Claims

1. A payment method based on attribute information, wherein:

a service providing device owned by a user and connected to an interface provided for a mobile terminal is configured to parse code information and participate in executing a payment operation; the service providing device or the mobile terminal acquires and records first attribute information when the service providing device parses code information corresponding to a code medium, and generates a to-be-paid order; and when payment is to be made, the service providing device or the mobile terminal acquires current corresponding second attribute information, extracts the recorded first attribute information, calculates or adjusts an amount involved in the order according to the first attribute information, the second attribute information or changes thereof, and then executes the payment operation, comprising:

deducting the amount from stored funds pre-deposited in the service providing device; or, recording a to-be-paid amount under a designated account stored by the service providing device first, and then settling when the service providing device or the mobile terminal is connected to a collaborative background server.

2. The method according to claim 1, comprising:

parsing code information to extract information used in the payment operation; wherein the extracted information from the parsing comprises:

service information corresponding to the code information, and/or prestored content; wherein the prestored content is pre-stored at the service providing device, or the mobile terminal or a collaborative background server.

3. The method according to claim 2, wherein:

the attribute information corresponds to the mobile terminal, or the user of the mobile terminal, or the service providing device; or, the attribute information corresponds to the code information or a releaser of the code information, or corresponds to the coding medium corresponding to the code information or a releaser of the coding medium; or, the attribute information refers to location information, corresponding to the mobile terminal, or the user of

the mobile terminal, or the service providing device, or corresponding to the code information, or corresponding to releaser of the coding information, or corresponding to the coding medium corresponding to the code information, or corresponding to a releaser of the coding medium; or, the attribute information refers to time; or, the attribute information refers to an aggregate amount or an aggregate number of times.

4. The method according to claim 2, wherein:

the attribute information is included in the service information extracted from the parsing; or, the attribute information is included in the pre-stored content extracted from the parsing; or, the attribute information is provided by the mobile terminal, or the user of the mobile terminal, or the service providing device, or the collaborative background server before or during the payment operation.

5. The method according to claim 2, wherein:

a corresponding discount is granted based on different attribute information or attribute information change, and the involved amount is adjusted when performing the payment operation; the attribute information and a rule for determining a corresponding discount are included in the service information extracted from the parsing or included in the prestored content extracted from the parsing.

6. The method according to claim 2, wherein:

the attribute information is included in second service information; corresponding second code information is generated from second service information according to a preset coding rule, and then a corresponding second coding medium is generated from the second code information; the second code information is available to any party storing a matched code parsing rule to identify; the second code information or the second coding medium is released, transmitted, displayed, or stored by the service providing device or the mobile terminal or the collaborative background server.

7. The method according to claim 6, comprising:

the second code information or the second coding medium is generated by the service providing device, or the mobile terminal, or the collaborative background server, or by a coding medium generating device designated by the service providing device or the mobile terminal or the collaborative background server, or by a third party coding medium generating device according to the preset coding rule; the second coding medium is any one or combination of:

a bar code image generated in a pattern of one-dimensional code, two-dimensional code, or multi-dimensional code; an optical lattice diagram generated in a form of light-shadow ray or refurbishing frequency variation or in a form of visible light or UV or infrared light or polarized light and a digitalized acoustic wave or radio wave generated with a specific law or a specific frequency variation pattern.

8. The method according to claim 1, wherein:

the first attribute information is pre-stored at the service providing device or the mobile terminal, and is recorded in the to-be-paid order after the service providing device parses the code information; when the payment operation is executed, currently corresponding second attribute information is obtained, and pre-stored first attribute information is extracted; the amount involved in the payment operation is computed based on the first attribute information or the second attribute information.

9. The method according to claim 1, wherein:

the information extracted from identifying the coding medium and parsing the corresponding information includes first attribute information recorded by the service providing device or the mobile terminal; the information extracted from next time of identifying the coding medium and parsing the code information includes second attribute information; the recorded first attribute information is obtained, and the amount involved in the payment operation is computed based on the first attribute information or the second attribute information; the code information involved in the two times of parsing is identical or different; the coding mediums involved in the two times of parsing refer to the same coding medium with the same code information, or two coding mediums with different code information.

10. The method according to claim 1, wherein:

the attribute information is transmitted to the service providing device or the mobile terminal along with a request for service provision; or, the attribute information is provided to the service providing device or the mobile terminal before requesting for service provision or during service provision; wherein the service includes executing the payment operation.

11. The method according to claim 10, wherein:

in the payment operation, the payment procedure is separated from the settlement procedure; a to-be-paid amount is first recorded under a designated account, and after the service providing device is connected to the collaborative background server, settlement is performed under the designated account based on the recorded to-be-paid amount and the designated account; or, the to-be-paid amount is first recorded, and then settling under the designated account is performed based on the recorded to-be-paid amount when the collaborative background server is connected; wherein the designated account includes a payment account and/or a debit account; and the payment account is bound to the mobile terminal, or user of the mobile terminal, or the service providing device; and settling under the payment account includes deducting the amount from the payment account or creating a bill under the designated account.

