

021506

18351

U.S. PTO

PTO/SB/05 (04-05)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY
PATENT APPLICATION
TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	BERKEL-48526
First Inventor	Richard Tad Lepman
Title	Process for ... Profitability
Express Mail Label No.	EV 705462600 US

113014 U.S. PTO
11/354798

021506

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ **Fee Transmittal Form** (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ **Applicant claims small entity status.**
See 37 CFR 1.27.
3. ☒ **Specification** [Total Pages 55]
Both the claims and abstract must start on a new page
(For information on the preferred arrangement, see MPEP 608.01(a))
4. ☒ **Drawing(s)** (35 U.S.C. 113) [Total Sheets 12]
5. **Oath or Declaration** [Total Sheets 3]
 - a. ☐ Newly executed (original or copy)
 - b. ☒ A copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ **Application Data Sheet.** See 37 CFR 1.76
7. ☐ **CD-ROM or CD-R** in duplicate, large table or
Computer Program (Appendix)
☐ Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission**
(if applicable, items a. - c. are required)
 - a. ☐ Computer Readable Form (CRF)
 - b. ☐ Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ Paper
 - c. ☐ Statements verifying identity of above copies

ADDRESS TO: Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

ACCOMPANYING APPLICATION PARTS

9. ☒ **Assignment Papers** (cover sheet & document(s))
Name of Assignee Berkeley *IEOR
10. ☐ **37 CFR 3.73(b) Statement** (when there is an assignee) ☒ **Power of Attorney**
11. ☐ **English Translation Document** (if applicable)
12. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
☐ Copies of citations attached
13. ☐ **Preliminary Amendment**
14. ☒ **Return Receipt Postcard** (MPEP 503)
(Should be specifically itemized)
15. ☐ **Certified Copy of Priority Document(s)**
(if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i).
Applicant must attach form PTO/SB/35 or equivalent.
17. ☒ **Other: Certificate of Express Mailing**

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

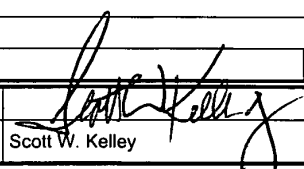
☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: 09/545,628.....

Prior application information: Examiner Rudy, Andrew J. Art Unit: 3627

19. CORRESPONDENCE ADDRESS

☒ The address associated with Customer Number: 26252 OR ☐ Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone	Email	

Signature		Date	February 14, 2006
Name (Print/Type)	Scott W. Kelley	Registration No. (Attorney/Agent)	30,762

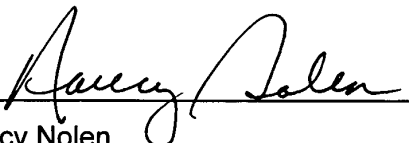
This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CERTIFICATE OF EXPRESS MAILING

I hereby certify that under "Express Mail" mailing label No. EV 705462600 US, the following documents are being deposited in a single envelope with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on February 14, 2006 and such envelope is addressed to:
COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450:

1. Utility Application Transmittal (1);
2. Fee Transmittal (1);
3. Specification for continuation patent application (58);
4. 12 sheets of drawings;
5. Copy of Declaration and Power of Attorney for Patent Application from parent application (3);
6. Recordation Form Cover Sheet (1) with Assignment (2) from parent application attached; and
7. Check in the amount of \$540.00 (Filing fee for \$600.00 and Recordation for \$40.00 fee)



Nancy Nolen

KELLY LOWRY & KELLEY, LLP
6320 Canoga Avenue, Suite 1650
Woodland Hills, CA 91367-7704

021506
18351

PTO/SB/17 (01-06)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

FEE TRANSMITTAL For FY 2006		Complete if Known	
		Application Number	
		Filing Date	Concurrently herewith
		First Named Inventor	Richard Tad Lepman
		Examiner Name	
☒ Applicant claims small entity status. See 37 CFR 1.27		Art Unit	
TOTAL AMOUNT OF PAYMENT (\$) 540.00		Attorney Docket No.	BERKEL-48526

METHOD OF PAYMENT (check all that apply)

☒ Check
 ☐ Credit Card
 ☐ Money Order
 ☐ None
 ☐ Other (please identify): _____

☐ Deposit Account Deposit Account Number: _____ Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below
 ☐ Charge fee(s) indicated below, except for the filing fee

☐ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17
 ☐ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	500.00
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims 9 - 20 or HP = 0 x 25.00 = 0
 HP = highest number of total claims paid for, if greater than 20.

Indep. Claims 1 - 3 or HP = 0 x 100.00 = 100.00
 HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
67	0	0	125	0

4. OTHER FEE(S)

Description	Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)	
Other (e.g., late filing surcharge): Recordation of Assignment Fee	40.00

SUBMITTED BY		
Signature	Registration No. 30,762	Telephone (818) 347-7900
Name (Print/Type) Scott W. Kelley	(Attorney/Agent)	Date February 14, 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PROCESS FOR DETERMINING OBJECT

LEVEL PROFITABILITY

RELATED APPLICATION

[0001] This application is a continuation application of United States Patent Application Serial No. 09/545,628, filed April 7, 2000, which claims priority from provisional patent application Serial No. 60/128,769, filed April 9, 1999.

BACKGROUND OF THE INVENTION

[0002] The process of measuring profit is an important business activity. Profit measures are the primary basis for understanding financial performance and value creation in a business. Once a business is owned publicly, an independent review of a firm's financial position becomes a mandatory process well known as measuring profit according to "generally accepted accounting principles" (GAAP.) While these standards and regulations are adequate for an external view of a company's financial condition, the measurement of profit contribution amongst the business is required for proper management of the franchise. Internal financial performance measurement is especially complex for a multi-product, multi-location, and/or large customer based businesses. The use of internal financial performance measures drives most businesses planning processes, management incentive processes and control processes. Many businesses have found that internal profit measures can be consistent with the external financial statement measures. These businesses implement internal accounting processes consistent with external measures using common metrical units similar to a GAAP Financial Statement presentation - a consistent metric or "yard stick" (i.e. numerically the sum-of-the-profit-parts equals the whole company's profit according to GAAP.)

[0003] Many businesses today are struggling to accurately measure profit contribution at a level necessary to accurately measure profit contribution of individual customer interactions. The reason for dilemma is found in the manner in which generally accepted accounting principles are applied. Fundamental accounting theory takes lumpy cash flows that occur in the day-to-day management of a business conducted with its customers and transform them into smoothed income or expense items (known as accruals.) At the end of every profit reporting cycle these income and expense items are consolidated into a period end balance sheet and income statements. Reports on the state of the business can then be presented by accountants in formats necessary for the independence of ownership and management that is the basis of capital markets. Indeed, most businesses today would call its accounting process critical for survival. Unfortunately, the complexity of maintaining an accurate financial accounting process has obscured the measurement of profit contribution at a very detailed level. While the aggregate cash flows of a large company are relatively stable the individual customer-to-business cash flows are very volatile. Accounting practice to date has been comfortable with using aggregate cash flow information for the accrual accounting process (10), as illustrated in FIG. 1. The accounting process based on aggregates has lead to blindness by businesses of incremental customer profit contribution measures necessary to implement customer level decision making, particularly in large businesses with many millions of customers.

[0004] General Ledgers (double entry book keeping systems) (11) were early adapters of automated data processing solutions due to the match between computing capabilities of computers and the execution of the accounting process. The benefit, from reduced cost for accounting processes easily justified large expenditures in information processing technology, both in hardware and in software development. The complexity of today's general ledger applications and the age of these systems have retarded the innovation of new automated

techniques taking advantage of technological advances in massively parallel computing capability.

[0005] References describing generally accepted accounting principles and financial performance measurement procedures are listed below, and are incorporated by reference herein:

[0006] The money market /, Marcia Stigum. 3rd ed. Homewood, Ill. : Dow Jones-Irwin, c1990.

[0007] Money market and bond calculations /, Marcia Stigum and Franklin L. Robinson. Chicago : Irwin Professional Publ., c1996.

[0008] Money market calculations : yields, break-evens, and arbitrage /, Marcia Stigum, in collaboration with John Mann. Homewood, Ill. : Dow Jones-Irwin, c1981.

[0009] The money market : myth, reality, and practice /, Marcia Stigum. Homewood, Ill. : Dow Jones-Irwin, c1978

[0010] Quantifying the market risk premium phenomenon for investment decision making: September 26-27, 1989, New York, New York /, Keith P. Ambachtsheer ... [et al.] ; edited by William F. Sharpe and Katrina F. Sherrerd ; sponsored by the Institute of Chartered Financial Analysts. Charlottesville, VA : CFA : May be ordered from Association for Investment Management and Research, c1990

[0011] Fundamentals of investments /, Gordon J. Alexander, William F. Sharpe, Jeffery V. Bailey. 2nd ed. Englewood Cliffs, N.J. : Prentice Hall, c1993.

[0012] Microeconomics /, Richard G. Lipsey . [et al.]. 9th ed. New York : Harper & Row, c1990.

[0013] Economics of the firm : theory and practice /, Arthur A. Thompson, Jr., John P. Formby. 6th ed. Englewood Cliffs, N.J. : Prentice Hall, c1993.

[0014] The FASB conceptual framework project, 1973-1985 : an analysis /, Pelham Gore. Manchester, UK ; New York : Manchester University Press ; New

York, NY, USA : Distributed exclusively in the USA and Canada by St. Martin's Press, c1992.

[0015] Statement of financial accounting standards no. 5 : impact on corporate risk and insurance management /, Robert C. Goshay. Stamford, Conn. : Financial Accounting Standards Board of the Financial Accounting Foundation, 1978.

[0016] Common cents : the ABC performance breakthrough : how to succeed with activity-based costing /, Peter B.B. Turney. Hillsboro, OR : Cost Technology, 1991.

[0017] A guide to the SQL standard; a user's guide to the standard relational language SQL /, Date, C. J. :Addison-Wesley Pub. Co., 1987.

[0018] Accountants SEC practice manual, Kellogg, Howard L. :Commerce Clearing House,1971.

[0019] Risk theory; the stochastic basis of insurance / , Beard, R. E. (Robert Eric): 3rd ed., Chapman and Hall, 1984.

[0020] Practical risk theory for actuaries / , Daykin, C. D. (Chris D.): 1st ed., Chapman & Hall, 1994.

[0021] Actuarial mathematics / :2nd ed., Society of Actuaries, 1997.

[0022] Objectives and concepts underlying financial statements / United Nations, 1989.

[0023] Cost accounting for factory automation / National Association of Accountants, 1987.

[0024] Interest rate risk models ;; theory and practice / : Glenlake Publ. Co. - Fitzroy Dearborn, 1997.

[0025] Economic analysis for management decisions, Elliott, Jan Walter: R. D. Irwin, 1973.

[0026] Microeconomic theory /, Ferguson, C. E. (Charles E.): 4th ed. R. D. Irwin, 1975.

[0027] Planning and measurement in your organization of the future /, Sink, D. Scott.: Industrial Engineering and Management Press, 1989.

[0028] Economics /, Paul A. Samuelson, William D.

Nordhaus. 16th ed. Boston, Mass : Irwin/McGraw-Hill, c1998.

[0029] Setting intercorporate pricing policies /, Business International Corporation, New York : Business International Corporation, 1973.

[0030] Controversies on the theory of the firm, overhead allocation, and transfer pricing /, Murry C. Wells, editor. New York : Arno Press, 1980.

[0031] The transfer pricing problem : a theory for practice /, Robert G. Eccles. Lexington, Mass. : Lexington Books, 1985.

[0032] Transfer pricing /, Clive R. Emmanuel and Messaoud Mehafdi. London ; San Diego : Academic Press, 1994.

[0033] Internal transfer pricing of bank funds /, by Valerie Giardini. Rolling Meadows, Ill. : Bank Administration Institute, 1983.

[0034] Transfer pricing : economic, managerial, and accounting principles /, by Clark J. Chandler ... [et al.] Washington, D.C. : Tax Management, Inc., 1995.

[0035] International intracorporate pricing; non-American systems and views, Jeffrey S. Arpan. New York, Praeger Publishers, 1971.

[0036] There remains, however, a need to resolve profit measures at a detailed level without using analytical models or statistical extrapolation. Such a process should utilize rule driven and data base measurement processes which will give large scale businesses a lower cost of maintenance and a technologically scalable tool to measure profit at a level of precision or resolution not possible in prior financial performance measurement processes. The present invention fulfills this need and provides other related advantages.

SUMMARY OF THE INVENTION

[0037] Prior approaches to management's desire for an accurate measure of individual decisions (incremental or marginal) profit impact have been solved by automating the accounting process for implementing accounting methods. Cash flows are transformed into two parts, a debit part or credit part, according to an

accounting rule. Other non-cash accounting rules are implemented to create "accrual" debits and credits smoothing income and expenses and adjusting for future contingencies. (see Management Accounting Theory books or any source of accounting theory, where the balance sheet equation and the consolidation process, the combination of flows and stocks of financial data, are developed.) The first large scale use of automated computing technology is frequently found to be the automation of the financial control or accounting processes, since it is easy to develop software to implement accountancy rules and there were large benefits in staff productivity easily observable. For businesses to observe marginal profit contributions it was necessary to use accounting information and make reasoned conclusion on how to apportion or extrapolate this information into incremental customer, product or organizational profit detail. (See Fig. 1)

[0038] What these methods of profit measurement lack are the adequate level of detail to measure an individual or incremental decision's impact on profit. To gain this new level of profit resolution this invention is designed to use micro profit measurement rules applied at a granular level consistent with standard accounting practice using a combination of actuarial science and mathematical set theory. The invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a level not available today in a large individual customer scale business. This invention does this through a consistent application of measures to a class of business entities which represent the smallest common component of profit measurement desired - the Profit Object.

[0039] The invention's method of apportionment of non-object related profit measures specifies a method which will not change the ordinal or cardinal profit contribution ranking when only marginal profit measures are counted. This specification is what makes it possible to apply marginal measurement rules (see Micro-economic theory literature) with macro economic principles; namely the sum-of-the-parts equals the whole criterion which is the basis of financial accounting theory and practice.

[0040] The invention decomposes profit measurement analytical calculations into five classifications:

1. Marginal profit measures associated with use of the business' balance sheet resources;
2. Marginal measures of non-balance oriented revenues;
3. Marginal cost measures;
4. Marginal measures of expected costs or revenues; and,
5. Apportioned cost measures.

[0041] This classification provides for additive profit measures across the five components. The calculation process is designed to be independent across classes 1, 2, 3, & 4 above with the addition of class five to preserve sum-of-the-parts integrity without simultaneous calculations typically found in profit measurement processes. When all five profit measures are summed at the lowest level of profit detail, a consistent set of profit values for all types of aggregations are possible - all profit measurement then originates from the same point in a profit database. The simultaneous use of these five analytical frameworks makes possible a detailed level of profit calculation consistent with GAAP.

[0042] In particular, the present invention relates to a process for determining object level profitability. In its basic form the process includes the steps of:

1. Preparing information to be accessed electronically;
2. Establishing rules for processing the prepared information;
3. Calculating at least one marginal value of profit using established rules as applied to a selected set of prepared information;
4. Calculating a fully absorbed value of profit adjustment using established rules as applied to the selected set of prepared information; and,
5. Combining the at least one marginal value of profit and fully absorbed value of profit adjustment to create a measure for object level of profitability.

[0043] More specifically in the step of preparing information to be accessed electronically, the database is prepared, object attributes are extracted,

conditioned and loaded into the database, and financial statement attributes are extracted, conditioned and loaded into the database. If desired the step may also include extracting, conditioning and loading the event attributes into the database, and calculating funds transfer treatment rates.

[0044] In the step of establishing for processing the prepared information for rule establishment providing the information necessary to select objects and perform the correct profit calculus is accomplished. The step of calculating at least one marginal value of profit using established rules as applied to a selected set of prepared information includes calculating net interest, other revenue, direct expense, and/or provision for the selected set of prepared information. Net Interest (NI) is the summation of interest income, value of funds provided and earnings on equity funds used less the sum of interest expense and cost of funds used. Other Revenues (OR) is a measure of profit contribution from non-interest related sources. Direct Expense (DE) is the profit value reduction due to marginal resource consumption by the object. Provisioning (P) is the expected profit value adjustment for future outcomes related to the object.

[0045] The step of fully absorbed profit adjustment, Indirect Expense (IE), is an apportioned profit value adjustment for all non-object related resource consumption by the business.

[0046] In the step of combining the five profit values, $NI + OR - DE - P - IE$, may be adjusted for taxes and/or object economic value.

[0047] The foregoing elements of the invention, which have been explained at a micro elemental level can be advantageously employed in massive amounts and parallel process power. For example, in the macro perspective of the invention the basic steps can be utilized.

[0048] The present invention gives management profit measures tailored to its need for accurate decision oriented profit information required to manage a large organization based on profit measurement. This invention gives businesses the ability to resolve profit measures at a level of detail necessary for all types of application of profit oriented performance measurement.

[0049] Other features and advantages of the present invention will become apparent from the following more detailed description, taken in conjunction with the accompanying drawings which illustrated, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0050] The accompanying drawings illustrate the invention. In such drawings:

[0051] FIGURE 1 shows existing profit calculation process flow.

[0052] FIGURE 2 shows analytical processing relationships.

[0053] FIGURE 3 shows the invention's information flow.

[0054] FIGURE 4 shows the invention's data relationships.

[0055] FIGURE 5 shows the invention's process flow.

[0056] FIGURE 6 shows the invention's database preparation process step detail.

[0057] FIGURE 7 shows the rule maintenance process.

[0058] FIGURE 8 shows the net interest measuring process.

[0059] FIGURE 9 shows the other revenue measuring process.

[0060] FIGURE 10 shows the direct expense measuring process.

[0061] FIGURE 11 shows the provision measuring process.

[0062] FIGURE 12 shows the indirect expense measuring process.

[0063] FIGURE 13 shows the profit component aggregation and adjustment process.

[0064] FIGURE 14 shows a partial relational database schema for an airline industry example.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0065] As shown in the accompanying drawings for purposes of illustration, the present invention is concerned with a detail profit metric (DPM) designed to be a computer database application (i.e. software) for profitability measurement. DPM's profit measurement system is fundamentally different from the common profit measurement system used by regulators and public accountancy - yet, it is consistent with generally accepted accounting principles.

[0066] With reference now to FIGS. 2 and 3, the invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a level not available today in a large individual customer scale business. This invention does this through a consistent application of measures (27) to a class of business entities (32) which represent the smallest common component of profit measurement desired - the Profit Object.

[0067] The invention's method of apportionment of non-object related profit measures (34) specifies a method which will not change the ordinal or cardinal profit contribution ranking when only marginal profit measures are counted. This specification is what makes it possible to apply marginal measurement rules with macro economic principles; namely the sum-of-the-parts equals the whole criterion which is the basis of financial accounting theory and practice.

[0068] As shown in FIG. 2, the invention decomposes profit measurement analytical calculations into five classifications:

1. Marginal profit measures associated with use of the business' balance sheet resources, also referred to as funds transfer pricing (21);
2. Marginal measures of non-balance oriented revenues, also referred to as non-interest revenues (23);
3. Marginal cost measures, also referred to as event costing (22);
4. Marginal measures of expected costs or revenues, also referred to as provisioning (24); and,

5. Apportioned cost measures and indirect costing, in accordance with an allocation model of the present invention (26).

[0069] This classification provides for additive profit measures across the five components. The calculation process is designed to be independent across classes 1, 2, 3, & 4 above with the addition of class five to preserve sum-of-the-parts integrity without simultaneous calculations typically found in profit measurement processes. When all five profit measures (49) are summed at the lowest level of profit detail, a consistent set of profit values for all types of aggregations (30) are possible - all profit measurement then originates from the same point in a profit database. The simultaneous use of these five analytical frameworks makes possible a detailed level of profit calculation consistent with GAAP.

[0070] Figure 3 illustrates DPM data flow: where systems of record (SOR's) (31) data source object (32) and object oriented event (33) data; where General Ledger data sources apportionment data; and, where event and general ledger data are used with activity based costs (35). DPM is based on object level detail of cash flows, customer events and management profit allocations of profit arising from non-customer related events. More particularly, DPM is based on object level detailed data extracted from the SOR's (31), customer object oriented event data (33) and non-SOR Apportionments (34). DPM provides both marginally (20) and fully absorbed profit measures (25), something traditional "general ledger" based profit accounting systems cannot accomplish due to reliance on aggregate debit and credit amounts (10). The differences in measures are directly observable in comparisons of detailed customer (13), product (14) or organizational (15) profit values calculated using prior art (12) methods with profit values derived using aggregations (30) of object data, per figure 3.

[0071] More specifically, with reference to FIG. 4, in the step of preparing information to be input (40) to be accessed electronically, a database is prepared. Object attributes are extracted, conditioned, and loaded into the database (43), and financial statement attributes are extracted, conditioned and loaded into the

database (45). If desired, the method may also include extracting, conditioning and loading the event attributes into the database (44) and calculating funds transfer treatment rates and activity based costing rates (46).

[0072] In the step of establishing for processing (41) the prepared information on how to select objects and perform the correct profit calculus rule mapping (47) is accomplished. The step of calculating (48) at least one marginal value of profit using established rules as applied to a selected set of prepared information includes calculating net interest (NI), other revenue (OR), direct expense (DE), and/or provision for the selected set of prepared information. Provisioning (P) is expected profit value adjustment for future outcomes related to the object. The step of fully absorbed profit adjustment, indirect expense (IE), is an apportioned profit value adjustment for a non-object related resource consumption by the business. The foregoing elements of the invention, which have been explained at a micro-elemental level, can be advantageously employed in massive and parallel processing power (41). The present invention gives businesses the ability to resolve profit measures at a level of detail (49) necessary for all types of applications of profit oriented performance measurement or detailed profitability data as an output (42) for enabling aggregation (30) to a particular customer, product or organization within a business.

[0073] The following is a definition of the inputs (attributes or measurement parameters), the method of processing and the output of the DPM process.

Definitions

Object Attributes (43)

[0074] These are data about the object being measured. Different businesses have different objects of detailed profit measurement. Examples of profit measurement objects include an airline using "seat" as the profit object, an insurance company using a "policy" object or a bank using an "account" object - these objects represent the lowest level of detail required to support consistent internal multi-dimensional internal profit analyses. Types of data attributes

associated with these objects include: balances, rates (or interest accrued), product identification, exposures, expected loss frequency, and various dates (e.g., start, finish, rate reset, last payment, next payment, life, etc.)

Event Attributes (44)

[0075] These data are about events (a resource consuming activity) related to the object being measured. Data found here include object identification, transaction amounts, quantities, event location, event time, counter-party identification, event type (e.g., payments, interest paid or earned, purchases, refunds, etc.) At least one of these attributes must relate the event to at least one Object.

Financial Statement Attributes (45)

[0076] These are data about the company's financial statement. Data found here include balance sheet and profit statement amounts usually aggregated by the legal or management entities that own a group of objects being measured. These data will be current accounting period either actual or planned.

Profit Measurement Parameters (46)

[0077] These data include parameter values necessary to perform the object or event level profit calculations. The major classifications of these data are:

- Funds valuing rates ("Treatment Rates") - DPM's funds transfer pricing method uses maturity opportunity rates used in valuing each object's marginal use or source of internal funds (balance sheet resources).
- Unit Costs - DPM's Direct Expense calculations require unit cost parameters. DPM can calculate unit costs, when unit cost data are not available; in these instances, if the total cost is provided a financial statement attribute and then unit cost is derived by dividing total cost by an appropriate attribute quantity amount.

- Allocated Amounts - In both Other Revenue and Indirect Expense calculations this amount is apportioned amongst all objects in a group.
- Miscellaneous Calculation Values - Some of DPM's calculations require non-system of record values. For example, number of days in profit measurement period or equity allocation weighting. These values are known as "modeling" parameters.
- Amortization Parameters - Interest amortization requires an interest rate and expected life attributes. Straight line and declining balance methods of amortization require expected life values.
- Expected Profit Adjustment Measurement Parameters - Provision calculations require appropriate attributes, such as: expected loss rates, reserve percentages, exposure factors, recovery rates, default probabilities and collection costs.
- Tax Rates - Tax rates are required for after-tax profit calculation. DPM is designed to calculate pre-tax income on a taxable equivalent basis (where an single effective tax rate is all that is required to transform pre-tax income into after tax earnings.)

Profit Measurement Rule Specification

[0078] DPM's processing approach is to combine profit measurement techniques with (non-modeled) data and calculation parameters. Each application of this calculus is called a rule (47). DPM is designed to allow the user the freedom to associate a group of objects with a rule and to use object-level information in combination with rule parameters to calculate profit values. The DPM invention uses profit measurement rules separate from, but applied to, object data and the use of relational database concepts, giving the user flexibility in both the assignment and depth of definition of measurement rules and measurement resolution. Use of this method is especially suited for massively parallel computing technology where linear scaleable capital investment in

processing technology is possible vis-à-vis object and event count and rule complexity.

[0079] The types of calculation (Rule types) are:

- **Funds Treatment** - Every object with cash flows affecting a financial statement's balance sheet requires a method of valuing an object's use or source of funds. The common name for this approach to valuing is known as "Matched Maturity Funds Transfer Pricing." DPM uses a canonical representation of an object's funding characteristics for computational performance. DPM's methodology requires effective yield adjustment to eliminate the allocation of interest payable / receivable required by GAAP. A value, based on effective yield adjusted market price (the yield curve), is then determined by DPM for each instance that requires an interest rate transfer pricing to calculate an object's marginal Net Interest (NI).
- **Equity Allocation** - In order for precise net interest revenue or economic value adjusting calculations the amount of equity funds required at an object level must be determined. DPM's equity allocation to the object level calculations may use any of the following methods: simple ratios; regulatory definitions; economic allocations based on econometric modeling (see book on Modern Portfolio Theory) methodologies; or, as statistically defined allocations.
- **Balance Sheet Allocations** – Complete calculation of Net Interest may require an object level allocation of some financial statement balance sheet amounts.
- **Apportionment** - In Other Revenue, Provision and Indirect Expense calculations are applied at the object level using Financial Statement Attributes which are not related directly to an object. These profit adjustments are made so that the sum of all object profit equals the whole enterprise's profit - an important property of DPM's output. Accountants refer to this profit measurement technique as "full allocation of profit." DPM's approach is to pool indirect costs and revenues and then apportion them. Apportionment rules specify how the pool is completely allocated to appropriate objects. DPM uses a specific closed form (mathematical formula that require only

information known in the current period and no iterative computation) allocation rules.

