SERVER AND METHOD FOR FACILITATING PROVIDING COOPERATIVE ADVERTISEMENT

TECHNICAL FIELD

[0001] Various embodiments relate to a server and a method for facilitating providing a cooperative advertisement.

BACKGROUND

[0002] Cooperative advertising is a type of advertising campaigns where two entities (for example, companies) with aligned incentives co-create and co-fund an advertisement to meet both entities' marketing objectives. For example, where a CPU manufacturer co-funds an advertisement with a computer manufacturer whose computer includes the CPU manufactured by the CPU manufacturer, such advertisement may be considered as a cooperative advertisement. Both the CPU manufacturer and the computer manufacturer may benefit if the computer manufacturer sells more computers including the CPU manufactured by the CPU manufacturer, and thus the CPU manufacturer and the computer manufacturer may have an incentive to pool funds and cooperate on marketing efforts.

[0003] Although the cooperative advertising may be an effective approach to marketing, there may have problems of high management overhead costs for creating and administering the cooperative advertisement. Generally, the cooperative adverting may require a high degree of manual management to create and run the cooperative advertisement, and such high degree of manual management may create a lower bound of budgets for the cooperative advertisement below which is not feasible to run the cooperative advertisement.

[0004] In addition, in an online-to-offline food and retail (for example, mart) market with a number of small and medium-sized merchants (retailers), the cooperative adverting may not currently be a viable marketing option for the small and medium-sized merchants due to the overhead costs of running the cooperative advertisement.

[0005] Therefore, there is a need to provide a solution for facilitating providing a cooperative advertisement.

SUMMARY

[0006] Various embodiments describes technical solutions for modifying a traditional system for managing the advertisement, serving the advertisement, and billing and reporting the advertisement, to automate the cooperative advertising. According to the various embodiments, costs for the cooperative advertising may be lowered, and it may be feasible for the small and medium-sized merchants to participate in the cooperative advertising.

[0007] According to various embodiments, there is a server for facilitating providing a cooperative advertisement, the server comprising: a memory configured to store instructions; and a processor for executing the stored instructions and configured to: generate a budget pool of a secondary advertiser for the cooperative advertisement, wherein the budget pool includes one or more criteria for a primary advertiser for the cooperative advertisement with the secondary advertiser; generate one or more indexes for the generated budget pool based on the one or more criteria of the generated budget pool; select, using the one or more indexes, at least one of a plurality of candidate primary advertisers as the primary advertiser allowed to use the budget pool for the cooperate advertisement with the secondary advertiser; and generate the cooperate advertisement for the primary advertiser and the secondary advertiser using the generated budget pool.

[0008] In some embodiments, the processor is further configured to generate the cooperate advertisement by inserting an image object relating to the secondary advertiser into an advertisement provided by the primary advertiser using an image processing technology.

[0009] In some embodiments, the processor is configured to insert the image object relating to the secondary advertiser into the advertisement provided by the primary advertiser based on the one or more criteria of the generated budget pool.

[0010] In some embodiments, the processor is further configured to bill each of the primary advertiser and the secondary advertiser based on at least one of an advertisement performance and the one or more criteria of the generated budget pool.

[0011] In some embodiments, the processor is further configured to: provide a computing device associated with the secondary advertiser with an interface allowing the secondary advertiser to search one or more candidate primary advertisers whose advertisement relates to a good or a service provided by the secondary advertiser; and in response to a request for a search from the computing device associated with the secondary advertiser, produce a search result including information about the one or more candidate primary advertisers whose advertisement relates to the good or the service provided by the secondary advertiser, and provide the computing device associated with the secondary advertiser with the search result.

[0012] In some embodiments, the processor is further configured to: provide a computing device associated with a candidate primary advertiser with an interface allowing the candidate primary advertiser to search one or more candidate secondary advertisers; and in response to a request for a search from the computing device associated with the candidate primary advertiser, produce a search result including information about the one or more candidate secondary advertisers using one or more indexes of a budget pool generated by each of the one or more candidate secondary advertisers, and provide the computing device associated with the candidate primary advertiser with the search result.

[0013] In some embodiments, the processor is further configured to: receive first constraints including at least one of a first frequency cap and a first budget cap for the cooperative advertisement from the primary advertiser; and store the received first constraints in the memory.

[0014] In some embodiments, the one or more criteria includes at least one of terms, conditions and second constraints provided by the secondary advertiser.

[0015] In some embodiments, the second constraints include at least one of a second frequency cap and a second budget cap for the cooperative advertisement provided by the secondary advertiser, and the processor is further configured to check whether the cooperative advertisement is not against both the first constraints and the second constraints; and post the cooperative advertisement if the cooperative advertisement is not against both the first constraints and the second constraints.

[0016] In some embodiments, the processor is further configured to store the generated budget pool with the one or more indexes in the memory.

[0017] According to various embodiments, there is a method for facilitating providing a cooperative advertisement, the method comprising: generating a budget pool of a secondary advertiser for the cooperative advertisement, wherein the budget pool includes one or more criteria for a primary advertiser for the cooperative advertisement with the secondary advertiser; generating one or more indexes for the generated budget pool based on the one or more criteria of the generated budget pool; selecting, using the one or more indexes, at least one of a plurality of candidate primary advertisers as the primary advertiser allowed to use the budget pool for the cooperate advertisement with the secondary advertiser; and generating the cooperate advertisement for the primary advertiser and the secondary advertiser using the generated budget pool.

[0018] In some embodiments, the generating the cooperate advertisement comprises inserting an image object relating to the secondary advertiser into an advertisement provided by the primary advertiser using an image processing technology.

[0019] In some embodiments, the generating the cooperate advertisement comprises inserting the image object relating to the secondary advertiser into the advertisement provided by the primary advertiser based on the one or more criteria of the generated budget pool.

[0020] In some embodiments, the method further comprises billing each of the primary advertiser and the secondary advertiser based on at least one of an advertisement performance and the one or more criteria of the generated budget pool.

[0021] In some embodiments, the method further comprises providing a computing device associated with the secondary advertiser with an interface allowing the secondary advertiser to search one or more candidate primary advertisers whose advertisement relates to a good or a service provided by the secondary advertiser; and in response to a request for a search from the computing device associated with the secondary advertiser, producing a search result including information about the one or more candidate primary advertisers whose advertisement relates to the good or the service provided by the secondary advertiser, and providing the computing device associated with the secondary advertiser with the search result.

[0022] In some embodiments, the method further comprises providing a computing device associated with a candidate primary advertiser with an interface allowing the candidate primary advertiser to search one or more candidate secondary advertisers; and in response to a request for a search from the computing device associated with the candidate primary advertiser, producing a search result including information about the one or more candidate secondary advertisers using one or more indexes of a budget pool generated by each of the one or more candidate secondary advertisers, and providing the computing device associated with the candidate primary advertiser with the search result.

