## EXHIBIT B

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(54) METHOD AND APPARATUS FOR RENTING ITEMS
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(52) $\qquad$
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ABSTRACT
According to a computer-implemented approach for renting items to customers, customers specify what items to rent using item selection criteria separate from deciding when to receive the specified items. According to the approach, customers provide item selection criteria to a provider provides the items indicated by the item selection criteria to customer over a delivery channel. The provider may be either centralized or distributed depending upon the requirements of a particular application. A "Max Out" approach allows up to a specified number of items to be rented simultaneously to customers. A "Max Turns" approach allows up to a specified number of item exchanges to occur during a specified period of time. The "Max Out" and "Max Turns" approaches may be used together or separately with a variety of subscription methodologies.

100 Claims, 7 Drawing Sheets


FIG. 1


FIG. 2


FIG. 3


FIG. 4


FIG. 5


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# 1 <br> METHOD AND APPARATUS FOR RENTING ITEMS 

## FIELD OF THE INVENTION

The present invention relates to inventory rental, and more specifically, to an approach for renting items to customers.

## BACKGROUND OF THE INVENTION

Conventional inventory rental models are typically based upon renting items for fixed rental periods and charging late fees for keeping rented items beyond a specified return date. These types of inventory models suffer from several significant limitations. First, conventional rental models require customers to make the decision of what items to rent at substantially the same time as the decision of when to rent the items. An example that illustrates this limitation is a video rental business. Customers go to a video rental store and select particular movies to rent at that time. The customers take the movies home and must return them by a particular due date or be charged a late fee. In this situation, the customers cannot decide what movies to rent before actually renting them. The customers may have a particular movie in mind, but there is no guarantee that the video rental store has the particular movie in stock. Moreover, due dates are inconvenient for customers, particularly for "new release" movies that are generally due back the next day.

Given the current demand for inventory rental and the 30 limitations in the prior approaches, an approach for renting items to customers that does not suffer from limitations associated with conventional inventory rental models is highly desirable. In particular, an approach for renting inventory items to customers that allows separation of customers' decisions of what items to rent from when to rent the items is highly desirable.

There is a further need for an approach for renting items to customers on a continuous basis that avoids the use of fixed due dates or rental "windows" appurtenant to conventional rental models.

There is yet a further need for an approach for renting movies, games and music to customers that is more convenient and flexible to customers than conventional approaches.

## SUMMARY OF THE INVENTION

According to one aspect of the invention, a method is provided for renting items to customers on a subscription basis. Up to a specified number of items are provided to the customer. In response to one or more item delivery criteria being satisfied (such a return of one or more previously rented items), one or more other items are provided to the customer, wherein a total current number of items provided to the customer does not exceed the specified number.

According to another of the invention, a method is provided for renting items to customers. According to the method, one or more item selection criteria are received that indicate one or more items that a customer desires to rent. Up to a specified number of the one or more items indicated by the one or more item selection criteria are provided to the customer. In response to one or more item delivery criteria being satisfied, one or more other items indicated by the one or more item selection criteria are provided to the customer, wherein a total current number of items provided to the customer does not exceed the specified number.

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According to another of the invention, a computerimplemented method is provided for renting items to customers. According to the method, one or more item selection criteria are received that indicate one or more items that a customer desires to rent. Up to a specified number of the one or more items indicated by the one or more item selection criteria are provided to the customer. In response to one or more item delivery criteria being satisfied, one or more other items indicated by the one or more item selection criteria are
10 provided to the customer, wherein a total current number of items provided to the customer does not exceed the specified number.

According to another aspect of the invention, a computerimplemented method is provided for renting items to customers. According to the method, one or more item selection criteria are received that indicate one or more items that a customer desires to rent. Up to a specified number of the one or more items indicated by the one or more item selection criteria are provided to the customer. In response to one or more item delivery criteria being satisfied, one or more other items indicated by the one or more item selection criteria are provided to the customer, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit.

According to another aspect of the invention, a method is provided for renting movies to customers. $U p$ to a specified number of movies are provided to the customer. In response to a return of any of the movies provided to the customer, one or more other movies are provided to the customer, wherein a total current number of movies provided to the customer does not exceed the specified number.

According to another aspect of the invention, a method is provided for renting movies to customers. Up to a specified number of movies are provided to the customer. In response to a return of any of the movies provided to the customer, one or more other movies are provided to the customer, wherein a total current number of movies provided to the customer does not exceed the specified number and wherein a total number of movies provided to the customer within a specified period of time does not exceed a specified limit.

According to another aspect of the invention, a computerimplemented method is provided for renting movies to customers. According to the method, one or more movie selection criteria are received from a customer that indicates one or more movies that the customer desires to rent. Up to a specified number of the one or more movies indicated by the one or more movie selection criteria are provided to the customer. In response to a return of any of the movies provided to the customer, one or more other movies indicated by the one or more movie selection criteria are provided to the customer, wherein a total current number of movies provided to the customer does not exceed the specified number and wherein a total number of movies provided to the customer within a specified period of time does not exceed a specified limit.

According to another aspect of the invention, an apparatus for renting items to customers is provided. The apparatus comprises one or more processors and a memory communicatively coupled to the one or more processors. The memory includes one or more sequences of one or more instructions which, when executed by the one or more processors, cause the one or more processors to perform several steps. First, one or more item selection criteria are received that indicate one or more items that a customer desires to rent. Up to a specified number of the one or more items indicated by the one or more item selection criteria are
provided to the customer. Finally, in response to one or more item delivery criteria being satisfied, one or more other items indicated by the one or more item selection criteria are provided to the customer, wherein a total current number of items provided to the customer does not exceed the specified number.

According to another aspect of the invention, an apparatus is provided for renting items to customers. The apparatus comprises an item rental mechanism configured to receive one or more item selection criteria that indicate one or more items that a customer desires to rent. The item rental mechanism is also configured to provide to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria. Finally, the item rental mechanism is configured to in response to one or more item delivery criteria being satisfied, provide to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number.

## BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention are illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements and in which:

FIG. 1 is a diagram depicting an approach for renting items to customers according to an embodiment.
FIG. 2 is a flow diagram depicting an approach for renting items to customers according to an embodiment.
FIG. 3 is a flow diagram depicting a "Max Out" approach for renting items to customers according to an embodiment.

FIG. 4 is a flow diagram depicting a "Max Turns" approach for renting items to customers according to an embodiment.
FIG. 5 is a diagram depicting an approach for renting audio/video items to customers over the Internet according to an embodiment.
FIG. 6 is a flow diagram illustrating an approach for renting audio/video items to customers over the Internet using both "Max Out" and "Max Turns" according to an embodiment; and
FIG. 7 is a block diagram of a computer system upon which embodiments of the invention may be implemented.

## DETAILED DESCRIPTION OF THE INVENTION

In the following description, for the purposes of explanation, specific details are set forth in order to provide a thorough understanding of the invention. However, it will be apparent that the invention may be practiced without these specific details. In other instances, well-known structures and devices are depicted in block diagram form in order to avoid unnecessarily obscuring the invention.
Various aspects and features of example embodiments of the invention are described in more detail hereinafter in the following sections: (1) functional overview; (2) item selection criteria; (3) item delivery; (4) "Max Out"; (5) "Max Turns"; (6) inventory management; and (7) implementation mechanisms.