- Amortization - Some types of income or expense are deferred or accrued over multiple periods including and subsequent to the current accounting period. This is common to accrual accounting methods used in financial statement presentation and give rise to timing differences between cash flows and their related profit as presented in a financial statement in any accounting period. Since DPM is designed to mirror a financial statement's profit measure it must support deferral and accrual accounting principles. Amortization methods are included in DPM to reflect these GAAP concepts. DPM's amortization methods include: interest method of amortization (used for interest income and expense accruals and for deferral of fees that are in lieu of interest); and, straight line or declining balance amortization methods (used for cost or income deferrals and capitalized investment depreciation.)
- Other Revenue Pricing - In situations where object and event activity can be used to derive object level income or fees DPM provides for the calculation of these drivers of profitability in Other Revenue profit calculations. These calculations take the mathematical form of a linear combination of event or object values and modeled coefficients.
- Direct Expense - Calculation of object profit adjustment due to object related activity requires rules that take the form of linear combinations of event or object values and modeled coefficients.
- Indirect Expense - In situations where expense apportionment or amortization amounts are aggregated the user may want different rules applied depending on the path (or dimension) of aggregation. These rules allow for multiple profit calculations rules to be applied to derive multiple object level indirect expense amounts.
- Provision - Adjusting current profit for expected future value changes is known as "actuarial" provisioning. The technique is well known by the financial industry's accounting practice. DPM applies actuarial based methods in its

object level profit calculations where the Provision pre-adjusts profit for contingent or known exposures to future profit.

- Taxable Equivalent Gross-up - Profit is usually an after-tax measure. Some events or portions of some object profit may be excluded from normal taxation. DPM's approach is to adjust these pre-tax values so that a singular tax rate can be used to convert pre-tax profit into after-tax values, known as taxable equivalent adjustment. For the purpose of the remaining detailed description all profit and loss profit measures are tax equivalent amounts (e.g., TEG * Amount.) These rules use object and event attributes to drive an adjustment for each of the five classes of profit amounts to a taxable equivalent basis.
- Interest Yield Adjustments - Since DPM can derive profit for any length of accounting period from daily to annual, the adjustment of cash interest payments and the financial statement's accrual or smoothed representation of interest related Profit, DPM requires a method for converting cash interest amounts to financial statement accrual amounts. DPM implements the mathematical concept of "effective interest rate" conversion to accomplish this type of calculation.

[0080] Before the calculation rules can be applied at the object or event level a calculation rule must be associated with an object, designating the methods DPM will use to calculate components of profit at the object level. An object grouping is designed to associate objects having common and defined set of object attributes for similar processing (note that a group may consist of one object). The association of a group of objects with a calculation rule is referred here as a Rule Map (47).

Inheritance Functionality

[0081] In nature the concept of inheritance is where a descendant receives properties of its predecessors, in computer science inheritance is defined in "Object Oriented" software development theory as the ability to increase function

without loss of function using the same data. In DPM the concept of inheritance is applied and in essence it means that an implementation can change Rules (change profit calculus) without losing any profit measurement capabilities of the preceding state(s). This feature allows DPM users a unique ability to apply techniques of differing levels of sophistication to different sets of objects according to the trade-off between the value of more accurate object-focused profit measures and the cost of obtaining and populating data and maintaining Rule Maps.

[0082] The DPM system is designed for Rules to be applied to any object without loss of integrity of output. This design feature allows the user to incrementally migrate objects to increased measurement precision as justified. This valuable piecewise increase in functionality is possible due to DPM's combination of rules and data in a mathematical set theoretic framework (41). This approach allows for a relational database management system implementation (42). It is nearly impossible develop and maintain procedural based software with as much flexibility and with the capability to simultaneously support the number of calculation permutations required by DPM .

Restatement Functionality

[0083] Since DPM is a rule based system the ability to restate prior period's Profit calculations are systematically possible providing historical data exists. DPM's design of object level profit measurement enables a unique historical profit restatement capability. Three features of DPM's restatement capability are:

1. Produces a mathematically consistent time series (i.e. no measurement bias) of object level Profit. DPM restatement functionality is designed to apply the same Rules to all available historical object or event level data.
2. DPM's restatement functionality preserves object accrual integrity when the object history is restated for different length accounting periods. Implementations of daily, weekly, monthly, quarterly, semi-annual, or annual

profit calculations and mixing different periodicity in historical data without loss of analytical integrity.

3. Capable of object's profit history restatement. If a DPM user changes Rules or Rule Maps and/or changes the way a subset of object's Profit are calculated and if the historical data is available per the new set of Rules then the user can restate historical profit measures for these subset of objects.

Processing (see Fig. 5)

[0084] With reference to FIG. 5, the database is first populated (50). Rules are maintained (51), as will be more fully discussed herein, and the NI, OR, DE, and P are calculated (52-55). Next, the IE is calculated (56) to arrive at a calculation of the object profitability (57). This process is repeated for all objects. After the last object (58), the process is finished as the detailed profitability database is obtained. FIGS. 6-13 describe in more detail the steps taken in FIG. 5 in accordance with the present invention.

1. Populate Database (see Fig. 6)

[0085] Perform standard database administration actions to initialize data for the required calculations:

1. Perform database Initialization (60)
2. Extract, condition & load object attributes (61)
3. Extract, condition & load event attributes (62)
4. Extract, condition & load financial statement attributes (63)
5. Calculate and populate NI treatment rate attributes (64).

2. MAINTAIN OBJECT GROUPS AND RULE MAPS (SEE FIG. 7)

[0086] Populate or edit Rule parameters necessary to perform calculations. Rules definition is by association of specific, non-iterative calculation, as described below, a set of object or event attributes defined as a data filter (see Relational Data Base Management System textbooks). Rules have two pieces:

1. Parameters to drive the object selection or data filter for calculations (70); and,

2. Parameters specific to the appropriate calculation methodology (71).

[0087] An easy-to-use graphical user interface can be used to maintain these data for all rules (72).

[0088] The following processing steps, Steps 3 through 6 perform object and event level profit calculations. Steps 3, 4, 5, and 6 can be processed independently; step 7 requires values derived in step 3, 4, 5, and 6 and therefore occurs sequentially.

3. Calculate Net Interest for All Objects (see Fig. 8)

[0089] Net Interest is:

NI = Interest Income - Cost of Funds + Value of Funds - Interest Expense + Earning on Allocated Equity

[0090] Correct interest rates for calculation of interest income or expense depend on the length of the profit measurement period. Using actuarial mathematical techniques the bookkeeping required by GAAP for interest receivables and Payables can be avoided in NI calculus. A known technique (see M Stigum, Money Markets) to accomplish this adjustment for profit measurement according to GAAP (i.e. accruals) the following calculation is used to convert interest rates:

Let r_{new} = annualized rate with new compounding factor
 r = annualized rate with old compounding factor
 m = number of old compounding periods per year
 n = number of new compounding periods per year

Then
$$r_{\text{new}} = \left[\left(1 + \frac{r}{m} \right)^{m/n} - 1 \right] * n$$

NI CALCULATION RULE TYPE I

[0091] The object balance is either an asset or a liability amount for Type I calculation.

Let $AAB(o_i)$ = Average Asset Balance of the object o_i
 $ALB(o_i)$ = Average Liability Balance of the object o_i
 $rate_{asset}(o_i)$ = Effective interest rate for object o_i as an asset balance
 $rate_{liability}(o_i)$ = Effective interest rate for object o_i as a liability balance
 R_t = Treatment rate based on the identified treatment for the object's product attributes
 $Int\ Inc(o_i)$ = Interest Income of object o_i
 $COF(o_i)$ = Cost of funds used by object o_i
 $Int\ Exp(o_i)$ = Interest Expense for object o_i
 $VOF(o_i)$ = Value of funds provided by object o_i

Then,

$Int\ Inc(o_i) = AAB(o_i) * rate_{asset}(o_i)$
{Compute only if object attribute doesn't exist}
 $COF(o_i) = AAB(o_i) * R_t$
 $Int\ Exp(o_i) = ALB(o_i) * rate_{liability}(o_i)$
{Compute only if object attribute doesn't exist}
 $VOF(o_i) = ALB(o_i) * R_t$

NI CALCULATION RULE TYPE II (81)

[0092] Let $AB_{(c,t)}(o_i)$ = Average Balances of the object o_i
 $rate_{(c,t)}(o_i)$ = Effective interest rate for the corresponding balance asset or liability

$R_t(o)$ = Object o's product type/group as needed to identify treatment rate

$R_{(c,t)}(pt(o))$ = Rate (treatment rate) for objects of this product type/group, given the balance class, and tier

$Int\ Inc(o_i)$ = Interest Income of object o_i

$COF(o_i)$ = Cost of funds used by object o_i

$Int\ Exp(o_i)$ = Interest Expense for object o_i

$VOF(o_i)$ = Value of funds provided by object o_i

Then, where summations are over the possible balance variables (class, tier) for the object,

$$Int\ Inc(o_i) = \sum_{\forall c,t} AB_{(asset\ c,t)}(o_i) * rate_{(asset\ c,t)}(o_i)$$

{calculate only if object attribute doesn't

exist}

$$COF(o_i) = \sum_{\forall c,t} AB_{(asset\ c,t)}(o_i) * R_{(asset\ c,t)} R_{(c,t)}(pt(o))$$

$$Int\ Exp(o_i) = \sum_{\forall c,t} AB_{(liability\ c,t)}(o_i) * rate_{(liability\ c,t)}(o_i)$$

{calculate only if object attribute doesn't

exist}

$$VOF(o_i) = \sum_{\forall c,t} AB_{(liability\ c,t)}(o_i) * R_{(liability\ c,t)} R_{(c,t)}(pt(o))$$

Allocated Balances

[0093] Let Total Amount = Balance Sheet amount to be allocated to object

Rule = Rule for allocating Amount

Then, DPM calculates the allocation to object o to determine the allocated balance:

$B(o_i)$ = Rule applied to (Total Amount)
 = The Allocated Balance

Treat this balance as any one of the average balances associated with the object, where class is specified by users, tier is "allocated". Thus, $B_i(o_i)$ is one of the $AB_{(c,t)}(o_i)$ defined above.

NI CALCULATION RULE TYPE III (82)

[0094] Let $AB_{(c,t)}(o_i)$ = Average Balances of the object o_i
 $rate_{(c,t)}(o_i)$ = Effective interest rate for the corresponding balance
 $Type_{p,a}(o_i)$ = Object o_i 's product and object attributes as needed to identify treatment
 $R_{(c,t)}(type_{p,a}(o_i))$ = Rate (treatment rate) for this object's product type, given the balance class, and tier/tenor
 $Int\ Inc(o_i)$ = Interest Income of object o_i
 $COF(o_i)$ = Cost of funds used by object o_i
 $Int\ Exp(o_i)$ = Interest Expense for object o_i
 $VOF(o_i)$ = Value of funds provided by object o_i

Then, where summations are over the possible balance attributes (state, tier) for the object,

$$Int\ Inc(o_i) = \sum_{\forall c,t} AB_{(asset\ c,t)}(o_i) * rate_{(asset\ c,t)}(o_i)$$

{calculate only if object attribute doesn't exist}

$$COF(o_i) = \sum_{\forall c,t} AB_{(asset\ c,t)}(o_i) * R_{(asset\ c,t)}(type_{p,a}(o_i))$$

$$Int\ Exp(o_i) = \sum_{\forall c,t} AB_{(liability\ c,t)}(o_i) * rate_{(liability\ c,t)}(o_i)$$

{calculate only if object attribute doesn't exist}

$$VOF(o_i) = \sum_{\forall c,t} AB_{(liability\ c,t)}(o_i) * R_{(c,t)}(type_{p,a}(o_i))$$

NI CALCULATION RULE TYPE IV (83)

[0095] Let $AB_{(c,t)}(o_i)$ = Average Balances of the object

$rate_{(c,t)}(o_i)$ = Effective interest rate for the corresponding balance amounts

$type_{p,a,b}(o_i)$ = Object o_i 's product, object attribute, and behavior types as needed to identify treatment rate

$R_{(c,t)}(type_{p,a,b}(o_i))$ = Rate (treatment rate) for objects of this product type, balance class, and tier/tenor

$Int\ Inc(o_i)$ = Interest Income of object o_i

$COF(o_i)$ = Cost of funds used by object o_i

$Int\ Exp(o_i)$ = Interest Expense for object o_i

$VOF(o_i)$ = Value of funds provided by object o_i

[0096] Then, where summations are over the possible balance variables (state, tier) for the object,

$$Int\ Inc(o_i) = \sum AB_{(asset\ c,t)}(o_i) * rate_{(asset\ c,t)}(o_i)$$

{calculate only if object attribute

doesn't exist}

$$COF(o_i) = \sum AB_{(asset\ c,t)}(o_i) * R_{(asset,t)}(type_{p,a,b}(o_i))$$

$$Int\ Exp(o_i) = \sum AB_{(liability\ ,t)}(o_i) * rate_{(liability\ ,t)}(o_i)$$

{calculate only if object attribute doesn't exist}

$$VOF(o_i) = \sum AB_{(liability\ ,t)}(o_i) * R_{(liability\ ,t)}(type_{p,a,b}(o_i))$$

NI CALCULATION RULE TYPE V (84)

[0097] Any Net Interest calculation that is non-iterative, canonical, and represents the marginal GAAP valuation of an object's balance sheet resource related revenues or expenses for each (o_i).

[0098] Note that in firms that are highly leveraged, the use of COF/VOF separation leads to a significant and volatile piece of NI, the net difference between to sum of COF and the sum of VOF (after adjusting for EOAE per the following section) and the firm's total NI. This is known by a banker as "mismatch profits arising from the difference in tenors" (duration) of the assets and liabilities.

If VOF and COF rates are based on matched maturity of objects then the difference between the firms total NI and the sum of the objects is the profit arising from the firm having different duration of balance sheet related objects. Since this profit is not related to a specific object, but the combination of objects in the enterprise, a separate profit measure is appropriate and possible using DPM's approach. The use of the rules above allow for a novel method of calculating funds transfer pricing, since the rules are based on sets, the processing can be preformed in parallel. Further, since the rules are canonical this approach leads to a computationally efficient method of calculating these types of profit values.

NI CALCULATIONS OF EOAE

[0099] Since GAAP financial statement's balance sheet is based on the balancing equation Assets equals Liabilities plus Equity, NI should be adjusted for the value of the Equity resource consumed by each Asset or Liability object. Calculating Earnings on Allocated Equity as part of an object's NI:

Four exclusive options are provided for allocating equity to objects. DPM's options are as follows:

- Option 1 No calculation of EOAE.

- Option 2 EOAE calculation based on a simple equity ratio.
- Option 3 Equity allocation for all assets following industry standards.
- Option 4 Equity allocation using an economic allocation rule, based on object cohorts and modern portfolio theory's capital asset pricing model.

Option 1 (85)

$$\text{EOAE}(o_i) = 0$$

Option 2 (86)

Let $\text{AB}_{(\text{asset}, t)}(o_i)$ = Average Asset balances of the object o_i , including any allocated asset balances

ER = Equity Ratio

R_{equity} = Treatment Rate for equity

$$\text{Then, EOAE}(o_i) = R_{\text{equity}} * \text{ER} * \sum \text{AB}_{(\text{asset}, t)}(o_i)$$

where the summation is taken over all asset balances.

Option 3 (87)

Let $\text{Amount}(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter, etc.

$\text{Wt}(\text{type}(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level

$\text{W}(\text{Wt}(\text{type}(o_i)))$ = determined by the weight code

Cap Ratio = An appropriate risk-weighted capital ratio chosen

R_{equity} = Treatment Rate for equity

$$\text{Then, } \text{EOAE}(o_i) = R_{\text{equity}} * \sum [\text{Amount}(o_i) * W(\text{Wt}(o_i)) * \text{Cap Ratio}]$$

where the summation is taken over all balances of o_i if there are multiple amounts.

Option 4 (88)

Let $\text{Amount}(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $\text{AB}_{(c,s,t)}(o_i)$)

$\text{Cohort}(o_i)$ = The cohort of objects in which object o is a member

$E_{\text{cohort}}(o_i)$ = The equity allocation rule for the cohort of object o .

This is a linear (two-valued) function that operates on $\text{Amount}(o_i)$ of the form $\alpha + \beta * \text{Amount}(o)$.

R_{equity} = Treatment Rate(s) for equity for the $\text{Amount}(o_i)$ value(s)

$$\begin{aligned} \text{Then, } \text{EOAE}(o_i) &= \sum R_{\text{equity}} * E_{\text{cohort}}(o)(\text{Amount}(o_i)) \\ &= \sum R_{\text{equity}} * [\alpha + \beta * \text{Amount}(o_i)] \end{aligned}$$

where summation occurs if $\text{Amount}(o_i)$ is a set of values (such as the object and allocated balances related to the object).

4. Calculate Other Revenue for All Objects (see Fig. 9)

OR Calculation Rule Type I (90)

Let OR_i = Financial Statement Other Revenue attribute subset ,

$\text{OR}_i(o_i)$ = The amount of OR_i apportioned to object o_i ,

$O(\text{OR}_i)$ = the objects that map to OR_i .

Let M be an OR calculation method, where M is dependent upon the OR subset under consideration. We then have the following.

If $M(OR_i)$ = a "balance" attribute method.

Define

$M(OR_i)(o_i)$ = An average balance method for calculating o_i 's OR

$$\text{and } OR_i(o_i) = OR_i * \frac{\text{Balance}(o_i)}{\sum_j (\text{Balance}(o_j))}$$

where the summation is over all o_i in $o_i(OR_i)$.

If $M(OR_i)$ = A "count" method for calculating o_i 's OR

Define

$M(OR_i)(o_i)$ = 1

$$\text{and } OR_i(o_i) = OR_i * \frac{1}{(\text{count}(a_j) \text{ in } O(OR_i))}$$

where the count is over all o_i in $o_i(OR_i)$.

If $M(OR_i)$ = "event count," we can define

$M(OR_i)(o_i)$ = Count of events in profit measurement period for object o_i

$$\text{and } OR_i(o_i) = OR_i * \frac{\text{count of events for object } o_i}{\sum_j (\text{count of events for object } (o_j))}$$

where the summation is over all o_i in $o_i(OR_i)$.

If $M(OR_i)$ = "event amount"

Define $M(OR_i)(o_i)$ = $\sum_{\text{events over the period}} (\text{event amounts for } o_i)$

$$\text{and } OR_i(o_i) = OR_i * \frac{\sum_{\text{events over the period}} (\text{event amounts for object } o_i)}{\sum_j \sum_{\text{events over the period}} (\text{event amounts for object } o_i)}$$

where the summation is over all events in $o_i(OR_i)$, and

the events are restricted to a class of event type. Then, we have the total OR for object o given by the sum of these allocations for all sets for which a has an association:

$$OR(o_i) = \sum (OR_i(o_i)), \text{ summing over } i.$$

As a generalization, these formulas can be written in shorthand where $M(OR)$ is the corresponding function of 'o' above, as:

$$OR_i(o_i) = OR_i * \frac{M(OR_i)(o_i)}{\sum_j M(OR_i)(o_i)}$$

and

$$OR(o_i) = \sum_i^{o_i \in O(OR_i)} \left[OR_i * \frac{M(OR_i)(o_i)}{\sum_j M(OR_i)(o_i)} \right]$$

OR Calculation Rule Type II (91)

The formula for OR calculation is given as follows:

Let o_i = Object being considered

$OR_i(o_i)$ = OR apportioned to a (if any) from a set OR_i

$Event(t)_i(o_i)$ = The event reflecting the activity of object o_i in the period restricted to a given event type t .

$Amount(Event(o_i))$ = An event amount

$Rev(Evt_i(o_i))$ = The revenue amount associated with this event. This is

assumed to be of the form

$$= \sum_{type\ t} \sum_i \left[\alpha_i * Count(Event(t)_i(o)) + \beta_i * Amt(Event(t)_i(o)) \right]$$

where α, β are pre-entered values.

$OR(o_i)$ = Total OR apportioned to object o_i

Then $OR(o_i)$ = $\sum_{type\ t} \sum_i (Rev(Event(t)_i(o)))$ summed over all the events of o_i

+ apportioned revenue as in the Type I case.

$$= \sum_{type} \sum_i [x_i * Count(Event(t)_i(a)) + \beta_i * Amt(Event(t)_i(a))] + \sum_i (OR_i(o_i))$$

OR Calculation Rule Type III (92)

- Let o_i = Object being considered
 $OR_i(o_i)$ = OR apportioned to the object (if any) from a set OR_i
 $Event(t)_i(o_i)$ = The events reflecting the activity of object o in the period restricted to a given event type t
 $Amount(Event(t)_i(o_i))$ = The event amount
 $Rev(Event(t)_i(o_i))$ = The revenue amount associated with this event.

This is assumed to be of the form

$$= \sum_{type} \sum_i [x_i * Count(Event(t)_i(o)) + \beta_i * Amt(Event(t)_i(o))] \text{ where } \alpha, \beta \text{ are}$$

pre-entered values based on event type. For completeness, $\alpha = \beta = 0$ in the event amount is null.

- AM = The method of amortization = cash, SL, DB, interest
 $AM_k \{amount\}$ = Deferral on amount, using method AM , at time k (= 0 if $k > \text{life}$ and $\text{life} = 1$ if cash basis is selected.)
 $AM_{now} \{amount\}$ = Deferral on amount, using method M , at this period
note that this is at various points of life for various amounts.
Let $OR(o_i)$ = Total OR apportioned to object o_i .
Then $OR(o_i)$ = Amortized amounts in their first amortization period
+ amortized amounts in their higher amortization periods
+ amounts not amortized but apportioned from a pool as in Type I

We take this step at a time. First, consider the amounts in their first amortization period. These are calculated as follows, using the formula generated in Type II:

$$\begin{aligned}
 \text{Then } OR(o_i) &= \sum_{\text{type } t} \sum_i (\text{Rev}(\text{Event}(t)_i(o_i))) \text{ summed over all the} \\
 &\quad \text{transactions of object } i \\
 &\quad + \text{ apportioned revenue as in the Type I case.} \\
 &= \sum_{\text{type } t} \sum_i \left[x_i * \text{Count}(\text{Event}(t)_i(o_i)) + \beta_i * \text{Amt}(\text{Event}(t)_i(o_i)) \right] + \\
 &\quad \sum_i (OR_i(o_i))
 \end{aligned}$$

where the AM_1 methods vary with the event types. We can group the amounts being amortized by their amortization characteristics. For this purpose, let $\text{Pool}_1(L, M)$ = the pools of amounts amortizing in this period for the first time according to life L and amortization method M . The new amortizing amounts can be rewritten as follows:

$$\text{New amortized amounts} = \sum_{L, M} \text{Pool}_1(L, M)$$

Similarly, define

$\text{Pool}_k(L, M)$ = the pools of amounts amortizing in this period for the k^{th} time according to life L and amortization method M , where $L \leq k$.

N.B. any amortization calculation can be used if the calculation can be derived using known Object Attributes.

Then, the total OR for object o_i in this period is computed as follows:

$$\begin{aligned}
 OR(o_i) &= \sum_{\text{type } t} \sum_i \left[x_i * \text{Count}(\text{Event}(t)_i(o_i)) + \beta_i * \text{Amt}(\text{Event}(t)_i(o_i)) \right] \\
 &\quad + \sum_{k>1} \sum_{L, M} \text{Pool}_k(L, M) \\
 &\quad + \sum_i (OR_i(o_i))
 \end{aligned}$$

$$= \sum_k \sum_{L,M} \text{Pool}_k(L, M) + \sum_i (\text{OR}_i(o_i))$$

OR Calculation Rule Type IVI (93)

Foregone OR:

Let Actual OR for object o_i = $\text{OR}_{\text{actual}}(o_i)$ - CASH AMOUNTS

Let Expected OR for object o_i = $\text{OR}_{\text{expected}}(o_i)$

Then, Foregone OR for object o_i = $\text{OR}_{\text{foregone}}(o_i)$
 = $\text{OR}_{\text{expected}}(o_i) - \text{OR}_{\text{actual}}(o_i)$ - CASH
 AMOUNTS

OR Calculation Rule Type V (94)

[0100] Any Other Revenue calculation that is non-iterative, canonical, and represents the entire GGAP valuation of non-balance sheet resource related revenues or expenses.

5. Calculate Direct Expense for All Objects (see Fig. 10)

DE Calculation Rule Type I (100)

[0101] None directly specified - use IE calculation rules (any type). For each IE rule used in this way, substitute $\text{DE}(o_i)$ for $\text{IE}(o_i)$ in any IE calculations used as DE.

DE Calculation Rule Type II (101)

[0102] Direct expense will be a variable dependent upon the object and the event being costed. These determine the unit cost to be used and the calculation type, along with the multiplier rule being used if external amounts are needed. Thus, using subscripts to indicate variables used,

$\text{DE}_{\text{object, event-type}}$

= unit cost_{event type} * (no. of events of this type in the period)
 + amounts taken from an event file
 + costs calculated as a percentage of Event Amount,

Where the unit costs, and revenue percentage by event type, are all entered by the user as pre-processing inputs.

Then, $DE_{\text{object}} = \sum_{\text{event types}} DE_{\text{object, event-type}}$ where the summation is over event types.

DE Calculation Rule Type III (102)

$DE_{\text{object, event-type, event-sub}}$
 = unit cost_{event type} * (no. of events of this type in the period)
 + amounts taken from an event file
 + costs calculated as a percentage of event amount

DE Calculation Rule Type IV (103)

[0103] Two calculations are made, each one using the above calculations, processing two independent DE attributes for each object. DE is calculated twice for each object, allowing for comparison of plan to actual values or standard to actual values or any scenario to scenario comparison.

DE Calculation Rule Type V (104)

[0104] Any Direct Expense calculation that is non-iterative, canonical, and represents the entire GGAP valuation of costs related to object or sub-object level details.

6. Calculate Provision for All Objects (see Fig. 11)

P Calculation Rule Type I (110)

[0105] The formula for calculating P of Object i is as follows, where $PG(o_i)$ denotes the P group in which o_i is a member:

$$P(o_i) = PG(o_i) * \frac{\text{Balance of } o_i}{\sum_{o_k \in \text{RPG}(o_i)} \text{Balance } o_k}.$$

P Calculation Rule Type II (111)

[0106] The formula for calculating P of o_i is as follows, using the same symbols as above and $RF(o_i)$ denotes the expected adjustment factor for o_i :

$$P(o_i) = PG(o_i) * \frac{\text{Balance}(o_i) * RF(o_i)}{\sum_k [\text{Balance}(o_k) * RF(o_k)]}.$$

P Calculation Rule Type III (112)

[0107] The formula for calculating P of object " o_i " is as follows, where $Pr(o_i)$ is a probability for object o_i .

$$P(o_i) = \text{Exposure}(o_i) * Pr(o_i) * \text{Expected Value Adjustment}(o_i) * \frac{1}{L_i}$$

Where L is the expected number of reporting periods during the life of o_i .

P Calculation Rule Type IV (113)

[0105] The addition of any of the Type I, II or III P rules applicable to an object i.

$$P(o_i) = P(o_i)_{\text{P Type I}} + P(o_i)_{\text{P Type II}} + P(o_i)_{\text{P Type III}} + P(o_i)_{\text{P Type IV}}$$

P Calculation Rule Type V (114)

[0106] Any Provision calculation that is non-iterative, canonical, and represents the entire GGAP valuation of expected costs related to future events, contingencies, timing effects.

