[0006a] In an aspect, the present disclosure refers to a transceiving apparatus comprising:

a transceiver, which in operation, receives a first set of beam failure detection (BFD) reference signal configurations, a second set of BFD reference signal configurations, a first set of candidate new beam detection (CBD) reference signal configurations, and a second set of CBD reference signal configurations; and

circuitry, which in operation, performs a first BFD relating to a first transmission and reception point (TRP) based on the first set of BFD reference signal configurations, a second BFD relating to a second TRP based on the second set of BFD reference signal configurations, and performs at least one of a first CBD relating to the first TRP based on the first set of CBD reference signal configurations or a second CBD relating to the second TRP based on the second set of CBD reference signal configurations.

[0006b] In an aspect, the present disclosure refers to a transceiving apparatus comprising:

communication method performed by a communication apparatus comprising:

receiving a first set of beam failure detection (BFD) reference signal configurations, a second set of BFD reference signal configurations, a first set of candidate new beam detection (CBD) reference signal configurations, and a second set of CBD reference signal configurations; and

performing a first BFD relating to a first transmission and reception point (TRP) based on the first set of BFD reference signal configurations, a second BFD relating to a second TRP based on the second set of BFD reference signal configurations, and performing a first CBD based on the first set of CBD reference signal configurations or

a second CBD based on the second set of CBD reference signal configurations.

[0007] In one example, the techniques disclosed here feature a transceiving apparatus including a transceiver and circuitry. The transceiver, in operation, receives a first set of reference signal configuration relating to a first transmission and reception point (TRP) and a second set of reference signal configuration relating to a second TRP. The circuitry, in operation, performs at least one of beam failure detection (BFD) based on the first set of reference signal configuration and the second set of reference signal configuration.

[0008] It should be noted that general or specific examples may be implemented as a system, a method, an integrated circuit, a computer program, a storage medium, or any selective combination thereof.

[0009] Additional benefits and advantages of examples in the disclosure will become apparent from the specification and drawings. The benefits and/or advantages may be individually obtained by the various embodiments and features of the specification and drawings, which need not all be provided in order to obtain one or more of such benefits and/or advantages.

BRIEF DESCRIPTION OF THE FIGURES

In the following, exemplary embodiments are described in more detail with reference to the attached figures and drawings.

[0010] **FIG. 1** shows an exemplary architecture for a 3GPP NR system;

[0011] **FIG. 2** is a schematic drawing which shows functional split between NG-RAN and 5GC;

CLAIMS

1. A transceiving apparatus comprising:

a transceiver, which in operation, receives a first set of beam failure detection (BFD) reference signal configurations, a second set of BFD reference signal configurations, a first set of candidate new beam detection (CBD) reference signal configurations, and a second set of CBD reference signal configurations; and

circuitry, which in operation, performs a first BFD relating to a first transmission and reception point (TRP) based on the first set of BFD reference signal configurations, a second BFD relating to a second TRP based on the second set of BFD reference signal configurations, and performs at least one of a first CBD relating to the first TRP based on the first set of CBD reference signal configurations or a second CBD relating to the second TRP based on the second set of CBD reference signal configurations.

2. The transceiving apparatus in accordance with Claim 1, wherein the first set of BFD reference signal configurations, the second set of BFD reference signal configurations, the first set of CBD reference signal configurations, and the second set of CBD reference signal configurations are indicated by a Medium Access Control Control Element (MAC CE) or a Radio Resource Control (RRC) signaling.

3. The transceiving apparatus in accordance with Claim 1 wherein the first and second BFD reference signal configurations and/or the first and second CBD reference signal configurations is a configuration of channel state information (CSI) reference signal and/or a configuration of synchronization signal block (SSB).

4. The transceiving apparatus in accordance with claim 1, wherein the transceiver, which in operation, reports to a base station content including at least one result of the first BFD and at least one result of the second BFD.

5. The transceiving apparatus in accordance with claim 1, wherein whether both of the first BFD based on the first set of BFD reference signal configurations and the second BFD based on the second set of BFD reference signal configurations are performed is determined by a transmission configuration indication (TCI) state of downlink control information (DCI).

6. A communication method performed by a communication apparatus comprising:

receiving a first set of beam failure detection (BFD) reference signal configurations, a second set of BFD reference signal configurations, a first set of candidate new beam detection (CBD) reference signal configurations, and a second set of CBD reference signal configurations; and

performing a first BFD relating to a first transmission and reception point (TRP) based on the first set of BFD reference signal configurations, a second BFD relating to a second TRP based on the second set of BFD reference signal configurations, and performing a first CBD based on the first set of CBD reference signal configurations or a second CBD based on the second set of CBD reference signal configurations.

7. The communication method in accordance with Claim 6, wherein the first set of BFD reference signal configurations, the second set of BFD reference signal configurations, the first set of CBD reference signal configurations, and the second set of CBD reference signal configurations are indicated by a Medium Access Control Control Element (MAC CE) or a Radio Resource Control (RRC) signaling.

8. The communication method in accordance with Claim 6, wherein the first and second BFD reference signal configurations and/or the first and second CBD reference signal configurations include a configuration of channel state information (CSI) reference signal and/or a configuration of synchronization signal block (SSB).

9. The communication method in accordance with claim 6, further comprising:

transmitting content including at least one result of the first BFD and at least one result of the second BFD.

10. The communication method in accordance with claim 6, further comprising:

determining, based on a transmission configuration indication (TCI) state of downlink control information (DCI), whether both of the first BFD based on the first set of BFD reference signal configurations and the second BFD based on the second set of BFD reference signal configuration are performed.

11. The communication method in accordance with claim 6, comprising:

transmitting content including one result of the first BFD relating to the first set of BFD reference signal configurations or the second BFD relating to the second set of BFD reference signal configurations, and one result of the first CBD relating to the first set of CBD reference signal configurations or the second CBD relating to the second set of CBD reference signal configurations.

12. The communication method in accordance with claim 6, comprising:

reporting, to a base station, content including at least one result of the first BFD or the first CBD and at least one result of the second BFD or the second CBD.

13. The transceiving apparatus in accordance with claim 1, wherein the transceiver, in operation, reports to a base station content including one result of the first BFD relating to the first set of BFD reference signal configurations or the second BFD relating to the second set of BFD reference signal configurations, and one result of the first CBD relating to the first set of CBD reference signal configurations or the second CBD relating to the second set of CBD reference signal configurations.

14. The transceiving apparatus in accordance with claim 1, wherein the transceiver, in operation, reports to a base station content including at least one result of the first BFD or the first CBD and at least one result of the second BFD or the second CBD.