12. The method according to claim 11, wherein:

the designated account is included in the service information extracted from the parsing; or, the designated account is included in the pre-stored content extracted from the parsing; or, the designated account is obtained during providing a service process or during executing a payment operation; wherein the designated account is provided by the user via the mobile terminal, or the service providing device, or the collaborative background server, or the designated account is provided by the collaborative background server, or the mobile terminal, or the service providing device.

13. The method according to claim 11, wherein:

recording of the to-be-paid amount is regarded as payment success, and then a subsequent service is provided, wherein the settlement is performed when the collaborative background

server is connected; or, recording of the to-be-paid amount and settling by the connected collaborative processing is regarded as payment success, and then the subsequent service is provided; wherein when the to-be-paid amount is recorded, the service providing device is in a network connected state or offline state, and the mobile terminal is in a network connected state or offline state; when performing settlement, at least one of the service providing device or the mobile terminal is in the network connected state, and settles with the collaborative background server.

14. The method according to claim 10, wherein:

in the payment operation, when the stored fund is pre-deposited in the service providing device, the service providing device deducts the amount from the stored fund, wherein the stored fund refers to a digital currency; wherein the stored fund is anonymous; or, the stored fund is bound to the mobile terminal, user of the mobile terminal, or the service providing device; deducting the amount from the stored fund is regarded as payment success, and then the subsequent service is provided; wherein upon deducting the amount from the stored fund, the service providing device is in a network connected state or offline state, and the mobile terminal is in a network connected state or offline state.

15. The method according to claim 14, wherein:

the service providing device, or the mobile terminal, or the collaborative background server summarizes the amounts deducted from the stored fund; and the background server is connected with the service providing device or the mobile terminal.

16. The method according to claim 10, wherein:

after the parsing, the service providing device extracts a link address of the collaborative background server; wherein the link address is included in the service information extracted from the parsing, or included in the pre-stored content extracted from the service providing device or the mobile terminal after the parsing.

17. The method according to claim 2, wherein:

a code parsing rule used in parsing the code information is matched with a preset coding rule used in generating the code information; the preset coding rule is used in generating corresponding code information based on the service information, or in generating corresponding coding information based on the service information, or in generating a coding medium corresponding to the code information.

18. The method according to claim 2, wherein:

the obtaining pre-stored content includes any of the following manners:

extracting, by the service providing device, the content pre-stored in the service providing device or the mobile terminal; extracting, by the service providing device, storage information of the content saved by the mobile terminal with respect to the content pre-stored in the mobile terminal; initiating, by the service providing device, a hardware entity or an application of the mobile terminal, to extracting the content pre-stored in the mobile terminal; and initiating, by the service providing device, an external device designated by the service providing device or the mobile terminal, and extracting, by the external device, the content pre-stored in the mobile terminal or the service providing device.

19. The method according to claim 2, wherein:

the service information and/or the prestored content is extracted by the service providing device, or the mobile terminal or the collaborative background server after parsing.

20. The method according to claim 2, wherein:

the information extracted from the parsing or a portion thereof is transmitted to the mobile terminal or provided to the user of the mobile terminal to view, or provided to the user of the mobile terminal to view for confirmation.

21. The method according to claim 2, wherein:

the information extracted from the parsing or a portion thereof refers to information bound to the mobile terminal, the user of the mobile terminal, or the service providing device.

22. The method according to claim 11, wherein:

the service providing device is anonymous, or is bound to the mobile terminal or the user; the service providing device pre-storing the stored fund and/or the payment account is distributed by an operator; and a background server of the operator stores identification information of the service providing device.

23. The method according to claim 2, wherein:

the code information is obtained by any of the following manners:

the code information is obtained from decoding the coding medium; the mobile terminal or the service providing device obtains a coding medium released where it can access, or a coding medium it receives, or a coding medium displayed thereto; the mobile terminal or the service providing device or the collaborative background server decodes the coding medium; the code information is obtained by clicking a hyperlink; the hyperlink is transmitted to the mobile terminal or the service providing device individually or along with a coding medium, or along with a carrier medium that may carry the hyperlink; or the code information is directly received by the service providing device, or is forwarded to the service providing device the mobile terminal or the collaborative background server after receipt.

24. The method according to claim 10, wherein:

the service providing device and/or the mobile terminal interacts with the collaborative background server for transmitting the payment result; the service providing device and/or the mobile terminal provides the payment result to the user; the payment result is provided in real-time or non-real-time after the payment operation is completed.

25. The method according to claim 10, wherein:

the collaborative background server or the service providing device or the mobile terminal is further connected to the third-party server to provide post-payment services.

26. The method according to claim 10, wherein:

identification information is included in the code information or the service information

extracted from the parsing; after the identification information is correctly parsed by a matching service providing device, the set operation flow is executed based on an instruction from the service information.

