Covered Business Method Review
CBM2012-00001

US Patent No. 6,553,350
Method and Apparatus for Pricing Products in Multi-Level Product and Organizational Groups

Oral Hearing: April 17, 2013, 2 p.m.

Patent owner did not invent:

Pricing based on customer and product data
SX1001, Figs. 1-2.

FIG. 1
PRIOR ART

WHAT / WHO	486/33 CPU	486/50 CPU	486/66 CPU
ADAM	$40		
BOB	$42		
CHARLIE	$44		

FIG. 2
PRIOR ART

WHAT / WHO	486/33 CPU	486/50 CPU	486/66 CPU
ADAM	10%	12%	14%
BOB	8%	16%	22%
CHARLIE	15%	5%	2%

Computerized pricing systems
SX1001, 2:56-63.

> A pricing application called R3 made by SAP has the prior art disadvantages explained above. For example, R3 requires a number of price adjustment tables and a number of database queries to retrieve applicable price adjustments. Likewise, an order entry application made by Oracle has a similar shortcoming in that a number of database queries are required to retrieve various price adjustments from a large number of price adjustment tables.

> As Versata has explained in its brief to the Federal Circuit, the use of hierarchal data structures to organize pricing information was already used by large companies and Versata's invention represented these "ubiquitous customer and product hierarchies within the pricing tables themselves." SX 1011, 5.

Hierarchical organization of customers and products
ID at 30.

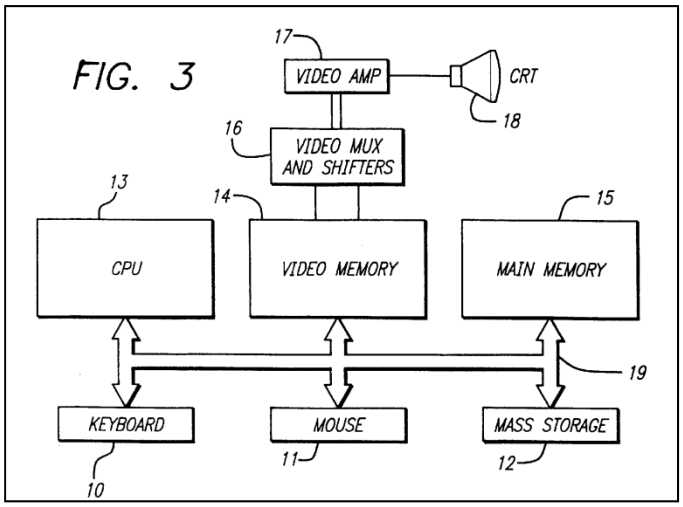
Patent describes no advance in computing

The present invention may be implemented on any conventional or general purpose computer system. An example of one embodiment of a computer system for implementing this invention is illustrated in FIG. **3**.

SX1001, 5:8-11.

(it is noted that although the invention is discussed in terms of a "database," the invention can be implemented using any data source that may be different from a conventional database).

SX1001, 10:58-61.



The computer system described above is for purposes of example only. The present invention may be implemented in any type of computer system or programming or processing environment.

SX1001, 5:55-58.

Patent owner explains: no data structures required

2012-1029, -1049

IN THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

VERSATA SOFTWARE, INC.
VERSATA DEVELOPME
Trilogy Development Gro
INDUSTRY SOLUTIONS, I
Indus

SAP AMERI

Appeals from the United States District Court for the Eastern District of Texas in case no. 07-CV-0153, Magistrate Judge Charles Everingham.

BRIEF OF PLAINTIFFS-CROSS APPELLANTS VERSATA SOFTWARE, INC., VERSATA DEVELO
COMPUTER IN

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May 29, 2012

SAP Exhibit 1011

determining the product price ….” A457 (emphases added). Again, the claim does not require any extant data structures—it simply requires computer instructions *to implement* the relevant *arranging*, *retrieving*, and *determining* operations. A457.

SX1011 at 24.

SAP suggests that “Versata’s patents are directed to a very *specific* way to determine [a] price,” SAP.Br.3,7, but in fact they cover the “capability to execute a pricing procedure using hierarchical accesses to hierarchical arrangements of customer … and product … data.” A5; A456-57; A540; A8430.

SX1011 at 11.

Claims 17, 26-29 do not recite:

- **Database**
- **Database tables**
- **Database queries**
- **Run time**
- **Execution flow**
- **Computer screens**
- **A number of database tables**
- **A number of database queries**

E.g., POR at 21, 27-31.

Patent owner explains: at "runtime" software does not change numbers

2012-1029, -1049

IN THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

VERSATA SOFTWARE, INC. (formerly known as Trilogy Software, In
VERSATA DEVELOPMENT GROUP, INC. (formerly known as
Trilogy Development Group, Inc.), and VERSATA COMPUTER
INDUSTRY SOLUTIONS, INC. (formerly known as Trilogy Compute
Industry Solutions, Inc.),

Plaintiffs-Cross Appellants,

v.

SAP AMERICA, INC. and SAP AG,

Defendants-Appellants.

Appeals from the United States District Court for the Eastern District of Te
case no. 07-CV-0153, Magistrate Judge Charles Everingham.

In short, "determined at runtime" does not and cannot mean, as SAP suggests, that the software changes the units or meaning of the number at runtime without reference to prior selections made by the pricing administrator. SAP.Br.44. The invention discloses a pricing system, not a Magic 8 Ball. "Determined at runtime" means that, at runtime, the computer determines the units connected with the number, and the number's application, by retrieving and interpreting the information previously associated with that number by the pricing administrator.

SX1011 at 37.

As Nettles testified, the numbers in SAP's pricing engine do not have fixed units or calculation types. Instead that data is independently entered by the pricing administrator in such a way that the engine can only determine the units connected with a particular number, and the number's meaning, when—at runtime—it retrieves and interprets the information previously associated with that number by the administrator. A1413-30; A519-23; A1258; A1429; Red Br. 13, 34-37. This

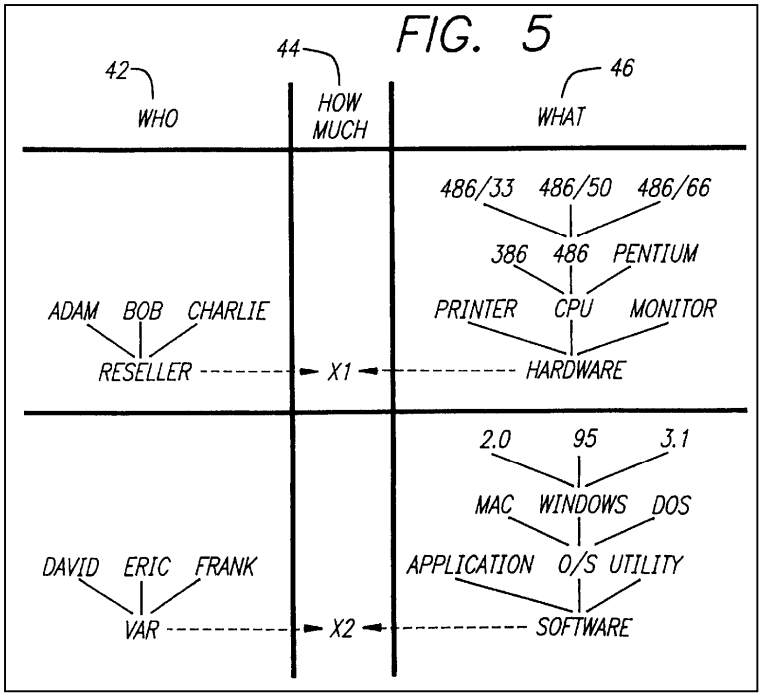
SX1034 at 17-18.