7. Calculate Indirect Expense for All Objects (see Fig. 12)

[0107] Indirect expense, by its nature is not related directly to an Object, therefore apportionment techniques are used to allocate indirect expense to an Object. Any apportionment function is allowed as long as it is derivable at the object level using ratios of attributes available at the object level to the summation of this available attribute across all objects receiving the apportioned expense. Examples of this type of ratio calculation (the function “F” used in the IE calculation types) are:

- Ratio 1: Balance-based apportionment of IE.
Define Apportionment ratio using Current Balance of (o_i).

Thus, the allocation of Indirect Expense k becomes (function $F(IE_k)(o_i)$ in IE rules below):

$$IE_k * \frac{\text{Current Balance of } o_i}{\sum_j (\text{Current Balance of } o_j)}, \text{ summed over all objects in grouping } j.$$

- Ratio 2: Count-based apportionment of IE

Thus, the allocation of Indirect Expense k becomes (function $F(IE_k)(o_i)$ in IE rules below):

$$IE_k * \frac{1}{(\text{count of } o_j \text{ in } O(IE_k))}, \text{ for all objects in grouping } j.$$

- Ratio 3: Revenue-based apportionment of IE
Define $NI(o_i) + OR(o_i) = \text{Total Revenue (using NI \& OR rules above) for } (o_i)$.

Thus, the allocation of Indirect Expense k becomes (function $F(IE_k)(o_i)$ in IE rules below):

$$IE_k * \frac{NI(o_i) + OR(o_i)}{\sum_j (NI(o_j) + OR(o_j))}, \text{ summed over all objects in grouping } j$$

- Ratio 4: Event Count apportionment of IE
Count of events for (o_i) are restricted to an event type.

Thus, the allocation of Indirect Expense k becomes (function F(IE_k)(o_i) in IE rules below):

$$IE_k * \frac{\text{count of event for object } o_i}{\sum_j (\text{count of event for object } (o_j))}$$

for some event type, summed over all objects in grouping j.

- Ratio 5: Transaction Amount apportionment of IE
Summation of event amounts for (o_i), restricted to a event type.

Thus, the allocation of Indirect Expense k becomes (function F(IE_k)(o_i) in IE rules below):

$$IE_k * \frac{\sum_{\text{event over the period}} (\text{event amounts for object } (o_i))}{\sum_j \sum_{\text{event over the period}} (\text{event amounts for object } (o_j))},$$

for some event type, summed over all objects in grouping j.

- Ratio 6: Direct Expense apportionment of IE
Using DE rules above for O_i.

Thus, the allocation of Indirect Expense k becomes (function F(IE_k)(o_i) in IE rules below):

$$IE_k * \frac{DE(o_i)}{\sum_j (DE(o_j))}, \text{ summed over all objects in grouping } j.$$

- Ratio 7: Normalized (averaged) apportionment of IE

Thus, the allocation of Indirect Expense k becomes in IE rules below:

$$F(IE_k)(o_i) = [IE \text{ using Ratio 1 } F(IE_k)(o_i) + IE \text{ using Ratio 3 } F(IE_k)(o_i) + IE \text{ using Ratio 6 } F(IE_k)(o_i)] \div 3.$$

IE Calculation Rule Type I (120)

[0108] Indirect expense is apportioned to accounts using one of the first three apportionment ratios above. Accordingly, using the nomenclatures above,

$$IE(o_i) = (\text{Total IE to be apportioned}) * \frac{F(IE_k)(o_i)}{\sum_k F(IE_k)(o_i)}$$

IE Calculation Rule Type II (121)

[0109] The rules for partitioning IE and defining corresponding object groups are based on product and event attributes. The calculation of $IE(o_i)$ is exactly as described above, and is given by the following, where the F's are the given apportionment ratios (any of the seven apportionment ratios are permitted for any partition O or groupings of objects).

$$IE(o_i) = \sum_k^{o_i \in O(IE)} \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j^{o_j \in O(IE)} F(IE_k)(o_j)} \right)$$

IE Calculation Rule Type III (122)

[0110] For Indirect Expense before deferral calculations, the process is similar to that as listed for the Type II Level, where:

$$IE(o_i) = \begin{aligned} & \text{New amounts in their first period of amortization} \\ & + \text{Amounts not being amortized (cash basis)} \\ & + \text{Amounts in their 2}^{nd} \text{ through last amortization period.} \end{aligned}$$

Since we include non-amortized amounts (cash basis) to be considered as amortized with only one period, this is re-written as follows:

$$IE(o_i) = \begin{aligned} & \text{New amounts in their first period of amortization (including cash-} \\ & \text{basis)} \\ & + \text{Amounts in their 2}^{nd} \text{ through last amortization period.} \end{aligned}$$

Note that non-amortized amounts are made to fit this equation by considering them to be an amortization of one profit reporting period only. Each IE set can have a different amortization type or period, though all objects receiving a specific apportionment will share the same amortization Rule.

The new amounts to be deferred are computed, therefore, as the following:

$$\text{Before deferral } IE(o_i) = IE_k * \frac{F(IE_k)(o_i)}{\sum_{j} F(IE_k)(o_j)} \text{ added over each set } IE_k \text{ to}$$

which o_i is related.

$$= \sum_k^{o_i \in O(IE)} \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \right)$$

Each of these terms may be deferred over its amortization period according to any of the amortization rules (cash, straight line, declining balance, or interest amortization calculations). Since amortization methods may vary by set, we have the following, where $AM_1(L,R)$ is used to denote the amortization rule and its life:

$$IE(o_i) = \sum_k^{o_i \in O(IE)} AM_1(L,R) \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \right)$$

To this is added the amounts with remaining amortization life for which amortization was begun in earlier periods.

IE Calculation Rule Type IV (123)

[0111] Multiple combinations of the any of the above IE type rules I, II, or III are calculated per object.

IE Calculation Rule Type V (124)

[0112] Any Indirect Expense apportionment calculation that is non-iterative, canonical, and represents the GAAP evaluation of indirect costs.

8. Calculate After-Tax Object Profit for All Objects (see Fig. 13)

$$\text{Profit}(o_i) = [\text{NIR}(o_i) + \text{OR}(o_i) - \text{DE}(o_i) - \text{IE}(o_i) - \text{P}(o_i)] * (1 - \text{EffectiveTaxRate})$$

where, for a two tier taxation system, Effective Tax Rate is calculated as:

$$\text{Effective Tax Rate} = (1 - \text{tax rate 2}) * (\text{tax rate 1}) + \text{tax rate 2}.$$

In the calculation of Effective Tax Rate, this formula assumes the two rates are effective rates which apply to the business conditions (not the nominal statutory rates), and that tax rate can be deducted from income in the calculation of tax rate. Then,

$$\text{Total Profit} = \sum_i [\text{Profit}(o_i)]$$

For those companies which use economic profit value calculations, the formula changes to:

$$\text{Profit}(o_i) = \{[\text{NIR}(o_i) + \text{OR}(o_i) - \text{DE}(o_i) - \text{IE}(o_i) - \text{P}(o_i)] * (1 - \text{EffectiveTaxRate})\} - \text{SVA}(o_i)$$

where

$$\text{SVA}(o_i) = \alpha(o_i) + \beta(o_i) * \text{Amount}(o_i)$$

and

$\alpha(o_i)$, $\beta(o_i)$ are functions for a cohort of objects in which o_i is a member, and $\text{Amount}(o_i)$ is given by a rule which maps o_i to a data value (such as balance, or allocated equity) also defined at the cohort level. (A cohort defined here represents a grouping of objects with similar risk characteristics, consistent with Modern Portfolio Theory and the Capital Asset Pricing Model.)

Shareholder Value Add (SVA) is a method financial analysts use to adjust profit measures for risk. The idea is to subtract from the profit measure the cost of the equity required to support whatever object is being measured. Companies use this risk adjustment measure essentially to burden the profit for risk being taken with the equity funds used by the object. These institutions will classify cohorts of risk and the risk cost equivalent as a percentage of account balance or allocated equity (i.e., "Hurdles").

DPM Example

[0113] In the airline industry a need for detailed customer profitability can be measured using DPM. Here the fundamental object is the seat, allowing consistent profitability values aggregated by route, aircraft type, as well as customer dimensions using data warehousing technology. The need for detailed customer profitability is being driven by the business impact analysis required to support loyalty and alliance strategic decisions. The following is a DPM profit calculation for a seat, with real profit measurement parameters simplified (not all aspects of true airline business is demonstrated) and where examples of each type of rule are utilized in DPM processing.

Flight: Air101

Date: 7/1/1998

From: London

To: New York

Equipment: Boeing 747-400

Classes: First (20 Seats); Business (80 Seats); Economy (300 seats)

DETAILED PROFIT METRIC PROCESSING

Step 1: Populate Database – assuming a relational database management system and terminology.

- Initialize database;

Extract, Condition, and Load the following tables: Planes, Flights,

Customers, Employees, Locations; The net balances in the Planes entity can be maintained by use of DPM amortization IE calculation from the prior period.

- Extract, Condition, and Load the following tables: Financial Transactions, Events; Manifest (occupant, seat, flight, date attributes);
- Extract, Condition, and Load the Financial Statement table;
- Calculate and populate Rate table;

Figure 14 shows a partial relational database schema showing the entities and attributes used in the example's processing.

Step 2: Maintain Object Groups and Rule Maps – a database processing routine is performed creating the following groupings:
Class to Seat

- Flight to Locations
- Seat to Plane

For ease in understanding the rule the specifications used to populate the database with rule parameters the processing instructions are shown below in the Rules. Also, most rules group by plane – the rule discussion below assumes this grouping without reference.

Step 3: Calculate Net Interest for Seat – Four types of NIR rules are processed - type I, II, III, IV for each seat. Interest rates are matched to plane purchase date for initial plane investments, and interest rates for plane net capitalizable improvements are funded with a 5 year pool of rates. Plane asset balances are kept in the Plane table maintained in Step 1.2 above.

NIR Type I: Carry cost of plane asset by seat is determined.

Rule

Populated in Step 2 are:

- The AAB(seat) parameter is Plane: net__orig_bal * (1/total seats on plane)
- The rt parameter is Treatment_rts: 25_yr_rate (maintained for each plane) There is no need for liability rates.

Calculate COF(seat) = AAB(seat) * rt for all seats on flight.

All other attributes are NI Type I calculations results are null. No grouping.

NIR Type II : Allocate net receivable/payable to seat for carry cost profit adjustment. This adjusts profitability for the impact of cash flows vs. accounting flows. This airline wants to apportion this cost across all revenue seats based on class_wt, a modeling parameter. A total weighted seat (tw) for the accounting period is a modeling parameter; where the seat factor is determined as a ratio of seat footprint to class portion of the plane's seat revenue space. (e.g. 1st = 15%, 2nd = 25% & 3rd = 60% of plane's seat revenue space with each seat evenly apportioned in class – 1/20, 1/80, 1/300 respectively, in this case.)

Rule

Populated in Step 2 are:

- The AB(seat) parameter is Financial: net_recv'ble * (1 / tws)
- The rt parameter is Treatment_rts: pool (for null plane row)

There is no need for liability rates.

Calculate COF(seat) = AB(seat) * rt * class_wt

Grouped by class all seats, so no_seats??? is no_seats1st value in the plane entity for first class seats on this plane, and so on for 2nd & 3rd class seat groups. The net recv'ble column is derived from the difference between sums of period_amts for the receivables minus sum of payable rows for this profit period.

All other attributes and NI Type II calculations results are null.

NIR Type III : Calculate the NI value of the customer mileage benefit

payable for each seat.

Rule

Populated in Step 2 are:

- The AB(seat) parameter is Customer: bene_miles * loyalty factor
- The rt parameter is Treatment_rts: pool (for null plane row)

There is no need for an asset rate.

Calculate $COF(seat) = AB(seat) * rt$

Since a customer can only occupy one seat, no groupings are used in this rule map.

All other attributes and NI Type III calculations results are null.

NIR Type IV: Calculate the NI impact of the plane's improvements for each seat. Upper classes interior, customer electronics and seating are improved faster during the life of the plane. Management strategy is for these improvements to be loyalty program related; they are amortized quicker and hence shorter funding requirement with less certain life. Therefore the loyal customers to pay proportionately more of the funding costs of improvement assets.

Rule

Populated in Step 2 are:

- The AB(seat) parameter is Plane:imp_net_bal * (1/tsw)
- The rt parameter is Treatment_rts: pool (for plane row) * Customer: loyalty_rtng

There is no need for a liability rate.

Calculate $COF(seat) = AB(seat) * rt * class_fac$

The unique class_fac values sum to 1. The rule map is grouped by classes (or class_fac).

All other attributes and NI Type IV calculations results are null.

NI EOAE- Option 4: Allocate equity based on mileage benefit and have it reduce NI by the weighted average cost of capital for the airline.

Rule

Populated in Step2 are:

- The Amount(seat) parameter is Customer:bene_miles
- The equity rate is 9.75%

Calculate EOAE(seat) = Amount(seat) * equity rate * cohort_wt

The cohort is based groups of each instance of loyalty_rtn and class of seat paired. Cohort_wt is "beta" and no "alpha."

[0114] All other attributes and EOAE calculations results are null.

Step 4: Calculate Other Revenues for each Seat – Revenue arises from ticket fares, duty free sales on board aircraft, excess baggage penalties collected, alliance code sharing license and multiple leg customer trips.

OR Type I: Apportion revenue from code sharing with alliance. Apportion revenue by seat allocated to alliance passenger.

Rule

Populated in Step 2 are:

- Flight:period_amt is alliance revenue per flight plus the sum of all flight/date alliance financial transactions.

Calculate OR(seat) = sum of Flight:period_amt *

(1/ no alliance seats available on flight)

Only for seats occupied by an alliance customer or a seat that is empty.

OR Type II: Use Transaction table to find direct passenger revenue by seat.

Rule

Populated in Step 2 are:

- Transaction:* (amounts, seats, flight, date, transaction type) are populated for events, financial or non-financial.

Calculate $OR(seat) = \text{sum of Transaction:trn_amt}$

where type = "passenger_payment" for each seat.

No seat grouping in rule map.

OR Type III: Apportion flight freight revenue amongst all seats, weighted by class_wt.

Rule

Calculate $OR(seat) = \text{sum of Transaction:trn_amt} * \text{class_wt} * (1/(\text{no_seats}???)$

where type "freight" for each seat.

Group seats by class (??? Is 1st, 2nd, 3rd.) Class_wt is a normalized weight for apportioning revenue amongst classes.

OR Type IV: Calculate the loyalty mileage benefit by seat.

Rule

Calculate Forgone $OR(seat) = \text{Flight: ???_fare} - \text{sum of transactions:trn_amt}$ where type = "passenger_payment" for each seat.

Group by class for loyalty passenger occupied seats only.

Step 5: Calculate Direct Expenses for each Seat – Compute the direct cost of using the seat. This is true for both occupied and unoccupied seats. Fuel and flight deck crew are costs of all seats, while cost of duty free goods sold and meals are a function of occupied seats. Some costs are a function of the plane taking off, no matter the duration of the flight (e.g., maintenance.) Some costs are a function of class, such as cabin crew expense and customer consumables.

DE Type I: Show direct cost of non-food materials consumed in flight.

Rule

Populated in Step 2 are:

- Transactions:* is populated based on these direct costs.
Calculate $DE(seat) = Transactions:trn_amt$ for all flight and date rows where type = direct_exp for each seat.

No grouping in rule map.

DE Type II: Show direct cost duty free goods sold by seat.

Rule

Populated in Step 2 are:

- Transactions:* are populated based on these direct costs.
Calculate $DE(seat) = Transactions:trn_amt$ for all flight and date rows where type = duty_free for each seat.

No grouping in rule map.

DE Type III: Show direct cost of food and beverage consumed.

Rule

Populated in Step 2 are:

- Transactions:* are populated based on these direct costs
- Loading is calculated as the ratio of occupied to total class seats by class (cl_load) using manifest table and plane configuration values.

Calculate $DE(seat) = Flight: catering_cost * class_wt * cl_load$ for each seat.

Grouped by class in rule map.

DE Type IV: The staffing of each cabin has a maximum count with a minimum of 1 per 50 passengers. The air deck crew must fly the plane even if there are no passengers. Calculate DE twice, once for based on a labor cost per seat based on total crew cost and total seats; and calculate DE a second time with actual staff apportioned to actual passengers.

Rule

Populated in Step 2 are:

- Total crew cost (tcc1) parameter is derived using the employee entity for all crew on flight. $Tcc = \text{Employee:salary+bene} * (\text{Flight:schd_hours} + 1.5) / 110$
- Total crew cost (tcc2) parameter is derived using the employee entity for all crew on flight by class. $Tcc??? = \text{Employee:salary+bene} * (\text{Flight:schd_hours} + 1.5) / 110$

Note: $tcc = tcc1st + tcc2nd + tcc3rd$

Calculate $DE1(\text{seat}) = tcc * (1/(\text{total no. of seats on plane}))$

Calculate $DE2(\text{seat}) = tcc?? * (1/(\text{no. of seats occupied in class}))$
for each seat.

Grouped by class in rule map.

Step 6: Calculate Provisions for each Seat – The cost of expected future events are measured here. The airline self insures property, casualty and miscellaneous insurance premiums on a per flight basis. And a provision for future loyalty benefit, a function of loyalty rating, claimed is made in step 6.

P Type I: - The cost of the flight's insurance premium is apportioned to each seat.

Rule

Populated in Step 2 are:

- Insurance premium is maintained in the flight entity (total PG)

Calculate $P(\text{seat}) = \text{Flight:ins_prem} * 1/(\text{total no. seats on plane})$

No grouping in rule map.

P Type II: Provision for unusual maintenance cost is made on a function of the inverse of flight time and takeoffs in the last 12 months.

Rule

Populated in Step 2 are:

- Financial:period_amt is maintained in the financial entity by equipment type.
- Total flight hours and last 12 months take-offs are accumulated each month, their product is to_hrs parameter.

Calculate $P(\text{seat}) = \text{Financial:period_amt} * 1/(\text{total no. of seats on plane}) * (\text{Plane:to_last12} * \text{Flight:schd_hrs}) / \text{to_hrs}$

No seat grouping in rule map.

P Type III: Providing for future loyalty benefit.

Rule

Populated in Step 2 are:

- Customer:bene_miles is maintained using prior periods provision for benefit miles by loyalty customer
- A parameter estimating the usage rate by loyalty cohort called burn factor

Calculate $P(\text{seat}) = \text{Flight:distance} * \text{burn}(\text{loyalty_rating})$

Grouping by loyalty rating in rule map.

P Type IV: Future order cancellation reserve.

Rule

Populated in Step 2 are:

- Future airplane order cancellation penalty (pen) and order size (fut_planes) is maintained in the financial entity

- Last 12 months loading is calculated by plane

Calculate $P(\text{seat}) = \text{pen} * (\text{Plane:orig_bal} / \text{fut_planes}) *$

$1 / (\text{total no. seats on plane}) * 1/24$. where last 12 months loading less than 75%.

Only seats on where last 12 months loading less than 75%.

Step 7: Calculate Indirect Expenses for each Seat – The calculation of indirect expense is the final step of detailed level profit calculation. Here remaining cost measures that are not differentiable by seat are measured. Fuel and oil, ground costs, regular aircraft maintenance, overheads, and general marketing expenses are apportioned in IE. The airline also wants to view customer profitability loaded with the cost of unoccupied seats.

IE Type I: General and administrative costs are apportioned to a seat in this rule.

Rule

Populated in Step 2 are:

- The periods financial entity is populated with all of the airlines G&A expenses (e.g., type of G&A are passenger services, navigation licenses, rentals, miscellaneous costs, premises and property taxes.) Allocate these costs based on seat revenue (NI + OR.)

Calculate $IE(\text{seat}) = \text{sum}(\text{Financial:trn_amt}) * (\text{sum}(\text{NI}(\text{seat})) + \text{sum}(\text{OR}(\text{seat}))) / (\text{Total OR} + \text{NI for period})$

No seat grouping in rule map for all Financial:type = "G&A".

IE Type II: Ground location costs, airport specific and gate expenses are apportioned by flight.

Rule

Populated in Step 2 are:

- Populate all of these expenses for the period Transactions:trn_amt with the type being the three letter international airport identifier.

- Calculate the number of seats flown to the flight airports during the profit period (tfc)

$$\text{Calculate IE(seat) = sum of Transactions:trn_amt} * \\ (1 / \text{tfc}) / 2$$

Group transactions by pair of airports in flight row for rule map, where only these types of expenses are included in the tuple.

IE Type III: Fixed asset depreciation is allocated to a seat.

Rule

Populated in Step 2 are:

- The net plane balances (Plane:net_orig_bal & Plane:imp_net_bal) are updated for last period's amortization or write-off.
- The amortization factor (function of amortization) given age of asset (for both original investment and improvements) is amfo and amfi for each plane.
- The tax planning estimate for taxable equivalent gross-up, due to accelerated tax amortization, is .8 = teg (less than 1 since a tax credit)

$$\text{Calculate IE(seat) = ((Plane:net_orig_bal - Plane:orig_bal) *} \\ \text{amfo) + (Plane:imp_org_bal - Plane: imp_org_bal) * amfi)) * teg *} \\ (1 / (\text{total no. seats on plane})) * (\text{Flight:schd_hrs} / \\ \text{Plane:hrs_last_12} / 12)$$

No grouping of seats in rule map.

IE Type IV: Indirect marketing expenses are apportioned by loyalty class for customer profit aggregations and by seat for other aggregations.

Rule

Populated in Step 2 are:

- Indirect marketing expense per loyalty tier per flight is parameterized as mef???, where ??? is 1st, 2nd, 3rd class.

Calculate IE(seat) = mef??? * (1 / (no. of occupied seats in
???))

Group seats by class in rule map.

IE Type V: For loyalty investment analysis, allocate all
DE for empty seats to occupied seats equally.

- Populated, after all prior steps are calculated, are the total DE less OR for each flight during the period, idef.

Calculate IE(seat) = idef / (total no. of occupied seats)

Only calculate for occupied seats.

Step 8: Calculate After-tax Seat Profit – The

After-tax Profit:

Rule

Populated in Step 2 are:

- The effective tax rate (etr) for the airline is maintained in the database.

Calculate Profit(seat) = sum(NI(seat) + OR(seat) + DE(seat) +
IE(seat) + P(seat)) * (1-etr)

Each seat is calculated individually, no grouping is used.

Shareholder Value-add: The airline has determined that
some routes have a greater risk of loss due to the volatility of loading
factors. Therefore each route is given a risk factor based on the last 12
months standard deviation of loading.

Rule

Populated in Step 2 are:

- Flight:risk_factor is maintained here
- Economic equity per average seat parameter (Flight:risk_factor) per route
- Cost of capital rate is parameterized (eqrt)

Calculate SHV(seat) = Profit(seat) – (Flight:risk_factor * eqrt)

Each seat is calculated.

[0115] From the foregoing, it will be appreciated that DPM provides a metric of profit measurement consistent with GAAP at a level of detail that has not been accomplished using the traditional General Ledger based data with analytical (apportioned) and/or sample survey based information.

[0116] This new ability to resolve profit measures at a detailed level without using analytical models or statistical extrapolation is a capability needed throughout industries that find their ability to determine a marginal decision's profit impact inadequate for optimization of ownership value. The use of rule driven and database measurement processes will give large scale businesses a lower cost of maintenance and technologically scaleable tool to measure profit at a level of precision or resolution not possible in prior financial performance measurement processes.

[0117] Although a particular embodiment of the invention has been described in detail for purposes of illustration, various modifications may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited, except as by the appended claims.

WHAT IS CLAIMED IS:

1. A process for determining object level profitability in a relational database management system, comprising the steps of:

preparing information to be accessed electronically through the relational database management system;

establishing, in the relational database, rules for processing the prepared information;

calculating independently at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information;

calculating a fully absorbed profit adjustment value for each object being measured; and

combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability.

2. The process of claim 1, wherein the relational database comprises a structured query language (SQL).

3. The process of claim 1, wherein the preparing step further includes the step of calculating opportunity values of funds used or supplied by each object being measured.

4. The process of claim 1, wherein the establishing step includes the steps of providing the information necessary to select objects, and performing the correct profit calculus.

5. The process of claim 1, wherein the step of calculating at least one marginal value of profit includes the steps of calculating net interest (NI), other revenue (OR) and direct expense (DE), wherein net interest (NI) is the summation of interest income, value of funds provided and earnings on equity funds used

less the sum of interest expense and costs of funds used, other revenue (OR) is a measure of profit contribution from non-interest related sources, and direct expense (DE) is the profit value reduction due to marginal resource consumption by the object.

6. The process of claim 1, wherein the step of calculating at least one marginal value of profit includes the step of provisioning (P) for the selected set of prepared information, provisioning being the expected profit value adjustment for future outcomes related to the object.

7. The process of claim 6, wherein the step of calculating a fully absorbed profit adjustment value includes the step of calculating the value for indirect expense (IE) which is an apportioned profit value adjustment for all non-object related resource consumption.

8. The process of claim 7, wherein the combining step includes the steps of adding net interest (NI) and other revenues (OR), and subtracting therefrom direct expense (DE), provisioning (P) and indirect expense (IE).

9. The process of claim 8, including the step of adjusting the measure for object level profitability for taxes and/or object economic value.

ABSTRACT OF THE DISCLOSURE

A process for determining object level profitability includes the steps of (1) preparing information to be accessed electronically, (2) establishing rules for processing the prepared information, (3) calculating at least one marginal value of profit using established rules as applied to a selected set of prepared information, (4) calculating a fully absorbed value of profit adjustment using established rules as applied to the selected set of prepared information, and (5) combining the at least one marginal value of profit and fully absorbed value of profit adjustment to create a measure for object level profitability. The inventive process gives management profit measures tailored to its need for accurate decision oriented profit information required to manage a large organization based on profit measurement.

