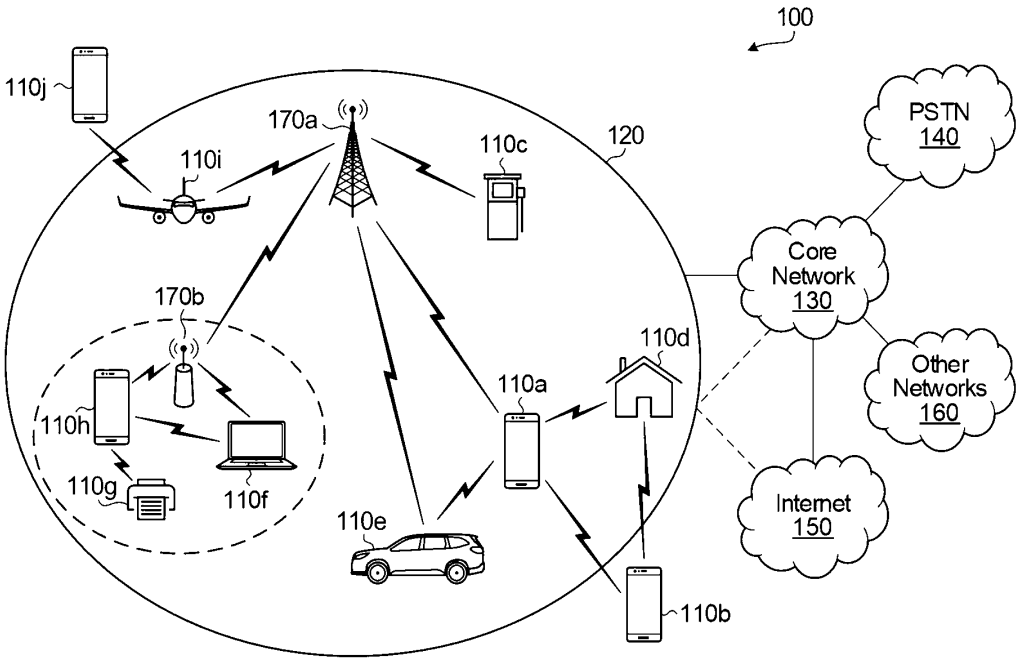

100
110j
170a
110i
110c
120
PSTN
140
Core
Network
130
170b
110d
Other
Networks
160
110h
110a
110g
110f
110e
Internet
150
110b