Patent describes "entirely arbitrary" hierarchies

The invention operates under the paradigm of WHO (the purchasing organization) is buying WHAT (the product). In the invention the WHO is defined by creating an organizational hierarchy of organizational groups, where each group represents a characteristic of the organizational group. One or more customers (i.e. purchasing organizations) may be members of each organizational group and each customer may be a member of more than one organizational group.

Similarly, a product group hierarchy is defined that can be applied to products. For example, a "hardware" product group may be defined that may include as members a number of products.

SX1001, 3:25-32; 3:42-45.



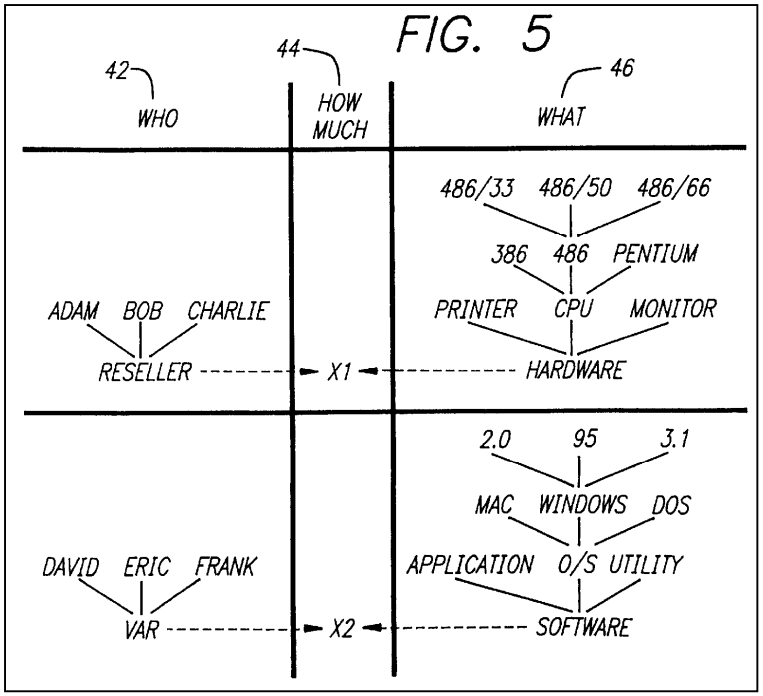
As with organizational groups, the particular grouping of various products is entirely arbitrary and determined by the user of the invention's pricing system.

SX1001, 7:64-67.

Patent describes business method of product pricing

The price adjustments for a particular purchasing organization are determined by retrieving the price adjustments for that particular purchasing organization as well as the price adjustments for other organizational groups that are above the particular purchasing organization in the organizational groups hierarchy. Likewise, the price adjustments for a particular product are determined by retrieving the price adjustments for that particular product as well as the price adjustments for other product groups that are above the particular product in the product groups hierarchy. The invention sorts the various pricing adjustments applicable to a particular product offered to a particular purchasing organization based on several criteria. After the sorting is accomplished the pricing adjustments are applied in sequence to arrive at a final price at which a particular product can be sold to a particular purchasing organization.

SX1001, 3:50-65.



Abstract ideas in claims 17, 26

17. A method for determining a price of a product offered to a purchasing organization comprising:

arranging a hierarchy of organizational groups comprising a plurality of branches such that an organizational group below a higher organizational group in each of the branches is a subset of the higher organizational group;

arranging a hierarchy of product groups comprising a plurality of branches such that a product group below a higher product group in each of the branches in a subset of the higher product group;

storing pricing information in a data source, wherein the pricing information is associated, with (i) a pricing type, (ii) the organizational groups, and (iii) the product groups;

retrieving applicable pricing information corresponding to the product, the purchasing organization, each product group above the product group in each branch of the hierarchy of product groups in which the product is a member, and each organizational group above the purchasing organization in each branch of the hierarchy of organizational groups in which the purchasing organization is a member;

sorting the pricing information according to the pricing types, the product, the purchasing organization, the hierarchy of product groups, and the hierarchy of organizational groups;

eliminating any of the pricing information that is less restrictive; and determining the product price using the sorted pricing information.

Customer and product hierarchies

Calculating product price

26. A computer readable storage media comprising: computer instructions to implement the method of claim 17.

SX1001, 20:66-21:28; 21:61-62.

Abstract ideas in claims 27-29

27. A computer implemented method for determining a price of a product offered to a purchasing organization comprising:

retrieving from a data source pricing information that is (i) applicable to the purchasing organization and (ii) from one or more identified organizational groups, within a hierarchy of organizational groups, of which the purchasing organization is a member;

retrieving from the data source pricing information that is (i) applicable to the product and (ii) from one or more identified product groups, within a hierarchy of product groups, of which the product is a member; and

receiving the price of the product determined using pricing information applicable to the one or more identified organizational groups and the one or more identified product groups according to the hierarchy of product groups and the hierarchy of organizational groups.

28. A computer readable storage media comprising: computer instructions to implement the method of claim 27.

Customer and product hierarchies

Calculated product price

29. An apparatus for determining a price of a product offered to a purchasing organization comprising:

a processor;

a memory coupled to the processor, wherein the memory includes

computer program instructions capable of:

retrieving from a data source pricing information that is (i) applicable to the purchasing organization and (ii) from one or more identified organizational groups, within a hierarchy of organizational groups, of which the purchasing organization is a member;

retrieving from the data source pricing information that is (i) applicable to the product and (ii) from one or more identified product groups, within a hierarchy of product groups, of which the product is a member; and

receiving the price of the product determined using pricing information applicable to the one or more identified organizational groups and the one or more identified product groups according to the hierarchy of product groups and the hierarchy of organizational groups.

SX1001, 21:63-22:34.

Supreme Court 101 Framework

- Patent may be obtained for a new and useful process, machine, manufacture, or composition of matter. 35 USC § 101.
- Excluded from patent protection are "laws of nature, natural phenomena, and abstract ideas." *Mayo*, 132 S. Ct. at 1293; *Diehr*, 450 US at 185.