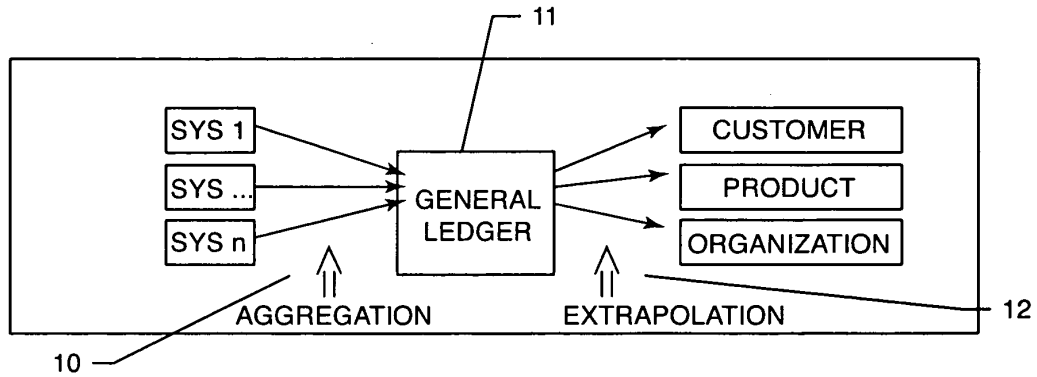


FIG. 1
PRIOR ART

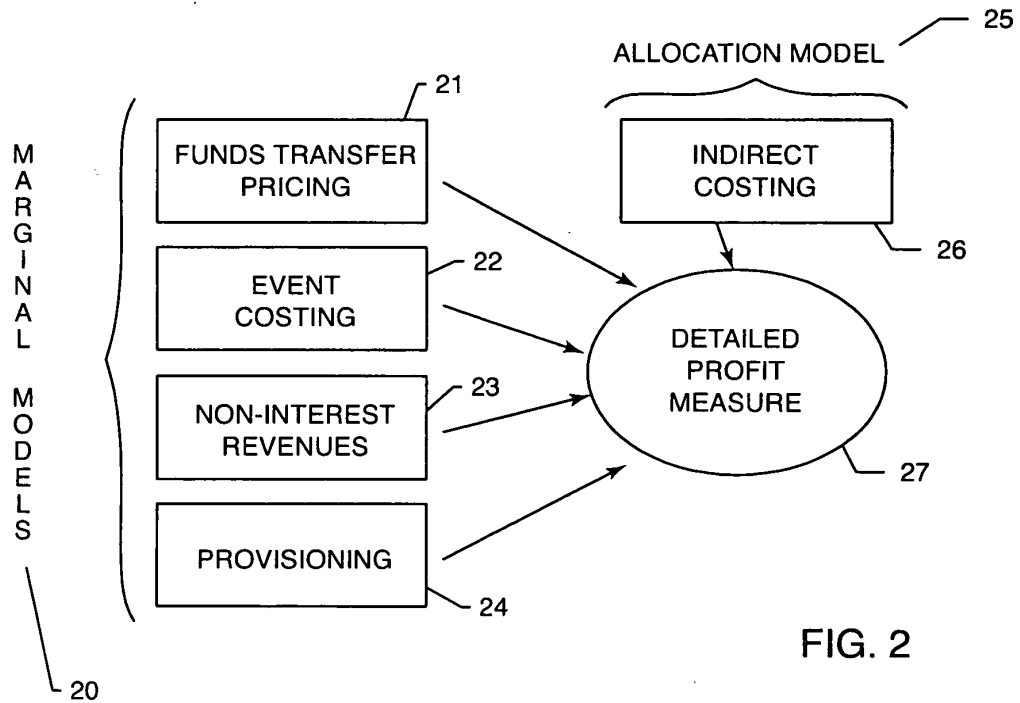


FIG. 2

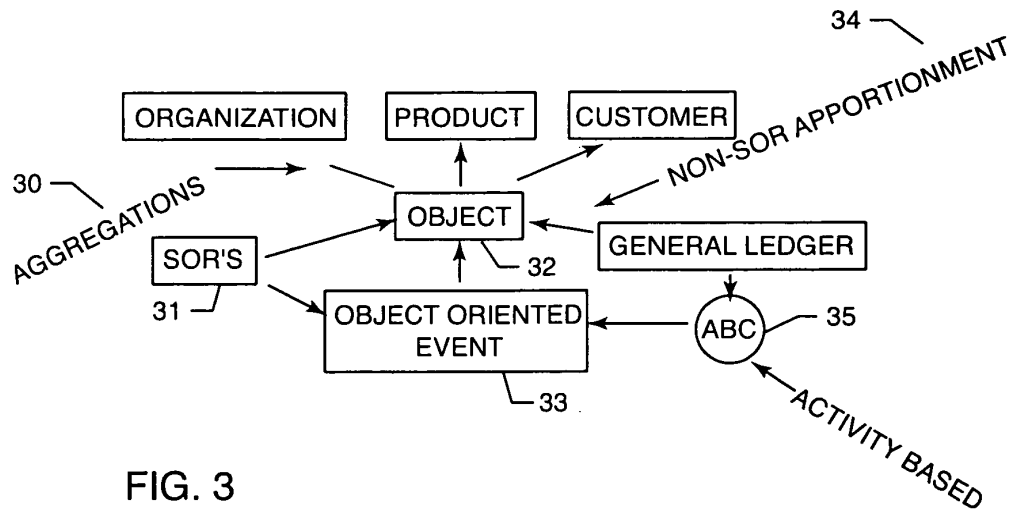


FIG. 3

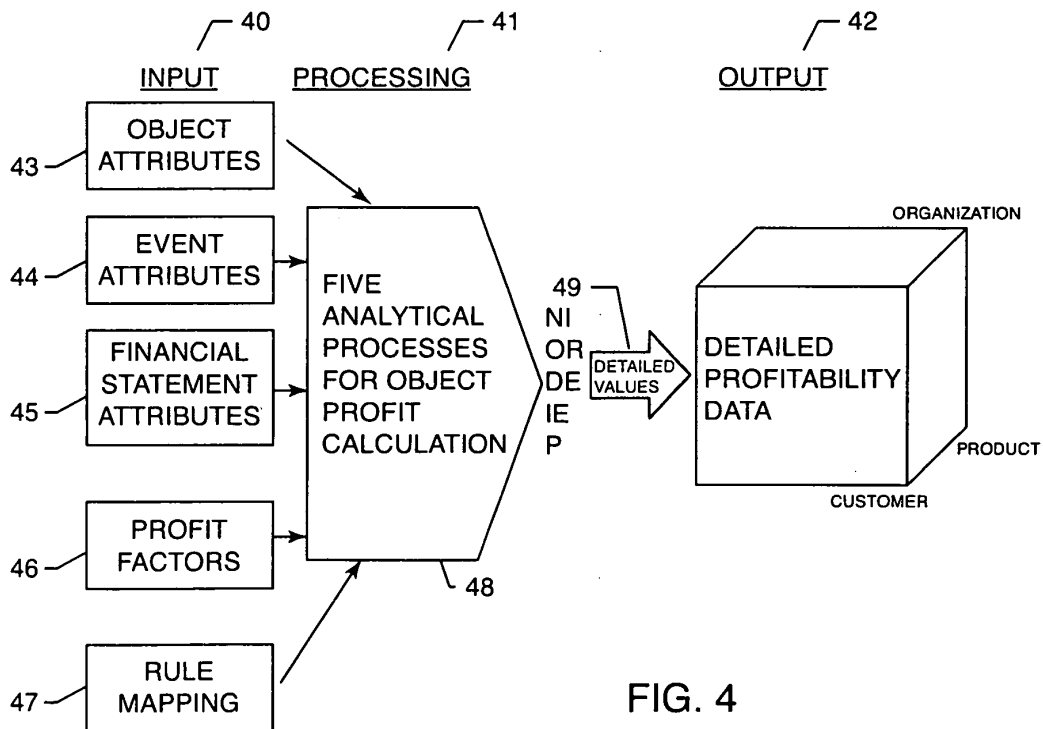


FIG. 4

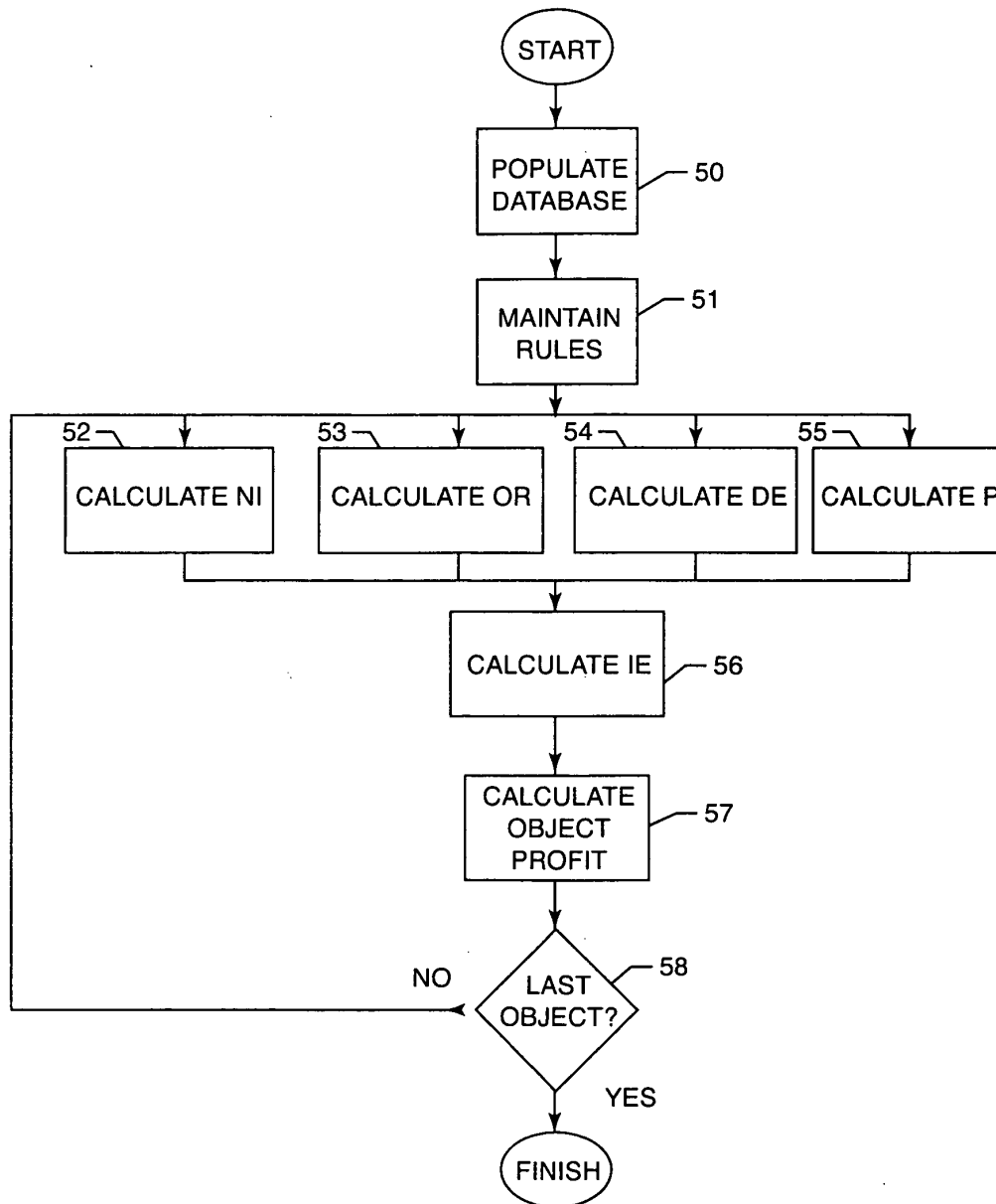


FIG. 5

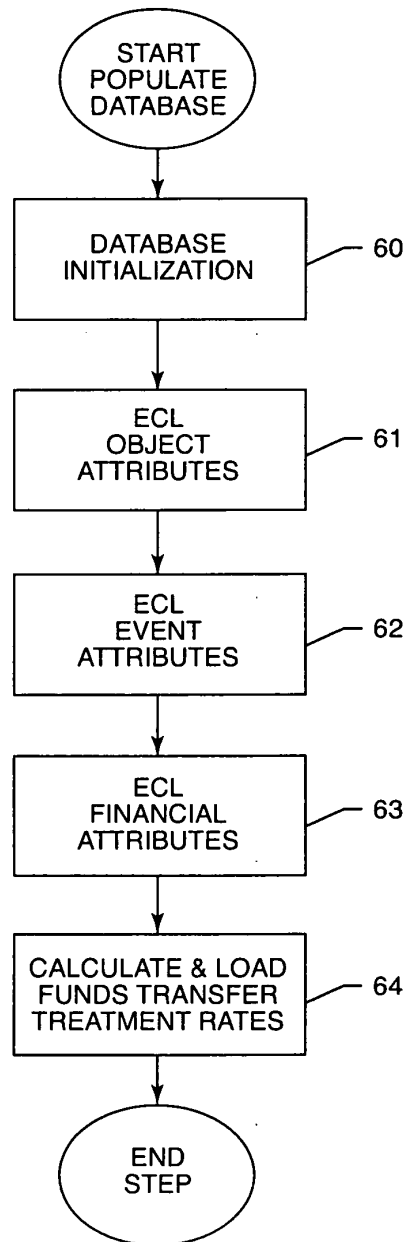


FIG. 6

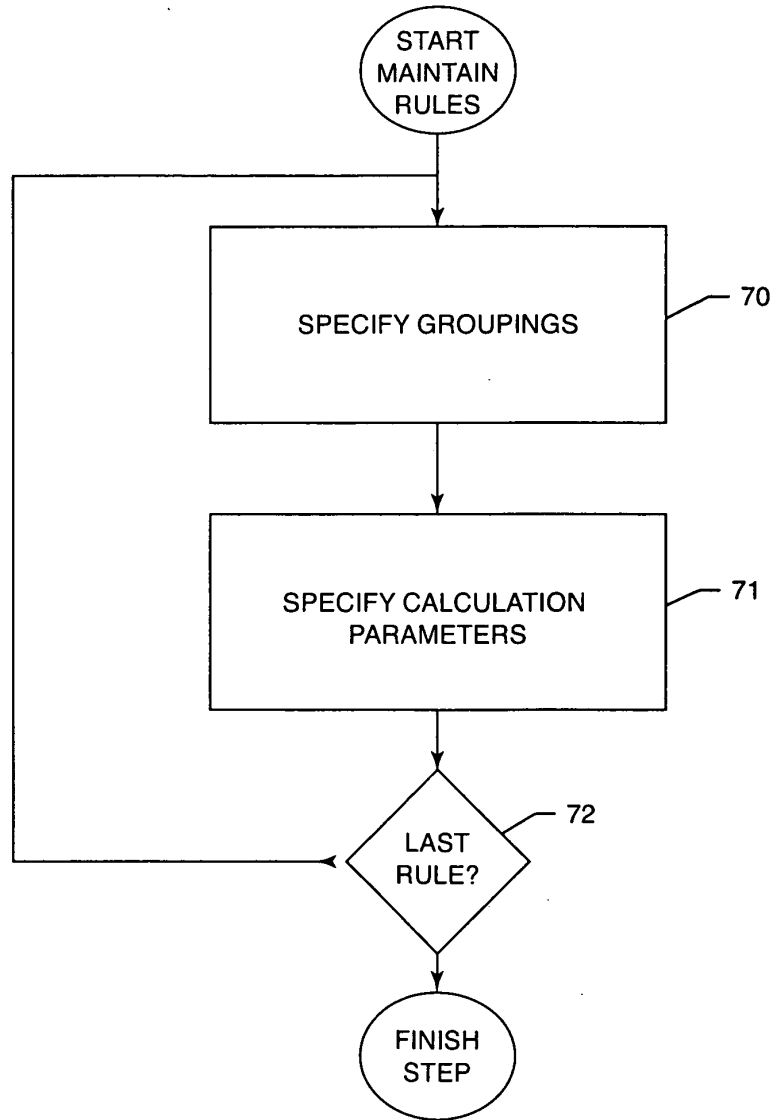
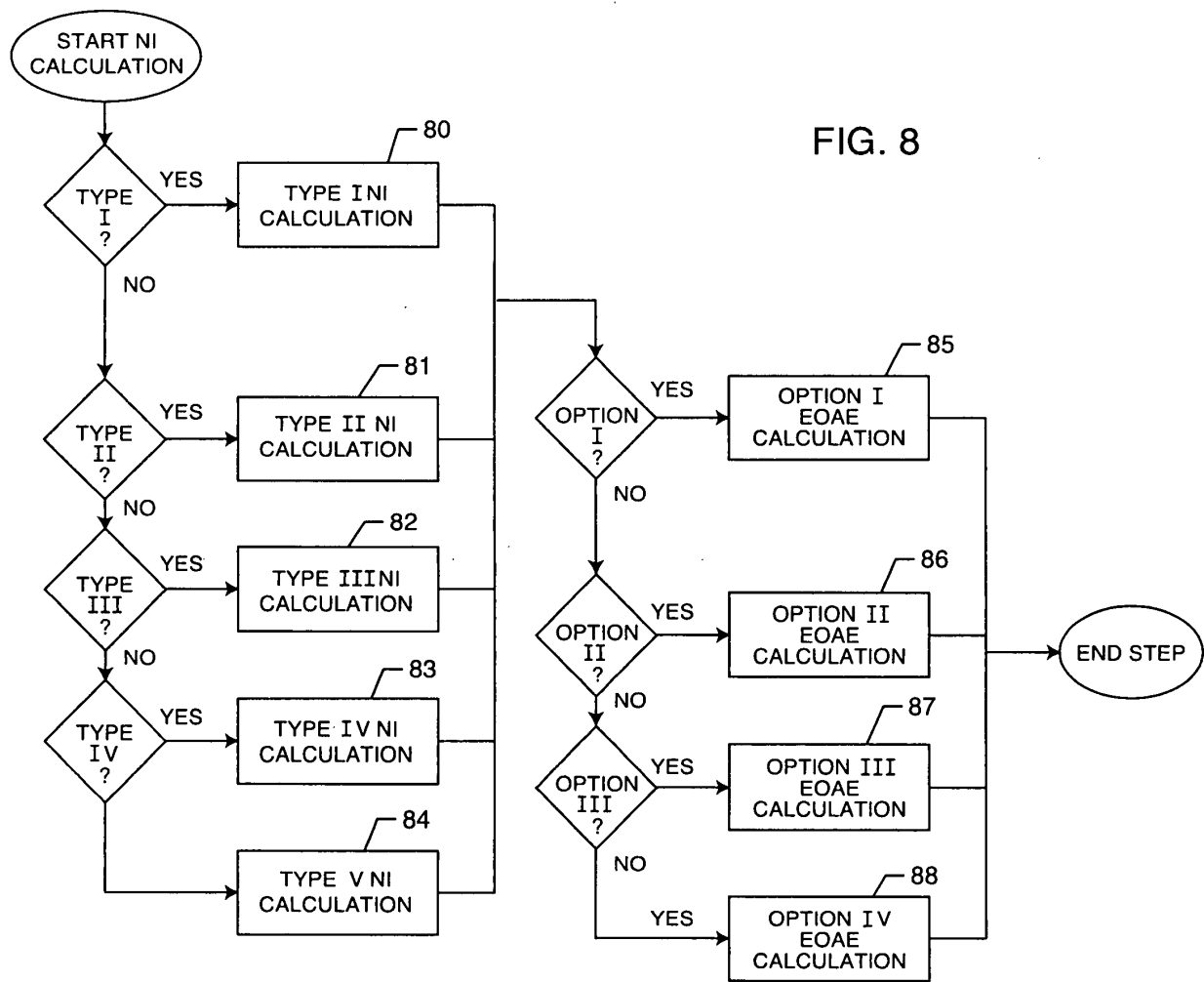


