What is claimed is:

1. A method of determining a Hybrid Automatic Repeat reQuest –Acknowledgement (HARQ-ACK) codebook performed by a terminal, comprising:

determining a first set of candidate Physical Downlink Shared Channel (PDSCH) reception opportunities according to first information;

determining HARQ-ACK information or a HARQ-ACK codebook transmitted on Physical Uplink Control Channel (PUCCH) resources of a first uplink slot or sub-slot n, according to the first set;

wherein the first information comprises at least one of following information:

a set of slot timing values or sub-slot timing values $K_{1,1}$, $K_{1,2}$, …, $K_{1,N}$ used to represent a timing from a PDSCH to a HARQ-ACK;

first configuration information, wherein the first configuration information comprises uplink-downlink configuration information at a cell level or at a user level,

wherein the first configuration information comprises following Information Elements (IE) configured by a base station through a high-layer signaling:

Time-Division-Duplex (TDD)-Uplink (UL)-Downlink (DL)-ConfigurationCommon, and/or, TDD-UL-DL- ConfigDedicated,

wherein i=1 …. N, N is a total quantity of timing values included in the set of slot timing values or sub-slot timing values, and T is a first period.

2. The method according to claim 1, wherein determining the first set of candidate PDSCH reception opportunities according to the first information comprises:

determining a second timing value set { $K_{1,i}$, $K_{1,i}$+ 1, …, $K_{1,i}$+T-1} for each timing value $K_{1,I}$ in the set of slot timing values or sub-slot timing values, and obtaining a plurality of second timing value sets, wherein T is a first period;

determining a first timing value set comprising all timing values in the plurality of second timing value sets; and

determining the first set of candidate PDSCH reception opportunities based on the first timing value set.

3. The method according to claim 1, wherein determining the first set of candidate PDSCH reception opportunities according to the first information comprises:

determining the first set of candidate PDSCH reception opportunities according to a first timing value set, wherein timing values in the first timing value set belong to at least one of following:{ $K_{1,i}$, $K_{1,i}$+ 1, … , $K_{1,i}$+T-1}.

4. The method according to claim 1, wherein determining the first set of candidate PDSCH reception opportunities according to the first information comprises:

determining the first set of candidate PDSCH reception opportunities according to a first timing value set,

wherein the first timing value set comprises all positive integers from min{ $K_{1,i}$ } to max{ $K_{1,i}$+T-1}, T is a first period.

5. The method according to claim 2 or 3 or 4, wherein determining the first set of candidate PDSCH reception opportunities according to the first timing value set comprises:

traversing each timing value $K_{1,X}$ in the first timing value set;

determining at least one first downlink slot corresponding to a first uplink slot or sub-slot n according to the timing value $K_{1,X}$;

judging whether a certain time-domain resource allocation exists in the at least one first downlink slot according to the uplink-downlink configuration information, wherein each symbol in the certain time-domain resource allocation is not configured as uplink by the uplink-downlink configuration information;

if the certain time-domain resource allocation exists, then adding at least one candidate PDSCH reception opportunity into the first set, wherein, the certain time-domain resource allocation is configured by a base station through a high-layer signaling, or is pre-agreed.

6. The method according to any one of claims 1 to 4, wherein determining the HARQ-ACK information or the HARQ-ACK codebook transmitted on PUCCH resources of the first uplink slot or sub-slot n according to the first set comprises:

for each PDSCH reception opportunity in the first set, reserving at least one bit in the HARQ-ACK information, for feeding back HARQ-ACK corresponding to the PDSCH reception opportunity.

7. The method according to any one of claims 1 to 4, wherein,

the first period T is predetermined; or,

the first period T is configured by a base station through a high-layer signaling; or,

the first period T is determined according to the first configuration information.

8. The method according to any one of claims 1 to 4, wherein,

the first period T is an integer, and first periods corresponding to different subcarrier spacings are same or different.

9. The method according to any one of claims 1 to 4, wherein the set of slot timing values or sub-slot timing values is predefined, or is configured by a base station through a high-layer signaling.

