KSR Training Examples

TC 3600
Business Methods

Rationale A- pages 2-5
Rationale B- pages 6-8
Rationale C- pages 9-12
Rationale D- pages 13-17
Rationale E- pages 18-20
Rationale F- pages 21-23
Rationale G- pages 24-27

Link to KSR Supreme Court decision and KSR Federal Guidelines and Case Law of Interest- page 28

Rationale A

Combining Prior Art Elements According To Known Methods to Yield Predictable Results

To reject a claim based on this rationale, Office personnel must resolve the ***Graham*** factual inquiries. Office personnel must then articulate the following:

(1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference;

(2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods and that in combination, each element merely would have performed the same function as it did separately;

(3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable; and

(4) whatever additional findings based on the ***Graham*** factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention. ‘‘[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.’’ If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

a. The Invention

The disclosed invention is an online remote banking system which allows bank customers to make use of the Internet to perform various banking functions. Among the banking functions that can be performed are the transfer of funds from one account to accessing customer account information, and the purchase of various investment vehicles, such as mutual funds and securities, offered by the bank.

Claim 1:

A remote banking system on the Internet comprising:

means for connecting a plurality of customer computers located at remote sites to a central computer associated with a bank;

means for allowing customers to access and retrieve selected information associated with their individual accounts;

means for permitting a customer to transfer funds from one account to another account through the use of said customer's computer; and

means for purchasing mutual funds offered by said bank through the use of said customer computers.

b. Evidence

Jones discloses a software packages for use on the Internet. The package allows a user to perform various functions remotely including accessing their accounts for balance information and to transfer funds from one account to another.

Smith discloses a bank being used to broker the purchase of various investments including stocks, bonds, mutual funds, futures over the internet.

c. Resolving the *Graham* factual inquiries for this rationale

(1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference.

It can be seen that each element claimed in taught in either Jones or Smith

(2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods and that in combination, each element merely would have performed the same function as it did separately;

Buying mutual funds over the internet (taught by Smith) does not change nor effect the normal functions of banking as taught by Jones. Accessing account information or transferring of funds from one account to another would be performed the same way even with the addition of buying mutual funds.

(3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable; and

Since the functionalities of the elements in Jones and Smith do not interfere with each other the results of the combination would be predictable.

(4) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness. The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time of the invention.43 ‘‘[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.’’ 44 If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

No additional findings are necessary since Jones and Smith show all the claimed elements as combined.

d. Statement of Rejection

Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Jones in view of Smith.

Jones discloses means for allowing customers to use their personal computers to communicate with a remotely located bank computer over the Internet to perform various functions including access to account information and transfer of funds from one account to another. However, Jones fails to disclose that banks would allow their customers to place mutual funds orders.

Smith discloses a bank being used to broker the purchase of various investments including stocks, bonds, mutual funds, futures over the internet.

It would have been obvious to one of ordinary still in the art to include in the banking system of Jones the ability to purchasing mutual funds over the internet as taught by Smith since the claimed invention is merely a combination of old elements, and in the

combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Rationale B

Simple Substitution of One Known Element for Another to Obtain Predictable Results

To reject a claim based on this rationale, Office personnel must resolve the ***Graham*** factual inquiries. Office personnel must then articulate the following:

(1) a finding that the prior art contained a device (method, product, etc,) which differed from the claimed device by the substitution of some components (step, elements, etc.) with other components:

(2) a finding that the substituted components and their functions were known in the art;

(3) a finding that one of ordinary skill in the art could have substituted one known element for another, and the results of the substitution would have been predictable; and

(4) whatever additional findings based on the ***Graham*** factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

a. **The Invention (*Ex parte* Catan, BPAI Precedential Opinion, Application 09/734,808).** http://www.uspto.gov/web/offices/dcom/bpai/prec/fd070820.pdf

The claimed invention is directed to the idea of authenticating an authorized user of a credit card (with a sub-credit limit) over the internet by means of bioauthentication. In other words, the ideas of using a finger print, voiceprint, or iris scan over the Internet rather than a PIN.