FIG. 7



6 / 12

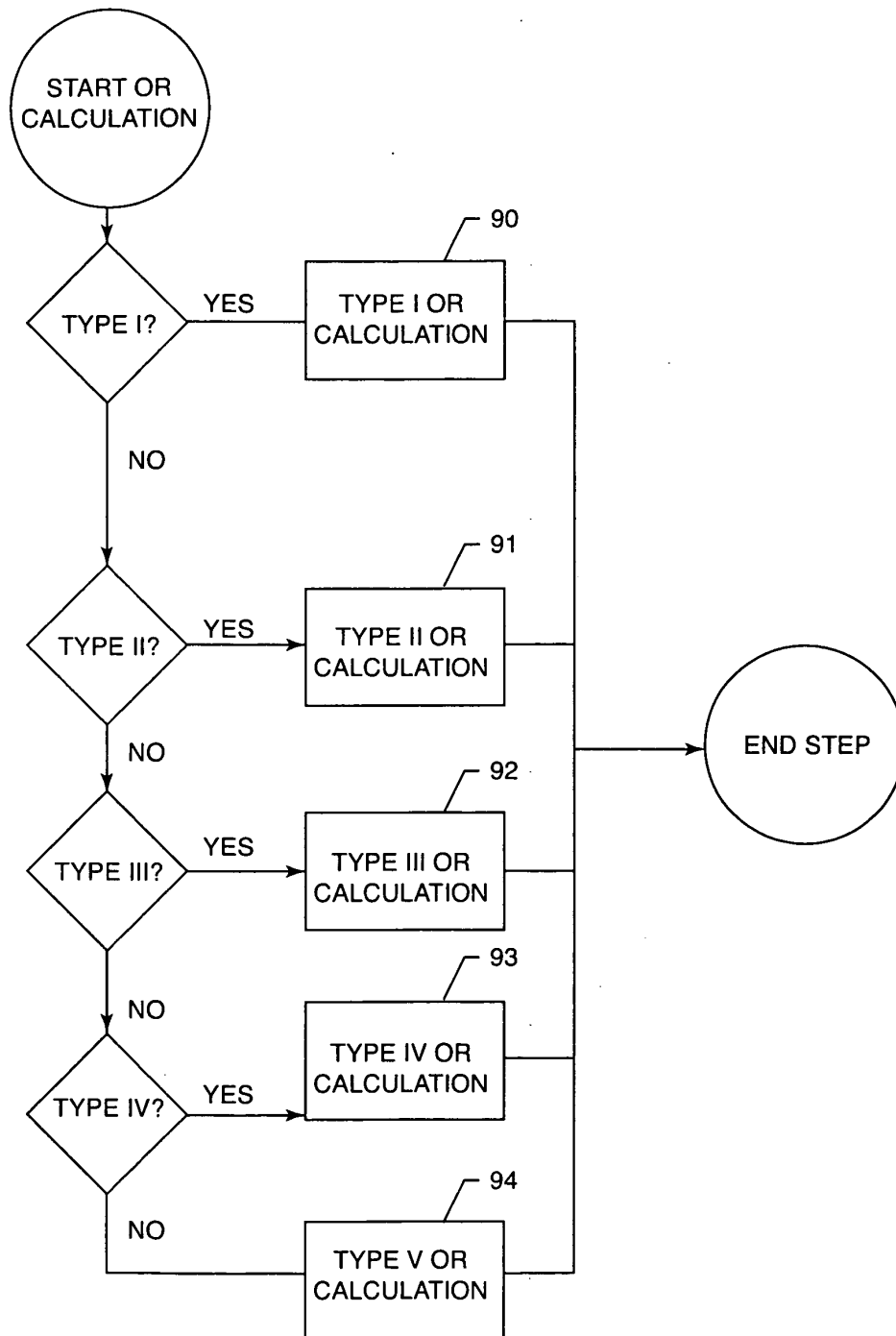


FIG. 9

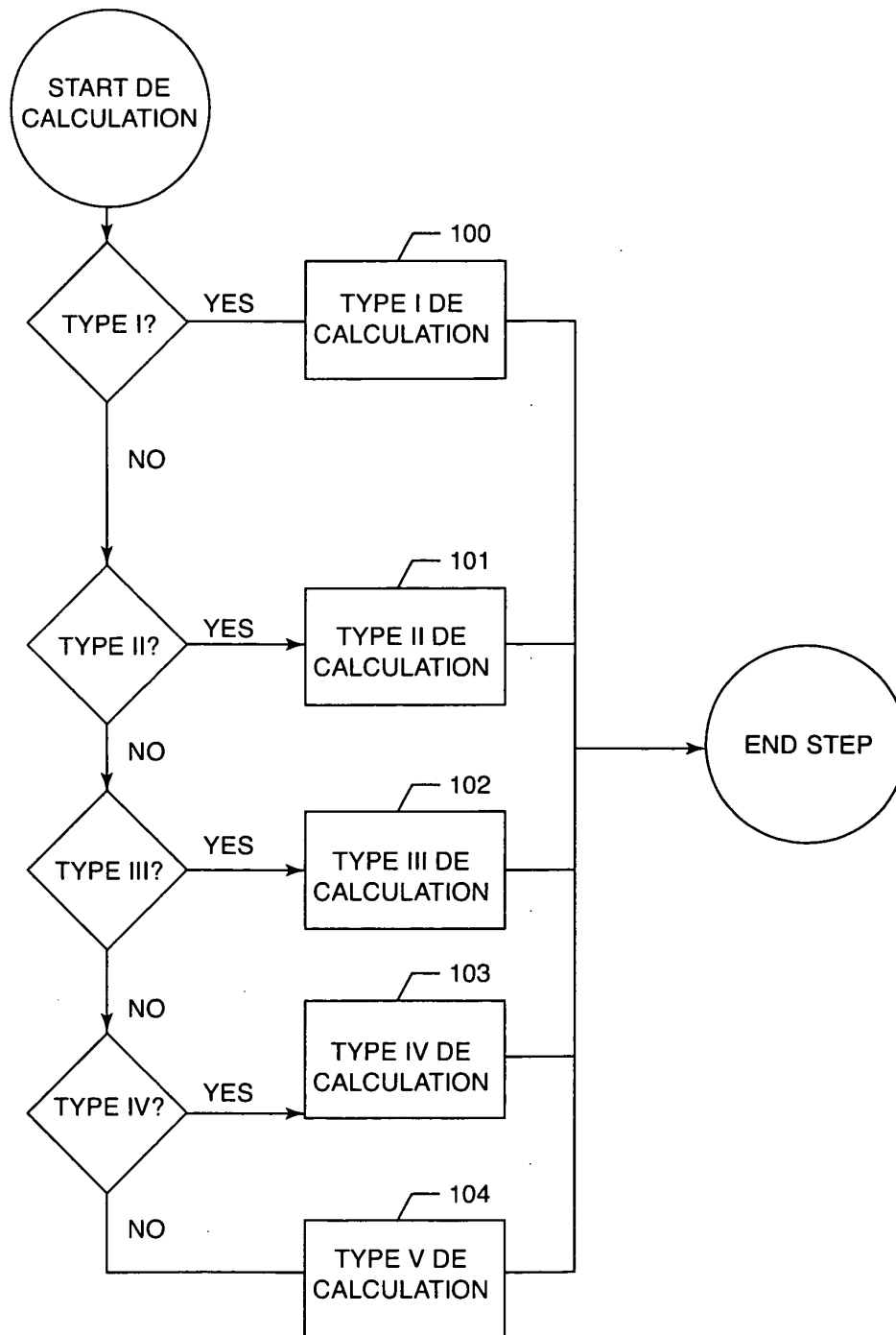


FIG. 10

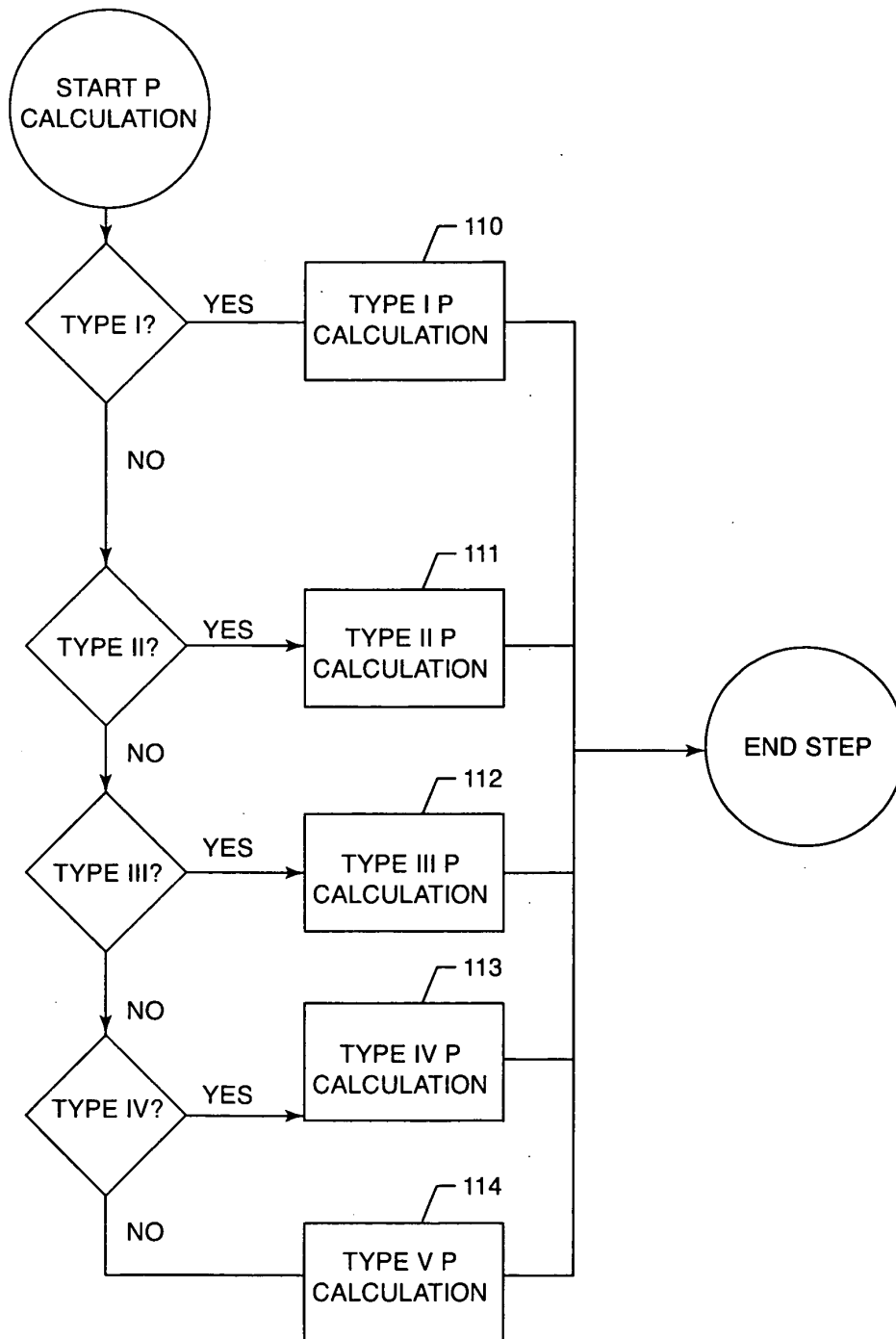


FIG. 11

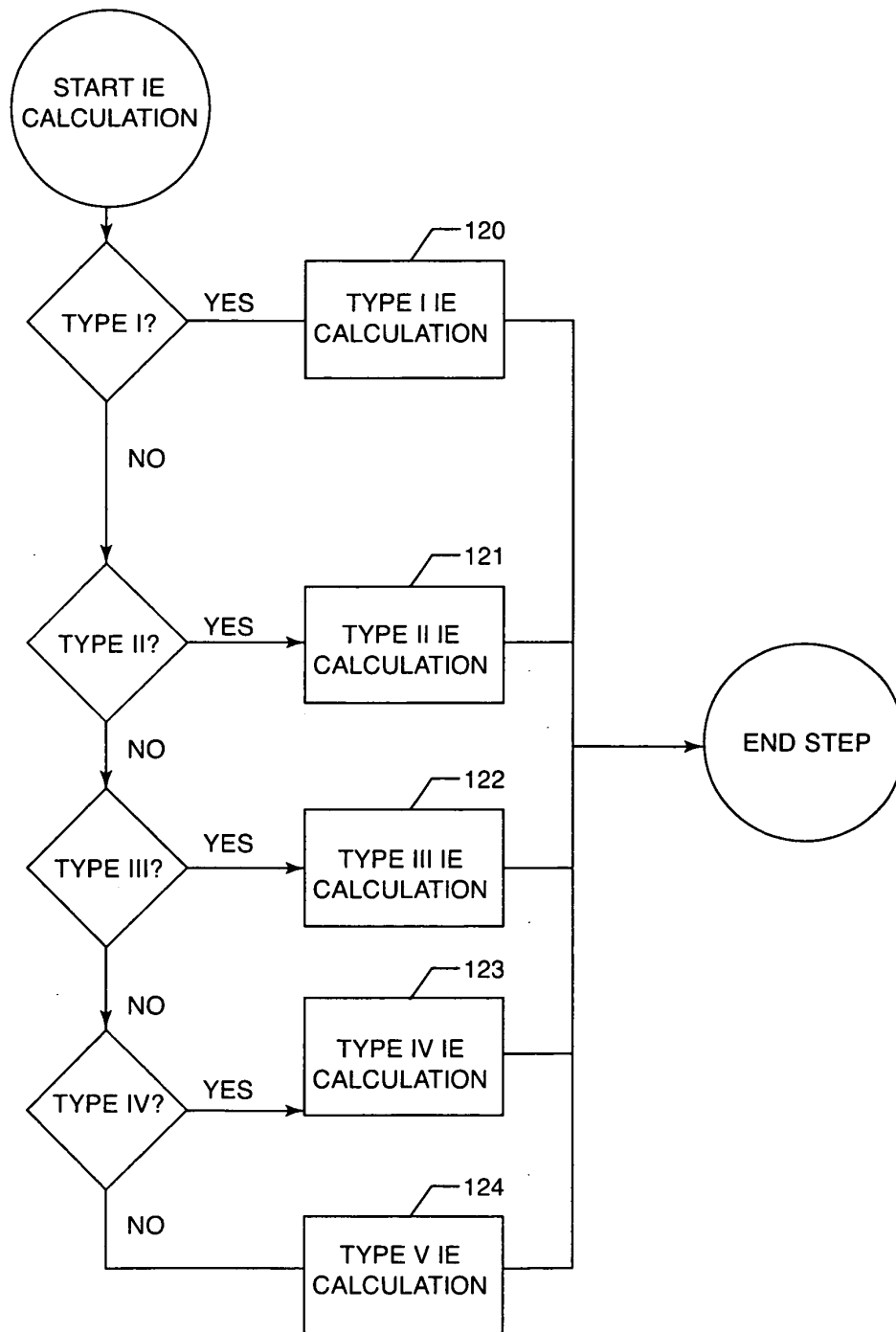


FIG. 12

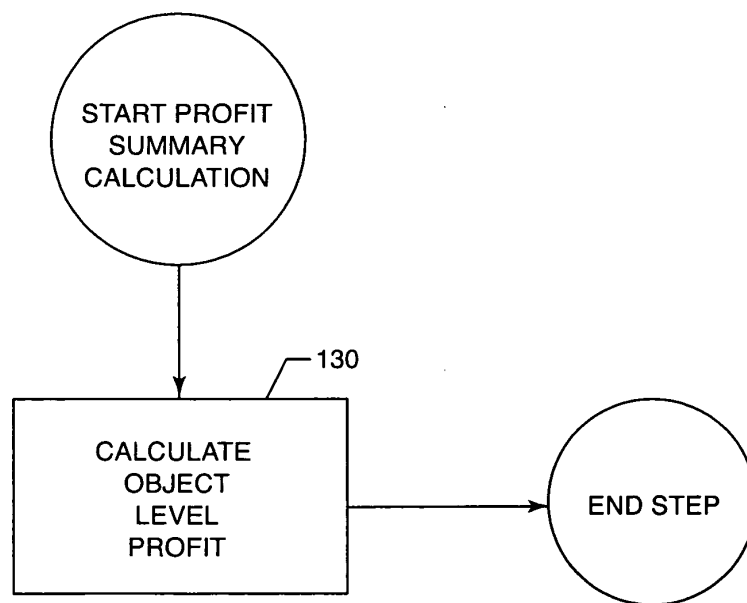
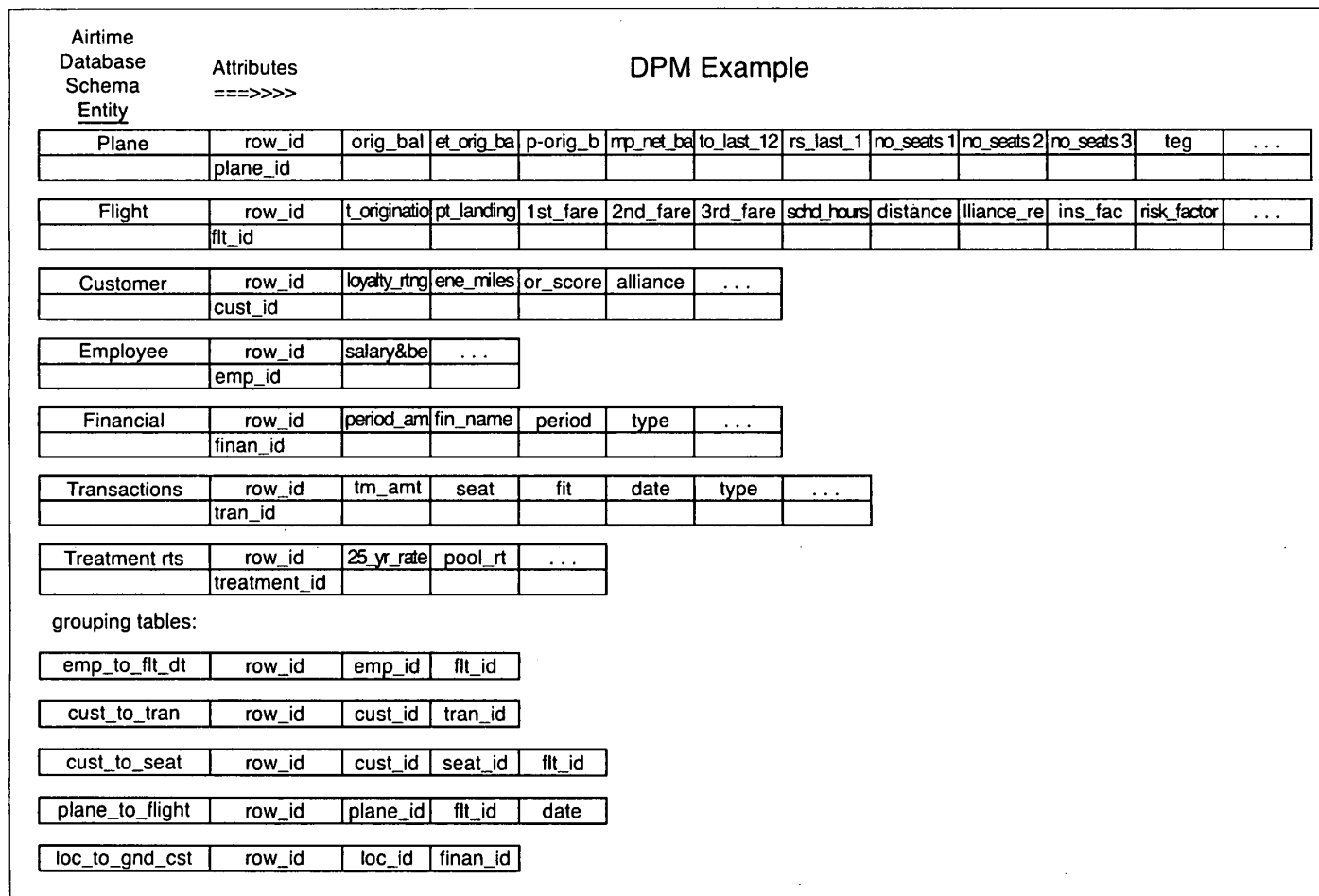


FIG. 13



12 / 12

FIG. 14

- 1 -

BERKELEY*IEOR EXHIBIT 2002
TERADATA V. BERKELEY*IEOR - CBM 2019-00011

prior application and the national or PCT International filing date of this application.

<u>60/128,769</u>	<u>April 9, 1999</u>	<u>Pending</u>
Appln. Ser. No.	Filing Date	Status

<u>PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY</u>	<u>BERK-37617</u>
Title	Attorney Docket No.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Scott W. Kelley, Registration No. 30,762; Stuart O. Lowry, Registration No. 26,563; John D. Bauersfeld, Registration No. 24,496; John E. Kelly, Registration No. 24,269; Kamran Fattahi, Registration No. 35,758; and Aaron T. Borrowman, Registration No. 42,348.

Direct all telephone calls to Scott W. Kelley, Esq. at telephone No. (818) 347-7900.

Address all correspondence to:

Scott W. Kelley
KELLY BAUERSFELD LOWRY & KELLEY, LLP
6320 Canoga Avenue, Suite 1650
Woodland Hills, California 91367

- 3 -

Full name of sole inventor: Richard Tad Leeman

Inventor's signature:

Date:

Richard Tad Leeman
Apr. 17 2000

Residence: London, United Kingdom

Citizenship: UNITED STATES OF AMERICA

Post Office Address: Park House
21 Ravenscourt Park
London W8 OTJ
United Kingdom

BEST AVAILABLE COPY

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875 Effective December 8, 2004

Application or Docket Number

11354798

APPLICATION AS FILED - PART I

(Column 1)

(Column 2)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(d), (f), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(g), (p), or (q))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(i))	9 minus 20 =	0
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))		

RATE (\$)	FEE (\$)
N/A	150.00
N/A	\$250
N/A	\$100
X\$ 25 =	
X100 =	
+180=	
TOTAL	500

RATE (\$)	FEE (\$)
N/A	300.00
N/A	\$500
N/A	\$200
X\$50 =	
X200 =	
+360=	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(i))	0	Minus **	=
Independent (37 CFR 1.16(h))	0	Minus ***	=
Application Size Fee (37 CFR 1.16(s))			
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))			

RATE (\$)	ADDITIONAL FEE (\$)
X\$ 25 =	
X100 =	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDITIONAL FEE (\$)
X\$50 =	
X200 =	
+360=	
TOTAL ADD'L FEE	

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(i))	0	Minus **	=
Independent (37 CFR 1.16(h))	0	Minus ***	=
Application Size Fee (37 CFR 1.16(s))			
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))			

RATE (\$)	ADDITIONAL FEE (\$)
X\$ 25 =	
X100 =	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDITIONAL FEE (\$)
X\$50 =	
X200 =	
+360=	
TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

02/17/2006 FFANAEIA 00000059 11354798

01 FC:2011	150.00 OP
02 FC:2111	250.00 OP
03 FC:2311	100.00 OP

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 489-267/89033



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,798	02/15/2006	Richard Tad Lepman	BERKEL-48526	9571
26252 7590 05/12/2008 KELLY LOWRY & KELLEY, LLP 6320 CANOGA AVENUE SUITE 1650 WOODLAND HILLS, CA 91367			EXAMINER RUDY, ANDREW J	
			ART UNIT 3687	PAPER NUMBER
			MAIL DATE 05/12/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/354,798		Applicant(s) LEPMAN, RICHARD TAD	
	Examiner Andrew Joseph Rudy		Art Unit 3687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) ☐ Claim(s) ____ is/are allowed.

6) ☒ Claim(s) 1-9 is/are rejected.

7) ☐ Claim(s) ____ is/are objected to.

8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-9 are pending.
2. The specification filed February 15, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The proposed material presented from pages 11-13, 20-30, etc. are not supported from the original specification from United States Application Serial Number 09/545,628 referenced from page 1 of Applicant's Disclosure. The new matter that has been added is not supported by any particular evidence from the original specification for the voluminous proposed additional material to the original specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al.

Price discloses, e.g. pages 28-41, 529, 531, 966-982 (Fig. 27-5), a method of measuring profit based on the factors of net interest revenue, other revenues (Fig 27-5, line 4, "Operating Revenues"), direct expenses (Fig 27-5, line 22, "Direct Expenses"), indirect expenses (Fig 27-5, line 30, "Indirect Expenses"), and risk (Fig 27-5, line 6, "Less Sales Returns and Allowances"), all set up to take advantage of flexible business rules.

Official Notice is taken that performing financial processing using computer software is common knowledge in the art.

To have provided a method of performing financial processing for an account using software for a computer measuring profit based on the factors of net interest revenue, other revenues, direct expenses, indirect expenses and risk, all set up to take advantage of flexible business rules to calculate known variations of one of the factors, e.g. net interest revenue, would have been obvious to one of ordinary skill in the art. Doing such would incorporate common knowledge data along with common knowledge software.

5. Applicant is reminded of their duty of disclosure with regards to references cited previously from Application Serial Number 09/545,628.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Joseph Rudy whose telephone number is 571-272-6789. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on 571-272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Joseph Rudy/
Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 11/354,798	Applicant(s)/Patent Under Reexamination LEPMAN, RICHARD TAD	
	Examiner Andrew Joseph Rudy	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Price et al., "College Accounting", Glencoe Macmillan/McGraw-Hill, Seventh Edition, 1994, pgs. 28-41, 529-531, 966,982
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Group Art Unit: 3687
	)	
Richard Tad Lepman	)	Examiner: Andrew J. Rudy
	)	
Serial No. 11/354,798	)	
	)	
Filed: February 15, 2006	)	Docket No. BERKEL-48526
	)	
For: PROCESS FOR DETERMINING	)	
OBJECT LEVEL	)	
PROFITABILITY	)	
_____	)	

AMENDMENT

Commissioner for Patents
Via E-File

Dear Sir:

In response to an Office Action dated **May 12, 2008**, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 17 of this paper.

- 1 -

BERKEL-48526
SN: 11/354,798
RESPONSE1

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Amend claim 1; and

Add claims 10-34.

Listing of Claims:

1. (Currently Amended) A process for determining object level profitability in a ~~computer relational database management system~~, comprising the steps of:

providing a relational database management system operable in association with a computer;

preparing information to be accessed electronically through the relational database management system;

establishing, in the relational database, rules for processing the prepared information;

using the relational database management system to ~~calculating~~ independently calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information;

using the relational database management system to calculate ~~calculating~~ a fully absorbed profit adjustment value for each object being measured; and

combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability.

2. (Original) The process of claim 1, wherein the relational database comprises a structured query language (SQL).

3. (Original) The process of claim 1, wherein the preparing step further includes the step of calculating opportunity values of funds used or supplied by each object being measured.

4. (Original) The process of claim 1, wherein the establishing step includes the steps of providing the information necessary to select objects, and performing the correct profit calculus.

5. (Original) The process of claim 1, wherein the step of calculating at least one marginal value of profit includes the steps of calculating net interest (NI), other revenue (OR) and direct expense (DE), wherein net interest (NI) is the summation of interest income, value of funds provided and earnings on equity funds used less the sum of interest expense and costs of funds used, other revenue (OR) is a measure of profit contribution from non-interest related sources, and direct expense (DE) is the profit value reduction due to marginal resource consumption by the object.

6. (Original) The process of claim 1, wherein the step of calculating at least one marginal value of profit includes the step of provisioning (P) for the selected set of prepared information, provisioning being the expected profit value adjustment for future outcomes related to the object.

7. (Original) The process of claim 6, wherein the step of calculating a fully absorbed profit adjustment value includes the step of calculating the value for indirect expense (IE) which is an apportioned profit value adjustment for all non-object related resource consumption.

8. (Original) The process of claim 7, wherein the combining step includes the steps of adding net interest (NI) and other revenues (OR), and subtracting therefrom direct expense (DE), provisioning (P) and indirect expense (IE).

9. (Original) The process of claim 8, including the step of adjusting the measure for object level profitability for taxes and/or object economic value.

10. (New) The process of claim 3, wherein the opportunity values are based on matched maturity funds transfer pricing theory, where the values are market alternative supplies or uses of funds having matched interest and payment characteristics.

11. (New) The process of claim 5, wherein the Net Interest (NI) is calculated as:

$$\begin{aligned} \text{Int Inc } (o_i) &= \text{Interest Income of object } o_i \\ - \text{COF } (o_i) &= \text{Cost of funds used by object } o_i \\ - \text{Int Exp } (o_i) &= \text{Interest Expense for object } o_i \\ + \text{VOF } (o_i) &= \text{Value of funds provided by object } o_i \end{aligned}$$

according to:

$$\begin{aligned} \text{Int Inc } (o_i) &= \text{AAB } (o_i) * \text{rate}_{\text{asset}} (o_i), \text{ only if object attribute doesn't exist,} \\ \text{COF } (o_i) &= \text{AAB } (o_i) * R_t \\ \text{Int Exp } (o_i) &= \text{ALB } (o_i) * \text{rate}_{\text{liability}} (o_i), \text{ only if object attribute doesn't exist, and} \\ \text{VOF } (o_i) &= \text{ALB } (o_i) * R_t, \end{aligned}$$

wherein:

$$\begin{aligned} \text{AAB } (o_i) &= \text{Average Asset Balance of the object } o_i, \\ \text{ALB } (o_i) &= \text{Average Liability Balance of the object } o_i, \\ \text{rate}_{\text{asset}} (o_i) &= \text{Effective interest rate for object } o_i \text{ as an asset balance,} \\ \text{rate}_{\text{liability}} (o_i) &= \text{Effective interest rate for object } o_i \text{ as a liability balance, and} \\ R_t &= \text{Treatment rate based on the identified treatment for the object's} \end{aligned}$$

product attributes.

12. (New) The process of claim 11, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$\text{EOAE}(o_i) = R_{\text{equity}} * \text{ER} * \sum \text{AB}_{(\text{asset}, t)} (o_i), \text{ wherein:}$$

$$\text{AB}_{(\text{asset}, t)} (o_i) = \text{Average Asset balances of the object } o_i, \text{ including any allocated asset balances,}$$

ER = Equity Ratio, and
 R_{equity} = Treatment Rate for equity.

13. (New) The process of claim 11, including the step of calculating earnings on allocated equity according to:

$EOAE(o_i)$ = $R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio]$, wherein:

$Amount(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object 'o_i' including any allocated asset balances, or may be an object parameter,

$Wt(type(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level,

$W(Wt(type(o_i)))$ = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

14. (New) The process of claim 11, including the step of calculating earnings on allocated equity, according to:

$EOAE(o_i)$ = $\sum R_{equity} * E_{cohort}(o)(Amount(o_i))$, or $\sum R_{equity} * [\alpha +$

$\beta * Amount(o_i)]$, wherein:

$Amount(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$),

$Cohort(o_i)$ = The cohort of objects in which object o is a member,

$E_{cohort}(o_i)$ = The equity allocation rule for the cohort of object o,

according to a linear (two-valued) function that operates on $Amount(o_i)$ of the form $\alpha + \beta * Amount(o)$, and

R_{equity} = Treatment Rate(s) for equity for the $Amount(o_i)$ value(s).

15. (New) The process of claim 5, wherein Net Interest (NI) is calculated as the summations over the possible balance variables for the object, according to:

$$\text{Int Inc}(o_i) = \sum_{\forall c, t} \text{AB}_{(\text{asset } c, t)}(o_i) * \text{rate}_{(\text{asset } c, t)}(o_i), \text{ calculate only if object attribute doesn't exist,}$$

$$- \text{COF}(o_i) = \sum_{\forall c, t} \text{AB}_{(\text{asset } c, t)}(o_i) * R_{(\text{asset } c, t)} R_{(c, t)}(\text{pt}(o))$$

$$- \text{Int Exp}(o_i) = \sum_{\forall c, t} \text{AB}_{(\text{liability } c, t)}(o_i) * \text{rate}_{(\text{liability } c, t)}(o_i), \text{ only if object attribute doesn't exist,}$$

$$+ \text{VOF}(o_i) = \sum_{\forall c, t} \text{AB}_{(\text{liability } c, t)}(o_i) * R_{(\text{liability } c, t)} R_{(c, t)}(\text{pt}(o)), \text{ wherein:}$$

$\text{AB}_{(c, t)}(o_i)$ = Average Balances of the object o_i ,

$\text{rate}_{(c, t)}(o_i)$ = Effective interest rate for the corresponding balance asset or liability,

$R_t(o)$ = Object o 's product type/group as needed to identify treatment rate,

$R_{(c, t)}(\text{pt}(o))$ = Rate (treatment rate) for objects of this product type/group, given the balance class, and tier,

$\text{Int Inc}(o_i)$ = Interest Income of object o_i ,

$\text{COF}(o_i)$ = Cost of funds used by object o_i ,

$\text{Int Exp}(o_i)$ = Interest Expense for object o_i , and

$\text{VOF}(o_i)$ = Value of funds provided by object o_i .

16. (New) The process of claim 15, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$\text{EOAE}(o_i) = R_{\text{equity}} * \text{ER} * \sum \text{AB}_{(\text{asset } , t)}(o_i), \text{ wherein:}$$

$AB_{(asset, t)}(o_i)$ = Average Asset balances of the object o_i , including any allocated asset balances,

ER = Equity Ratio, and

R_{equity} = Treatment Rate for equity.

17. (New) The process of claim 15, including the step of calculating earnings on allocated equity according to:

$EOAE(o_i) = R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio]$, wherein:

$Amount(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter,

$Wt(type(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level,

$W(Wt(type(o_i)))$ = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

18. (New) The process of claim 15, including the step of calculating earnings on allocated equity, according to:

$EOAE(o_i) = \sum R_{equity} * E_{cohort}(o)(Amount(o_i))$, or $\sum R_{equity} * [\alpha +$

$\beta * Amount(o_i)]$, wherein:

$Amount(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$,

$Cohort(o_i)$ = The cohort of objects in which object o is a member,

$E_{cohort}(o_i)$ = The equity allocation rule for the cohort of object o,

according to a linear (two-valued) function that operates on $Amount(o_i)$ of the form $\alpha + \beta * Amount(o)$, and

$R_{\text{equity}} = \text{Treatment Rate(s) for equity for the Amount}(o_i) \text{ value(s).}$

19. (New) The process of claim 5, wherein Net Interest (NI) is calculated as the summations over the possible balance attributes for the objects, according to:

$$\text{Int Inc } (o_i) = \sum_{\forall c, t} \text{AB}_{(\text{asset } c, t)}(o_i) * \text{rate}_{(\text{asset } c, t)}(o_i), \text{ only if object attribute}$$

doesn't exist,

$$- \text{COF } (o_i) = \sum_{\forall c, t} \text{AB}_{(\text{asset } c, t)}(o_i) * R_{(\text{asset } c, t)}(\text{type}_{p, a}(o_i)),$$

$$- \text{Int Exp}(o_i) = \sum_{\forall c, t} \text{AB}_{(\text{liability } c, t)}(o_i) * \text{rate}_{(\text{liability } c, t)}(o_i), \text{ only if object attribute doesn't exist,}$$

$$+ \text{VOF}(o_i) = \sum_{\forall c, t} \text{AB}_{(\text{liability } c, t)}(o_i) * R_{(c, t)}(\text{type}_{p, a}(o_i)), \text{ wherein:}$$

$\text{AB}_{(c, t)}(o_i) = \text{Average Balances of the object } o_i,$

$\text{rate}_{(c, t)}(o_i) = \text{Effective interest rate for the corresponding balance,}$

$\text{Type}_{p, a}(o_i) = \text{Object } o_i \text{'s product and object attributes as needed to identify treatment,}$

$R_{(c, t)}(\text{type}_{p, a}(o_i)) = \text{Rate (treatment rate) for this object's product type, given the balance class, and tier/tenor,}$

$\text{Int Inc } (o_i) = \text{Interest Income of object } o_i,$

$\text{COF } (o_i) = \text{Cost of funds used by object } o_i,$

$\text{Int Exp } (o_i) = \text{Interest Expense for object } o_i, \text{ and}$

$\text{VOF } (o_i) = \text{Value of funds provided by object } o_i.$

20. (New) The process of claim 19, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$EOAE(o_i) = R_{equity} * ER * \sum AB_{(asset, t)}(o_i), \text{ wherein:}$$

$AB_{(asset, t)}(o_i)$ = Average Asset balances of the object o_i , including any allocated asset balances,

ER = Equity Ratio, and

R_{equity} = Treatment Rate for equity.

