UNMANNED AIRCRAFT SYSTEMS

The National Airspace System (NAS) has seen a dramatic rise in Unmanned Aircraft Systems (UAS) activity over the past three years. With UAS, or drones, becoming more popular among aviation enthusiasts, the lack of a defined process for operators of such sport vehicles has the potential to create a safety concern.

Each day, the Federal Aviation Administration (FAA) distributes reports on operational issues encountered by aircraft. One of the newest categories is the number of UAS conflicts reported by aircraft.

The August 4, 2015, document had seven (7) reported occurrences. These ranged from general aviation aircraft to regional airline flights to mainline airline flights. Two of the reports were from Austin-Bergstrom Tower, by a CRJ-9 and a MD-83. Both reports were of occurrences that took place north of the airport, seven miles apart within 30 minutes of each other.

So, what is NATCA's role in managing UAS? The Union appointed a UAS Representative, Steve Weidner from Minneapolis Center (ZMP). Weidner attended an UAS conference in Northern California addressing UAS and possible systems to control or monitor the airspace utilized by most of the small (55 pounds and under) UAS. Google and Amazon are both very interested in using the airspace below 500 feet to employ UAS. Weidner met with representatives from Amazon to provide the controller perspective on operations in this altitude block.

Controllers in the United States already work UAS traffic every day. At this time there is not an FAA-controlled field working UAS and piloted aircraft together. Weidner has been working with the controllers at Fargo (FAR) and Syracuse (SYR) reference the National Guard wanting to integrate UAS into the traffic pattern with their normal traffic. Another challenge to integrating UAS into the NAS is the inability of UAS operators to see and then avoid other aircraft near them, because they are obviously not onboard the aircraft. This is of particular concern in uncontrolled airspace or busy airspace where air traffic control does not provide separation to traffic without filed flight plans, also known as "Visual Flight Rules" traffic, or VFR.

NATCA has been told that UAS pilots can input a specific location to make a turn in the pattern or can turn when asked. However, without see and avoid, the UAS is not able to "follow" the aircraft in front of it. NATCA's concerns with this are controller workload and, of course, ensuring a safe operation.

The International Civil Aviation Organization (ICAO) has international work groups addressing UAS operations. Chris Stephenson, from the NATCA Safety and Technology Department, has represented the International Federation of Air Traffic Controllers' Associations (IFATCA) on this working group. NATCA will continue its work to ensure the air traffic controller remains in the discussion reference UAS operations.