

SYSTEM AND METHOD FOR PROVIDING HOSPITALITY PRODUCTS

[001] The invention relates to the provision of hospitality products. More specifically, the invention relates to a system and method for providing hospitality products in which customers of a hospitality establishment are offered products by the hospitality establishment that are from external providers.

BACKGROUND OF THE INVENTION

[002] The hospitality industry plays a pivotal role in providing memorable and comfortable experiences to customers, encompassing a diverse range of goods and services that relate to accommodation, dining, and entertainment. However, despite its crucial role, the hospitality industry faces numerous challenges, especially when it comes to providing services to customers that are both high-quality and cost-effective.

[003] Conventionally, a hospitality establishment, such as a hotel, is to employ a large number of staff to manage the hospitality establishment so that its customers may be provided with relevant hospitality products. These hospitality products may include goods and services that may be, but shall not be limited to, food and beverages, housekeeping, and transportation. However, the provision of hospitality products requires the maintenance of a large number of staff to ensure consistency in quality. This is further aggravated by economic inflation, which further increases the overall operation costs of the hospitality establishment.

[004] Among the prior arts that relate to systems and methods for providing hospitality products includes the patent US20140257963A1, which discloses a kind of system and method for delivering hotel services. In particular, it informs a hotel's customers on goods and/or services relevant to their hotel and its surrounding area. In particular, there may be one or more providers of these goods and/or services that may be registered with the hotel. Furthermore, the system and method further track the usage of providers by the customers and report this information to the staff of the hotel.

[005] Yet another prior art that relates to systems and methods for providing hospitality products includes the patent US10719896B2, which discloses a kind of system and method

that is capable of allowing customers to identify, via arbitrary search, amenities and/or services available at venues such as lodging facilities and travel accommodations. The amenities and/or special. The system provides a network of one or more servers and devices to enable customers to identify hospitality/tourism features based on availability, matching attributes, and user preferences.

[006] However, none of the aforementioned prior arts discloses or inform of means that enable the management of a hospitality establishment with minimal staff while still offering quality hospitality products. Accordingly, it is desirable to have a system and method that enables customers of a hospitality establishment to be provided with products by the hospitality establishment, which are from external providers that are appropriately elected by the hospitality establishment.

SUMMARY OF INVENTION

[007] The main objective of the invention is to provide a system and method where customers of a hospitality establishment are offered hospitality products, by the hospitality establishment, which are from internal or external providers. To achieve this objective, there is provided a server cluster, which may include one or more servers, which (i) receives one or more instructions from a device of the customer that relates to a selected product, (ii) elects a provider that offers the selected product from a plurality of providers for the elected provider to provide the selected product to the hospitality establishment, and (iii) receives one or more responses from the device of the guest that relates to feedback of their selected product that was from the elected provider. In particular, it is preferred that there is an opacity between the customer and the elected provider. In particular, it is preferred that the customer is provided with their selected product under the impression it is affiliated with the hospitality establishment.

[008] Advantageously, the present invention may enable a hospitality establishment to have a minimum number of staff while still providing quality experiences to their customers.

[009] The present invention intends to provide a system for providing hospitality products, comprising at least one device of a customer of a hospitality establishment, and a server cluster that is provided by and/or provided to the hospitality establishment. The server cluster

receives one or more instructions from the device, for facilitation of provision of at least one product selected by the customer thereto them, by election of one provider of the selected product filtered from a plurality thereof.

[0010] Preferably, the server cluster receives one or more responses from the device that pertain to feedback information of the selected product of the provider that was elected by the server cluster.

[0011] Preferably, the server cluster includes at least one storage device that stores data files that include provider data files, which pertain to feedback information of providers historically elected by the server cluster to provide products to customers of the hospitality establishment.

[0012] Preferably, the server cluster includes a feedback module that updates the provider data files based on the response from the device.

[0013] Preferably, the server cluster further comprises a provider management module, which comprises a provider aggregator module, for aggregating a plurality of providers.

[0014] Preferably, the provider management module further comprises a first ranking module for ranking the providers based on feedback information of each provider obtained from the stored provider data files and/or external sources.

[0015] Preferably, the provider management module further includes a second ranking module for ranking the providers based on fees imposed by providers for their product, which corresponds to the selected product.

[0016] Preferably, the provider management module further includes a filter module, for filtering any one or a combination of providers aggregated by the provider aggregator module, providers ranked by the first ranking module, and providers ranked by the second ranking module.

[0017] Preferably, the provider management module further includes an election module for electing one provider to provide the selected product to the customer.

[0018] Preferably, the provider management module further includes an ordering module for ordering the selected product from the provider that was elected.

[0019] Preferably, the server cluster further includes a product provision module that validates repackaging of the selected product to ensure the selected product is made to become affiliated with the hospitality establishment prior to providing the selected product to the customer.

[0020] Preferably, the server cluster further includes a first finance module that facilitates financial transactions between the customer and the hospitality establishment in a first currency.

[0021] Preferably, the server cluster further includes a second finance module that facilitates financial transactions between the hospitality establishment and the providers in a second currency.

[0022] The present invention further intends to provide a method for providing hospitality services, comprising the steps of providing a server cluster, by the hospitality establishment, and interacting with the server cluster, by a device of a customer of the hospitality establishment. The server cluster receives one or more instructions from the device, for facilitation of provision of at least one product selected by the customer thereto them, by election of one provider of the selected product filtered from a plurality thereof.