Claim 1:

A consumer electronics device, comprising
a memory which stores account information for an account holder and sub-credit limits and bioauthentication information for authorized users of the account;
a bioauthentication device which provides bioauthentication information to the memory;
a communication link; and
a processor, which compares received bioauthentication

information to stored bioauthentication information to detect a match, and finds associated sub-credit limit corresponding to the received bioauthentication information, to enable a purchase over the response network via the communication network up to a maximum of the sub-credit limit, the processor sending the account holder information over the communication link only if the match is detected and the sub-credit limit is not exceeded.

b. Evidence

The prior art (primary reference) consisted of references teaching the sub-credit aspect of the invention, combined with the use of manual identification, a PIN, for remote authentication.

The prior art (secondary references) also included the use of bioauthentication for remote authentication; the substitution of alternative user authentication techniques such as the substitution of a PIN authentication with bioauthentication to enable a user to access credit; and that the art of consumer electronics devices evidences a common usage of personal codes or personal identification numbers (PINs).

c. Resolving the *Graham* factual inquiries for this rationale

The question to resolve was whether it was obvious to substitute the use of bioauthentication for the manual identification of the primary reference- a PIN.

The answer was yes.

In this particular case, the claim is to a structure already known in the prior art that is altered by the mere substitution of one known element for another known element in the field of the same function.

d. Statement of Rejection

The claim is rejected under 35 USC 103 as obvious over the primary reference in view of the secondary reference.

The primary reference teaches a consumer electronics device, comprising a memory which stores account information for an account holder and sub-credit limits and the use of personal codes or personal identification numbers (PINs) to remotely identify or authorize users.

The sole difference between the primary reference and the claimed subject matter is that the primary reference does not disclose the authentication information being provided by

the bioauthentication device claimed. The primary reference authenticates by the use of a manual identification means (PIN) and the claim calls for bioauthentication identification.

The secondary references disclose bioauthentication information as the identification information. In one of the secondary references, the bioauthentication device provides the bioauthentication information as a fingerprint wherein the employed sensor is on the remote control.

The secondary references shows that the use of a bioauthentication device (fingerprint sensor) on a consumer electronic device (remote control) to provide bioauthentication information (fingerprint) was known in the prior art at the time of the invention.

Since each individual element and its function are shown in the prior art, albeit shown in separate references, the difference between the claimed subject matter and the prior art rests not on any individual element or function but in the very combination itself- that is in the substitution of the bioauthentication device of the secondary reference(s) for the manual identification means of the primary reference.

Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

Rationale C

Use of Known Techniques to Improve Similar Devices (Methods, or Products) in the Same Way

To reject a claim based on this rationale, Office personnel must resolve the ***Graham*** factual inquiries. Office personnel must then articulate the following:

(1) a finding that the prior art contained a "base" device (method, or product) upon which the claimed invention can be seen as an "improvement;"

(2) a finding that the prior art contained a "comparable" device (method, or product that are not the same as the base device) that was improved in the same way as the claimed invention;

(3) a finding that one of ordinary skill in the art could have applied the known "improvement" technique in the same way to the "base" device (method, or product) and the results would have been predictable to one of ordinary skill in the art; and

(4) whatever additional findings based on the ***Graham*** factual inquires may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that a method of enhancing a particular class of devices (methods, or products) was made part of the ordinary capabilities of one skilled in the art based upon the teaching of such improvement in other situations. One of ordinary skill in the art would have been capable of applying this known method of enhancement to a "base" device (method, or product) in the prior art and the results would have been predictable to one of ordinary skill in the art. The Supreme Court in *KSR* noted that if the actual application of the technique would have been beyond the skill of one of ordinary skill in the art, then using the technique would not have been obvious. If any of these finding cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

58. *KSR*, 550 U.S. at _, 82 USPQ2d at 1396

a. The Invention

The invention is drawn to a method of providing a bank customer with the ability to remotely transfer money among multiple accounts within the same banking institution on a computer network. While providing the customer with a convenient methodology to make transfers, the system and method provide a higher level of transaction security by requiring a biometric (specifically, fingerprint) input as well as a password and by

including an authorization form required as a prerequisite to initiating any transfer activities. The form is only provided to the customer once the right to access the various accounts is established through verification of identity information. The form provides both the customer and the banking institution with a validation record of the transfer activities.