Supreme Court 101 Framework

- When an abstract idea is involved, ask: "What else is there in the claims before us?" *Mayo*, 132 S. Ct. at 1297.
  - "[M]ust do more than simply state the [abstract idea] while adding the words 'apply it.'" *Mayo*, 132 S. Ct. at 1294; *Benson*, 409 US at 71-72.
  - Claims must "also contain other elements or a combination of elements . . . sufficient to ensure that the patent in practice amounts to significantly more" than the abstract idea itself. *Mayo*, 132 S. Ct. at 1294; *Flook*, 437 US at 594.
  - Improper to "depend simply on the draftsman's art." *Mayo*, 132 S. Ct. at 1294; *Flook*, 437 US at 593.
  - Limiting claims to field of use or adding token post-solution activity does not make an abstract concept patentable. *Bilski*, 130 S. Ct. at 3231; *Diehr*, 450 US at 191-92.

Supreme Court: Unpatentable Abstract Idea

Claim 8 reads:

'The method of converting signals from binary coded decimal form into binary which comprises the steps of

'(1) storing the binary coded decimal signals in a reentrant shift register,

'(2) shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register,

'(3) masking out said binary '1' in said second position of said register,

'(4) adding a binary '1' to the first position of said register,

'(5) shifting the signals to the left by two positions,

*74 '(6) adding a '1' to said first position, and

'(7) shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register.'

409 US at 73-74.

Gottschalk v. Benson

- Abstract idea: converting BCD numbers to binary. 409 US at 71.
- 7-step process could be "done mentally" using a table printed in the patent. *Id.* at 66, 73-74.
- Process with "no substantial practical application except in connection with a digital computer" was still unpatentable abstract idea. *Id.* at 71-72.
- The prohibition on patenting abstract ideas applies equally to "product" and "process" claims. *Id.* at 67-68.

Supreme Court: Unpatentable Abstract Idea

"1. A method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons wherein said alarm limit has a current value of

$Bo + K$

"wherein Bo is the current alarm base and K is a predetermined alarm offset which comprises:

***597** "(1) Determining the present value of said process variable, said present value being defined as PVL;

"(2) Determining a new alarm base B_1, using the following equation:

$B_1 = Bo(1.0—F) + PVL(F)$

"where F is a predetermined number greater than zero and less than 1.0;

"(3) Determining an updated alarm limit which is defined as $B_1 + K$; and thereafter

"(4) Adjusting said alarm limit to said updated alarm limit value." App. 63A.

437 US at 596-97.

Parker v. Flook

- Abstract idea: method for calculating alarm limit values. 437 US at 594-95.
- Unpatentable even though "abstract of disclosure makes it clear that the formula is primarily useful for computerized calculations . . . ." *Id.* at 586.
- Process can be performed "by pencil and paper." *Id.*
- Even if claim does not "wholly preempt" an abstract idea, "post-solution activity" cannot transform an unpatentable principle into a patentable process. *Id.* at 589-90.

Supreme Court: Unpatentable Abstract Idea

changes. The key claims are claims 1 and 4. Claim 1 describes a series of steps instructing how to hedge risk. Claim 4 puts the concept articulated in claim 1 into a simple mathematical formula. Claim 1 consists of the following steps:

> "(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity*3224 at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumers;
>
> "(b) identifying market participants for said commodity having a counter-risk position to said consumers; and
>
> "(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions." App. 19–20.

130 S. Ct. at 3223-24.

Bilski v. Kappos

- Abstract idea: basic concept of hedging. 130 S. Ct. at 3231.
- While the Patent Act "appears to leave open the possibility of some business method patents, it does not suggest broad patentability of such claimed inventions." *Id.* at 3229.
- Limiting claims to field of use or adding token postsolution activity does not make an abstract concept patentable. *Id.* at 3231.

Supreme Court: Unpatentable Law of Nature

"A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:

"(a) administering a drug providing 6–thioguanine to a subject having said immune-mediated gastrointestinal disorder; and

"(b) determining the level of 6–thioguanine in said subject having said immune-mediated gastrointestinal disorder,

"wherein the level of 6–thioguanine less than about 230 pmol per $8x10^8$ red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and

"wherein the level of 6–thioguanine greater than about 400 pmol per $8x10^8$ red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject." '623 patent, col.20, ll.10–20, 2 App. 16.

132 S. Ct. at 1295.

Mayo v. Prometheus

- Law of nature: relationships between concentrations of metabolites and likelihood of ineffectiveness or harm. 132 S. Ct. at 1296-98.
- Claims add only "well-understood, routine, conventional activity" insufficient to transform unpatentable law of nature into patentable application. *Id.* at 1298.
- Claim not patentable unless "process has additional features that provide practical assurance that the process is more than a drafting effort" to claim fundamental principle. *Id.* at 1297.

Supreme Court: Patentable Industrial Process

"1. A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising:

"providing said computer with a data base for said press including at least,

"natural logarithm conversion data (ln),

"the activation energy constant (C) unique to each batch of said compound being molded, and

"a constant (x) dependent upon the geometry of the particular mold of the press,

"initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure,

"constantly determining the temperature (Z) of the mold at a location closely adjacent to the mold cavity in the press during molding,

"constantly providing the computer with the temperature (Z),

"repetitively calculating in the computer, at frequent intervals during each cure, the Arrhenius equation for reaction time during the cure, which is

"$\ln v = CZ + x$

"where *v* is the total required cure time,

"repetitively comparing in the computer at said frequent intervals during the cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and

"opening the press automatically when a said comparison indicates equivalence.

450 US at 180-81.

Diamond v. Diehr

- Abstract idea: Arrhenius equation. 450 US at 177-78.
- Excluded from patent protection are "laws of nature, natural phenomena, and abstract ideas." *Id.* at 185.
- To analyze patentability under § 101, "claims must be considered as a whole" and not dissected "into old and new elements." *Id.* at 188.
- Claims are not "an attempt to patent a mathematical formula" but rather drawn to "an industrial process for the molding of rubber products." *Id.* at 192-93.

Fed Cir: Unpatentable Abstract Idea

9. A method for managing a life insurance policy comprising:

generating a life insurance policy including a stable value protected investment with an initial value based on a value of underlying securities of the stable value protected investment;

calculating fees for members of a management group which manage the life insurance policy;

calculating credits for the stable value protected investment of the life insurance policy;

determining an investment value and a value of the underlying securities of the stable value protected investment for the current day;

calculating a policy value and a policy unit value for the current day;

storing the policy unit value for the current day; and

removing a value of the fees for members of the management group which manage the life insurance policy.