## 1. FUNCTIONAL OVERVIEW

FIG. $\mathbf{1}$ is a block diagram $\mathbf{1 0 0}$ that illustrates an approach for renting items to customers according to various embodi-
ments described herein. As used berein, the term "items" refers to any commercial goods that can be rented to customers. Examples of items include movies, music and games stored on a non-volatile memory such as a tape, other magnetic medium, optical medium, read-only memory or the like, and the invention is not limited to any particular type of item. In general, the decision of what items to rent is separated from the decision of when to rent the items. Customers may specify what items to rent using one or more item selection criteria separate from deciding when to receive the specified items. Furthermore, customers are not constrained by conventional rental "windows" and instead can have continuous, serialized rental of items.
According to one embodiment, a customer 102 provides one or more item selection criteria to a provider 104 over a link 106. Link 106 may be any medium for transferring data between customer 102 and provider 104 and the invention is not limited to any particular medium. Examples of link 106 include, without limitation, a network such as a LAN, WAN or the Internet, a telecommunications link, a wire or optical link or a wireless connection.
The item selection criteria indicate items that customer 102 desires to rent from provider 104. In response to receiving the item selection criteria from customer 102, provider 104 provides the items indicated by the item selection criteria to customer 102 over a delivery channel 108. Delivery channel 108 may be implemented by any mechanism or medium that provides for the transfer of items from provider 104 to customer 102 and the invention is not limited to any particular type of delivery channel. Examples of delivery channel 108 include, without limitation, mail delivery, courier delivery or delivery using a delivery agent. Provider 104 may be centralized or distributed depending upon the requirements of a particular application.
According to an embodiment, a "Max Out" approach allows up to a specified number of items to be rented simultaneously to customer $\mathbf{1 0 2}$ by provider 104. According to another embodiment, a "Max Turns" approach allows up to a specified number of item exchanges to occur during a specified period of time. The "Max Out" and "Max Turns" approaches may be used together or separately with a variety of subscription methodologies.
The approach just described for renting items to customers is now described with reference to a flow diagram 200 of FIG. 2. After starting in step 202, in step 204, customer 102 creates item selection criteria. In step 206, customer 102 provides the item selection criteria to provider 104. In step 208, in response to provider 104 receiving the item selection criteria from customer 102, provider 104 provides one or more items indicated by the item selection criteria to customer 102. The process is complete in step 210.

## 2. ITEM SELECTION CRITERIA

The one or more item selection criteria provided by .customer 102 to provider 104 indicate the particular items that customer 102 desires to rent from provider 104. Thus, the item selection criteria define a customer-specific order queue that is fulfilled by provider 104. According to one embodiment, the item selection criteria specify attributes of items to be provided by provider 104 to customer 102. Item selection criteria may specify any type of item attributes and the invention is not limited to particular item attributes. Examples of item attributes include, without limitation, identifier attributes, type attributes and cost attributes. Item 65 selection criteria may be changed at any time to reflect changes in items that customers desire to rent from a provider.

## 3. ITEM DELIVERY

According to one embodiment, items are delivered by provider 104 to customer 102 over delivery channel 108 based upon item delivery criteria. More specifically, the delivery of items from provider 104 to customer 102 is triggered by item delivery criteria being satisfied. The item delivery criteria may include a wide range of criteria and the invention is not limited to any particular item delivery criteria. Examples of item delivery criteria include, without limitation, customer request/notification, customer notification that an item is being returned, customer return of an item, the occurrence of a specified date, the elapsing of a specified period of time or a customer payment.

The item delivery criteria may be specified by customer 102 to provider 104 or aegotiated by customer 102 and provider 104 as part of a subscription service. For example, a particular subscription service may include item delivery criteria that specifies that a particular number of items are to be delivered monthly. As another example, item delivery criteria may specify that an initial set of items is to be delivered by provider 104 to customer 102 upon initiation of a subscription service and that additional items are to be delivered to customer 102 upon return of items to provider 104. Item delivery criteria may be applied uniformly to all items to be delivered to a customer, or may be item specific. For example, item delivery criteria may specify a particular date, i.e., the third Wednesday of every month, for all item deliveries. Alternatively, separate item delivery dates may be assigned to each item.

## 4. "MAX OUT"

According to one embodiment, a "Max Out" approach is used to manage the number of items that may be simultaneously rented to customers. According to the "Max Out" approach, up to a specified number of items may be rented simultaneously to a customer. Thus, the "Max Out" approach establishes the size of an inventory of items that may be maintained by customers. The specified number of items may be specific to each customer or may be common to one or more customers. In the present example, if the specified number of items is three, then up to three items may be rented simultaneously by provider 104 to customer 102. If the specified number of items are currently rented to customer 102 and the specified item delivery criteria triggers the delivery of one or more additional items, then those items are not delivered until one or more items are returned by customer 102 to provider 104.

According to one embodiment, in situations where the specified number of items are currently rented to customer 102 and the specified item delivery criteria triggers the delivery of one or more additional items, then the one or more additional items are delivered to customer 102 and customer 102 and a surcharge is applied customer 102. The specified number of items may then be increased thereafter to reflect the additional items delivered to customer 102 and increase the size of the inventory maintained by customer 102. Alternatively, the specified number of items may remain the same and number of items maintained by customer 102 returned to the prior level after items are returned to provider 104 by customer 102 . When used in conjunction with the "Max Turns" approach described hereinafter, the specified number of items may be unlimited.
The "Max Out" approach for managing the number of items that may be simultaneously rented to customers is now described with reference to a flow diagram 300 of FIG. 3. After starting in step 302, in step 304, one or more initial
items are delivered to customer 102 to establish the inventory maintained by customer 102. Note that an initial delivery of items is not required and according to one cmbodiment, the inventory of customer 102 is incrementally established over time.

In step 306, a determination is made whether the item delivery criteria have been satisfied. If not, then the determination continues to be made until the item delivery criteria are satisfied. As described previously berein, the delivery criteria may include customer notification generally, customer notification that an item is being returned, the actual return of an item, the occurrence of a specific date, or that a specified amount of time has elapsed.

Once the item delivery criteria are satisfied, then in step 308, a determination is made whether the specified number of items have been delivered. If not, then control returns to step 304 and one or more additional items are delivered by provider 104 to customer 102. If however, in step 308, the specified number of items have been delivered, then in step 310, a determination is made whether the specified number of items, i.e., the "Max Out" limit, is to be overridden. As previously described, the specified number of items may be overridden by increasing the specified number of items, i.e., the "Max Out" limit, to allow additional items to be delivered to customer 102 and charging a fee to customer 102. Alternatively, the specified number of items is not changed and a surcharge applied to customer 102 . This process continues for the duration of the subscription and is then complete in step 312.

## 5. "MAX TURNS"

According to one embodiment, a "Max Turns" approach is used to rent items to customers. According to the "Max Turns" approach, up to a specified number of item exchanges may be performed during a specified period of time. For example, referring to FIG. 1, suppose that provider 104 agrees to rent items to customer 102 with a "Max Turns" limit of three items per month. This means that customer 102 may make up to three item exchanges per month. This approach may be implemented independent of the number of items that a customer may have rented at any given time under the "Max Out" approach. The approach is also independent of the particular item delivery criteria used.

According to one embodiment, the "Max Turns" approach is implemented in combination with the "Max Out" approach to rent items to customers. In this situation, up to a specified number of total items are simultaneously rented to customer 102 and up to a specified number of item exchanges may be made during a specified period of time. Thus, using the "Max Out" and the "Max Turns" approaches toget her essentially establishes a personal item inventory for customer 102 based upon the "Max Out" limit that may be periodically refreshed based upon the "Max Turns" limit selected.

