

SUMMARY OF INVENTION

[0004a] According to a first aspect of the present invention, there is provided a portable autonomous vehicle connectivity platform, comprising:

- a portable case;
- 5 one or more local area network (LAN) side adapters disposed within the portable case configured to communicate with one or more local devices including an autonomous vehicle (AV);
- one or more wide area network (WAN) side adapters disposed within the portable case configured to communicate with one or more remote servers;
- 10 a gateway router disposed within the portable case for bridging communications between the one or more LAN side adapters and the one or more WAN side adapters; and
- a controller including a processor and local storage coupled to the gateway router, wherein the local storage stores instructions that, when executed by the processor, causes the portable autonomous vehicle connectivity platform to perform operations including:
- 15 receiving a mission log report from the AV over the one or more LAN side adapters after the AV returns from a mission;
- caching the mission log report in the local storage; and
- transmitting the mission log report from the local storage to the one or more remote serves over the one or more WAN side adapters.

20 [0004b] According to a second aspect of the present invention, there is provided a portable autonomous vehicle connectivity platform, comprising:

- a portable case;
- a local area network (LAN) side adapter disposed within the portable case for communicating with unmanned aerial vehicles (UAVs);
- 25 a wide area network (WAN) side adapter disposed within the portable case for communicating with a remote server;
- a gateway router disposed within the portable case and coupled to bridge communications between the LAN side adapter and the WAN side adapter; and
- a controller coupled to the gateway router for caching mission log reports received
- 30 from the UAVs and transmitting the mission log reports to the remote server.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Non-limiting and non-exhaustive embodiments of the invention are described with reference to the following figures, wherein like reference numerals refer to like parts throughout the various views unless otherwise specified. Not all instances of an

element are necessarily labeled so as not to clutter the drawings where appropriate. The drawings are not necessarily to scale, emphasis instead being placed upon illustrating the principles being described.

5 **[0006]** FIG. 1 is an illustration of an autonomous vehicle (AV) ecosystem for using a portable AV connectivity platform (PAVCP) that links field deployed AVs to backend remote servers, in accordance with an embodiment of the disclosure.

[0007] FIG. 2 is a functional block diagram illustrating various functional components of the AV ecosystem including software utilities installed on the PAVCP, in accordance with an embodiment of the disclosure.

10 **[0008]** FIG. 3 is a flow chart illustrating a process of operation of the PAVCP, in accordance with an embodiment of the disclosure.

[0009] FIG. 4A is a perspective view illustration of the PAVCP with an open lid, in accordance with an embodiment of the disclosure.

15 **[0010]** FIG. 4B is a perspective view illustration of a rear of the PAVCP with a closed lid, in accordance with an embodiment of the disclosure.

[0011] FIG. 5A is a perspective view illustration of an internal chassis for mounting internal components within the portable case of the PAVCP, in accordance with an embodiment of the disclosure.

20 **[0012]** FIG. 5B is an exploded perspective view illustration of top side components mounted to the internal chassis, in accordance with an embodiment of the disclosure.

[0013] FIG. 5C is a perspective view illustration of an underside of the carriage lid and topside internal components, in accordance with an embodiment of the disclosure.

25 **[0014]** FIG. 5D is an exploded perspective view illustration of bottom side internal components mounted to the internal chassis, in accordance with an embodiment of the disclosure.