27. The method according to claim 10, wherein:

for the service provided, the identification information corresponding to any one or more of the collaborative background server, the user of the mobile terminal, the mobile terminal, and the service providing device, is provided as the service requesting party and/or service recipient; and/or the identification information of the third-party user or the third-party mobile terminal or the third-party server designated by the mobile terminal or the service providing device or the collaborative background server, is provided as the service recipient; wherein, the identification information is included in the code information, or included in the service information extracted from the parsing, or included in the pre-stored content extracted from the parsing; or, the identification information is provided by the user via the mobile terminal or the service providing device or the collaborative background server, or is provided by the collaborative background server, or the mobile terminal, or the service providing device.

28. The method according to claim 26, wherein:

the identification information of the service requesting party and/or the service recipient is in default; wherein the service requesting party and/or the service recipient refer to a mobile terminal currently connected to the service providing device; or, the service requesting party and/or the service recipient are designated by a set operation flow.

29. The method according to claim 2, wherein:

through the parsing, one or more of the service providing device, the mobile terminal, and the collaborative background server are driven to perform an operation flow set for them respectively; the operation flow is included in the service information extracted from the parsing, or included in the prestored content extracted from the parsing.

30. The method according to claim 2, wherein:

the payment operation is executed after confirming at least part of information extracted from the parsing; the confirmation is provided by the user through the mobile terminal, or transmitted directly by the mobile terminal; or, the confirmation is provided in a manner of code information or coding medium; or, the confirmation is in default.

31. The method according to claim 6, wherein:

the second service information further includes any one or more items of the following:

the payment result after executing the payment operation; first identification information, which refers to identification of any one or more of the collaborative background server, the user of the mobile terminal, the mobile terminal, and the service providing device; second identification information, which refers to identification information of a third party user, a third party mobile terminal, or a third party server designated by the mobile terminal, the service providing device, or the collaborative background server; or information correspondingly bound to the first identification information and/or second identification information.

32. The method according to claim 1, wherein:

the service providing device or the mobile terminal pre-stores a coding medium or its medium carrier; the service information corresponding to the coding medium includes the following parameters:

paid amount, or number of times of consumptions corresponding to the paid amount; upon consumption, the service providing device or the mobile terminal releases, or transmits, or displays the coding medium, and any party which identifies the coding medium or successfully parses the corresponding information can obtain the parameter in the service information to write off or update the parameter.

33. The method according to claim 1, wherein:

the coding medium refers to any one of the following or a combination thereof:

a bar code image generated in a pattern of one-dimensional code, two-dimensional code, or multi-dimensional code; an optical lattice diagram generated in a form of light-shadow ray or

refurbishing frequency variation or in a form of visible light or UV or infrared light or polarized light; and a digitalized acoustic wave or radio wave generated with a specific law or a specific frequency variation pattern.

34. The method according to claim 1, wherein:

the collaborative background server includes one or more of the following:

server of the operator of the service providing device; server of the issuer of the service providing device; server of the issuer of the code information or its corresponding coding medium; server of the operator of the application configured in the service providing device; server of the operator of the application configured in the mobile terminal; server of the payee; and server which manages digital currency exchange.

35. The method according to claim 1, wherein:

the service providing device is always connected with the interface of the mobile terminal; or, the service providing device is connected with the interface of the mobile terminal when performing parsing and/or performing the payment operation.

36. The method according to claim 35, wherein:

verification is performed when performing parsing, or when performing the payment operation, or when the service providing device is re-connected with the interface of the mobile terminal after disconnection, or when the service providing device is connected with the interface of another mobile terminal.

37. The method according to claim 36, wherein:

verification is performed by one of the service providing device, the mobile terminal, and the collaborative server, or performed collaboratively by more of the parties; wherein the verification comprises:

determining whether password information provided by the user agrees with a preset password; or, determining whether biometric information acquired from the user agrees with preset biometric information; or, verifying through identity questions; or, verifying through

short messages; or, determining whether the attribute information corresponding to the user or the mobile terminal or the service providing device is matched with designated attribute information; or, determining whether the location information corresponding to the mobile terminal or the service providing device is matched with designated location information; or, determining whether the service providing device maintains connected with the interface of the mobile terminal; or, determining whether the service providing device has a digital certificate, further confirming user identity through the digital certificate and verifying association between the mobile terminal and the digital certificate.

38. The method according to claim 10, wherein:

identification information which may uniquely identify the user, or the mobile terminal, or the service providing device serves as a payment token, wherein the payment token is used to mask sensitive information.

39. The method according to claim 10, wherein:

the coding rule is stored at the service providing device or the mobile terminal; corresponding code information can be generated from the service information according to the coding rule; the service information is superimposed with identification information which serves as payment token and may uniquely identify the mobile terminal, or the user, or the service providing device, and/or associated information of the mobile terminal, or the user, or the service providing device; wherein payment tokenization can be implemented according to the coding rule so as to replace sensitive information with the payment token.

