



UVS International's Global Advocacy

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It is becoming clearer every day that in order to introduce unmanned aircraft systems (UAS) into non-segregated airspace, it is imperative for nations that have an adequate UAS industry and/or user base to form a national UAS vision. Such a national vision should be elaborated in coordination between the national industry, and the national military and regulatory authorities. However, as European UAS will have to operate in the Single European Sky (SES), it also becomes imperative that a European UAS vision is agreed upon.

Similarly, a North American UAS vision (Canada & USA, and possibly Mexico) is required, just as multi-national regional visions in other parts of the world e.g.: China, India, Russia, South Africa, South Korea, the Australia & New Zealand & Papua New Guinea zone, and the Indonesia & Malaysia & Singapore & Thailand zone.

In this context «Vision» should be interpreted as a consensual approach formally agreed on by the regulatory authorities, the military establishment and industry in the respective countries.

In Europe, the certification of unmanned aircraft with a mass of more than 150 kg is the responsibility of the European Aviation Safety Agency (EASA). However, the certification of unmanned aircraft systems comprising aircraft that weigh less than 150 kg is the responsibility of the European national civil aviation authorities. The European national UAS visions should encompass both classes of UAS (below & above 150 kg). Certification requests relative to small UAS have been received by the civil aviation authorities in a number of countries now (Austria, Canada, Italy, The Netherlands, Spain, Sweden, UK), and it is becoming apparent that it would not be efficient, and actually be counter-productive, if the certification activities in European countries relative to unmanned aircraft with a mass of less than 150 kg are not co-ordinated; such co-ordination would be the first step towards true European harmonization.

The European and North American UAS visions would be the core contributions towards a Global UAS Vision. In order to make the transition from individual national visions to a single European one, and subsequently to a global one, as seamless as possible, the national visions in Europe (the 41 ECAC⁽¹⁾ countries) should not be elaborated in isolation from each other, but should be closely co-ordinated from the onset with the objective of European harmonization. This European co-ordination should involve regulatory authorities, military authorities, standardization bodies, all relevant stakeholder groups, current and future UAS users & service suppliers, industry and academia on a national and pan-European level.

In turn, the European UAS Vision should be co-ordinated and harmonized with the North American UAS Vision, as well as the UAS visions of other diligent countries (e.g. Australia, Canada, Japan, New Zealand, Singapore, South Africa, South Korea, U.A.E.). With the objective to contribute to accomplishing the aforementioned, the Global Access Initiative was instigated by UVS International in August 2005.

The purpose of the Global Access Initiative is to:

- Encourage independent national UAS system industry

organizations, associations or working groups to form, and contribute to creating national visions, and to subsequently collaborate on an international scale;

- Encourage information exchange between these organizations, associations and working groups;
- Provide a channel permitting the the widest possible dissemination of the aforementioned information;
- Contribute to the co-ordination & promotion of international non-competitive industry actions and initiatives;
- Reach out to all relevant stakeholders on an international scale;
- Building on the earlier UCARE initiative, endeavour to compile and make all relevant documents and information pertaining to the work being undertaken internationally relative to the introduction of UAS into non-segregated airspace available to all;
- Contribute to international consensus forming relative to UAS issues;
- Contribute to international standardization of UAS-related terms and definitions by continuing its work in this area and making it available to the global UAS community;
- Contribute to promoting the international harmonization of UAS system-related standards, rules & regulations at the earliest possible stage.

Global Access Initiative Activities

The start-up of the Global Access Initiative was co-ordinated the persons driving the now cancelled Access 5 initiative in the USA. All Access 5 programme deliverables, which were financed by NASA Dryden Flight Research Center, are, with the authorization of NASA posted on www.uvs-info.com

With the objective to widen general awareness of UAS and the ongoing international UAS-related regulatory activities, UVS International co-ordinates its actions relative to the Global Access Initiative with EASA, EUROCAE, Eurocontrol, FAA, ICAO and RTCA SC203, as well as with JARUS (Joint Authorities for Rulemaking on Unmanned Systems) and a significant number of national civil aviation authorities.

Starting in 1999, UVS International started to instigate the formation of national UAS working groups consisting of industry, and in some cases government and military representatives, to deal with UAS-related airworthiness, certification and air traffic management issues on a national level, and to exchange information amongst each other.

