CLAIMS

1. A method, the method comprising:

at a first device in the wireless communication network:

communicating, in accordance with a first communication mode, data or control information with a second device in the wireless communication network, the first communication mode being one of a plurality of communication modes comprising at least the first communication mode and a second communication mode, the second communication mode differing from the first communication mode in terms of at least one of:

a quantization level used to quantize values of variables in the data or control information;

a Hybrid Automatic Repeat reQuest, HARQ, feedback and retransmission mode for selective retransmission of one or more portions of the data or control information.

2. The method of claim 1, wherein transmission of the data or control information that is communicated with the second device is scheduled by downlink control information DCI, wherein a cyclic redundancy check, CRC, value of the DCI is scrambled with a first radio network temporary identifier, RNTI, the first RNTI being different from a Cell RNTI, C-RNTI.

3. The method of claim 1 or claim 2, further comprising:

training an artificial intelligence or machine learning, AI/ML model at the first device based on the data or control information communicated with the second device.

4. The method of any of claims 1 to 3, wherein:

in the first communication mode, a first HARQ feedback and retransmission mode is used, wherein, in the first HARQ feedback and retransmission mode, there is no HARQ feedback process and no retransmission of the data or control information between the first device and the second device; and

in the second communication mode, a second HARQ feedback and retransmission mode is used, wherein, in the second HARQ feedback and retransmission mode, there is a HARQ feedback process to request retransmission of one or more portions of the data or control information.

5. The method of any of claims 1 to 3, wherein:

in the first communication mode, a first HARQ feedback and retransmission mode is used, wherein N1 retransmissions are permitted in the first HARQ feedback and retransmission mode, wherein N1 is an integer and $N1 \geq 1$;

in the second communication mode, a second HARQ feedback and retransmission mode is used, wherein a maximum of N2 retransmissions are permitted in the second HARQ feedback and retransmission mode, wherein N2 is an integer and $N2 > N1$.

6. The method of claim 4 or claim 5, wherein:

in the first communication mode, a first quantization level is used to quantize values of variables in the data or control information; and

in the second communication mode, a second quantization level, higher than the first quantization level, is used to quantize values of variables in the data or control information.

7. The method of any of claims 1 to 6, further comprising:

switching from communicating data or control information with the second device in accordance with the first communication mode to communicating data or control information with the second device in accordance with the second communication mode.

8. The method of claim 7, wherein switching comprises:

transmitting, from the first device, control signaling to the second device, the control signaling containing a switching instruction; and

after transmitting the control signaling, switching from the first communication mode to the second communication mode.

9. The method of any of claims 1 to 8, further comprising:

transmitting, from the first device, control signaling to the second device, the control signaling containing a stop training instruction to configure the second device to stop training of an AI/ML model at the second device.

10. The method of claim 7, wherein switching comprises:

receiving, at the first device, control signaling from the second device, the control signaling containing a switching instruction; and

after receiving the control signaling, switching from the first communication mode to the second communication mode.

11. The method of claim 10, further comprising:

receiving, at the first device, control signaling from the second device, the control signaling containing a stop training instruction; and

after receiving the control signaling, stopping transmitting data or control information for AI/ML model training to the second device.

12. The method of claim 3, further comprising:

transmitting, from the first device, assistance information to the second device, the assistance information containing a training stop request from the first device to stop training of the AI/ML model at the first device.

13. The method of claim 7, wherein, after switching to the second communication mode, the method further comprising:

for data that was not successfully received by the first device, transmitting, from the first device to the second device:

HARQ feedback information to inform the second device that the data was not successfully received by the first device; and

importance indicator information corresponding to the unsuccessfully received data, the importance indicator information corresponding to the unsuccessfully received data indicating whether the unsuccessfully received data is important to AI/ML model training at the first device.

14. An apparatus, comprising one or more units for performing the method according to any one of claims 1 to 13.

15. A non-transitory computer readable storage medium having instructions stored thereon, when the instructions executed by a computer, cause an apparatus to perform the method according to any one of claims 1 to 13.