) or +1 (206) 310-2904.

### **Aviation Partners, Inc.**

Seattle, Washington based Aviation Partners, Inc. (API) is the world leader in advanced Winglet technology. API's patented Performance Enhancing Blended Winglets™ have been designed and certified for a number of commercial and business aircraft; applications include Boeing, Falcon, Hawker and Gulfstream airframes. As of November 2015 over 6,300 in-service aircraft have saved an estimated 5.5 billion gallons of fuel. In addition to the improvement in fuel burn, Blended Winglets have reduced global CO2 emissions by approximately 59 million tons. Additional airframe programs are in-development, and future Winglet designs will lead to greater incremental improvements in performance, fuel savings and emissions reduction.

### **FlexSys, Inc.**

FlexSys Inc. was founded in 2000 by Dr. Sridhar Kota to develop and commercialize his patented design of a shape-morphing adaptive control surface of an airfoil. As a professor of Mechanical Engineering at the University of Michigan (1987-present), Dr. Kota initiated research in compliant mechanisms in the 1990s and pioneered the bio-inspired concept of Distributed Compliance. FlexSys developed proprietary software for creation and optimization of compliant systems and successfully demonstrated the application of compliant design methods for aerospace, automotive and other applications over the years. Today, FlexSys is an established world leader in shape-adaptive structures.