21. (New) The process of claim 19, including the step of calculating earnings on allocated equity according to:

$$EOAE(o_i) = R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio], \text{ wherein:}$$

$Amount(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter,

$Wt(type(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level,

$W(Wt(type(o_i)))$ = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

22. (New) The process of claim 19, including the step of calculating earnings on allocated equity, according to:

$$EOAE(o_i) = \sum R_{equity} * E_{cohort}(o)(Amount(o_i)), \text{ or } \sum R_{equity} * [\alpha +$$

$\beta * Amount(o_i)]$, wherein:

$Amount(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$),

$Cohort(o_i)$ = The cohort of objects in which object o is a member,

$E_{\text{cohort}}(o_i)$ = The equity allocation rule for the cohort of object o_i , according to a linear (two-valued) function that operates on $\text{Amount}(o_i)$ of the form $\alpha + \beta * \text{Amount}(o_i)$, and

R_{equity} = Treatment Rate(s) for equity for the $\text{Amount}(o_i)$ value(s).

23. (New) The process of claim 5, wherein Net Interest (NI) is calculated where summations are over the possible balance variables for the object, according to:

$\text{Int Inc}(o_i) = \sum AB_{(\text{asset } c, t)}(o_i) * \text{rate}_{(\text{asset } c, t)}(o_i)$ *only if object attribute doesn't exist,*

- $\text{COF}(o_i) = \sum AB_{(\text{asset } c, t)}(o_i) * R_{(\text{asset } c, t)}(\text{type}_{p,a,b}(o_i))$,

- $\text{Int Exp}(o_i) = \sum AB_{(\text{liability } t)}(o_i) * \text{rate}_{(\text{liability } t)}(o_i)$ *only if object attribute doesn't exist,*

+ $\text{VOF}(o_i) = \sum AB_{(\text{liability } t)}(o_i) * R_{(\text{liability } t)}(\text{type}_{p,a,b}(o_i))$, wherein:

$AB_{(c,t)}(o_i)$ = Average Balances of the object,

$\text{rate}_{(c,t)}(o_i)$ = Effective interest rate for the corresponding balance amounts,

$\text{type}_{p,a,b}(o_i)$ = Object o_i 's product, object attribute, and behavior types as needed to identify treatment rate,

$R_{(c,t)}(\text{type}_{p,a,b}(o_i))$ = Rate (treatment rate) for objects of this product type, balance class, and tier/tenor,

$\text{Int Inc}(o_i)$ = Interest Income of object o_i ,

$\text{COF}(o_i)$ = Cost of funds used by object o_i ,

$\text{Int Exp}(o_i)$ = Interest Expense for object o_i , and

$\text{VOF}(o_i)$ = Value of funds provided by object o_i .

24. (New) The process of claim 23, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$EOAE(o_i) = R_{equity} * ER * \sum AB_{(asset, t)}(o_i), \text{ wherein:}$$

$AB_{(asset, t)}(o_i)$ = Average Asset balances of the object o_i , including any allocated asset balances,

ER = Equity Ratio, and

R_{equity} = Treatment Rate for equity.

25. (New) The process of claim 23, including the step of calculating earnings on allocated equity according to:

$$EOAE(o_i) = R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio], \text{ wherein:}$$

$Amount(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter,

$Wt(type(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level,

$W(Wt(type(o_i)))$ = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

26. (New) The process of claim 23, including the step of calculating earnings on allocated equity, according to:

$$EOAE(o_i) = \sum R_{equity} * E_{cohort}(o)(Amount(o_i)), \text{ or } \sum R_{equity} * [\alpha +$$

$\beta * Amount(o_i)]$, wherein:

$Amount(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$,

$Cohort(o_i)$ = The cohort of objects in which object o is a member,

$E_{\text{cohort}}(o_i)$ = The equity allocation rule for the cohort of object o_i , according to a linear (two-valued) function that operates on $\text{Amount}(o_i)$ of the form $\alpha + \beta * \text{Amount}(o)$, and

R_{equity} = Treatment Rate(s) for equity for the $\text{Amount}(o_i)$ value(s).

27. (New) The process of claim 7, wherein the value for indirect expense (IE) is calculated as:

$$\text{before deferral } IE(o_i) = IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \text{ added over each set } IE_k \text{ to which } o_i$$

is related,

$$= \sum_k^{o_i \in O(IE)} \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \right)$$

and each of these terms is deferred over its amortization period according to any of the amortization rules (cash, straight line, declining balance, or interest amortization calculations), and where $AM_1(L, R)$ is used to denote the amortization rule and its life:

$$IE(o_i) = \sum_k^{o_i \in O(IE)} AM_1(L, R) \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \right), \text{ and}$$

the result increased by the amounts with remaining amortization life for which amortization was begun in earlier periods.

28. (New) The process of claim 6, provisioning (P) of each object is calculated according to:

$$P(o_i) = PG(o_i) * \frac{\text{Balance of } o_i}{\sum_{o_k \in \text{RPG}(o_i)} \text{Balance } o_k}, \text{ wherein:}$$

PG(o_i) denotes the P group in which o_i is a member.

29. (New) The process of claim 6, wherein provisioning (P) is calculated as:

$$P(o_i) = PG(o_i) * \frac{\text{Balance}(o_i) * RF(o_i)}{\sum_{o_k \in \text{RPG}(o_i)} [\text{Balance}(o_k) * RF(o_k)]}, \text{ wherein:}$$

PG(o_i) denotes the P group in which o_i is a member, and

RF(o_i) denotes the expected adjustment factor for o_i.

30. (New) The process of claim 6, wherein provisioning (P) is calculated as:

$$P(o_i) = \text{Exposure}(o_i) * \text{Pr}(o_i) * \text{Expected Value Adjustment}(o_i) * \frac{1}{L_i}, \text{ wherein:}$$

Pr(o_i) is a probability for object o_i, and

L is the expected number of reporting periods during the life of o_i.

31. (New) The process of claim 9, wherein the step of adjusting the measure for object level profitability is calculated as:

$$\text{Profit}(o_i) = \{[\text{NIR}(o_i) + \text{OR}(o_i) - \text{DE}(o_i) - \text{IE}(o_i) - P(o_i)] * (1 - \text{EffectiveTaxRate})\} - \text{SVA}(o_i),$$

where

$$\text{SVA}(o_i) = \alpha(o_i) + \beta(o_i) * \text{Amount}(o_i),$$

and

α(o_i), β(o_i) are functions for a cohort of objects in which o_i is a member, and Amount(o_i) is given by a rule which maps o_i to a data value (such as balance, or allocated equity) also defined at the cohort level.

32. (New) The process of claim 9, wherein the step of adjusting the measure for object level profitability includes the calculation:

Profit (o_i) = $[NIR(o_i) + OR(o_i) - DE(o_i) - IE(o_i) - P(o_i)] * (1 - \text{EffectiveTaxRate})$ where, for a two tier taxation system, Effective Tax Rate is calculated as:

$$\text{Effective Tax Rate} = (1 - \text{tax rate 2}) * (\text{tax rate 1}) + \text{tax rate 2}.$$

33. (New) A method for transforming a computerized profit database, comprising the steps of:

providing a computerized profit database having profit information;

providing a relational database management system operable in association with the computerized profit database;

preparing the profit information to be accessed electronically through the relational database management system, including the step of calculating opportunity values for funds used or supplied by each object being measured;

establishing, in the relational database, rules for processing the prepared information, including the steps of providing information necessary to select objects and performing a profit calculus;

using the relational database management system to independently calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information;

using the relational database management system to calculate a fully absorbed profit adjustment value for each object being measured; and

combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability.

REMARKS/ARGUMENTS

The present application has been carefully reviewed in light of the May 12, 2008 Office Action. In light of the foregoing amendments, and the following remarks, applicant respectfully requests reconsideration and reexamination of the application.

TIME EXTENSION REQUEST

Applicant submits herewith a three-month time extension request, with pertinent fee.

INFORMATION DISCLOSURE STATEMENT

In the Office Action, the Examiner reminded applicant of the duty to disclose all references previously recited in Application Serial No. 09/545,628. Applicant is grateful to the Examiner for noting this, and submits herewith a Supplemental Information Disclosure Statement.

OBJECTION UNDER 35 U.S.C. §132(a)

The Specification filed on February 15, 2006 was objected to under 35 U.S.C. §132(a) based upon the assertion that it introduced new matter into the disclosure. The Examiner asserted that "the added material which is not supported by the original disclosure is as follows: The proposed material presented from pages 11-13, 20-30, etc. are not supported from the original specification from United States Application Serial Number 09/545,628 reference from page 1 of Applicant's Disclosure. The new matter that has been added is not supported by any particular evidence from the original specification for the voluminous proposed additional material to the original specification."

As will be more fully detailed below, the material added in this Specification is a near word-for-word copy of other paragraphs in the parent '628 specification, including

- 15 -

BERKEL-48526
SN: 11/354,798
RESPONSE1

the Summary of the Invention section. In the '628 parent specification, there were various sentences and paragraphs which were deemed to be supported by the original specification. The following paragraphs and sentences which have been changed are listed below and followed by supporting citations in the original parent specification of the '628 application, from which this application claims priority.

Paragraph 66 – first sentence

With reference now to FIGS. 2 and 3, the invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a level not available today in a large individual customer scale business.

Support in the Parent Specification:

- “The invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a level not available today in a large individual customer scale business.” Page 6, Lns. 18-21.
- “Use of this method is especially suited for massively parallel computing technology where linear scalable capital investment and processing technology is possible vis-a-vis object and event count and rule complexity.” Page 12, Lns. 17-20.
- FIGS. 2 and 3. Note detailed profit measure 27 and the object 32.

Paragraph 66 – second sentence

This invention does this through a consistent application of measures (27) to a class of business entities (32) which represent the smallest common component of profit measurement desired - the Profit Object._

Support in the Parent Specification:

- “This invention does this through a consistent application of measures to a class business entities which represent the smallest

common component of profit measurement desired- the Profit Object.” Page 6, Lns 21-24.

- See FIGS. 2 and 3 illustrating the detailed profit measure 27 and the object 32, respectively.

Paragraph 67 – first sentence

The invention’s method of apportionment of non-object related profit measures (34) specifies a method which will not change the ordinal or cardinal profit contribution ranking when only marginal profit measures are counted.

Support in the Parent Specification:

- “The invention’s method of apportionment of non-object related profit measures specifies a method which will not change the ordinal or cardinal profit contribution ranking when only marginal profit measures are counted.” Page 6, Lns. 25-27.
- FIG. 3 illustrates the non-SOR Apportionment 34.

Paragraph 67 – second sentence

This specification is what makes it possible to apply marginal measurement rules with macro economic principles; namely the sum-of-the-parts equals the whole criterion which is the basis of financial accounting in theory and practice.

Support in the Parent Specification:

- “This specification is what makes it possible to apply marginal measurement rules (see Micro-economic theory literature) with macro economic principles; namely the sum-of-the-parts equals the whole criterion which is the basis of financial accounting in theory and practice.” Page 6, Lns. 28-31.
- See also FIG. 3.

Paragraph 68 – first sentence

As shown in FIG. 2, the invention decomposes profit measurement analytical calculations into five classifications:

Support in the Parent Specification:

- “The invention decomposes profit measurement analytical calculations into five classifications:”. Page 7, Lns. 1-2.
- FIG. 2 illustrates the five classifications including funds transfer pricing 21, event costing 22, non-interest revenues 23, provisioning 24 and indirect costing 26.

Paragraph 68 – second sentence

1. Marginal profit measures associated with use of the business' balance sheet resources, also referred to as funds transfer pricing (21);

Support in the Parent Specification:

- “Marginal profit measures associated with use of the business' balance sheet resources;”. Page 7, Lns. 3-4.
- See FIG. 2. Note that funds transfer pricing 21 is one of four marginal models 20 associated with detail profit measure 27.

Paragraph 68 – third sentence

2. Marginal measures of non-balance oriented revenues, also referred to as non-interest revenues (23);

Support in the Parent Specification:

- “Marginal measures of non-balance oriented revenues;”. Page 7, Ln. 5.
- FIG. 2. Note that non-interest revenues 23 is one of four marginal models 20 that feed into the detailed profit measure 27.

Paragraph 68 – fourth sentence

3. Marginal cost measures, also referred to as event cost (22);

Support in the Parent Specification:

- “Marginal cost measures;”. Page 7, Ln. 6.
- FIG. 2. Note that event costing 22 is one of four marginal models 20 that feed into the detailed profit measure 27.

Paragraph 68 – fifth sentence

4. Marginal measures of expected costs or revenues, also referred to as provisioning (24); and,

Support in the Parent Specification:

- “Marginal measures of expected cost measures or revenues; and,”. Page 7, Ln. 7.
- FIG. 2. Note that provisioning 24 is one of four marginal models 20 that feed into the detailed profit measure 27.

Paragraph 68 – sixth sentence

5. Apportioned cost measures indirect cost, in accordance with an allocation model of the present invention (26).

Support in the Parent Specification:

- “Apportioned cost measures.” Page 7, Ln. 8.
- “Allocated Amounts – In both Other Revenue and Indirect Expense calculations this amount is apportioned amongst all objects in a group.” Page 11, Lns. 21-22.
- FIG. 2. Note that the indirect costing 26 is part of allocation model 24 that feeds into the detailed profit measure 27.

Paragraph 69 – first sentence

This classification provides for additive profit measures across the five components.

Support in the Parent Specification:

- “This classification provides for additive profit measures across the five components.” Page 7, Lns. 9-10.
- FIG. 2. Note that the detailed profit measure 27 is an additive profit measure across the funds transfer pricing 21, the event costing 22, the non-interest revenues 23, the provisioning 24 and the indirect costing 26.

Paragraph 69 – second sentence

The calculation process is designed to be independent across classes, 1, 2, 3, & 4 above with the addition of class 5 to preserve sum-of-the-parts integrity without simultaneous calculations typically found in profit measurement processes.

Support in the Parent Specification:

- “The calculation process is designed to be independent across classes, 1, 2, 3, & 4 above with the addition of class 5 to preserve sum-of-the-parts integrity without simultaneous calculations typically found in profit measurement processes.” Page 7, Lns. 10-13.
- FIG. 2. Note that independent classes 1, 2, 3, & 4 reference the funds transfer pricing 21, the event costing 22, the non-interest revenues 23 and the provisioning 24 as each is shown independently and simultaneously feeding into the detailed profit measure 27.

Paragraph 69 – third sentence

When all five profit measures (49) are summed at the lowest level of profit detail, a consistent set of profit values for all types of aggregations (30) are possible – all profit measurement then originates from the same point in a profit database.

Support in the Parent Specification:

- “When all five profit measures are summed at the lowest level of profit detail, a consistent set of profit values for all types of aggregations are possible – all profit measurement then originates from the same point in a profit database.” Page 7, Lns. 13-16.
- FIG. 2 illustrates each of the five profit measures (funds transfer pricing 21, event costing 22, non-interest revenues 23, provisioning 24 and indirect costing 26) individually summed at the lowest level of profit detail, identified as detailed profit measure 27. As indicated above, all profit measurement originates from the detailed profit measure 27.

Paragraph 69 – fourth sentence

The simultaneous use of these five analytical frameworks makes possible a detailed level of profit calculation consistent with GAAP.

Support in the Parent Specification:

- “The simultaneous use of these five analytical frameworks makes possible a detailed level of profit calculation consistent with GAAP.” Page 7, Lns. 16-18
- FIG. 2. Note that the five analytical frameworks (funds transfer pricing 21, event costing 22, non-interest revenues 23, provisioning 24 and indirect costing 26) feed into the detailed profit measure 27 (i.e. a detailed level of profit calculation).

Paragraph 70 – first sentence

Figure 3 illustrates DPM data flow: where systems of record (SOR's) (31) data source object (32) and object oriented event (33) data; where General Ledger data sources apportionment data; and, where event and general ledger data are used with activity based costs (35).

Support in the Parent Specification:

- “DPM is based on object level detail of cash flows, customer events and management allocations of profit arising from non-customer related events.” Page 10, Lns. 3-5.
- FIG. 3 illustrates that the SOR's 31 source the object 32 and the object oriented event 33, as noted by the directional arrows therein. Moreover, the general ledger sources the object 32 and the activity based data 35, also shown by the directional arrows in FIG. 3.

Paragraph 70 – second sentence

DPM is based on object level detail of cash flows, customer events and management allocations of profit arising from non-customer related events.

Support in the Parent Specification:

- “DPM is based on object level detail of cash flows, customer events and management allocations of profit arising from non-customer related events.” Page 10, Lns. 3-5.
- See FIG. 3 generally.

Paragraph 70 – third sentence

More particularly, DPM is based on object level detailed data extracted from the SOR's (31), customer object oriented event data (33) and non-SOR Apportionments (34).

Support in the Parent Specification:

- FIG. 3. Note that the object 32 is based on the object level detail data extracted from the SOR's 31, the object oriented event 33, the non-SOR Apportionment 34, and the general ledger.

Paragraph 70 – fourth sentence

DPM provides both marginally (20) and fully absorbed profit measures (25), something traditional “general ledger” based profit accounting systems cannot accomplish due to reliance on aggregate debit and credit amounts (10).

Support in the Parent Specification:

- “DPM provides both marginally and fully absorbed profit measures, something traditional ‘general ledger’ based profit accounting systems cannot accomplish due to reliance on aggregate debit and credit amounts (see FIGS. 2-4).” Page 10, Lns. 5-8.
- FIG. 2 illustrates the marginal model 20 and the allocation model 25.

Paragraph 70 – fifth sentence

The differences in measures are directly observable and comparisons of detailed customer (13), product (14) or organizational (15) profit values calculated using prior art (12) methods with profit values derived using aggregations (30) of object data, per figure 3.

Support in the Parent Specification:

- See page 1 and 2: Many businesses today are struggling to accurately measure profit contribution at a level necessary to accurately measure profit contribution. See page 8: ...it was necessary to use accounting information and make reasoned conclusion on how to apportion or extrapolate this information into

incremental customer, product or organizational profit detail (see Fig. 1), and ...new level of profit resolution this invention is designed to use micro profit measurement rules applied at a granular level. See page 9: ...a consistent set of profit values for all types of aggregations are possible. See page 36: Total Profit = {sum} [Profit (o .)].

Paragraphs 71-72 – these paragraphs are basically word-for-word replications of an amendment made to the parent Specification in an Office Action Response dated May 26, 2004. (See Exhibit C). In an Office Action dated December 20, 2004, in response to arguments that additional material added to the parent Specification was supported, the Examiner accepted support for paragraphs 71-72:

With respect to the additions in the first full paragraph on Page 12, the added material finds support in original Figure 3.

With respect to the last paragraph on Page 12, extending to the full paragraph on Page 13, this newly added matter finds support in Figure 4, as well as in the Summary of the Invention section, Pages 7-10 of the Specification, and particularly Pages 9-10 of the Specification.

Paragraph 84

This paragraph is also identical to an amendment made to page 20 of the parent Specification. (See Exhibit D). In the December 20, 2004 Office Action, the Examiner accepted that this amendment was supported “in the flow-chart of Fig. 5 . . . on pages 20-54, which describes the steps in detail.”

In view of the foregoing detailed analysis, applicant respectfully asserts that no new matter has been added into the application from the original specification, but instead the original specification has been amended so that the reference of the drawings, the particular description for each relevant section of the figures is included and the like. That is, all of the material which has been changed in the Specification is supported by the parent specification, as indicated above.

CLAIM REJECTIONS - 35 U.S.C. §103

Claims 1-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Price et al.

More particularly, the Examiner stated:

“Price discloses, e.g. pages 28-41, 529, 531, 966-982 (Fig. 27-5), a method of measuring profit based on the factors of net interest revenue, other revenues (Fig 27-5, line 4, ‘Operating Revenues’), direct expenses (Fig 27-5, line 22, ‘Direct Expenses’), indirect expenses (Fig 27-5, line 30, ‘Indirect Expenses’), and risk (Fig 27-5, line 6, ‘Less Sales Returns and Allowances’), all set up to take advantage of flexible business rules.

Official Notice is taken that performing financial processing using computer software is common knowledge in the art.

To have provided a method of performing financial processing for an account using software for a computer measuring profit based on the factors of net interest revenue, other revenues, direct expenses, indirect expenses and risk, all set up to take advantage of flexible business rules to calculate known variations of one of the factors, e.g. net interest revenue, would have been obvious to one of ordinary skill in the art. Doing such would incorporate common knowledge data along with common knowledge software.”

The Price reference is a college accounting textbook that describes accounting concepts and principles. Price does not disclose a process for determining object level profitability in a computer, nor a method for transforming a computerized profit database, as recited in independent claims 1 and 33.

The Examiner stated that “official notice is taken that performing financial processing using computer software is common knowledge in the art.” Applicant respectfully traverses the assertion that Price, when combined with the Official Notice teaches applicant’s claims. Instead, Price merely provides a college accounting textbook that describes general accounting concepts and principles, while the Official Notice merely states that performing financial processing using computer software is common knowledge in the art.

According to the Office Action, to have provided a method of performing financial processing for an object using software for a computer measuring profit based on the factors of net interest revenue, other revenues, direct expenses, indirect expenses, and risk, to calculate known variations of one of the factors, e.g. net interest revenue, would have been obvious to one of ordinary skill in the art, and doing such would incorporate common knowledge data along with common knowledge software. However, such an assertion is unsupported by the evidence, and merely comprises hindsight by the Office Action. Under M.P.E.P. §2141.01, “The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.”

Mr. Tad Lepman, the inventor of the invention set forth in the above-identified application, has provided a Declaration in support of the patentability of the invention. In his Declaration, Mr. Lepman states that his review of Price has indicated that Price is directed to a college accounting textbook, which deals with what accounting is and how profit is different than cash by use of double entry bookkeeping methods. The method of accounting for cash flows and subsequent bookkeeping uses a fundamental accounting equation to guide ledger postings, each transaction’s double entry amounts consisting of debits and credits, simultaneously increasing or decreasing financial amounts and distinct ledger values. The result is a financial statement from these ledgers once all debit and credit transactions have been processed following the end of the accounting period.

Mr. Lepman has indicated that the double entry bookkeeping method and fundamental accounting equation have been known since the Renaissance and it was

the Italian mathematician Luca Pacioli who is regarded as the creator of the “double entry” accounting methodology. Accounting and the theory and methodology of double entry bookkeeping has remained essentially unaffected and unchanged, including Price’s college accounting textbook. Mr. Lepman further declare that through the use of computer technology, businesses have gone from manually posted ledgers to computerized processing of millions of debit and credit transactions daily using “double entry” and the “fundamental accounting equation”.

Mr. Lepman states in his Declaration that Price’s text regarding “management accounting” teaches how the accounting method of double entry bookkeeping develops profit values at a managerially defined level using a ledger accounting system. Mr. Lepman refers to Figure 1 of his patent application which is directed to such prior art “management accounting”, as described by Price.

Mr. Lepman states that Price actually teaches away from using detailed profit measures for management accounting, instead stating that detailed marginal contribution is more useful for most management, since these decisions are future oriented and indirect expenses would not be affected by such management action. Thus, Mr. Lepman declares that Price indicates the production of profit values (as is accomplished with the invention) is not useful in detailed profit accounting. Moreover, Mr. Lepman states that Price’s accounting leads to the use of ledger accounting, which characteristically lacks multi-dimensional component aggregation integrity. Mr. Lepman states that nowhere in Price is there a discussion how ledgers, sub-ledgers, managerial assignments and/or allocations arise to produce multi-dimensional additive profit values leading to detailed object level profit measures, as in Mr. Lepman’s invention. In fact, Mr. Lepman asserts that Price does not teach object level profit determination, and the profit addition amongst the pieces or objects could not be expected simply from Price’s profit measures and accounting methods. Furthermore, in paragraph 30, Mr. Lepman asserts that even if the methodologies and teachings of Price were applied to a relational database management system, as in the present invention, the end resulting database would be fundamentally different than that of the present invention.

- 27 -

BERKEL-48526
SN: 11/354,798
RESPONSE1

Thus, from the foregoing, it is clear that Price is not directed to a process for determining object level profitability, let alone a process for determining object level profitability in a relational database management system operable in association with a computer. In the rare case where the prior art does not appreciate the existence of the problem solved by the invention, the applicant's recognition of the problem is, in itself, strong evidence of the non-obviousness of the invention. *In re Nomiya et al.*, 184 USPQ 607, 612-613 (CCPA 1975).

Moreover, the Examiner has failed to show that the teachings of Price could be combined with computer software which is common knowledge in the art to arrive at the present invention. As stated in M.P.E.P. 2144, it is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 ("[T]he Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). Furthermore, Mr. Lepman has declared that even if the methodologies and calculations of Price were passed through a relational database management system, they would yield a different result, clearly indicating that Price cannot be combined with known computer software to arrive at the present invention.

Furthermore, Price does not teach all of the claim limitations of the currently pending claims. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. §2143.03 (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970)).

Mr. Lepman, in his Declaration, asserts that Price does not teach the steps of determining object level profitability using a relational database management system operable in association with a computer. Nor does Price disclose the steps of doing so

by preparing information to be accessed electronically through the relational database management system, establishing, in the relational database, rules for processing the prepared information, independently calculating at least one marginal value of profit for each object using the established rules as applied to the selected set of prepared information, calculating for each object a fully absorbed profit adjustment value and the at least one marginal value of profit and the fully absorbed profit adjustment value being combined to create a measure for object level profitability. Moreover, in paragraph 10, Mr. Lepman declares that not only are these steps not taught in Price, but these steps would not take place or yield the same result if the accounting methodologies of Price were applied to relational database technology. Moreover, Mr. Lepman declares that Price's profit measurement methodology and that of his invention are different in the use of information over time. Mr. Lepman declares that in his invention processing cannot begin until financial statements, as taught by Price, are prepared following the completion of an accounting period. Thus, Mr. Lepman's invention requires the existence of Price's profit calculations before the step of preparing information to be accessed, as recited in claim 1. The present invention, which builds a computerized profit apparatus utilizing relational database specifications and calculations, calculate profit at levels which are several levels of magnitude greater resolution than Price is capable of doing.