Claim 1:

A method of securely transferring funds from one account to another account in a bank remotely by an account holder comprising the steps of:

scanning a finger of a user and accepting a password entered by the user;

reading stored finger image data and password from a smart card;

determining, by comparison of the scanned finger image data and entered password to the stored image data and stored password, if the user is the account holder who has authorization to transfer funds based on the match of information;

if the authorization is confirmed, transmitting an electronic form to the account holder; the form asking information about the transfer of funds from one account to another;

filling out the form and electronically sending it back to the bank by the account holder;

receiving the form at the bank's computer and automatically transferring the funds from one account to another account as specified in the form; and

if the authorization is not confirmed, recording the occurrence of an attempt to access the accounts as basis of preventing service to the user.

b. Evidence

Barnes teaches a method of transferring funds among multiple accounts held with the same banking institution. The method is performed remotely over a computer network and employs a validation form to record the transaction. The method includes the steps of retrieving from an account holder identification and password information; using that information to determine if the account holder has authorization to transfer funds; transmitting an electronic from to the account holder wherein the form requests transfer information; filling out the form; and electronically sending the form back to the bank. Upon receipt of the form at the bank's computer, the funds are automatically transferred from one account to another account as specified in the form. In the event an authorization fails, the identifying information is recorded and a count of an attempt to access the account is made. After a predetermined number of attempts have been made, the user can only cancel out of the login screen. Barnes is silent with respect to biometrics or the use of smart cards.

Wells shows accessing medical records with the use of a smart card which stores a template of a fingerprint of the owner of the smart card as well as a password of the card owner. Biometric information is asserted, in the background Wells, to more securely protect information from those who may view, guess, or otherwise obtain a person's name or password. Matching a fingerprint obtained using a scanner to the template stored in the smart card and matching the passwords is performed by a computer at a medical institution where the user is present, however, a remote online embodiment does exist in the case where a fingerprint scanner is installed or connected to the user's computer as well as the installation/connection of a smart card reader. In the remote embodiment, all information is encrypted before transmission to the medical institution server where the information is decrypted in order to perform authentication.

c. Resolving the *Graham* factual inquiries for this rationale

(1) A finding that the prior art contained a "base" device (method, or product) upon which the claimed invention can be seen as an "improvement;"

Barnes teaches the "base" method of performing the transfer of funds using some form of security and authentication process.

(2) a finding that the prior art contained a "comparable" device (method, or product that are not the same as the base device) that was improved in the same way as the claimed invention;

Wells teaches a "comparable" method with respect to protecting information where the smart card offers an improvement over information which potentially could be more easily compromised.

(3) a finding that one of ordinary skill in the art could have applied the known "improvement" technique in the same way to the "base" device (method, or product) and the results would have been predictable to one of ordinary skill in the art; and

Wells offers the embodiment of attaching a fingerprint scanner and smart card reader to a personal computer using the associated software to communicate with a trusted party. One of ordinary skill in the art would have recognized the adaptation of the scanner, reader, associated software of Wells to the base system (method) of Barnes for the predicted result of improved security of information.

(4) whatever additional findings based on the *Graham* factual inquires may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

Additional findings may be used to strengthen the basis of the rejection. For example, while encryption/decryption is not claimed, one of ordinary skill in the art would readily recognize the need for the encryption/decryption of financial information to prevent theft and/or fraud in the event of interception of the data transmission. Thus, Wells could also be used to support the concept of "securely transferring funds" as in the preamble and the inherent transmission performed by the claimed method.

d. Statement of rejection

Claim 1 is rejected under 35 U.S.C 103 as being unpatentable over Barnes in view of Wells.

Barnes teaches accepting a password entered by the user (col. , lines); determining if the user is the account holder who has authorization to transfer funds based on the match of information (col. , lines); if the authorization is confirmed, transmitting an electronic form to the account holder; the form asking information about the transfer of funds from one account to another (col. , lines); filling out the form and electronically sending it back to the bank by the account holder (col. ,lines); receiving the form at the bank's computer and automatically transferring the funds from one account to another account as specified in the form(col., lines); and if the authorization is not confirmed, recording the occurrence of an attempt to access the accounts as basis of preventing service to the user (col. , lines).