FIG. 1

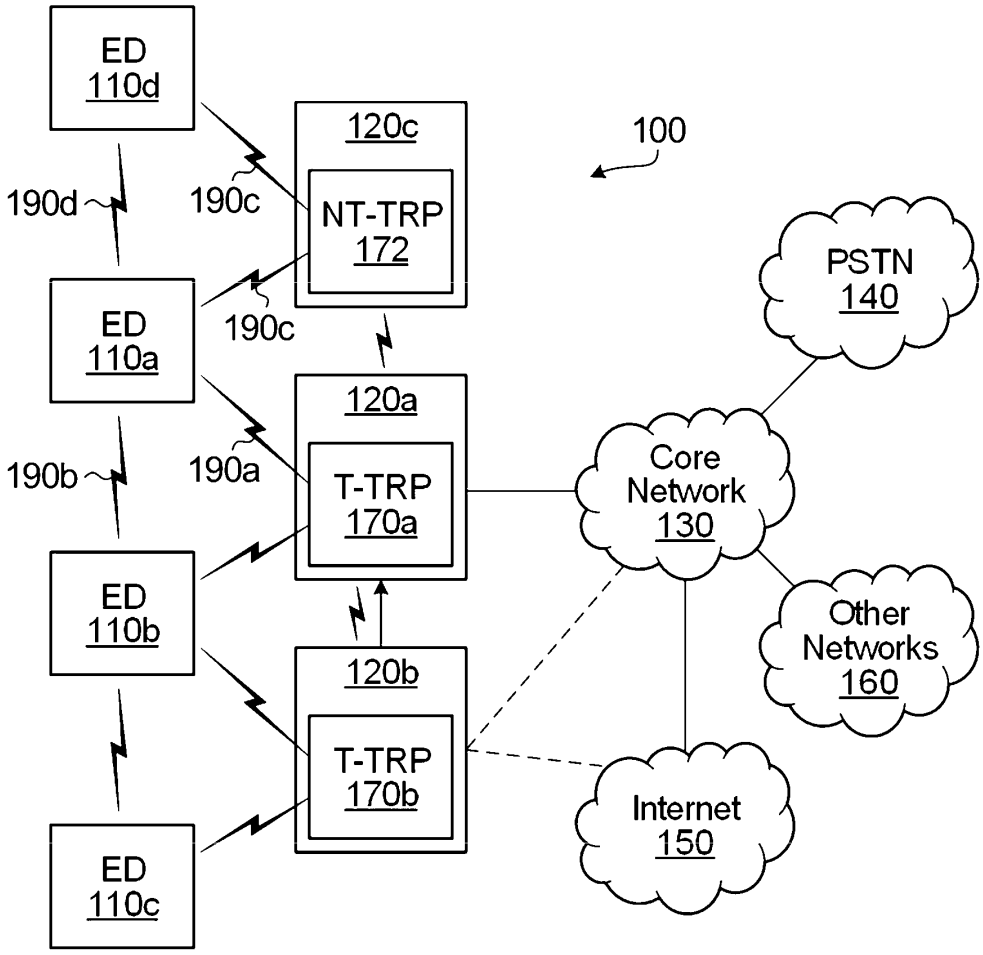

ED
110d
ED
110a
ED
110b
ED
110c
190d
190c
190c
190b
190a
120c
NT-TRP
172
120a
T-TRP
170a
120b
T-TRP
170b
100
PSTN
140
Core
Network
130
Other
Networks
160
Internet
150