40. The method according to claim 35, wherein:

the service providing device is a USB device with a USB connector, which is connected to a mobile terminal with a corresponding USB interface; or the service providing device is a memory card, which is connected to the mobile terminal with a corresponding memory card slot or memory card interface; or the service providing device is a SIM card, which is connected to the mobile terminal with a corresponding SIM card slot or SIM card interface; or the service providing device is an eSIM card, which is connected to the mobile terminal with

a corresponding eSIM card integrated interface or is integrated in the mobile terminal; or, the service providing device is a device having a wired or wireless communication interface, which is in signal connection with the mobile terminal having a corresponding wired or wireless communication interface, wherein the signal connection allows the service providing device to communicate with the mobile terminal when offline or online; or the service providing device is a device with an infrared interface, which is in signal connection with the mobile terminal with a corresponding infrared interface; or the service providing device is a device with a Bluetooth interface, which is in signal connection with a mobile terminal with a corresponding Bluetooth interface; or the service providing device is wirelessly connected with the mobile terminal based on NFC identification; or the service providing device is a combination of at least two components that are respectively connected to the mobile terminal in same or different manners, wherein one component in the combination is any one in a first group including a USB device, a memory card, a SIM card, an eSIM card, or a device with a wired or wireless communication interface, a device with an infrared interface, a device with a Bluetooth interface, or a device that is connected based on NFC identification; the other component in the combination is any one in a second group including a USB device, a memory card, a SIM card, an eSIM card, or a device with a wired or wireless communication interface, a device with an infrared interface, a device with a Bluetooth interface, or a device that is connected based on NFC identification.

41. The method according to claim 10, wherein:

the service providing device performs parsing, or participates in service providing, or executing the payment operation by running an application configured therein; or, the service providing device collaborates with the mobile terminal to run the application such that the service providing device and the mobile terminal collaborates to perform parsing, or provide services or execute the payment operation; the application provided for the mobile terminal is associated with the application configured for the service providing device; or, the mobile terminal and the service providing device independently run their own configured applications, such that the service providing device and the mobile terminal collaborate to provide services or execute the payment operation; the application configured by the mobile terminal is a general payment application, or an application provided for the mobile terminal or the service providing device

are associated.

42. The method according to claim 1, wherein:

a wearable device serves as the mobile terminal or is connected with the mobile terminal; or, the service providing device is embedded in the wearable device.

43. The method according to claim 42, wherein:

the wearable device refers to one of the following parts or a portion thereof:

accessories, eyeglass, eyeglass clips, headwear, hats, tie clips, brooches, bow ties, bracelets, watches, earphones, clothing, and shoes; the wearable device is at least provided with an information display and input device.

44. A service providing device for paying based on attribute information, wherein:

the service providing device owned by a user is connected with an interface of a mobile terminal and participates in executing a payment operation; the service providing device is provided with a code information parsing unit for parsing code information; the service providing device or the mobile terminal acquires and records first attribute information when the service providing device parses code information corresponding to a code medium, and generates a to-be-paid order; and when payment is to be made, the service providing device or the mobile terminal acquires current corresponding second attribute information, extracts the recorded first attribute information, calculates or adjusts an amount involved in the order according to the first attribute information, the second attribute information or changes thereof, and then executes the payment operation, comprising:

deducting the amount from stored funds pre-deposited in the service providing device; or, recording a to-be-paid amount under a designated account stored by the service providing device first, and then settling when the service providing device or the mobile terminal is connected to a collaborative background server.

45. The service providing device according to claim 44, wherein:

the attribute information corresponds to the mobile terminal, or the user of the mobile terminal,

or the service providing device; or, the attribute information corresponds to the code information or a releaser of the code information, or corresponds to the coding medium corresponding to the code information or a releaser of the coding medium; or, the attribute information refers to location information, corresponding to the mobile terminal, or the user of the mobile terminal, or the service providing device, or corresponding to the code information, or corresponding to releaser of the coding information, or corresponding to the coding medium corresponding to the code information, or corresponding to a releaser of the coding medium; or, the attribute information refers to time; or, the attribute information refers to an aggregate amount or an aggregate number of times.

46. The service providing device according to claim 44, wherein:

the attribute information is included in the service information corresponding to the code information extracted from the parsing; or, the attribute information is included in the prestored content, wherein the prestored content is in the mobile terminal, service providing device, or background server, and is extracted from the parsing and provided to the service providing device; or, the attribute information is provided by the mobile terminal, or the user of the mobile terminal, or the service providing device, or the collaborative background server before or during the payment operation; wherein the transmitting/receiving unit of the service providing device receives the attribute information provided by the mobile terminal or the user or the background server or the prestored content including the attribute information.

47. The service providing device according to claim 46, wherein:

a corresponding discount is granted based on different attribute information or attribute information change, and the involved amount is adjusted when performing the payment operation; the attribute information and a rule for determining a corresponding discount are included in the service information extracted from the parsing or included in the prestored content extracted from the parsing.