Barnes does not teach scanning a finger of a user, reading stored finger image data and password from a smart card, and comparison of the scanned finger image data and entered password to the stored image data and stored password.

Wells teaches an improved secure transmission of sensitive information for authentication purposes which includes scanning a finger of a user (col., lines) , reading stored finger image data and password from a smart card (col., lines), and comparison of the scanned finger image data and entered password to the stored image data and stored password (col., lines).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have scanned the user's finger, read image and password data from a smart card for comparison in authentication by including the scanner, reader and associated software for communication with a trusted party seeking authentication information as in the improvement discussed in Wells in the system executing the method of Barnes. As in Wells, it is within the capabilities of one of ordinary skill in the art to attach and install the scanner, reader, and associated software to Barnes' personal computer communicating with the authenticating server with the predicted result of securely transmitting identification and password information as needed in Barnes.

Rationale D

Applying a Known Technique to a Known Device (Method, or Product) Ready for Improvement to Yield Predictable Results

To reject a claim based on this rationale, Office personnel must resolve the **Graham** factual inquiries. Office personnel must then articulate the following:

(1) a finding that the prior art contained a ‘‘base’’ device (method, or product) upon which the claimed invention can be seen as an ‘‘improvement;’’

(2) a finding that the prior art contained a known technique that is applicable to the base device (method, or product);

(3) a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved system; and

(4) whatever additional findings based on the ***Graham*** factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. One of ordinary skill in the art would have been capable of applying this known technique to a known device (method, or product) that was ready for improvement and the results would have been predictable to one of ordinary skill in the art. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

a. The Invention

The invention is directed to a record-keeping system which is adapted for use with automatic banking devices for machine handling of checks or deposits for accounts of bank customers. Machine-readable data for each bank transaction is generated directly on the check or the deposit ticket. The transaction data includes the customer's account number, amount of the transaction, and the type of transaction, i.e. whether a check or a deposit, as is required for conventional bank processing presently carried out on checks or deposits. Another set of machine-readable data is provided for each transaction, namely, a code that identifies the bookkeeping classification of each transaction. This classification code is called the “category code” indicating different sources of income for which deposits are made, and different types of expenses for which checks are written. The category code is entered by the customer on each transaction slip at the time it is prepared, in the form of a machine-readable record or in the form of a set of hand-written numeric characters which are converted to a machine-readable record by the customer's bank.

In the customer's bank, upon a deposit being made or a check clearing the bank, the machine-readable transaction information on the checks or deposit tickets are read by

a suitable document-reader device and a transaction record is created. To process the transaction record, the record-keeping system employs a data processor, having data storage files and sub-files there under. Each sub-file is used to post all of the transaction records for each customer in accordance with the customer's own category codes. The codes are individually designed to the customer's needs. The data processor directs the generation of periodic output reports for the customer account which present the customer's transaction records in accordance with his own category codes and corresponding sub-files, and desired accounting procedures.

Claim 1. A record-keeping system for customer financial accounts in a bank, said system comprising:

a data processor including a memory for storing records;

said memory including a plurality of customer account record files, each said account record file having an associated account identifier and including a plurality of sub-files, each sub-file associated with one of a plurality of different record-keeping category codes for storing transaction records; each said transaction record having an assigned category code, an amount and an account identifier; and

said data processor further including means for posting the transaction records to the sub-files according to the account identifier and the assigned category code of the transaction record and means for producing an output report for each account record file, said report including a total for each category code determined from the amounts in said transaction records in the sub-file for each code.

b. Evidence

Reference A teaches the nature of current data processing equipment and computer programs in the banking industry. Automatic data processing equipment employing digital computers have been developed for the handling of much of the record-keeping operations involved in a banking system. The coded checks and deposit slips are automatically processed by creating machine-readable account transaction records. With such systems, most of the extensive data handling required in a bank can be performed automatically including posting those records to files associated with the appropriate account. It is through the use of such data processing equipment that periodic statements are ordinarily given to a bank customer on each of the transaction records in each of several accounts that he may have at a given bank. Also, it is disclosed separately that banks have long segregated debits attributable to different service charges within any given individual account and have provided their customers with subtotals for those charges.