FIG. 2

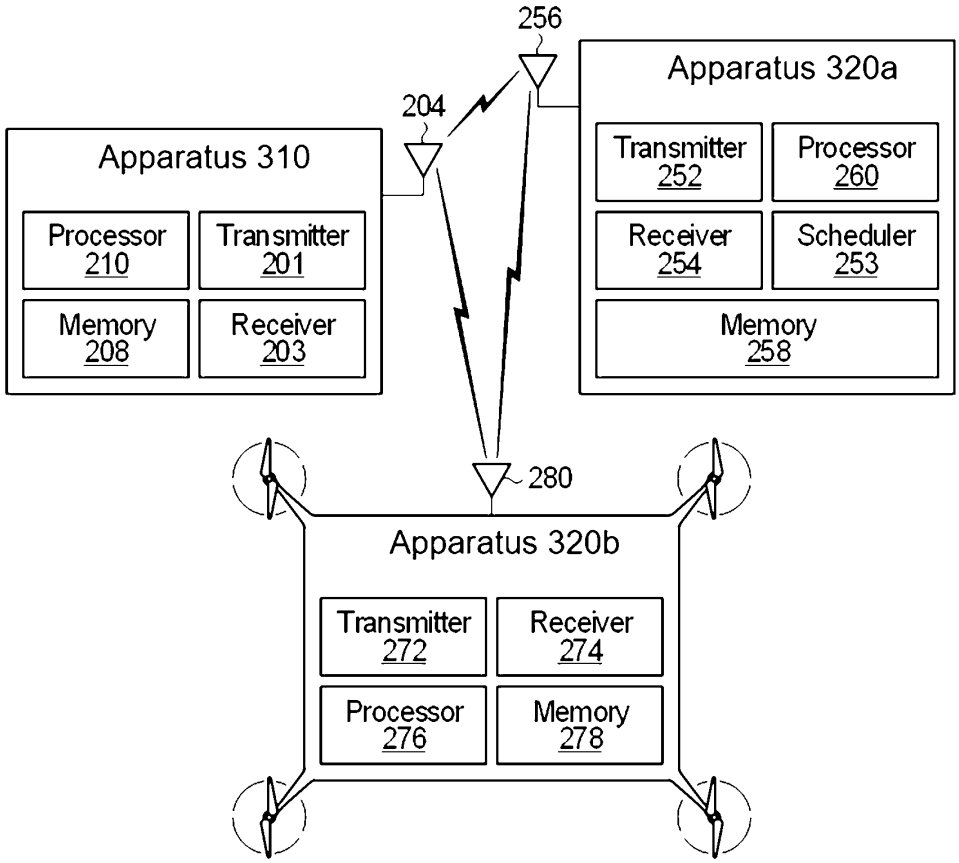

256
204
Apparatus 320a
Transmitter 252
Processor 260
Receiver 254
Scheduler 253
Memory 258
Apparatus 310
Processor 210
Transmitter 201
Memory 208
Receiver 203
280
Apparatus 320b
Transmitter 272
Receiver 274
Processor 276
Memory 278

FIG. 3

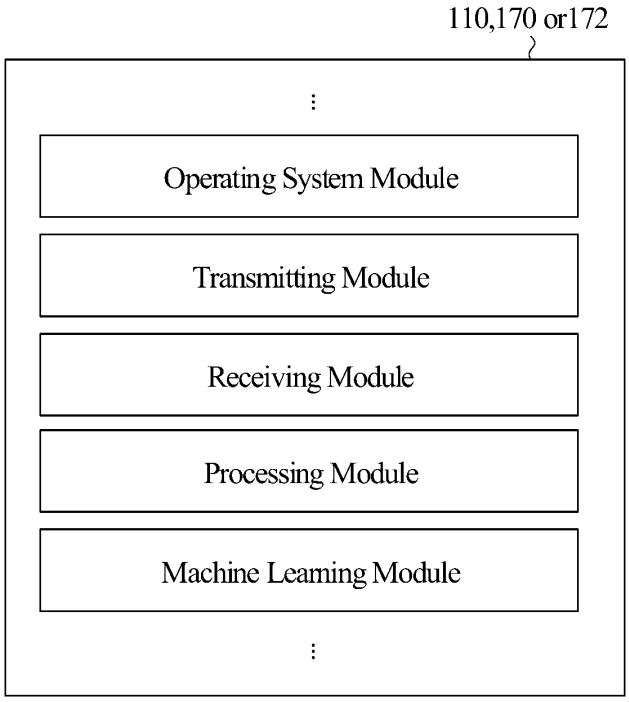

110,170 or172
Operating System Module
Transmitting Module
Receiving Module
Processing Module
Machine Learning Module