48. The service providing device according to claim 46, wherein:

the attribute information is included in second service information; corresponding second code

information is generated from second service information according to a preset coding rule, and then a corresponding second coding medium is generated from the second code information; the second code information is available to any party storing a matched code parsing rule to identify; the second code information or the second coding medium is released, transmitted, displayed, or stored by the service providing device or the mobile terminal or the collaborative background server.

49. The service providing device according to claim 46, wherein:

the second code information or the second coding medium is generated by a coding medium generating unit configured for the service providing device, or the mobile terminal, or the collaborative background server, or by a coding medium generating device designated by the service providing device or the mobile terminal or the collaborative background server, or by a third party coding medium generating device according to the preset coding rule.

50. The service providing device according to claim 44, wherein:

the first attribute information is pre-stored in a memory unit of the service providing device or at the mobile terminal, and is recorded in the to-be-paid order after the service providing device parses the code information; when the payment operation is executed, currently corresponding second attribute information is obtained, and pre-stored first attribute information is extracted; the amount involved in the payment operation is computed based on the first attribute information or the second attribute information.

51. The service providing device according to claim 44, wherein:

the information extracted from identifying the coding medium and parsing the corresponding information includes first attribute information recorded by the service providing device or the mobile terminal; the information extracted from next time of identifying the coding medium and parsing the code information includes second attribute information; the recorded first attribute information is obtained, and the amount involved in the payment operation is computed based on the first attribute information or the second attribute information; the code information involved in the two times of parsing is identical or different; the coding mediums

involved in the two times of parsing refer to the same coding medium with the same code information, or two coding mediums with different code information.

52. The service providing device according to claim 44, wherein:

the attribute information is transmitted to the service providing device along with a request for service provision; or, the attribute information is provided to the service providing device before requesting for service provision or during service provision, wherein the service includes executing the payment operation.

53. The service providing device according to claim 52, wherein:

a code information parsing unit of the service providing device parses the code information obtained by the service providing device to extract service information corresponding to the parsed code information, such that the service providing device may provide services based on the extracted service information and content stored by the service providing device.

54. The service providing device according to claim 52, wherein:

the transmitting/receiving unit of the service providing device may interact with the mobile terminal when offline, and may interact with the mobile terminal and/or a background server when online; the transmitting/receiving unit may further obtain code information from the mobile terminal or the background server and passes the code information to the code information parsing unit to parse; or, the transmitting/receiving unit may further obtain a coding medium or other carrier medium from the mobile terminal or the background server; passes the code information obtained from parsing the coding medium to the code information parsing unit to parse; a decoding unit is provided at the service providing device or the mobile terminal or the background server.

55. The service providing device according to claim 52, wherein:

a memory unit of the service providing device stores a designated account or link information for retrieving the designated account, wherein the designated account is pre-stored, or included in the service information, or extracted from the parsing and then stored, or the designated

account is stored after the transmitting/receiving unit retrieves based on link information, or the designated account is provided by the mobile terminal or provided by the user through the mobile terminal and stored after being retrieved by the transmitting/receiving unit; the service providing device deducts the amount from the stored-value fund under the designated account; or, the service providing device records the to-be-paid amount under the designated account, and when the service providing device is connected to a collaborative background server, the transmitting/receiving unit transmits the designated account and the to-be-paid amount for settlement, and deduction or billing is performed under the designated account.

56. The service providing device according to claim 55, wherein:
the designated account is bound to the mobile terminal, or the user of the mobile terminal, or the service providing device.

57. The service providing device according to claim 53, wherein:
after the parsing, the service providing device obtains a link address of the collaborative background server; and the link address is included in the service information extracted after the parsing, or included in the pre-stored content extracted from the service providing device or the mobile terminal after the parsing.

58. The service providing device according to claim 53, wherein:
a code parsing rule used by the code information parsing unit in parsing the code information is matched with a preset coding rule used in generating the code information; the preset coding rule is used in generating corresponding code information based on the service information, or generating corresponding coding information based on the service information and generating a coding medium corresponding to the code information; the storing unit or the code information parsing unit stores the code parsing rule or stores the code parsing rule and a preset coding rule; the coding medium refers to any one or any combination of the following:
a bar code image generated in a pattern of one-dimensional code, two-dimensional code, or multi-dimensional code; an optical lattice diagram in a form of light-shadow ray or refurbishing frequency variation or in a form of visible light or UV or infrared light or polarized light; and a

digitalized acoustic wave or radio wave generated with a specific law or a specific frequency variation pattern.

59. The service providing device according to claim 53, wherein:

the service information extracted from the coding medium parsed by the code information parsing unit or the code parsing rule further includes command information; the command information is configured for actuating the service providing device to execute an operation flow set thereto, or for actuating the service providing device and the background server in collaboration therewith or the mobile terminal to execute the operation flow respectively set thereto.

60. The service providing device according to claim 52, wherein:

the memory unit of the service providing device further stores verification and check information or stores link information for retrieving the verification and check information; the transmitting/receiving unit further transmits the verification and checking information and/or verification information; when the service providing device is connected to the mobile terminal or is providing a service or is performing a payment operation, the verification and check information is retrieved by the service providing device or the background server or a verification unit of the mobile terminal, used for checking with the verification information provided by the background server or the mobile terminal or the user or with the verification information acquired from the user.

