coordinate their transmission power. In C-OFDMA, APs coordinate resource unit (RU) assignment. In coordinated beamforming (BF), APs coordinate BF. In coordinated multi user multiple input multiple output (MU-MIMO) (also known as joint transmission), APs coordinate their MU-MIMO transmissions.

[0005] However, there has been no discussion so far concerning coordinated service periods (SPs).

[0006] There is thus a need for communication apparatuses and methods that can solve the above mentioned issue. Furthermore, other desirable features and characteristics will become apparent from the subsequent detailed description and the appended claims, taken in conjunction with the accompanying drawings and this background of the disclosure.

SUMMARY

[0007] Non-limiting and exemplary examples facilitate providing communication apparatuses and communication methods for Coordinated SPs.

[0008] According to an aspect of the present disclosure, there is provided a first Access Point (AP) comprising: circuitry, which in operation, generates a request frame indicating a request to setup one or more Coordinated service periods (SPs); and a transmitter, which in operation, transmits the request frame to a second AP.

[0009] According to another aspect of the present disclosure, there is provided a non-AP STA, comprising: a receiver, which in operation, receives one of a Beacon frame or Action frame from its associated AP; circuitry, which in operation, extracts information of SPs for coordinated transmissions from the frame; and a transmitter, which in operation, transmits a request frame to the AP, the request frame indicating a request to join the SPs.

[0010] According to another aspect of the present disclosure, there is provided a method comprising: generating a request frame indicating a request to setup one or more Coordinated SPs; and transmitting the request frame to an AP.

[0011] 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. Additional benefits and advantages of the disclosed examples will become apparent from the specification and drawings. The benefits and/or advantages may be individually obtained by the various examples 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 DRAWINGS

[0012] The accompanying figures where like reference numerals refer to identical or functionally similar elements throughout the separate views and which together with the detailed description below are incorporated in and form part of the specification, serve to illustrate various embodiments and to explain various principles and advantages in accordance with present embodiments.

[0013] FIG. 1 shows a flow diagram illustrating communications using enhanced service periods for prioritized traffic according to an example.

[0014] FIG. 2 illustrates an example of coordinated service periods for Multi-AP Coordinated transmission.

[0015] FIG. 3 and FIG. 4 show overlapping wireless networks each of which can include at least one access point (AP) and at least one communication apparatus according to an example.

[0016] FIG. 5 illustrates EHT Action frames according to an example.