FIG. 4

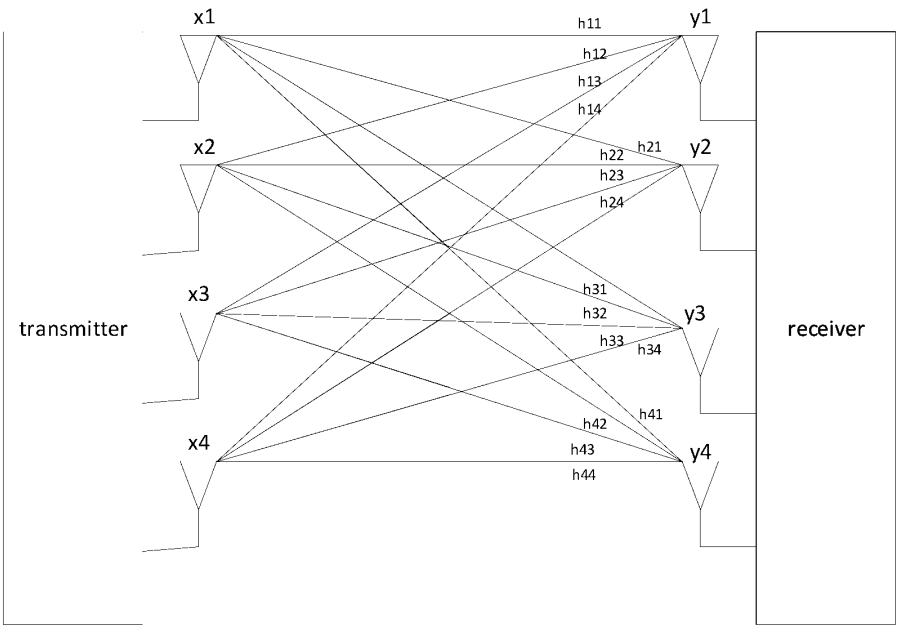

transmitter
x1
x2
x3
x4
y1
y2
y3
y4
receiver
h11
h12
h13
h14
h21
h22
h23
h24
h31
h32
h33
h34
h41
h42
h43
h44

FIG. 5

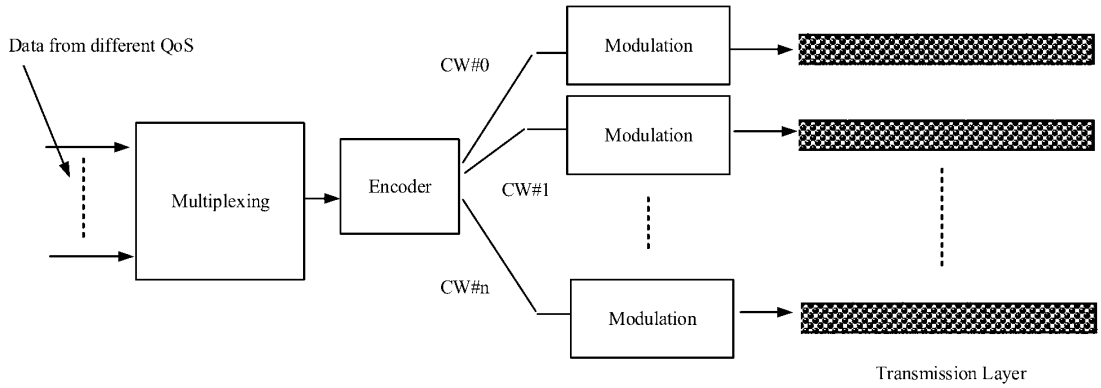

Data from different QoS
Multiplexing
Encoder
CW#0
CW#1
CW#n
Modulation
Modulation
Modulation
Transmission Layer