61. The service providing device according to claim 53, wherein:

The memory unit of the service providing device further stores the coding medium or its carrier medium; the code information corresponding to the coding medium can be parsed by the service providing device or parsed by the mobile terminal or background server or other mobile terminal obtaining the coding medium; wherein the coding medium or its carrier medium is pre-stored before being distributed by the service providing device; or, the coding medium or its carrier medium is autonomously obtained by the service providing device or received from the mobile terminal or the background server before or during service provision; or, the coding

medium or its carrier medium is generated by the mobile terminal or the coding medium generating unit configured for the service providing device.

62. The service providing device according to claim 52, wherein:

the service providing device generates corresponding second code information from second service information according to a preset coding rule, and then a corresponding second coding medium is generated from the second code information; the second code information is available to any party storing a matched code parsing rule to identify; wherein the second code information or the second coding medium can be transmitted by the transmitting/receiving unit, and/or stored by the memory unit; the second service information includes any one or more items of the following:

payment result after executing the payment operation; first identification information, which refers to identification of any one or more of the collaborative background server, the user of the mobile terminal, the mobile terminal, and the service providing device; second identification information, which refers to identification information of a third-party user, a third-party mobile terminal, or a third-party server designated by the mobile terminal, the service providing device, or the collaborative background server; information correspondingly bound to the first identification information and/or second identification information; or attribute information corresponding to the user of the mobile terminal, or the mobile terminal, or the service providing device.

63. The service providing device according to claim 44, wherein:

identification information which may uniquely identify the user, or the mobile terminal, or the service providing device, and/or bound or association information thereof, serve as a payment token, the payment token is used for performing masking processing to sensitive information.

64. The service providing device according to claim 44, wherein:

the coding rule is stored at the service providing device; corresponding code information may be generated from the service information according to the coding rule; the service information is superimposed with identification information which serves as payment token and may

uniquely identify the mobile terminal, or the user, or the service providing device, and/or superimposed with associated information of the mobile terminal, or the user, or the service providing device; wherein payment tokenization may be implemented according to the coding rule so as to replace sensitive information with the payment token.

65. The service providing device according to claim 44, wherein:

the service providing device stores a digital certificate, wherein user identity and verify association between the mobile terminal and the digital certificate are further confirmed through the digital certificate.

66. The service providing device according to claim 44, wherein:

the service providing device is a USB device with a USB connector, which is connected to a mobile terminal with a corresponding USB interface; or the service providing device is a memory card, which is connected to the mobile terminal with a corresponding memory card slot or memory card interface; or the service providing device is a SIM card, which is connected to the mobile terminal with a corresponding SIM card slot or SIM card interface; or the service providing device is an eSIM card, which is connected to the mobile terminal with a corresponding eSIM card integrated interface or is integrated in the mobile terminal; or, the service providing device is a device having a wired or wireless communication interface, which is in signal connection with the mobile terminal having a corresponding wired or wireless communication interface, wherein the signal connection allows the service providing device to communicate with the mobile terminal when offline or online; or the service providing device is a device with an infrared interface, which is in signal connection with the mobile terminal with a corresponding infrared interface; or the service providing device is a device with a Bluetooth interface, which is in signal connection with a mobile terminal with a corresponding Bluetooth interface; or the service providing device is wirelessly connected with the mobile terminal based on NFC identification; or the service providing device is a combination of at least two components that are respectively connected to the mobile terminal in same or different manners, wherein one component in the combination is any one in a first group including a USB device, a memory card, a SIM card, an eSIM card, or a device with a wired or wireless communication

interface, a device with an infrared interface, a device with a Bluetooth interface, or a device that is connected based on NFC identification; the other component in the combination is any one in a second group including a USB device, a memory card, a SIM card, an eSIM card, or a device with a wired or wireless communication interface, a device with an infrared interface, a device with a Bluetooth interface, or a device that is connected based on NFC identification.

67. The service providing device according to claim 44, wherein:
a wearable device serves as the mobile terminal or is connected with the mobile terminal; or, the service providing device is embedded in the wearable device.

68. The service providing device according to claim 67, wherein:
the wearable device refers to one of the following parts or a portion thereof:
accessories, eyeglass, eyeglass clips, headwear, hats, tie clips, brooches, bow ties, bracelets, watches, earphones, clothing, and shoes; the wearable device is at least provided with an information display and input device.

69. A mobile terminal for paying based on attribute information, wherein:
an interface provided for the mobile terminal is connected with the service providing device; the service providing device owned by a user is configured to parse code information and participate in executing a payment operation the service providing device or the mobile terminal acquires and records first attribute information when the service providing device parses code information corresponding to a code medium, and generates a to-be-paid order; and when payment is to be made, the service providing device or the mobile terminal acquires current corresponding second attribute information, extracts the recorded first attribute information, calculates or adjusts an amount involved in the order according to the first attribute information, the second attribute information or changes thereof, and then executes the payment operation, comprising:
deducting the amount from stored funds pre-deposited in the service providing device; or, recording a to-be-paid amount under a designated account stored by the service providing device first, and then settling when the service providing device or the mobile terminal is

connected to a collaborative background server; the mobile terminal has a transmitting/receiving unit to transmit the attribute information from the mobile terminal, or the user, or the background server to the service providing device.