687 F.3d at 1271-72.

Bancorp Servs. v. Sun Life

- Abstract idea: managing a stable value protected life insurance policy and using well-known calculations to establish inputs into the equation. 687 F.3d at 1278.
- No technological advance is claimed because "the computer simply performs more efficiently what could otherwise be accomplished manually." *Id.* at 1279.
- The equivalence of system and method claims is "readily apparent" because "[t]he only difference between the claims is the form in which they were drafted." *Id.* at 1277.

Each independent method claim is further limited in a dependent claim requiring that the method be "performed by a computer." *Id.* claims 17, 37, 60. Independent claims 18 and 63 are directed to a "computer readable medi[um] for controlling a computer to perform the steps" set out in the method claims. Claim 18 for example, recites the same seven steps set forth in method claim 9, above.

Fed Cir: Unpatentable Abstract Idea

Claim 3, as amended during reexamination, reads:

3. A method for verifying the validity of a credit card transaction over the Internet comprising the steps of:

a) obtaining information about other transactions that have utilized an Internet address that is identified with the [ ] credit card transaction;

b) constructing a map of credit card numbers based upon the other transactions and;

c) utilizing the map of credit card numbers to determine if the credit card transaction is valid.

654 F.3d at 1368.

CyberSource v. Retail Decisions

- Abstract idea: detecting credit card fraud using information relating credit card transactions to Internet addresses. 654 F.3d at 1368.
- Even if some steps "are required to obtain information from the database" such "data-gathering steps cannot alone confer patentability." *Id.* at 1372.
- "Merely claiming a software implementation of a purely mental process that could otherwise be performed without the use of a computer" does not satisfy 101. *Id.* at 1375.

While claim 2 contains somewhat redundant language, it is clear from the emphasized text that claim 2 recites nothing more than a computer readable medium containing program instructions for executing the method of claim 3.

654 F.3d at 1374.

Fed Cir: Unpatentable Abstract Idea

1. A computer aided method of managing a credit application, the method comprising the steps of:

[A] receiving credit application data from a remote application entry and display device;

[B] selectively forwarding the credit application data to remote funding source terminal devices;

[C] forwarding funding decision data from at least one of the remote funding source terminal devices to the remote application entry and display device;

[D] wherein the selectively forwarding the credit application data step further comprises:

[D1] sending at least a portion of a credit application to more than one of said remote funding sources substantially at the same time;

[D2] sending at least a portion of a credit application to more than one of said remote funding sources sequentially until a finding [*sic,* funding] source returns a positive funding decision;

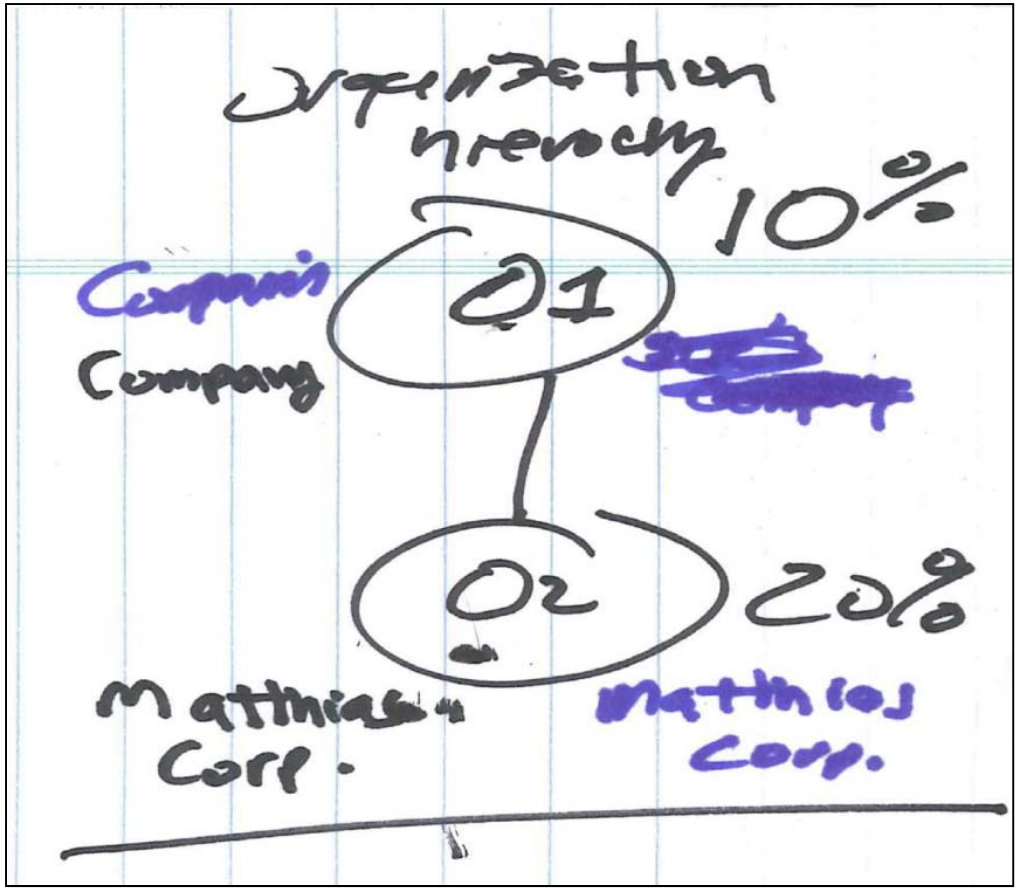
[D3] sending at least a portion of a credit application to a first one of said remote funding sources, and then, after a predetermined time, sending to at least one other remote funding source, until one of the finding [*sic,* funding] sources returns a positive funding decision or until all funding sources have been exhausted; or,

[D4] sending the credit application from a first remote funding source to a second remote finding [*sic,* funding] source if the first funding source declines to approve the credit application.

