described in this embodiment of this application may be indirect coupling or a communication connection between apparatuses, units, or modules in an electrical form, a mechanical form, or another form. Coupling is used for information exchange between the apparatuses, the units, or the modules. The processor 3020 may collaborate with the memory 3030 together. The processor 3020 may execute the program instructions stored in the memory 3030. At least one of the at least one memory may be included in the processor.

[00216] In this embodiment of this application, a specific connection medium between the communication interface 3010, the processor 3020, and the memory 3030 is not limited. In this embodiment of this application, the memory 3030, the processor 3020, and the communication interface 3010 are connected through a bus 3040 in FIG. 30a, and the bus is represented by a bold line in FIG. 30a. A manner of connection between other components is schematically described, and is not limited thereto. The bus may be classified into an address bus, a data bus, a control bus, and the like. For ease of representation, only one thick line is used to represent the bus in FIG. 30a, but this does not mean that there is only one bus or only one type of bus.

[00217] When the apparatus 300 is specifically an apparatus used in a station or an access point, for example, when the apparatus 300 is specifically a chip or a chip system, the communication interface 3010 may output or receive a baseband signal. When the apparatus 300 is specifically a station or an access point, the communication interface 3010 may output or received a radio frequency signal. In the embodiments of this application, the processor may be a general purpose processor, a digital signal processor, an application-specific integrated circuit, a field programmable gate array or another programmable logic device, a discrete gate or transistor logic device, or a discrete hardware component, and may implement or execute the methods, steps, and logical block diagrams disclosed in the embodiments of this application. The general-purpose processor may be a microprocessor, any conventional processor, or the like. The steps of the method disclosed with reference to the embodiments of this application may be directly performed by a hardware processor, or may be performed by using a combination of hardware in the processor and a software module.

[00218] For example, FIG. 30b is a schematic diagram depicting a structure of another station 3000 according to an embodiment of this application. The station may perform operations performed by the station in FIG. 12.

computer-readable storage medium stores instructions. When the instructions are run on a computer, the instructions are configured to perform the method performed by the station in the foregoing method embodiments.

[00228] An embodiment of this application provides a computer-readable storage medium. The computer-readable storage medium stores instructions. When the instructions are run on a computer, the instructions are configured to perform the method performed by the access point in the foregoing method embodiments.

[00229] An embodiment of this application further provides a computer program product. When the computer program product runs on a processor, the computer program product is configured to perform the method performed by the station in the foregoing method embodiments.

[00230] An embodiment of this application further provides a computer program product. When the computer program product runs on a processor, the computer program product is configured to perform the method performed by the access point in the foregoing method embodiments.

[00231] Based on a same inventive concept, a problem-resolving principle of the apparatus provided in this embodiment of this application is similar to that of the method embodiments of this application. Therefore, for implementation of the apparatus, refer to the implementation of the methods. For brevity of description, details are not described herein again.

[00232] It should be noted that, for brief description, the foregoing method embodiments are represented as a combination of a series of actions. However, persons skilled in the art should appreciate that this application is not limited to the described order of the actions, because according to this application, some steps may be performed in other orders or simultaneously. It should be further appreciated by persons skilled in the art that the related actions and modules are not necessarily required in this application.

[00233] Description of the embodiments provided in this application may refer to each other, and description of the embodiments has different focuses. For a part not described in detail in an embodiment, refer to related description in another embodiment. For ease of description and brevity, for functions and performed steps of the apparatuses and devices provided in the embodiments of this application, refer to related description in the method embodiments of this application. Mutual reference, combination, or reference may be made between the method embodiments and between the apparatus embodiments.

CLAIMS

What is claimed is:

1. A communication method applied in a wireless local area network, wherein the method comprises:

generating, by a communication apparatus, a physical layer protocol data unit (PPDU), wherein a transmission bandwidth of the PPDU is divided into a plurality of segments, the PPDU comprises a universal signal (U-SIG) field and an extremely high throughput-signal (EHT-SIG) field, wherein the U-SIG field and the EHT-SIG field are carried on at least one segment of the plurality of segments, the transmission bandwidth of the PPDU is used for non-OFDMA transmission, the U-SIG field indicates number of EHT-SIG Symbols, the PPDU further comprises a first field, wherein the first field is carried on the at least one segment of the plurality of segments, and the first field indicates number of multi-user multiple-input multiple-output (MU-MIMO) users; and

sending, by the communication apparatus, the PPDU to a station.

2. The method according to claim 1, wherein the EHT-SIG field does not comprise a resource unit allocation subfield.

3. The method according to claim 1 or 2, wherein EHT-SIG fields carried on different segments in the PPDU are the same.

4. The method according to any one of claims 1 to 3, wherein EHT-SIG fields carried on different channels in a same segment in the PPDU are the same.

5. The method according to claim 4, wherein each channel of the different channels is 20MHz.

6. The method according to any one of claims 1 to 5, wherein the at least one segment of the plurality of segments is 80MHz.

7. A communication method applied in a wireless local area network, wherein the method comprises:

receiving, by a communication apparatus, a physical layer protocol data unit (PPDU), wherein a transmission bandwidth of the PPDU is divided into a plurality of segments, the PPDU comprises a universal signal (U-SIG) field and an extremely high throughput-signal (EHT-SIG) field, wherein the U-SIG field and the EHT-SIG field are carried on at least one segment of the plurality of segments, the transmission bandwidth of the PPDU is used for non-OFDMA

transmission, the U-SIG field indicates number of EHT-SIG Symbols, the PPDU further comprises a first field, wherein the first field is carried on the at least one segment of the plurality of segments, and the first field indicates number of multi-user multiple-input multiple-output (MU-MIMO) users.

8. The method according to claim 7, wherein the method further comprises:

determining, by the communication apparatus, the number of EHT-SIG Symbols and the number of MU-MIMO users based on the U-SIG field and the first field respectively.

9. The method according to claim 7 or 8, wherein the EHT-SIG field does not comprise a resource unit allocation subfield.

10. The method according to any one of claims 7 to 9, wherein EHT-SIG fields carried on different segments in the PPDU are the same.

11. The method according to any one of claims 7 to 10, wherein EHT-SIG fields carried on different channels in a same segment in the PPDU are the same.

12. The method according to claim 11, wherein each channel of the different channels is 20MHz.

13. The method according to any one of claims 7 to 12, wherein the at least one segment of the plurality of segments is 80MHz.

14. A communication apparatus, wherein the communication apparatus comprises a processor, and when the processor executes a computer program in a memory, the method according to any one of claims 1 to 6 or claims 7 to 13 is performed.

15. A computer-readable storage medium, wherein the computer-readable storage medium is configured to store computer-executable instructions, and when the computer-executable instructions are executed, the method according to any one of claims 1 to 6 or claims 7 to 13 is implemented.

16. A computer program product, wherein the computer program product comprises a computer program, and when the computer program is executed, the method according to any one of claims 1 to 6 or claims 7 to 13 is implemented.

17. A computer program, wherein when the computer program is executed, the method according to any one of claims 1 to 6 or claims 7 to 13 is implemented.