embodiments, the control mode change request may include an indication of a cause or reason for the control mode change request.

[0235] It is well understood that the use of personally identifiable information should follow privacy policies and practices that are generally recognized as meeting or exceeding industry or governmental requirements for maintaining the privacy of users. In particular, personally identifiable information data should be managed and handled so as to minimize risks of unintentional or unauthorized access or use, and the nature of authorized use should be clearly indicated to users.

[0236] Embodiments of the present disclosure may be realized in any of various forms. For example, some embodiments may be realized as a computer-implemented method, a computer-readable memory medium, or a computer system. Other embodiments may be realized using one or more custom-designed hardware devices such as ASICs. Still other embodiments may be realized using one or more programmable hardware elements such as FPGAs.

[0237] In some embodiments, a non-transitory computer-readable memory medium may be configured so that it stores program instructions and/or data, where the program instructions, if executed by a computer system, cause the computer system to perform a method, e.g., any of the method embodiments described herein, or, any combination of the method embodiments described herein, or, any subset of any of the method embodiments described herein, or, any combination of such subsets.

[0238] In some embodiments, a device (e.g., a UE **106**) may be configured to include a processor (or a set of processors) and a memory medium, where the memory medium stores program instructions, where the processor is configured to read and execute the program instructions from the memory medium, where the program instructions are executable to implement any of the various method embodiments described herein (or, any combination of the method embodiments described herein, or, any subset of any of the method embodiments described herein, or, any combination of such subsets). The device may be realized in any of various forms.

[0239] Any of the methods described herein for operating a user equipment (UE) may be the basis of a corresponding method for operating a base station, by interpreting each message/signal X received by the UE in the downlink as message/signal X transmitted by the base station, and each message/signal Y transmitted in the uplink by the UE as a message/signal Y received by the base station.

[0240] Although the embodiments above have been described in considerable detail, numerous variations and modifications will become apparent to those skilled in the art once the above disclosure is fully appreciated. It is intended that the following claims be interpreted to embrace all such variations and modifications.

What is claimed is:

1. A non-transitory computer readable memory medium storing program instructions executable by processing circuitry to cause a processor to

receive, from a network entity, tracking information associated with an unmanned aerial vehicle (UAV) and/or a UAV controller (UAC) associated with the UAV, wherein the UAV is in a Network-Assisted control mode, and wherein the tracking information includes at least one of a UAV identifier (UAV ID) associated with the UAV or a UAC identifier (UAC ID) associated with the UAC;

determine, based on the tracking information associated with the UAV, to switch the UAV from the Network-Assisted control mode to a UTM-Navigated control mode; and

send, to the network entity, a control mode change request, wherein the control mode change request includes at least one of the UAV ID or UAC ID.

2. The non-transitory memory medium of claim **1**,

wherein, to determine to switch the UAV from the Network-Assisted control mode to the UTM-Navigated control mode, the program instructions are further executable to:

send, based on a prior request, the tracking information associated with the UAV to a Third-Party Authorized Entity (TPAE); and

receive, from the TPAE, the control mode change request.

3. The non-transitory memory medium of claim **1**,

wherein the control mode change request includes an indication of a cause or reason for the control mode change request.

4. The non-transitory memory medium of claim **1**,

wherein, to determine, based on the tracking information associated with the UAV, to switch the UAV from the Network-Assisted control mode to the UTM-Navigated control mode, the program instructions are further executable to:

determine that the UAV is entering a designated area, wherein UTM-Navigated control mode is required while in the designated area, and wherein the designated area is specified by at least one of an air traffic control policy or a government policy.

5. The non-transitory memory medium of claim **1**,

wherein, to determine, based on the tracking information associated with the UAV, to switch the UAV from the Network-Assisted control mode to the UTM-Navigated control mode, the program instructions are further executable to:

determine at least one of:

that the UAC is unable to communicate with the UAV;

that the UAC is initiating the switch based on at least one of a UAC control release cause code or a UAC control suspend cause code; or

that the UAV is initiating the switch based on a UAC lost cause code.

6. The non-transitory memory medium of claim **1**,

wherein the tracking information is at least one of periodic tracking information or event tracking information.

7. The non-transitory memory medium of claim **6**,

wherein periodic tracking information includes at least one of:

UAV navigational properties;

a cell identifier associated with the UAV;

a tracking area code (TAC) identifier associated with the UAV;

global positioning system (GPS) information associated with the UAV;

a C2 link communication quality as reported by one of the UAV or UAC;