Mr. Lepman further declares that claim 1 is directed to a process for determining object level profitability, and Price is not. Mr. Lepman further declares that the preparing information step recited in claim 1 is not discussed or alluded to whatsoever in Price. In Price, data are debit and credit amounts with ledger account reference and possibly data attributes, nothing more. In Mr. Lepman's invention, these data include non-financial object level data used in de novo, object level internal calculations and transaction level financial details (see paragraph 16 of Declaration).

In paragraph 17 of Mr. Lepman's Declaration, Mr. Lepman states that Price does not teach the step of establishing, in the relational database, rules for processing the prepared information. Instead, Price discusses that debit and credit classifications are

part of the prepared information itself, not the calculation thereof. Moreover, Price's rules do not lend themselves into relational database management system (RDBMS) rules, since they were procedural in nature, that is they use if-then-else step-wise iterative logic.

In paragraph 18 of Mr. Lepman's Declaration, Mr. Lepman states that Price does not teach of using established rules applied to a selected set of prepared information to independently calculate at least one marginal value of profit for each object being measured, as recited in independent claim 1. Instead, Price teaches a sequential process, first classification and then aggregation. Calculations in Price are additions, without subsets.

In paragraph 19 of his Declaration, Mr. Lepman states that Price actually teaches away from the step of calculating a fully absorbed profit adjustment value for each object being measured. In Mr. Lepman's invention, a financial statement must be prepared (as discussed in Price) and the resulting data prepared, as indicated above, prior to the calculation.

In paragraph 20 of Mr. Lepman's Declaration, Mr. Lepman states that Price teaches a general ledger accounting system, wherein the data is presented simultaneously and no "combining" is required, as recited in independent claim 1. Instead, only financial statement preparation occurs. Of course, as indicated above, the present invention requires the financial statement preparation before conducting its steps.

In paragraphs 21-29 of Mr. Lepman's Declaration, Mr. Lepman addresses the dependent claims and the differences between the invention and the Price reference. The "Official Notice" fails to cure the defects that Price presents with respect to the claims.

Thus, it is very clear that Price does not teach or suggest each of the claim limitations of independent claim 1, thus independent claim 1 is patentably distinct from Price, and a *prima facie* case of obviousness has not been established. Thus, the rejection of claim 1 should be withdrawn. Of course, if independent claim is in condition

for allowance, those claims depending therefrom are also patentably distinct from the Examiner's refusal, as if an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

New independent claim 33 also recites each of the steps of independent claim 1, and thus is patentably distinct from Price and the Official Notice as well.

Submitted herewith is the Declaration of Daniel W. Won, who is a certified public accountant, holds a Masters of Business Administration degree, and has twenty-five years experience in public accounting, working primarily with businesses and in international tax planning. Mr. Won declares that he is aware of Mr. Lepman's invention, and has reviewed the patent application, the Office Action, and the Price reference.

Mr. Won declares that the Price reference is a college accounting textbook that describes accounting concepts and principles, and essentially Price discusses the creation and preparation of financial statements following the completion of an accounting period. Mr. Won states that this is done according to the well-known accounting principles of using debit and credit entries in a general ledger system.

By contrast, Mr. Won states that the Lepman invention is directed to a process for determining object level profitability, the methodology, steps and formulas for achieving this being significantly different than Price. Moreover, the level of profitability determined is much more focused and refined than that taught in Price.

Mr. Won declares that there is no mention in Price of preparing any information to be accessed electronically through a relational database management system, or establishing any rules for processing prepared information, as recited in independent claim 1 of Mr. Lepman's application. Mr. Won further states that the other steps of independent claim 1 are not found in Price, and are beyond general accounting practices and principles. Mr. Won further states that the formulas of claims 11-32 for calculating net interest, other revenue, direct expense, indirect expense, and provisioning are not found in Price nor are they used in general accounting calculations.

Lastly, Mr. Won declares that as one of ordinary skill in the field of accounting, he does not view Mr. Lepman's invention as being contemplated or obvious by general accounting procedures and methodologies, such as that disclosed in Price. He asserts that one of ordinary skill in accounting would understand the methodologies that the Price college accounting reference discusses, but he does not believe that an accountant of ordinary skill would be able to recreate Mr. Lepman's invention even if he was aware of both Price and relational database computer technologies.

From the foregoing, it is clear that Price is not directed to the same end as that of the present invention. Price fails to disclose each of the recitations of the currently pending claims. Moreover, in some instances Price actually teaches away from these steps and recitations. Furthermore, even if the teachings of Price are combined with the Official Notice, this combination does not arise to teaching all of the steps recited in the claims. Thus, the currently pending claims are patentably distinct from both Price and the combination of Price with the Official Notice, and the rejections should be withdrawn and the claims allowed.

Respectfully submitted,

KELLY LOWRY & KELLEY, LLP

/Scott W. Kelley, Reg. No. 30,762/

SCOTT W. KELLEY
Registration No. 30,762

SWK:nh
6320 Canoga Avenue, Suite 1650
Woodland Hills, California 91367
(818) 347-7900

- 32 -

BERKEL-48526
SN: 11/354,798
RESPONSE1

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	Group Art Unit: 3687
	)	
Richard Tad Lepman	)	Examiner: Andrew J. Rudy
	)	
Serial No. 11/354,798	)	
	)	
Filed: February 15, 2006	)	Docket No. BERKEL-48526
	)	
For: PROCESS FOR DETERMINING	)	
OBJECT LEVEL PROFITABILITY	)	
_____	)	

DECLARATION OF RICHARD TAD LEPMAN

I, RICHARD TAD LEPMAN, declare as follows:

1. I am the inventor of the invention set forth in the above-identified patent application.

2. As shown in my Curriculum Vitae, attached hereto as Exhibit "A", I obtained a Bachelor of Arts in Applied Mathematics from Claremont Men's College in 1975. In 1986, I received a Masters of Science in Industrial Engineering and Operations Research from the University of California at Berkeley. I have thirty (30) years experience in the Financial Services and Information Technology industries.

3. I have reviewed the May 12, 2008 Office Action, as well as the Price College Accounting reference.

4. Price is directed to a college accounting textbook, and deals with what accounting is and how profit is different than cash by use of double entry bookkeeping methods. In Price, the method of accounting for cash flows and subsequent bookkeeping uses a fundamental accounting equation to guide ledger postings, each transaction's double entry amounts consisting of debits and credits, simultaneously increasing or decreasing financial amounts and distinct ledger values. The resulting financial statement presentations are prepared from these ledgers once all debit and credit transactions have been processed, or posted, following the end of each accounting period.

5. Italian mathematician Luca Pacioli is regarded as the creator of the "double entry" accounting methodology. Giovanni Dé Medici built his famous Italian banking empire during the Renaissance due to Pacioli's then new measurement method. The bank expected its borrowers to produce basic economic information and verifiable financial statements following standard technique. Fundamentally, the method monetarily equates tangible cash flows with fungible values presented in financial statements, particularly a "balance sheet" and an income statement. Accounting theory and methodology of double entry bookkeeping has remained essentially unaffected and unchanged, including Price's *College Accounting* textbook.

6. Through the use of computer technology, businesses have gone from manually posted ledgers to computerized processing of millions of debit and credit transactions daily using "double entry" and the "fundamental accounting equation".

7. Price's text regarding "management accounting" teaches how the accounting method of double entry bookkeeping develops profit values at a managerially defined level using a ledger accounting system. In essence, this approach uses ledger values including allocations of non-cash, inter-entity debit and credit calculated transactions, also referred to as "transfer pricing". This allows the creation of financial statements for any management defined departmental or business entity. The same methodology may be used independently for other performance measurement dimensions such as product or location. In fact, Figure 1 of my patent

application is directed to such prior art “management accounting”, as described by Price.

8. However, Price actually teaches away from using detailed profit measures for management accounting. Price states that detailed marginal contribution is more useful for most management, since these decisions are future oriented and indirect expenses would not be affected by such management action. As such, Price indicates the production of detailed profit values is not useful in profit accounting.

9. Moreover, Price’s accounting leads to the use of ledger accounting, which characteristically lacks multi-dimensional component aggregation integrity. This is due to the use of allocations of certain ledger amounts to other columns or ledgers based on averages. When the details are added in other dimensions, object level profitability determination is violated. Nowhere does Price discuss how ledgers, sub-ledgers, managerial assignments and/or allocations arise to produce multidimensional additive profit values leading to detailed object level profit measures, as in my invention. In fact, Price does not teach object level profit determination, and the profit addition amongst the pieces or objects could not be expected simply from Price’s profit measures and accounting methods.

10. In my invention, as recited in independent claim 1, object level profitability is determined using a relational database management system operable in association with a computer, by preparing information to be accessed electronically through the relational database management system, and establishing, in the relational database, rules for processing the prepared information. At least one marginal value of profit for each object is independently calculated using the established rules as applied to the selected set of prepared information. A fully absorbed profit adjustment value is also calculated for each object being measured, and the at least one marginal value of profit and the fully absorbed profit adjustment value are combined to create a measure for object level profitability. These steps are not taught in Price, nor would these steps take place or the same result occur if the accounting methodologies of Price were applied to relational database technology.

11. In fact, Price's profit measurement methodology and that of my invention are different in the use of information over time. The present invention processing cannot begin until financial statements, as shown in Price, are prepared following the completion of an accounting period. My invention requires the existence of Price's profit calculations (e.g. "preparation" (Price, Figs. 2-6, pg. 39) of the "income statement" (Price, page 34)) before the step of preparing information to be accessed, as recited in claim 1.

12. Price does not discuss the data processing environment necessary to accomplish financial statement presentation. Moreover, Price is silent on the technical difficulty of providing daily profit data in large-scale organizations, nor are alternative technical environments mentioned. The present invention uses actuarial formulas to transform the stock and flow approach of traditional accounting to an object level by use of a machine parallelizable method of profit calculations which are far behind Price's teaching. The present invention is directed to building a computerized profit apparatus utilizing relational database specifications in machine parallel mathematical terms using non-iterative calculations to determine and calculate profit at detailed levels which are several levels of magnitude greater than Price's managerial accounting is capable of doing.

13. The complexity of maintaining an accurate financial accounting process has obscured the measurement of profit contribution at a very detailed level due to the use of profit aggregations and subsequent apportionment. The accounting process based on aggregates, such as Price, has led to blindness by business of incremental customer profit contribution measures necessary to implement customer level decision making, particularly in large businesses with many millions of customers.

14. To gain this new level of profit resolution, my invention is designed to use micro profit measurement rules applied at a granular level consistent with the standard accounting practice, using a combination of actuarial science and mathematical set theory. The invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a

level not available today in a large individual customer scale business. The invention does this through a consistent application of measures to a class of business entities which represent the smallest common component of profit measurement desired - the profit object.

15. With reference to independent claim 1, the invention is directed to a process for determining object level profitability in a relational database management system. In Price, the lowest level of profit object is a "center", either a product or a department. In the invention, an object is common to the business organizations, products or customers, and for example an airline may use a seat for the profit object, an insurance company may use a policy as the object, or a bank may use an account as the object.

16. Claim 1 further recites preparing information to be accessed electronically through the relational database management system. This is not discussed or alluded to whatsoever in Price. In Price, data are debit and credit amounts with ledger account reference and possibly data attributes, and nothing more. In the invention, these data include non-financial object level data used in de novo object level internal calculations and transaction level financial details.

17. Claim 1 further recites the step of establishing, in the relational database, rules for processing the prepared information. This is a computer formula for use in a non-iterative and standard actuarial formula along with dynamic data in an RDBMS calculation. In Price, the debit and credit classifications are part of the prepared information itself, not the calculation thereof. Price's rules do not lend themselves into RDBMS rules, since they are procedural in nature, i.e., use if-then-else stepwise iterative logic.

18. Independent claim 1 also recites the step of independently calculating at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information. The invention allows for four of the five factors to be processed in parallel by a relational database management system (RDBMS) using formulas using selected object level data directly. Price

teaches a sequential process, first classification and then aggregation, calculations are additions, without subsets. Thus, Price does not teach of using established rules applied to a selected set of prepared information to independently calculate at least one marginal value of profit for each object being measured.

19. Independent claim 1 further recites the calculation of a fully absorbed profit adjustment value for each object being measured. In the invention, a financial statement must be prepared and the resulting data prepared, as indicated above, prior to the calculation. Price actually teaches away from this step of a fully absorbed profit measure in management accounting.

20. Claim 1 further recites the step of combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability. As Price teaches a general ledger accounting system, the data is presented simultaneously and no “combining” is required, only financial statement preparation.

21. Claim 2 recites that the relational database comprises structured query language. The invention requires the use of an electronic relational database management system having parallel operation and calculation capabilities, which can be run using structured query language. There is no such discussion in Price of a relational database management system or structured query language.

22. Claim 3 recites that the preparing step further includes the step of calculating opportunity values of funds used or supplied by each object being measured. In contrast, Price discusses “transfer pricing”, using debit and credit transactional data and possibly sub-ledger processing.

23. Claim 4 recites that the establishing step includes the steps of providing the information necessary to select objects, and performing the correct profit calculus. Price does not teach a method for such calculation using standard “double entry bookkeeping”.

24. Claim 5 recites the step of calculating at least marginal value of profit, including the steps of calculating net interest, other revenue and direct expense,

wherein net interest is the summation of interest income, value of funds provided in earnings on equity funds used less the sum of interest expense and cost of funds used, other revenue is a measure of profit contribution from non-interest related sources, and direct expense is the profit value reduction due to marginal resources consumption by the object. In general ledger systems, such as that taught by Price, the data is a debit or credit pre-calculated amount for each ledger account. In my invention, the profit metric components are categorized, as indicated in this claim.

25. Claim 6 recites the step of calculating at least one marginal value of profit, including the step of provisioning for the selected set of prepared information. In Price, this profit item is discussed as part of the balance sheet valuation of receivables. The methodology is based on pooling and expected amounts and usually posted directly into ledgers. There would be no reason for Price to calculate this as the present invention does, or to subject it to a relational database management system instead of directly into ledgers.

26. Claim 7 recites the step of calculating a fully absorbed profit adjustment value including the step of calculating the value for indirect expense, which is an apportioned profit value adjustment for all non-object related resource consumption. Price enters this amount into ledgers as debits or credits, usually through internal transfers. It would not be calculated in any relational database management system itself. The invention requires the existence of a prepared income statement to calculate these amounts at the object level of detail using dynamic data.

27. Claim 8 recites that the combining step includes the steps of adding net interest and other revenues, and subtracting therefrom direct expense, provisioning and indirect expense. This sequential step is required in non-procedural language. In Price, by contrast, no combining is required since this occurs in financial statement preparation.

28. Claim 9 recites the step of adjusting the measure for object level profitability for taxes and/or object economic value. The present invention uses simple

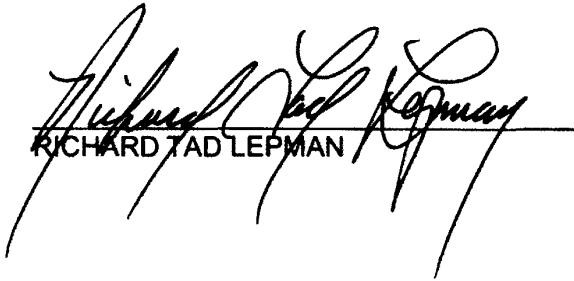
effective rates for detailed calculations. Accounting methods, such as Price, require ledgers for deferred taxes and timing differences which is complicated.

29. Claims 11-33 are directed to formulas which are used in association with the computerized relational database management system to perform the calculations and computations necessary to determine the object level profitability which is the intention of the invention. None of these formulas are indicated in Price, and are well beyond the scope of Price.

30. As one of ordinary skill in the field of the invention, I disagree with the Examiner's assertion that it would have been obvious to take the teachings of Price and combine them with the relevant relational database technology to arrive at the present invention. In fact, even if the methodologies and teachings of Price were applied to a relational database management system, the end result would be different than that of the present invention.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Executed on November 12, 2008, at Charlevoix, Michigan.


RICHARD TAD LEPMAN

BERKEL-48526
SN: 11/354,798
LEPMAN DECLARATION

- 8 -

Curriculum Vitae

Richard Tad Lepman

(510) 524-5838

tad@bieor.com

Thirty years experience in the Financial Services and Information Technology Industries. Accomplishments utilised knowledge of financial evaluation, technological development, operations research and banking. Consistently contributes to improvement of shareholder value.

Employment History

- **1993 to Present -- Berkeley*IEOR, President**
Founded company, provides consulting services specialising in large scale decision support systems and analyst empowerment. Develops detailed risk adjusted profit measurement processes and solutions. Lectures and provides management consulting on performance measurement and application of information technology in the Financial Services Industry.
- **1995 to 2001 -- NCR, Global Solution Consultant**
Key member of Customer Relationship Management initiative and provided product line development and customer support for the Financial Services Industry. Presented and consulted solutions to NCR's banking customers world-wide. Work included solution design, funds transfer pricing concepts, costing methods, data modelling, profit measurement theory, customer implementation, development specification and solution testing.
- **1993 to 1996 -- Barclays Bank, Data Warehouse Consultant**
Advised executive management on uses of large scale decision support opportunities using Teradata technology. Worked with Group Treasury and Group Portfolio Management to establish a sound decision support environment providing immediate and strategic value. Deliverables included: customer segmentation, maturity profiles, risk vs. return portfolio analysis, analyst training and development.
- **1992 to 1993 -- WhiteLight Systems, Consultant**
Founding member of company. Beta tested software in a business consultant role, helping create a customer's "off-shore" strategic plan, including the consolidation and long term plan for 50+ full or partially owned foreign subsidiaries plus new investments and divestments.
- **1976 to 1992 -- Bank of America, Vice President & Sr. Manager of Finance**
Analytical corporate level roles including: mergers & acquisitions, performance measurement policies, asset sales and servicing, long term capital planning, capital investment analysis, tax planning, funds transfer pricing, budget and planning, and management science projects (e.g., credit scoring, check sorting, mail and courier routing, mainframe replacement, premises planning and customer retention.)

Education

- University of California at Berkeley, School of Engineering, Masters of Science in Industrial Engineering and Operations Research; 1976
- Claremont Men's College, Bachelor of Arts in Applied Mathematics; 1975

EXHIBIT "A"

Work Products

Decision Support Systems

- FFAPM™ invention
- funds transfer pricing methodology
- liability mark-to-market accounting
- customer relationship tracking
- investment decision analyser
- loan profitability measurement tools
- three generations of corporate planning and budgeting processes
- two generations of transfer pricing accounting processes
- daily settlement risk and liquidity monitoring & valuing
- interest rate forecasting tool development
- tax position forecasting tool development
- check processing volume forecasting
- loan and credit card loss methodology, scoring and research
- cash and regulatory reserve position forecasting and control
- foreign exchange dealer support system design

Financial Analysis

- debt/equity transaction evaluations
- litigation reserve estimations
- product profitability analyses
- cost accounting methodology
- incentive stock option evaluation
- employee benefit costing

Capital Budgeting

- over 35, \$5 million+ capital investment decision financial reviews of:
- branch automation
- premises acquisition
- mainframe investments
- business acquisition/ divestment
- corporate-wide investment expenditure policy and control
- premises planning and investment optimisation
- lease-buy fixed asset acquisition decision support
- computer technology procurement financial review

Asset Backed Securities

- negotiated and managed the sale and servicing of \$1.3 billion of automobile receivables
- managed tax receivable sale, \$77 million private placement
- asset value adjusted preferred stock (NYSE: BAC pfd. C) transaction support

Merger & Acquisition

- SeaFirst Corporation merger financial evaluation
- 50+ deposit base evaluations, public and private purchases by Bank of America
- Security Pacific Corporation merger retail liability base evaluation
- Managistics payroll services acquisition evaluation
- Decimus Computer Leasing Corporation divestment
- AT&T, Chemical & Bank of America electronic banking partnership development
- Bank of America, Canada consolidation financial analyst

Operations Research

- credit scoring research and tracking development
- courier routing (transportation model heuristic)
- mail room work flow optimisation
- float optimisation in check processing
- customer retention estimation using renewal theory

Strategic Planning

- de-novo bank start-up
- bank liability base deregulation financial strategy development
- branch bank functional reengineering financial modelling
- technology direction financial evaluation and methodology
- bank item processing evolution strategy financial evaluation

Tax Planning

- tax room measurement and control
- tax position optimisation
- accounting impact analyses (e.g., new regulations or litigation reserve estimation)

Planning

- consolidated corporate plan analyses, three annual budget cycles
- strategic business unit annual plan review, two budget cycles
- econometric sensitivity analyses
- earnings sensitivity modelling under different interest rate and credit loss scenarios
- budget variance reporting and analyses

Long Term Planning

- capital planning using Monte Carlo and linear programming
- dividend modelling and decision support
- debt/preferred stock/common stock structuring analysis

Direct Supervision

- workflow consulting projects: two management scientists
- capital budgeting reviews: three financial analysts
- loan sales servicing: one analyst and one systems analyst
- intangible accounting and valuation: two financial consultants
- foreign exchange dealer control: two control officers

Project Management

- financial tasks: teams of two to fifteen officers and analysts one week to six months
- systems development: project manager of five large scale IT development efforts
- asset sales servicing: matrix managed four geographically dispersed loan servicing centres

Technical Experience

- Operating Systems: MS-DOS v3.x & 4; Windows v3.0a & 3.1 & 9x & 2000 & XP; OS/2 1.x & 2.0; MP-RAS; Linux; MVS; VM/CMS; VP/CSS; TPF/ACP; MacOS v6, 7, 8, 9 & X; InGrid; TOS; and EXEC.
- Database Management Systems; Teradata; Sybase; Oracle; Nomad; Versant, {IDEF - Data Modelling.}
- Programming Languages: SQL x, TQL; TSQL; SQL-Plus; Object-C; C-Shell; Unix tools (BSD4.3 & NFS); Nomad; REXX; FORTRAN; PL/I; APL; RPG; System 360 Assembler/Macro; Lotus; Excel; Javelin; Mesa; Paradox PAL; and Improv.
- Hardware: NCR/Teradata Worldmark & DBC/1012; IBM PS/2 and PC compatibles (Wintel); NeXTStep; IBM Systems 360/70, 36, & 3090; Digital PDP-8 & 11; Sperry Univac 1108; Apple Lisa, Macintosh, PowerBook, iMac, G4; and Grid Compass.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	Group Art Unit: 3687
	)	
Richard Tad Lepman	)	Examiner: Andrew J. Rudy
	)	
Serial No. 11/354,798	)	
	)	
Filed: February 15, 2006	)	Docket No. BERKEL-48526
	)	
For: PROCESS FOR DETERMINING	)	
OBJECT LEVEL PROFITABILITY	)	
	)	

DECLARATION OF DANIEL W. WON

I, DANIEL W. WON, declare as follows:

1. I am making this Declaration in support of the patentability of the above-identified application.
2. I have twenty-five (25) years experience in public accounting, working primarily with businesses and in international tax planning. I hold an MBA degree from California State University East Bay, and have served as an adjunct professor for the University of California at Berkeley. I am a certified public accountant, and an alumni of Price Waterhouse. I am a member of the American Institute of CPAs, the California Society of CPAs, and a non-attorney member of the Bar Association of San Francisco.
3. I am aware of Mr. Lepman's invention and his patent application, and have reviewed the May 12, 2008 Office Action, and the cited College Accounting, 7th edition, by Price, Haddock, and Brock (Price).

BERKEL-48526
SN: 11/354,798
WON DECLARATION

4. The Price reference is a college accounting textbook that describes accounting concepts and principles. The portions cited describe analyzing business transactions including the accounting cycle, accounting for assets and liabilities, including accounts receivable and uncollectible accounts. Essentially, Price discusses the creation and preparation of financial statements following the completion of an accounting period. This is done according to the well-known accounting principles of using debit and credit entries in a general ledger system.

5. The Lepman invention is directed to a process for determining object level profitability. The methodology, steps, and formulas for achieving this are significantly different than Price, and the level of profitability determined is much more focused and refined than that taught in Price.

6. In the Lepman patent application, the independent claim recites the step of providing a relational database management system operable in association with a computer, and the steps of preparing information to be accessed electronically through the relational database management system, and establishing, in the relational database, rules for processing the prepared information. There is no mention in Price of preparing any information to be accessed electronically through a relational database management system or establishing any rules for processing prepared information.

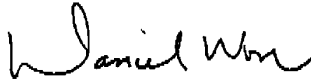
7. Claim 1 also recites that the relational database management system is used to independently calculate at least one marginal value of profit for each object being measured, using the established rules as applied to the prepared information, and calculating a fully absorbed profit adjustment value for each object being measured. The marginal value of profit and the fully absorbed profit adjustment value are combined to create a measure for object level profitability. These steps are not found in Price, and are beyond the general accounting practices and principles.

8. Moreover, the steps and formulas of claims 11-33 for calculating net interest, other revenue, direct expense, indirect expense, and provisioning, are not found in Price, nor are they used in general accounting calculations, such as those disclosed in Price.

9. I consider myself at least of ordinary skill in the field of accounting, and do not view Mr. Lepman's invention of a computerized relational database management system having rules, formulas, preparation of information and the like being contemplated or obvious by general accounting procedures and methodologies, such as that disclosed in Price. Although I believe that one of ordinary skill in accounting would understand the methodologies that the Price College Accounting reference discusses, I do not believe that an accountant of ordinary skill would be able to recreate Mr. Lepman's invention even if he was aware of both Price and relational database computer technologies.

I declare under penalty of perjury, under the laws of the State of California that the foregoing is true and correct.

Executed on November 12, 2008, at San Francisco, California.



DANIEL W. WON

Doc code :IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (10-08)

Approved for use through 11/30/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		11354798
	Filing Date		2006-02-15
	First Named Inventor	Richard Tad Lepman	
	Art Unit	3687	
	Examiner Name	Andrew J. Rudy	
	Attorney Docket Number	BERKEL-48526	

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5446890		1995-08-29	Renslo et al.	
	2	5615109		1997-03-25	Eder	
	3	5712987		1998-01-27	Waits et al.	
	4	5721831		1998-02-24	Waits et al.	
	5	5721903		1998-02-24	Anand et al.	
	6	6026382		2000-02-15	Kalthoff	
	7	6092064		2000-07-18	Aggarwal et al.	
	8	6154731		2000-11-28	Monks et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	11354798
	Filing Date	2006-02-15
	First Named Inventor	Richard Tad Lepman
	Art Unit	3687
	Examiner Name	Andrew J. Rudy
	Attorney Docket Number	BERKEL-48526

	9	6360210	B1	2002-03-19	Wallman	
--	---	---------	----	------------	---------	--

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S. PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button.