Reference B discloses a data processing system using a digital computer for use in a large business organization. Under this system, transaction and balance records can be kept and updated for each department of the organization. The system allows a breakdown within each department’s file into various identified areas for, e.g., different types of expenses.

Moreover, the system is sufficiently flexible to provide additional breakdowns into identified “sub-areas” within the areas and can record and store specially designated information regarding each of any department's transactions. Thus, for instance, under this system the disbursing office of a corporation can continually be kept apprised of the precise level and nature of the corporation's disbursements within various areas and sub-areas.

c. Resolving the *Graham* factual inquiries for this rationale

(1) a finding that the prior art contained a ‘‘base’’ device (method, or product) upon which the claimed invention can be seen as an ‘‘improvement’’;

As can be seen from Reference A, the nature of current check processing systems in the banking industry show a “base device” that handles a plurality of individual accounts automatically including posting transactions and generating reports by account number via coded indicia on the check. The claimed invention can be seen as an “improvement” via added category codes to track different types of expenditures within one account.

(2) a finding that the prior art contained a known technique that is applicable to the base device (method, or product);

As can be seen from Reference B, the prior art contains the known technique of breaking down and reporting transactions and balances for departments into areas of different types of expenses and allows additional breakdown into sub-areas within the area that is applicable to the base device since they are both directed to record keeping and reporting of transactions.

(3) a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved system; and

The known technique of associating transactions and balances with identified areas and sub-areas which then enable reporting via area and sub-area is analogous. Note that applicant’s “category code” scheme is closely analogous to a bank offering its customers multiple accounts from which to choose for making a deposit or writing a check. The addition of a category number, indicating the nature of the transaction, to a bank customer's regular account number, creates in effect a series of different and distinct account numbers.

Further, although Reference B is not literally equivalent to respondent's system, the departments of the business organization and the areas and sub-areas under the Reference B system are closely analogous to the bank customers and category number designations respectively under applicant’s system. And each shares a similar capacity to provide breakdowns within its areas, sub-areas or category numbers. While the Reference B invention is not designed specifically for application to the banking industry many of its characteristics and capabilities are similar to those of applicant’s system.

Given the relatively high level of skill in the art demonstrated by the references, the application of the known technique would have yielded no more than the predictable outcome which one of ordinary skill would have expected to achieve, i.e. the ability to report transactions according to type.

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

No additional findings are seen to be necessary.

d. Statement of rejection

Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Reference A in view of Reference B.

Reference A teaches a record-keeping system for customer financial accounts in a bank, said system comprising a data processor including a memory for storing records; said memory including a plurality of customer account record files, each said account record file having an associated account identifier for storing transaction records; each said transaction record having an assigned category code, an amount and an account identifier; and said data processor further including means for posting the transaction records and means for producing an output report for each account record file.

Reference A fails to teach a plurality of sub-files, each sub-file associated with one of a plurality of different record-keeping category codes, posting the transaction records to the sub-files according to the account identifier and the assigned category code of the transaction record and said report including a total for each category code determined from the amounts in said transaction records in the sub-file for each code.

However, Reference B teaches a known technique of including a plurality of sub-files (areas and sub-areas), each sub-file associated with one of a plurality of different record-keeping category codes (different types of expenses), posting the transaction records to the sub-files according to the account identifier and the assigned category code of the transaction record and said report including a total for each category code determined from the amounts in said transaction records in the sub-file for each code. This known technique is applicable to the system of Reference A as they both share characteristics and capabilities, namely, they are directed to record keeping and reporting transactions.

One of ordinary skill in the art would have recognized that applying the known technique of Reference B would have yielded predictable results and resulted in an improved system. It would have been recognized that applying the technique of Reference B to the teachings of reference A would have yielded predictable results because the level of ordinary skill in the art demonstrated by the references applied shows the ability to incorporate such data processing features into similar systems. Further, applying sub-files and category codes to Reference A with transaction records stored accordingly, would have been recognized by those of ordinary skill in the art as resulting in an improved system that would allow more detailed reports according to specific category codes.