[0023] In some embodiments, the method further comprises receiving first constraints including at least one of a first frequency cap and a first budget cap for the cooperative advertisement from the primary advertiser; and storing the received first constraints in a memory.

[0024] In some embodiments, the one or more criteria includes at least one of terms, conditions and second constraints provided by the secondary advertiser.

[0025] In some embodiments, the second constraints include at least one of a second frequency cap and a second budget cap for the cooperative advertisement provided by the secondary advertiser, and the method further comprises checking whether the cooperative advertisement is not against both the first constraints and the second constraints; and posting the cooperative advertisement if the cooperative advertisement is not against both the first constraints and the second constraints.

[0026] In some embodiments, the method further comprises storing the generated budget pool with the one or more indexes in a memory.

[0027] According to various embodiments, a data processing apparatus configured to perform the method of any one of the above embodiments is provided.

[0028] According to various embodiments, a computer program element comprising program instructions, which, when executed by one or more processors, cause the one or more processors to perform the method of any one of the above embodiments is provided.

[0029] According to various embodiments, a computer-readable medium comprising program instructions, which, when executed by one or more processors, cause the one or more processors to perform the method of any one of the above embodiments is provided. The computer-readable medium may include a non-transitory computer-readable medium.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030] The invention will be better understood with reference to the detailed description when considered in conjunction with the non-limiting examples and the accompanying drawings, in which:

- FIGS. 1 and 2 illustrate infrastructures of a system including a server for facilitating providing a cooperative advertisement according to various embodiments.
- FIG. 3 illustrates a block diagram of a server for facilitating providing a cooperative advertisement according to various embodiments.
- FIG. 4 illustrates a flowchart for a method for facilitating providing a cooperative advertisement according to various embodiments.
- FIG. 5 illustrates a data flow diagram of a system for facilitating providing a cooperative advertisement according to various embodiments.
- FIGS. 6 and 7 illustrate exemplary diagrams showing a user interface of a computing device of a secondary advertiser according to various embodiments.
- FIGS. 8 and 9 illustrate exemplary diagrams showing a user interface of a computing device of a candidate primary advertiser according to various embodiments.
- FIGS. 10, 11, 12 and 13 illustrate exemplary diagrams showing a user interface of a computing device of a user according to various embodiments.

DETAILED DESCRIPTION

[0031] The following detailed description refers to the accompanying drawings that show, by way of illustration, specific details and embodiments in which the disclosure may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice

the disclosure. Other embodiments may be utilized and structural, and logical changes may be made without departing from the scope of the disclosure. The various embodiments are not necessarily mutually exclusive, as some embodiments can be combined with one or more other embodiments to form new embodiments.

[0032] Embodiments described in the context of one of a server and a method are analogously valid for the other server and method. Similarly, embodiments described in the context of a server are analogously valid for a method, and vice-versa.

[0033] Features that are described in the context of an embodiment may correspondingly be applicable to the same or similar features in the other embodiments. Features that are described in the context of an embodiment may correspondingly be applicable to the other embodiments, even if not explicitly described in these other embodiments. Furthermore, additions and/or combinations and/or alternatives as described for a feature in the context of an embodiment may correspondingly be applicable to the same or similar feature in the other embodiments.

[0034] In the context of various embodiments, the articles “a”, “an” and “the” as used with regard to a feature or element include a reference to one or more of the features or elements.

[0035] As used herein, the term “and/or” includes any and all combinations of one or more of the associated listed items.

[0036] Throughout the description, the term “module” may be understood as an application specific integrated circuit (ASIC), an electronic circuit, a combinational logic circuit, a field programmable gate array (FPGA), a processor which executes code, other suitable hardware components which provide the described functionality, or any combination thereof. The term of “module” may include a memory which stores code executed by the processor.

[0037] In the following, embodiments will be described in detail.

[0038] FIGS. 1 and 2 illustrate infrastructures of a system 200 including a server 100 for facilitating providing a cooperative advertisement according to various embodiments.

[0039] As shown in FIG. 1, the system 200 may include, but is not limited to, the server 100, a database system 140, a network 150, a computing device 160 associated with a user 161 (also referred to as a "consumer"), a plurality of computing devices 170 (not shown) each associated with a plurality of primary advertisers 171, and a plurality of computing devices 180 (not shown) each associated with a plurality of secondary advertisers 181.

[0040] In some embodiments, an on-demand service may be a service allowing the user 161 to fulfill the user's demand via an immediate access to items and/or services. The user 161 may request the on-demand service, such as a transport service or an item delivery service, using a user interface presented on the computing device 160. The user 161 may make an order for the on-demand service.

[0041] In some embodiments, the user 161 may use an application, for example, a mobile application, provided by a server 100. For example, the server 100 may be controlled and/or managed by an on-demand service platform provider. The application may be installed in the computing device 160 associated with the user 161, to interact with the on-demand service. In some embodiments, the application may show an advertisement, to promote a good, a service, an event or a brand of an advertiser to the user 161.

[0042] In some embodiments, the advertisement may be an announcement or a notice in a public medium to promote the good, the service, the event or the brand of the advertiser. For example, the advertisement may include, but is not limited to, a visibility advertisement and a promotion advertisement. In some embodiments, the advertiser may be a person or a company who advertises its good, service, event or brand. For example, the advertiser may include, but is not limited to, a manufacturer, a retailer, and a merchant. As an example, the primary advertiser 171a may be a merchant and the secondary advertiser 181a may be a large company. As another example, both of the primary advertiser 171a and the secondary advertiser 181a may be merchants. In some embodiments, the cooperative advertisement may be a

collaborative advertisement which may occur when two or more advertisers share advertising costs.

[0043] In some embodiments, the advertiser may include the primary advertiser 171a (also referred to as a "merchant advertiser") that may lead to provide the cooperative advertisement. For example, the primary advertiser 171a may create the advertisement to promote the good, service, event or brand of the primary advertiser 171a. The primary advertiser 171a may involve the secondary advertiser 181a to the advertisement to create the cooperative advertisement using budget pool funds of the secondary advertiser 181a, to promote the good, service, event or brand of the primary advertiser 171a and the secondary advertiser 181a. In some embodiments, the advertiser may include the secondary advertiser 181a (also referred to as a "co-funder" or a "co-funding advertiser") that may join in the advertisement provided by the primary advertiser 171a to create the cooperative advertisement to promote the good, service, event or brand of the primary advertiser 171a and the secondary advertiser 181a. The secondary advertiser 181a may set a budget pool with the budget pool funds, so that the primary advertiser 171a may use the budget pool funds for the cooperative advertisement, based on one or more criteria specified in the budget pool. In some embodiments, the secondary advertiser 181a, as a budget pool provider, may independently set up its budget pool, specify constraints (for example, what kinds of merchants can utilize their budgets and at what maximum amount, advertisement creative design constraints, etc.), and then submit the budget pool for automatic indexing and searchability by the primary advertisers 171a later on when the primary advertisers 171a are creating their advertisements. The primary advertisers 171a may optionally view available budget pools and determine if they want to consume some of the budget for their advertisements. In this manner, the primary advertisers 171a and the secondary advertiser 181a may coordinate their advertisement creation, without having to talk directly to

each other and/or without assistance of any kind of advertisement operation person. (as will be described with reference to FIG. 3).