In some situations, customer $\mathbf{1 0 2}$ may wish to exchange more than the specified number of items during a specified period. According to one embodiment, in this situation, provider 104 agrees to rent additional items above the specified number to customer 102 and to charge customer 102 for the additional items. For example, suppose that provider 104 agrees to rent items to customer 102 with up to three item turns (exchanges) per month. If, in a particular month, customer 102 requires two additional turns, then the two additional items are provided to customer 102 and a surcharge is applied to customer 102 for the additional two items.

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In other situations, customer $\mathbf{1 0 2}$ may not use all of its allotted turns during a specified period. According to one embodiment, customers lose unused turns during a subscription period. For example, if customer 102 has a "Max Turns" limit of four item exchanges per month and only makes two item exchanges in a particular month, then the two unused exchanges are lost and cannot be used. At the start of the next month, customer 102 would be entitled to four new item exchanges.
According to another embodiment, customers are allowed to carry over unused tums to subsequent subscription periods. For example, if customer 102 has a "Max Turns" limit of four item exchanges per month and only makes two item exchanges in a particular month, then the two unused exchanges are lost and cannot be used. At the start of the next month, customer 102 would be entitled to six new item exchanges, two from the prior month and four for the current month.

The "Max Turns" approach for renting items to customers is now described with reference to a flow diagram 400 of FIG. 4. After starting in step 402, in step 404, customer 102 and provider 104 agree upon the terms of the "Max Turns" agreement. Specifically, customer 102 and provider 104 agree at least upon the maximum number of turns that are allowed in a specified period of time.

In step 406, in response to one or more item delivery criteria being satisfied, provider 104 provides one or more items to customer 102 over delivery channel 108. Any type of item delivery criteria may be used with the "Max Turns" approach and the invention is not limited to any particular delivery criteria. For example, the initial one or more items may be delivered to customer 102 in response to a subscription payment made by customer 102 to provider 104, the initiation of a specified subscription period, or by request of customer $\mathbf{1 0 2}$ for the initial rental items. The number of initial one or more items must not exceed the terms of the "Max Turns" agreement.

In step 408, in response to one or more delivery criteria being satisfied, a determination is made whether additional items can be provided to customer 102 within the terms of the "Max Turns" agreement. For example, if the number of items rented to customer in the current subscription period is less than the agreed-upon "Max Turns," then additional items can be rented to customer $\mathbf{1 0 2}$ within the terms of the "Max Turns" agreement. In this situation, this determination may be made in response to customer 102 returning one or more items to provider 104, or by customer 102 requesting additional items.
If, in step 408, a determination is made that additional items can be rented to customer 102 within the terms of the "Max Turns" agreement, then control returns to step 406 where one or more additional items are rented to customer 102. If however, in step 408, a determination is made that additional items cannot be rented to customer 102 within the terms of the "Max Turns" agreement, then in step 410, a determination is made whether to override the current agreement terms. If so, then in step 412, the agreement terms are changed to allow for a larger number of terms and customer 102 is charged accordingly, or the terms are left unchanged and a surcharge is applied for the additional items to be delivered. Control then retums to step 406, where one or more additional items are delivered to customer 102.
If in step $\mathbf{4 1 0}$, a determination is made that the current agreement is not to be overridden, then in step 414, no items are delivered to customer 102 until the next subscription period. For example, the request for additional items may be
received at the end of a subscription period and instead of renting the additional items immediately, they are instead delivered during the subsequent subscription period. Control then returns to step 406 where one or more additional items are rented to customer or the process is complete in step 416.

The approach for renting items described herein is now described in the context of renting to customers audio/video (A/V) items, such as movies, games and music, stored on various media. FIG. 5 is a diagram 500 that depicts a set of customers 502 that desire to $\mathrm{A} / \mathrm{V}$ items from a provider 504. Customers 502 communicate with provider 504 over links 506, the global packet-switched network referred to as the "Internet," and a link 510.

Links 506 and 510 may be any medium for transferring data between customers 502 and the Internet 508 and between the Internet 508 and provider 504, respectively, and the invention is not limited to any particular medium. In the present example, links 506 and 510 may be connections provided by one or more Internet Service Providers (ISPs) and customers 502 are configured with generic Internet web browsers. Links 506 and $\mathbf{5 1 0}$ may be secure or unsecured depending upon the requirements of a particular application.
In accordance with an embodiment, customers 502 enter into a rental agreement with provider 504 to rent audio/video (A/V) items 512 from provider 504 according to the "Max Out" and/or "Max Turns" approaches described herein. The invention is not limited to any particular approach for entering into the rental agreement. For example, customers 502 and provider 504 may enter into a rental agreement by mail, telephone or over the Internet, by customers 502 logging into a web site associated with provider 504.

Customers 502 create and provide item selection criteria to provider 504 over links 506 and 510 and the Internet 508. The invention is not limited to any particular approach for specifying and providing item selection criteria to provider 504. For example, according to one embodiment, customers 502 provide item selection criteria to provider 504 in one or more data files. According to another embodiment, customers 502 log onto a web site of provider 504 and use a graphical user interfaced (GUI) to specify attributes of the movies and music that customers desire to rent from provider 504.
The item selection attributes may include any attributes that describe, at least in part, movies, games or music that customers 502 desire to rent. For movies, example attributes include, without limitation, title, category, director name, actor name and year of release. For games, example attributes include, without limitation, title and category. For music, example atributes include, without limitation, title, category, artist/group name and year of release. Customers 502 may identify specific movies or music by the item selection criteria, or may provide various attributes and allow provider 504 to automatically select particular movies and music that satisfy the attributes specified. For example, customers 502 may specify item selection criteria that include horror movies released in 1999 and let provider 504 automatically select horror movies that were release in 1999. As another example, customers 502 may specify item selection criteria that include adventure movies starring Harrison Ford. Customers 502 may also specify an order or priority for the specified item selection criteria. For example, customers 502 may specify specific movie titles and the order in which they want to receive them. As another example, customers 502 may specify that they want to receive a particular number of movies of different types.

Once customers 502 and provider 504 have entered into a rental agreement and customers $\mathbf{5 0 2}$ have provided item
selection criteria to provider 504, then $\mathrm{A} / \mathrm{V}$ items 512 are rented to customers 502 over delivery channels 514 in accordance with the terms of the rental agreement. Specifically, according to the "Max Out" approach described herein, an initial set of $\mathrm{A} / \mathrm{V}$ items 512 , such as movies, games and music, are delivered to customers 502 over delivery channels 514 according to the terms of the rental agreement. Subsequent A/V items 512 are delivered whenever the specified item delivery criteria are satisfied. For example, additional $\mathrm{A} / \mathrm{V}$ items 512 may be delivered upon the return of one or more $\mathrm{A} / \mathrm{V}$ items 512 to provider, a request from customers 502 , the arrival of a particular date, e.g., a specific day of the month, or the expiration of a specificd period of time, e.g., fifteen days.

In accordance with the "Max Out" approach described herein, once the maximum number of $\mathrm{A} / \mathrm{V}$ items $\mathbf{5 1 2}$ have been rented to a particular customer 502, then no additional $A / V$ items 512 are rented until one or more rented $A / V$ items 512 are returned to provider 504, or unless a surcharge is applied to the particular customer 502. Alternatively, the rental agreement between the particular customer 502 and provider 504 may be modified to increase the maximum number of $\mathrm{A} / \mathrm{V}$ items 512 that may be rented simultaneously to the particular customer 502.

The rental agreement between customers 502 and provider $\mathbf{5 0 4}$ may also specify a maximum number of turns in combination with the "Max Out" approach. In this situation, a maximum number of turns restricts how quickly customers 502 may refresh their $\mathrm{A} / \mathrm{V}$ item 512 inventories. For example, suppose that a particular customer 502 agrees with provider 504 to rent up to four movies with a maximum of four turns per month. Under this agreement, the particular customer 502 may maintain a personal inventory of up to four movies and rent four new movies per month. Thus, the particular customer 502 can completely "replace" his personal inventory once per month. If the particular customer 502 agreed to a maximum of up to eight turns per month, then the particular customer 502 would be able to completely replace his personal inventory twice per month.