Rationale E

Obvious To Try—Choosing From a Finite Number of Identified, Predictable Solutions, With a Reasonable Expectation of Success

To reject a claim based on this rationale, Office personnel must resolve the *Graham* factual inquiries. Office personnel must then articulate the following:

(1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem;

(2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;

(3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success; and

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that ‘‘a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.’’ [69] If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

The claimed invention

The invention is drawn to an online bookstore. The bookstore has a catalog of different books that are made available through a series of web pages. Customers having Internet access are able to browse through the collection of books, choose those that they would like to buy and make an online purchase using a credit card. The bookstore would then accept the order, process the credit card information and send the books to the customer by mail. This online bookstore has the added feature of e-mailing the customer sometime after the purchase with a customer service survey to enable the customer to comment on the condition of the books as delivered, the ease of use of the web pages and any other comments the customer would like to add.

Claim 1:

A method of providing and ordering books through the Internet comprising:

providing a selection of books for sale on a web page by displaying an image of the front cover of the book along with a written description;

providing a selection box adjacent to each book for sale to allow a buyer to select a book or books to be purchased;

adding the selection or selections to an online shopping cart provided for the customer's selections;

providing the customer with a form to be filled out with the customer's credit card information to enable the sale transaction to be carried out on the Internet; and

e-mailing the customer, a predetermined time after the purchase, a customer service survey to be filled out by the customer as a way of obtaining customer feedback.

b. Evidence

A reference to Smith has been cited which teaches an online bookstore that uses the Internet in much the same way as that in the application. Smith mentions surveys but does not give any details.

An article by John discuss the continual need to survey costumers and mentions different type of surveying systems including. E-mail, regular mail, web pages, comment cards and follow-up telephone calls. The article goes on to discuss each type of survey with benefits and costs associated with each.

c. Resolving the *Graham* factual inquiries for this rational.

(1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem.

Note the article by John discuses the need for surveys.

(2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;

There are a finite number of ways to conduct surveys. Since the article discuss the benefits and costs of several different types, each one would has a predictable potential solution.

(3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success;

Since each survey has a benefit and cost associated with each type, there would be a reasonable expectation of success using the e-mail approach.

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

> *No additional finds are necessary since the facts come from the references them selves.*

d. Good statement of the rejection

Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Smith in view of John.

Smith teaches all of the claimed process steps with the exception of e-mailing a customer service survey to a customer some time after the purchase of a book.

John teaches the continual need to survey costumers and mentions different types of surveying systems. The article goes on to discuss each type of survey with benefits and costs associated with each.

Since Customer service is a key factor in the success of any business, whether it be brick and mortar or online, the most common vehicle for businesses to measure customer service is by asking the customers directly what they believed was good or bad about their experience with the business. As discussed by John, Businesses have resorted to many different techniques of obtaining customer comments including. E-mail, regular mail, web pages, comment cards and follow-up telephone calls. This practice is well known in the business community and would follow in the Internet world as well where competition is sometimes worldwide and customers have a greater influence on the success of a business.

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to pick the e-mail type survey system and incorporate it into the system of Smith since there are a finite number of identified, predictable potential solutions (i.e. types of survey systems) to the recognized need (customer service) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (the cost and benefits are known)

Rationale F

Known Work In One Field Of Endeavor May Prompt Variations Of It for Use In Either The Same Field or A Different One Based On Design Incentives Or Other Market Forces If The Variations Would Have Been Predictable To One Of Ordinary Skill In The Art

To reject a claim based on this rationale, Office personnel must resolve the ***Graham*** factual inquiries. Office personnel must then articulate the following:

(1) a finding that the scope and content of the prior art, whether in the same field of the endeavor as that of the applicants invention or a different field of endeavor, included a similar or analogous device (method, or product);

(2) a finding that there were design incentives or market forces which would have prompted adaptation of the known device (method or product);

(3) a finding that the differences between the claimed invention and the prior art were encompassed in known variations or in a principle known in the prior art;

(4) a finding that one of ordinary skill in the art, in view of the design incentives or other market forces, could have implemented the claim variation of the prior art, and the claimed variation would have been predictable to one of ordinary skill in the art; and

(5) whatever additional findings based on the ***Graham*** factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

a. **The Invention -Leapfrog Enterprises, Inc. v. Fisher-Price, 485 F.3d 1157, 82 USPQ2d 1687 (Fed. Cir. 2007)**

http://iplaw.bna.com/iplw/5000/split_display.adp?fedfid=5168694&vname=ippqcases2&wsn=109&searchid=2974925&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0

Leapfrog was an infringement case involving a patent on a learning device which helped children learn to read phonetically.