674 F.3d at 1331.

Dealertrack v. Huber

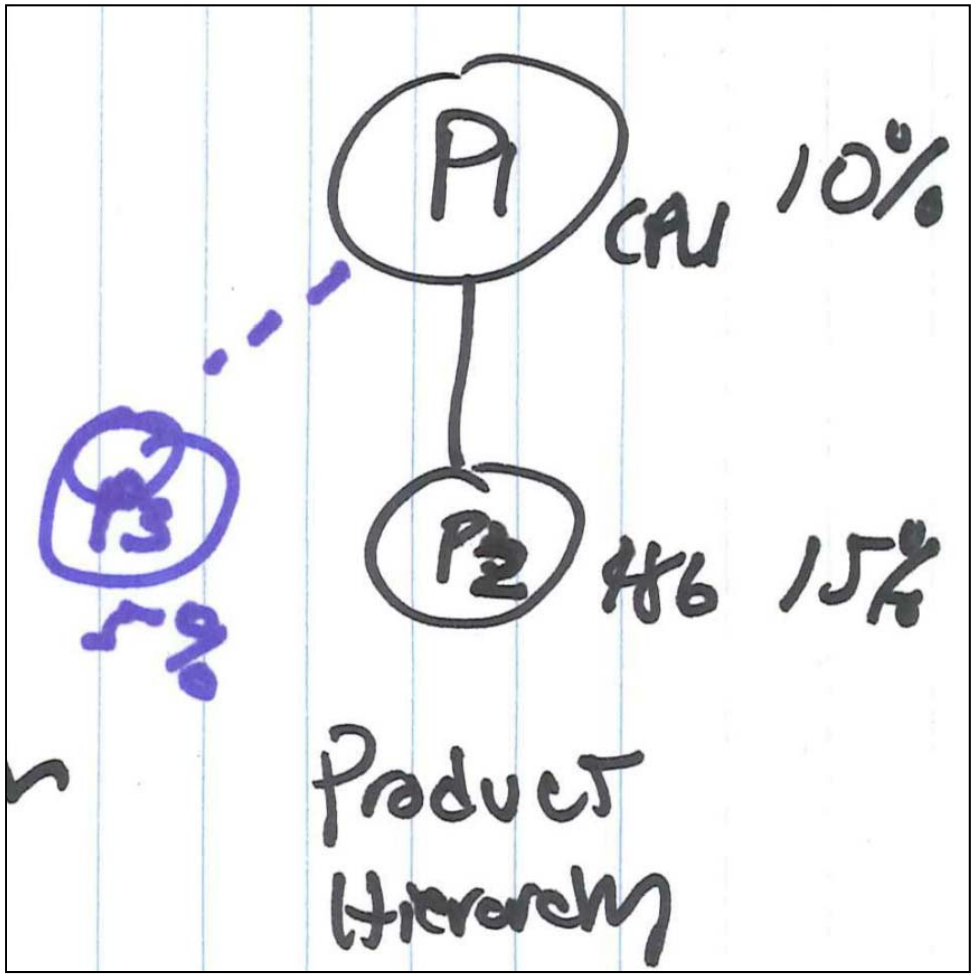
- Abstract idea: the basic concept of processing information through a clearinghouse. 674 F.3d at 1333.
- The claimed steps do not "impose meaningful limitations on the claim's scope." *Id.*
- "Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible." *Id.*
- Algorithms that may be disclosed in the specification do not change the outcome because "[i]n considering patent eligibility under § 101, one must focus on the claims." *Id.* at 1334.



Claim 17

"arranging a hierarchy of organizational groups comprising a plurality of branches such that an organizational group below a higher organizational group in each of the branches is a subset of the higher organizational group;"

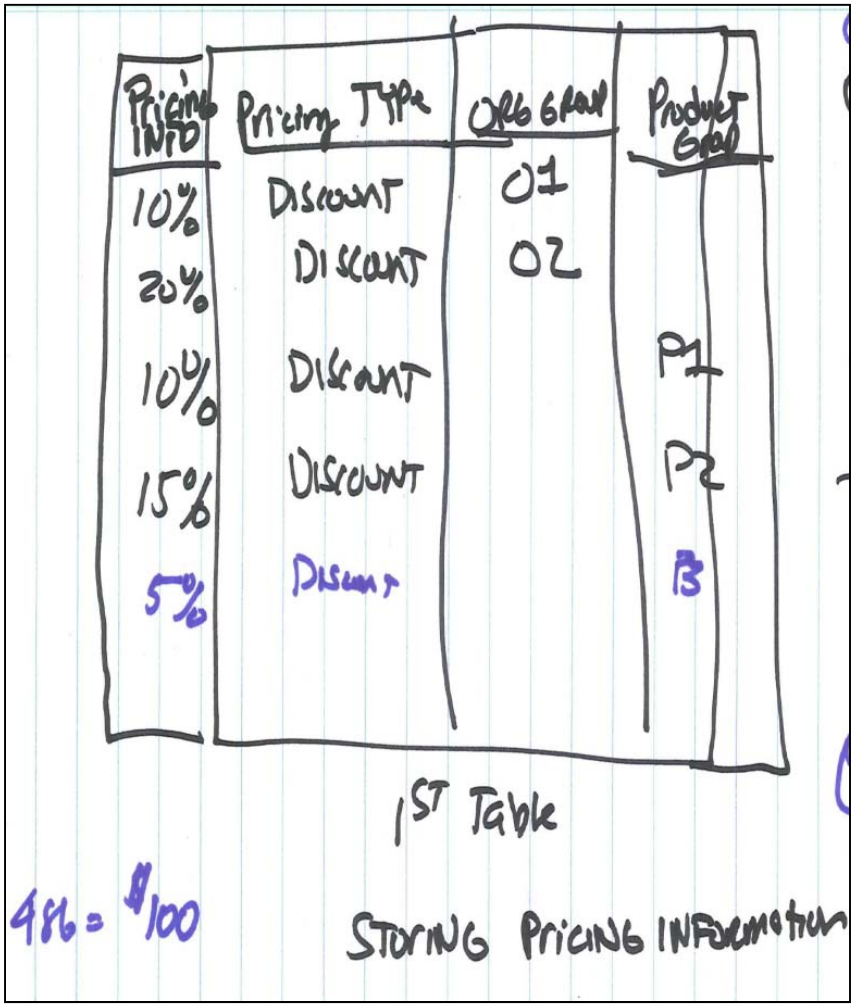
SX1033, 119:4-120:12; SX1029 (top right).



Claim 17

"arranging a hierarchy of product groups comprising a plurality of branches such that a product group below a higher product group in each of the branches in a subset of the higher product group;"