Provider $\mathbf{5 0 4}$ is illustrated as a single entity for purposes of explanation only. Provider 504 may be centralized or distributed depending upon the requirements of a particular application. For example, provider 504 may be a central warehouse from which all $\mathrm{A} / \mathrm{V}$ items 512 are provided. Alternatively, provider $\mathbf{5 0 4}$ may be implemented by a network of distributed warehouses.
FIG. 6 is a flow diagram that illustrates an approach for renting $A / V$ items 512, e.g., movies, to customers over a communications network such as the Internet using both "Max Out" and "Max Turns" according to an embodiment. Referring also to FIG. 5, after starting in step 602, in step 604 , a customer 502 enters into a rental agreement with provider 504. In the present example, customer 502 uses a generic web browser to access an Intemet web site associated with provider 504 and enter into a rental agreement that specifies that customer 502 may maintain a personal inventory of four movies ("Max Out" of four) and receive up to four new movies per month ("Max Turns" of four). Furthermore, the rental agreement specifies that new movies will be delivered upon return of a rented movie from customer 502 , i.e., the delivery criteria is a return of a movie by the customer.
In step 606, customer 502 creates and provides movie selection criteria to provider 504 that indicates movies that customer 502 desires to rent. For example, the movie selection criteria may specify particular movie titles that

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customer 502 desires to rent. The movie selection criteria may also specify an order or priority in which customer 502 wishes to rent the movies. Instead of identifying particular movie titles, the movie selection criteria may specify movie preferences for customer 502, e.g., types of movies, directors, actors, or any other movie preferences or attributcs. In this situation, provider 504 automatically selects particular titles that satisfy the movie selection criteria. For example, the movie selection criteria may specify a preference for action movies starring a particular actor, with a preference for "new release" movies. Provider $\mathbf{5 0 4}$ attempt to provide movies to customer $\mathbf{5 0 2}$ that best satisfy the preferences indicated by the movie selection criteria.
In step 608, one or more initial movies 512 are delivered to customer 502 over delivery channel 514. The one or more initial movies $\mathbf{5 1 2}$ may be delivered to customer $\mathbf{5 0 2}$ via mail, courier, delivery agent or any other suitable means negotiated between customer 502 and provider and the invention is not limited to any particular type of delivery mechanism. For purposes of explanation only, is presumed in the present example that movies are mailed between customer 502 and provider 504.

The one or more initial movies 512 establish the personal movie inventory of customer 502. Customer 502 may choose to receive any number of movies up to the "Max Out" limit of four movies. Typically, customer 502 will choose to initially receive four movies in the initial delivery.
Once the one or more initial movies 512 have been mailed to customer 502, then in step 610, a determination is made whether any movies 512 have been returned by customer 502 to trigger another movie delivery. In the present example, the delivery of additional movies is triggered by the receipt, e.g., via mail, of one or more movies from customer 502. In the situation where customer 502 elects to not receive the maximum number of movies 512 in the initial delivery, then the delivery of additional movies 512 may also be triggered by a request from customer $\mathbf{5 0 2}$ for additional movies 512. For example, customer 502 may notify provider 504 via telephone, email or by accessing the web site associated with provider. 504.
If, in step 610, a determination is made that one or more movies 512 were received from customer 502, then in step 612, a determination is made whether the maximum number of turns ("Max Turns") limit has been reached for the current cycle. In the present example, a determination is made whether four or more movies have been mailed in the current month. If not, then control returns to step 608, where one or more additional movies 512 are mailed to customer $\mathbf{5 0 2}$ via delivery channel 514 up to the "Max Out" limit of four.
If, in step 612, a determination is made that the "Max Turns" limit has been met for the current cycle, i.e., in the present example, four movies 512 have been mailed to customer 502 in the current month, then in step 614 a determination is made whether to override the current "Max Turns" limit. If so, then in step 616, a surcharge is applied to customer 502 and control returns to step 608 where the additional movies 514 are mailed to customer $\mathbf{5 0 2}$. If not, then in step 618, a determination is made whether to continue the subscription service. If so, then no additional movies are mailed to customer $\mathbf{5 0 2}$ during the current cycle, e.g., the current month, and the control returns to step 610. If, in step 618, a determination is made that service is not to be continued, then the process is complete in step 620.
In some situations, customer 502 may desire to increase or decrease the size of customer's 502 personal movie
inventory by changing the current "Max Out" limit. According to one embodiment, customer 502 notifies provider 504, e.g., by telephone, mail, email or by accessing the web site associated with provider 504, that customer 502 wishes to change the "Max Out" limit. The movie rental agreement between customer 502 and provider 504 is then modified to reflect the change of the "Max Out" limit. In the situation where the "Max Out" limit is increased, then additional movies $\mathbf{5 1 2}$ may be immediately mailed to customer $\mathbf{5 0 2}$.

## 6. INVENTORY MANAGEMENT

The approach described herein for renting items to customers provides superior inventory management to prior approaches. Specifically, the use of item selection criteria provides for efficient inventory management by allowing the greatest number of items to be rented at any given time. Moreover, the greatest number of customers are provided with their most preferred items. For example, customers may specify priorities for the items indicated by the item selection criteria. Thus, if a particular customer's first choice is not available, or already rented, then the item having the next highest priority can be rented to the particular customer. According to one embodiment, customers may indicate items that are not yet available for rent. Then, the items are delivered to customers when they become available.

For example, referring again to FIG. 5, suppose that a particular customer $\mathbf{5 0 2}$ desires to rent an as-yet-unreleased movie entitled " ABC ." The particular customer 502 indicates this movie to provider 504 by the item selection criteria. Since the movie $A B C$ is not yet available, it cannot be delivered to the particular customer 502. However, when the movie ABC does become available, it can be shipped immediately to the particular customer 502 , as well as other customers 502 who may have also requested the movie. This allows provider 504 to maximize the number of items rented while ensuring that customers 502 are able to rent the highest priority items that they requested.

According to another embodiment, as yet unknown items may also be rented by specifying attributes of the unknown items. For example, the particular customer $\mathbf{5 0 2}$ may request to rent the next new movie of a particular director, for which the exact name is unknown to the particular customer. As another example, the particular customer 502 may request to rent the next album of a particular group that is currently in process and does not yet bave a title.

## 7. IMPLEMENTATION MECHANISMS

The approach described herein for renting items to customers is applicable to any type of rental application and (without limitation) is particularly well suited for Internetbased rental applications for renting movies and music to customers. The invention may be implemented in hardware circuitry, in computer software, or a combination of hardware circuitry and computer software and is not limited to a particular hardware or software implementation.
FIG. 7 is a block diagram that illustrates a computer system 700 upon which an embodiment of the invention may be implemented. Computer system 700 includes a bus 702 or other communication mechanism for communicating information, and a processor 704 coupled with bus 702 for processing information. Computer system 700 also includes a main memory 706, such as a random access memory (RAM) or other dynamic storage device, coupled to bus 702 for storing information and instructions to be executed by processor 704. Main memory 706 also may be used for storing temporary variables or other intermediate informa-
tion during execution of instructions to be executed by processor 704. Computer system 700 further includes a read only memory (ROM) 708 or other static storage device coupled to bus 702 for storing static information and instructions for processor 704. A storage device 710 , such as a magnetic disk or optical disk, is provided and coupled to bus 702 for storing information and instructions.

