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## Improved User Shopping Journey

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## IMPROVED USER SHOPPING JOURNEY

### **Introduction**

Traditionally, a user may need to perform a significant amount of preemptive research about a particular product just to understand the marketplace. Subsequently, the user may visit a retailer or a retailer's website to compare products based on specifications. In order to compare prices of multiple retailers, a user may visit a number of websites to compare prices. In many cases, a user may overlook information of which they are not already conscious. Understanding a comparison of specifications between products, availability of products, and price of products at multiple retailers may become a time consuming and complex task that may ultimately result in user frustration.

### **Summary**

Computer-implemented systems and methods are provided for improved user shopping experiences particularly suited to unfamiliar buyers, such as first time buyers of a product. A shopping assistant and platform is provided that aggregates product data into a user interface to facilitate a shopping journey for a user. A user may provide a product as input to a system along with a plurality of parameters such as, for example, budget or size restrictions. The system can generate one or more results pertaining to the plurality of parameters. A particular result may include a product's name, technical specifications, dimensions, or any other relevant information pertaining to the product which may then be used to cross reference and compare with other results. For example, a user may indicate that they are shopping for a washing machine, and provide inputs such as necessary dimensions to fit inside their home and a budget range. The platform can return a page or other content including information on basic features of washing machines, budgeting and unified features across various washing machine brands, and insights

and comparisons of results that match the inputs. The results may include technical specifications for each product, as well as the price for each product at a plurality of retailers.

In example embodiments, a shopping assistant can provide users the ability to compare products based on features and compare retailers based on price. Users can understand basic features of products which enables them to get basic knowledge around different functionalities of the product from trusted sources like featured snippets, virtual consultations with retailers or related apps (e.g., social media apps). Budgeting and unified features are provided which can directly be applied on a search page. A price range line can be provided by bucketing different products with similar features in different price ranges and to present those buckets to the user. This feature can be monetized by providing ads for products which would otherwise fall in a higher bucket, but are on discount currently, and thus belong to a lower price range. Better representation of product comparisons between brands or within brands can be provided.

By aggregating products, technical specifications, and prices at multiple retailers as described herein, the user shopping experience becomes more efficient and leads to more informed purchasing decisions.

### **Detailed Description**

Computer-implemented systems and methods provide a user interface for comparing products across multiple brands and retailers based on given input parameters. A user may provide a query pertaining to a given product (e.g., refrigerator, washing machine, etc.) to the platform which returns data for a user interface. The user interface may include a first section which outlines the basic features and terminology pertaining to the query such as, for example, links to informative websites or a video(s). In some instances, the first section may include links to third-party services or retailers that allow a user to talk to or message with a trained

professional in the respective field of the query. The user interface may include a second section including product results pertaining to the query (e.g., those matching budget, dimensions, or specific functionalities (e.g., >10 wash cycles, power back-up, high RPM, etc.)). In some instances, the product results may be presented in a one-dimensional plot having a horizontal axis depicting price. Product results can be placed according to their respective price by retailer (e.g., MSRP may not be the price displayed or used to align a given result). The second section may include parameter filters that allow a user to shrink or expand product results based on given parameters to filter search results. In some instances, the second section includes an advertising section. The user interface may include a third section including a specification comparison tool. A user may directly compare product results from the second section of the user interface using the specification tool.

The first section of the user interface can provide integration with popular forums or social media apps pertaining to a query provided by a user. For example, a user may enter a query pertaining to home improvement or appliances and the first section may provide a link to customer service for a corresponding retailer. A link may be provided to speak to a professional or a link may be provided to a social media site or application enabling the user to post a message or read messages posted by others pertaining to the query.

Product results provided in the user interface may be from multiple retailers resulting in multiple prices for a product. The multiple prices may be displayed with their respective retailers for the user to select. In some instances, the lowest price may be used to represent the product overall and the plurality of retailers and prices may be displayed after selecting the product. One or more of the multiple retailers may offer used, refurbished, or other non-new product states for

a product which may also be displayed with the price of the product. In some instances, a product in a non-new state may be displayed as a separate product from a new product.