FIG. 6

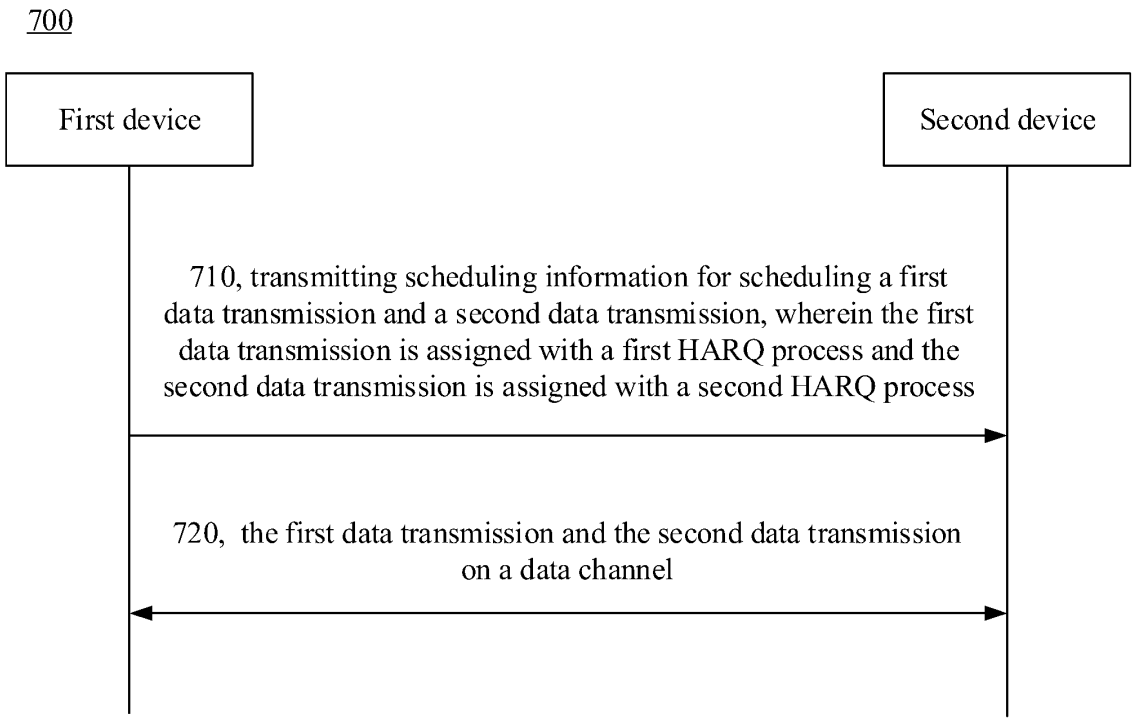

700
First device
Second device
710, transmitting scheduling information for scheduling a first data transmission and a second data transmission, wherein the first data transmission is assigned with a first HARQ process and the second data transmission is assigned with a second HARQ process
720, the first data transmission and the second data transmission on a data channel