Computer system 700 may be coupled via bus 702 to a display 712, such as a cathode ray tube (CRT), for displaying information to a computer user. An input device 714, including alphanumeric and other keys, is coupled to bus 702 for communicating information and command selections to processor 704. Another type of user input device is cursor control 716, such as a mouse, a trackball, or cursor direction keys for communicating direction information and command selections to processor 704 and for controlling cursor movement on display 712. This input device typically has two degrees of freedom in two axes, a first axis (e.g., x) and a second axis (e.g., y), that allows the device to specify positions in a plane.

The invention is related to the use of computer system 700 for renting items to customers. According to one embodiment of the invention, the renting of items to customers is provided by computer system 700 in response to processor 704 executing one or more sequences of one or more instructions contained in main memory 706. Such instructions may be read into main memory 706 from another computer-readable medium, such as storage device 710 . Execution of the sequences of instructions contained in main memory 706 causes processor 704 to perform the process steps described herein. One or more processors in a multiprocessing arrangement may also be employed to execute the sequences of instructions contained in main memory 706. In alternative embodiments, hard-wired circuitry may be used in place of or in combination with software instructions to implement the invention. Thus, embodiments of the invention are not limited to any specific combination of hardware circuitry and software.
The term "computer-readable medium" as used herein refers to any medium that participates in providing instructions to processor 704 for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, optical or magnetic disks, such as storage device 710. Volatile media includes dynamic memory, such as main memory 706. Transmission media includes coaxial cables, copper wire and fiber optics, including the wires that comprise bus 702. Transmission media can also take the form of acoustic or light waves, such as those generated during radio wave and infrared data communications.

Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read.

Various forms of computer readable media may be involved in carrying one or more sequences of one or more instructions to processor 704 for execution. For example, the instructions may initially be carried on a magnetic disk of a 65 remote computer. The remote computer can load the instructions into its dynamic memory and send the instructions over a telephone line using a modem. A modem local to computer

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system $\mathbf{7 0 0}$ can receive the data on the telephone line and use an infrared transmitter to convert the data to an infrared signal. An infrared detector coupled to bus 702 can receive the data carried in the infrared signal and place the data on bus 702. Bus 702 carries the data to main memory 706, from which processor 704 retrieves and executes the instructions. The instructions received by main memory 706 may optionally be stored on storage device 710 either before or after execution by processor 704

Computer system 700 also includes a communication interface 718 coupled to bus 702. Communication interface 718 provides a two-way data communication coupling to a network link 720 that is connected to a local network 722. For example, communication interface 718 may be an integrated services digital network (ISDN) card or a modem to provide a data communication connection to a corresponding type of telephone line. As another example, communication interface 718 may be a local area network (LAN) card to provide a data communication connection to a compatible LAN. Wireless links may also be implemented. In any such implementation, communication interface 718 sends and receives electrical, electromagnetic or optical signals that carry digital data streams representing various types of information.

Network link 720 typically provides data communication through one or more networks to other data devices. For example, network link 720 may provide a connection through local network 722 to a host computer $\mathbf{7 2 4}$ or to data equipment operated by an Internet Service Provider (ISP) 726. ISP 726 in tum provides data communication services through the world wide packet data communication network now commonly referred to as the "Internet" 728. Local network 722 and Internet 728 both use electrical, electromagnetic or optical signals that carry digital data streams. The signals through the various networks and the signals on network link $\mathbf{7 2 0}$ and through communication interface 718, which carry the digital data to and from computer system 700, are exemplary forms of carrier waves transporting the information.

Computer system 700 can send messages and receive data, including program code, through the network(s), network link 720 and communication interface 718. In the Internet example, a server $\mathbf{7 3 0}$ might transmit a requested code for an application program through Internet 728, ISP 726, local network 722 and communication interface 718. In accordance with the invention, one such downloaded application provides for the renting of items to customers as described herein.
The received code may be executed by processor 704 as it is received, and/or stored in storage device 710, or other non-volatile storage for later execution. In this manner, computer system 700 may obtain application code in the form of a carrier wave.

The novel approach described herein for renting items to 5 customers provides several advantages over prior approaches for renting items to customers. First, the decision of what items to rent may be separated from the decision of when to rent the items. Customers may specify what items to rent using the item selection criteria and receive the items at a future point in time, without having to go to the provider to pick up the items. The selection criteria may be user specific and may indicate a desired fulfillment sequence. Furthermore, customers are not constrained by conventional due dates and instead may establish continuous, serialized rental streams of items. The approach also allows more efficient inventory management. of items provided to the customer within a specified period of time does not exceed a specified limit.
3. A method as recited in claim 2 , further comprising if the total number of items provided to the customer within the specified period of time is less than the specified limit, then increasing the specified limit for another specified period of time.
4. A method as recited in claim 1 , wherein
the one or more item selection criteria indicates a desired order for the one or more items that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria in the desired order indicated by the item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes providing to the customer one or more other items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria.
5. A method as recited in claim 4 , further comprising if a particular item from the one or more items indicated by the one or more item selection criteria is not available, then providing another item from the one or more items based upon the desired order indicated by the one or more item selection criteria.
6. A method as recited in claim 1 , wherein
the one or more item selection criteria specifies one or 20 more preferred item attributes,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer up to a specified number of one or more items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer one or more other items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria.

## 7. A method as recited in claim 1,

further comprising:
establishing, based upon the one or more item selection criteria, an item rental queue for the customer, wherein the item rental queue contains one or more entries that specify the one or more items that the customer desires to rent; and
in response to receiving back any of the items provided to the customer, selecting the one or more other items from the item rental queue.
8. A method as recited in claim 1 ,
further comprising in response to receiving a customer notification, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
9. A method as recited in claim 1,
further comprising in response to expiration of a specified amount of time, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
10. A method as recited in claim 1,
further comprising in response to a specified date being reached, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
11. A method as recited in claim 1,
further comprising in response to a specified fee being received, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
12. A method as recited in claim 1, wherein items are provided to the customer by mail.