Claim:

An interactive learning device comprising:

a housing including a plurality of switches;

a sound production device in communication with the switches and including a processor and memory;

at least one depiction with a sequence of letters, each letter being associated with a switch; and

a reader configured to communicate the identity of the depiction to the processor,

wherein the selection of a depicted letter activates an associated switch to communicate with the processor, causing the sound production device to generate a signal corresponding to a sound associated with the selected letter, the sound being determined by a position of the letter in the sequence of letters.

The key limitation being:

"wherein the selection of a depicted letter activates an associated switch to communicate with the processor, causing the sound production device to generate a signal corresponding to a sound associated with the selected letter, the sound being determined by a position of the letter in the sequence of letters" (pressing on the letter makes the sound of the letter).

b. Evidence

The primary reference included an electro-mechanical device (not electronic) that made sounds of letters printed on puzzle pieces when puzzle pieces were pressed, thereby sounding out words.

The secondary reference was an electronic device that pronounced the first letter of a word.

c. Resolving the *Graham* factual inquiries for this rationale

The question to resolve was whether it was obvious to update the prior art mechanical device that made sounds of letters printed on puzzle pieces when puzzle pieces were pressed by applying modern electronics to achieve the same result.

The answer was yes.

d. Statement of Rejection

The claim is rejected under 35 USC 103 as obvious over the primary reference in view of the secondary reference.

One of ordinary skill in the art of children's learning toys would found it obvious to update the electro mechanical device of the primary reference using modern electronic components, as found in the secondary reference, in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost.
All this would be accomplished with no unpredictable results.

Accommodating the prior art mechanical device of the primary reference to modern electronics would have been obvious. As stated in ***Leapfrog,*** "applying modern electronics to older mechanical devices has been commonplace in recent years."

http://iplaw.bna.com/iplw/5000/split_display.adp?fedfid=5168694&vname=ippqcases2&wsn=109&searchid=2974925&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0

This rejection encompasses:

- updating old prior at devices
- a showing of advantages
- use of common sense
- a conclusion of no unpredictable results

Rationale G

Some Teaching, Suggestion, or Motivation in the Prior Art That Would Have Led One of Ordinary Skill to Modify the Prior Art Reference or to Combine Prior Art Reference Teachings to Arrive at the Claimed Invention

To reject a claim based on this rationale, Office personnel must resolve the ***Graham*** factual inquires. Office personnel must then articulate the following:

(1) a finding that there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;

(2) a finding that there was reasonable expectation of success; and

(3) whatever additional findings based on the ***Graham*** factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The rationale to support a conclusion that the claim would have been obvious is that "a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success." 80 If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.

80. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co*., 464 F.3d 1356, 1360, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006) http://iplaw.bna.com/iplw/display/split_display.adp?fedfid=3836288&vname=ippqcases2&wsn=187&searchid=3192867&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0

a. The Invention – (same as invention used to illustrate rationale C)

The invention is drawn to a method of providing a bank customer with the ability to remotely transfer money among multiple accounts within the same banking institution on a computer network. While providing the customer with a convenient methodology to make transfers, the system and method provide a higher level of transaction security requiring a biometric (specifically, fingerprint) input as well as a password and by including an authorization form required as a prerequisite to initiating any transfer activities. The form is only provided to the customer once the right to access the various accounts is established through verification of identity information. The form

provides both the customer and the banking institution with a validation record of the transfer activities.

