(54) Title: METHOD AND SYSTEM FOR MANAGING SALES OPERATIONS
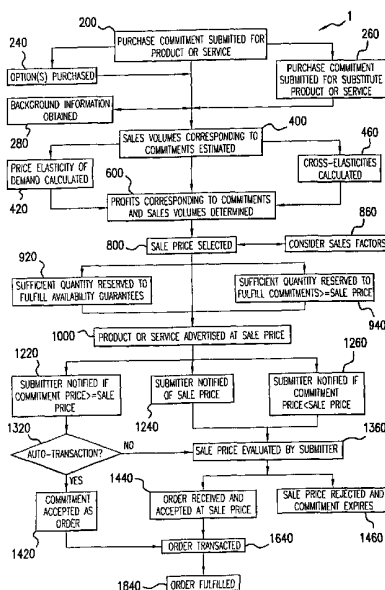
(57) Abstract: At least one method (Fig. 1) is disclosed for managing sales. A disclosed examplary method (Fig. 1) includes obtaining a plurality of purchase commitments for each of a plurality of items having at least one specified attribute. The disclosed method (Fig. 1) also includes determining a selling price (800) for an identified item having the at least one attribute based upon the plurality of purchase commitments and advertising the identified item to the public at the selling price.

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Method and System for Managing Sales Operations

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      This application claims priority to and is a continuation-in-part of pending application Serial No. 09/693,849 (Attorney Docket No. 10551-134), titled "**Method and System for Managing Sales Operations**" filed 23 October 2000, and claims priority to provisional application Serial No. 60/215,767 (Attorney Docket No.

15   10551-112), titled "**Method and System for Sampling Demand**", filed June 30, 2000, and claims priority to, and is a continuation-in-part of pending application Serial No.09/589,176 (Attorney Docket No. 10551-78), titled "**Method and System for Stimulating Promotions,** filed June 8, 2000, which claims priority to, and is a continuation-in-part of pending application Serial No.09/569,025 (Attorney Docket

20   No. 10551-75), titled "**Method and System for Protecting a Purchaser from Post-Purchase Price Decreases**", filed May 11, 2000, which claims priority to, and is a continuation-in-part of pending application Serial No. 09/560,805 (Attorney Docket No. 10551-76), titled "**Method and System for Sampling Demand**", filed April 28, 2000, which claims priority to provisional application Serial No. 60/191115

25   (Attorney Docket No. 10551-69), titled "**Method and System for Sampling Demand**", filed March 22, 2000, and claims priority to, and is a continuation-in-part of, pending application Serial No.09/510,308 (Attorney Docket No. 10551-62),

titled "**Method and System for Determining a Price**", filed February 22, 2000,

which claims priority to, and is a continuation-in-part of pending application Serial

No. 09/478,815 (Attorney Docket No. 10551-54), titled "**Method and System for**

Determining a Selling Price", filed January 7, 2000, each of which are incorporated

5   by reference herein in their entirety.

Field of the Invention

The present invention relates to the field of operations management, and,

more particularly, to a method and system for managing sales operations.

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Background of the Invention

There are many types of sellers in today's marketplace, including business-

to-business sellers, retailers, and one-time sellers. These classifications can be

further refined. For instance, among retailers, there are traditional bricks-and-mortar

15   sellers, and on-line e-tailers.

Many sellers are faced with the challenge of determining a selling price for

each item offered by the seller. Typically, a seller desires the selling price to be that

price which maximizes the seller's profit. Clearly, an infinitely high price would

maximize the seller's profit, if only purchasers would buy at such a price. Likewise,

20   a price of zero will maximize the sales volume, but there will be no profit for the

seller. Thus, the maximum profit must fall at some intermediate price. Determining

this profit-maximizing price can be a substantial challenge for sellers.

It is generally agreed that, for a particular item, multiplying any selling price

by its resulting sales volume yields the sales revenue associated with that item.

25   Subtracting the seller's cost yields the seller's profit. For each selling price in a

range of selling prices, there will be a corresponding sales volume from which a

corresponding profit can be determined. Upon determining this range of profits,

identifying which of these profits is the maximum can be relatively straight-forward.

Determining which sales volume results from a particular selling price, however, can

30   be extremely difficult.

Traditionally, sellers have determined what sales volume to expect from each

of a variety of selling prices by repeated experimentation. More specifically, over a

number of months or years, sellers experiment by raising and/or lowering the price on a item, noting how the sales volume for the item reacts. For example, a seller can announce a 20% off sale on a particular item, and count the number of items sold at that selling price to determine the sales volume at the selling price. Later, the seller

5   can announce a 30% off sale on a particular item, and similarly count the sales. Over the course of numerous experiments, the seller can develop a feel for how sales volume will respond to various price changes, and which price results in the maximum profit.

This traditional approach is problematic, however, because of the numerous

10   and substantial costs and delays involved. These costs can include the costs to communicate the new selling price within the seller's organization, the cost to change price stickers or provide signs announcing the new price, the cost to advertise the new price, the cost of lost goodwill if potential purchasers disfavor the new price, and the cost of lost profits if the new price results in a lower profit than

15   the maximum profit. Moreover, the substantial costs of the traditional approach often can be exacerbated because, for each new selling price, weeks or months can pass before sufficient data is accumulated to determine how sales volume is affected by that new selling price.

Furthermore, this traditional approach can be too slow to promptly detect

20   fads, changes in purchaser preferences, and quickly developing economic trends. Also, if a seller faces a rapidly or dramatically changed cost for the item, the seller may not have yet gathered sufficient sales volume data under the traditional approach to anticipate the sales volume and profit effects of a dramatic change in selling price. The slowness of this traditional approach is even more significant

25   given today's emphasis on just-in-time inventory management techniques that attempt to minimize excess inventory and speed inventory turn-over.

Other traditional approaches for estimating sales volume are equally problematic. For example, to more rapidly gather sales volume data, sellers sometimes offer different selling prices at different selling locations. In addition to

30   the typical downfalls, however, this approach can substantially harm purchaser goodwill when purchasers learn that their location is subject to a higher selling price than another, perhaps nearby, location. Moreover, once purchasers learn of the

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differing selling prices at nearby stores of the same seller, the sales volumes of those stores can reflect cannibalistic effects, whereby a store with a lower selling price "steals" sales volume from another store having a higher selling price. In this situation, the resulting sales volumes may not accurately reflect purchasers'

5   responses to a uniform lower selling price, and any seller assuming otherwise may be substantially misled. Additionally, tracking all the selling prices and their resulting sales volumes can be very costly and difficult to manage.

In another approach, a seller can put an item on sale frequently, each time at a different selling price. Yet this approach can create its own problems. If potential

10   purchasers begin to expect an item to go on-sale, they may delay their purchases at the "regular" price and purchase once they feel the seller is offering the lowest "on-sale" price for the foreseeable future. Thus, in an attempt to gather accurate sales volume data, the seller can taint the data by skewing purchasers' reactions to sales.

Another traditional and problematic approach is for a seller to utilize focus

15   groups or surveys to gather purchaser opinions about changes to the selling price. An overwhelming problem with this approach is that purchasers are not bound to behave according to their stated opinions. For example, if a purchaser indicates in a survey that they would buy 10% more of a given item if the selling price were 20% lower, the purchaser is not committed to behaving in that manner. Thus, when

20   actually faced with a price that is 20% lower, the purchaser may purchase substantially more or less than the 10% increase that the purchaser previously stated. Thus, estimating sales volumes based on purchaser opinions and/or estimates is fraught with uncertainty and potential inaccuracies.

Therefore, there is a need for a method of rapidly determining a profit-

25   maximizing price that overcomes deficiencies in the traditional approaches.

Summary of the Invention

Embodiments of the present invention provide a method for determining a selling price. The method includes obtaining a plurality of purchase commitments

30   on an identified item from a plurality of submitters, and estimating a plurality of sales volumes based on the plurality of purchase commitments. The method also includes calculating a plurality of profits corresponding to the plurality of purchase

commitments and the plurality of sales volumes, and identifying a maximum profit from the plurality of profits. Furthermore, the method includes determining a selling price based upon the maximum profit.

Embodiments of the present invention also provide a method for pricing an
5   item. The method includes obtaining a first metric and a second metric for an item having a price. If the first metric is greater than the second metric, the method includes automatically raising the price. If the first metric is less than the second metric, the method includes automatically lowering the price.

Embodiments of the present invention also provide a method for sampling
10   demand. The method includes receiving a plurality of purchase commitments for an item. The method also includes generating a plurality of market demands for the item based on the plurality of purchase commitments.

Embodiments of the present invention further provide a method for stimulating promotions. The method includes receiving purchase commitment
15   information. The method also includes obtaining promotion relationship information and determining a promotion from the purchase commitment information and the promotion relationship information.

Embodiments of the present invention also provide a method for managing sales. The method includes obtaining a plurality of purchase commitments for each
20   of a plurality of items having at least one specified attribute. The method also includes determining a selling price for an identified item having the at least one attribute based upon the plurality of purchase commitments and advertising the identified item to the public at the selling price.

25   Brief Description of the Drawings

The invention will be more readily understood through the following detailed description, with reference to the accompanying drawings, in which:

FIG. 1 is a flowchart of an embodiment of a method of the present invention;

FIG. 2 is an exemplary graph plotting sales volume versus selling price;

30   FIG. 3 is an exemplary graph plotting commitment quantity versus commitment price for a sample;

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FIG. 4 is an exemplary graph plotting constrained commitment quantity versus commitment price for a sample;

FIG. 5 is an exemplary graph plotting cumulative constrained commitment quantity versus commitment price for a sample;

5 FIG. 6 is an exemplary table illustrating price points and resulting commitment quantities, revenues, costs, and profits for a sample;

FIG. 7 is a block diagram of an embodiment of a system of the present invention;

FIG. 8 is a block diagram of an alternative embodiment of a system of the
10 present invention;

FIG. 9 is an exemplary three-dimensional cylinder graph plotting an illustrative demand curve at various times 1 through 10;

FIG. 10 is an exemplary table illustrating, for a fixed transaction price, fixed item cost, and various demands, the resulting revenues and profits;

15 FIG. 11 is an exemplary table illustrating, for a fixed transaction price, variable item costs, and various demands, the resulting revenues and profits;

FIG. 12 is an exemplary table illustrating, for a fixed transaction price, various item costs, various demands, and various times, the resulting
20 revenues and profits;

FIG. 13 is an exemplary three-dimensional chart of some of the data presented in FIG. 12;

FIG. 14 is a flowchart of an embodiment of another method of the present invention;

25 FIG. 15 is a block diagram of an embodiment of another system of the present invention;

FIG. 16 is a flowchart of an embodiment of yet another method of the present invention;

FIG. 17 is a flowchart of an embodiment of still another method of the
30 present invention;

FIG. 18 is an exemplary table illustrating promotion relationship information; and

FIG. 19 is a flowchart of an embodiment of still another method of the present invention.

FIG. 20 is a flowchart of an embodiment of another method of the present invention.

5   FIG. 21 is a flowchart of an embodiment of yet another method of the present invention.

Detailed Description

Embodiments of the present invention provide a method for determining a

10   selling price. The method includes obtaining a plurality of purchase commitments on an identified item from a plurality of submitters, and estimating a plurality of sales volumes based on the plurality of purchase commitments. The method also includes calculating a plurality of profits corresponding to the plurality of purchase commitments and the plurality of sales volumes, and identifying a maximum profit

15   from the plurality of profits. Furthermore, the method includes determining a selling price based upon the maximum profit.

Embodiments of the present invention also provide a method for pricing an item. The method includes obtaining a first metric and a second metric for an item having a price. If the first metric is greater than the second metric, the method

20   includes automatically raising the price. If the first metric is less than the second metric, the method includes automatically lowering the price.

Embodiments of the present invention further provide a method for stimulating promotions. The method includes receiving purchase commitment information. The method also includes obtaining promotion relationship

25   information and determining a promotion from the purchase commitment information and the promotion relationship information.

Fig. 1 is a flowchart of an embodiment of a method 1 of the present invention. Method 1 can begin at step 200 by obtaining purchase commitments for an identified item from a plurality of submitters. These purchase commitments can

30   be obtained verbally, or by any well-known written or electronic method. For example, if obtained electronically, purchase commitments can be submitted in a facsimile, e-mail, electronic file, or web page.

In one embodiment, a purchase commitment can include a legally-enforceable offer to become bound upon a legally sufficient acceptance of the offer, and can include material terms of the offer, such as, for example, a description of the item, a commitment quantity, a commitment price, identifying information for the

5   submitter, payment terms, and/or delivery terms.

An item can be, for example, a product, a service, a bundled group of products, a bundled group of services, or a combination thereof. The item can be identified sufficiently to allow the seller to differentiate the desired item from other items sold by the seller. The submitter can type, write, speak or otherwise identify

10   the desired item. If the identification of the item is insufficient, the submitter can be requested to provide more detail.

In one embodiment of method 1, the seller, an agent of the seller, or a third party can provide a listing of items and the submitter can indicate which is desired by selecting from the listing. The listing can include a description of the items. If

15   such a listing of items is provided, the listing can be provided by any means, including verbally, via traditional printed materials, and/or via electronic means such as facsimile, electronic mail, electronic file, and/or Web page.

A purchase commitment can include a commitment quantity that specifies a quantity of the identified item to which the submitter can be bound to purchase. A

20   purchase commitment can also include a commitment price at which the submitter can be bound to purchase the identified item. Moreover, a purchase commitment can include a commitment period of any length during which the submitter can be bound to purchase the identified item.

As an illustrative example, a purchase commitment can be obtained via a

25   Web page submission to the GAP for two pairs of men's EASYFIT brand, pleated front, chino-style trousers, in a sand color, with waist size 33 and length 32, which are regularly priced at $30 per pair. The purchase commitment can specify a commitment quantity of two, a commitment price of $25 per pair, and a commitment period of December 20, 1999 to December 31, 1999.

30   A purchase commitment can include payment information such as payment terms and mechanisms. Moreover, a purchase commitment can include information sufficient to identify the submitter, including information sufficient to check the

credit-worthiness of the submitter. Furthermore, a purchase commitment can include delivery information such as a location where the item can be delivered to the submitter, and a delivery mechanism.

Building on the previous illustrative example, a purchase commitment can

5   identify that the purchase commitment was obtained from John Doe, who lives at 1234 Main Street, Fairfax, Virginia, 22030. John Doe's purchase commitment can also identify that he wishes to secure his purchase commitment using his VISA credit card, with a card number of 0123 4567 8901 2345, an expiration date of January 2001, and a billing address identical to his home address. The purchase

10   commitment can identify that John Doe desires that the trousers specified in his purchase commitment be delivered to him in person on the date he arrives between January 3, 2000 and January 15, 2000 at his local GAP store, which is located at the Fair Oaks Mall in Fairfax, Virginia. Alternatively, the purchase commitment could identify that John Doe desires that the trousers be delivered to his home address via

15   UPS Blue service, with no receipt signature required.

In one embodiment of method 1, a purchase commitment having a commitment price equal to or above the selling price (a "successful commitment price") can implicitly or explicitly provide the submitter's authorization for the purchase commitment to be treated as an order and transacted automatically. In

20   another embodiment of method 1, a purchase commitment having a successful commitment price can require explicit authorization by the submitter before the purchase commitment can be treated as an order. Thus, a purchase commitment can be binding or non-binding on the submitter.

Moreover, a submitter can be charged for the opportunity to submit a

25   purchase commitment. The charge can be based on a number of factors, including, for example, the seller, the commitment price, the length of the commitment period, etc.

Along these lines, any of a number of revenue-generating options can be purchased by the submitter, as shown at step 240. For example, a submitter can

30   purchase the option to reject the selling price, so that a purchase commitment having a successful commitment price is not automatically converted to an order. As another example, a submitter can purchase an option to purchase at the selling price

rather than at the successful commitment price. As yet another example, the submitter can purchase an option that guarantees the availability of the item of the purchase commitment should the commitment price be successful. When this option is purchased, a seller could be obligated to refuse to allow purchase commitments to

5   be submitted for a quantity of an item greater than what the seller has and/or will have in inventory at the time the selling price is determined, announced, and/or advertised.

At step 260, purchase commitments can be obtained from the submitter for substitute items. Again building on the previous illustrative example, a substitute

10 item could be one pair of the same trousers in a navy color for $18 from January 3, 2000 through January 10, 2000.

At step 280, background information on the submitter or the item can be obtained. For the submitter, this background information can include credit-worthiness and/or demographic data. Building on the previous illustrative example,

15 an authorization can be sought for charging the commitment price to the VISA credit card of John Doe, or a credit check can be run to verify that John Doe is credit-worthy and trustworthy to honor his purchase commitment without securing that purchase commitment with a credit card or other well-known method. Additionally, a demographic database can be accessed to find that John Doe is a 32 year-old single

20 male, with an annual gross income between $40,000 and $50,000, who lives in an apartment, and who leans somewhat toward the conservative side in his clothing, music, and politics.