The one-dimension chart in the second section of the user interface may display key features for each product on the chart. For example, the second section of the user interface may display four different washing machines, each at a different price along with distinctive features (e.g., features the other products lack or are common to the price point) of each washing machine. The higher end washing machine has Wi-Fi capabilities which the other washing machines lack and as a result, “Wi-Fi” is listed underneath the higher end washing machine on the one-dimension chart.

The third section of the user interface may display product results and individual specifications by brand. Each brand may have a table and breakdown of each product from the brand’s specifications and cost. In some instances, a list of prices and product states are provided with each product. For example, a table may consist of four different products from a manufacturer and include technical specifications in a table with the products on the X-axis and specifications of the Y-axis. At the bottom of the table, rows for price, retailer, and product condition can be provided to allow the user to compare both features within a brand as well as price.

A user can initiate a query on a user computing device which will be sent to a remote computing system. The remote computing system determines that the query pertains to a product and returns relevant information regarding the product to the user computing device and instructions to display a user interface along with the relevant information. The remote computing system may aggregate data from a plurality of retailers pertaining to the product and send it to the user computing device for display in the user interface. The user computing device

may use the aggregate data to generate a one-dimension chart with the axis being price on the items being products for sale, as well as a comparison tool for the user to interact with in the user interface. In some embodiments, locally stored data is used to as a response to a user submitting a query on the user computing device. It should be appreciated that any combination or order of the methods described herein can be executed on a user computing device, remote computing device, or similar. For example, all steps of displaying the user interface and aggregating for sale data can be performed on a remote computing system or parts of the process can be performed on a user computing device and others on a remote computing system as previously described.

FIG. 1 depicts an example computing system 100 in accordance with the present disclosure. The computing system comprises a user computing device 102 including one or more processors 112, memory 114 including data 116 and instructions 118 configured to carry out the methods disclosed herein, and a user input component 122. The user input component can be, for example, a touch display or physical buttons within the user computing device 102. The computing system 100 further comprises a network 180 and a server computing system 130. The server computing system 130 comprises one or more processors 132, and memory 134 including data 136 and instructions 138 configured to carry out the methods disclosed herein.

A user may provide a query via user input component 122 on the user computing device 102. The query may be sent across the network 180 to the server computing system 130. The server computing system 130 determines the query pertains to a particular product. The server computing system 130 retrieves and aggregates data for the product from different sources. The aggregated data can be provided to the user computing device 102. The user computing device 102 may display a user interface including information pertaining to the product, as well as listings for the product from different retailers.

Referring to FIG. 2, an example user interface 200 is provided in accordance with the present disclosure. The user interface 200 comprises one or more sections 202, as well as search result(s) 204. When a user provides a query to a system pertaining to an available product, one or more sections 202 may be provided with or otherwise as part of search results 204. The one or more sections 202 may be divided into distinct sections as seen in FIG. 2, however it should be appreciated that the one or more sections 202 may be rearranged, reordered, separated, or provided in other display formats. The one or more sections may appear in any order within the search results 204.

FIG. 3 depicts an example section 300 of a user interface 200 in accordance with the present disclosure. The section 300 consists of an information display area 302, third party links 304, and social media integration 306. The information display area 302 may consist of information pertaining to a query in a plurality of forms such as, for example a video (as pictured) or text (not pictured) or any other format for presenting data pertaining to the query. The third-party links 304 may consist of links to third party services or websites that may provide information pertaining to a query such as, for example live chat services with trained professionals with knowledge of the query. For example, a user may search for a washing machine and therefore a link to a hardware store chat service is provided as one of the third-party links 304. The social media integration may comprise links, buttons, or other interactions with social media services deemed relevant to a provided query. For example, similar to the third-party links 304 a query for a washing machine may result in a social media integration 306 with a social media site providing information and/or feedback.