70. The mobile terminal according to claim 69, wherein:

the attribute information is included in the service information obtained from parsing the code information; the mobile terminal transmits or forwards the coding medium of the attribute information included in the service information or the carrier medium to the service providing device via the transmitting/receiving information, such that the service providing device autonomously identifies and parses the coding medium; or, the attribute information is included in the prestored content, or is prestored in the mobile terminal or background server, and is transmitted to the service providing device via the transmitting/receiving unit; or, the attribute information is provided by the mobile terminal, or the user of the mobile terminal, or the service providing device, or the collaborative background server before or during the payment operation, and then the mobile terminal transmits the attribute information to the service providing device via the transmitting/receiving unit.

71. The mobile terminal according to claim 69, wherein:

the attribute information corresponds to the mobile terminal, or the user of the mobile terminal, or the service providing device; or, the attribute information corresponds to the code information or a releaser of the code information, or corresponds to the coding medium corresponding to the code information or a releaser of the coding medium; or, the attribute information refers to location information, corresponding to the mobile terminal, or the user of the mobile terminal, or the service providing device, or corresponding to the code information, or corresponding to releaser of the coding information, or corresponding to the coding medium corresponding to the code information, or corresponding to a releaser of the coding medium; or, the attribute information refers to time; or, the attribute information refers to an aggregate amount or an aggregate number of times.

72. The mobile terminal according to claim 71, wherein:

a corresponding discount is granted based on different attribute information or attribute information change, and the involved amount is adjusted when performing the payment operation; the attribute information and a rule for determining a corresponding discount are included in the service information extracted from the parsing or included in the prestored content.

73. The mobile terminal according to claim 70, wherein:

the attribute information is included in second service information; the mobile terminal is configured with a coding medium generating unit configured for generating corresponding second code information from second service information according to a preset coding rule, and then generating a corresponding second coding medium from the second code information; the second code information is available to any party storing a matched code parsing rule to identify; the second code information or the second coding medium is released, transmitted, displayed, or stored by the service providing device or the mobile terminal or the collaborative background server.

74. The mobile terminal according to claim 73, wherein:

the second code information or the second coding medium is generated by a coding medium generating unit configured for the service providing device, or the mobile terminal, or the collaborative background server, or by a coding medium generating device designated by the service providing device or the mobile terminal or the collaborative background server, or by a third party coding medium generating device according to the preset coding rule.

75. The mobile terminal according to claim 69, wherein:

the first attribute information is pre-stored in a memory unit of the service providing device or at the mobile terminal, and is recorded in the to-be-paid order after the service providing device parses the code information; when the payment operation is executed, currently corresponding second attribute information is obtained, and pre-stored first attribute information is extracted; the amount involved in the payment operation is computed based on the first attribute information or the second attribute information.

76. The mobile terminal according to claim 69, wherein:

the information extracted from identifying the coding medium and parsing the corresponding information includes first attribute information recorded by the service providing device or the mobile terminal; the information extracted from next time of identifying the coding medium and parsing the code information includes second attribute information; the recorded first attribute information is obtained, and the amount involved in the payment operation is computed based on the first attribute information or the second attribute information; the code information involved in the two times of parsing is identical or different; the coding mediums involved in the two times of parsing refer to the same coding medium with the same code information, or two coding mediums with different code information.

77. The mobile terminal according to claim 70, wherein:

the attribute information is transmitted by the mobile terminal to the service providing device along with a request for service provision; or, the attribute information is provided by the mobile terminal to the service providing device before requesting for service provision or during service provision, wherein the service includes executing the payment operation.

78. The mobile terminal according to claim 77, wherein:

the mobile terminal transmits or forwards via the transmitting/receiving unit a designated account or the coding medium or its carrier medium whose corresponding service information includes the designated account to the service providing device; the designated account is stored at the mobile terminal, or provided by the user or the background server during service provision or during executing the payment operation; the service providing device deducts the amount from the stored-value fund under the designated account; or, the service providing device records the to-be-paid amount under the designated account, so as to provide the designated account and the to-be-paid amount for settlement when the service providing device or the mobile terminal is connected to a background server, and to deduct the amount or form a bill under the designated account.

79. The mobile terminal according to claim 77, wherein:

the mobile terminal further comprises:

an obtaining module configured for obtaining a coding medium of a corresponding type, wherein the obtained coding medium is decoded by a decoding unit configured to any party of the mobile terminal or the service providing device or the background server for decoding to obtain corresponding code information, and the decoded code information is parsed by a code information parsing unit configured to the service providing device to extract corresponding service information; the coding medium refers to any one or any combination of the following:

a bar code image generated in a pattern of one-dimensional code, two-dimensional code, or multi-dimensional code; an optical lattice diagram in a form of light-shadow ray or refurbishing frequency variation or in a form of visible light or UV or infrared light or polarized light; and a digitalized acoustic wave or radio wave generated with a specific law or a specific frequency variation pattern.