For a product, the background information can include inventory information for the product, such as, where applicable, detailed description, specifications,

25 stockkeeper's unit (SKU), uniform product code (UPC), the quantity currently in inventory, the quantity back-ordered, the back-order delivery date, the lead time required to obtain more of the product from the supplier(s), the supplier, supplier contact information, supplier's stock number, the shelf life of the product, the location of each unit of inventoried product, etc.

30 For a service, the background information can include information such as, where applicable, a description of the service, the quantity of service units available to be sold in a given time period, the time required to provide the service, the times

available for provision of the service, the names of individuals qualified to perform

the service, any products or qualifications which a purchaser must possess prior to

provision of the service, the products used to provide the service, inventory

information (such as that listed in the preceding paragraph) concerning the products

5   used to provide the service, etc.

At step 400, the purchase commitments of step 200 can be used to estimate

sales volumes for the identified items. More specifically, the purchase commitments

of step 200 can serve as a sample of market demand for the identified items. To do

so, at step 400, the purchase commitments of step 200 can be segregated by

10   commitment price into a number of price ranges, each price range having an

associated price point that can equal the average price of that price range. Thus, for

each price point, there can be an associated number of items, or sales volume, for

which purchase commitments have been obtained.

As described above, the sales volume for an item typically increases as the

15   price of the item decreases. Using the earlier example, an illustrative sales volume

curve is plotted in Fig. 2, which shows that at a price of $100, the sales volume for

the GAP trousers is essentially zero, while at a price of $0, the sales volume for the

GAP trousers is very large, and essentially infinite.

Applying step 400 to the earlier example, upon gathering a number of

20   purchase commitments for the same GAP trousers, the commitment prices can be

adjusted by rounding them to the nearest dollar and segregated them into a collection

of price points. Plotting the number of pairs of trousers for which purchase

commitments were obtained against the price point for each purchase commitment

can yield the sample commitment volume curve of Fig. 3.

25   At step 420, based on commitment prices and sample commitment volumes,

a price elasticity of demand for the item can be calculated. The price elasticity of

demand can provide a simple measure of whether the revenues generated by the sale

of an item will increase, remain static, or decrease as the price of the item changes,

thereby potentially obviating the need to calculate the revenues.

30   Price elasticities are traditionally classified as either elastic, inelastic, or

unitary. A price elasticity greater than 1 is called elastic, and a given percentage

decrease in price creates a larger percentage increase in sales volume, and thus, an

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increase in revenue. Conversely, a price elasticity less than 1 is called inelastic, and a given percentage decrease in price creates a smaller percentage increase in sales volume, and thus, a decrease in revenue. A price elasticity of exactly one is called unitary, meaning that a given percentage decrease in price creates an identical

5   percentage increase in sales volume, and thus, no change in revenue.

Generally, price elasticity of demand can be found by taking the absolute value of the ratio of the percentage change in quantity demanded corresponding to a selected percentage change in price. As an illustrative example involving applying this formula to method 1, at a price of $25, the price elasticity can be found by

10   taking the absolute value of the ratio of the percentage change in sample sales volume corresponding to a five percent change in commitment price.

At step 460, based on commitment prices and sample commitment volumes for the item of interest and for substitute items identified in step 260, a cross-elasticity of demand for the item can be calculated. The cross-elasticity of demand

15   for an item can provide a simple measure of the change in sales volume for a first item that results from a change in price of a second item. If the cross-elasticity is positive, the goods are substitutes, and a decrease in price of the second item will cause an increase in sales volume of the substitute and a decrease in sales volume of the first item. If the cross-elasticity is negative, however, the goods are

20   complements, and a decrease in price for the second item will cause an increase in sales volume for both the second item and the first item. Thus, knowing the cross-elasticity of demand can help a seller determine how the sales of one item are correlated with those of another.

The approach of steps 400, 420, and 460 can vastly improve, with respect to

25   traditional methods, estimates of the sales volume for an item. This can be particularly true for an item that is new to the market. To obtain even better estimates of sales volume for established items that are put on sale, or to build enthusiasm for potential submitters to participate in method 1, sellers can provide incentives or motivators to submitters. For example, one motivator can be that if a

30   seller puts the identified item on sale to the public, submitters of purchase commitments will be notified of that sale. The notified submitters can be only those who submitted purchase commitments at or above the selling price, or can include

only those who submitted purchase commitments below the selling price, or can include all submitters, or can include any other identifiable subset of submitters, such as submitters whose commitment price is within a predetermined range and/or percentage of the selling price.

5   Another motivator for submission of purchase commitments can be offering a rebate or discount to a submitter based on the quantity of the identified item. Such a rebate or discount can reflect any reduced variable costs that are associated with a transaction involving a purchase of multiple units of the item versus the purchase of only a single unit.

10   Yet another motivator for submission of purchase commitments can be that once notified, each submitter will have the opportunity to bind the seller to selling the item to the submitter at the selling price. Yet another motivator can be that those submitters who submit commitment prices that are above the selling price will be charged the selling price, rather than their commitment price.

15   To discourage submitters from submitting commitment prices that are so low as to stand little, if any, chance of being at or above the selling price, those submitters who submit commitment prices that are at or above the selling price can receive an incentive for submitting a "reasonable" commitment price, that is a commitment price that is above the selling price, within a predetermined range of the

20   selling price, and/or within a predetermined percentage of the selling price. As an illustrative example, those who submit a commitment price within $2 of the selling price can receive a 5% discount off of the selling price, a $2 rebate, or a gift-wrapped mousepad emblazoned with the seller's logo.

          Because the submission of purchase commitments can be motivated by

25   incentives, the sample sales volume curve can be adjusted to reflect those incentives. Such a sample sales volume curve is called "constrained" because it essentially ignores the sales that would occur at very low prices where the seller is likely to experience substantial losses. A graph of a constrained sample sales volume curve for the illustrative GAP trousers is plotted in Fig. 4, which shows that when one or

30   more incentives are provided, submitters tend to cluster their commitment prices around an average commitment price of $24.00.

Although a constrained sample sales volume curve can be helpful, it may not necessarily provide an accurate estimate of how many items a seller would sell at a selected selling price. For example, the curve of Fig. 4 shows that approximately 3000 pairs of trousers have been committed to at a commitment price that rounds to

5   $24. If the seller were to put the trousers on sale at a selling price of $24.00, and accept at the selling price all purchase commitments for the trousers having a commitment price that rounds to $24 or higher, however, the resulting sales volume would be 3000 pairs plus the sum of the sales volumes at each price point above $24.

10   Adjusting Fig. 4 to account for this scenario, a cumulative constrained sample sales volume curve is provided in Fig. 5, which shows that a sample sales volume of 6500 would result if all purchase commitments equal to or above a selling price of $24 were accepted.

Although adjusting the sample sales volumes to account for the incentives

15   may provide a more accurate estimate of the sample sales volume curve, an additional step can be taken to estimate the actual sales volume curve for the market as a whole. In one embodiment of method 1, a market sales volume curve can be approximated by applying a scaling factor to the cumulative constrained sample sales volume curve. The scaling factor can be based on an estimate and/or

20   knowledge of the correlation between sample sales volume and actual sales volume. For example, if it is known that 1000 pairs of the exemplary trousers will be sold at all GAP stores nationwide for each pair for which a purchase commitment is obtained, the commitment quantity axis of Fig. 5 can be replaced with a market sales volume axis that is scaled upwards by 1000 versus the commitment quantity axis.

25   Otherwise, the shape of the curve of Fig. 5 can remain the same.

As an alternative example, the scaling factor for the cumulative constrained sample sales volume curve can be based on a correlation of the ratio of purchase commitments to visits to a Web site where purchase commitments can be submitted, versus the ratio of actual trouser sales at one or more bricks-and-mortar GAP stores

30   to the number of visitors that enter those stores.

In another embodiment of method 1, estimates of the sample commitment volume curve, the constrained sample sales volume curve, the cumulative

constrained sample sales volume curve, and/or the market sales volume curves can be improved by applying well-known statistical techniques, such as normal or binomial distribution estimation techniques, regression techniques, and/or correlation techniques.

5   At step 600, using the market sales volumes, in combination with their associated price points, and the seller's cost for the identified item, the seller's profit can be calculated or determined at each of the price points. This calculation can begin by multiplying each price point by its associated sales volume to arrive at a sales revenue. The seller's cost for the item at that price point can be subtracted

10   from the sales revenue to arrive at a seller's profit at the price point. The seller's cost for the item, can include both fixed and variable costs, as well as any costs allocated to the item, such as administrative, sales, or general costs.

          At step 800, a maximum profit can be identified, and a price point associated with the maximum profit can be selected as a profit-maximizing price and as a

15   selling price.

          In an alternative embodiment of steps 600 and 800, the sample sales volumes can be used to identify a selling price. To explain this approach, Fig. 6 provides illustrative sample data that continues the earlier example. Referring to Fig. 6, column A provides a series of price points, beginning at $30 and descending to $0.

20   Column B lists the number of pairs of trousers for which purchase commitments were obtained at each price point.

          Column C shows, for each price point, the cumulative number of pairs for which commitments were obtained. As an example, at $28, Column C shows a value of 329, which is the sum of the column B commitment quantities for $30, $29,

25   and $28. This means that commitments have been obtained for 329 pairs of trousers at a selling price of $28 or greater.

          Column D lists the sales revenue corresponding to each price point, and column E lists the cumulative sales revenue for commitments at or greater than the given price point. Thus, the commitments at or greater than $28 total $9212.

30   In a similar manner both single price point and cumulative values are provided for the seller's costs and profits. For the sake of simplicity, a uniform cost of $15.00 per pair (i.e., a variable cost of $0 per pair) is assumed, although one of

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ordinary skill in the art could easily extend this example to include non-uniform costs. Column F provides the costs, column G the cumulative costs, column H the profit, and column I the cumulative profit for the estimated sales volume at the given price point. Assessing column I, the maximum cumulative profit occurs between

5      $22 and $23 per pair. Thus, a selling price of $23 per pair could approximately maximize the profit to the seller from the sample of purchase commitments. This selling price can also maximize the profit to the seller from market sales, particularly if the scale-up from the sample sales volume to the market sales volume is linear.

Choosing the calculated or estimated profit-maximizing selling price may not

10   always be the optimal choice, however. Instead, if desired, at step 860, the selling price can be adjusted upwards or downwards from the profit-maximizing price to reflect various sales factors. These sales factors can include, for example, inventory, marketing, economic, and/or financial factors. Adjusting for these sales factors can potentially optimize the selling price.

15   For example, assume the selling price corresponds to a sales volume that exceeds a seller's available inventoried quantity of the identified item, and that inventoried quantity can not be reasonably increased during the duration of the sale. In this scenario, the selling price can be raised until it corresponds to a sales volume that approximates the available inventory, thereby maximizing profits for that

20   available inventory, and allowing all the available inventory to be sold during the sale period.

Similarly, if the selling price corresponds to a sales volume that is less than the seller's available inventory, particularly for a seasonal item for which the seller anticipates substantially reduced demand in the near future, the selling price can be

25   adjusted downward from the profit-maximizing price. This adjustment can allow the seller to sell the item at a selling price that produces the highest profit corresponding to selling all the available inventory.

If the selling price is a number that may be socially unacceptable or invoke social stigma's, such as $13.13, the selling price can be adjusted to a more socially

30   acceptable number, such as $14.00 or $12.99, thereby potentially improving the seller's profits.

If the item is frequently sold with a complementary item, the selling price for the item can be adjusted above or below the profit-maximizing price to account for the profitability of the sales of the complementary item. For example, the selling price for a new razor can be adjusted downward from the profit-maximizing price in

5   the anticipation that the additional sales volume from that lower selling price will lead to a larger sales volume, and potentially greater profits, on the sale of blades for that razor.

If the seller has a need to increase sales volume without primary regard to maximizing profits, the selling price for the item can be adjusted downward from the

10   profit-maximizing price. For example, such a situation could arise if the seller has a substantial need to build market awareness of the seller or the seller's brand, to gain market share, or to impress analysts.

Thus, at step 800, the seller can analyze the price points, the sales volumes associated with those price points, the profits associated with those price points,

15   and/or price-influencing sales factors such as those discussed above, and select a selling price for the identified item.

Once the selling price is selected, at step 1000 the seller can advertise the item at the selling price. The seller's advertising can be directed to the submitters, to a group that includes none, some, or all of the submitters, or to the general public.

20   Once the selling price is identified, submitters can be notified of the selling price. At step 1220, submitters who submitted a commitment price equal to or above the selling price can be notified. As an alternative approach, at step 1240, all submitters can be notified of the selling price. As yet another alternative, at step 1260, submitters who submitted a commitment price below the selling price can be

25   notified.

Submitters can be notified when a commitment period has expired and can be offered an option to renew the purchase commitment. Moreover, submitters can be notified when a sale period has commenced or expired. Likewise, submitters can be notified of a date and/or time by which purchase commitments must be received

30   to be considered, particularly for an upcoming sale.

In addition, submitters can be provided with a list of purchase commitments. As an illustrative example, that list can include purchase commitments submitted to

a particular seller, purchase commitments submitted within a particular time period, and/or purchase commitments expiring within a particular time period, etc.

In one embodiment of method 1, any purchase commitment having a commitment price that is equal to or above the selling price can be automatically
5   accepted as an order and the transaction automatically executed. In another embodiment of method 1, a submitter can be given a choice whether the purchase commitment is automatically accepted and executed.

Thus, at step 1320, the process can branch depending on whether, in step 200, a submitter who submitted a commitment price equal to or above the selling
10 price indicated that the transaction should be executed automatically. When an automatic transaction is requested or required, the process can proceed at step 1420, where the submitter's purchase commitment is accepted as an order. In one embodiment of method 1, the price associated with the order can be the selling price. In another embodiment of method 1, the price associated with the order can be the
15 commitment price.

If an automatic transaction is not requested or required, the process can proceed to step 1360, where the submitter can evaluate the selling price and decide whether to place an order for the item at the selling price or reject the selling price. If the submitter places an order, the process continues to step 1440, where the order
20 is received and accepted at the selling price. If the submitter rejects the selling price explicitly, or implicitly by failing to respond within a designated time frame, at step 1460 the purchase commitment and/or the opportunity to place an order at the selling price can expire.

Upon accepting an order from a submitter, at step 1640 the order can be
25 transacted by debiting or charging the submitter using whatever payment method was specified in the purchase commitment or order. At step 1840, the seller can fulfill the orders by delivering the identified item to the delivery location, and by the delivery method, that was specified in the purchase commitment or order.

In one embodiment of method 1, the seller can allow the submitter to modify
30 the payment and/or delivery method after submitting the purchase commitment.

Fig. 7 provides a block diagram of an embodiment of a system 2 of the present invention. As an initial matter, it suffices to say that, using the description

of method 1, one of ordinary skill in the art can implement the functionality of method 1 via system 2 utilizing any of a wide variety of well-known architectures, hardware, protocols, and/or software. Thus, the following description of system 2 can be viewed as illustrative, and should not be construed to limit the

5   implementation of method 1.

Within system 2, seller interaction device 2100 can be used by a seller to interact with system 2 to, for example, host databases, manage databases, provide descriptions of items offered by the seller, obtain and/or receive purchase commitments, estimate sales volumes, calculate profits, identify a maximum profit,

10   determine a selling price, adjust a selling price, track inventory, process orders, draft notifications, send notifications, charge submitters, create advertisements, track inventory, etc.

From a hardware standpoint, seller interaction device 2100 can be, for example, a landline or wireless telephone, facsimile, personal computer, personal

15   information manager, personal digital assistant, handheld computer, data terminal, or other similar device. Seller interaction device 2100 can include well-known components such as a processor 2120, a memory 2140, and an input/output (I/O) device 2160. Input/output (I/O) device 2160 can be an audio and/or visual device, including, for example, a monitor, display, keyboard, keypad, touchpad, pointing

20   device, microphone, speaker, video camera, camera, scanner, printer, and/or port to which an I/O device can be attached or connected.

In one embodiment, processor 2120 can be a general purpose microprocessor, such a the Pentium series microprocessor manufactured by the Intel Corporation of Santa Clara, California. In another embodiment, the processor can

25   be an Application Specific Integrated Circuit (ASIC) which has been designed to implement in its hardware and/or firmware at least a part of a method in accordance with an embodiment of the present invention.

