Young Fire UAS Test and Demonstration

The Young Fire, located in the Siskiyou Wilderness is being managed and allowed to burn into remote locations with old burn scars and sparse fuels.

Every morning and often through early afternoon, the fire perimeter and other important details remained undetectable due to strong smoke inversions. On 8/23 crews engaged the fire's southern flank with the objective of holding the backing fire coming off Twin Peaks to prevent fire progression to the North of Doe Creek. With no manned fixed or rotor reconnaissance flights on the morning of 8/23 because of poor visibility conditions there was no intelligence on the exact fire location or progression of the fire from the night before. The Young FIre Incident Commander (IC) assigned an Infrared (IR) flight for Unmanned F3, the *FireFly* UAS to launch and work with ground firefighters to provide them real-time intelligence on current fire behavior and perimeter location. With the inversion blocking any vantage from high ground or from traditional manned aircraft, the crew was walking into the assignment blind with no situational awareness (SA) on the current fire activity; a high-risk proposition. With its IR gimbal the *FireFly* was able to fly 5.5 miles beyond visual line of sight (BVLOS) and easily see through the smoke inversion. The UAS crew was then able communicate the exact location and behavior of the fire to firefighters. Feedback from IC, firefighters and the Duty Officer were all very positive stating, *"The UAS flights are giving us real-time data we have no other means of gathering."* This real-time SA allowed crews to make quicker and safer tactical decisions. Additionally, the UAS Team was able to gather intelligence on the encroaching Prescott Fire, an additional 4 miles to the North of the Young Fire. This aided in the decision of turning the Young Fire over to the Type 1 Incident Management Team (IMT) managing the Eclipse Complex, saving valuable time and scarce resources.