This initiative resulted, directly or indirectly, in the formation of the following independent national associations:

- AVBS, Czech Rep.
- Japan UAV Association
- Korea UVS Association
- UAS Norway
- UAVS, UK
- UVS Canada
- UVS France

UAV DACH, a multi-national German language UAV Working Group (Austria + Germany + Netherlands + Switzerland), was instigated by UVS International in 2000 and is still very active.

It is within the framework of the Global Access Initiative, that UVS International:

- Contributed to the creation of the EUROCAE WG 73 on UAS;

- Is standing advisor to the EUROCAE WG73 and member of its leadership team, and actively participates in this working group;
- Is a member of RTCA SC203;
- Created & lead the Interim Working Group on Light UAS and supplied its output as recommendations to EUROCAE WG73 Sub-Group 4 on Light UAS;
- Participated in the informal working group that produced guidelines for ICAO relative to action to be undertaken concerning UAS;
- Actively supported the start-up of JARUS (Joint Authorities for Rulemaking in Unmanned Systems);
- Instigated & organized the UAS International Coordination Council (relative to furthering the cause for Light UAS (aircraft weight <150 kg);
- Partnered with International Aviation Group, China to co-organize the first UAS conference in China (Sept 2008);
- Instigated the creation of www.testranges.org;
- Partnered with China Aviation Group to co-organize the UAS China 2008 conference (Sept 2008);
- Partnered with Expo-Ecos, Russia to co-organize the UVS-Tech conference in Moscow (Jan 2009);
- Participated in the Swiss 1st UAS Day (March 2009);
- Partnered with the Indian Ministry of Defence, Defence Research Development Organization, Aeronautical Development Establishment to co-organize the first UAS conference in India (April 2009);
- Partnered to organize the 2009 Middle East UAS Summit in Adu Dhabi, UAE (April 2009);
- Supports and will participate in the Global ATM Forum on Civil/Military Cooperation organized by ICAO (Oct 2009);
- Supports the annual UVS Canada conference and has agreed to again organize its regulatory workshop in 2009;
- Actively participates in the ICAO UAS Study Group.

One of the most important contributions of UVS International to the Global Access Initiative is its extremely extensive database containing more than 15.000 persons in 68 countries who are actively involved with UAS. In the spirit of the Global Access Initiative, and making use of this database, wide dissemination of the following documents has taken place:

- French Ministry of Defence, Flight Test Centre's USAR document;
- EUROCAE's call for participation in Working Group 73 on unmanned aircraft systems;
- EASA's A.NPA and the request for comments on it;
- EUROCONTROL's Specifications for the Use of Military Unmanned Aerial Vehicles as Operational Air Traffic Outside Segregated Airspace and the request for comments on it.

This database was also used to widely announce:

- ISR 2009, the 40th international symposium on robotics (Barcelona, March 2009);
- the symposium on unmanned systems related export regulations organised by UVS France in cooperation with French government authorities;
- the INOUI Programme meetings;
- the European Space Agency's symposium on UAS & Satellite Services (May 2009);
- NATO RTO's symposium on Intelligent Uninhabited Vehicle Guidance Systems (June 2009);
- EMAV 2009 (Sept 2009), the European Micro UAS conference & flight competition;
- ICAO's Global ATM Forum on Civil/Military Cooperation (Oct 2009).

Within the framework of the Global Access Initiative, UVS International:

- Participated in a panel session at the ATCA Annual conference,

and exhibited at this event jointly with Access 5 (Dallas, TX, USA, (30 Oct-2 Nov 2005);