[0044] In some embodiments, the network 150 may include, but is not limited to, a Local Area Network (LAN), a Wide Area Network (WAN), a Global Area Network (GAN), or any combination thereof. The network 150 may provide a wireline communication, a wireless communication, or a combination of the wireline and wireless communication between the server 100 and the computing device 160, between the server 100 and the plurality of computing devices 170, and between the server 100 and the plurality of computing devices 180. As shown in FIG. 2, the network 150 may provide the wireline communication, the wireless communication, or the combination of the wireline and wireless communication between the plurality of computing devices 170 and the plurality of computing devices 180.

[0045] In some embodiments, the computing device 160 may be connectable to the server 100 via the network 150. In some embodiments, the computing device 160 may be arranged in data or signal communication with the server 100 via the network 150. In some embodiments, the computing device 160 may include, but is not limited to, at least one of the following: a mobile phone, a tablet computer, a laptop computer, a desktop computer, a head-mounted display and a smart watch. In some embodiments, the computing device 160 may be associated with the user 161. For example, the computing device 160 may belong to the user 161. Although not shown, it may be appreciated that the system 200 may further include a plurality of computing devices each associated with, for example, belonging to, a plurality of users.

[0046] In some embodiments, the computing device 160 may include a location sensor. In some embodiments, the location sensor may communicate with at least one of a global positioning satellite (GPS) server, a network server, and a Wi-Fi server, to detect a location of the computing device 160. In some embodiments, the computing device 160 may generate information about the location of the computing device 160.

[0047] In some embodiments, the server 100, for example, implemented by a server computer, may include a communication interface 110, a processor 120, and a memory 130 (as will be described with reference to FIG. 3).

[0048] In some embodiments, the server 100 may communicate with the computing device 160 via the network 150. In some embodiments, the computing device 160 may receive a request (hereinafter, referred to as an "order") from the user 161 for the on-demand service. The computing device 160 may send the order to the server 100 via the network 150. In some embodiments, the computing device 160 may send the information about the location of the computing device 160 to the server 100 via the network 150. The location of the computing device 160 may be considered as a location of the user 161. In some embodiments, the application, provided by the server 100, may show the advertisement based on the location of the computing device 160, to promote a good, a service, an event or a brand of an advertiser to the user 161.

[0049] In some embodiments, the system 200 may further include a database 141. In some embodiments, the database 141 may be a part of the database system 140 which may be external to the server 100. The server 100 may communicate with the database 141. In some other embodiments, although not shown, the database 141 may be implemented locally in the memory 130 of the server 100.

[0050] In some embodiments, the server 100 may communicate with the plurality of computing devices 170 via the network 150. In some embodiments, the plurality of computing devices 170 may be arranged in data or signal communication with the server 100 via the network 150. In some embodiments, the plurality of computing devices 170 may include, but is not limited to, at least one of the following: a mobile phone, a tablet computer, a laptop computer, a desktop computer, a head-mounted display and a smart watch. The plurality of computing devices 170 may be associated with the plurality of primary advertisers 171 respectively. For example, the

plurality of computing devices 170 may belong to the plurality of primary advertisers 171 respectively.

[0051] In some embodiments, the server 100 may communicate with the plurality of computing devices 180 via the network 150. In some embodiments, the plurality of computing devices 180 may be arranged in data or signal communication with the server 100 via the network 150. In some embodiments, the plurality of computing devices 180 may include, but is not limited to, at least one of the following: a mobile phone, a tablet computer, a laptop computer, a desktop computer, a head-mounted display and a smart watch. The plurality of computing devices 180 may be associated with the plurality of secondary advertisers 181 respectively. For example, the plurality of computing devices 180 may belong to the plurality of secondary advertisers 181 respectively.

[0052] In some embodiments, the primary advertiser 171a and the secondary advertiser 181a may be different from each other in terms of a type of the business. For example, the primary advertiser 171a may include, but is not limited to, a merchant or a retailer, who may provide a good or a service to the user 161, while the secondary advertiser 181a may include, but is not limited to, a manufacturer, who may produce and provide a good or a service to the manufacturer or the retailer, for example, the primary advertiser 171a. As another example, the secondary advertiser 181a may include, but is not limited to, a merchant or a retailer, who may provide a good or a service to the user 161, while the primary advertiser 171a may include, but are not limited to, a manufacturer, who may produce and provide a good or a service to the manufacturer or the retailer, for example, the secondary advertiser 181a. In some other embodiments, the primary advertiser 171a and the secondary advertiser 181a may be the same in terms of a type of the business. For example, the primary advertiser 171a and the secondary advertiser 181a may include, but are not limited to, a merchant or a retailer, who may provide a good or a service to the user 161. As another example, the primary advertiser 171a and the

secondary advertiser 181a may include, but are not limited to, a manufacturer, who may produce and provide a good or a service to the manufacturer or the retailer.

[0053] FIG. 3 illustrates a block diagram of a server 100 for facilitating providing a cooperative advertisement according to various embodiments.

[0054] As shown in FIG. 3, the server 100, for example, implemented by a server computer, may include a communication interface 110, a processor 120, and a memory 130.

[0055] In some embodiments, the memory 130 (also referred to as a "database") may store input data and/or output data temporarily or permanently. In some embodiments, the memory 130 may be configured to store instructions. In some embodiments, the memory 130 may store program code which allows the server 100 to perform a method 300 (as will be described with reference to FIG. 4). In some embodiments, the program code may be embedded in a Software Development Kit (SDK). The memory 130 may include an internal memory of the server 100 and/or an external memory. The external memory may include, but is not limited to, an external storage medium, for example, a memory card, a flash drive, and a web storage.

[0056] In some embodiments, the communication interface 110 may allow one or more computing devices, including a computing device 160, to communicate with the processor 120 of the server 100 via a network 150, as shown in FIG. 1. In some embodiments, as shown in FIG. 1, the computing device 160 may belong to a user 161 who wants to make an order for an on-demand service. In some embodiments, the communication interface 110 may transmit signals to the computing device 160, and/or receive signals from the computing device 160 via the network 150.