80. The mobile terminal according to claim 79, wherein:

the mobile terminal further comprises:

an input unit configured for obtaining user inputted information; and a displaying unit for displaying the input information or information from the service providing device or the background server upon interaction to the user or the external parties, and displaying the coding medium obtained by the mobile terminal, or code information obtained from decoding, or service information extracted from the parsing.

81. The mobile terminal according to claim 80, wherein:

the mobile terminal further comprises:

a verifying unit configured for checking and comparing verification and check information with verification provided by the background server or the mobile terminal or the user or verification acquired from the user when the service providing device is connected to the mobile terminal or is providing a service or is performing a payment operation; the verification and check information is pre-stored in the mobile terminal or the service providing device or the background server; and the transmitting/receiving unit further transmits the verification and check information and/or verification information.

82. The mobile terminal according to claim 81, wherein:

a coding medium generating unit of the mobile terminal is configured for generating corresponding second code information from second service information according to a preset coding rule, and then generating a corresponding second coding medium from the second code information; the second code information is available to any party storing a matched code parsing rule to identify; wherein the second code information or the second coding medium can be transmitted by the transmitting/receiving unit, and/or stored by the mobile terminal or the service providing device; the second service information includes any one or more items of the following:

payment result after executing the payment operation; first identification information, which refers to identification of any one or more of the collaborative background server, the user of the mobile terminal, the mobile terminal, and the service providing device; second identification information, which refers to identification information of a third-party user, a third-party mobile terminal, or a third-party server designated by the mobile terminal, the service providing device, or the collaborative background server; information correspondingly bound to the first identification information and/or second identification information; and attribute information corresponding to the user of the mobile terminal, or the mobile terminal, or the service providing device.

83. The mobile terminal according to claim 70, wherein:

identification information which may uniquely identify the user, or the mobile terminal, or the service providing device and/or bound or association information thereof serves as a payment token, the payment token is used for performing masking processing to sensitive information.

84. The mobile terminal according to claim 70, wherein:

the coding rule is stored at the mobile terminal; corresponding code information may be generated from the service information according to the coding rule; the service information is superimposed with identification information which serves as payment token and may uniquely identify the mobile terminal, or the user, or the service providing device, and/or superimposed with associated information of the mobile terminal, or the user, or the service providing

device; wherein payment tokenization may be implemented according to the coding rule so as to replace sensitive information with the payment token.

85. The mobile terminal according to claim 69, wherein:

the service providing device is a USB device with a USB connector, which is connected to a mobile terminal with a corresponding USB interface; or the service providing device is a memory card, which is connected to the mobile terminal with a corresponding memory card slot or memory card interface; or the service providing device is a SIM card, which is connected to the mobile terminal with a corresponding SIM card slot or SIM card interface; or the service providing device is an eSIM card, which is connected to the mobile terminal with a corresponding eSIM card integrated interface or is integrated in the mobile terminal; or, the service providing device is a device having a wired or wireless communication interface, which is in signal connection with the mobile terminal having a corresponding wired or wireless communication interface, wherein the signal connection allows the service providing device to communicate with the mobile terminal when offline or online; or the service providing device is a device with an infrared interface, which is in signal connection with the mobile terminal with a corresponding infrared interface; or the service providing device is a device with a Bluetooth interface, which is in signal connection with a mobile terminal with a corresponding Bluetooth interface; or the service providing device is wirelessly connected with the mobile terminal based on NFC identification; or the service providing device is a combination of at least two components that are respectively connected to the mobile terminal in same or different manners, wherein one component in the combination is any one in a first group including a USB device, a memory card, a SIM card, an eSIM card, or a device with a wired or wireless communication interface, a device with an infrared interface, a device with a Bluetooth interface, or a device that is connected based on NFC identification; the other component in the combination is any one in a second group including a USB device, a memory card, a SIM card, an eSIM card, or a device with a wired or wireless communication interface, a device with an infrared interface, a device with a Bluetooth interface, or a device that is connected based on NFC identification.

86. The mobile terminal according to claim 82, wherein:

a wearable device serves as the mobile terminal or is connected with the mobile terminal; or, the service providing device is embedded in the wearable device; wherein the transmitting/receiving unit, the obtaining unit, the input unit, the displaying unit, the coding medium generating unit, and the decoding unit are provided in one wearable device or separately provided in a plurality of wearable devices or separately provided in the wearable device and the mobile terminal.

87. The mobile terminal according to claim 86, wherein:

the wearable device refers to one of the following parts or a portion thereof:

accessories, eyeglass, eyeglass clips, headwear, hats, tie clips, brooches, bow ties, bracelets, watches, earphones, clothing, and shoes.