Memory 2140 can be coupled to processor 2120 and can store instructions adapted to be executed by processor 2120. Memory 2140 can be any device capable

30   of storing analog or digital information, such as a hard disk, Random Access Memory (RAM), Read Only Memory (ROM), flash memory, a compact disk, a magnetic tape, a floppy disk, and any combination thereof.

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Seller interaction device 2100 can connect to a controller 2300, which can, for example, host databases, manage databases, provide information regarding a seller's items, obtain and/or receive purchase commitments, estimate sales volumes, calculate profits, identify a maximum profit, determine a selling price, adjust a

5   selling price, track inventory, process orders, draft notifications, send notifications, charge submitters, charge sellers, create advertisements, track inventory, etc.

Controller 2300 can include a processor 2320, a memory 2340, an input/output device 2360, an operating system, and one or more databases. In one embodiment, processor 2320 can be a general purpose microprocessor, such a

10   Pentium series microprocessor manufactured by the Intel Corporation of Santa Clara, California. In another embodiment, processor 2320 can be an Application Specific Integrated Circuit (ASIC) which has been designed to implement in its hardware and/or firmware at least a part of a method in accordance with an embodiment of the present invention.

15   Memory 2340 can be coupled to processor 2320 and can store instructions adapted to be executed by processor 2320. Memory 2340 can be any device capable of storing analog or digital information, such as a hard disk, Random Access Memory (RAM), Read Only Memory (ROM), flash memory, a compact disk, a magnetic tape, a floppy disk, and any combination thereof.

20   Input/output (I/O) device 2360 can be an audio and/or visual device, including, for example, a monitor, display, keyboard, keypad, touchpad, pointing device, microphone, speaker, video camera, camera, scanner, printer, and/or port to which an I/O device can be attached or connected.

Seller interaction device 2100 can connect to network 2400 via network

25   interface 2200. Controller 2300 can also connect to network 2400 via network interface 2200. Alternatively, controller 2300 can connect to network 2400 via its own network interface (not shown).

Network 2400 can electronically link physically distant user interaction devices 2600, seller interaction devices 2100, and/or controllers 2300 so that

30   information can be transmitted and/or exchanged therebetween. Network 2400 can have any architecture, including a direct connection, a local area network, a wide area network such as the public switched telephone network and/or the Internet,

20

and/or a combination thereof. Network 2400 can be a packet-switched, a circuit-switched, a connectionless, or connection-oriented network or interconnected networks, or any combination thereof. Network 2400 can be oriented toward voice, data, or voice and data communications. Moreover, a transmission media of

5   network 2400 can take any form, including wireline, satellite, wireless, or a combination thereof.

A number of user interaction devices 2600 can connect to network 2400 via purchaser network interfaces 2500. Each user interaction device 2600 can be used by a submitter to interact with system 2 to, for example, review a seller's items,

10   submit a purchaser commitment, and/or receive notifications. In addition, user interaction device 2600 can be used by others, such as, for example, a guest to system 2 who can review a seller's items, and/or a purchaser who can place an order for an item on system 2 at a selling price. User interaction device 2600 can be an landline or wireless telephone, facsimile, personal computer, personal information

15   manager, personal digital assistant, handheld computer, data terminal, or other similar device. User interaction device 2600 can include well-known components such as a processor 2620, a memory 2640, and an input/output (I/O) mechanism 2660.

In one embodiment, processor 2620 can be a general purpose

20   microprocessor, such as a Pentium series microprocessor manufactured by the Intel Corporation of Santa Clara, California. In another embodiment, processor 2620 can be an Application Specific Integrated Circuit (ASIC) which has been designed to implement in its hardware and/or firmware at least a part of a method in accordance with an embodiment of the present invention.

25   Memory 2640 can be coupled to processor 2620 and can store instructions adapted to be executed by processor 2620. Memory 2640 can be any device capable of storing analog or digital information, such as a hard disk, Random Access Memory (RAM), Read Only Memory (ROM), flash memory, a compact disk, a magnetic tape, a floppy disk, and any combination thereof.

30   Input/output (I/O) device 2660 can be an audio and/or visual device, including, for example, a monitor, display, keyboard, keypad, touchpad, pointing

device, microphone, speaker, video camera, camera, scanner, printer, and/or port to
which an I/O device can be attached or connected.

Network interfaces 2200 and/or 2500 can be a telephone, a traditional data
modem, a fax modem, a cable modem, a digital subscriber line interface, a bridge, a
5   hub, a router, or other similar devices.

System 2 can include one or more software applications running locally on
interaction devices 2100 and/or 2600, and/or on controller 2300. These software
applications can provide instructions to processors 2120, 2320, and/or 2620 thereby
causing the method of the invention to be performed.

10   Fig. 8 provides a block diagram of an alternative embodiment of a system 2
of the present invention. The embodiment of Fig. 8 is similar to that of Fig. 7 with
two primary exceptions. The embodiment of Fig. 8 shows a plurality of seller
interaction devices 2100, each of which can accommodate a different seller, and
each of which can be attached to network 2400 via a seller network interface 2200.

15   The embodiment of Fig. 8 also shows that controller 2300 can be independently
attached to network 2400 via controller network interface 2350. Thus, controller
2300 can be operated by a seller, a purchaser, or a third-party.

When controller 2300 is operated by a third-party, additional revenue-
generating opportunities can be availed. For example, sellers can be charged to
20   access submitted purchase commitment information and/or demographic
information or datasets regarding submitters. Furthermore, sellers can be charged to
notify submitters and/or to advertise sales.

The software of system 2 can take any of numerous forms that are well-
known in the art. For example, system 2 can utilize one or more databases having a
25   flat file or a relational organization, and a centralized or distributed architecture. For
instance, those of skill in the art can tailor products such as an SQL database to
provide the functionality of method 1 and system 2. Additionally, system 2 can
utilize platform-independent and network-centric software such as Java or
JavaScript, thereby potentially eliminating the need for controller 2300.

30   There are substantial advantages of the methods and systems of the present
invention over the known methods and systems. For example, embodiments of the
present invention can rapidly provide a seller with a sample of market demand, from

which sales volumes can be rapidly estimated. Furthermore, embodiments of the present invention can allow a seller to rapidly determine a profit-maximizing selling price for all potential quantities of the item, and thereby establish an appropriate selling price, and/or plan upcoming sales. Also, utilizing the demographic data

5   which can be gathered about each submitter, market demand for various market segments can be estimated.

Because each purchase commitment can represent a manifestation of an intent to be legally bound, purchase commitments can provide a vastly superior sample of true market demand compared to traditional market demand estimation

10   techniques. For instance, focus groups, interest surveys, and other measures typically only measure interest rather than actual monetary commitments. Because interest is at best only a precursor to demand, and frequently never leads to demand, the typical market demand measurement techniques can be poor predictors of actual market demand. Thus, obtaining purchase commitments for an identified item can

15   be a vastly superior technique for measuring actual market demand for that item.

Moreover, embodiments of the present invention can alert potential purchasers to current and/or up-coming sales on items of interest. Embodiments of the present invention also can allow potential purchasers to submit a purchase commitment for an item of interest, and obtain that item at the commitment price if

20   the seller offers the item for sale at a price equal to or below the commitment price.

As discussed supra, the present invention recognizes that demand for an item can vary with time. Such variation can be due to many factors, such as the seasonal desirability of the item. For example, with price held constant, the demand for snow shovels in Virginia is typically greater during the winter months than during the

25   summer months. Demand variation can also be due to fashion and/or fad. Furthermore, demand can vary due to changes in an item's features, changes in the perceived value of an item, as well as evaluations, ratings, and promotions for the item. Moreover, demand variation can be due to changes in the supply of substitute items, changes in the supply of complementary items, and/or local, regional, and or

30   global economic changes.

To better visualize a variation in demand for an item over time, Fig. 9 provides an exemplary three-dimensional cylinder graph plotting an illustrative

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demand curve at various times 1 through 10. Fig. 9 illustrates that at any of the indicated times, there is a curve reflecting the variation in demand with respect to price. Moreover, for any of the plotted prices, there is a curve reflecting the variation in demand with respect to time. Because demand can vary with price

5   and/or time, revenue can also vary with price and/or time.

Furthermore, cost (whether cost per item or total cost) can also vary with respect to demand and/or time. For example, even with constant demand, cost can change due to inflation, changes in supply situtations, improvements in operating efficiencies, strikes, promotions, etc. Because profit can depend on revenue and

10   cost, profit can vary with respect to price, demand, revenue, cost, and/or time.

Fig. 10 is an exemplary table illustrating, for a fixed transaction price ($25), fixed item cost ($15), and various demands, the resulting revenues and profits. Specifically, column A lists demands of 10,000 through 100,000 units. Column B shows the revenue associated with the listed demand (number of items transacted

15   multiplied by the price per item). Column C identifies the resulting profits (revenues minus costs at each demand).

Fig. 11 provides an example wherein the cost per item varies with demand, thereby causing the profit earned per item at the given transaction price ($25) to vary with demand. Specifically, column A again lists demands of 10,000 through

20   100,000 items transacted. Column B shows the cost per item at the listed demand. Column C provides the revenue at the listed demand, and column D identifies the profit at the listed demand.

Moreover, either of the examples of Figs. 10 or 11 can vary with time. Fig. 12 provides a simple example of this situation, wherein because the cost per item

25   varies with both demand and time, the resulting profit (both per item and overall) at a given transaction price ($25) varies with both demand and time. Specifically, for each of times 1 through 5, columns are provided listing demands of 10,000 through 100,000 items transacted, the cost per item, the revenue, and the resulting profit. To better visualize the variations present in Fig. 12, Fig. 13 provides a chart plotting the

30   time, demand, and profit values of Fig. 12.

In recognition of the potential for these and other fluctuations, the present invention includes a method 3 for adjusting price in response to a metric (measure)

that can vary with time, such as, for example, usage, demand, revenue, cost, and/or profit or any measure thereof. In one embodiment, method 3 can include obtaining a first metric and a second metric. If the first metric is different from the second metric, the price can be automatically changed.

5　　　　A price can be automatically changed when it is changed without substantial human involvement. For example, in one embodiment, a price can be changed fully-automatically, wherein there is no human involvement. In another exemplary embodiment, a price can be changed quasi-automatically, wherein the only human involvement is that needed to initiate a process by which the price changes. In yet

10　another exemplary embodiment, a price can be changed semi-automatically, wherein a price change is communicated to a human and the human approves the price change by, for example, clicking an "Approved" button on a computer screen, and the price is thereafter fully-automatically changed.

　　　　Fig. 14 provides a flowchart illustrating one embodiment of method 3. At

15　step 3010, one or more uses and/or transactions can occur. As described supra, an item can be, for example, a product, a service, a bundled group of products, a bundled group of services, or a combination thereof. Moreover, an item can be tangible or intangible. A use can involve, for example, a utilization, an operation, a consumption, and/or an exhaustion of an item. A transaction can involve, for

20　example, a sale, lease, rental, and/or license of an item. In some cases, a transaction can include an offer, an acceptance, and/or a delivery of the item. When present, the offer and/or acceptance can occur via any communication, including in person, by letter, telephone, facsimile, radio, television, pager, e-mail, chat, instant message, and/or web-page. If in person, the offer and/or acceptance can be at a store, a kiosk,

25　a vending machine, and/or anywhere offers and/or acceptances are communicated in person. When a delivery is involved, the delivery can occur via any delivery technique.

　　　　At step 3020, a first and second metric for the item are obtained before, during, and/or after the use and/or transaction. The item can have a price, which can

30　include, for example, a purchase price, a sales price, a commitment price, a lease price, a rental price, a usage price, a license price, or any other price. Either metric can be related to usage, demand, revenue, cost, and/or profit. Either metric can be

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related to a use, a plurality of uses, a transaction, a plurality of transactions, a time period, and/or a plurality of time periods. Either metric, as well as the difference between the two metrics, can be obtained in any manner, including collecting, retrieving, receiving, measuring, determining, calculating, computing, and/or estimating. The first metric need not involve the same variable as the second metric.

Method 3 contemplates a large number of possible metrics for the first and/or second metric. Using a metric for demand as an example, a demand metric can be related to a quantity of an item transacted during one or more time periods. Moreover, a demand metric can be related to a quantity of an item for which bids are received at, or within a predetermined range of, the price. Furthermore, for a physical or Internet location, a demand metric can be related to the quantity of an item transacted per visitor, customer, and or purchaser. Similarly, numerous metrics relating to use, revenue, cost, and/or profit can be utilized. For example, either the first or the second metric can relate to consumption per period, operations per item, revenue per period, cost per period, cost per item, cost to revenue ratio, profit per item, profit per period, etc.

At step 3030, the first metric is compared to the second metric. At step 3050, if the first metric is greater than the second metric, the price is automatically raised. If not, at step 3070, if the first metric is less than the second metric, the price is automatically lowered.

The second metric need not involve the same variable as the first metric. Moreover, the second metric can relate to a later use, transaction, or time period. Thus, the first metric can relate to, for example, profit for a first time period, and the second metric can relate to profit for a plurality of time periods. By way of further example, the second metric can relate to an average of the profits for a predetermined number of previous time periods. As another example, a second cost metric can relate to a weighted average of the costs for each of a predetermined number of the previous time periods, with the more recent time periods weighted heavier (or lighter) than the less recent time periods. As yet another example, a first revenue metric can relate to a rate of change of revenue for a first time period versus one or more previous time periods. In another example, a first use metric can be related to a percentage change in utilization for a first time period over an

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immediately previous time period, and a second use metric can be a percentage change in utilization measured over several previous time periods.

In steps 3050 or 3070, price can be changed in any of a large number of manners. For example, price can be changed by the percentage difference between the first metric and the second metric. Thus, if the first and second metrics measure profit, and the first metric is 3% lower than the second, the price is lowered by 3%. In another embodiment, to potentially add stability to price changes, price can be changed by a fraction of the percentage difference between the first metric and the second metric. Thus, if the first metric is 5% higher than the second, price can be increase by, for example, one-half that amount, namely, 2.5%. In yet another example, if demand increases by 10% per day, price can be increased by 12% per day.

Differences between the first and second metric can also be viewed as a velocity and/or acceleration. For example, a first demand metric can measure items transacted per hour and a second demand metric can measure items transacted in the immediately previous hour. Thus, the first and second demand metrics can have units of items transacted per hour, which can be called demand velocity. Changes in demand velocity with respect to time, such as the difference between the first demand metric and the second demand metric, can be called demand acceleration. Demand acceleration can be measured as items transacted per hour per hour, or as a percentage change in items transacted per hour. Similar metrics can be devised for usage.

One illustrative example of applying these concepts of velocity and acceleration is to change the price by the percentage change in items transacted per hour, or a fraction of that percentage. For example, if the first metric indicates that 110 items were sold in a particular hour, and the second metric indicates that 100 items were sold in the previous hour, the demand acceleration is 10 items per hour per hour, or 10% per hour. Thus, price could be increased by 10%, 12%, 5%, or some other fraction or multiple of the demand acceleration. Similarly, by way of illustrative example, if cost acceleration measured 10% per week, price could be increased by 10%, 15%, 6%, or some other fraction or multiple of the cost acceleration.

Moreover, velocity or acceleration (or any higher order derivative) for a particular time period can be compared to any previous time period or periods. For example, a usage acceleration of 14% can be identified as occuring with respect to a time period (T-2) previous to the time period immediately previous to the time

5   period evaluated (T).

In another embodiment of method 3, either or both metrics can combine, for example, a demand measurement and a profit measurement. Thus, if for example, demand increased 0.25% per minute and profit decreased by 11% per hour, price could be changed (increased or decreased) by 6.4% per hour. The determination of

10   the amount by which price will be changed can be a linear or non-linear, continuous or step-wise, function of first metric, second metric, and/or any other variable or constant. As an illustrative example of a step-wise price change function, an offered purchase price can be increased by 10% only when consumption increases by 5%, but not until. Afterwards, the offered purchase price can be increased by an

15   additional 7% only when consumption increases an additional 2%, but not until.

Moreover, price changes can be rounded to reflect commonly used monetary units, such as $0.01, or to allow the price to reflect a custom or practice such as always ending in $.99. Furthermore, price changes can be limited such that price can be raised only until a predetermined ceiling is reached, or lowered only until a

20   predetermined floor is reached. Also, notifications, including alarms, can be communicated when predetermined levels are reached for price, usage, demand, revenue, cost, profit, the first metric, the second metric, and/or any other related measure. Along these lines, automatic price changes can be disabled when such predetermined levels are reached, thereby requiring human intervention for

25   additional price changes or to resume automatic price changes.

For example, if price descends to and meets a predetermined floor, such that insufficient profit is made on each transaction of the item, automatic price changes can be disabled, and an offeror of an item can take additional loss prevention measures, such as, for example, refusing to offer the item until higher profits can be

30   achieved, promoting the item to generate demand at a more profitable price, and/or redeploying the item to another market where transactions are more profitable.