FIG. 7

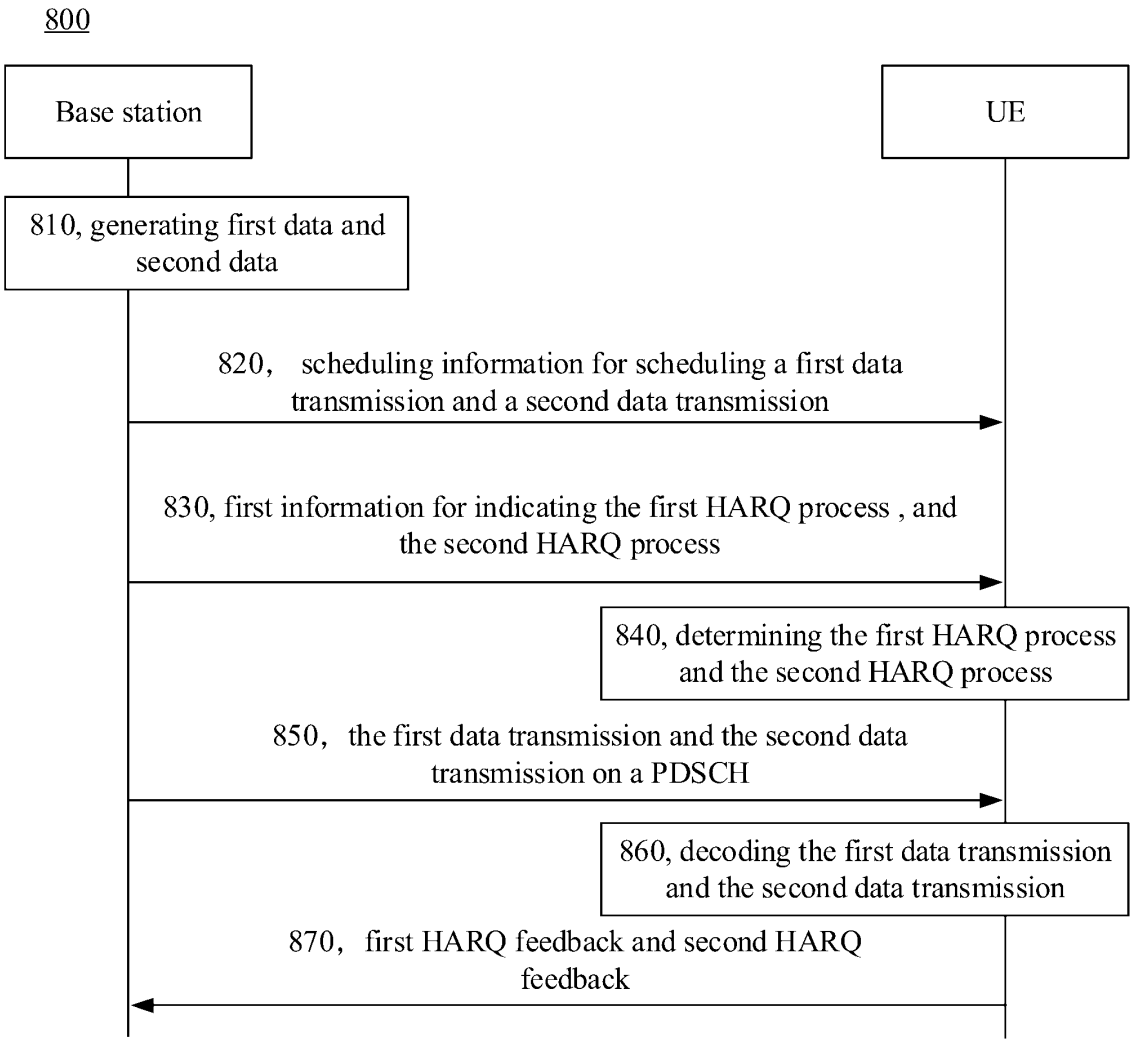

800
Base station
UE
810, generating first data and second data
820, scheduling information for scheduling a first data transmission and a second data transmission
830, first information for indicating the first HARQ process , and the second HARQ process
840, determining the first HARQ process and the second HARQ process
850, the first data transmission and the second data transmission on a PDSCH
860, decoding the first data transmission and the second data transmission
870, first HARQ feedback and second HARQ feedback