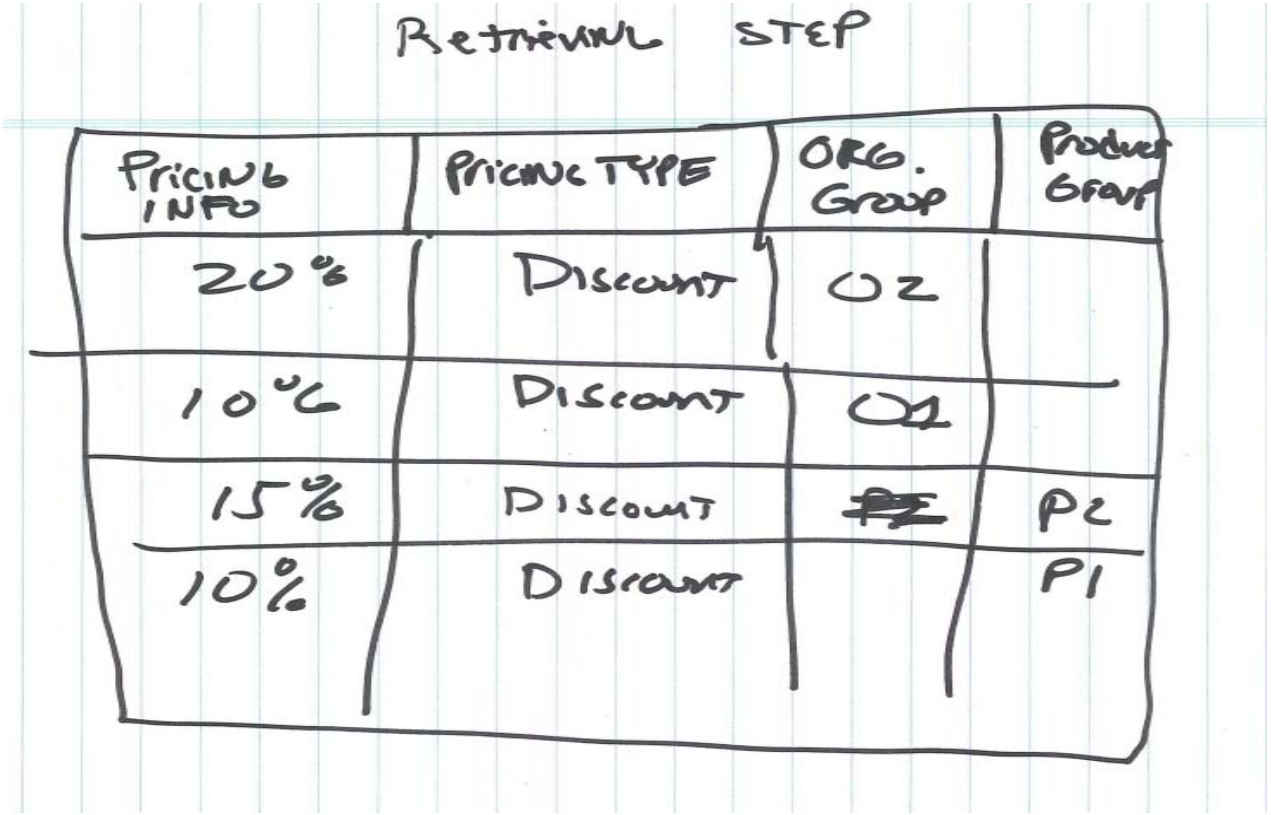
SX1033, 120:13-121:4; SX1029 (bottom right).



Claim 17

"storing pricing information in a data source, wherein the pricing information is associated, with (i) a pricing type, (ii) the organizational groups, and (iii) the product groups;"

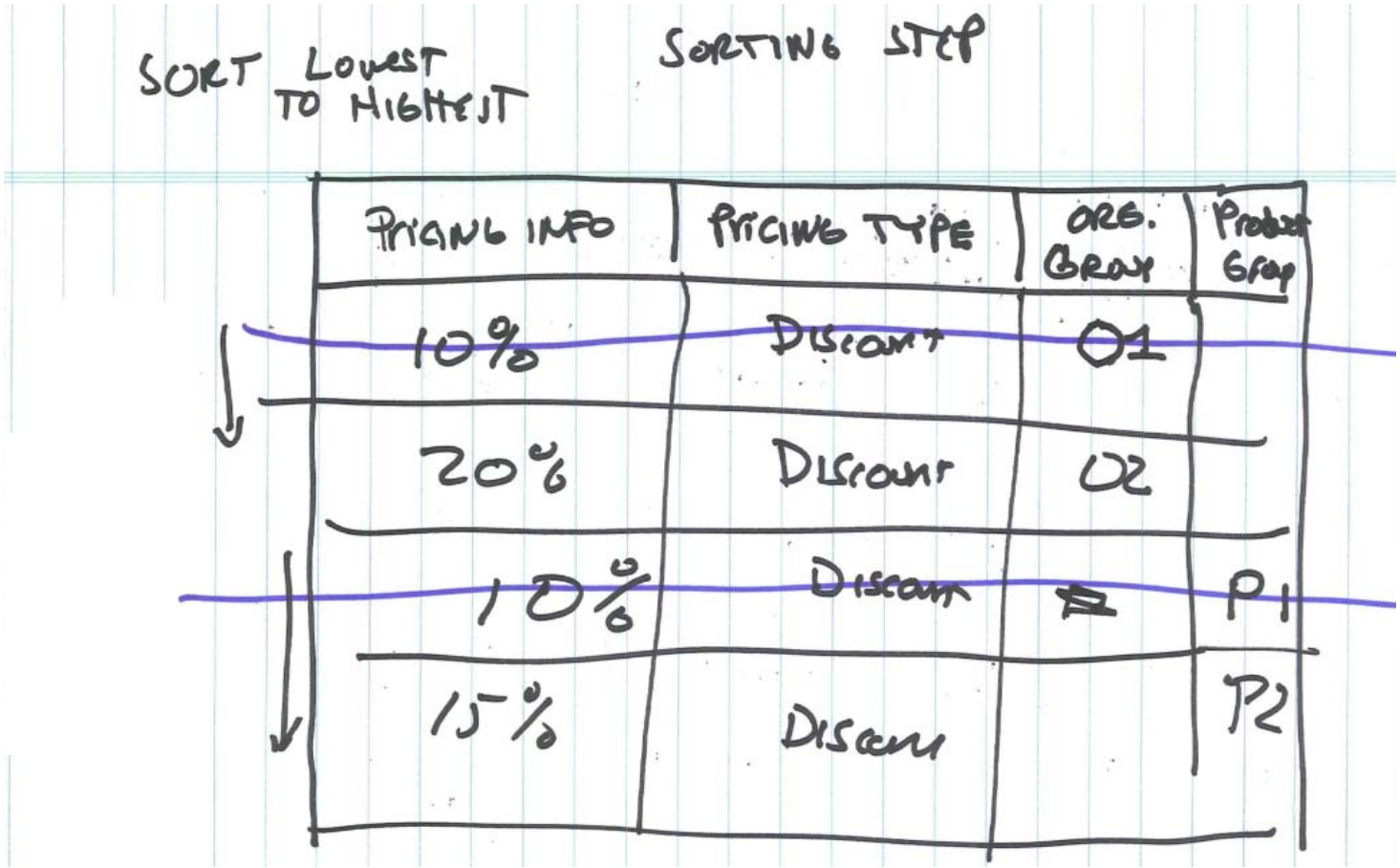
SX1033, 121:5-123:6, 131:10-14; SX1029 ("1st table").