Referring now to FIG. 4, an example section 400 of a user interface 200 is provided in accordance with aspects of the present disclosure. The section 400 of a user interface comprises a

price chart 402 with price range data 404 and sponsored offers 406 comprising products 408. The price chart 402 includes aggregated data from one or more retailers regarding product listings pertaining to a query sorted into price ranges with price range data 404. The price range data 404 may be any information pertaining to the product listings found for the given price range such as, for example brand, key technical features, product state (e.g., used, refurbished, etc.), or price state (e.g., on sale, discounted, closeout, etc.). The sponsored offers 406 may comprise products 408 that align with a provided query and the data shown in the price chart 402. The sponsored offers 406 may provide deals only available through the section 400 of the user interface and paid for by retailers of the shown products.

FIG. 5 depicts an example section 500 of a user interface 200 according to aspects of the present disclosure. The section 500 of a user interface includes a product comparison tool 502 with one or more products 504 and a feature chart 506. The one or more products 504 may be selected from other sections of the user interface (not shown) or auto-populated based on a provided query. When the one or more products 504 are put into the comparison tool 502, the feature chart 506 populates the key features of each of the one or more products 504 to allow for easy comparison between the one or more products 504. The key features of the feature chart 506 may be any data pulled pertaining to the one or more products 504.