[0023] Preferably, the method further comprises the step of receiving one or more responses from the device, by the server cluster, which pertain to feedback information of the selected product of the provider that was elected by the server cluster.

[0024] Preferably, the method further comprises the step of storing data files that include provider data files, which pertain to feedback information of providers historically elected by the server cluster to provide products to the customers of the hospitality establishment.

[0025] Preferably, the method further comprises the step of updating, by a feedback module of the server cluster, the provider data files based on the response from the device.

[0026] Preferably, the method further comprises any one or a combination of steps that include the step of aggregating a plurality of providers, by a provider aggregator module of a provider management module, the step of ranking the providers based on feedback information of each provider obtained from the stored provider data files and/or external

sources, by a first ranking module of the provider management module, and the step of ranking the providers based on fees imposed by provider for their product, which corresponds to the selected product, by a second ranking module of the provider management module.

[0027] Preferably, the method further comprises the step of filtering, by a filter module of the provider management module, any one or a combination of providers aggregated by the provider aggregator module, providers ranked by the first ranking module, and providers ranked by the second ranking module.

[0028] Preferably, the method further comprises the step of validating, by a product provision module of the server cluster, repackaging of the selected product to ensure the selected product is made to become affiliated with the hospitality establishment prior to providing the selected product to the customer.

[0029] One skilled in the art will readily appreciate that the invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those inherent therein. The embodiments described herein are not intended as limitations on the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030] To facilitate an understanding of the invention, there is illustrated in the accompanying drawings the preferred embodiments from an inspection of which when considered in connection with the following description, the invention, its construction and operation and many of its advantages would be readily understood and appreciated.

[0031] **FIG. 1** is a diagram illustrating a first example embodiment of the system of the present invention.

[0032] **FIG. 2** is a diagram illustrating a second example embodiment of the system of the present invention.

[0033] **FIG. 3** is a block diagram illustrating an example embodiment of the server cluster within the present invention.

[0034] **FIG. 4** is a block diagram illustrating an example embodiment of the provider management module within the server cluster of the present invention.

[0035] **FIG. 5** is a flowchart detailing an example method of the present invention, which may be according to any one of the system embodiments shown in **FIGS 1 – 4**.

[0036] **FIG. 6** is a flowchart that continues from the flowchart of **FIG. 6**.

DETAILED DESCRIPTION OF THE INVENTION

[0037] The present invention generally relates to a system and method for the provision of hospitality products. The invention may also be presented in a number of different embodiments with common elements.

[0038] According to the concept of the invention, there is provided a server cluster that may include one or more servers, which (i) receives one or more instructions from a device of the customer that relates to a selected product, (ii) elects a provider that offers the selected product from a plurality of providers for the elected provider to provide the selected product to the hospitality establishment, and (iii) receives one or more responses from the device of the customer that relates to feedback information towards their selected product that was provided by the elected provider that was elected by the hospitality establishment. In particular, the hospitality establishment ensures opacity between the customer and the elected provider.

[0039] From hereon, it is noted that the term “product”, in the context of the invention, broadly relates to any one or both goods and services that may be tangible or intangible. Furthermore, it is preferred that the term “product” relates to the hospitality industry, and hence may synonymously be referred to as “hospitality product”. With this, the term “product” may be, but shall not be limited to, food and/or their servicing thereof to a customer, beverages and/or their servicing thereof to a customer, transportation services, housekeeping services, therapeutic services, or the like.

[0040] From hereon, it is to be noted that the term “hospitality establishment”, in the context of the invention, broadly relates to any kind of place or facility that offers hospitality products. A hospitality establishment may be, but shall not be limited to, hotels, motels, resorts, lodgings, guest houses, or the like. The hospitality establishment may generally have a plurality of rooms that each may house one or more customers.

[0041] From hereon, it is to be noted that the term “provider”, in the context of the invention, broadly relates to entities that provide, offer, or vend hospitality products to customers of the hospitality establishment. These entities may be one or more humans or non-humans. Preferably, these entities are to substantially interact with the hospitality establishment before providing, offering, or vending hospitality products to customers of the hospitality establishment. These entities are to be regarded as entities external to the hospitality establishment and may generally be located outside of the hospitality establishment.

[0042] The invention will now be described in greater detail, by way of example, with reference to the figures. For ease of reference, common reference numerals or series of numerals will be used throughout the figures when referring to the same or similar features common to the figures.

[0043] **FIG. 1** illustrates a first example embodiment of the system of the present invention. As shown, there is preferably a customer **C** that interacts with a server cluster **2** via a device **1**, with the device **1** interfacing the server cluster **2**. In particular, the server cluster **2** is provided by and/or provided to a hospitality establishment in which customer **C** may be currently staying. Further shown in that the server cluster **2** may comprise a first server **21**, a second server **22**, and a third server **23**. The server cluster **2** may further interact with a plurality of providers **4** which may include a first provider **41**, a second provider **42**, a third provider **43** or more.

[0044] With reference to **FIG. 1**, the customer **C** is to interact with the device **1** for device **1** to send one or more instructions to the server cluster **2**. Preferably, these instructions may pertain to the selection of at least one product that is offered by the hospitality establishment. The server cluster **2** receives these instructions from device **1**, and subsequently facilitates provision of the customer’s selected product to the customer **C**. More specifically, the server

cluster **2** interacts with the providers **4** that are able to provide the selected product, for electing one provider **4** from the plurality thereof. For example, as shown in **FIG. 1**, the server cluster **2** may have elected third provider **43**, and may interact with the third provider **43** accordingly for them to provide the customer's selected product to the customer **C**.