Exemplary method 3 can be embodied in a wide range of systems. As shown
in Fig. 15, in one exemplary system 4, a controller 4010 obtains a first metric and a
second metric. Controller 4010 can include a processor 4020 adapted to execute
instructions 4030 contained in a memory 4040 of controller 4010, and receive input

5   or provide output on input/output device 4050. Controller 4010 can obtain either
metric by direct measurement using a sensor 4060, computation on processor 4020,
retrieval from memory 4040 of controller 4010 or from an external memory 4070, or
by receipt from another source 4080. Sensor 4060, external memory 4070, and/or
source 4080 can be connected to controller 4010 by means of a network 4090 or

10   direct connection 4100. Controller 4010 can display an adjusted price on
input/output device 4050 and/or on display 4110, which can be connected to
controller 4010 by means of a network 4090 or direct connection 4100.

As an illustrative example, controller 4010 can obtain one or more flowrate
measurements from directly connected flowmeters 4080 serving a group of fuel

15   pumps at a filling station. Based on instructions 4030 in memory 4040, the
processor 4020 of controller 4010 can aggregate the flowrates for each type of fuel
(regular premium, diesel, etc.). The first metric can be the aggregated unleaded
gasoline flowrate for the most recent hour, and the second metric can be the
aggregated unleaded gasoline flowrate for the previous hour. Upon comparing these

20   metrics, controller 4010 can automatically output an adjusted price for the unleaded
gasoline to pump displays and signs 4050.

In another illustrative embodiment, a retail store can collect sales information
from cash registers and/or UPC scanners. A controller can obtain a first and second
profit metric, compare them, and automatically change prices displayed on

25   electronic signs on or near the shelves where goods are stored. In yet another
illustrative embodiment, a power company can measure electricity usage and
automatically adjust price accordingly. In yet another illustrative embodiment, a
web site can offer goods, measure its costs for those goods, compare a first and
second cost metric, and automatically change prices displayed on the web site to

30   reflect differences between the first and second metric, or automatically e-mail a
communication describing the price change. In still another illustrative
embodiment, a web site can collect purchase commitments for an item, compute the

profit associated with those commitments that are within a predefined range of a current selling price, and adjust price to improve profitability. In another illustrative embodiment, a service provider, such as for example an Internet service provider, can measure the bandwidth consumed by each or all of its subscribers, and can

5   automatically adjust the price charged based on profit metrics associated with that bandwidth. In another illustrative embodiment, a toy manufacturer can measure its consumption and/or inventory of polystyrene, and automatically increase the purchase price it is willing to pay for polystyrene with increases in consumption and/or decreases in on-hand polystyrene.

10   Thus, the present invention advantageously provides numerous methods for automatically adjusting price in response to any of a variety of metrics, and thereby can facilitate improved inventory management, cost management, profitability, market share, and/or price management.

Moreover, as discussed supra, the present invention recognizes that retailers

15   operate under conditions of great uncertainty. Retailers have attempted to reduce this uncertainty by utilizing past transactional data and, in increasing numbers, point-of-sale transactional data as a basis for decisions.

However, as previously discussed, demand for an item can vary with time. In addition, consumer preferences can vary with time. This variation in consumer

20   preferences can be due to many factors, such as seasonality, fads, and the supply of substitute and/or complementary products. Also, a given consumer's preferences can evolve due to changes in the consumer's lifestyle and/or stage of life. For example, as some consumers age, they get married and have children, thereby causing their needs and wants to vary dramatically. As another example, when a

25   college graduate moves into the workforce, he or she may be more inclined to buy nicer clothing instead of the jeans and t-shirts he or she might have worn to classes. Further, changes in a consumer's profession can result in new colleagues, interests, and adjustments in income which can alter consumer preferences.

A consumer's preferences can also change due to relocating to different

30   cities, apartments, and/or homes. For instance, a consumer's needs and wants could be completely different in a large metropolitan city than if he or she was to move to

a small town. Also, a consumer's needs could alter if he or she was to move from an apartment or house into a larger house.

Therefore, past transactions are not necessarily a good indicator of current or future consumer preferences. Even point-of-sale transactions can be considered a

5   historical event once they are analyzed. As a result of changing consumer preferences, retailers that base their marketing information and efforts on past transactional data can often incur unproductive advertising, promotional, and other costs.

One example of unproductive advertising costs is the poor targeting of direct

10   mail efforts. Due to limited budgets, retailers must limit the number of mailers that are sent out. Distribution lists are frequently constructed from a pool of the retailer's past customers based on historical transactions. However, since consumer preferences change over time relying on historical information can lead to a low response rate and poor sales per advertising dollar.

15   Another example of the difficulty retailers can have with marketing information is the selection of newspapers in which to advertise promotions. Ideally, a retailer select those newspapers that are best able to reach the retailer's best customers. For retailers that are heavy users of newspaper advertising, the poor selection of such newspapers can lead to wasted advertising expenses. Retailers can

20   utilize past transactional data to determine where past customers live in relation to where various newspapers are distributed, however, these consumers may have moved and/or their needs and wants may have changed.

In addition, retailers have a difficult time determining how to optimize the utilization of their retail space. One of the key components to optimal space

25   utilization is determining which merchandise should be located adjacent to each other in order to increase consumer convenience and promote increased spending. Retailers attempt to understand cross-shopping patterns of consumers by analyzing past transactions so that they can better format the layout of their store. However, these cross-shopping patterns can change over time as consumer preferences evolve,

30   and therefore, basing merchandise adjacencies on historical information can lead to a less than optimal space utilization.

Furthermore, retailers can have difficulties assessing which products they

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should promote. Retailers try to determine the items that have the greatest

merchandise drawing power, e.g., the ones that if discounted for a promotion would

produce the greatest demand and profits. Again, historical information can be

utilized, but due to evolving consumer needs and wants and new product mixes,

5   basing merchandise drawing power on this information could lead to less than

optimal results.

In recognition of the potential for changes in consumer preferences and the

problems these fluctuations cause for basing decisions on historical information, the

present invention includes method 4 for automatically generating valuable marketing

10   information based upon purchase commitments. Fig. 16 is a flowchart of a method

4 of the present invention. In one embodiment, method 4 can include, at step 4200,

obtaining a plurality of purchase commitments at least one item from a plurality of

submitters. At step 4300, background information on the submitters can be

obtained. At step 4400, sales volumes for the at least one item can be estimated

15   based on the purchase commitments. At step 4600, based upon these sales volumes

and/or the background information, various valuable marketing information can be

automatically generated.

Marketing information can be automatically generated, for example, when it

is generated fully-automatically, wherein there is no human involvement. In another

20   exemplary embodiment, marketing information can be generated quasi-

automatically, wherein the only human involvement is that needed to initiate a

process by which marketing information is generated. In yet another exemplary

embodiment, marketing information can be generated semi-automatically, wherein

some minimal human interaction, such as clicking a button selecting the type of

25   marketing information, is required during the process of generating the marketing

information.

Method 4 contemplates a large variety of possible marketing information

being generated. One illustrative example is the automatic generation of direct mail

lists for a promotion to target consumers interested in a particular product or in

30   similar products. Consumers over time could submit purchase commitments on

items of interest at a particular online or bricks-and-mortar retail store, indicating

what their needs and wants are today. Then, when the retailer decides to run a

promotion on an item, such as bed linens, a list, including names and addresses, could automatically be generated of consumers that submitted purchase commitments on bed linens or other housewares. In another illustrative embodiment, method 4 can utilize background information of the submitters of

5 purchase commitments as a sample of the population to ascertain a demographic profile of the submitters interested in particular items. Then, an expanded list could automatically be generated of consumers that meet the demographic profile of the submitters.

Another illustrative example of applying method 4 to automatically generate

10 marketing information is the automatic generation of lists of newspapers and other publications with the best circulation to reach the most and/or the best customers of a retailer. Method 4 could utilize purchase commitments to determine where the submitters live in relation to where various newspapers and other publications are distributed. Method 4 could indicate the newspapers and other publications with the

15 best circulation to reach the most and/or the best consumers for a retailer for a given promotion. Again, method 4 could utilize the submitters of purchase commitments as a sample to project where the population of consumers with similar demographic profiles lives. In a similar fashion, method 4 could generate lists of other advertising mediums, such as but not limited to radio, television, and/or the internet with the

20 best coverage to reach the most and/or the best consumers for a retailer.

In yet another illustrative embodiment, method 4 could automatically generate merchandise adjacencies. Utilizing purchase commitments, method 4 could automatically generate cross-shopping patterns and recommend merchandise that should be located next to one another to, for example, optimize space

25 utilization. In addition, these cross-shopping patterns could be used to automatically generate special offers for an individual when he or she purchases an item or submits a purchase commitment for an item. For example, if a consumer purchased or submitted a purchase commitment for a pair of shoes, method 4 could analyze cross-shopping patterns from submitted purchase commitments and generate a special

30 offer on a product that is often purchased along with shoes, such as socks.

An additional illustrative embodiment could include method 4 automatically calculating merchandise drawing power and a list of the products for which a

promotion would produce the greatest results. Based upon actual purchase commitments and utilizing these purchase commitments as a sample to make projections, method 4 could recommend the products that if discounted for a promotion would produce the greatest response and profits.

5   Thus, the present invention advantageously provides numerous methods for automatically generating marketing information based upon submitted purchase commitments, and thereby can facilitate improved direct mail promotions, selection of advertising mediums, store layouts, and/or selection of items to promote.

As discussed above with regard to method 1, revenue-generating options can

10   be purchased by a submitter of a purchase commitment. Another example of such options is an option to obtain price decrease protection. Such protection can refund to a purchaser at least a portion of a difference between a transaction price and a lower selling price. For example, under one form of such price protection, if today a seller sells an item to purchaser A for a selling price of $25, and in six weeks the

15   seller offers the same item to a potential purchaser B for $20, at least a portion of the $5 difference can be refunded to purchaser A. As another example, under another form of such price protection, assume a purchaser C submits a purchase commitment for an item and the seller accepts that commitment and sells the item to purchaser C for the commitment price of $35. If, based on submitted purchase commitments or

20   otherwise, the seller offers the item to others at a selling price of $32, at least a portion of the $3 difference can be refunded to purchaser C.

Such a refund can be in one or more forms, including, for example, cash, an adjustment to the purchaser's credit and/or debit card account, a coupon that provides a discount on another item purchased from the seller, and/or a seller credit

25   useful for reducing the price of another item purchased from the seller.

Fig. 17 shows an embodiment of a method 5 of the present invention. Activities 5100 through 5400 can mimic any of the earlier described activities for determining a selling price. For example, at activity 5100, a seller can obtain a plurality of purchase commitments on an identified item from a plurality of

30   submitters. Each of those purchase commitments can identify a commitment price at which the submitter can be bound to purchase the identified item.

At activity 5200, the seller can estimate a plurality of sales volumes based on

the plurality of purchase commitments. At step 5300, the seller can calculate a plurality of profits corresponding to the plurality of purchase commitments and the plurality of sales volumes. At step 5400, the seller can determine a selling price based upon a maximum profit from the plurality of profits.

5   At activity 5500, the seller can offer to compensate a potential or actual purchaser of the identified item. In one embodiment, this compensation can be for at least a portion of a difference between the transaction price and a later-determined and/or reduced selling price. In another embodiment, this compensation can be for at least a portion of a difference between the commitment price and the transaction

10   price.

In any event, this offer can occur before, during, and/or after submission of a purchase commitment. Moreover, this offer can be explicit or implicit. That is, although a seller can charge a submitter and/or purchaser for price protection, the seller can also offer price protection without charge, and instead build any costs

15   associated with the protection into the selling price of the item. At activity 5600, the seller can sell the item to the purchaser. In one embodiment, the price paid by the purchaser, i.e., the transaction price, is the determined selling price. In another embodiment, the price paid by the purchaser is that purchaser's commitment price..

At activity 5700, the seller can notify the purchaser that the selling price has

20   decreased. This notification can be provided to the purchaser via any known communication method, including mail, fax, e-mail, posting on the seller's web site, and/or push technology to the purchaser's web browser. The addressing of this notification can be based on information provided by the purchaser either when the purchase commitment was submitted, during the sales transaction, and/or at some

25   other time. Moreover, the addressing and delivery of this communication can reflect a purchaser's addressing and/or delivery preferences. Further, the notification itself can be sent to the purchaser automatically upon the seller's lowering of the selling price.

At activity 5800, the seller can compensate the purchaser for at least a

30   portion of a difference between the transaction price and a newly determined (i.e., reduced) selling price. When the compensation takes the form of a store credit, the amount of the compensation can be added to any balance in the purchaser's store

credit account. Moreover, the compensation can be included with the notification of activity 5700, or can be provided separately. Like the notification, the compensation can be generated automatically upon the seller's lowering of the selling price.

The price protection provided by method 5 advantageously can reduce and/or

5   eliminate the frustration that consumers often experience after purchasing a product and later discovering that the product went on sale. Although some retailers may currently credit consumers with the difference between a transaction price and a reduced sale price if the consumer provides a receipt showing the higher transaction price to the retailer, embodiments of method 5, however, can reduce and/or

10   eliminate the difficulties with doing so, both for the retailer and for the consumer.

For example, by implementing an embodiment of method 5, a given retailer can differentiate itself from other retailers, and thereby gain consumer good will. Also, via method 5, a retailer can re-engineer and/or streamline the process of reimbursing consumers for price differentials, potentially reducing the costs

15   associated with this process. Moreover, by providing consumers with coupons or store credits, rather than cash, retailers can provide price protection and avoid losing revenue.

As discussed above, the present invention provides a method for determining a selling price. A selling price can include, for example, an optimal selling price for

20   a new or existing product or service, an optimal selling price for excess inventory, and/or an optimal promotional selling price for a promotional item. The selling price can be offered by any seller, such as, for example, a manufacturer, distributor, wholesaler, and/or retailer.

Promotions for items often arise in one or more of three forms. First, there

25   are retailer promotions that bricks-and-mortar and online retailers offer to stimulate sales and to attract potential consumers into their stores or to their Internet sites. In addition to reduced selling prices, retailer promotions can include, for example, coupons, free samples, and various give-aways. Second, there are manufacturer promotions that manufacturers offer directly to consumers to encourage purchases.

30   Manufacturer promotions can include, for example, coupons, rebates, free samples, and sweepstakes. Third, there are trade promotions, such as, for example, promotions that manufacturers offer to other sellers in the supply chain. Trade

promotions frequently can be price discounts that can be used to stimulate retailer promotions. Trade promotions can be offered by any seller to any buyer. Typically, but not always, the buyers who directly receive trade promotions are not retail consumers.

5   As previously discussed, sellers can operate under conditions of great uncertainty. Demand for an item and consumer preference can vary with time due to, for example, economic factors, seasonality, fads, the quality, availability, and/or price of substitute products, changes in a consumer's lifestyle, economic situation, stage of life, profession, geography, and/or values.

10   To complicate matters further, sellers frequently must contend with not only consumer demand uncertainty but also with promotion chain uncertainty. Manufacturers and/or other sellers in the chain can offer trade promotions to retailers and/or other buyers in the chain with the hope that the buyers will seek to increase sales by passing on the savings to, for example, consumers via a retailer promotion.

15 Buyers, however, generally pass on only a portion of the savings from the trade promotion, keeping some of the savings for themselves. Moreover, sellers do not know beforehand what percentage of a trade promotion will be passed along and therefore do not know how large of a trade promotion to offer.

Thus, sellers, and particularly manufacturers, can be deeply challenged to

20 determine what level of trade promotion is needed to stimulate a retailer to offer a particular retailer promotion or retail price. Even more challenging for sellers can be determining an optimal trade promotion that will stimulate an optimal retailer promotion. Such an optimal retailer promotion could, for example, generate a selling price that maximizes profits for the manufacturer, other seller, and/or retailer,

25 optimizes sales volume for a seasonal item, and/or meets another objective.

In addition, the availability of a trade promotion can be a major determinant for retailers regarding when to hold a retailer promotion and how large of a promotion to offer. Because the need to stimulate sales does not always arise when a trade promotion is available or known, retailers may have to plan their retailer

30 promotions without full knowledge of when a seller is going to offer a trade promotion, how large it is going to be, or if one is even going to be offered.

In recognition of the promotion chain uncertainty faced by sellers and

buyers, the present invention includes a new inventive method 6 for stimulating

promotions. In one embodiment, method 6 can include obtaining purchase

commitment information, such as, for example, by obtaining a plurality of purchase

commitments on a plurality of items from a plurality of submitters. Method 6 can

5   also include obtaining promotion relationship information. Based upon this

purchase commitment information and the promotion relationship information,

method 6 can automatically indicate the optimal trade promotion that would

stimulate the optimal retail promotion.