[0057] In some embodiments, the communication interface 110 may allow a plurality of computing devices 170 to communicate with the processor 120 of the server 100 via the network 150, as shown in FIGS. 1 and 2. As shown in FIGS. 1 and 2, each of the plurality of computing devices 170 may belong to each of a plurality of primary advertisers 171 who may

offer a cooperative advertisement. In some embodiments, the communication interface 110 may transmit signals to the plurality of computing devices 170, and/or receive signals from the plurality of computing devices 170, via the network 150.

[0058] In some embodiments, the communication interface 110 may allow a plurality of computing devices 180 to communicate with the processor 120 of the server 100 via the network 150, as shown in FIGS. 1 and 2. As shown in FIGS. 1 and 2, each of the plurality of computing devices 180 may belong to each of a plurality of secondary advertisers 181 who may participate in the cooperative advertisement. In some embodiments, the communication interface 110 may transmit signals to the plurality of computing devices 180, and/or receive signals from the plurality of computing devices 180, via the network 150.

[0059] The processor 120 may include, but is not limited to, a microprocessor, an analogue circuit, a digital circuit, a mixed-signal circuit, a logic circuit, an integrated circuit, a Central Processing Unit (CPU), a Graphics Processing Unit (GPU), a Digital Signal Processor (DSP), a Field Programmable Gate Array (FPGA), an Application Specific Integrated Circuit (ASIC), or any combination thereof. Any other kind of implementation of the respective functions, which will be described below in further detail, may also be understood as the processor 120.

[0060] In some embodiments, the processor 120 may be connectable to the communication interface 110. In some embodiments, the processor 120 may be arranged in data or signal communication with the communication interface 110 to transmit/receive the signals.

[0061] In some embodiments, the processor 120 may generate a budget pool of a secondary advertiser 181a for the cooperative advertisement. In some embodiments, a computing device 180a of the secondary advertiser 181a may send a request for generating the budget pool for the cooperative advertisement to the communication interface 110. In some embodiments, the request may include information about funds, for example, a funding amount. The request may further include one or more criteria for a primary advertiser 171a for the cooperative

advertisement with the secondary advertiser 181a. In some embodiments, the processor 120 may generate the budget pool of the secondary advertiser 181a based on the request received from the secondary advertiser 181a. In some embodiments, the budget pool of the secondary advertiser 181a may include the one or more criteria for the primary advertiser 171a for the cooperative advertisement with the secondary advertiser 181a. The secondary advertiser 181a may contribute the funds to the budget pool. The primary advertiser 171a may use the budget pool funds for the cooperative advertisement with the secondary advertiser 181a.

[0062] In some embodiments, the one or more criteria provided by the secondary advertiser 181a may include, but are not limited to, at least one of terms, conditions and constraints (also referred to as "restrictions") (hereinafter, referred to as "second constraints") for qualifying criteria that may define which primary advertiser 171a may utilise the budget pool funds. For example, the one or more criteria may include, but are not limited to, at least one of the following:

- The primary advertiser 171a may offer a particular product SKU (stock-keeping unit) defined by the secondary advertiser 181a;
- Maximum budget pool funds the primary advertiser 171a can utilise;
- Co-funding split (%) between the primary advertiser 171a and the secondary advertiser 181a;
- Minimum advertisement performance criteria needed for continued co-funding;
- Restricting co-funding for a specified primary advertiser;
- Restrictions on a location (for example, a geo-location) of the primary advertiser 171a;
- Restrictions on audience targeting;
- Frequency capping and budget capping restrictions (for example, maximum advertisement spending per day per cooperative advertisement); and

- Advertisement creation requirements (for example, including the secondary advertiser's 181a logo on the primary advertiser's 171a advertisement, if desired).

[0063] In some embodiments, the processor 120 may store the one or more criteria in the memory 130. In some embodiments, the one or more criteria may be used to select the primary advertiser 171a from a plurality of candidate primary advertisers 171. In some embodiments, the one or more criteria may be used to restrict the primary advertiser 171a when the primary advertiser 171a posts the cooperative advertisement using the budget pool funds. In some embodiments, the one or more criteria may be used to share spending for the cooperative advertisement with the primary advertiser 171a and the secondary advertiser 181a.

[0064] In some embodiments, the processor 120 may generate one or more indexes for the budget pool based on the one or more criteria of the budget pool. In some embodiments, the one or more indexes may be linked to the budget pool. For example, the one or more indexes may include, but are not limited to, data relevant to the one or more criteria of the budget pool. For example, the one or more indexes may include data relevant to the term and conditions of the one or more criteria. As another example, the one or more indexes may include data relevant to the second constraints. In some embodiments, the processor 120 may store the generated budget pool with the one or more indexes in the memory 130.

[0065] In some embodiments, the processor 120 may select at least one of a plurality of candidate primary advertisers 171 as the primary advertiser 171a allowed to use the budget pool for the cooperate advertisement with the secondary advertiser 181a. To select the primary advertiser 171a, the processor 120 may use the one or more indexes for the budget pool of the secondary advertiser 181a. In some embodiments, the processor 120 may match the at least one of the plurality of candidate primary advertisers 171 to the budget pool using the one or more indexes. In some embodiments, the processor 120 may obtain information about the plurality of candidate primary advertisers 171. For example, the information about the plurality

of candidate primary advertisers 171 may include, but is not limited to, a good and/or a service that each candidate primary advertiser 171 provides. In some embodiments, the processor 120 may compare the information about the plurality of candidate primary advertisers 171 with the one or more indexes for the budget pool of the secondary advertiser 181a, and match the at least one of the candidate primary advertisers 171 to the budget pool based on the comparison. The processor 120 may determine the matched advertiser as the primary advertiser 171a allowed to use the budget pool for the cooperative advertisement with the secondary advertiser 181a.

[0066] In some embodiments, the processor 120 may execute the generated cooperative advertisement for the primary advertiser 171a and the secondary advertiser 181a using the budget pool. In some embodiments, executing the cooperative advertisement may include generating (creating or designing) the cooperative advertisement, and posting (running or serving) the designed cooperative advertisement to promote goods, service and/or brand of the primary advertiser 171a and the secondary advertiser 181a.

[0067] In some embodiments, the processor 120 may generate the cooperate advertisement for the primary advertiser 171a and the secondary advertiser 181a using the budget pool. In some embodiments, the processor 120 may generate the cooperate advertisement by inserting an image object relating to the secondary advertiser 181a into an advertisement provided by the primary advertiser 171a using an image processing technology. In some embodiments, the processor 120 may insert the image object relating to the secondary advertiser 181a into the advertisement provided by the primary advertiser 171a based on the one or more criteria of the budget pool. For example, the one or more criteria may include the terms and the conditions relating to visual properties of the image object relating to the secondary advertiser 181a. The image object relating to the secondary advertiser 181a may include, but is not limited to, at least one of a name, a logo, a symbol, and an advertising copy relating to a good or a service

provided by the secondary advertiser 181a or relating to a brand of the second advertiser 181a. The visual properties of the image object may include, but are not limited to, at least one of a size, a shape, a position and a colour of the image object.