[0045] **FIG. 2** illustrates a second example embodiment of the system of the present invention. **FIG. 2** is substantially similar to **FIG. 1**, but has the further inclusion of external servers **3** which are preferably not part of the server cluster **2** as external sources. Whilst interactions between the device **1** and the server cluster **2** may remain the same as **FIG. 1**, interactions between the server cluster **2** and the providers may differ. More specifically, the server cluster **2** may interact with one or more external servers **3**, which may include a first external server **3a**, a second external server **3b**, a third external server **3c**, or more. Each of the external servers **3** is to further interact with a plurality of providers **4**. For example, the first external server **3a** may interact with a first set of providers that include a first provider **41a** or more, the second external server **3b** may interact with a second set of providers that include a second provider **41b** or more, the third external server **3c** may interact with a third set of providers that include a third provider **41c** or more, and so forth.

[0046] With reference to **FIG. 2** the customer **C** is to interact with the device **1** for device **1** to send one or more instructions to the server cluster **2**. Preferably, these instructions may pertain to the selection of at least one product that is offered by the hospitality establishment. The server cluster **2** receives these instructions from device **1**, and subsequently facilitates provision of the customer's selected product to the customer **C**. More specifically, the server cluster **2** interacts with the external servers **3** to determine providers **4** that are able to provide the selected product, for electing one provider **4** from the plurality thereof. For example, as shown in **FIG. 2**, the server cluster **2** may have elected third provider **41c**, and may interact with the third provider **43** accordingly, via the third external server **3c**, for them to provide the customer's selected product to the customer **C**. Alternatively, the server cluster **2** may directly interact with the third provider **41c** for them to provide the customer's selected product to the customer **C**.

[0047] Regarding device **1**, it may be a conventional commercially available end-user device, which may include smartphones, desktops, personal device assistants, a kiosk machine, or any device capable of interacting with a computer network. The device **1** may be a device

that is owned by the customer **C**, or a device that is temporarily provided by the hospitality establishment to the customer **C**.

[0048] Details regarding the server cluster **2** shall be described later in the specification.

[0049] Regarding the external servers **3**, they may be entities not part of the hospitality establishment and may facilitate aggregation of providers **4** and interactions between the said providers **4** and the hospitality establishment. By way of example, these external servers **3** may relate to entities that provide and manage a multitude of services that include payment gateway services, provider aggregation services, provider advertising services, or the like. By way of an even more detailed example, these external servers may be part of super app platforms provided by Grab Holdings Inc., Tencent Holdings Ltd., or the like.

[0050] Regarding the providers **4**, they are to be substantially in communication or interactable with the server cluster **2**, so that they may receive instructions from the server cluster **2**. In particular, according to the first embodiment as shown in **FIG. 1**, the server cluster **2** may directly communicate or interact with the providers **4** for election of one of them from a plurality thereof. In particular, according to a second embodiment as shown in **FIG. 2**, the server cluster **2** may instead communicate or interact with external servers **3** for the external servers **3** to further communicate or interact with providers **4** for the election of one of them from a plurality thereof. For communicating or interacting with the server cluster **2** and/or the external servers **3**, the providers **4** each may have their device(s) that is connected to a computer network, which may be the same as embodiments of device **1**, so that they may receive instructions to provide a customer's selected product from the server cluster **2**.

[0051] **FIG. 3** illustrates an example embodiment of the server cluster **2** within the present invention. As previously mentioned, the server cluster **2** comprises a first server **21**, a second server **22**, and a third server **23**. These servers **21 – 23** are preferably one or more computers configured to perform resource management, and may be provided through cloud computing. In one embodiment, the servers **21 – 23** within the server cluster **2** may be provided by the hospitality establishment by being proprietarily owned by the hospitality establishment. In one alternative embodiment, the servers **21 – 23** within the server cluster **2** may be provided to the hospitality establishment by relevant service providers or third parties. In yet another embodiment, it may be a combination of both of the aforementioned embodiments.

[0052] Further shown in **FIG. 3** is that the servers **21 – 23** are preferably located at different locations. For example, the first server **21** is located at a first location, the second server **22** is located at a second location, and the third server **23** is located at a third location. These locations may be in different countries. In particular, the first location would be a place of origin of the customer **C**, the second location would be the location of the hospitality establishment, and the third location would be a location that may be different from the aforementioned locations.

[0053] Further shown in **FIG. 3** include the servers **21 – 23** with their relevant hardware and software components for performing their relevant operations. Preferably, the servers **21 – 23** have at least one processor that runs a server-side application software, and at least one data storage device interfaced with the said processor. The server-side application software are to manage communication between the device **1** and the providers **4**, and the delivery and receipt of content for the servers **21 – 23**. The data storage device acts as a medium that stores said content.

[0054] The processors of servers preferably perform the scheduling and the execution of software instructions of the software modules of the server-side application software running thereon while being interfaced with the data storage devices as well. Preferably, they may be, but shall not be limited to, a conventional processor, application-specific integrated circuit (ASIC), a field-programmable gate array (FPGA), a graphics processing unit (GPU), or a combination thereof.

[0055] The data storage devices of the servers may store data therewithin in a permanent or semi-permanent manner. Preferably, the data storage devices may be, but shall not be limited to one or a combination of digital storage mediums such as hard disk drives, solid-state drives, hybrid drives, or the like. In embodiments where there are one or more digital storage mediums are present, they are preferably set up to have an increased reliability through the implementation of redundancy measures, such as a Random Array of Independent Disks (RAID) setup.