    An optimal promotion can be a promotion that accomplishes a seller's and/or

10   buyers's goals. These goals can be, for example, increased sales volume, increased

profits, increased market share, and/or decreased inventory, etc.

    Promotion relationship information can include, for example, information

obtained from a retailer describing the retailer's expected and/or promised response

to various trade promotions. For instance, retailer promotion relationship

15   information could be provided by a retailer in a table that describes a range of trade

promotions and corresponding retail promotions.

    Promotion relationship information can also include, for example,

information obtained from a manufacturer describing what trade promotions the

manufacturer will offer in exchange for various promised retailer promotions. For

20   instance, manufacturer promotion relationship information could be provided by a

manufacturer as an equation that identifies how a retailer promotion must relate to

given manufacturer promotion.

    Fig. 18 is an example of promotion relationship information that could be

provided to a manufacturer by a retailer or that could be automatically generated and

25   provided to the manufacturer. Alternatively, the promotion relationship information

of Fig. 18 could be provided by a manufacturer to a retailer or other buyer. The

table of Fig. 18 generally shows, for an item having an original manufacturer's

selling price of $15.00, and an original retailer's selling price of $30.00, discounted

manufacturer and retailer selling prices corresponding to various trade and retailer

30   promotions. As a specific example, Fig. 18 indicates that the retailer will offer a 4%

retailer promotion if the manufacturer offers the retailer a 2% trade promotion. Such

promotions will create a new retailer selling price of $28.80 and a new manufacturer

selling price of $14.70.

Utilizing this exemplary promotion relationship information, a retailer could encourage a manufacturer to provide a desired trade promotion by offering to run a certain retail promotion. For example, if a retailer knows that a retailer selling price

5   of about $23 would maximize the retailer's and/or the manufacturer's profits, the retailer could request that the manufacturer offer a 12% trade promotion, and promise that the retailer will in turn offer a 24% retail promotion.

Similarly, utilizing this exemplary promotion relationship information, a manufacturer can offer to absorb some and/or all of the cost of a retailer promotion,

10   thereby encouraging the retailer to offer that promotion. For example, if a manufacturer knows that a retailer selling price of about $23 would maximize the manufacturer's and/or the retailer's profits, the manufacturer could communicate to a retailer that if the retailer will offer a 24% retailer promotion the manufacturer will offer the retailer a 12% trade promotion to absorb some of the costs.

15   Several things should be noted about Fig. 18. Although the trade promotions are listed as ranging between 2% and 20% in common increments of 2%, trade promotions can span any range of percentages either continuously and/or discontinuously, can increment by any amount, and can increment linearly and/or non-linearly. The same freedom can apply to retailer promotions. Also, although

20   the trade promotions are shown as one-half the value of the corresponding retailer promotions, there is no specifically required relationship between the size of a retailer promotion and the size of the corresponding trade promotion. Thus, a trade promotion can be greater than, equal to, or less than the corresponding retailer promotion. Moreover, although the promotion relationship information of Fig. 18 is

25   shown as a table, promotion relationship information can generally be provided in any format, including a table, schedule, equation, and/or algorithm, and include limits and/or exceptions. For example, a manufacturer can indicate that it will provide a 100% subsidizing trade promotion for retailer promotions ranging from 2 to 10 percent, a trade promotion amounting to a 75% subsidy for retailer promotions

30   of 11% to 20 percent, a 50% subsidy for retailer promotions of 21% to 30%, and no trade promotion at all for retailer promotions greater than 30%. As another example, a retailer can offer to match any manufacturer promotion exactly, thereby passing on

all the savings to consumers. As yet another example, a manufacturer can offer to provide a trade promotion of 50% of a retailer's price discount, and to provide for each of the retailer's consumers a $25 rebate coupon for any identified item purchased between specified dates.

5   In another inventive embodiment, method 6 can include obtaining a plurality of purchase commitments on a plurality of items from a plurality of submitters and automatically generating promotion relationship information . Based upon these purchase commitments and the promotion relationship information, method 6 can automatically indicate the optimal trade promotion that would stimulate the optimal

10   retail promotion.

        In the example provided above in Figure 6, it was seen that a selling price of $23 maximized profit. Integrating this example with the exemplary promotion relationship information of Fig. 18, the trade promotion that stimulates a retailer promotion that generates a retailer selling price closest to $23.00 is about 12%.

15   Such a trade promotion would trigger a 24% retail promotion resulting in a retailer selling price of $22.80. More accurately, the values of Fig. 18 can be interpolated to determine that a trade promotion of 11.67% will trigger a retail promotion of 23.33%, which will result in a promotional retailer selling price of almost exactly $23.80.

20   Thus, by obtaining a plurality of purchase commitments, an optimal, profit-maximizing, selling price can be determined. Using known manufacturer and retailer prices and costs, promotion relationship information can be obtained. With this information, a promotional retail price most closely matching the optimal selling price can be selected, thereby indicating an optimal retailer promotion and an

25   optimal trade promotion.

        Figure 19 provides an illustrative example of how method 6 could stimulate promotions and/or integrate the promotion chain.

        At activity 6100, purchase commitment information is obtained. This information can be obtained, for example, from a plurality of purchase commitments

30   submitted by a plurality of consumers for a plurality of items.

        At activity 6200, promotion relationship information can be obtained. This promotion relationship information can be obtained by a buyer and/or a seller, and

can be obtained from a buyer and/or a seller. In an exemplary embodiment, the promotion relationship information is obtained by a manufacturer from a retailer.

At activity 6300, a promotion is determined. In an examplary embodiment, an optimal retailer promotion and/or an optimal manufacturer promotion is
5 determined using the purchase commitment information and the promotion relationship information.

At activity 6400, the promotion is offered. In an exemplary embodiment, the promotion is offered by a manufacturer to a retailer.

At activity 6500, the promotion is provided. In an exemplary embodiment, a
10 trade promotion is provided by a manufacturer to a retailer, and a retailer promotion is provided by the retailer to a czonsumer.

Any and/or all of activities 6100 through 6500 can by implemented using system 2 and/or system 4. Moreover, any and/or all of activities 6100 through 6500 can be automated, such that the activity occurs without any, or without any
15 substantial, human involvement.

As discussed above, items can be related to each other. For instance, items can be substitutes for each other, or can be complements of each other. For example, margarine can sometimes serve as a substitute for butter. Also, similar
20 items of different brands, such as a Zenith 27" television and a Sony 27" television, can sometimes serve as substitutes. Likewise, socks can sometimes serve as a complement to shoes, and music CD's can sometimes serve as a complement to an audio CD player.

Moreover, items can be related by virtue of belonging to a common category.
25 For example, sneakers, heels, and sandals can be categorized as types of women's shoes. Moreover, the category called "women's shoes" can itself be categorized as a sub-category under a category called "shoes", which can be categorized under "articles of clothing", and so forth, thereby forming an organization of entities such as categories, subcategories, and items. Such an organization can be a network or
30 hierarchy, can be multi-dimensional, and/or can include linear and/or non-linear links between entities. Thus, relationships between items can be rendered (i.e., made perceptible) as an organization.

Relating items and/or identifying relationships between items can provide many benefits, particularly for managing various aspects of sales operations. For example, consider a situation where a seller desires to have a sale for an identified item for which there are an insufficient number of purchase commitments from

5   which to determine an optimal selling price. In such a situation, the seller can improve upon mere guesswork by considering the demand curves (the quantity demanded at various selling prices) for substitutes of the identified item.

For instance, the demand curve of a substitute can be read to determine the percentage increase in sales volume (demand) for the substitute corresponding to

10   each of any number of percentage decreases in selling price for the substitute. Then, depending on the correlation therebetween, the demand curve of the substitute can be used to estimate the demand curve of the identified item. The greater the correlation between the demand curve of the substitute and the demand curve of the identified item (i.e., the closer the cross-elasticity comes to approaching -1.0), the

15   better the demand curve of the substitute can serve as an accurate predictor of the demand curve of the identified item.

Also, in some situations, the demand curves of several substitutes can be combined to create a composite demand curve for the "family" or category of substitute items. For example, if there were insufficient purchase commitments to

20   estimate a demand curve for a Zenith 27" television, then the purchase commitments for all 27" televisions could be aggregated to generate a demand curve for all 27" televisions. This aggregate or composite demand curve for the 27" television category could serve as a proxy for the demand curve for the Zenith 27" television.

Similar estimates of the demand curve for the identified item can be made

25   from those of its complements, where the correlation between the demand curves depends on the degree of complementarity. That is, the closer the cross-elasticity between the complement and the identified item comes to 1.0, the better the demand curve of the complement can serve as an accurate predictor of the demand curve of the identified item. As with substitute items, the demand curve for a complementary

30   item can be determined by obtaining purchase commitments for the complement and applying, for example, the activities of method 1, utilizing, for example, system 7 or 8. Once such demand curves for related items are found, sales volumes for the

identified item at various prices can be estimated, and profits associated with those sales volumes and prices can be determined. Thus, relating items can help with establishing prices and/or with optimizing profits for some or all of the related items.

Another significant advantage of relating items appears when reporting the

5. selling of items. Such reports can include sales volumes, sales revenues, and/or profits generated by sales. As discussed previously, sales can be reported on an item-by-item basis. By relating items, however, sales can also be reported on additional bases and/or attributes, such as for example, on the basis of one or more item aspects such as category, sub-category, supra-category, manufacturer,

10 distributor, brand, style, type, model, model year, and/or feature, etc. basis. Moreover, sales can be reported based on aspects of the purchase commitments that helped generate those sales, such as for example, the addresss, city, state, zip code, area code, and/or metropolitan statistical area (MSA), etc. of the billing and/or delivery location. Similarly, sales can be reported based on other aspects of

15 purchase commitments, such as for example, list price, selling price, percentage discount from list price, quantity ordered, extended price, subtotal, tax amount, shipping, handling, and/or delivery charges, total price, method of payment, method of delivery, method of purchase commitment communication, and/or options purchased, etc.

20 Another advantage of relating items is manifested in the process of cross-selling, which involves offering to a potential purchaser one or more items that are related to the item for which the potential purchaser has expressed interest, perhaps via submission of a purchase commitment. As an example, if a potential purchaser submits a purchase commitment for a pair of athletic shoes, by virtue of a pre-

25 defined relationship, a pair of sport socks could be offered to the potential purchaser. This sock offer can be generated automatically, semi-automatically, or manually. Also, this sock offer can be generated at the time a purchase commitment for the shoes is received, after the shoe offer is accepted and/or executed by the seller, with a counter-offer for the shoes from the seller, or after such a counter-offer is accepted

30 by the purchaser.

Similarly, if a potential purchaser submits a purchase commitment for a first item, and a second, related item goes on sale, the potential purchaser can be notified

of the sale and offered the opportunity to purchase the second item. In one

embodiment, the potential purchaser can be notified of the second item only if the

percent discount off the list price for the second item meets or exceeds the percent

discount off the list price offered by the potential purchaser in the purchase

5   commitment for the first item. In another embodiment, if any related second item

goes on sale, that second item is offered to the potential purchaser. In yet another

embodiment, the second item is offered only if the percent discount off the list price

for the second item is a least a predetermined portion of the percent discount off of

list price offered by the potential purchaser in the purchaser commitment for the first

10   item. In any event, the offer and/or notification can be communicated via any

known communication technology, including, for example, e-mail, chat, pager, fax,

phone, etc., and can be communicated automatically, semi-automatically, and/or

manually.

        Fig. 20 is a flowchart of an embodiment of a method 7 of the present

15   invention, which manifests a number of the advantages discussed above. Because

many of the activities of method 7 have already been explained, in the preceeding

few paragraphs, or in the explanation of similar activities for method 1, little

elaboration is provided now. Nevertheless, those of skill in the art will recognize

that many of the advantages explained above can be obtained without necessarily

20   implementing every activity of this embodiment of method 7, and that embodiments

of method 7 can be implemented using, for example, embodiments of system 7 or 8.

Moreover, many, if not all of the activities of embodiments of method 7 can be

performed automatically, semi-automatically, quasi-automatically, or manually.

        Turning to the activities shown in Fig. 20, at activity 7100, an attribute is

25   specified. The attribute can represent some aspect of an item or items, such as item

category, sub-category, supra-category, manufacturer, distributor, brand, type, style,

feature, model, and/or model year, etc. Moreover, the attribute can be an aspect of

purchase commitments, such as for example, the addresss, city, state, zip code, area

code, and/or metropolitan statistical area (MSA), etc. of the billing and/or delivery

30   location, as well as list price, selling price, percentage discount from list price,

quantity ordered, extended price, subtotal, tax amount, shipping, handling, and/or

delivery charges, total price, method of payment, method of delivery, method of

purchase commitment communication, and/or options purchased, etc. The attribute can be specified by a potential purchaser, by a seller, or by any user of a system that implements an embodiment of method 7.

At activity 7200, a plurality of items having the attribute can be identified.
5   This identification can be performed by any system that implements an embodiment of method 7, and/or by any user of such a system. At activity 7300, the plurality of items can be organized. As discussed above, this organization can be formed in any fashion, including a hierarchy or a network.

At activity 7400, a plurality of purchase commitments can be obtained for
10 each of the plurality of items. These purchase commitments can be obtained directly from their submitters, and/or from an archive or database of previously submitted purchase commitments. At activity 7500, based upon some or all of these purchase commitments, a selling price can be determined for an identified item having the specified attribute. This determination can occur using any of the previously
15 specified actions for determining a selling price.

At activity 7600, the identified item can be advertised to the public at the determined selling price. The advertisement can appear in any advertising media, including, for example, radio, television, printed media, and/or the Internet. Similarly, an advertisement in the form of an identification of the price and/or
20 features of the item can be displayed to the public at, for instance, a retail store, a kiosk, a web site, etc. At activity 7700, the identified item can be sold to the public at the determined selling price. At activity 7800, a related item can be cross-sold to a purchaser of the identified item. This related item can be a complement, a substitute, or an item that is otherwise related to the identified item. At activity
25 7900, sales can be reported. Such sales reports can be organized, aggregated, and/or sorted on any aspect of the identified item, the related item, and/or a purchase commitment.

In the process of reporting sales, sales can be credited to any of various entities. One possibility is to credit sales to the seller who directly earns the sale. In
30 the case of on-line sales, however, determining where to credit the sale is not always simple. For instance, consider the situation where a potential purchaser notices an item in one of a retailer's retail stores, and then later decides to submit a purchase

commitment for that item to the retailer's on-line store. For some retailers, it would be desirable to credit the sale to the retail store closest to the purchaser's billing and/or shipping address. Other retailers credit the sale to a retail entity within a same geographic region as the purchaser's billing and/or shipping address. The

5 retail entity can be a retailer, a retail location, and/or a retail store location.

Recognizing the advantages of crediting sales, we introduce Fig. 21, which is a flowchart of an embodiment of method 8 of the present invention, and which manifests many, if not all of these advantages. Many of the activities of this embodiment of method 8 have already been explained, in the explanation for similar

10 activities of methods 1, and/or 7, and thus, little elaboration for those activities is provided now. Nevertheless, those of skill in the art will recognize that many of the advantages associated with method 8 can be obtained without necessarily   · implementing every activity of this embodiment of method 8, and that embodiments of method 8 can be implemented using, for example, embodiments of system 7 or 8.

15 Moreover, many, if not all of the activities of embodiments of method 8 can be performed automatically, semi-automatically, quasi-automatically, or manually.

Turning to the activities shown in Fig. 21, at activity 8100, a plurality of purchase commitments can be obtained for each of a plurality of items. At activity 8200, based upon some or all of these purchase commitments, a selling price can be

20 determined for an identified item. At activity 8300, the identified item can be advertised to the public at the determined selling price. At activity 8400, the identified item can be sold to the public at the determined selling price.

At activity 8500, a retailer can be credited for the sale in any of the manners discussed above.

25 Another aspect of managing sales operations is managing order fulfillment and shipping. Due to increased specialization, many e-tailers and mail order retailers do not carry an inventory of the items the sell, and instead delegate to one or more third parties, such as the manufacturers and/or distributors of those items, or fulfillment houses, to fulfill orders for the items.

30 Thus, at activity 8600, a third party can be notified of a sales transaction involving the item. This notification can include sufficient item information for the third party to determine what item to ship to the purchaser and to prepare that item

for shipping. The notification can also include sufficient purchaser information, such as shipping address, and method of shipment, to enable the third party to deliver the item to the correct location in the correct manner. The third party can be a manufacturer, a distributor, and/or a retailer of the item. Also, the third party can

5   be a fulfillment entity, such as a fulfillment house. At activity 8700, the third party can deliver the item to the purchaser according to the information provided in the notification of activity 8600. Thus, depending on the notification, the delivery can occur at a location of the third party, a location of the purchaser, a location of the seller, or some other specified location.

