

Prox Dynamics Newsletter Q1-2010



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Hornet-4a first flight

Our eighth prototype lifted off on February 1st. The Hornet-4a is the first aircraft with an enclosed aerodynamic body and a complete set of flight sensors, GPS and a nose mounted camera. Weighing less than 16 grams it has been flown outside in sub zero temperatures, and has achieved more than 20 minutes endurance with all systems running.

New hires

Prox Dynamics is expanding and proudly welcomes two new employees; a very experienced CAD designer and project manager will join the team in April as a Senior Engineer, and a hardware engineer will start his work in May.

"Harmless" UAS – EuroCAE WG73

The EUROCAE WG73 (<http://www.eurocae.net/>) is involved in the rulemaking process to allow civilian UAS operations in non segregated airspace. Subgroup 4 (SG4) focuses on Visual Line of Sight (VLOS) operations for light UAS (less than 150 kg). Operations of light UAS is outside the regulatory scope of EASA, but the group has established a set of recommendations that may be applied by individual national Authorities. The first version of the document is now ready for internal consultations, and in its final form it will provide the fast growing Light UAS market with access to new airspace.

Future work in SG4 will include implementation of a "harmless" UAS concept. The group has accepted the fact that very small and light UAS are inherently safer due to their limited energy and soft structures, requiring less stringent design requirements and reduced operational limitations. These are important factors in the development of commercial operations with very small and light UAS.

Prox Dynamics is currently involved in this work, and has together with other members proposed a concept for classifying low energy UAS as "harmless". The goal of this work is to establish a set of criteria that assures a level of risk to the general public that is at least as low as in manned aviation. Eventually this will allow regulators to open up more airspace for these systems backed by a set of relevant regulations.

Prox Dynamics celebrates second anniversary

On April 1st 2010 Prox Dynamics has been in operation for two years. In that period we have expanded from four to 14 employees; we have flown eight prototypes with advanced electronic flight control systems; developed a featherweight two-way digital data link capable of up-linking control commands and down-linking live video and system data; and we have developed video compression algorithms optimized for UAV use. This has all been stitched together forming a complete system weighing only a few grams. This makes us quite proud!

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