[0056] In particular, the first server **21** may at least comprise a first processor **211** that runs a first server-side application software **211a** for operating one or more modules for (i) enabling the customer **C** to make a reservation at the hospitality establishment, and (ii)

facilitating financial transactions between the customer **C** and the hospitality establishment in a first currency. These modules may at least include a customer reservation module **2111**, and a first finance module **2112**. It should be noted that while the aforementioned modules may be in a software embodiment, they may also be a hardware embodiment where they are directly connected to the processor **21**, or they are their own independent computer system. While not shown, the first server-side application software **211a** may further include one or more ancillary software modules that support the operations of the first server **21**.

[0057] Regarding the customer reservation module **2111** of the first server **21**, it enables the customer **C** to make a reservation at the hospitality establishment. More specifically, prior to arriving at the hospitality establishment, the customer **C**, who may be located at the first location, may interact with the first server **21** of the server cluster **2** for making a reservation at the hospitality establishment. Furthermore, the customer reservation module **2111** may facilitate the obtainment of relevant information from the customer **C** which may include their personal identity, duration of stay, selected hospitality products, etc.

[0058] Regarding the first finance module **2112**, it facilitates financial transactions between the customer **C** and the hospitality establishment in a first currency. More specifically, the first currency is a native currency of the first location in which customer **C** originates. In particular, the first finance module **2112** shall initiate or communicate with relevant payment gateways native to the first location so that the customer **C** is able to make their payment for making a reservation at the hospitality establishment. Furthermore, the first finance module **2112** may facilitate a transfer of funds between a bank account of the customer **C** and a bank account of the hospitality establishment, which may both be in the first currency. Furthermore, the first finance module **2112** may confirm payment by customer **C**.

[0059] Whilst not shown, the first server **21** may include a communication unit and/or module for communicating with the other servers in the server cluster **2**. It is to be noted that upon confirmation of payment by the first finance module **2112**, the first server **21** may communicate with the other servers in the server cluster **2** to inform them of customer **C**. More specifically, the first server **21** may communicate with the second server **22** to notify the second server **22** that customer **C** has made their payment and reservation to the hospitality establishment. Furthermore, the first server **21** may communicate with the third server **23** to provide relevant information from the customer **C** thereto for the third server **23** to store said information therewithin as a customer information data file **2321**.

[0060] In particular, the second server **22** may comprise a second processor **221** that runs a second server-side application software **221a** for operating one or more modules for at least (i) managing customers and rooms within the hospitality establishment, (ii) managing interactions and/or communications between the hospitality establishment and the providers **4**, (iii) offering products to the customers **C** of the hospitality establishment and managing the provision of product(s) provided by the providers **4** to the customers **C**, (iv) managing the feedback information provided by the customers **C** on their selected products that were provided by the elected provider, and (v) facilitating financial transactions between any one or a combination of the hospitality establishment, the customer **C**, and the providers **4**, in a first currency and/or a second currency.

[0061] With this, the modules of the second server **22** may at least include a customer and room management module **2211**, a provider management module **2212**, a product provision module **2213**, a feedback module **2214**, and a second finance module **2215**. It should be noted that while the aforementioned modules may be in a software embodiment, they may also be a hardware embodiment where they are directly connected to the second processor **22**, or they are their own independent computer system. While not shown, the second server-side application software **221a** may further include one or more ancillary software modules that support the operations of the second server **22**.

[0062] Regarding the customer and room management module **2211** of the second server **22**, it shall perform or facilitate the management of customers **C** and rooms within the hospitality establishment. More specifically, it may inform staff of the hospitality establishment on the room occupancy within the hospitality establishment, the relevant information of the customers **C**, and current customers within the hospitality establishment and their designated rooms within the hospitality establishment. It may further enable communication between the customer **C** and the server **22** via the device **1**, and/or communication between a room of the hospitality establishment and the server **22** via the device **1**.

[0063] Regarding the provider management module **2212** of the second server **22**, it shall perform or facilitate the management of interactions and/or communications between the hospitality establishment and the providers **4**. More specifically, it shall (i) aggregate providers from a plurality of providers **4**, (ii) filter the plurality of providers **4** based on the

selected product of the customer **C**, (iii) elect one provider from the plurality of providers **4** that is to provide customer **C** with their selected product, (iv) make an order for the selected product of the customer **C** from the elected provider, and (v) facilitating payment between the hospitality establishment and the elected provider.

[0064] Regarding the product provision module **2213** of the second server **22**, it shall substantially facilitate the provision of the selected product of the customer **C** from the elected provider to the customer **C**. It may also facilitate and/or validate the repackaging of the selected product in such a way the product is affiliated with the hospitality establishment. In particular, the repackaging and/or provision of the selected product may be done with assistance from the staff of the hospitality establishment.

[0065] Regarding the feedback module **2214** of the second server **22**, it shall substantially facilitate the receipt and assignment of feedback information received from the customer **C** towards the elected providers on their product that were provided to the customer **C**. In particular, the feedback module **2214** shall assign the feedback information related to the elected provider and further save the feedback information within the second server **22** as one or more provider data files **2324** that pertain to the elected provider.