10   The present invention advantageously provides numerous methods for managing various aspects of sales operations, include pricing, reporting, and shipping. Still other advantages of the present invention will become readily apparent to those skilled in this art from the above-recited detailed description. Accordingly, the drawings and descriptions are to be regarded as illustrative in

15   nature, and not as restrictive.

What Is Claimed Is:

1.   1.   A method for managing sales, comprising the activities of:

2.   obtaining a plurality of purchase commitments for each of a

3. plurality of items having at least one specified attribute;

4.   determining a selling price for an identified item having the at

5. least one attribute based upon the plurality of purchase commitments;

6. and

7.   advertising the identified item to the public at the selling

8. price.

1.   2.   The method of claim 1, further comprising

2.   relating the plurality of items to each other.

1.   3.   The method of claim 1, further comprising

2.   identifying the plurality of items.

1.   4.   The method of claim 1, further comprising

2.   identifying a plurality of item categories.

1.   5.   The method of claim 1, further comprising

2.   identifying the at least one item attribute.

1.   6.   The method of claim 1, further comprising

2.   organizing the plurality of items.

1.   7.   The method of claim 1, further comprising

2.   organizing the plurality of items according to the at least one

3. attribute.

1.   8.   The method of claim 1, further comprising

2.   organizing the plurality of items into a plurality of item

3.   categories.

1   9.   The method of claim 1, further comprising

2   organizing the plurality of items into a hierarchy.

1   10.   The method of claim 1, further comprising

2   organizing the plurality of items and a plurality of item

3   categories into a hierarchy.

1   11.   The method of claim 1, further comprising

2   selling the identified item.

1   12.   The method of claim 1, further comprising

2   selling the identified item at the selling price.

1   13.   The method of claim 1, further comprising

2   reporting sales of the identified item.

1   14.   The method of claim 1, further comprising

2   aggregating sales of the identified item.

1   15.   The method of claim 1, further comprising

2   reporting aggregated sales of the identified item.

1   16.   The method of claim 1, further comprising

2   reporting aggregated sales of the identified item during a

3   specified time period.

1   17.   The method of claim 1, further comprising

2   reporting aggregated sales of the identified item in a specified

3   geographic area.

1   18.   The method of claim 1, further comprising

2   selling the plurality of items.

1   19.   The method of claim 1, further comprising

2   aggregating sales of the plurality of items.

1   20.   The method of claim 1, further comprising

2   reporting sales of the plurality of items.

1   21.   The method of claim 1, further comprising

2   reporting aggregated sales of the plurality of items.

1   22.   The method of claim 1, further comprising

2   reporting aggregated sales of the plurality of items during a

3   specified time period.

1   23.   The method of claim 1, further comprising

2   reporting aggregated sales of the plurality of items in a

3   specified geographic area.

1   24.   The method of claim 1, wherein the plurality of items are substitutes.

1   25.   The method of claim 1, wherein the plurality of items are

2   complements.

1   26.   The method of claim 1, wherein the plurality of items are members of

2   a item category.

1   27.   The method of claim 1, further comprising cross-selling a

2   predetermined item from the plurality of items.

1   28.   The method of claim 1, further comprising cross-selling a

2   predetermined item associated with the identified item.

1   29.   The method of claim 1, further comprising cross-selling a

2   predetermined item that is a complement to the identified item.

1   30.   The method of claim 1, further comprising cross-selling a

2   predetermined item that is a substitute for the identified item.

1   31.   The method of claim 1, further comprising offering for sale a

2   predetermined item from the plurality of items.

1   32.   The method of claim 1, further comprising offering for sale a

2   predetermined item associated with the identified item.

1   33.   The method of claim 1, further comprising offering for sale a

2   predetermined item that is a complement to the identified item.

1   34.   The method of claim 1, further comprising offering for sale a

2   predetermined item that is a substitute for the identified item.

1   35.   The method of claim 1, further comprising specifying the attribute.

1   36.   The method of claim 1, further comprising specifying the attribute for

2   each of the plurality of items.

1   37.   The method of claim 1, further comprising specifying the attribute for

2   the identified item.

1   38.   The method of claim 1, further comprising receiving an identity of

2   the item.

1   39.   The method of claim 1, further comprising receiving an identity of

2   the item from a potential purchaser of the item.

1   40.   The method of claim 1, further comprising receiving an identity of

2   the item from a potential seller of the item.

1   41.   The method of claim 1, further comprising correlating the item to the

2   plurality of items.

1   42.   The method of claim 1, further comprising correlating the item to the

2   plurality of items based on the attribute.

1   43.   The method of claim 1, further comprising retrieving the plurality of

2   purchase commitments.

1   44.   The method of claim 1, further comprising retrieving the plurality of

2   purchase commitments for each of a plurality of items having a

3   specified attribute.

1   45.   The method of claim 1, further comprising selecting a substitute item

2   from the plurality of items.

1   46.   The method of claim 1, further comprising selecting a substitute item

2   from the plurality of items, the substitute item having the specified

3   attribute.

1   47.   The method of claim 1, further comprising cross-selling a substitute

2   item from the plurality of items, the substitute item having the

3   specified attribute.

1   48.   The method of claim 1, further comprising selecting a

2   complementary item from the plurality of items.

1   49.   The method of claim 1, further comprising selecting a

2   complementary item from the plurality of items, the substitute item

3   having the specified attribute.

1   50.   The method of claim 1, further comprising cross-selling a

2   complementary item from the plurality of items, the complementary

3   item having the specified attribute.

1   51.   The method of claim 1, wherein the plurality of purchase

2   commitments relate to a predetermined geographic area.

1   52.   The method of claim 1, wherein the plurality of purchase

2   commitments identify a predetermined geographic area.

1   53.   The method of claim 1, wherein the plurality of items are substitutes

2   for the identified item.

1   54.   The method of claim 1, wherein the plurality of items are

2   complements of the identified item.

1   55.   The method of claim 1, wherein the attribute is manufacturer.

1   56.   The method of claim 1, wherein the attribute is brand.

1   57.   The method of claim 1, wherein the attribute is style.

1   58.   The method of claim 1, wherein the attribute is model.

1   59.   The method of claim 1, wherein the attribute is model year.

1   60.   The method of claim 1, wherein the attribute is type.

1   61.   The method of claim 1, wherein the attribute is an item feature.

1   62.   The method of claim 1, further comprising aggregating the plurality

2   of purchase commitments.

1   63.   The method of claim 1, further comprising aggregating a subset of

2   the plurality of purchase commitments.

1   64.   The method of claim 1, further comprising aggregating the at least

2   some of the plurality of purchase commitments.

1   65.   The method of claim 1, further comprising determining a sale

2   percentage for the identified item.

1   66.   The method of claim 1, further comprising determining a sale

2   percentage for the identified item and applying the sale percentage to

3   the identified item.

1   67.   The method of claim 1, further comprising determining a sale

2   percentage for the plurality of items.

1   68.   The method of claim 1, further comprising determining a sale

2   percentage for the plurality of items and applying the sale percentage

3   to the plurality of items.

1   69.   The method of claim 1, further comprising determining a sale

2   percentage for all items from the plurality of items that are related to

3   a specified item category.

1   70.   The method of claim 1, further comprising determining a sale

2   percentage for those items from the plurality of items that are related

3   to a specified item category and applying the sale percentage to those

4   items from the plurality of items that are related to the specified item

54

5   category.

1   71.   The method of claim 1, further comprising crediting a retailer for

2   sales of the predetermined item from purchasers within a geographic

3   region associated with the retailer.

1   72.   A machine-readable medium storing instructions for activities

2   comprising:

3   obtaining a plurality of purchase commitments for each of a

4   plurality of items having at least one specified attribute;

5   determining a selling price for an identified item having the at

6   least one attribute based upon the plurality of purchase commitments;

7   and

8   advertising the identified item to the public at the selling

9   price.

1   73.   An apparatus for managing sales, comprising:

2   means for obtaining a plurality of purchase commitments for

3   each of a plurality of items having at least one specified attribute;

4   means for determining a selling price for an identified item

5   having the at least one attribute based upon the plurality of purchase

6   commitments; and

7   means for advertising the identified item to the public at the

8   selling price.

1   74.   A system for managing sales, comprising a server adapted to obtain

2   via a network a plurality of purchase commitments for each of a

3   plurality of items having at least one specified attribute, said server

4   further adapted to determine a selling price for an identified item

5   having the at least one attribute based upon the plurality of purchase

6   commitments, and to advertise via the network the identified item to

7   the public at the selling price.

1   75.   A method for stimulating promotions, comprising the activities of:

2   receiving purchase commitment information;

3   obtaining promotion relationship information; and

4   determining a promotion from the purchase commitment

5   information and the promotion relationship information.

1   76.   A computer-readable medium storing instructions that, when

2   executed by one or more processors, cause the one or more

3   processors to perform activities comprising:

4   receiving purchase commitment information;

5   obtaining promotion relationship information; and

6   determining a promotion from the purchase commitment

7   information and the promotion relationship information.

1   77.   An apparatus for stimulating promotions, comprising:

2   means for receiving purchase commitment information;

3   means for obtaining promotion relationship information; and

4   means for determining a promotion from the purchase

5   commitment information and the promotion relationship information.

1   78.   A promotion determined by a process comprising:

2   receiving purchase commitment information;

3   obtaining promotion relationship information; and

4   determining a promotion from the purchase commitment

5   information and the promotion relationship information.

1   79.   A method for protecting a purchaser from post-purchase price

2   decreases, comprising the activities of:

3   obtaining a plurality of purchase commitments on an

4   identified item from a plurality of submitters;

5   estimating a plurality of sales volumes based on the plurality

6   of purchase commitments;

7   calculating a plurality of profits corresponding to the plurality

8   of purchase commitments and the plurality of sales volumes;

9   determining a selling price based upon a maximum profit

10   from the plurality of profits; and

11   compensating a purchaser of the identified item for at least a

12   portion of a difference between a transaction price and a reduced

13   selling price.

1   80.   A computer-readable medium storing instructions that, when

2   executed by one or more processors, cause the one or more

3   processors to perform activities comprising:

4   obtaining a plurality of purchase commitments on an

5   identified item from a plurality of submitters;

6   estimating a plurality of sales volumes based on the plurality

7   of purchase commitments;

8   calculating a plurality of profits corresponding to the plurality

9   of purchase commitments and the plurality of sales volumes;

10   determining a selling price based upon a maximum profit

11   from the plurality of profits; and

12   compensating a purchaser of the identified item for at least a

13   portion of a difference between a transaction price and a reduced

14   selling price.

1   81.   An apparatus for protecting a purchaser from post-purchase price

2   decreases, comprising:

3   means for obtaining a plurality of purchase commitments on

4   an identified item from a plurality of submitters;

5   means for estimating a plurality of sales volumes based on the

6   plurality of purchase commitments;

7   means for calculating a plurality of profits corresponding to

8   the plurality of purchase commitments and the plurality of sales

9   volumes;

10   means for determining a selling price based upon a maximum

11   profit from the plurality of profits; and

12   means for compensating a purchaser of the identified item for

13   at least a portion of a difference between a transaction price and a

14   reduced selling price.

1   82.   A price decrease protection created by a process comprising:

2   obtaining a plurality of purchase commitments on an

3   identified item from a plurality of submitters;

4   estimating a plurality of sales volumes based on the plurality

5   of purchase commitments;

6   calculating a plurality of profits corresponding to the plurality

7   of purchase commitments and the plurality of sales volumes;

8   determining a selling price based upon a maximum profit

9   from the plurality of profits; and

10   compensating a purchaser of the identified item for at least a

11   portion of a difference between a transaction price and a reduced

12   selling price.

1   83.   A method for protecting a purchaser from post-purchase price

2   decreases, comprising the activities of:

3   obtaining a plurality of purchase commitments on an

4   identified item from a plurality of submitters;

5   estimating a plurality of sales volumes based on the plurality

6   of purchase commitments;

7   calculating a plurality of profits corresponding to the plurality

8   of purchase commitments and the plurality of sales volumes;

9   determining a selling price based upon a maximum profit

10   from the plurality of profits;

11   offering to compensate a purchaser of the identified item for

12   at least a portion of a difference between a transaction price and a

13   reduced selling price;

14   transacting a sale of the identified item with the purchaser at

15   the transaction price; and

16   automatically providing a compensation to the purchaser for

17   at least a portion of the difference between the transaction price and

18   the reduced selling price.

1   84.   A method for sampling demand, comprising:

2   receiving a plurality of purchase commitments for an item;

3   and

4   generating a plurality of market demands for the item based

5   on the plurality of purchase commitments.

1   85.   A computer-readable medium storing instructions that, when

2   executed by one or more processors, cause the one or more

3   processors to perform steps comprising:

4   receiving a plurality of purchase commitments for an item;

5   and

6   generating a plurality of market demands for the item based

7   on the plurality of purchase commitments.

1   86.   An apparatus for sampling demand, comprising:

2   means for receiving a plurality of purchase commitments for

3   an item; and

4   means for generating a plurality of market demands for the

5   item based on the plurality of purchase commitments.

1   87.   Marketing information created by a process comprising:

2   receiving a plurality of purchase commitments for an item;

3   generating a plurality of market demands for the item based

4   on the plurality of purchase commitments; and

5   generating marketing information based upon the plurality of

6   purchase commitments.

1   88.   A method for pricing an item, comprising the steps of:

2   obtaining a first metric and a second metric for an item having

3   a price; and

4   if the first metric is different from the second metric,

5   automatically changing the price.

1   89.   A method for establishing a selling price, comprising the steps

2   of:

3   obtaining a plurality of purchase commitments on an

4   identified item from a plurality of submitters;

5   estimating a plurality of sales volumes based on the plurality

6   of purchase commitments;

7   calculating a plurality of profits corresponding to the plurality

8   of purchase commitments and the plurality of sales volumes;

9   identifying a selling price corresponding to a maximum profit

10   from the plurality of profits;

11   fulfilling one or more purchase commitments having a

12   commitment price equal to or above the selling price; and

13   advertising the identified item to the public at the selling

14   price.

1   90.   A method of doing business, comprising the steps of:

2   listing a description and available quantity associated with an

3   item;

4   obtaining a plurality of purchase commitments for the item;

5   estimating a plurality of sales volumes based on the plurality

6   of purchase commitments;

7   calculating a plurality of profits corresponding to the plurality

8   of purchase commitments and the plurality of sales volumes;

9   identifying a selling price corresponding to a maximum profit

10   from the plurality of profits;

11   adjusting the selling price in recognition of a sales factor;

12   fulfilling one or more purchase commitments having a

13   commitment price equal to or above the adjusted selling price; and

14   advertising the identified item to the public at the adjusted

15   selling price.

1   91.   A method for determining a selling price, comprising:

2   obtaining a plurality of purchase commitments on an

3   identified item from a plurality of submitters;

4   estimating a plurality of sales volumes based on the plurality

5   of purchase commitments;

6   calculating a plurality of profits corresponding to the plurality

7   of purchase commitments and the plurality of sales volumes;

8   identifying a maximum profit from the plurality of profits;

9   and

10   determining a selling price based upon the maximum profit.

1   92.   A method for estimating sales volumes, comprising the steps

2   of:

3   obtaining a plurality of purchase commitments on an

4   identified item from a plurality of submitters;

5   segregating each of the purchase commitments from the

6   plurality of purchase commitments into one of a plurality of price

7   ranges;

8   counting a commitment quantity in each price range from the

9   plurality of price ranges to obtain a plurality of sample sales volumes.

1   93.   A method for estimating profits, comprising the steps of:

2   obtaining a plurality of purchase commitments on an

3   identified item from a plurality of submitters;

4   estimating a plurality of sales volumes based on the plurality

5   of purchase commitments; and

6   calculating a plurality of profits corresponding to the plurality

7   of purchase commitments and the plurality of sales volumes.

1   94.   A method for sampling demand, comprising the steps of:

2   obtaining a plurality of purchase commitments on an

3   identified item from a plurality of submitters; and

4   estimating a plurality of sales volumes based on the plurality

5   of purchase commitments.

1   95.   A computer-readable medium having stored thereon

2   instructions for estimating profits, the instructions when

3   executed by a processor causing the processor to:

4   obtain a plurality of purchase commitments on an identified

5   item from a plurality of submitters;

6   estimate a plurality of sales volumes based on the plurality of

7   purchase commitments; and

8   calculate a plurality of profits corresponding to the plurality of

9   purchase commitments and the plurality of sales volumes.