- Participated in the organisation of a regulatory workshop during the UAS conference in Banff, Alberta, Canada, which was orchestrated by UVS Canada, in cooperation with Aviation Alberta (Nov 15-18, 2005) and organised a meeting which resulted in a consolidated Canadian reply to EASA's A.NPA;
- Participated in a panel discussion at the AFS400 Workshop organised by the FAA (Arlington, VA, USA, Nov 29-Dec 1, 2005);
- Gave a back-to-back presentation with Access 5 at the CANSO annual conference taking place in Maastricht, The Netherlands on February 13, 2006 to increase UAV system awareness with the international air navigation service providers community;
- Gave a back-to-back presentation with Access 5 at the ATC 2006 conference, and exhibited there jointly with Access 5 (Maastricht, Netherlands, February 13-16, 2006);
- Gave a presentation, together with EUROCONTROL at the Avionics 2006 conference in Amsterdam, The Netherlands on March 9, 2006 in order to create awareness with the international avionics community on the business potential that UAS offer;
- Participated in the first informal meeting called by ICAO on UAS that took place in Montreal, Quebec, Canada in May 2006;
- Gave a presentation at the UAV DACH symposium at the ILA (Berlin) Air Show in May 2006;
- Gave an education seminar on UAS for United Nations weapon inspectors on May 23, 2006;
- Gave a presentation to the SESAR Executive Committee in Brussels, Belgium on August 30, 2006;
- Gave a presentation to the Belgian Chapter of the Royal Aeronautical Society at EUROCONTROL headquarters in Brussels, Belgium on September 26, 2006;
- Gave a presentation at the TAAC 2006 conference in Albuquerque, NM, USA on December 4-7, 2006 that was organized by NMSU-PSL-TAAC, in order to inform the attendees on the UAS regulatory work going on in Europe;
- Participated in and gave a presentation at a regulatory workshop during the UAS conference in Montebello, Quebec, Canada, on November 7-10, 2006, which was organised by UVS Canada in order to inform the attendees on the UAS regulatory work going on in Europe;
- Participated in the organization of and gave a presentation at the 1st Trans-Atlantic UAS Summit in Washington, DC, USA on November 13, 2006, which organised by the European Insitute;
- Participated in the 2nd informal meeting on UAS called by ICAO that took place in Palm Coast, FL, USA on January 11-12, 2007;
- Gave a presentation at the plenary session of the Aero India conference in Bangalore, India on February 5, 2007 in order to inform the attendees on the UAS regulatory work going on in Europe and the USA;
- Gave a back-to-back presentation with RTCA SC203 at the Civil Military Air Traffic Management Summit (CMAC) (Bangkok, Thailand February 26-March 1, 2007);
- Gave a back-to-back presentation with RTCA SC203, EUROCONTROL, EUROCONTROL Experimental Centre at the Avionics 2007 conference (Amsterdam, The Netherlands, March 7-8, 2007);
- Gave a presentation, and a presentation for RTCA SC203, at the UTAR WG 27 conference in Brisbane, Australia informing the attendees on the UAS regulatory work going on in Europe and the USA;
- Chaired two sessions and gave a presentation at the UAS Slovenia conference in Maribor, Slovenia on May 31-June 2, 2007 that was organised by the Euro-Atlantic Council of Slovenia;
- Gave a presentation at the GovSec conference in Brussels,

Belgium on June 6 & 7, 2007 in order to highlight the potential applications of UAS for security applications and the required regulatory requirements;

- Organized a Workshop on Small UAS (<150 kg) during the UAV 2007 conference;
- Gave a presentation at the the MAV2007 international micro UAS competition in Toulouse, France on September 18, 2007;
- Gave a presentation at the Civil Applications for UAS (CAUAS) conference in Boulder, CO, USA on October 2 & 3, 2007;
- Gave a presentation at the Airtec UAS conference in Frankfurt, Germany on October 24, 2007;
- Gave a presentation at the UVS Canada conference in St. John's, NL, Canada on November 6, 2007;
- Contributed to the organization & participated in the 2nd Trans-Atlantic UAS Roundtable organized by the European Institute in Washington, DC, USA on November 12, 2007;
- Gave a presentation at the Innovation in UAS conference in Madrid, Spain on November 12, 2007;
- Gave a presentation at a restricted technology conference organised by the French Ministry of Interior in Paris, France on January 24, 2008;
- Gave a presentation at the UAS Symposium organized by EASA in Paris, France on February 1, 2008;
- Gave a back-to-back presentation with RTCA SC203 at the Avionics conference in Amsterdam, The Netherlands on February 15, 2008;
- Gave a presentation at the UAS ATM Integration Workshop organised by EUROCONTROL in Brussels, Belgium on May 7 & 8, 2008;
- Gave a presentation at the ATMA conference in Paris, France on June 4, 2008;
- Partnered with COGES to organise the UVS Forum (tactical UGVs & UAS) at the Eurosatory Exhibition (June 16-20, 2008), where it organised and commentated daily UGV demonstrations;
- Partnered with China Aviation Group to co-organize the UAS China 2008 conference in Beijing, China 5Sept 2008);
- Chaired the UAS China 2008 conference in Beijing, China and gave a keynote address & 2 presentations at this event;
- Organised & chaired the regulatory workshop at the 2008 UVS Canada conference in Ottawa, Canada (Nov 2008);
- Gave a presentation at the Flight Operational Forum in Oslo, Norway (Nov 2008);
- Co-organised & addressed the 3rd Trans-Atlantic UAS Roundtable in Washington, DC, USA (Nov 2008);
- Gave a presentation at a restricted meeting called by the European Commission, Directorate General of Transport & Energy in Brussels, Belgium (Nov 2008);
- Gave a presentation at the TAAC 2008 conference in Albuquerque, NM, USA (Dec 2008);
- Participated in a press conference prior to the UVS-Tech 2009 conference in Moscow, Russia (Jan 2009) and gave 2 keynote addresses at this event;
- Gave a 2 hour lecture at the Free University of Brussels, Belgium (March 2009);
- Gave a keynote speech at ISR 2009, the 40th international symposium on robotics (Barcelona, March 2009);
- Gave a presentation at the 1st Swiss UAS Day in Lausanne, Switzerland;
- Gave a presentation at the ICAUV 2009 conference in Banagalore, India (April 2009);.
- Chaired and gave a keynote address at the Middle East UAS Summit in Abu Dhabi, UAE (April 2009).