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13. A method as recited in claim 1, wherein items are provided to the customer by a delivery agent.
14. A method as recited in claim 1, wherein:
the one or more items are one or more movies,
the one or more item selection criteria are one or more movie selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more movie selection criteria that indicates one or more movies that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number includes in response to receiving any of the movies provided to the customer, providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total current number of movies provided to the customer does not exceed the specified number.
15. A method as recited in claim 1, wherein:
the one or more items are one or more games,
the one or more item selection criteria are one or more game selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more game selection criteria that indicates one or more games that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more games indicated by the one or more game selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number includes in response to receiving any of the games provided to the customer, providing to the customer one or more other games indicated by the one or more game selection criteria, wherein a total current number of games provided to the customer does not exceed the specified number.
16. A method for renting items to customers, the method comprising the computer-implemented steps of:
receiving one or more item selection criteria that indicates one or more items that a customer desires to rent;
providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria; and
in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total number of items provided to the
customer within a specified period of time does not exceed a specified limit.
17. A method as recited in claim 16, wherein the total current number of items provided to the customer does not exceed the specified number.
18. A method as recited in claim 16, further comprising if the total number of items provided to the customer within the specified period of time is less than the specified limit, then increasing the specified limit for another specified period of time.
19. A method as recited in claim 16, wherein
the one or more item selection criteria indicates a desired order for the one or more items that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes providing to the customer one or more other items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria.
20. A method as recited in claim 19, further comprising if a particular item from the one or more items indicated by the one or more item selection criteria is not available, then providing another item from the one or more items based upon the desired order indicated by the one or more item selection criteria.
21. A method as recited in claim 16, wherein
the one or more item selection criteria specifies one or more preferred item attributes,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer up to a specified number of one or more items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer one or more other items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria.
22. A method as recited in claim 16,
further comprising:
establishing, based upon the one or more item selection criteria, an item rental queue for the customer, wherein the item rental queue contains one or more entries that specify the one or more items that the customer desires to rent; and
in response to receiving back any of the items provided to the customer, selecting the one or more other items from the item rental queue.
23. A method as recited in claim 16,
further comprising in response to receiving a customer notification, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
24. A method as recited in claim 16,
further comprising in response to expiration of a specified amount of time, providing to the customer a second set
of one or more other items indicated by the one or more item selection criteria.
25. A method as recited in claim 16,
further comprising in response to a specified date being reached, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
26. A method as recited in claim 16,
further comprising in response to a specified fee being received, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
27. A method as recited in claim 16, wherein items are provided to the customer by mail.
28. A method as recited in claim 16, wherein items are provided to the customer by a delivery agent.
29. A method as recited in claim 16, wherein:
the one or more items are one or more movies,
the one or more item selection criteria are one or more movie selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more movie selection criteria that indicates one or more movies that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit includes in response to receiving any of the movies provided to the customer, providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit.
30. A method as recited in claim 16, wherein:
the one or more items are one or more games,
the one or more item selection criteria are one or more game selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more game selection criteria that indicates one or more games that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more games indicated by the one or more game selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit includes in response to receiving any of the games provided to the
customer, providing to the customer one or more other games indicated by the one or more game selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit.
31. A method for renting movies to customers, the method comprising the computer-implemented steps of:
receiving one or more movie selection criteria from a customer that indicates one or more movies that the customer desires to rent;
providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria; and
in response to a return of any of the movies provided to the customer, providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total current number of movies provided to the customer does not exceed the specified number.
32. A method as recited in claim 31, wherein
the one or more movie selection criteria specifies an order in which the customer desires to receive the movies,
the step of providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the move selection criteria in the order specified by the one or more movie selection criteria, and
the step of providing to the customer one or more other movies specified by the one or more movie selection criteria includes providing to the customer one or more other movies specified by the one or more movie selection criteria in the order specified by the one or more movie selection criteria.
33. A method as recited in claim 31, wherein
the one or more movie selection criteria specifies movie attributes preferred by the customer,
the step of providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria includes automatically selecting and providing to the customer up to a specified number of the one or more movies that have the specified movie attributes preferred by the customer, and
the step of providing to the customer one or more other movies specified by the one or more movie selection criteria includes automatically selecting and providing to the customer one or more other movies that have the specified movie attributes preferred by the customer.
34. A method as recited in claim 31, wherein movies are provided to the customer by mail.
35. A method as recited in claim 31, wherein movies are provided to the customer by a delivery agent.
36. A computer-readable medium for renting items to customers, the computer-readable medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to perform the computer-implemented steps of:
receiving one or more item selection criteria that indicates one or more items that a customer desires to rent;
providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria; and
in response to receiving any of the items provided to the customer, providing to the customer one or more other
items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number.
37. A computer-readable medium as recited in claim 36, wherein the total number of items provided to the customer within a specified period of time does not exceed a specified limit.
38. A computer-readable medium as recited in clain 37, further comprising one or more sequences of one or more instructions which, when executed by the one or more processors, cause the one or more processors to perform the step of if the total number of items provided to the customer within the specified period of time is less than the specified limit, then increasing the specified limit for another specified period of time.
39. A computer-readable medium as recited in claim 36, wherein
the one or more item selection criteria indicates a desired order for the one or more items that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes providing to the customer one or more other items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria.
40. A computer-readable medium as recited in claim 39, further comprising one or more sequences of one or more instructions which, when executed by the one or more processors, cause the one or more processors to perform the step of if a particular item from the one or more items indicated by the one or more item selection criteria is not available, then providing another item from the one or more items based upon the desired order indicated by the one or more item selection criteria.
41. A computer-readable medium as recited in claim 36, wherein
the one or more item selection criteria specifies one or more preferred item attributes,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer up to a specified number of one or more items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer one or more other items that have one or more of the one or more preferred item altributes specified by the one or more item selection criteria.
42. A computer-readable medium as recited in claim 36, further comprising:
establishing, based upon the one or more item selection criteria, an item rental queue for the customer, wherein the item rental queue contains one or more entries that specify the one or more items that the customer desires to rent; and

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in response to receiving back any of the items provided to the customer, selecting the one or more other items from the item rental queue.
43. A computer-readable medium as recited in claim 36,
further comprising in response to receiving a customer notification, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
44. A computer-readable medium as recited in claim 36,
further comprising in response to expiration of a specified amount of time, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
45. A computer-readable medium as recited in claim 36, further comprising in response to a specified date being reached, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
46. A computer-readable medium as recited in claim 36,
further comprising in response to a specified fee being received, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria
47. A computer-readable medium as recited in claim 36, wherein items are provided to the customer by mail.
48. A computer-readable medium as recited in claim 36 , wherein items are provided to the customer by a delivery agent.
49. A computer-readable medium as recited in claim 36, wherein:
the one or more items are one or more movies,
the one or more item selection criteria are one or more movie selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more movie selection criteria that indicates one or more movies that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria, and
the slep of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number includes in response to 50 receiving any of the movies provided to the customer providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total current number of movies provided to the customer does not exceed the specified number. 5
50. A computer-readable medium as recited in claim 36, wherein:
the one or more items are one or more games,
the one or more item selection criteria are one or more game selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more game selection criteria that indicates one or more games that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one
or more item selection criteria includes providing to the customer up to a specified number of the one or more games indicated by the one or more game selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number includes in response to receiving any of the games provided to the customer, providing to the customer one or more other games indicated by the one or more game selection criteria, wherein a total current number of games provided to the customer does not exceed the specified number:
51. An apparatus for renting items to customers comprising:
one or more processors; and
a memory communicatively coupled to the one or more processors, the memory including one or more sequences of one or more instructions which, when executed by the one or more processors, cause the one or more processors to perform the steps of:
receiving one or more item selection criteria that indicates one or more items that a customer desires to rent;
providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria; and
in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number.
52. An apparatus as recited in claim 51, wherein the total number of items provided to the customer within a specified period of time does not exceed a specified limit.
53. An apparatus as recited in claim 52, wherein the memory further includes one or more sequences of one or more instructions which, when executed by the one or more processors, cause the one or more processors to perform the step of if the total number of items provided to the customer within the specified period of time is less than the specified limit, then increasing the specified limit for another specified period of time.
54. An apparatus as recited in claim 51, wherein
the one or more item selection criteria indicates a desired order for the one or more items that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes providing to the customer one or more other items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria.
55. An apparatus as recited in claim 54, wherein the memory further includes one or more sequences of one or more instructions which, when executed by the one or more
processors, cause the one or more processors to perform the step of if a particular item from the one or more items indicated by the one or more item selection criteria is not available, then providing another item from the one or more items based upon the desired order indicated by the one or more item selection criteria.
56. An apparatus as recited in claim 51, wherein
the one or more item selection criteria specifies one or more preferred item attributes,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer up to a specified number of one or more items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer one or more other items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria.
57. An apparatus as recited in claim 51,
further comprising:
establishing, based upon the one or more item selection criteria, an item rental queue for the customer, wherein the item rental queue contains one or more entries that specify the one or more items that the customer desires to rent; and
in response to receiving back any of the items provided to the customer, selecting the one or more other items from the item rental queue.
58. An apparatus as recited in claim 51,
further comprising in response to receiving a customer 35 notification, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
59. An apparatus as recited in claim 51,
further comprising in response to expiration of a specified amount of time, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
60. An apparatus as recited in claim 51,
further comprising in response to a specified date being reached, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
61. An apparatus as recited in claim 51,
further comprising in response to a specified fee being received, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
62. An apparatus as recited in claim 51, wherein items are provided to the customer by mail.
63. An apparatus as recited in claim 51, wherein items are provided to the customer by a delivery agent.
64. An apparatus as recited in claim 51, wherein:
the one or more items are one or more movies,
the one or more item selection criteria are one or more movie selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more movie selection criteria that indicates one or more movies that a customer desires to rent,