[0066] Regarding the second finance module **2215**, it may facilitate financial transactions between the customer **C** and the hospitality establishment in a first currency and/or financial transactions between the hospitality establishment and the providers **4**. The first currency may be as previously described. The second currency is preferably a native currency of the second location in which the hospitality establishment and/or the providers **4** may be located. In particular, the second finance module **2215** shall initiate or communicate with relevant payment gateways native to the second location so that the customer **C** may still be able to make their payment to any one or both the hospitality establishment and the providers **4** in the first currency. In particular, the second finance module **2215** shall also initiate or communicate with relevant payment gateways native to the second location so that the hospitality establishment may be able to make payment to the elected provider in the second currency for providing the customer's selected product to the customer **C**.

[0067] In particular, the third server **23** may comprise a data storage device **232** that acts as a database of the server cluster **2**. Preferably, the data storage device **232** may store a plurality of data files that include customer information data files **2321**, room information data files

2322, finance record data files **2323**, and provider data files **2324**. Preferably, these data files are stored in the data storage device **232** in a digital format. Whilst not shown, the third server **23** may further comprise a processor running an application software for facilitating management of the data files in the data storage device **232**. More specifically, the customer information data files **2321** stores customer information of at least one customer **C**, the room information data files **2322** stores information relating to the rooms of the hospitality establishment, the finance record data files **2323** stores information relating to the financial records relating to prices of the customer's selected products as historically imposed by the elected providers **4**. The provider data files **2324** stores information relating to the feedback information received from the customer **C** on their selected product received from providers **4** that had been elected. Preferably, there is an inter-relationship between the finance record data files **2323** and the provider data files **2324**.

[0068] **FIG. 4** illustrates an example embodiment of the provider management module **2212**, which is preferably within the second server **22** of the server cluster **2** of the present invention. In particular, the provider management module **2212** itself may comprise a plurality of modules that include a provider aggregator module **22121**, a grouping module **22122**, a filtering module **22123**, a first ranking module **22124**, a second ranking module **22125**, an election module **22126**, an ordering module **22127**, and a payment module **22128**.

[0069] The provider aggregator module **22121** of the provider management module **2212** is to enable and/or facilitate the second server **22** to aggregate a plurality of providers **4**.

[0070] In accordance with the embodiment of the system as shown in **FIG. 1**, the provider aggregator module **22121** may perform web content extraction such as web-scraping to aggregate relevant providers **4** that provide products that are offered by the hospitality establishment.

[0071] In accordance with the embodiment of the system as shown in **FIG. 2**, the provider aggregator module **22121** may interact with the external servers **3** for obtaining providers **4** that are already onboard the external servers **3**. For example, in the case where a first external server **31** is part of a super app platform, there may be a plurality of providers on or partnered with the super app platform. Hence, by the provider aggregator module **22121** may interact with the first external server **31** to aggregate providers **4** that are on or partnered with the super app platform that provides products that are offered by the hospitality establishment.

[0072] The grouping module **22122** of the provider management module **2212** is to enable and/or facilitate the second server **22** to group the aggregated providers **4** into their relevant categories and their offered products. For example, from the aggregated providers **4**, the grouping module **22122** shall categorise and/or classify them into one or more relevant groups. More specifically, the aggregated providers **4** may each be grouped into a plurality of groups, with a first group of providers that relate to those that provide dining products (Chicken Rice, etc.), a second group of providers that relate to those that provide service products (Massage Service, etc.), and so forth.

[0073] It is to be noted that the grouping module **22122** may further categorise and/or classify each provider in each group based on the products they provide based on the products that are offered by the hospitality establishment. For example, for dining products, each provider in one group may be further categorised and/or classified based on a first dining product (e.g. Chicken Rice), a second dining product (e.g. Chilli Crab), and so forth. It is to be further noted that the grouping module **22122** may manage products that are offered by one provider of the same.

[0074] The filter module **22123** of the provider management module **2212** is to enable and/or facilitate the second server **22** to filter the providers **4**. In one embodiment of the invention, the filter module **22123** may filter the aggregated providers **4** by whitelisting specific providers so that only these specific providers will be considered for one provider to be eventually elected. In another embodiment of the invention, whitelisting may be done periodically so that new providers of products may be considered and evaluated by the customers. It is to be noted that the filter module **22123** may either filter providers **4** that had been aggregated by the provider aggregation module **22122**, providers **4** that had been ranked by the first ranking module **22124**, and/or providers **4** that had been ranked by the second ranking module **22125**.

[0075] The first ranking module **22124** of the provider management module **2212** is to enable and/or facilitate the second server **22** to rank the providers **4**. This may be done based on any one or both of (i) historical feedback of the providers **4** on their products based on the feedback information of each provider obtained from the provider data files **2324** stored in the third server **23**, and historical feedback of the providers on their products based on the feedback information of each provider obtained from the external servers **3**. It is to be

noted that both aforementioned embodiments of the first ranking module **22124** may be in a single combination, and that it is preferable that the provider data files **2324** stored in the third server **23** is at least referenced. In particular, the first ranking module **22124** may further include a function that assigns a score to the providers **4** prior to ranking them, with the providers **4** being based on any one or both feedback information of each provider and historical feedback of each provider based on their products. With this, the first ranking module **22124** may rank the providers based on the assigned scores based on an order such as ascending order, descending order, or the like.

[0076] The second ranking module **22125** of the provider management module **2212** is to enable and/or facilitate the second server **22** to rank the providers **4** based on prices of their products. Most preferably, the second ranking module **22125** shall rank them based on the current pricing of their products that had most recently been obtained by the provider aggregator module **22121**. More specifically, the second ranking module **22125** shall rank the products of the providers **4** by comparing a difference amount between (i) the price or fees of the product as set by the providers **4** and (ii) the price or fees of the product that was offered to the customer by the hospitality establishment that is preferably set by the second finance module **2215**. Products are to be ranked based on the difference amount with those that have a higher difference amount have a higher rank than those who have a lower difference amount, or by any permissible way.