1   96.   A system for estimating profits, comprising:

2   means for obtaining a plurality of purchase commitments on

3   an identified item from a plurality of submitters;

4   means for estimating a plurality of sales volumes based on the

5   plurality of purchase commitments; and

6   means for calculating a plurality of profits corresponding to

7   the plurality of purchase commitments and the plurality of sales

8   volumes.

1   97.   A method for managing sales, comprising:

2   obtaining a plurality of purchase commitments for a plurality

3   of items;

4   determining a selling price for a first item from the plurality

5   of items based upon the plurality of purchase commitments;

6   advertising the first item from the plurality of items to the

7   public at the selling price; and

8   crediting a retail entity for a sale of the first item from the

9   plurality of items to a purchaser associated with the retail entity.

1   98.   A machine-readable medium storing instructions for activities

2   comprising:

3   obtain a plurality of purchase commitments for a plurality of

4   items;

5   determine a selling price for a first item from the plurality of

6   items based upon the plurality of purchase commitments;

7   advertise the first item from the plurality of items to the

8   public at the selling price; and

9   credit a retail entity for a sale of the first item from the

10   plurality of items to a purchaser associated with the retail entity.

1   99.   An apparatus for managing sales, comprising:

2   means for obtaining a plurality of purchase commitments for a

3   plurality of items;

4   means for determining a selling price for a first item from the

5   plurality of items based upon the plurality of purchase commitments;

6   means for advertising the first item from the plurality of items

7   to the public at the selling price; and

8   means for crediting a retail entity for a sale of the first item

9   from the plurality of items to a purchaser associated with the retail

10   entity.

1   100.   A system for managing sales, comprising a server adapted to

2   obtain via a network a plurality of purchase commitments for

3   a plurality of items, said server further adapted to determine a

4   selling price for a first item from the plurality of items based

5   upon the plurality of purchase commitments, and to advertise

6   via the network the first item from the plurality of items to the

7   public at the selling price, and to credit a retail entity for a

8   sale of the first item from the plurality of items to a purchaser

9   associated with the retail entity.

1   101.   A method for managing sales, comprising:

2   obtaining a plurality of purchase commitments for a plurality

3   of items;

4   determining a selling price for a first item from the plurality

5   of items based upon the plurality of purchase commitments;

6   advertising the first item from the plurality of items to the

7   public at the selling price; and

8   providing the first item from a third party to a purchaser of the

9   first item.

1   102.   A machine-readable medium storing instructions for activities

2   comprising:

3   obtain a plurality of purchase commitments for a plurality of

4   items;

5   determine a selling price for a first item from the plurality of

6   items based upon the plurality of purchase commitments;

7   advertise the first item from the plurality of items to the

8   public at the selling price; and

9   provide the first item from a third party to a purchaser of the

10   first item.

1   103.   An apparatus for managing sales, comprising:

2   means for obtaining a plurality of purchase commitments for a

3   plurality of items;

4   means for determining a selling price for a first item from the

5   plurality of items based upon the plurality of purchase commitments;

6   means for advertising the first item from the plurality of items

7   to the public at the selling price; and

8   means for providing the first item from a third party to a

9   purchaser of the first item.

1   104.   A system for managing sales, comprising a server adapted to obtain

2   via a network a plurality of purchase commitments for a plurality of

3   items, said server further adapted to determine a selling price for a

4   first item from the plurality of items based upon the plurality of

5   purchase commitments, and to advertise via the network the first item

6   from the plurality of items to the public at the selling price, and to

7   provide via the network sufficient information to enable a third party

8   to provide the first item from the third party to a purchaser of the first

9   item.

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PURCHASE COMMITMENT SUBMITTED FOR PRODUCT OR SERVICE — 200

240 — OPTION(S) PURCHASED

PURCHASE COMMITMENT SUBMITTED FOR SUBSTITUTE PRODUCT OR SERVICE — 260

1

BACKGROUND INFORMATION OBTAINED — 280

SALES VOLUMES CORRESPONDING TO COMMITMENTS ESTIMATED — 400

PRICE ELASTICITY OF DEMAND CALCULATED — 420

CROSS-ELASTICITIES CALCULATED — 460

600 — PROFITS CORRESPONDING TO COMMITMENTS AND SALES VOLUMES DETERMINED

800 — SALE PRICE SELECTED

CONSIDER SALES FACTORS — 860

920 — SUFFICIENT QUANTITY RESERVED TO FULFILL AVAILABILITY GUARANTEES

SUFFICIENT QUANTITY RESERVED TO FULFILL COMMITMENTS>=SALE PRICE — 940

1000 — PRODUCT OR SERVICE ADVERTISED AT SALE PRICE

1220 — SUBMITTER NOTIFIED IF COMMITMENT PRICE>=SALE PRICE

SUBMITTER NOTIFIED OF SALE PRICE — 1240

SUBMITTER NOTIFIED IF COMMITMENT PRICE<SALE PRICE — 1260

1320 — AUTO-TRANSACTION? — NO

SALE PRICE EVALUATED BY SUBMITTER — 1360

YES

COMMITMENT ACCEPTED AS ORDER — 1420

ORDER RECEIVED AND ACCEPTED AT SALE PRICE — 1440

SALE PRICE REJECTED AND COMMITMENT EXPIRES — 1460

ORDER TRANSACTED — 1640

1840 — ORDER FULFILLED

FIG.1

SUBSTITUTE SHEET (RULE 26)

FIG.2

FIG.3

CONSTRAINED SAMPLE COMMITMENTS FOR MEN'S TROUSERS

FIG.4

CUMULATIVE CONSTRAINED SAMPLE COMMITMENTS FOR MEN'S TROUSERS

FIG.5

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A PRICE POINT $	B PAIRS OF TROUSERS	C CUMULATIVE PAIRS	D REVENUE $	E CUMULATIVE REVENUE $	F COSTS $	G CUMULATIVE COSTS $	H PROFIT $	I CUMULATIVE PROFIT $
30	47	47	1410	1410	705	705	705	705
29	94	141	2726	4089	1410	2115	1316	1974
28	188	329	5264	9212	2820	4935	2444	4277
27	376	705	10152	19035	5640	10575	4512	8460
26	752	1457	19552	37882	11280	21855	8272	16027
25	1504	2961	37600	74025	22560	44415	15040	29610
24	3008	5969	72192	143256	45120	89535	27072	53721
23	1504	7473	34592	171879	22560	112095	12032	59784
22	752	8225	16544	180950	11280	123375	5264	57575
21	376	8601	7896	180621	5640	129015	2256	51606
20	188	8789	3760	175780	2820	131835	940	43945
19	94	8883	1786	168777	1410	133245	376	35532
18	47	8930	846	160740	705	133950	141	26790
17	24	8954	400	152210	353	134303	47	17907
16	12	8965	188	143444	176	134479	12	8965
15	6	8971	88	134567	88	134567	0	0
14	3	8974	41	125637	44	134611	-3	-8974
13	1	8976	19	116682	22	134633	-3	-17951
12	1	8976	9	107715	11	134644	-2	-26929
11	0	8977	4	98743	6	134649	-1	-35907
10	0	8977	0	89766	0	134649	0	-44883
9	0	8977	0	80790	0	134649	0	-53860
8	0	8977	0	71813	0	134649	0	-62836
7	0	8977	0	62836	0	134649	0	-71813
6	0	8977	0	53860	0	134649	0	-80790
5	0	8977	0	44883	0	134649	0	-89766
4	0	8977	0	35907	0	134649	0	-98743
3	0	8977	0	26930	0	134649	0	-107720
2	0	8977	0	17953	0	134649	0	-116696
1	0	8977	0	8977	0	134649	0	-125673
0	0	8977	0	0	0	134649	0	-134649

FIG.6

FIG.7

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SELLER INTERACTION
DEVICE   2160
I/O   2140
MEMORY
INSTRUCTIONS
PROCESSOR
2120
2100

SELLER INTERACTION
DEVICE   2160
I/O   2140
MEMORY
INSTRUCTIONS
PROCESSOR
2120
2100

SELLER INTERACTION
DEVICE   2160
I/O   2140
MEMORY
INSTRUCTIONS
PROCESSOR
2120
2100

NETWORK
INTERFACE
2200

NETWORK
INTERFACE
2200

NETWORK
INTERFACE
2200

2

CONTROLLER

NETWORK
INTERFACE

NETWORK

2400

2300

2350

2500

NETWORK
INTERFACE

2500

NETWORK
INTERFACE

2500

NETWORK
INTERFACE

2620

2640
PROCESSOR
MEMORY
INSTRUCTIONS
I/O
2660
USER INTERACTION
DEVICE

2620

2640
PROCESSOR
MEMORY
INSTRUCTIONS
I/O
2660
USER INTERACTION
DEVICE

2620

2640
PROCESSOR
MEMORY
INSTRUCTIONS
I/O
2660
USER INTERACTION
DEVICE

2600

2600

2600

FIG.8

ILLUSTRATIVE DEMAND CURVE VARYING WITH TIME

FIG.9

ILLUSTRATIVE PROFITS AT VARIOUS DEMANDS

PRICE	DEMAND	REVENUE	PROFIT
25	10,000	250,000	100,000
25	20,000	500,000	200,000
25	30,000	750,000	300,000
25	40,000	1,000,000	400,000
25	50,000	1,250,000	500,000
25	60,000	1,500,000	600,000
25	70,000	1,750,000	700,000
25	80,000	2,000,000	800,000
25	90,000	2,250,000	900,000
25	100,000	2,500,000	1,000,000

FIG.10

ILLUSTRATIVE PROFITS AT VARIOUS DEMANDS AND COSTS

PRICE	DEMAND	COST/UNIT	REVENUE	PROFIT
25	10,000	30	250,000	(50,000)
25	20,000	25	500,000	–
25	30,000	21	750,000	120,000
25	40,000	17	1,000,000	320,000
25	50,000	15	1,250,000	500,000
25	60,000	13	1,500,000	720,000
25	70,000	12	1,750,000	910,000
25	80,000	11	2,000,000	1,120,000
25	90,000	10	2,250,000	1,350,000
25	100,000	10	2,500,000	1,500,000

FIG.11

ILLUSTRATIVE PROFITS AT VARIOUS DEMANDS, TIMES, AND COSTS

DEMAND	T1 COST/UNIT	PROFIT	T2 COST/UNIT	PROFIT	T3 COST/UNIT	PROFIT	T4 COST/UNIT	PROFIT	T5 COST/UNIT	PROFIT
10,000	30	(50,000)	29	(40,000)	31	300,000	32	280,000	28	(90,000)
20,000	27	(40,000)	26	(20,000)	25	—	29	80,000	25	—
30,000	22	90,000	21	120,000	20	450,000	24	120,000	20	2,250,000
40,000	17	320,000	17	320,000	18	2,240,000	19	1,920,000	16	20,160,000
50,000	15	500,000	16	450,000	15	5,000,000	17	3,600,000	15	50,000,000
60,000	13	720,000	13	720,000	13	8,640,000	15	7,200,000	12	112,320,000
70,000	13	840,000	12	910,000	11	11,760,000	15	9,100,000	11	164,640,000
80,000	11	1,120,000	11	1,120,000	12	14,560,000	13	13,440,000	11	203,840,000
90,000	10	1,350,000	11	1,260,000	10	20,250,000	11	17,640,000	10	303,750,000
100,000	10	1,500,000	9	1,600,000	10	22,500,000	11	22,400,000	8	382,500,000

FIG.12

ILLUSTRATIVE CHART SHOWING PROFIT VARYING WITH TIME AND DEMAND

FIG.13

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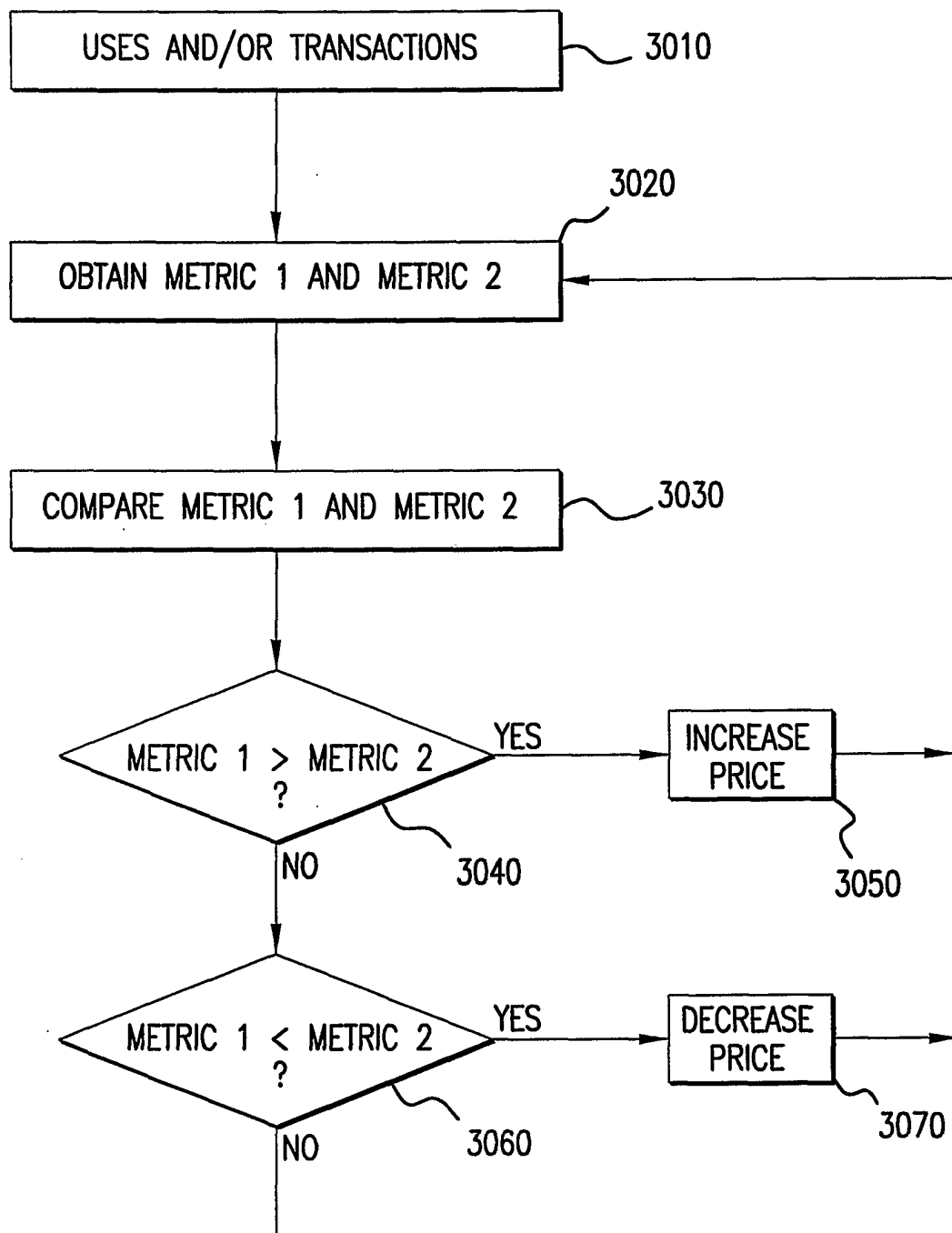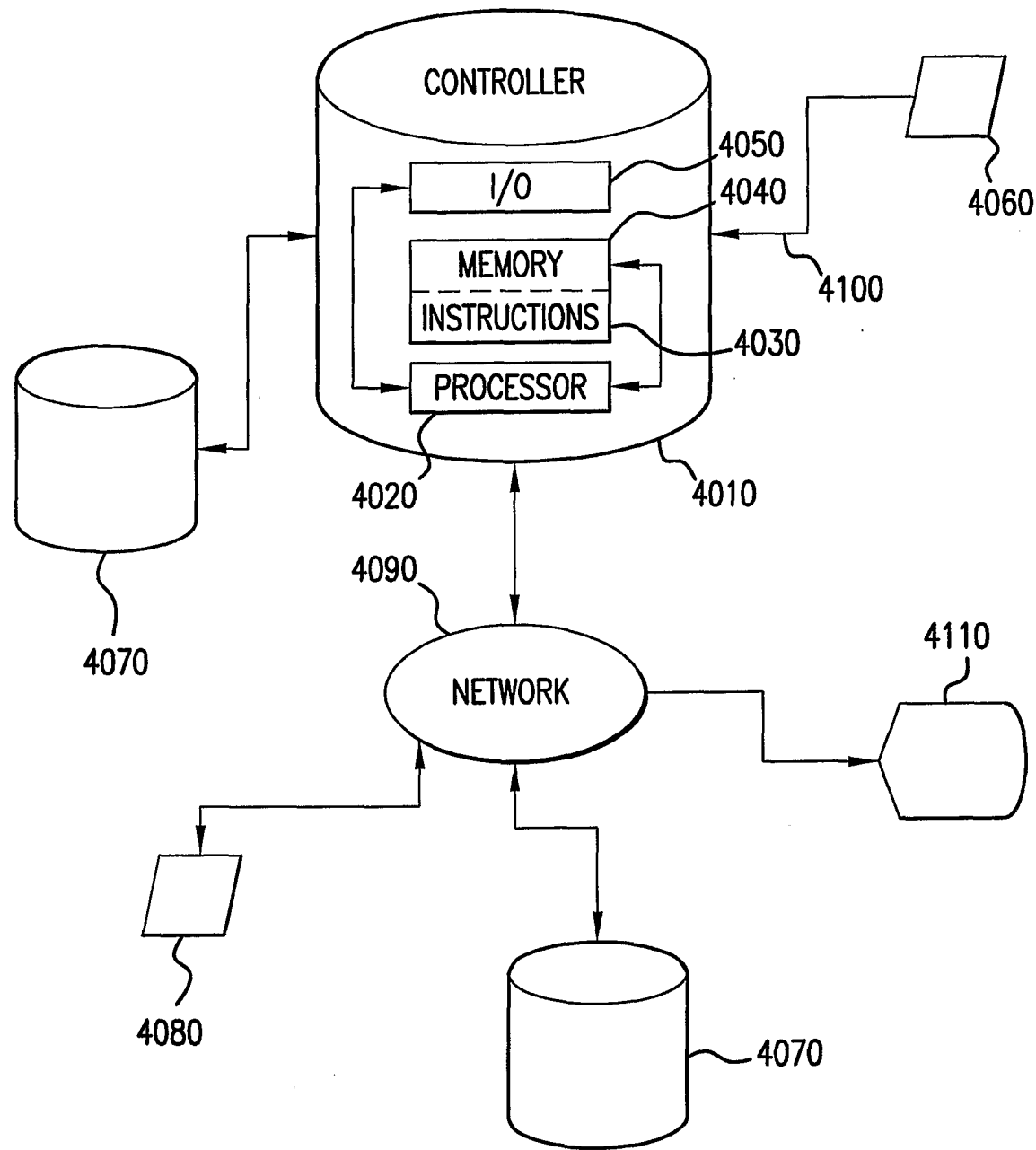USES AND/OR TRANSACTIONS — 3010