Claim 17

"retrieving applicable pricing information corresponding to the product, the purchasing organization, each product group above the product group in each branch of the hierarchy of product groups in which the product is a member, and each organizational group above the purchasing organization in each branch of the hierarchy of organizational groups in which the purchasing organization is a member;"

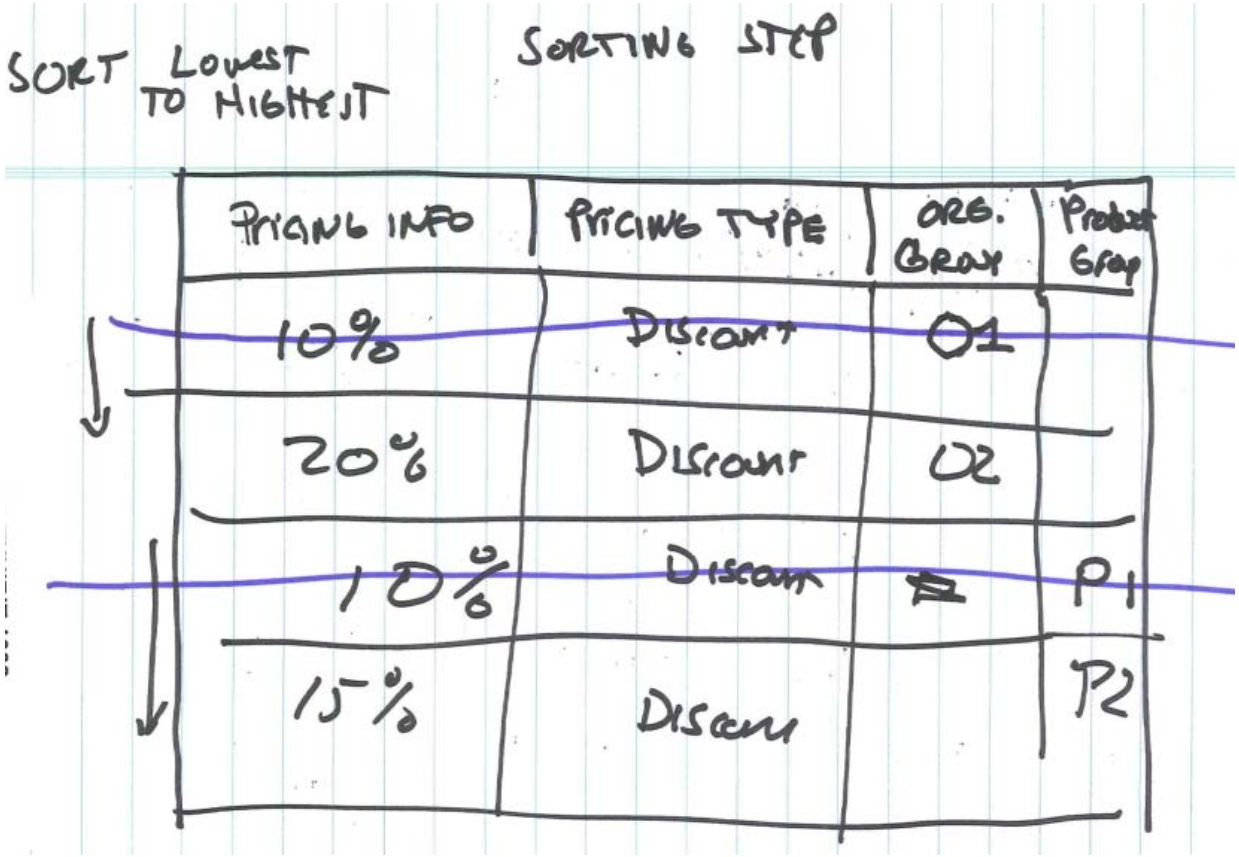
SX1033, 131:15-135:21; SX1031.



Claim 17

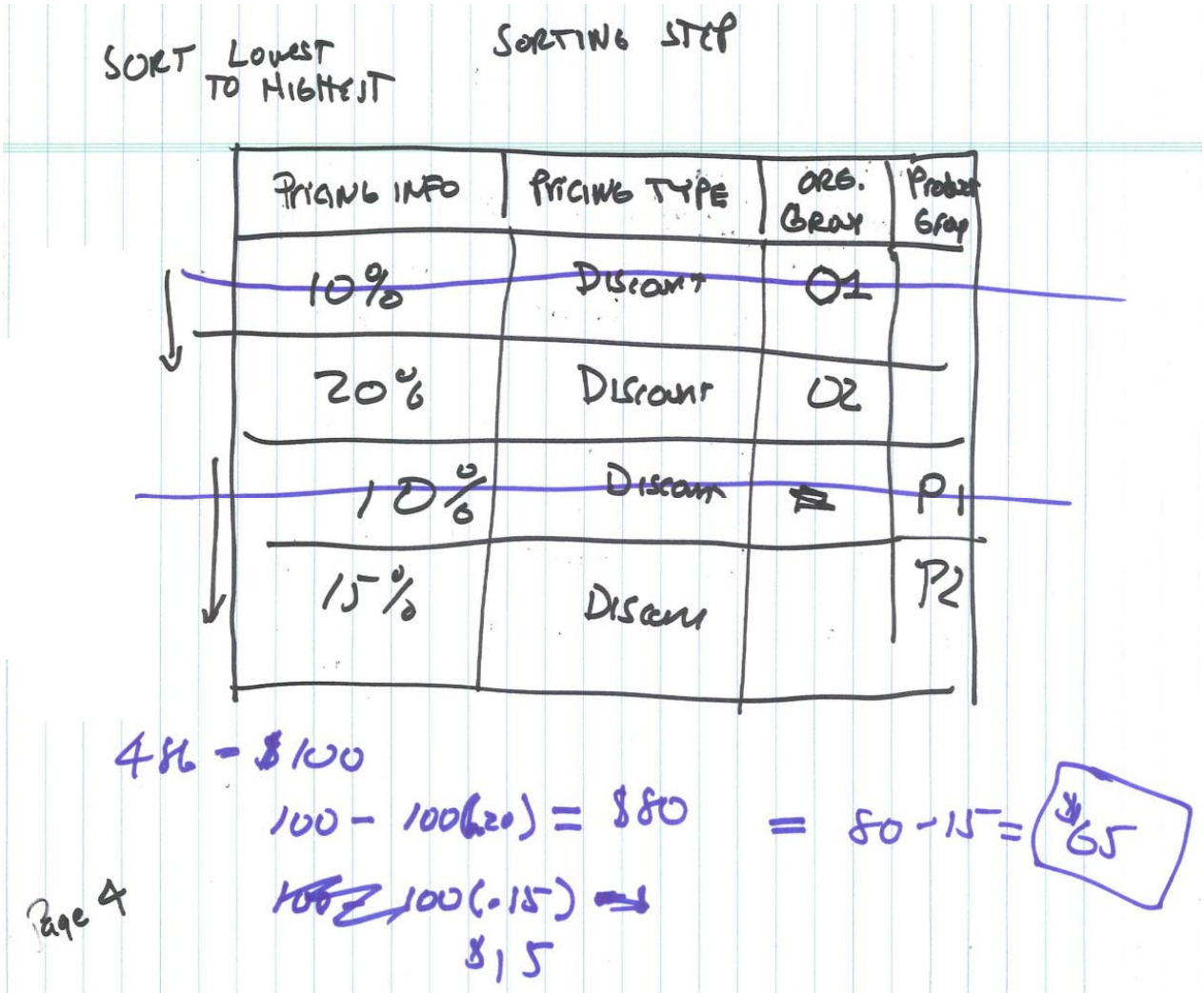
"sorting the pricing information according to the pricing types, the product, the purchasing organization, the hierarchy of product groups, and the hierarchy of organizational groups;"

SX1033, 135:21-138:16; SX1032 (arrows representing sorting).