[0068] In some embodiments, the processor 120 may generate the image object relating to the secondary advertiser 181a based on the one or more criteria for the budget pool, for example, the terms and the conditions, and insert the generated image object into the advertisement provided by the primary advertiser 181a based on the one or more criteria for the budget pool, for example, the terms and the conditions. In some other embodiments, the processor 120 may obtain the image object relating to the secondary advertiser 181a from the computing device 180a of the secondary advertiser 181a, and insert the obtained image object into the advertisement provided by the primary advertiser 181a based on the one or more criteria for the budget pool, for example, the terms and the conditions.

[0069] In some embodiments, the primary advertiser 171a may spend the budget pool funds to post the cooperative advertisement. For example, the primary advertiser 171a may spend the budget pool funds, based on the one or more criteria of the budget pool.

[0070] In some embodiments, the processor 120 may post the cooperative advertisement based on the one or more criteria of the budget pool. In some embodiments, the processor 120 may receive constraints (also referred to as "restrictions") (hereinafter, referred to as "first constraints") from the computing device 170a of the primary advertiser 171a via the communication interface 110. For example, the first constraints may include, but are not limited to, at least one of a frequency cap (hereinafter, referred to as a "first frequency cap") which may limit the frequency for posting the cooperative advertisement and a budget cap (hereinafter, referred to as a "first budget cap") which may limit the budget for posting the cooperative advertisement. The primary advertiser 171a may decide the first constraints including the at least one of the first frequency cap and the first budget cap, for example, at an

advertisement set-up time, and send the first constraints to the processor 120. In some embodiments, before or after selecting a budget pool to co-fund their advertisement, the primary advertiser 171a may define the first constraints (such as their own targeting and delivery constraints including target audience selection, frequency capping, and other constraints) for their advertisement. In some embodiments, the processor 120 may store the received first constraints in the memory 130.

[0071] In some embodiments, the one or more criteria for the budget pool of the secondary advertiser 181a may include, but are not limited to, at least one of terms, conditions and constraints (hereinafter, referred to as "second constraints") provided by the secondary advertiser 181a. For example, the second constraints may include, but are not limited to, at least one of a frequency cap (hereinafter, referred to as a "second frequency cap") which may limit the frequency for posting the cooperative advertisement and a budget cap (hereinafter, referred to as a "second budget cap") which may limit the budget for posting the cooperative advertisement. The secondary advertiser 181a may decide the second constraints including the at least one of the second frequency cap and the second budget cap, and send the second constraints to the processor 120 to generate the budget pool.

[0072] In some embodiments, the processor 120 may check whether the cooperative advertisement is not against both the first constraints and the second constraints. In some embodiments, the processor 120 may post the cooperative advertisement if it is determined that the cooperative advertisement is not against both the first constraints and the second constraints.

[0073] In some embodiments, if it is determined that the cooperative advertisement is against at least one of the first constraints and the second constraints, the cooperative advertisement may not be created. For any other serving time constraints such as a target audience selection, frequency capping, time of day when the advertisement can be in effect (or other typical

advertisement serving constraints), the advertisement itself may inherit those constraints to determine if a user can see the advertisement at advertisement request time when the user is using a primary service application.

[0074] As described above, as both the primary advertiser 171a and secondary advertiser 181a are cooperative to create the advertisement, both entities may need to have a mechanism that may give them a measure of control on how budgets are deployed and how the advertisement is seen (for example, frequency capping, advertisement impressions per day, etc.). This may be a mechanism that has an ability to enforce two sets of advertisement serving capping constraints, specified by the primary advertiser 171a and the secondary advertiser 181a. According to various embodiments, the system 200 may enable cooperative advertising based on the two sets of frequency and budget capping criteria (for example, one set from the primary advertiser 171a and the other set from the secondary advertiser 181a), and if employed, the cooperative advertisement may only be served when neither set of capping criteria is not violated. This may be achieved by creating two sets of real-time capping aggregation logic and data to track serving restrictions for both the primary advertiser 171a and the secondary advertiser 181a.

[0075] In some embodiments, the processor 120 may bill each of the primary advertiser 171a and the secondary advertiser 181a, based on at least one of an advertisement performance and the one or more criteria of the budget pool. For example, the processor 120 may bill each of the primary advertiser 171a and the secondary advertiser 181a after the cooperative advertisement is finished posting. In some embodiments, the processor 120 may calculate spending for posting the cooperative advertisement, and calculate charges to be billed to each of the primary advertiser 171a and the secondary advertiser 181a based on the spending along with the at least one of the advertisement performance and the one or more criteria of the budget

pool, for example, conditions and constraints specified in the budget pool used for the cooperative advertisement.

[0076] In some embodiments, the processor 120 may include a mechanism for generating billing reports for the cooperative advertisement for both the primary advertiser 171a and the secondary advertiser 181a. Conventionally, only a single billing report has been sent to an advertiser for each billing cycle, and the billing for the advertisement may be based on the number of advertisement impressions, clicks and/or conversions. However, according to various embodiments of this disclosure, the processor 120 may create a plurality of billing reports, for example, two billing reports, per each cooperative advertisement per each billing cycle. For example, one billing report may be created to be sent to the primary advertiser 171a, and the other billing report may be created to be sent to the secondary advertiser 181a. In some embodiments, the billing amount to each of the primary advertiser 171a and the secondary advertiser 181a may be based on the advertisement performance, including, but not limited to, the number of impressions, clicks, conversions, and an advertisement bid per billable event type (for example, 1,000 conversions × $1/conversion = $1,000 billing), and based on the one or more criteria of the budget pool, for example, the terms and the conditions specified in the budget pool referenced by the cooperative advertisement. For example, the budget pool may specify the co-funding split (for example, 50% paid by a co-funder (secondary advertiser 181a) and 50% paid by an advertising merchant (primary advertiser 171a)). In some embodiments, additional informational performance reports may be generated for the secondary advertiser 181a.

[0077] In some embodiments, the processor 120 may provide the computing device 180a associated with the secondary advertiser 181a, for example, the computing device 180a of the secondary advertiser 181a, with an interface allowing the secondary advertiser 181a to search one or more candidate primary advertisers 171 whose advertisement relates to a good or a

service provided by the secondary advertiser 181a. In some embodiments, in response to a request for a search from the computing device 180a of the secondary advertiser 181a, the processor 120 may produce a search result including information about the one or more candidate primary advertisers 171 whose advertisement relates to the good or the service provided by the secondary advertiser 181a, and provide the computing device 180a of the secondary advertiser 181a with the search result.