OBTAIN METRIC 1 AND METRIC 2 — 3020

COMPARE METRIC 1 AND METRIC 2 — 3030

METRIC 1 > METRIC 2 ? — 3040

YES → INCREASE PRICE — 3050

NO

METRIC 1 < METRIC 2 ? — 3060

YES → DECREASE PRICE — 3070

NO

FIG.14

FIG.15

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                                                              4
                                            ┌─────────────────────────────────┐
                              4200 ───────┤  PURCHASE COMMITMENT SUBMITTED FOR AT │
                                            │     LEAST ONE PRODUCT OR SERVICE     │
                                            └─────────────────────────────────┘
                                                           │
                                                           │
            ┌──────────────────────────────────┐          │
            │  BACKGROUND INFORMATION OBTAINED  │◄────────►│
            └──────────────────────────────────┘
                        │
                      4300
                                                           │
                                                           ▼
                                            ┌─────────────────────────────────┐
                                            │  SALES VOLUMES CORRESPONDING     │
                                            │   TO COMMITMENTS ESTIMATED       │
                                            └─────────────────────────────────┘
                                                                          │
                                                                        4400
                                                           │
                                                           ▼
                        │                   ┌─────────────────────────────────┐
                        └──────────────────►│  MARKETING INFORMATION GENERATED │
                                            └─────────────────────────────────┘
                                                                         │
                                                                       4600
```

FIG.16

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PURCHASE COMMITMENT SUBMITTED FOR PRODUCT OR SERVICE — 5100

SALES VOLUMES CORRESPONDING TO COMMITMENTS ESTIMATED — 5200

PROFITS CORRESPONDING TO COMMITMENTS AND SALES VOLUMES DETERMINED — 5300

SELLING PRICE SELECTED — 5400

PRICE PROTECTION OFFERED — 5500

SALE TRANSACTED — 5600

SELLING PRICE DECREASED — 5700

PRIOR PURCHASER NOTIFIED OF DECREASE — 5800

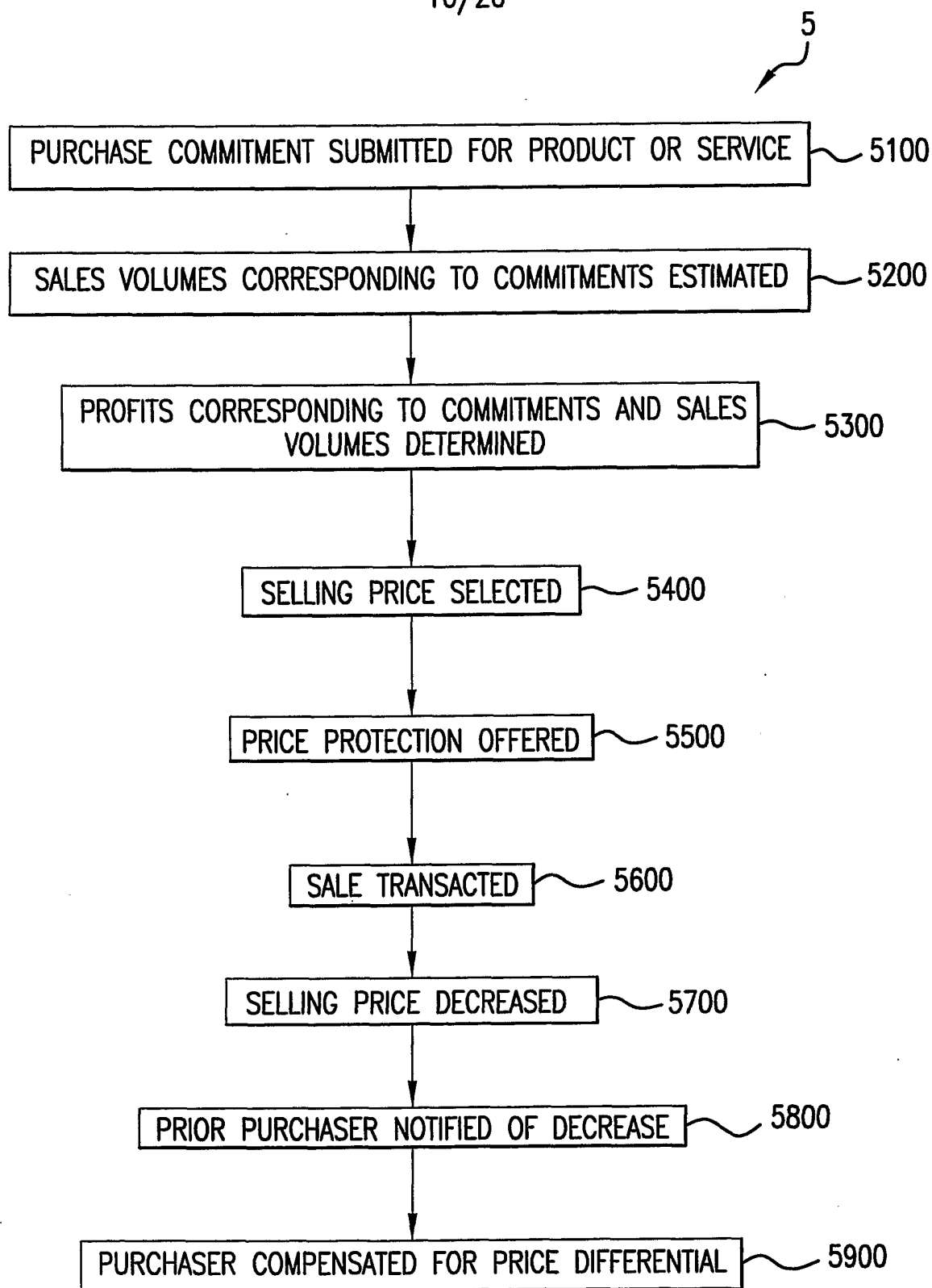PURCHASER COMPENSATED FOR PRICE DIFFERENTIAL — 5900

FIG.17

PROMOTION RELATIONSHIP INFORMATION

ORIGINAL MANUFACTURER PRICE	TRADE PROMOTION	NEW MANUFACTURER PRICE	ORIGINAL RETAILER PRICE	RETAILER PROMOTION	NEW RETAILER PRICE
$15.00	2.0%	$14.70	$30.00	4.0%	$28.80
$15.00	4.0%	$14.40	$30.00	8.0%	$27.60
$15.00	6.0%	$14.10	$30.00	12.0%	$26.40
$15.00	8.0%	$13.80	$30.00	16.0%	$25.20
$15.00	10.0%	$13.50	$30.00	20.0%	$24.00
$15.00	12.0%	$13.20	$30.00	24.0%	$22.80
$15.00	14.0%	$12.90	$30.00	28.0%	$21.60
$15.00	16.0%	$12.60	$30.00	32.0%	$20.40
$15.00	18.0%	$12.30	$30.00	36.0%	$19.20
$15.00	20.0%	$12.00	$30.00	40.0%	$18.00

FIG.18

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FIG.19

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FIG.20

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OBTAIN PURCHASE COMMITMENTS FOR A
PLURALITY OF ITEMS ⟋8100

DETERMINE A SELLING PRICE FOR AN
IDENTIFIED ITEM BASED ON THE
PURCHASE COMMITMENTS ⟋8200

ADVERTISE THE ITEM AT THE SELLING PRICE ⟋8300

SELL THE ITEM ⟋8400

CREDIT A RETAIL ENTITY FOR THE SALE ⟋8500

NOTIFY A 3RD PARTY OF THE SALE OF THE ITEM ⟋8600
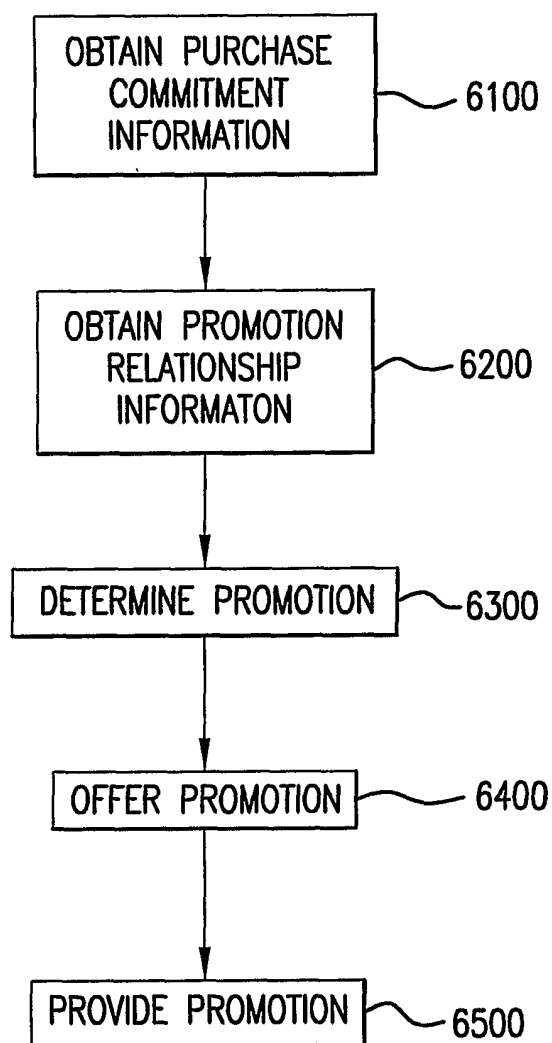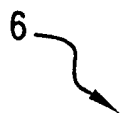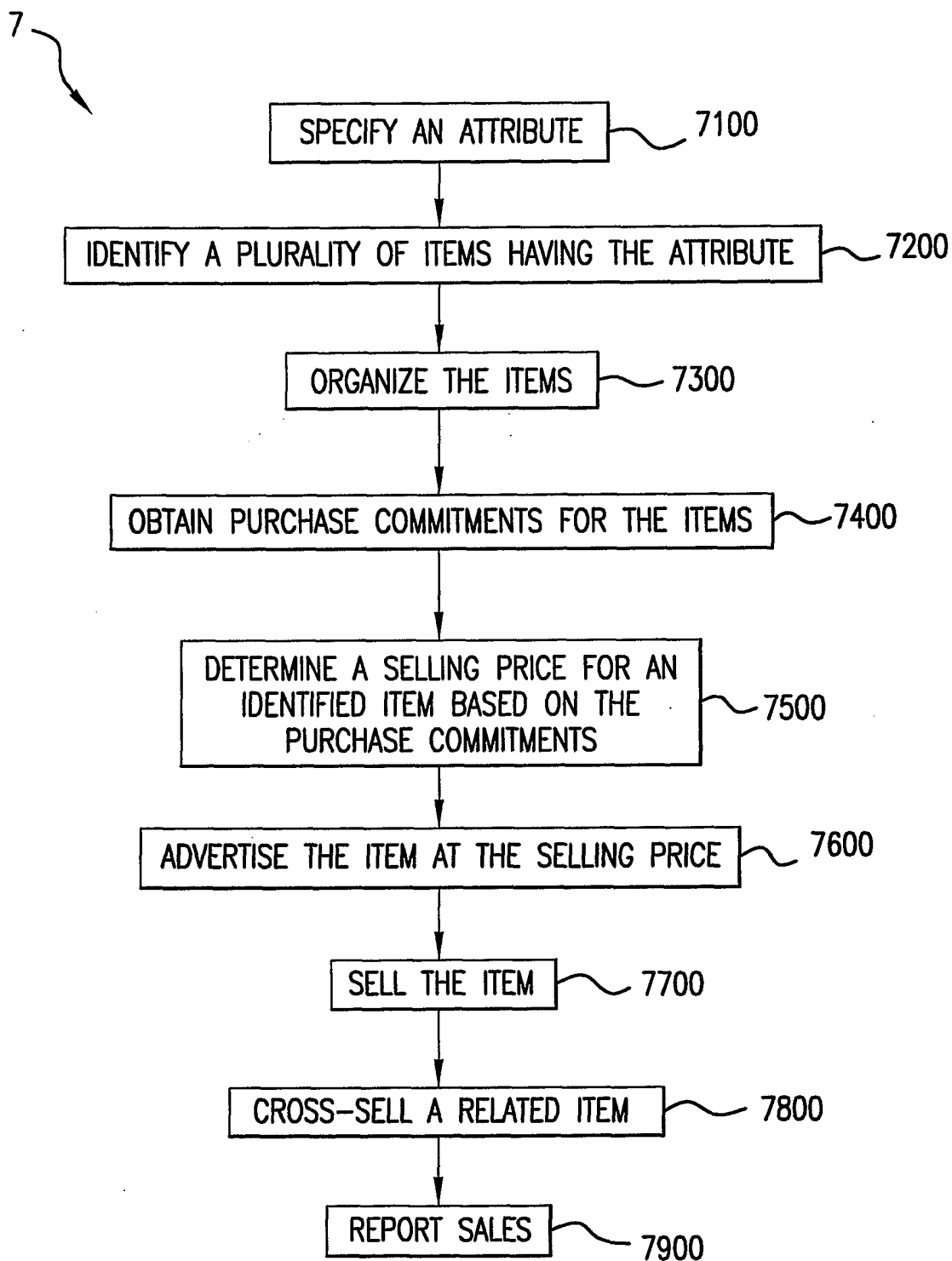
PROVIDE THE ITEM FROM THE 3RD PARTY ⟋8700

FIG.21

INTERNATIONAL SEARCH REPORT

A.	CLASSIFICATION OF SUBJECT MATTER
IPC(7)	: G 06 F 17/60
US CL	: 705/1, 14, 26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
     U.S. : 705/1, 10, 14, 26, 27, 29, 37, 80

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
--- Y, P	US 6,101,484 A (HALBERT et al.) 8 Aug 2000, colums 1-6, col. 8, lines 48-52, col. 9, lines 47-58, col. 10, lines 11-30, co. 11 lines 51-57	-------- 1-104
--- Y	McCain III, Roger Ashton, "Table of Contens, Essential Principles of Economics: A Hypermedia Text" Online document http:/william-king.www.drexel.edu/top/print/txt/EcoToC.html, 70 pages,	-------- 1-104
X	US 5,974,399 A (GIULIANI et al.) 26 Oct 1999, the Abstract, cols. 1-3	75-78

☐ Further documents are listed in the continuation of Box C.   ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance		
"E"	earlier application or patent published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report **03 APR 2001**
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Hyung S. Sough *(signature)* Telephone No. 703-308-0956

Form PCT/ISA/210 (second sheet) (July 1998)