



# ***DARACK RESEARCH***

SUMIDS – SMALL UNMANNED MULTI-DOMAIN SYSTEM

CONCEPT PAPER

7 FEBRUARY 2022

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## SMALL UNMANNED MULTI-DOMAIN SYSTEM CONCEPT PAPER

SUMIDS, or Small Unmanned Multi-Domain System, is a concept conceived by Darack Research in its quest to maximize warfighter combat efficacy by optimizing situational awareness and signature at the tactical and operational levels through systems that can be employed at the lowest tactical levels. The SUMIDS concept was conceived and continues to be pioneered and refined by Darack Research. Small Unmanned Multi-Domain Systems are small, lightweight individual-person portable and operable systems that, on their own or in synergized concert with other Darack Research SUMIDS component entities, enable tactical effects, operational end states, and overall capability evolution through functions that take place in the air, on the ground, and otherwise engage in other domains, notably information and maritime, during a mission. These functions include passive mechanisms such as ISR collections, and active means such as sparkle, remote beacon, EW, and others. SUMIDS is as much a developmental maxim as it is a classification – all Darack Research systems are conceived, designed, and engineered for a tremendously broad spectrum of multi-domain efficacy.

Darack Research air vehicle systems, notably the UAV-1 and the UAV-2, were designed and engineered to not only perform a wide array of air missions, but a wide array of missions where only a fraction of mission time will be spent in the air. An example is setting up a “remote overwatch” position by flying a Darack Research UAV-1 or UAV-2 to a key terrain feature, landing, and then passively observing, and, at the appropriate trigger, engaging an active Darack Research Situational Awareness Enhancement system such as a remote sparkle or marker beacon.

All Darack Research air vehicle systems are designed with their primary ISR payload “up and out front” of the vehicle, so that, even on the ground, a user will have an unobstructed view of the battlespace, as opposed to systems with the ISR payload under the system. Furthermore, all Darack Research air vehicle systems include a wide field pan and tilt feature, enabling the user to scan a large area while stationary on the ground. Other Darack Research SUMIDS innovations include customizable landing gear legs and a wide variety of landing gear feat. This allows a user to configure a Darack Research UAV to land, for example, on a steep roof (by varying the lengths of the landing gear legs), or on snow, by using Darack Research “snowshoe” landing gear feet.

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The SUMIDS concept extends to other vehicle and Darack Research Situational Awareness Enhancement programs. For example, the Darack Research Ground Surveillance and Targeting Vehicle (“GSTV”) can be carried and deployed by the Darack Research UAV-1, as can the Darack Research Static Surveillance and Targeting Pod (“SSTP”), and Darack Research beacons. The SUMIDS concept, within the Darack Research “4-Ts” construct, fosters the development of multi-domain TTPs that incorporate all types of Darack Research systems.

### **CONTACT INFORMATION:**

Thank you very much for your interest in Darack Research capabilities.

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