[0077] It is to be noted that the order of operations of the first ranking module **22124** and the second ranking module **22125** is of irrelevance as either one of the ranking modules **22124**, **22125** may perform ranking first prior to the other.

[0078] It is to be noted that certain embodiments of the present invention may only include first ranking module **22124** or the second ranking module **22125**.

[0079] The election module **2216** of the provider management module **2212** is to enable and/or facilitate the second server **22** to elect one provider from the providers **4**, which have been ranked by the ranking modules **22124**, **22125**, to be elected to provide a customer's selected product to the customer **C** of the hospitality establishment. Preferably, the provider that had the highest rank in any one or both ranking modules **22124**, **22125** may be elected as the elected provider by the election module **2217**.

[0080] The ordering module **2217** of the provider management module **2212** is to enable and/or facilitate the second server **22** to order of the customer's selected product from an elected provider. More specifically, it shall enable the second server **22** to communicate with the elected provider, by way of direct communication with devices of the provider or through the relevant external servers **3**, to request for the customer's selected product at the price as set by the elected provider. With this, the elected provider may receive the order and prepare to provide the product to the customer **C** of the hospitality establishment.

[0081] The payment module **22128** of the provider management module **2212** is to enable and/or facilitate the second server **22** to make payment towards the elected provider, preferably by prompting the second finance module **2215** to credit funds of a second currency into a relevant bank account of the elected provider so as to pay them for their provided product.

[0082] **FIGS 5 – 6** illustrate a flowchart of the example method of the present invention, which may be according to the preferred embodiment as shown in **FIGS 1 – 4**. More specifically, the flowchart describes the provision of a product selected by the customer of the hospitality establishment from beginning to end. It is noted that the steps described in this flowchart are not to be interpreted as non-limiting, and minor modifications to the steps (e.g. additions, omissions, or swaps) are permissible by a skilled person without substantial deviation from as described. Furthermore, while the specific features of the system of the present invention may not be implicated, they are to be deemed as substantially present for enabling the steps described in the flowchart of **FIGS 5 – 6**.

[0083] The steps of **FIGS 5 – 6** may begin with step **S1**, which involves aggregating, by the provider aggregator module **221221**, a plurality of providers **4** that relate to the products to be offered by the hospitality establishment to its customers.

[0084] Following step **S1** is step **S2**, which involves grouping by the grouping module **22122** the providers **4** into one or more sets of categories.

[0085] Following step **S2** is step **S3**, which involves interfacing, by at least one customer **C** with the server cluster **2** via the device **1** for the customer **C** to select one or more products that are to be offered by the hospitality establishment.

[0086] Following step **S3** is step **S4**, which is a decision step whereby it is determined, preferably by the provider management module **2212**, whether or not the product selected by the customer **C** is to be provided to them at a scheduled time. Should this be the case, step **S4** proceeds to step **S5**. Else, step **S4** proceeds to step **S6**.

[0087] In step **S5**, since it was determined that the product selected by the customer is to be provided to the customer at a scheduled time, the provider management module **2212** may withhold ordering of the customer's selected product until or prior to the scheduled time. More specifically, the provider management module **2212** may initiate its downstream processes at a predetermined period prior to the provision of the customer's selected product, which may be, by way of example, 20 minutes, 30 minutes, or the like. With this step **S5** may proceed to step **S6**.

[0088] Following step **S4** or step **S5** is step **S6**, which involves initiating, by the provider management module **2122**, the provision of the customer's selected product to the customer **C**.

[0089] Following step **S6** is step **S7**, which involves filtering by the filtering module **22123**, the sets of providers into one set of providers that relate to the customer's selected product.

[0090] Following step **S7** is step **S8**, which involves ranking, by the first ranking module **22124**, the said set of providers based on a first set of data that relates to their ratings and reviews, while referencing provider data files **2324** in the third server **23**.

[0091] Following step **S8** is step **S9**, which involves filtering, by the filtering module **22123**, the set of providers that has been ranked by the first ranking module **22124** for a subset of the set of providers to remain.

[0092] Following step **S9** is step **S10**, which involves ranking, by the second ranking module **22125** the subset of providers, based on a second set of data that relates to their fees for providing their products, while referencing provider data files **2324** and/or finance record data files **2323** in the third server **23**.

[0093] Following step **S10** is step **S11**, which involves filtering, by the filtering module **22123** of the subset of providers that has been ranked by the second ranking module **22125**,

for one provider, which has a price or fees that have a highest difference when compared with the price or fees of the product that was offered to the customer by the hospitality establishment that was set by the second finance module **2215**, to remain.

[0094] Following step **S11** is step **S12**, which involves electing, by an election module **22126** of the provider management model **2212**, the provider as filtered in the previous step for them to provide the customer's selected product to customer **C**.

[0095] Following step **S12** is step **S13**, which involves communicating, by an ordering module **22127** of the provider management model **2212**, with the elected provider for an order for the customer's selected product to be placed for customer **C**. Preferably, the payment module **22128** may initiate payment for the ordered customer's selected product to the elected provider in the second currency.

[0096] Following step **S13** is step **S14**, which involves receiving, by the elected provider, the order for the customer's selected product as placed by the ordering module **22127**.

[0097] Following step **S14** is step **S15**, which involves tracking, by the product provision module **2213** the arrival of the product at the hospitality establishment.

