

WHAT IS CLAIMED IS:

1. A terminal device comprising:

at least one processor; and

at least one memory including program code;

wherein the at least one memory and the program code are configured to, with the at least one processor, cause the terminal device at least to:

perform beam failure detection on a first number of serving cells configured for the terminal device; and

determine that a beam failure is detected on a predetermined serving cell of the first number of serving cells, wherein the predetermined serving cell comprises a primary cell or a primary secondary cell; and

determine a bitmap comprising a number of bits indicating results of the beam failure detection at least on the first number of serving cells or a second number of serving cells, wherein the second number of serving cells includes some but not all of the first number of serving cells; and

determine that (a) random access procedure is initiated to transmit indication of the beam failure detection using a resource allocated for the terminal device; and

transmit, using the resource allocated for the terminal device, to a network device serving the terminal, the indication including the bitmap, wherein the bitmap comprises the predetermined serving cell and the first or the second number of serving cells.

2. The terminal device of claim 1, wherein the resource allocated for the terminal device is sufficient for the transmission of the indication of the results of the beam failure detection on the first number of serving cells.

3. The terminal device of claim 1, wherein the resource allocated for the terminal device is insufficient for the transmission of the indication of the results of the beam failure detection on the first number of serving cells.

4. The terminal device of claim 1, wherein the resource allocated for the terminal device is sufficient for the transmission of the indication of the results of the beam failure detection on the second number of serving cells.

5. The terminal device of claim 1, wherein the resource allocated for the terminal device is insufficient for the transmission of the indication of the results of the beam failure detection on the first number of serving cells and sufficient for the transmission of the indication of the results of the beam failure detection on the second number of serving cells.

6. The terminal device of claim 1, wherein each bit of the bitmap indicates whether the beam failure is detected or not on one serving cell of the first or the second number of serving cells.

7. The terminal device of claim 6, wherein each cell is associated with a different cell index.

8. The terminal device of claim 7, wherein one bit of the bitmap corresponds to one cell associated with the cell index of that serving cell.

9. The terminal device of claim 7, wherein one bit corresponds to the cell index of the predetermined serving cell.

10. The terminal device of claim 1, wherein the bitmap is one-octet.