Claim 17

"eliminating any of the pricing information that is less restrictive;"
SX1033, 138:17-141:10; SX1032 (blue lines representing eliminating).



Claim 17

"determining the product price using the sorted pricing information."

SX1033, 141:11-143:10; SX1032 (determining $65 price by applying remaining 20% and 15% discounts from sorted pricing information).

VI. The Solution Described and Claimed in the '350 Patent

VX2091 at 12.

. . .

35. This is best illustrated with a specific example. I will use the simple pricing scenario described above to illustrate the advantages of the invention -- advantages that are magnified as the pricing scenario becomes more complex and takes into account additional customer-specific discounts as well as product-specific discounts. In this pricing scenario, the seller applies a discount to the base price of a particular CPU, where the amount of the discount depends on the particular CPU being purchased. Specifically, in this scenario, the seller would like to have a particular discount amount that applies to all CPUs (e.g., 10%), a more specific discount amount that applies to 486 CPUs (e.g. 15%), and an even more specific discount amount for 486/x CPUs (e.g., 25%).

VX2091 ¶ 35.

VI. The Solution Described and Claimed in the '350 Patent

VX2091 at 12.

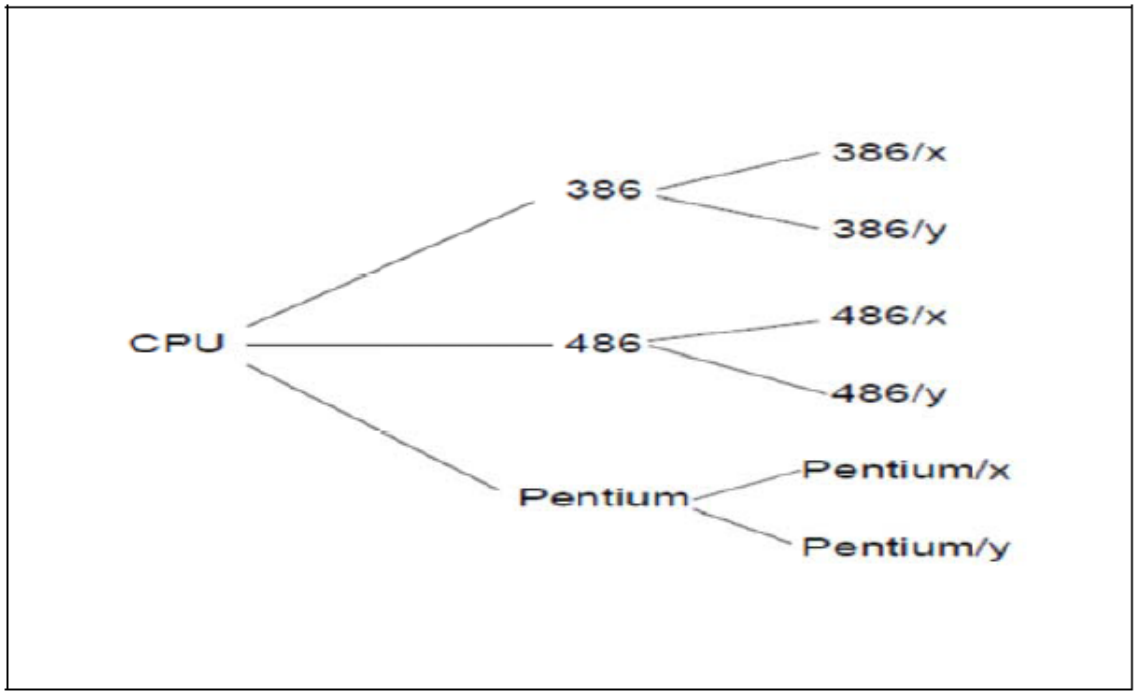


FIGURE 1

VX2091 ¶ 19.

VI. The Solution Described and Claimed in the '350 Patent

VX2091 at 12.

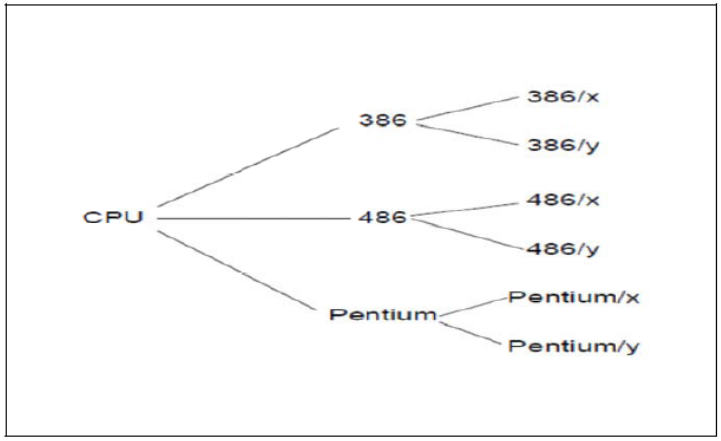


FIGURE 1

VX2091 ¶ 19.

37. In this particular example, three discount values would be obtained from the database: (i) a 10% discount applicable to all CPUs; (ii) a 15% discount applicable to any 486 CPU; and (iii) a 25% discount applicable to the 486/x CPU.

VX2091 ¶ 37.

VI. The Solution Described and Claimed in the '350 Patent

VX2091 at 12.

. . .

38. After obtaining the discount values, the pricing software then determines the price "according to the hierarchy." That is, for example, the pricing software may "sort the pricing information according to ... the hierarchy of product groups," SX 1001, 21:23-25, and "eliminate any of the pricing information that is less restrictive," SX 1001, 21:26-27. Doing this would result in the pricing software using the 25% discount by eliminating the 10% and 15% discounts from the price calculation.

VX2091 ¶ 38.

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing **PETITIONER SAP'S DEMONSTRATIVE EXHIBIT** was served on April 15, 2013, to Nancy J. Linck and Martin M. Zoltick, Lead and Back-up Counsel for Versata, respectively, at the service e-mail address of VERSATA-PGR@rfem.com provided in Versata's Mandatory Notices. The parties have agreed to electronic service.

/Jacob T. Mersing/

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