[0078] In some embodiments, the processor 120 may receive input data relating to a query from the computing device 180a of the secondary advertiser 181a. The processor 120 may process the query for the search. The processor 120 may perform the search for the query to produce the search result from the information about the plurality of candidate primary advertisers 171. For example, the information about each of the plurality of candidate primary advertisers 171 may include, but is not limited to, a good or a service promoted by the advertisement provided by the primary advertiser 171. As an example, the information about each of the plurality of candidate primary advertisers 171 may further include, but is not limited to, a good or a service used by the candidate primary advertisers 171 and a good or a service provided (sold) by the candidate primary advertisers 171. The processor 120 may perform the search for the one or more relevant candidate primary advertisers from the plurality of candidate primary advertisers 171. The processor 120 may rank the plurality of candidate primary advertisers 171, by scoring the candidate primary advertisers 171 based on the query. The processor 120 may then produce the search result based on the score of each of the plurality of candidate primary advertisers 171.

[0079] In some embodiments, the processor 120 may provide the computing device 170a associated with a candidate primary advertiser 171a, for example, the computing device 170a of the candidate primary advertiser 171a, with an interface allowing the candidate primary advertiser 171a to search one or more candidate secondary advertisers 181. In some

embodiments, in response to a request for a search from the computing device 170a of the candidate primary advertiser 171a, the processor 120 may produce a search result including information about the one or more candidate secondary advertisers 181 using one or more indexes of a budget pool generated by each of the one or more candidate secondary advertisers 181, and provide the computing device 170a of the candidate primary advertiser 171a with the search result.

[0080] In some embodiments, the processor 120 may receive input data relating to a query from the computing device 170a of the primary advertiser 171a. The processor 120 may process the query for the search. The processor 120 may perform the search for the query to produce the search result from a plurality of budget pools. Each of the plurality of budget pools may link to one or more indexes relevant to the corresponding budget pool. The processor 120 may perform the search for relevant budget pools from the plurality of budget pools stored in the memory 130. The processor 120 may rank the plurality of budget pools, by scoring the one or more indexes linked to each of the plurality of budget pools based on the query. The processor 120 may then produce the search result based on the score of each of the plurality of budget pools.

[0081] As described above, various embodiments according to this disclosure may provide an advertisement management system 200 including a mechanism for the primary advertiser 171a to discover and/or avail of cooperative advertising budget pools, including a search interface and related indexing systems for the primary advertiser 171a to discover the budget pools available for co-funding their advertisements. The system 200 may use new indexes to match the primary advertiser 171a to budget pools including the terms, the conditions and the constraints (restrictions) specified by the secondary advertiser 181a. In addition, the system 200 may include a mechanism for automated advertisement generation that may feature the secondary advertiser's 181a logo or product on the primary advertiser's 171a advertisement.

The image processing technology may be automatically used to overlay the secondary advertiser's 181a image object onto the primary advertiser's 171a existing advertisement, as specified in the cooperative budget pool's terms and conditions.

[0082] As described above, the system 200 according to various embodiments may enable companies, for example, small and medium-sized merchants, to participate in the cooperative advertising. Advantageously, according to various embodiments, the system 200 may enable radical lowering of the management costs of cooperative advertising by at least one of search indexing techniques, automated image processing for producing the cooperative advertisement, a more complex advertisement serving restriction criteria, and a more complex billing and reporting mechanism. The system 200 may also automate the process of managing the cooperative advertisement and minimise human interaction needed.

[0083] FIG. 4 illustrates a flowchart for a method 300 for facilitating providing a cooperative advertisement according to various embodiments. According to various embodiments, the method 300 for facilitating providing the cooperative advertisement may be provided.

[0084] In some embodiments, the method 300 may include a step 301 of generating a budget pool of a secondary advertiser 181a for the cooperative advertisement. In some embodiments, the budget pool includes one or more criteria for a primary advertiser 171a for the cooperative advertisement with the secondary advertiser 181a.

[0085] In some embodiments, the method 300 may include a step 302 of generating one or more indexes for the generated budget pool based on the one or more criteria of the generated budget pool. In some embodiments, the generated budget pool may be stored in a memory along with the one or more indexes.

[0086] In some embodiments, the method 300 may include a step 303 of selecting, using the one or more indexes, at least one of a plurality of candidate primary advertisers as the primary

advertiser 171a allowed to use the budget pool for the cooperate advertisement with the secondary advertiser 181a.

[0087] In some embodiments, the method 300 may include a step 304 of generating the cooperate advertisement for the primary advertiser 171a and the secondary advertiser 181a using the generated budget pool.

[0088] FIG. 5 illustrates a data flow diagram of a system 200, for example, an advertisement online system, for facilitating providing a cooperative advertisement according to various embodiments.

[0089] In some embodiments, an application 201 (also referred to as an "app") may be a mobile application provided by an on-demand service platform provider. A user 161 (also referred to as a "consumer") may use the application 201 installed in a computing device 160 associated with the user 161 to interact with the on-demand service.

[0090] In some embodiments, an advertisement decision engine 202 (also referred to as an "ad decision engine") may be a backend service engine of the on-demand service platform provider. In some embodiments, the advertisement decision engine 202 may handle a request for an advertisement received via the application 201, and decide which advertisement(s) to return in response to the request. In some embodiments, the advertisement decision engine 202 may communicate with the application 201, an advertisement datastore 203, a frequency and budget capping module for the advertiser 206 and a frequency and budget capping module for the co-funder 207.

[0091] In some embodiments, the advertisement datastore 203 (also referred to as an "ad datastore") may be a database storing (housing) advertisement data (advertisement campaign data). For example, the advertisement datastore 203 may store all the advertisement data. In some embodiments, the advertisement datastore 203 may communicate with the advertisement decision engine 202 and an advertisement campaign manager 204.

[0092] In some embodiments, the advertisement campaign manager 204 (also referred to as an "ad campaign manager") may be a user interface though which advertisers (also referred to as "primary advertisers") may set up the advertisements. In some embodiments, the advertisement campaign manager 204 may communicate with the advertisement datastore 203, a co-funding budget pool manager 205, and the frequency and budget capping module for the advertiser 206.

[0093] In some embodiments, the co-funding budget pool manager 205 may be a user interface through which co-funding advertisers (also referred to as "secondary advertisers" or "co-funders") may create, configure and view a performance of budget pools available for co-funding campaigns (cooperative advertisements). In some embodiments, the co-funding budget pool manager 205 may communicate with the advertisement campaign manager 204 and the frequency and budget capping module for the co-funder 207.