## **Figures**

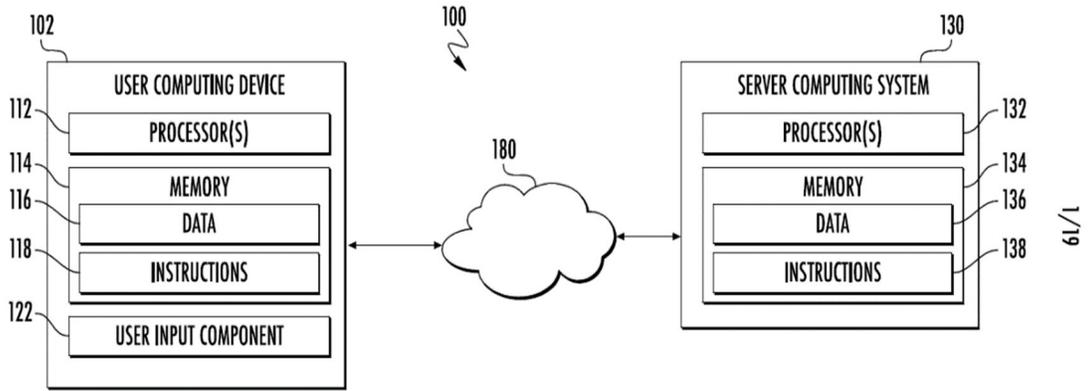


FIG. 1

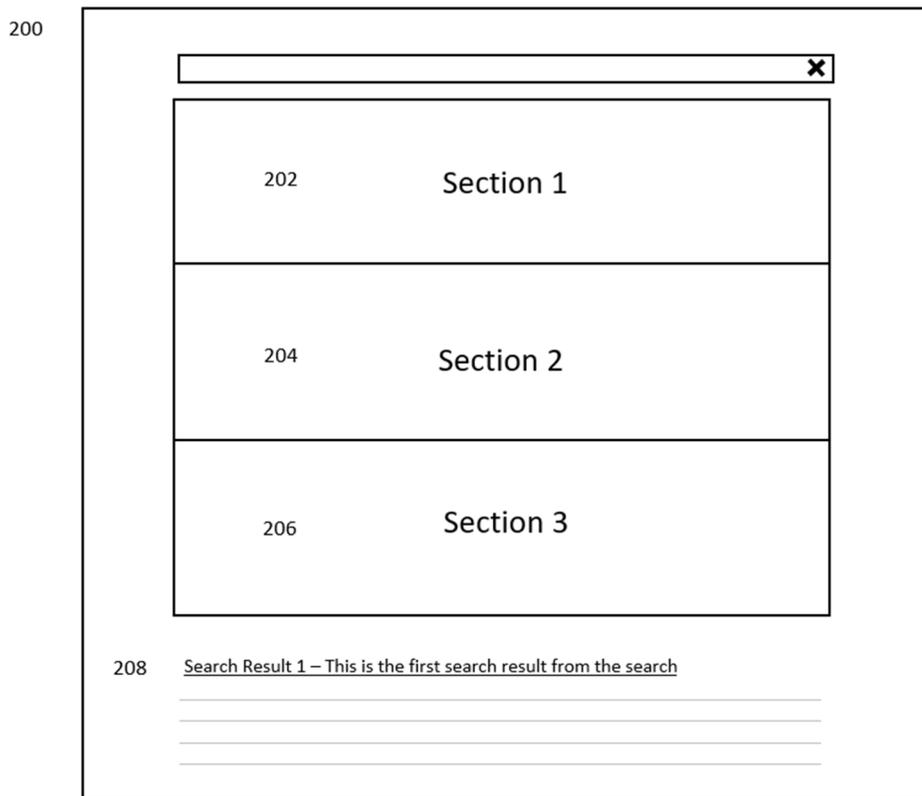


FIG. 2

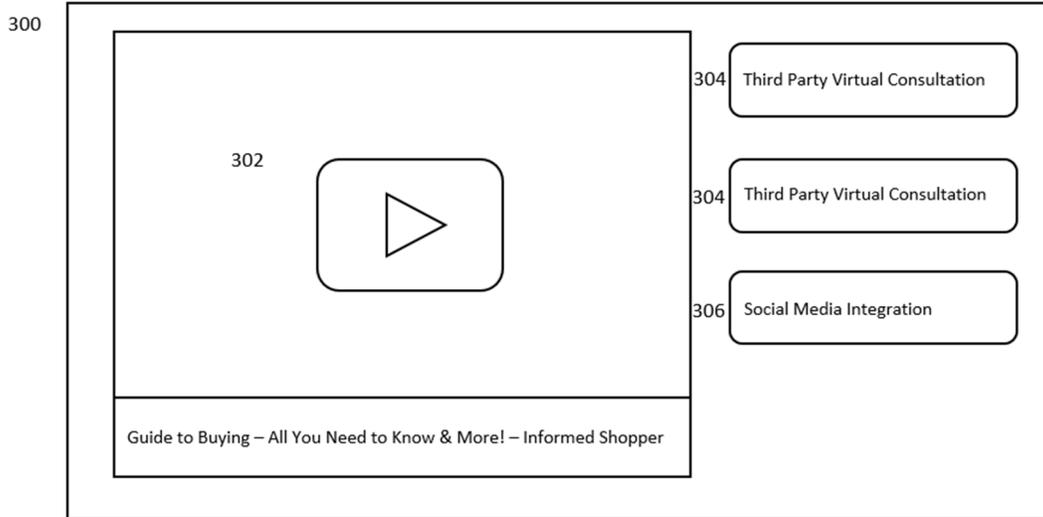


FIG. 3

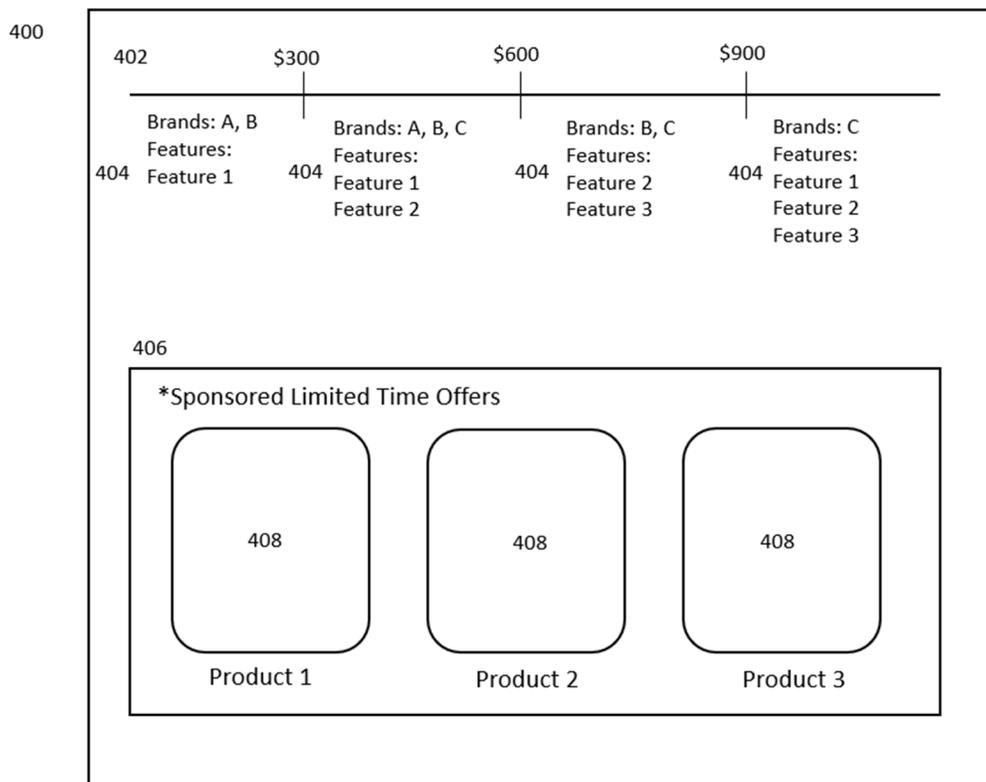


FIG. 4

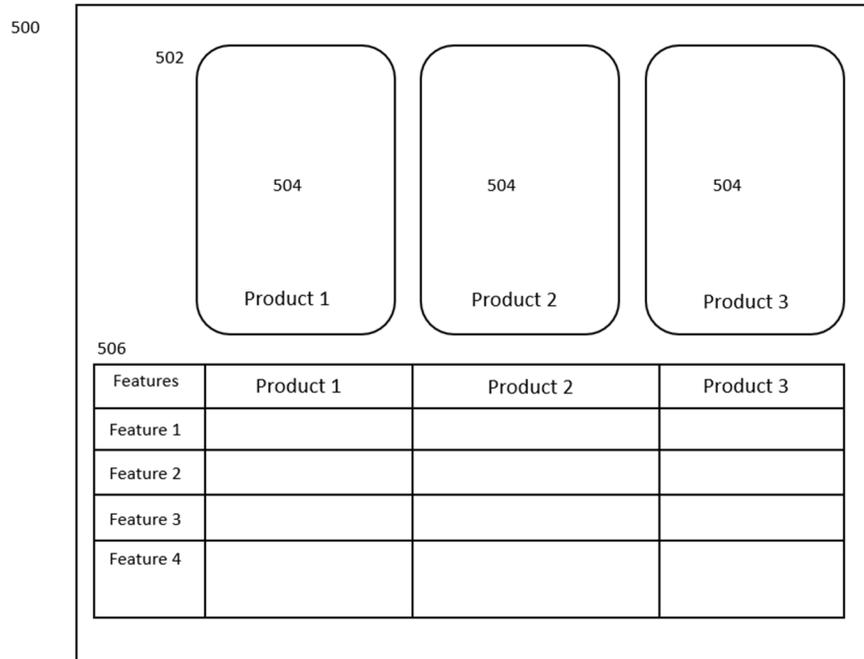


FIG. 5

## Abstract

Computer-implemented systems and methods provide for an improved user shopping experience via aggregated product data. In one embodiment, in response to a query, a system generates a user interface with multiple sections. A first section may include learning materials and information pertaining to the query to aid a user in making an informed purchase. A second section may include an overview of available products based on price and given features, as well as feature filters to narrow results. A third section may include a comparison tool that allows the user to directly compare products with the same brand, as well as compare individual products across multiple brands.