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the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number includes in response to receiving any of the movies provided to the customer, providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total current number of movies provided to the customer does not exceed the specified number.
65. An apparatus as recited in claim 51, wherein:
the one or more items are one or more games,
the one or more item selection criteria are one or more game selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more game selection criteria that indicates one or more games that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more games indicated by the one or more game selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number includes in response to receiving any of the games provided to the customer, providing to the customer one or more other games indicated by the one or more game selection criteria, wherein a total current number of games provided to the customer does not exceed the specified number.
66. An apparatus for renting items to customers comprising an item rental mechanism configured to:
receive one or more item selection criteria that indicates one or more items that a customer desires to rent;
provide to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria; and
in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total current number of items provided to the customer does not exceed the specified number.
67. An apparatus as recited in claim 66, wherein the total number of items provided to the customer within a specified period of time does not exceed a specified limit.
68. An apparatus as recited in claim 67, wherein the item 60 rental mechanism is further configured to if the total number of items provided to the customer within the specified period of time is less than the specified limit, then increase the specified limit for another specified period of time.
69. An apparatus as recited in claim 66, wherein
the one or more item selection criteria indicates a desired order for the one or more items that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specificd number of the one or more items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes providing to the customer one or more other items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria.
70. An apparatus as recited in claim 69, wherein the item rental mechanism is further configured to if a particular item from the one or more items indicated by the one or more item selection criteria is not available, then providing another item from the one or more items based upon the desired order indicated by the one or more item selection criteria.
71. An apparatus as recited in claim 66, wherein
the one or more item selection criteria specifies one or more preferred item attributes,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer up to a specified number of one or more items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer one or more other items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria.
72. An apparatus as recited in claim 66,
further comprising:
establishing, based upon the one or more item selection criteria, an item rental queue for the customer, wherein the item rental queue contains one or more entries that specify the one or more items that the customer desires to rent; and
in response to receiving back any of the items provided to the customer, selecting the one or more other items from the item rental queue.
73. An apparatus as recited in claim 66,
further comprising in response to receiving a customer notification, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
74. An apparatus as recited in claim 66,
further comprising in response to expiration of a specified amount of time, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
75. An apparatus as recited in claim 66,
further comprising in response to a specified date being reached, providing to the customer a second set of one 60 or more other items indicated by the one or more item selection criteria.
76. An apparatus as recited in claim 66,
further comprising in response to a specified fee being received, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
77. An apparatus as recited in claim 66, wherein items are provided to the customer by mail.
78. An apparatus as recited in claim 66, wherein items are provided to the customer by a delivery agent.
79. An apparatus as recited in claim 66, wherein:
the item rental mechanism is a movie rental mechanism,
the one or more items are one or more movies,
the one or more item selection criteria are one or more movie selection criteria,
the movie rental mechanism is further configured to receive one or more movie selection criteria that indicates one or more movies that a customer desires to rent,
the movie rental mechanism is further configured to provide to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria, and
the movie rental mechanism is further configured to in response to receiving any of the movics provided to the customer, provide to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total current number of movies provided to the customer does not exceed the specified number.
80. An apparatus as recited in claim 66, wherein:
the one or more items are one or more games,
the one or more item selection criteria are one or more game selection criteria,
the movie rental mechanism is further configured to receive one or more game selection criteria that indicates one or more games that a customer desires to rent,
the movie rental mechanism is further configured to provide to the customer up to a specified number of the one or more games indicated by the one or more game selection criteria, and
the movie rental mechanism is further configured to in response to receiving any of the games provided to the customer, provide to the customer one or more other games indicated by the one or more game selection criteria, wherein a total current number of games provided to the customer does not exceed the specified number.
81. A computer-readable medium for renting items to customers, the computer-readable medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to perform the computer-implemented steps of: receiving one or more item selection criteria that indicates one or more items that a customer desires to rent;
providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria; and
in response to receiving any of the items provided to the customer, one or more item delivery criteria being satisfied, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit.
82. A computer-readable medium as recited in claim 81, wherein the total current number of items provided to the customer does not exceed the specified number.
83. A computer-readable medium as recited in claim 81 , further comprising if the total number of items provided to the customer within the specified period of time is less than
the specified limit, then increasing the specified limit for another specified period of time.
84. A computer-readable medium as recited in claim 81, wherein
the one or more item selection criteria indicates a desired 5 order for the one or more items that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes providing to the customer one or more other items indicated by the one or more item selection criteria in the desired order indicated by the one or more item selection criteria.
85. A computer-readable medium as recited in claim 84, further comprising if a particular item from the one or more items indicated by the one or more item selection criteria is not available, then providing another item from the one or more items based upon the desired order indicated by the ${ }^{2}$ one or more item selection criteria.
86. A computer-readable medium as recited in claim 81, wherein
the one or more item selection criteria specifies one or more preferred item attributes,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer up to a specified number of one or more items that have one or more of the one or more preferred item atributes specified by the one or more item selection criteria, and
the step of providing to the customer one or more other items indicated by the one or more item selection criteria includes automatically selecting and providing to the customer one or more other items that have one or more of the one or more preferred item attributes specified by the one or more item selection criteria.
87. A computer-readable medium as recited in claim 81,
further comprising:
establishing, based upon the one or more item selection criteria, an item rental queue for the customer, wherein the item rental queue contains one or more entries that specify the one or more items that the customer desires to rent; and
in response to receiving back any of the items provided to the customer, selecting the one or more other items from the item rental queue.
88. A computer-readable medium as recited in claim 81, further comprising in response to receiving a customer notification, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
89. A computer-readable medium as recited in claim 81,
further comprising in response to expiration of a specified amount of time, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
90. A computer-readable medium as recited in claim 81, 6 further comprising in response to a specified date being reached, providing to the customer a second set of one