[0094] In some embodiments, the frequency and budget capping module for the advertiser 206 and the frequency and budget capping module for the co-funder 207 may provide real-time aggregation services for monitoring how many users 161 have interacted with the advertisements per unit time, and how much budget has been spent per unit time. These modules 206, 207 may be used for both the advertisers and the co-funders to set constraints (restrictions) on how budgets are utilised over time. In some embodiments, the frequency and budget capping module for the advertiser 206 may communicate with an event-based streaming data module 211, the advertisement decision engine 202, the advertisement campaign manager 204, and the frequency and budget capping module for the co-funder 207. In some embodiments, the frequency and budget capping module for the co-funder 207 may communicate with the event-based streaming data module 211, the advertisement decision engine 202, the co-funding budget pool manager 205 and the frequency and budget capping module for the advertiser 206. In some embodiments, each advertisement event (for example, advertisement impressions, clicks and/or conversions) may be sent to the event-based data

streaming module 211 that the frequency and budget capping modules 206, 207 may subscribe to, in order to receive each event as it occurs for real-time aggregation. This may allow the frequency and budget capping modules 206, 207 to perform minutely, hourly, daily, or lifetime caps on views per user per unit time and/or advertisement budget spent per unit time.

[0095] In some embodiments, a transport engine 208 may be a backend service engine for a transport business of the on-demand service platform provider, from which pick-up locations and travel destinations are collected. In some embodiments, the transport engine 208 may communicate with the application 201 and the event-based streaming data module 211.

[0096] In some embodiments, a food engine 209 may be a backend service engine for a food and package delivery business of the on-demand service platform provider, from which food order data and delivery location data are collected. In some embodiments, the food engine 209 may communicate with the application 201 and the event-based streaming data module 211.

[0097] In some embodiments, a mart engine 210 may be a backend service engine for a mart (for example, goods, groceries, etc.) business of the on-demand service platform provider, from which grocery order data is collected. In some embodiments, the mart engine 210 may communicate with the application 201 and the event-based streaming data module 211.

[0098] FIGS. 6 and 7 illustrate exemplary diagrams showing a user interface of a computing device 180a of a secondary advertiser 181a according to various embodiments.

[0099] As shown in FIG. 6, in some embodiments, the user interface allowing the secondary advertiser 181a to search one or more candidate primary advertisers 171 (for example, retailers) whose advertisement relates to a good or a service provided by the secondary advertiser 181a may be provided. For example, if the secondary advertiser 181a may produce products #1, #2 and #3, the user interface may provide a screen showing a list of retailers who sell at least one of the products #1, #2 and #3, as candidate primary advertisers 171. For example, the user interface may show information including, but not limited to, at least one of a name, a product

sold by the retailer, a link to access a product catalogue provided by the retailer, and a preview image of the product sold by the retailer. In some embodiments, the user interface may show the list of the retailers based on ranks of the retailers, and the ranks may be determined based on interest of the secondary advertiser 181a and/or relevance to the secondary advertiser 181a. For example, as shown in FIG. 6, a retailer who sells the widest range of products provided by the secondary advertiser 181a may be highly ranked and displayed at the top of the list of the retailers.

[00100] As shown in FIG. 7, in some embodiments, where the secondary advertiser 181a inputs a query to search retailers who sell a certain product that the secondary advertiser 181a produces (and wants to promote), for example, the product #3, the list of the retailers may be filtered based on the query, and the user interface may show a list of the retailers excluding retailers who do not sell the product #3.

[00101] FIGS. 8 and 9 illustrate exemplary diagrams showing a user interface of a computing device 170a of a candidate primary advertiser 171a according to various embodiments.

[00102] As shown in FIG. 8, in some embodiments, the user interface allowing candidate primary advertiser 171a to search one or more candidate secondary advertisers 181 (for example, manufacturers) and/or one or more budget pools provided by the one or more candidate secondary advertisers 181. For example, if the candidate primary advertiser 171a may sell products #1 and #2, the user interface may provide a screen showing a list of manufacturers who produce at least one of the products #1 and #2, as the candidate secondary advertisers 181.

[00103] For example, the user interface may show information including, but not limited to, at least one of a name, a product produced by the manufacturer, a summary of a budget pool provided by the manufacturer, and a preview image of the product produced by the manufacturer. In some embodiments, the user interface may show the list of the manufacturers

based on ranks of the manufacturers, and the ranks may be determined based on interest of the candidate primary advertiser 171a and/or relevance to the candidate primary advertiser 171a. For example, as shown in FIG. 8, a manufacturer who produces the widest range of products sold by the candidate primary advertiser 171a may be highly ranked and displayed at the top of the list of the manufacturers.

[00104] As shown in FIG. 9, in some embodiments, where the candidate primary advertiser 171a inputs a query to search manufacturers who produce a certain product that the candidate primary advertiser 171a sells, for example, the product #2, the list of the manufacturers may be filtered based on the query, and the user interface may show a list of the manufacturers excluding manufacturers who do not produce the product #2.

[00105] FIGS. 10 to 13 illustrate exemplary diagrams showing a user interface of a computing device 160 of a user 161 according to various embodiments.

[00106] In some embodiments, the processor 120 (as described with reference to FIG. 3) may generate the cooperate advertisement for the primary advertiser 171a and the secondary advertiser 181a, by inserting, for example, overlaying, an image object 163 relating to the secondary advertiser 181a into an advertisement, for example, an existing advertisement, provided by the primary advertiser 171a using an image processing technology.

[00107] In some embodiments, the processor 120 may insert the image object 163 relating to the secondary advertiser 181a into the advertisement provided by the primary advertiser 171a based on visual properties of the image object specified in the budget pool. The image object 163 may include, but is not limited to, at least one of a name, logo, a symbol, and an advertising copy relating to a good or a service provided by the secondary advertiser 181a or relating to a brand of the second advertiser 181a. The visual properties of the image object may include, but are not limited to, at least one of a size, a shape, a position and a colour of the image object 163.

[00108] For example, as shown in FIG. 10, the existing advertisement 162a provided by the primary advertiser 171a may include a name and a logo of the primary advertiser 171a, to promote a café operated by the primary advertiser 171a. As shown in FIG. 11, the cooperative advertisement 162b may be generated by overlaying the image object 163 including a name of the secondary advertiser 181a and a name of a product produced by the secondary advertiser 181a on the existing advertisement 162a provided by the primary advertiser 171a. In some embodiments, the overlaying the image object 163 may be performed using the image processing technology.

[00109] As another example, as shown in FIG. 12, the existing advertisement 162a provided by the primary advertiser 171a may include the name and the logo of the primary advertiser 171a, to promote the café operated by the primary advertiser 171a. As shown in FIG. 13, the cooperative advertisement 162b may be generated by overlaying the image object 163 including a name of the secondary advertiser 181a and a name of a product produced by the secondary advertiser 181a on the existing advertisement 162a provided by the primary advertiser 171a. In some embodiments, a part of the image objects 164 included in the existing advertisement 162a provided by the primary advertiser 171a may be re-arranged, to make a space for overlaying the image object 163 relating to the secondary advertiser 181a on the existing advertisement 162a. In some embodiments, the re-arranging the part of the image objects 164 included in the existing advertisement 162a may include, but is not limited to, moving, re-sizing, and deleting the part of the image objects 164. In some embodiments, the re-arranging the part of the image objects 164 and the overlaying the image object 163 may be performed using the image processing technology.