FIG. 8

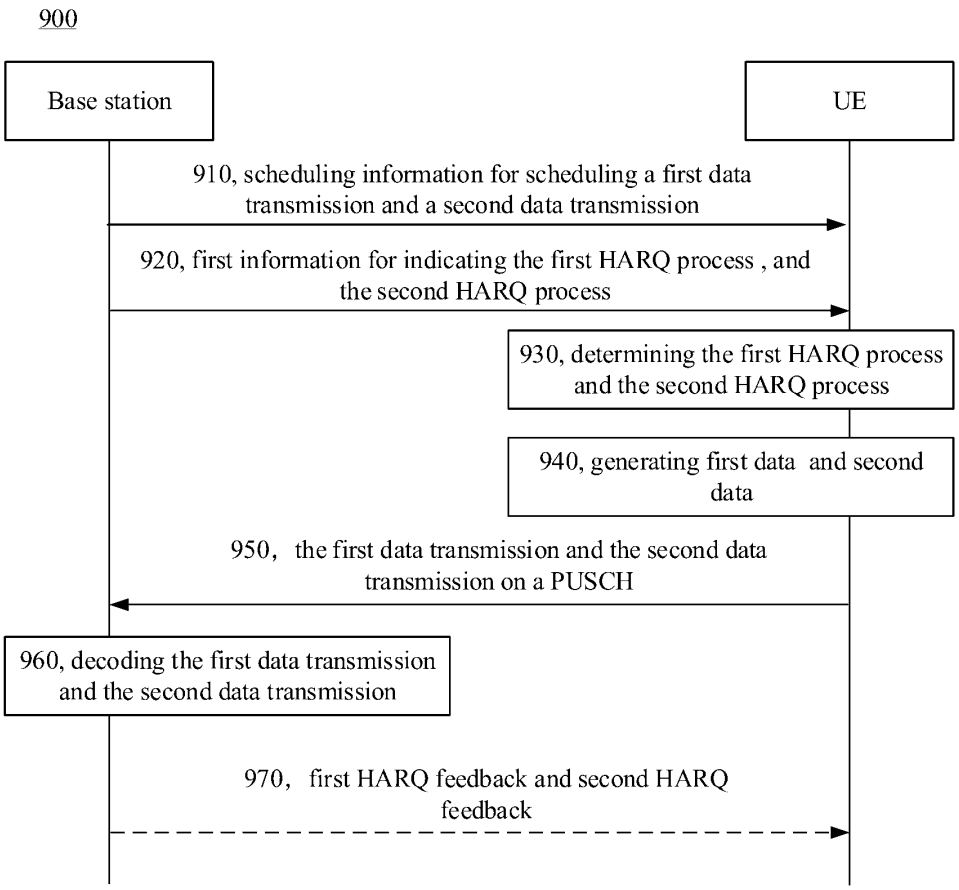

900
Base station
UE
910, scheduling information for scheduling a first data transmission and a second data transmission
920, first information for indicating the first HARQ process , and the second HARQ process
930, determining the first HARQ process and the second HARQ process
940, generating first data and second data
950, the first data transmission and the second data transmission on a PUSCH
960, decoding the first data transmission and the second data transmission
970, first HARQ feedback and second HARQ feedback

FIG. 9

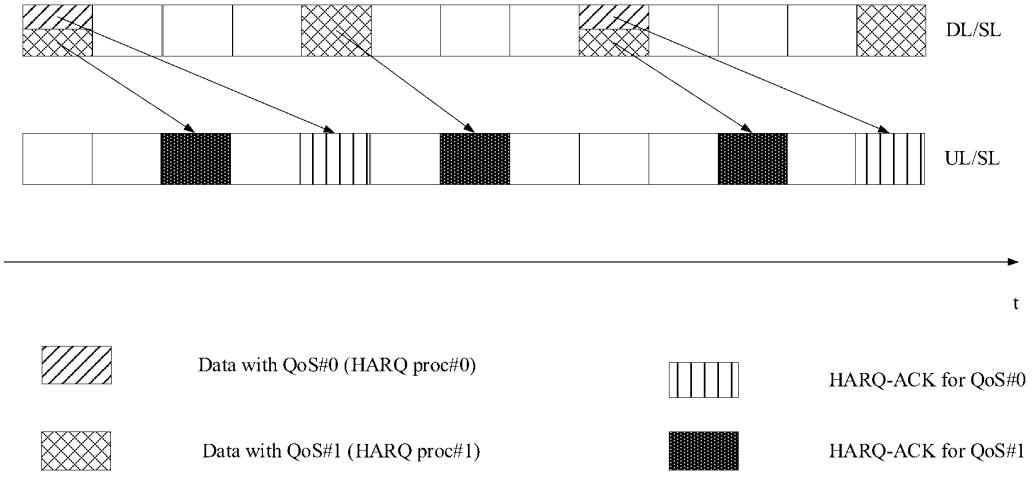

DL/SL
UL/SL
t
Data with QoS#0 (HARQ proc#0)
Data with QoS#1 (HARQ proc#1)
HARQ-ACK for QoS#0
HARQ-ACK for QoS#1