[0098] Following step **S15** is step **S16**, which is a decision step whereby it is determined by the provider management module **2212** whether or not the product has arrived at the hospitality establishment. Should that be the case, step **S16** proceeds to step **S17**. Else, step **S17** proceeds to step **S18**.

[0099] In step **S17**, since it was determined that the product has not arrived the hospitality establishment, the provider management module **2212** shall continue tracking the status of the product. With this, step **S17** may loop back to step **S16** and continue therefrom.

[00100] In step **S18**, since it was determined that the product has arrived at the hospitality establishment, the provider management module **2212** shall liaise with the product provision module **2213** to notify staff of the hospitality establishment on the arrival of the product at the hospitality establishment.

[00101] Following step **S18** is step **S19**, which is a decision step whereby it is determined by the product provision module **2213** whether or not repackaging of the product is required.

Should this be the case, step **S19** proceeds to step **S20**. Else, step **S19** proceeds to step **S22**. In particular, the product provision module may be pre-configured to identify the category of product that requires repackaging, which may be, by way of example, dining products, service products, or the like.

[00102] In step **S20**, since it was determined that the product provided by the elected provider needs to be repackaged, the product provision module **2213** shall inform staff of the hospitality establishment to initiate repackaging of the product. In one example, in the case of a dining product, the product provision module **2213** may instruct the staff of the hospitality establishment to switch the original packaging of the dining product into one that may indicate affiliation with the hospitality establishment. In one example, in the case of a service product, the product may be an individual sent by the provider to provide his/her services to the customer **C**, hence the said individual may be reoutfitted into attire that may indicate affiliation with the hospitality establishment.

[00103] Following step **S20** is step **S21**, which involves verifying that the repackaged product has been appropriately repackaged. This step may be performed by the product provision module **22123**. In particular, the product provision module **22123** verifies the repackaged product from images of the repackaged product uploaded onto the second server **22**. The images of the repackaged product may be uploaded onto the second server **22** by the staff of the hospitality establishment. Upon receiving images of the repackaged product, the product provision module **22123** may analyse the image to verify that the product has indeed been repackaged. The product provision module **22123** may analyse these images to determine the presence of at least one marking that may indicate the product has been repackaged. The marking may be, by way of example, a logo of the hospitality establishment, or the like.

[00104] Following step **S19** or step **S21** is step **S22**, which involves delivering or sending off the product to the customer **C**. This step may be physically performed by the staff of the hospitality establishment.

[00105] Following step **S22** is step **S23**, which involves receiving, by the customer **C**, their selected product.

[00106] Following step **S23** is step **S24**, which involves notifying the server cluster **2** that the customer's selected product has been provided to the customer **C** or received by the customer **C**. This step may be performed by the customer **C** via the device **1**.

[00107] Following step **S24** is step **S25**, which involves consuming the customer's selected product, by the customer **C**. It should be noted that the term "consume" in this context relates to consumption of goods and/or services.

[00108] Following step **S25** is step **S26**, which involves notifying the server cluster **2** that the consumption of the product is completed. This step may be performed by the customer **C** via the device **1**.

[00109] Following step **S26** is step **S27**, which involves providing or responding to the server cluster **2** with feedback information on the product, by customer **C**, which may be in the form of form of qualitative or quantitative data.

[00110] Following step **S27** is step **28**, which involves receiving, by a feedback module **2214** of the second server, the feedback information provided by the customer **C**.

[00111] Finally, following step **S28** is step **S29**, which involves providing, by the second server **21**, the feedback information of the product provided by the elected provider to the third server **23** for the feedback information to be saved or updated therein as a provider data file **2324** relevant to the elected provider of the product.

[00112] Finally, following step **S29** is step **S30**, which involves billing the customer **C** for their selected product. The billing of the customer **C** may be done in a first currency or the second currency.

[00113] Whilst not shown, it should be noted that the server cluster **2** intends to further enable the customer **C** located at the first location to make a reservation at the hospitality establishment from the first location. This process may be represented by a series of steps.

[00114] The first step of booking involves interfacing, by a customer **C** located at a first location, with a server cluster **2** via the device **1** for the customer **C** to make a reservation at the hospitality establishment, which operates the server cluster **2**.

[00115] The second step of booking involves selecting, by the customer **C**, their desired products to be provided by the hospitality establishment based on product offerings of the hospitality establishment.

[00116] The third step of booking involves initiating by the customer **C** via the first device **1**, a financial transaction for payment to the hospitality establishment in a first currency to be made for making the booking.

[00117] The fourth step of booking involves facilitating, by the first finance module **2112** of the first server **21**, which may be located at the first location, the financial transaction performed by the customer **C**.

[00118] The fifth step of booking involves facilitating, by the customer reservation module **2111** of the first server **21** of the server cluster **2**, the reservation made by customer **C** by communicating with the second server **22** and/or the third server **23** within the server cluster **2**, which may be located at other locations.

[00119] The sixth step of booking involves providing, by the first server **21** a notification to the second server **22** on customer **C**, which may relate to their payment status, summarised reservation information, and selected services.

[00120] Finally, the seventh step of booking involves providing, by the first server **21**, information relating to customer **C** to the third server **23** for the information to be saved therein as a customer information data file **2321** that pertains to the customer **C**.

[00121] With this, the details pertaining to a system and method for providing of hospitality products have been described. The present disclosure includes as contained in the appended claims, as well as that of the foregoing description. Although this invention has been described in its preferred form with a degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangements of parts may be resorted to without departing from the scope of the invention.