Claim 1:

A method of securely transferring funds from one account to another account in a bank remotely by an account holder comprising the steps of:

scanning a finger of a user and accepting a password entered by the user;

reading stored finger image data and password from a smart card;

determining, by comparison of the scanned finger image data and entered password to the stored image data and stored password, if the user is the account holder who has authorization to transfer funds based on the match of information;

if the authorization is confirmed, transmitting an electronic form to the account holder; the form asking information about the transfer of funds from one account to another;

filling out the form and electronically sending it back to the bank by the account holder;

receiving the form at the bank's computer and automatically transferring the funds from one account to another account as specified in the form; and

if the authorization is not confirmed, recording the occurrence of an attempt to access the accounts as basis of preventing service to the user.

b. Evidence

Barnes teaches a method of transferring funds among multiple accounts held with the same banking institution. The method is performed remotely over a computer network and employs a validation form to record the transaction. The method includes the steps of retrieving from an account holder identification and password information and uses that information to determine if the account holder has authorization to transfer funds; transmitting an electronic from to the account holder wherein the form requests transfer information' filling out the form; and electronically sending it back to the bank. Upon receipt of the form at the bank's computer, the funds are automatically transferred from one account to another account as specified in the form. In the event an authorization fails, the identifying information is recorded and a count of an attempt to access the account is made. After a predetermined number of attempts have been made, the user can only cancel out of the login screen. Barnes is silent with respect to biometrics or the use of smart cards.

Wells shows accessing medical records with the use of a smart card which stores a template of a fingerprint of the owner of the smart card as well as a password of the card owner. Biometric information is asserted, in the background of the invention of Wells, to more securely protect information from those who may view, guess, or otherwise obtain a person's name or password. Matching a fingerprint obtained using a scanner to the template stored in the smart card and matching the passwords is performed by a computer at a medical institution where the user is present, however, a remote online embodiment does exist in the case where a fingerprint scanner is installed or connected to the user's computer as well as the installation/connection of a smart card reader. In the remote embodiment, all information is encrypted before transmission to the medical institution server where the information is decrypted in order to perform authentication.

c. Resolving the *Graham* factual inquiries for this rationale

(1) a finding that there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;

Wells teaches a more secure protection of information over the password and identification of Barnes.

(2) a finding that there was reasonable expectation of success; and

Wells is adaptable to the system described in Barnes without a significant change in authentication processing in Barnes – still comparing identification and password information.

(3) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

d. Statement of rejection

Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Barnes in view of Wells.

Barnes teaches accepting a password entered by the user (col. , lines); determining if the user is the account holder who has authorization to transfer funds based on the match of information (col. , lines); if the authorization is confirmed, transmitting an electronic form to the account holder; the form asking information about the transfer of funds from

one account to another (col. , lines); filling out the form and electronically sending it back to the bank by the account holder (col. ,lines); receiving the form at the bank's computer and automatically transferring the funds from one account to another account as specified in the form(col., lines); and if the authorization is not confirmed, recording the occurrence of an attempt to access the accounts as basis of preventing service to the user (col. , lines).

Barnes does not teach scanning a finger of a user, reading stored finger image data and password from a smart card, and comparison of the scanned finger image data and entered password to the stored image data and stored password.

Wells teaches secure transmission of sensitive information for authentication purposes which includes scanning a finger of a user (col., lines), reading stored finger image data and password from a smart card (col., lines), and comparison of the scanned finger image data and entered password to the stored image data and stored password (col., lines).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have scanned the user's finger, read image and password data from a smart card for comparison in authentication by including the scanner, reader and associated software for communication with a trusted party seeking authentication information as in Wells in the system executing the method of Barnes with the motivation of offering a more secure handling of sensitive information as taught by Wells over that of Barnes.

Case Law of Interest

Link to Supreme Court Decision in KSR:
http://iplaw.bna.com/iplw/display/split_display.adp?fedfid=4736163&vname=ippqcases2&wsn=1&searchid=3193018&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0

Link to KSR Federal Guidelines:
http://www.uspto.gov/web/offices/com/sol/notices/72fr57526.pdf

In addition to the case law cited in the Federal Guidelines for KSR, the following case law published after KSR may be of interest.

In re Trans Holding Corp.:
http://iplaw.bna.com/iplw/display/split_display.adp?fedfid=6291583&vname=ippqcases2&wsn=82&searchid=3175974&doctypeid=1&type=court&mode=doc&split=0&scm=5000&pg=0
Case depended largely on a claim construction argument. The CAFC upheld the Board under the "broadest reasonable interpretation rule" consistent with the specification.

Also provided is a link to precedential and informative decisions from the Board of Appeals.
http://www.uspto.gov/web/offices/dcom/bpai/index.html

This link provides three post KSR decisions on obviousness - ***Catan, Kubin,*** **and** ***Smith.***