FIG.10

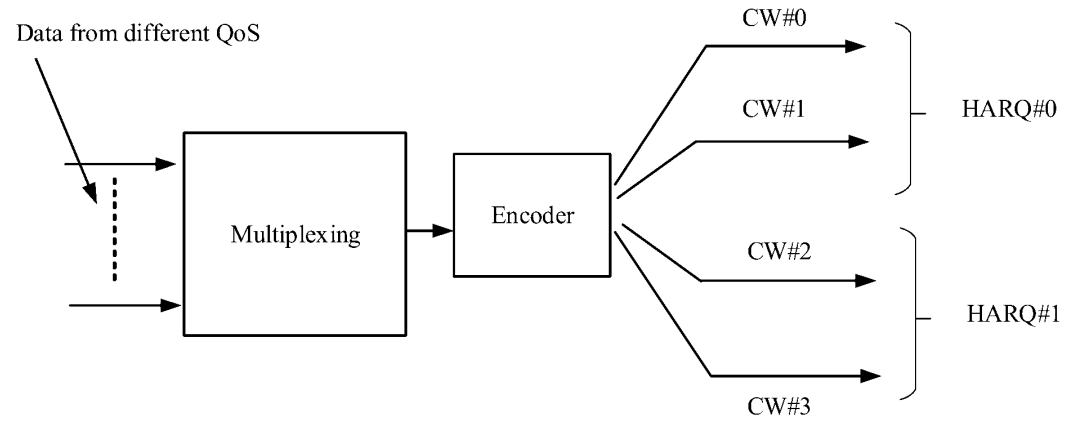


FIG. 11

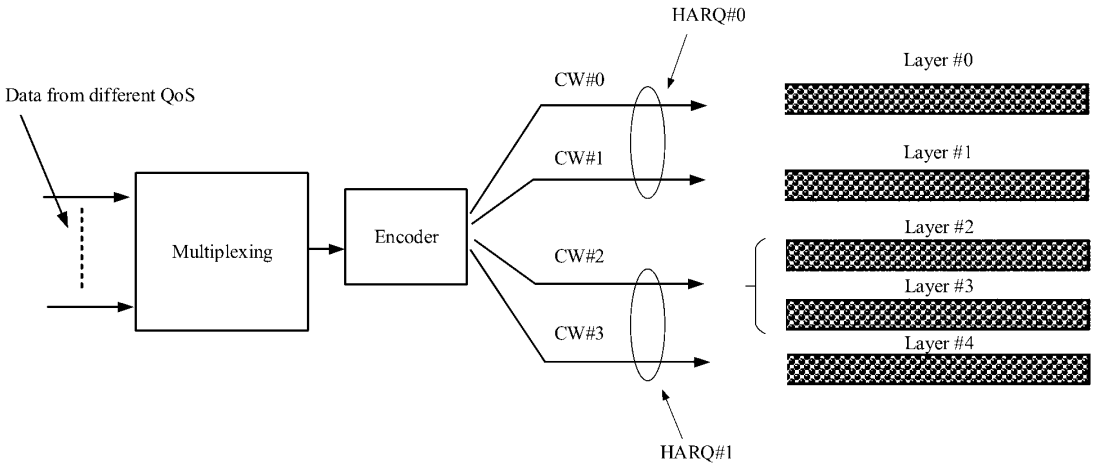


FIG. 12

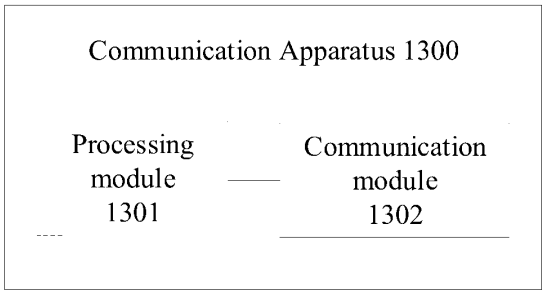


FIG. 13

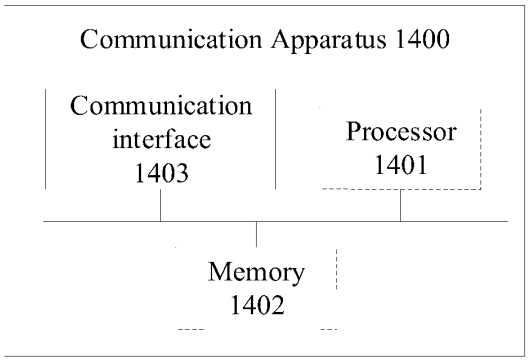

Communication Apparatus 1400
Communication interface 1403
Processor 1401
Memory 1402

FIG. 14