10. The method according to claim 1, further comprising at least one of following:

determining that an uplink slot or an uplink sub-slot is the first uplink slot or sub-slot n, wherein the uplink slot or the uplink sub-slot does not comprise any of target PUCCH resources, or Semi-Persistent Scheduling (SPS) PDSCH reception satisfying a first condition exists;

determining that an uplink slot or an uplink sub-slot is the first uplink slot or sub-slot n, wherein the uplink slot or the uplink sub-slot does not comprise any of target PUCCH resources, Semi-Persistent Scheduling (SPS) PDSCH reception satisfying a first condition exists, and a HARQ-ACK codebook is transmitted using PUCCH resources configured by a base station for a SPS PDSCH through a high-layer signaling;

determining that an uplink slot or an uplink sub-slot is the first uplink slot or sub-slot n, wherein the uplink slot or the uplink sub-slot comprises any of target PUCCH resources or SPS PDSCH reception satisfying a first condition exists;

wherein the target PUCCH resources are PUCCH resources indicated by a PDSCH-to-HARQ-feedback timing indicator and a PUCCH resource indicator comprised in Downlink Control Information; the first condition is that at least one symbol in a HARQ-ACK resource corresponding to the SPS PDSCH is configured or indicated to be downlink or flexible, and most adjacent uplink slot or sub-slot after the HARQ-ACK resource is the uplink slot or the uplink sub-slot.

11. A method of determining a Hybrid Automatic Repeat reQuest –Acknowledgement (HARQ-ACK) codebook performed by a base station, comprising:

determining a first set of candidate Physical Downlink Shared Channel (PDSCH) reception opportunities according to first information;

determining HARQ-ACK information or a HARQ-ACK codebook received on Physical Uplink Control Channel (PUCCH) resources of a first uplink slot or sub-slot n, according to the first set;

wherein the first information comprises at least one of following information:

a set of slot timing values or sub-slot timing values $K_{1,1}$, $K_{1,2}$, …, $K_{1,N}$ used to represent a timing from a PDSCH to a HARQ-ACK;

first configuration information, wherein the first configuration information comprises uplink-downlink configuration information at a cell level or at a user level,

wherein the first configuration information comprises following Information Elements (IE) configured by a base station through a high-layer signaling:

Time-Division-Duplex (TDD)-Uplink (UL)-Downlink (DL)-ConfigurationCommon, and/or, TDD-UL-DL- ConfigDedicated,

wherein i=1 …. N, N is a total quantity of timing values included in the set of slot timing values or sub-slot timing values, and T is a first period.

12. The method according to claim 11, further comprising at least one of following:

determining that an uplink slot or an uplink sub-slot is the first uplink slot or sub-slot n, wherein the uplink slot or the uplink sub-slot does not comprise any of target

PUCCH resources, or Semi-Persistent Scheduling (SPS) PDSCH reception satisfying a first condition exists;

determining that an uplink slot or an uplink sub-slot is the first uplink slot or sub-slot n, wherein the uplink slot or the uplink sub-slot does not comprise any of target PUCCH resources, Semi-Persistent Scheduling (SPS) PDSCH reception satisfying a first condition exists, and a HARQ-ACK codebook is transmitted using PUCCH resources configured by a base station for a SPS PDSCH through a high-layer signaling;

determining that an uplink slot or an uplink sub-slot is the first uplink slot or sub-slot n, wherein the uplink slot or the uplink sub-slot comprises any of target PUCCH resources or SPS PDSCH reception satisfying a first condition exists;

wherein the target PUCCH resources are PUCCH resources indicated by a PDSCH-to-HARQ-feedback timing indicator and a PUCCH resource indicator comprised in Downlink Control Information; the first condition is that at least one symbol in a HARQ-ACK resource corresponding to the SPS PDSCH is configured or indicated to be downlink or flexible, and most adjacent uplink slot or sub-slot after the HARQ-ACK resource is the uplink slot or the uplink sub-slot.

13. A communication device, the communication device being a terminal, comprising:

a processor, a storage and a program stored on the storage and executable by the processor, wherein, when the program is executed by the processor, the processor implements steps of the method according to any one of claims 1 to 10.

14. A communication device, the communication device being a base station, comprising:

a processor, a storage and a program stored on the storage and executable by the processor, wherein, when the program is executed by the processor, the processor implements steps of the method according to claim 11 or 12.