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or more other items indicated by the one or more item selection criteria.
91. A computer-readable medium as recited in claim 81,
further comprising in response to a specified fee being received, providing to the customer a second set of one or more other items indicated by the one or more item selection criteria.
92. A computer-readable medium as recited in claim 81, wherein items are provided to the customer by mail.
93. A computer-readable medium as recited in claim 81, wherein items are provided to the customer by a delivery agent.
94. A computer-readable medium as recited in claim 81, wherein:
the one or more items are one or more movies,
the one or more item selection criteria are one or more movie selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more movie selection criteria that indicates one or more movies that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria, and the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total number of items provided to the customer witbin a specified period of time does not exceed a specified limit includes in response to receiving any of the movies provided to the customer, providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit.
95. A computer-readable medium as recited in claim 81, wherein:
the one or more items are one or more games,
the one or more item selection criteria are one or more game selection criteria,
the step of receiving one or more item selection criteria that indicates one or more items that a customer desires to rent includes receiving one or more game selection criteria that indicates one or more games that a customer desires to rent,
the step of providing to the customer up to a specified number of the one or more items indicated by the one or more item selection criteria includes providing to the customer up to a specified number of the one or more games indicated by the one or more game selection criteria, and
the step of in response to receiving any of the items provided to the customer, providing to the customer one or more other items indicated by the one or more item selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit includes in response to receiving any of the games provided to the customer, providing to the customer one or more other games indicated by the one or more game selection criteria, wherein a total number of items provided to the customer within a specified period of time does not exceed a specified limit.
96. A computer-readable medium for renting movies to customers, the computer-readable medium carrying one or more sequences of one or more instructions which, when executed by one or more processors, cause the one or more processors to perform the computer-implemented steps of:
receiving one or more movie selection criteria from a customer that indicates one or more movies that the customer desires to rent;
providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria; and
in response to a return of any of the movies provided to the customer, providing to the customer one or more other movies indicated by the one or more movie selection criteria, wherein a total current number of movies provided to the customer does not exceed the specified number.
97. A computer-readable medium as recited in claim 96, wherein
the one or more movie selection criteria specifies an order in which the customer desires to receive the movies,
the step of providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria includes providing to the customer up to a specified number of the one or more movies indicated by the move selection criteria in the order specified by the one or more movie selection criteria, and
the step of providing to the customer one or more other movies specified by the one or more movie selection criteria includes providing to the customer one or more other movies specified by the one or more movie selection criteria in the order specified by the one or more movie selection criteria.
98. A computer-readable medium as recited in claim 96, wherein
the one or more movie selection criteria specifies movie attributes preferred by the customer,
the step of providing to the customer up to a specified number of the one or more movies indicated by the one or more movie selection criteria includes automatically selecting and providing to the customer up to a specified number of the one or more movies that have the specified movie attributes preferred by the customer, and
the step of providing to the customer one or more other movies specified by the one or more movie selection criteria includes automatically selecting and providing to the customer one or more other movies that have the specified movie attributes preferred by the customer.
99. A computer-readable medium as recited in claim 96, wherein movies are provided to the customer by mail.
100. A computer-readable medium as recited in claim 96, wherein movies are provided to the customer by a delivery agent.

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : 6,584,450 B1
Page 1 of 4
DATED
: June 24, 2003
INVENTOR(S) : Hastings et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page,
Item [57], ABSTRACT,
Line 6, before "provides", insert -- that - .
Column 1,
Line 53, change " a " to $-\mathrm{as} \mathrm{--}$.
Line 57, after "another", insert -- aspect --.
Column 2,
Line 1, after "another", insert -- aspect --.
Column 10,
Line 42, change "provider. 504 " to -- provider 504 --.
Column 14,
Line 10, after "since," delete " $a$ ".
Lines 46, 48 and 66, "one or more items" should be -- two or more items --;
Column 15,
Lines $2,4,15,17,24,27$ and 41, "one or more items" should be -- two or more items --;
Column 16,
Lines 4, "the one or more items are one or more movies" should be -- the two or more items are two or more movies --;
Lines $8,13,34,39,58$ and 60 , "one or more items" should be -- two or more itmes --; Lines 10 and 15, "one or more movies" should be -- two or more movies --;
Line 30, "the one or more items are one or more games" should be -- the two or more items are two or more games --;
Lines 36 and 41, "one or more games" should be -- two or more games --;
Column 17,
Lines $13,16,18,29,31,38,41$ and 55 , "one or more items" should be -- two or more items --;

Column 18,
Line 18, "the one or more items are one or more movies" should be -- the two or more items are two or more movies --;
Lines 22, 27, 49 and 54, "one or more items" should be -- two or more items --;
Lines 24 and 29, "one or more movies" should be -- two or more movies --;

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PATENT NO. : 6,584,450 B1
Page 2 of 4
DATED : June 24, 2003
INVENTOR(S) : Hastings et al.

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Column 18 (cont'd),
Line 45, "the one or more items are one or more games" should be -- the two or more items are two or more games --;
Lines 51 and 56, "one or more games" should be -- two or more games --;
Column 19,
Lines 9, 12, 24, 26, 40 and 43, "one or more movies" should be -- two or more movies --;
Lines 61 and 63, "one or more items" should be -- two or more items --;
Column 20,
Lines $20,23,25,39,41,49,52$ and 66 , "one or more items" should be -- two or more items --;

Column 21,
Line 31, "the one or more items are one or more movies" should be -- the two or more items are two or more movies --;
Lines 35, 40, 62 and 67, "one or more items" should be -- two or more items --;
Lines 37 and 42, "one or more movies" should be -- two or more movies --;
Line 58, "the one or more items are one or more games" should be -- the two or more items are two or more games --;
Line 64, "one or more games" should be -- two or more games --;
Column 22,
Line 2, "one or more games" should be -- two or more games --;
Lines $25,28,49,52$ and 54, "one or more items" should be -- two or more items --;
Column 23,
Lines $2,4,11,14,28$ and 62, "one or more items" should be -- two or more items --; Line 58, "the one or more items are one or more movies" should be -- the two or more items are two or more movies --;
Line 64, "one or more movies" should be -- two or more movies --;
Column 24,
Lines $2,23,28,47,49$ and 67, "one or more items" should be -- two or more items --; Line 4, "one or more movies" should be -- two or more movies --;
Line 19, "the one or more items are one or more games" should be -- the two or more items are two or more games --;
Lines 25 and 30, "one or more games" should be -- two or more games --;

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

| PATENT NO. | $: 6,584,450 \mathrm{~B} 1$ | Page 3 of 4 |
| :--- | :--- | :--- |
| DATED | $:$ June 24,2003 |  |
| INVENTOR(S) | $:$ Hastings et al. |  |

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Column 25,
Lines $2,4,16,18,25,28$ and 42 , "one or more items" should be -- two or more items --;
Column 26,
Line 7, "the one or more items are one or more movies" should be -- the two or more items are two or more movies --;
Lines 12 and 16, "one or more movies" should be -- two or more movies --;
Line 26, "the one or more items are one or more games" should be -- the two or more items are two or more games --;
Lines 31 and 34, "one or more games" should be -- two or more games --;
Lines 49 and 51 , "one or more items " should be -- two or more items --;
Column 27,
Lines $6,9,11,22,24,32,35$ and 49 , "one ore more items" should be -- two or more items --;

Column 28,
Line 15 , "the one or more items are one or more movies" should be -- the two or more items are two or more movies --;
Lines 19, 24, 47 and 52, "one or more items" should be -- two or more items --;
Lines 21 and 26 , "one or more movies" should be -- two or more movies --;
Line 43 , "the one or more items are one or more games" should be -- the two or more items are two or more games --;
Lines 49 and 54, "one or more games" should be -- two or more games --;
Column 29,
Lines 7, 10, 23 and 25, "one or more movies" should be -- two or more movies --;

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Column 30,
Lines 12 and 15, "one or more movies" should be -- two or more movies --;

## Signed and Sealed this

Thirteenth Day of April, 2004


JON W. DUDAS

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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INVENTOR(S) : Hastings et al.
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Column 18,
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Lines 25 and 30, "one or more games" should be -- two or more games --;

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| PATENT NO. | $: 6,584,450 \mathrm{~B} 1$ |
| :--- | :--- |
| DATED | $:$ June 24,2003 |
| INVENTOR(S) | $:$ Hastings et al. |

Page 3 of 4
INVENTOR(S) : Hastings et al.

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Column 30,
Lines 12 and 15, "one or more movies" should be -- two or more movies --;

This certificate supersedes Certificate of Correction issued April 13, 2004.

## Signed and Sealed this

Tenth Day of May, 2005


JON W. DUDAS
Director of the United States Patent and Trademark Office