Other actions by UVS International that should be seen in the light of the Global Access Initiative are:

- Participation in the USEP Study, which was undertaken by the Conseil Général de l'Armement, France;
- Publication & wide distribution of the UVS News Flash;

- Publication & even wider distribution of the upcoming UVScope;
- Start-up of the generic UVS web site www.uvs-info.com, which is now the largest web site of its kind in the world;
- Start-up of www.testranges.org, a web site dedicated to international test ranges
- Participation in the promotion of MAV2007, EMAV2008 & EMAV2009 conferences on micro UAS & flight competitions;
- Teaming with the European Institute to contribute to the organization of the annual Trans-Atlantic UAS Roundtable;
- Partnership with EUROCONTROL Experimental Centre to promote its annual technical conference in Bretigny-sur-Orge, France;
- Partnership with NMSU-PSL-TAAC to promote their annual conference in Santa Ana Pueblo, NM, USA;
- Organization of its annual UAS conference (11th edition, Paris, France, June 9-12, 2009);
- Partnership with Expo-Ecos to co-organize the UVS-Tech 2010 conference in Moscow, Russia (March 3-5, 2010);
- Partnership with AVBS, the national Czech unmanned systems manufacturers' association, to organize the first national Czech UAS conference in Prague, Czech Rep. (March 17, 2010);
- Partnership with COGES to organize the UVS Forum, consisting of two international conferences (UAS 2010 & UGV 2010), an exhibition & UGV demonstrations at the Eurosatory Exhibition (June 14-18, 2010);
- Partnership with International Aviation Group, China to co-organize the UAS China 2011 conference (Sept 2010);
- Partnership with the Indian Ministry of Defence, DRDO, ADE to co-organize the 2nd UAS conference in India (2012);
- Production, on request of the European Commission, Directorate General Transport and Energy, of a worldwide survey on the current and future non-military applications of Light UAS (<150 kg);
- Organization of a petition by the international Light UAS community (industry & government & regulatory authorities) addressed to the European Commission to promote the opening of the airspace to Light UAS;
- Contribution to the organization of the European Commission's first-ever hearing on Light UAS;
- Moderation of the UAS Panel at ICAO's Global ATM Forum on Civil/Military Cooperation at ICAO headquarters in Montreal, Québec, Canada on October 19-21, 2009;
- Continued participation in the EUROCAE WG73 on UAS;
- Continued participation in the ICAO UAS Study Group;
- Continued efforts to assist interested entities to establish independant national UAS working groups or associations;
- Continued outreach to all relevant stakeholders;
- Continued annual publication of the UAS Yearbook.

The world is at the dawn of a new aviation era, and it is up to industry, in close coordination with the relevant government and regulatory authorities, as well as all relevant stakeholders, to make it become a reality.

In the interest of all, a co-ordinated international industry effort is required to bring the future nearer. With co-ordinated government and industry action, it may be possible to have global open skies for civil, commercial and military unmanned aviation within the decade.

Opening the airspace frontier to unmanned aircraft systems is a societal imperative, which can be accomplished, if we all collaborate.