[00110] In some embodiments, the cooperative advertisement may be posted based on terms and conditions specified in the budget pool. For example, as shown in FIG. 11, according to the terms and the conditions, the cooperative advertisement may be presented on a main screen

of an application provided by an on-demand service platform. As another example, as shown in FIG. 13, according to the terms and the conditions, the cooperative advertisement may be presented along with a search result in response to a request for search from the user 160.

[00111] While the disclosure has been particularly shown and described with reference to specific embodiments, it should be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention as defined by the appended claims. The scope of the invention is thus indicated by the appended claims and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced.

CLAIMS

1. A server for facilitating providing a cooperative advertisement, the server comprising:

a memory configured to store instructions; and

a processor for executing the stored instructions and configured to:

generate a budget pool of a secondary advertiser for the cooperative advertisement, wherein the budget pool includes one or more criteria for a primary advertiser for the cooperative advertisement with the secondary advertiser;

generate one or more indexes for the generated budget pool based on the one or more criteria of the generated budget pool;

select, using the one or more indexes, at least one of a plurality of candidate primary advertisers as the primary advertiser allowed to use the budget pool for the cooperate advertisement with the secondary advertiser; and

generate the cooperate advertisement for the primary advertiser and the secondary advertiser using the generated budget pool.

2. The server according to claim 1, wherein the processor is further configured to generate the cooperate advertisement by inserting an image object relating to the secondary advertiser into an advertisement provided by the primary advertiser using an image processing technology.

3. The server according to claim 2, wherein the processor is configured to insert the image object relating to the secondary advertiser into the advertisement provided by the primary advertiser based on the one or more criteria of the generated budget pool.

4. The server according to any one of claims 1 to 3, wherein the processor is further configured to bill each of the primary advertiser and the secondary advertiser based on at least one of an advertisement performance and the one or more criteria of the generated budget pool.

5. The server according to any one of claims 1 to 4, wherein the processor is further configured to:

provide a computing device associated with the secondary advertiser with an interface allowing the secondary advertiser to search one or more candidate primary advertisers whose advertisement relates to a good or a service provided by the secondary advertiser; and

in response to a request for a search from the computing device associated with the secondary advertiser, produce a search result including information about the one or more candidate primary advertisers whose advertisement relates to the good or the service provided by the secondary advertiser, and provide the computing device associated with the secondary advertiser with the search result.

6. The server according to any one of claims 1 to 5, wherein the processor is further configured to:

provide a computing device associated with a candidate primary advertiser with an interface allowing the candidate primary advertiser to search one or more candidate secondary advertisers; and

in response to a request for a search from the computing device associated with the candidate primary advertiser, produce a search result including information about the one or more candidate secondary advertisers using one or more indexes of a budget pool generated by each of the one or more candidate secondary advertisers, and provide the computing device associated with the candidate primary advertiser with the search result.

7. The server according to any one of claims 1 to 6, wherein the processor is further configured to:

receive first constraints including at least one of a first frequency cap and a first budget cap for the cooperative advertisement from the primary advertiser; and

store the received first constraints in the memory.

8. The server according to claim 7, wherein the one or more criteria includes at least one of terms, conditions and second constraints provided by the secondary advertiser.

9. The server according to claim 8, wherein the second constraints include at least one of a second frequency cap and a second budget cap for the cooperative advertisement provided by the secondary advertiser, and

the processor is further configured to check whether the cooperative advertisement is not against both the first constraints and the second constraints; and post the cooperative advertisement if the cooperative advertisement is not against both the first constraints and the second constraints.

10. The server according to any one of claims 1 to 9, wherein the processor is further configured to store the generated budget pool with the one or more indexes in the memory.

11. A method for facilitating providing a cooperative advertisement, the method comprising:

generating a budget pool of a secondary advertiser for the cooperative advertisement, wherein the budget pool includes one or more criteria for a primary advertiser for the cooperative advertisement with the secondary advertiser;

generating one or more indexes for the generated budget pool based on the one or more criteria of the generated budget pool;

selecting, using the one or more indexes, at least one of a plurality of candidate primary advertisers as the primary advertiser allowed to use the budget pool for the cooperate advertisement with the secondary advertiser; and

generating the cooperate advertisement for the primary advertiser and the secondary advertiser using the generated budget pool.

12. The method according to claim 11, wherein the generating the cooperate advertisement comprises inserting an image object relating to the secondary advertiser into an advertisement provided by the primary advertiser using an image processing technology.

13. The method according to claim 12, wherein the generating the cooperate advertisement comprises inserting the image object relating to the secondary advertiser into the advertisement provided by the primary advertiser based on the one or more criteria of the generated budget pool.

14. The method according to any one of claims 11 to 13 further comprising billing each of the primary advertiser and the secondary advertiser based on at least one of an advertisement performance and the one or more criteria of the generated budget pool.

15. The method according to any one of claims 11 to 14 further comprising:

providing a computing device associated with the secondary advertiser with an interface allowing the secondary advertiser to search one or more candidate primary advertisers whose advertisement relates to a good or a service provided by the secondary advertiser; and

in response to a request for a search from the computing device associated with the secondary advertiser, producing a search result including information about the one or more candidate primary advertisers whose advertisement relates to the good or the service provided by the secondary advertiser, and providing the computing device associated with the secondary advertiser with the search result.

16. The method according to any one of claims 11 to 15 further comprising:

providing a computing device associated with a candidate primary advertiser with an interface allowing the candidate primary advertiser to search one or more candidate secondary advertisers; and

in response to a request for a search from the computing device associated with the candidate primary advertiser, producing a search result including information about the one or more candidate secondary advertisers using one or more indexes of a budget pool generated by each of the one or more candidate secondary advertisers, and providing the computing device associated with the candidate primary advertiser with the search result.

17. The method according to any one of claims 11 to 16 further comprising:

receiving first constraints including at least one of a first frequency cap and a first budget cap for the cooperative advertisement from the primary advertiser; and

storing the received first constraints in a memory.

18. The method according to claim 17, wherein the one or more criteria includes at least one of terms, conditions and second constraints provided by the secondary advertiser.

19. The method according to claim 18, wherein the second constraints include at least one of a second frequency cap and a second budget cap for the cooperative advertisement provided by the secondary advertiser, and

the method further comprises checking whether the cooperative advertisement is not against both the first constraints and the second constraints; and posting the cooperative advertisement if the cooperative advertisement is not against both the first constraints and the second constraints.

20. The method according to any one of claims 11 to 16 further comprising storing the generated budget pool with the one or more indexes in a memory.