CLAIMS

1. A system for providing hospitality products, comprising
at least one device of a customer of a hospitality establishment; and
a server cluster that is provided by and/or provided to the hospitality establishment, with at least one server having at least one processor that operates at least a provider management module having a filtering module and one or more ranking modules, and a product provision module, wherein the server cluster receives one or more instructions from the device that includes at least one selection of at least one product offered by the hospitality establishment, with the selection being made by the customer, for the provider management module and the product provision module to facilitate provision of the product to the customer by election of one provider of the product from a plurality of providers;
wherein the plurality of providers is successively filtered by the filtering module upon selection of the product by the customer, in which providers are ranked by the ranking modules based on
historical feedback of each provider regarding the product; and
a difference between a price or fee of the product set by each provider and a price or fee of the product offered to the customer by the hospitality establishment;
for election of one provider therefrom to provide the product to the hospitality establishment;
whereby a requirement for repackaging of the product is determined by the product provision module based on the product, and in the event that repackaging is required, the product is repackaged and further verified by the product provision module that analyses images of the repackaged product through determining a presence of at least one marking related to the hospitality establishment on the repackaged product.
2. The system according to claim 1, wherein the server cluster receives one or more responses from the device that pertain to feedback information of the selected product of the provider that was elected by the server cluster.
3. The system according to claim 2, wherein the server cluster includes at least one storage device that stores data files that include provider data files, which pertain to feedback information of providers historically elected by the server cluster to provide products to customers of the hospitality establishment.

4. The system according to claim 3, wherein the server cluster includes a feedback module that updates the provider data files based on the response from the device.
5. The system according to any one of the preceding claims, wherein the provider management module further comprises a provider aggregator module, for aggregating a plurality of providers.
6. The system according to any one of the preceding claims, wherein the ranking modules include a first ranking module for ranking the providers based on feedback information of each provider obtained from the stored provider data files and/or external sources.
7. The system according to claim 6, wherein the ranking modules further includes a second ranking module for ranking the providers based on fees imposed by providers for their product, which corresponds to the selected product.
8. The system according to any one of the preceding claims, wherein the provider management module further includes a filter module, for filtering any one or a combination of
 - providers aggregated by the provider aggregator module;
 - providers ranked by the first ranking module; and
 - providers ranked by the second ranking module.
9. The system according to any one of the preceding claims, wherein the provider management module further includes an election module for electing one provider to provide the selected product to the customer.
10. The system according to claim 9, wherein the provider management module further includes an ordering module for ordering the selected product from the provider that was elected.
11. The system according to any one of the preceding claims, wherein the product provision module validates repackaging of the selected product to ensure the selected

product is made to become affiliated with the hospitality establishment prior to providing the selected product to the customer.

12. The system according to any one of the preceding claims, wherein the server cluster further includes a first finance module that facilitates financial transactions between the customer and the hospitality establishment in a first currency.

13. The system according to any one of the preceding claims, wherein the server cluster further includes a second finance module that facilitates financial transactions between the hospitality establishment and the providers in a second currency.

14. A method for providing hospitality services, comprising the steps of
 providing a server cluster, having at least one server having at least one processor that operates at least one finance module, and a provider management module having a filtering module and one or more ranking modules, and a product provision module, by the hospitality establishment; and

interacting with the server cluster, by a device of a customer of the hospitality establishment, for server cluster to receive one or more instructions from the device that includes at least one selection of at least one product offered by the hospitality establishment, with the selection being made by the customer, for the provider management module and the product provision module to facilitate provision of the product to the customer by election of one provider of the product from a plurality of providers;

wherein the plurality of providers is successively filtered by the filtering module upon selection of the product by the customer, in which providers are ranked by the ranking modules based on

historical feedback of each provider regarding the product; and

a difference between a price or fee of the product set by each provider and a price or fee of the product offered to the customer by the hospitality establishment;

for election of one provider therefrom to provide the product to the hospitality establishment;

whereby a requirement for repackaging of the product is determined by the product provision module based on the product, and in the event that repackaging is required, the product is repackaged and further verified by the product provision module that analyses

images of the repackaged product through determining a presence of at least one marking related to the hospitality establishment on the repackaged product.

15. The method according to claim 14, further comprising the step of receiving one or more responses from the device, by the server cluster, which pertain to feedback information of the selected product of the provider that was elected by the server cluster.

16. The method according to claim 15, further comprising the step of storing data files that include provider data files, which pertain to feedback information of providers historically elected by the server cluster to provide products to the customers of the hospitality establishment.

17. The method according to claim 16, further comprising the step of updating, by a feedback module of the server cluster, the provider data files based on the response from the device.

18. The method according to any one of claims 14 to 17, further comprising any one or a combination of the steps that include

- aggregating a plurality of providers, by a provider aggregator module of the provider management module;

- ranking the providers based on feedback information of each provider obtained from the stored provider data files and/or external sources, by the first ranking module of the provider management module; and

- ranking the providers based on fees imposed by the provider for their product, which corresponds to the selected product, by the second ranking module of the provider management module.

19. The method according to claim 18, further comprising the step of filtering, by a filter module of the provider management module, any one or a combination of

- providers aggregated by the provider aggregator module;

- providers ranked by the first ranking module; and

- providers ranked by the second ranking module.

20. The method according to any one of claims 15 to 19, further comprising the step of validating, by the product provision module of the server cluster, repackaging of the selected product to ensure the selected product is made to become affiliated with the hospitality establishment prior to providing the selected product to the customer.