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	CHAN, DKC; A document-driven approach to database report generation; August 26, 1998; pages 925-930; XP010296617	☐
	2	GUPTA, VR; An Introduction to Data Warehousing; August 1997; XP002204504	☐

If you wish to add additional non-patent literature document citation information please click the Add button.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	11354798
	Filing Date	2006-02-15
	First Named Inventor	Richard Tad Lepman
	Art Unit	3687
	Examiner Name	Andrew J. Rudy
	Attorney Docket Number	BERKEL-48526

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			
¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.			

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	11354798
	Filing Date	2006-02-15
	First Named Inventor	Richard Tad Lepman
	Art Unit	3687
	Examiner Name	Andrew J. Rudy
	Attorney Docket Number	BERKEL-48526

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Scott W. Kelley, Reg.No. 30,762/	Date (YYYY-MM-DD)	2008-11-12
Name/Print	Scott W. Kelley	Registration Number	30762

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:	11354798			
Filing Date:	15-Feb-2006			
Title of Invention:	Process for determining object level profitability			
First Named Inventor/Applicant Name:	Richard Tad Lepman			
Filer:	Scott W. Kelley/Nancy Hoover			
Attorney Docket Number:	BERKEL-48526			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with \$0 paid	2253	1	555	555

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				735

Electronic Acknowledgement Receipt	
EFS ID:	4276060
Application Number:	11354798
International Application Number:	
Confirmation Number:	9571
Title of Invention:	Process for determining object level profitability
First Named Inventor/Applicant Name:	Richard Tad Lepman
Customer Number:	26252
Filer:	Scott W. Kelley/Nancy Hoover
Filer Authorized By:	Scott W. Kelley
Attorney Docket Number:	BERKEL-48526
Receipt Date:	12-NOV-2008
Filing Date:	15-FEB-2006
Time Stamp:	15:38:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$735
RAM confirmation Number	1107
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
-----------------	----------------------	-----------	-------------------------------------	------------------	------------------

1	Extension of Time	48526_Ext_Pet.pdf	357761 ee8e4812050feae69e7eb6174f3b297682061dc9	no	2
Warnings:					
Information:					
2	Amendment/Req. Reconsideration-After Non-Final Reject	48526_Response1.pdf	158949 af889b0efe1d021bc51fef1842270b7425caf783	no	32
Warnings:					
Information:					
3	Oath or Declaration filed	48526_LepmanDeclaration.pdf	143040 542d8e6e22a764c7c7ce69cf033ed1994be79a0a	no	11
Warnings:					
Information:					
4	Oath or Declaration filed	48526_WonDeclaration.pdf	44294 25e9e042d103549fd9273eb09eadce1ea478eca9	no	3
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Filed (SB/08)	48526_IDS.pdf	608163 ded600dadd82b8a836c8aee79e812412c85dbd20	no	5
Warnings:					
Information:					
6	NPL Documents	48526_ChanNPL.pdf	67115 27474061f5cf671850a556c90449e8cf36575d0f	no	6
Warnings:					
Information:					
7	NPL Documents	48526_GuptaNPL.pdf	240987 906c7299d879e869359f1776a80d39c1bd94ae32	no	22
Warnings:					
Information:					
8	Fee Worksheet (PTO-06)	fee-info.pdf	32014 07a5a41ea33d74948edfbb5f1bbaa483110faa4c	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1652323		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) FY 2009 <i>(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)</i>		Docket Number (Optional) BEKEL-48526																									
Application Number 11/354,798		Filed February 15, 2006																									
For PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY																											
Art Unit 3687		Examiner Andrew J. Ruby																									
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Fee</u></th> <th style="width: 15%; text-align: center;"><u>Small Entity Fee</u></th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td>☐ One month (37 CFR 1.17(a)(1))</td> <td style="text-align: center;">\$130</td> <td style="text-align: center;">\$65</td> <td style="text-align: center;">\$ _____</td> </tr> <tr> <td>☐ Two months (37 CFR 1.17(a)(2))</td> <td style="text-align: center;">\$490</td> <td style="text-align: center;">\$245</td> <td style="text-align: center;">\$ _____</td> </tr> <tr> <td>☒ Three months (37 CFR 1.17(a)(3))</td> <td style="text-align: center;">\$1110</td> <td style="text-align: center;">\$555</td> <td style="text-align: center;">\$ 555.00</td> </tr> <tr> <td>☐ Four months (37 CFR 1.17(a)(4))</td> <td style="text-align: center;">\$1730</td> <td style="text-align: center;">\$865</td> <td style="text-align: center;">\$ _____</td> </tr> <tr> <td>☐ Five months (37 CFR 1.17(a)(5))</td> <td style="text-align: center;">\$2350</td> <td style="text-align: center;">\$1175</td> <td style="text-align: center;">\$ _____</td> </tr> </tbody> </table> ☒ Applicant claims small entity status. See 37 CFR 1.27. ☐ A check in the amount of the fee is enclosed. ☒ Payment by credit card. Form PTO-2038 is attached. (Via E-File) ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. ☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. I am the ☐ applicant/inventor. ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96). ☒ attorney or agent of record. Registration Number <u>30,762</u> ☐ attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____ <u>/Scott W. Kelley, Reg.No. 30,762/</u> Signature <u>Scott W. Kelley</u> Typed or printed name <u>November 12, 2008</u> Date <u>818-347-7900</u> Telephone Number NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below. ☐ Total of _____ forms are submitted.					<u>Fee</u>	<u>Small Entity Fee</u>		☐ One month (37 CFR 1.17(a)(1))	\$130	\$65	\$ _____	☐ Two months (37 CFR 1.17(a)(2))	\$490	\$245	\$ _____	☒ Three months (37 CFR 1.17(a)(3))	\$1110	\$555	\$ 555.00	☐ Four months (37 CFR 1.17(a)(4))	\$1730	\$865	\$ _____	☐ Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$ _____
	<u>Fee</u>	<u>Small Entity Fee</u>																									
☐ One month (37 CFR 1.17(a)(1))	\$130	\$65	\$ _____																								
☐ Two months (37 CFR 1.17(a)(2))	\$490	\$245	\$ _____																								
☒ Three months (37 CFR 1.17(a)(3))	\$1110	\$555	\$ 555.00																								
☐ Four months (37 CFR 1.17(a)(4))	\$1730	\$865	\$ _____																								
☐ Five months (37 CFR 1.17(a)(5))	\$2350	\$1175	\$ _____																								

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		11354798		
Filing Date:		15-Feb-2006		
Title of Invention:		Process for determining object level profitability		
First Named Inventor/Applicant Name:		Richard Tad Lepman		
Filer:		Scott W. Kelley/Nancy Hoover		
Attorney Docket Number:		BERKEL-48526		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	13	26	338
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				338

Electronic Acknowledgement Receipt	
EFS ID:	4277068
Application Number:	11354798
International Application Number:	
Confirmation Number:	9571
Title of Invention:	Process for determining object level profitability
First Named Inventor/Applicant Name:	Richard Tad Lepman
Customer Number:	26252
Filer:	Scott W. Kelley/Nancy Hoover
Filer Authorized By:	Scott W. Kelley
Attorney Docket Number:	BERKEL-48526
Receipt Date:	12-NOV-2008
Filing Date:	15-FEB-2006
Time Stamp:	16:03:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 338
RAM confirmation Number	1602
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
-----------------	----------------------	-----------	-------------------------------------	------------------	------------------

1	Fee Worksheet (PTO-06)	fee-info.pdf	30207 048caa172a3e531aa99e47c7ddbce05f1f0d258f	no	2
Warnings:					
Information:					
Total Files Size (in bytes):				30207	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 11/354,798		Filing Date 02/15/2006		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY ☒ OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =		OR	X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =			X \$ =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL				
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			(Column 3)		SMALL ENTITY OR OTHER THAN SMALL ENTITY		
AMENDMENT	11/12/2008	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 33	Minus	** 20	= 13	X \$26 =		X \$ =		
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X \$110 =		X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE	338	OR	TOTAL ADD'L FEE		
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		X \$ =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
/DEBORAH SCOTT/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,798	02/15/2006	Richard Tad Lepman	BERKEL-48526	9571

26252 7590 02/09/2009
KELLY LOWRY & KELLEY, LLP
6320 CANOGA AVENUE
SUITE 1650
WOODLAND HILLS, CA 91367

EXAMINER	
RUDY, ANDREW J	

ART UNIT	PAPER NUMBER
3687	

MAIL DATE	DELIVERY MODE
02/09/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/354,798		Applicant(s) LEPMAN, RICHARD TAD	
	Examiner Andrew Joseph Rudy		Art Unit 3687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 12 November 2008.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-33 is/are pending in the application.

4a) Of the above claim(s) 33 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-32 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☒ Claim(s) 33 are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 33 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 33 is directed towards a profit database. This is different in scope and content in juxtaposition with the previously submitted claims. Further search would be required to analyze the meets and bounds of claim 33, as has already been performed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 33 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-32 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-32 do not meet standards articulated by the Court of Appeals for the Federal Circuit in *In Re Bilski*, 545, F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008). The method claims 1-32 are not tied to a different state or thing, nor do the claims 1-32 transform a particular article to a different state or thing. The recitations of “for determining object level profitability in a computer” or “in

association with a computer” does not obviate this line of reasoning. The computer is not positively recited in the body of the claim. As is intentional use claim language, e.g. claim 1, line 1, “for determining” is given little, if any, patentable weight in juxtaposition to positively recited claim language, e.g. claim 1, line 3, “providing a relational database management system.”

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A computer or processor, critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The claims do not recite any technology that adhere to the Bilsky test noted above.

Claim Rejections - 35 USC § 103

6. Claims 1-32, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al in view of Official Notice and Clancey et al, US 6,292,811.

Price discloses, e.g. pages 28-41, 529, 531, 966-982 (Fig. 27-5), a method of measuring profit based on the factors of net interest revenue, other revenues (Fig 27-5,

line 4, "Operating Revenues"), direct expenses (Fig 27-5, line 22, "Direct Expenses"), indirect expenses (Fig 27-5, line 30, "Indirect Expenses"), and risk (Fig 27-5, line 6, "Less Sales Returns and Allowances"), all set up to take advantage of flexible business rules.

Official Notice is taken that performing financial processing using computer software is common knowledge in the art. Clancey discloses, e.g. Figs. 1-13E and related text, a relational database or electronic spreadsheet, e.g. 30, that a computer may populate to determine profit, e.g. 136.

To have provided a method of performing financial processing for an account using software for a computer measuring profit based on the factors of net interest revenue, other revenues, direct expenses, indirect expenses and risk, all set up to take advantage of flexible business rules to calculate known variations of one of the factors, e.g. net interest revenue, for Price, would have been obvious to one of ordinary skill in the art, in view of Official Notice, as supported by Clancy. Doing such would incorporate common knowledge data along with common knowledge software.

Applicant's REMARKS regarding Official Notice are noted, but not convincing. Using a relational database management system directed by a computer system has been common knowledge in the art. Clancy, among others, discloses such.

Applicant's Affidavits have been reviewed, but are not convincing. It is noted that it appears the Affidavits believe a computer is positively recited. This is not the case. The term "one marginal value of profit" and "a fully absorbed profit adjustment value for each object being measured" are not new within the financial arts. Neither is a rule

associated therewith. These terms are extremely broad and nearly limitless in their scope and breadth.

7. Further pertinent references of interest are noted on the attached PTO-892.

8. Applicant's Information Disclosure Statement (IDS) submitted November 12, 2008 has been reviewed. Note attached IDS.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. 10.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Joseph Rudy whose telephone number is 571-272-6789. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on 571-272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Joseph Rudy/
Primary Examiner, Art Unit 3687

Notice of References Cited	Application/Control No. 11/354,798	Applicant(s)/Patent Under Reexamination LEPMAN, RICHARD TAD	
	Examiner Andrew Joseph Rudy	Art Unit 3687	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,379,908	05-2008	Clancey et al.	705/35
*	B	US-7,231,082	06-2007	Lenoir, Wayne Edward	382/154
*	C	US-7,162,689	01-2007	Demers et al.	715/227
*	D	US-6,882,538	04-2005	Frisch, Michael	361/728
*	E	US-6,826,538	11-2004	Kalyan et al.	705/7
*	F	US-6,292,811	09-2001	Clancey et al.	715/210
*	G	US-6,144,893	11-2000	Van Der Vegt et al.	700/108
*	H	US-6,098,070	08-2000	Maxwell, John M.	707/102
*	I	US-5,999,914	12-1999	Blinn et al.	705/26
	J	US-			
	K	US-			
	L	US-			
	M	US-			

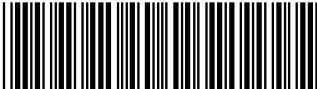
FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 		Application/Control No. 11/354,798	Applicant(s)/Patent under Reexamination LEPMAN, RICHARD TAD	
		Examiner Andrew Joseph Rudy	Art Unit 3687	

SEARCHED			
Class	Subclass	Date	Examiner
705	35	1/28/2009	AJR

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 9571

SERIAL NUMBER 11/354,798	FILING or 371(c) DATE 02/15/2006 RULE	CLASS 705	GROUP ART UNIT 3687	ATTORNEY DOCKET NO. BERKEL-48526		
APPLICANTS Richard Tad Lepman, London, UNITED KINGDOM; ** CONTINUING DATA ***** This application is a CON of 09/545,628 04/07/2000 ABN which claims benefit of 60/128,769 04/09/1999 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 04/04/2006						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /ANDREW J RUDY/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWINGS 12	TOTAL CLAIMS 9	INDEPENDENT CLAIMS 1
ADDRESS KELLY LOWRY & KELLEY, LLP 6320 CANOGA AVENUE SUITE 1650 WOODLAND HILLS, CA 91367 UNITED STATES						
TITLE Process for determining object level profitability						
FILING FEE RECEIVED 838	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit			

Doc code :IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (10-08)

Approved for use through 11/30/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		11354798
	Filing Date		2006-02-15
	First Named Inventor	Richard Tad Lepman	
	Art Unit	3687	
	Examiner Name	Andrew J. Rudy	
	Attorney Docket Number	BERKEL-48526	

U.S. PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5446890		1995-08-29	Renslo et al.	
	2	5615109		1997-03-25	Eder	
	3	5712987		1998-01-27	Waits et al.	
	4	5721831		1998-02-24	Waits et al.	
	5	5721903		1998-02-24	Anand et al.	
	6	6026382		2000-02-15	Kalthoff	
	7	6092064		2000-07-18	Aggarwal et al.	
	8	6154731		2000-11-28	Monks et al.	

/Andrew Joseph Rudy/

01/22/2009

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		11354798	
	Filing Date		2006-02-15	
	First Named Inventor	Richard Tad Lepman		
	Art Unit	3687		
	Examiner Name	Andrew J. Rudy		
	Attorney Docket Number	BERKEL-48526		

	9	6360210	B1	2002-03-19	Wallman	
--	---	---------	----	------------	---------	--

If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S. PATENT APPLICATION PUBLICATIONS

Remove

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

Add

FOREIGN PATENT DOCUMENTS

Remove

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button.

Add

NON-PATENT LITERATURE DOCUMENTS

Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	CHAN, DKC; A document-driven approach to database report generation; August 26, 1998; pages 925-930; XP010296617	☐
	2	GUPTA, VR; An Introduction to Data Warehousing; August 1997; XP002204504	☐

If you wish to add additional non-patent literature document citation information please click the Add button.

Add

/Andrew Joseph Rudy/

01/22/2009

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	11354798
Filing Date	2006-02-15
First Named Inventor	Richard Tad Lepman
Art Unit	3687
Examiner Name	Andrew J. Rudy
Attorney Docket Number	BERKEL-48526

EXAMINER SIGNATURE

Examiner Signature	/Andrew Joseph Rudy/	Date Considered	01/22/2009
--------------------	----------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES		Docket Number (Optional) BERKEL-48526						
I hereby certify that this correspondence is being transmitted ^{mailed} to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] <u>March 2, 2009</u> on _____ Signature <u>/Scott W. Kelley, Reg. No. 30762/</u> Typed or printed name <u>Scott W. Kelley</u>		In re Application of Richard Tad Lepman <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%;">Application Number 11/354,798</td><td style="width: 50%;">Filed February 15, 2006</td></tr><tr><td colspan="2">For PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY</td></tr><tr><td>Art Unit 3687</td><td>Examiner Andrew J. Rudy</td></tr></table>	Application Number 11/354,798	Filed February 15, 2006	For PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY		Art Unit 3687	Examiner Andrew J. Rudy
Application Number 11/354,798	Filed February 15, 2006							
For PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY								
Art Unit 3687	Examiner Andrew J. Rudy							
Applicant hereby appeals to the Board of Patent Appeals and Interferences from the last decision of the examiner. The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) \$ <u>540</u> ☒ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: \$ <u>270</u> ☐ A check in the amount of the fee is enclosed. ☒ Payment by credit card. Form PTO-2038 is attached. ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. ☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. _____. ☐ A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. I am the <table style="width: 100%;"><tr><td style="width: 50%; vertical-align: top;"> ☐ applicant/inventor. ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) ☒ attorney or agent of record. Registration number <u>30762</u> ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____ </td><td style="width: 50%; vertical-align: top;"> <u>/Scott W. Kelley, Reg. No. 30762/</u> Signature <u>Scott W. Kelley</u> Typed or printed name <u>(818) 347-7900</u> Telephone number <u>March 2, 2009</u> Date </td></tr></table> NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.			☐ applicant/inventor. ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) ☒ attorney or agent of record. Registration number <u>30762</u> ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	<u>/Scott W. Kelley, Reg. No. 30762/</u> Signature <u>Scott W. Kelley</u> Typed or printed name <u>(818) 347-7900</u> Telephone number <u>March 2, 2009</u> Date				
☐ applicant/inventor. ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) ☒ attorney or agent of record. Registration number <u>30762</u> ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____	<u>/Scott W. Kelley, Reg. No. 30762/</u> Signature <u>Scott W. Kelley</u> Typed or printed name <u>(818) 347-7900</u> Telephone number <u>March 2, 2009</u> Date							
☒ *Total of <u>1</u> forms are submitted.								

This collection of information is required by 37 CFR 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		11354798		
Filing Date:		15-Feb-2006		
Title of Invention:		Process for determining object level profitability		
First Named Inventor/Applicant Name:		Richard Tad Lepman		
Filer:		Scott W. Kelley/Jody Cohan		
Attorney Docket Number:		BERKEL-48526		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Notice of appeal	2401	1	270	270
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				270

Electronic Acknowledgement Receipt	
EFS ID:	4884978
Application Number:	11354798
International Application Number:	
Confirmation Number:	9571
Title of Invention:	Process for determining object level profitability
First Named Inventor/Applicant Name:	Richard Tad Lepman
Customer Number:	26252
Filer:	Scott W. Kelley/Jody Cohan
Filer Authorized By:	Scott W. Kelley
Attorney Docket Number:	BERKEL-48526
Receipt Date:	02-MAR-2009
Filing Date:	15-FEB-2006
Time Stamp:	15:29:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$270
RAM confirmation Number	902
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
-----------------	----------------------	-----------	-------------------------------------	------------------	------------------

1	Notice of Appeal Filed	48526_Notice_of_Appeal_sb31.pdf	227833 5bb3b4e58f12f91b90df09f8439187797590b78f	no	2
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	30165 01deaeb9473754849ec0975450dacf0afa688d62	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			257998		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	Group Art Unit: 3687
	)	
Richard Tad Lepman	)	Examiner: Andrew J. Rudy
	)	
Serial No. 11/354,798	)	
	)	
Filed: February 15, 2006	)	Docket No. BERKEL-48526
	)	
For: PROCESS FOR DETERMINING	)	
OBJECT LEVEL PROFITABILITY	)	
_____	)	

APPELLANT'S BRIEF

Commissioner for Patents
Via E-File

Gentlemen:

This brief is in furtherance of the Notice of Appeal filed in this case on March 2, 2009. The fees required for filing this Brief are submitted herewith.

- 1 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

I. REAL PARTY INTEREST

Further to the April 7, 2000 Assignment, the real party in interest is Berkeley
*IEOR, a Nevada corporation.

- 2 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for this application or any related pending applications.

- 3 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

III. STATUS OF CLAIMS

Claims 1-32 are pending. No claims have been cancelled, although claim 33 was withdrawn from consideration by the Examiner in the February 9, 2009 Office Action based upon the assertion that it was directed to an invention that is independent or distinct from the invention originally claimed. Thus, claims 1-32 are being appealed.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the February 9, 2009 Final Office Action.

- 5 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a process for determining object level profitability in a computer. This comprises the steps of providing a relational database management system operable in association with a computer (paragraphs 38, 65, 66, 72 and 78, and as illustrated in FIGS. 2-14).

Information is prepared to be accessed electronically through the relational database management system (see paragraphs 42, 43, 71, 72, 84 and 85, and as illustrated in FIGS. 3-6).

In the relational database, rules are established for processing the prepared information (see paragraphs 42, 44, 72, 80, 84 and 86, and FIGS. 4-7).

The relational database management system is used to independently calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information (see paragraphs 42, 44, 72, 84 and 88, and as illustrated in FIGS. 2-5, and 8-12).

The relational database management system is used to calculate a fully absorbed profit adjustment value for each object being measured (see paragraphs 42, 45, 72, 84 and 88, and as illustrated in FIGS. 2-5 and 8-12).

The at least one marginal value of profit and the fully absorbed profit adjustment value are combined to create a measure for object level profitability (see paragraphs 41, 42, 46, 72, 84 and 88, and as illustrated in FIGS. 2-5, 13 and 14).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1-32 are properly rejected under 35 U.S.C. §101.
2. Whether claims 1-32 are properly rejected under 35 U.S.C. §112, first paragraph, as based on a disclosure which is not enabling.
3. Whether claims 1-32 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Price et al. in view of Official Notice and Clancey et al. (U.S. Patent No. 6,292,811).

VII. ARGUMENT

1. Claim Rejections - 35 U.S.C. §101.

In the February 9, 2009 Office Action, the Examiner rejected claims 1-32 under 35 U.S.C. §101 based upon the assertion that the claimed invention is directed to non-statutory subject matter. More particularly, the Examiner asserted that claims 1-32 do not meet the standards articulated by the Court of Appeals for the Federal Circuit in *In re Bilski*. Applicant respectfully asserts that this rejection is in error.

The present invention, as recited in claims 1-32, is not directed to natural phenomena, abstract intellectual concept, mental process, or system that solely depends on human intelligence. Instead, the present invention is directed to a useful method which is directly tied to machines and transforms the relational database.

As recited in independent claim 1, the process is for determining object level profitability in a computer. The first positive recitation of independent claim 1 is "providing a relational database management system operable in association with a computer". The remaining body of independent claim 1 is replete with steps which are physically tied to the use of the computer and the relational database management system. These include preparing information to be accessed electronically through the relational database management system; establishing, in the relational database, rules for processing the prepared information; using the relational database management system to independently calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared

information; using the relational database management system to calculate a fully absorbed profit adjustment value for each object being measured.

Given the foregoing, applicant respectfully disagrees with the Examiner's assertion that *"the recitations of 'for determining object level profitability in a computer' or 'in association with a computer' does not obviate this line of reasoning. The computer is not positively recited in the body of the claim."* Clearly, the computer is positively recited in the body of the claim, as is the relational database management system which is operable in association with the computer.

In the present invention, the information is prepared to be accessed electronically through a relational database management system. Rules for processing the prepared information are established in the relational database before the relational database management system is used to calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information, as well as calculating a fully absorbed profit adjustment value for each object being measured before combining these calculated values to create a measure for object level profitability. These steps do not rely on a mental process or abstract idea, but must be processed using massively parallel processing equipment consisting of a computerized relational database management system. As such, the process is tied to a machine, which is critical to the operation of the method of the invention.

Moreover, in the present invention, the information or data is not merely gathered and redistributed, as is the case with many Internet and software applications. Instead,

- 9 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

the information is actually transformed into a completely different state than that which was originally entered. In essence, the process of the present invention creates a new and useful computerized processing database as compared to the state of the electronic database and information content before the process of the present invention has acted upon it.

Similar to electronic devices which are used to receive, interpret, and alter electronic signals, such as in the case with cell phones or the like, the present invention is a process for transforming information into object level profitability information which is useful in the physical world. The invention provides machine scalable precision or resolution of the profit via parallel processing and computation of detailed profit database values. As described in the Specification, this may be the profitability of a single account of a bank. It may represent the profitability of not only an airplane of an airline company, but a seat on that particular airplane of that particular airline company. This provides a degree of resolution of profit which has heretofore been unattainable. This is similar to improving and increasing the resolution or strength of an electronic signal using electronic devices. It is not merely an insignificant extra-solution activity. Instead, it is associated with something tangible in the real world due to the data transformation and transformation of the database management system, as a result of the invention. This transformation is central to the purpose of the claimed process, and once again has a connection to the physical world.

As such, applicant respectfully requests that the rejection be withdrawn, and the claims considered directed to statutory subject matter.

- 10 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

2. Claim Rejections - 35 U.S.C. §112.

The Examiner rejected claims 1-32 under 35 U.S.C. §112, first paragraph, asserting that it is based on a disclosure which is not enabling. More particularly, the Examiner stated *"A computer or processor, critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure."* *"The claims do not recite any technology that adhere to the Bilski test noted above."*

From the foregoing, applicant believes that it is abundantly clear that a computer or processor, which is critical or essential to the practice of the invention, is positively recited in the claims, and particularly independent claim 1 of the application. Moreover, the claims do recite technology that adhere to the Bilski test noted above, as the invention, as recited in independent claim 1 and its dependent claims, is tied to a machine, and in fact both the data is transformed as well as the status and content of the database management system during the operation of the invention. Accordingly, applicant respectfully asserts that claims 1-32 have been improperly rejected under 35 U.S.C. §112, and these rejections should be withdrawn.

3. Claim Rejections - 35 U.S.C. §103.

Claims 1-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Price et al. in view of Official Notice and Clancey et al. (U.S. Patent No. 6,292,811). The Examiner asserts that *"To have provided a method of performing financial processing for an account using software for a computer measuring profit based on the factors of net interest revenue, other revenues, direct expenses, indirect expenses and risk, all set up to take advantage of flexible business rules to calculate known variations*

of one of the factors, e.g. net interest revenue, for Price, would have been obvious to one of ordinary skill in the art, in view of Official Notice, as supported by Clancey. Doing such would incorporate common knowledge data along with common knowledge software.” Applicant respectfully disagrees with this assertion.

In applicant's Response filed November 12, 2008, applicant included the Declaration of Mr. Tad Lepman, the inventor who has a Masters degree in Engineering, as well as Mr. Daniel W. Won, a certified public accountant who holds a Masters of Business Administration degree, and has twenty-five years experience in public accounting. Applicant submits herewith copies of these Declarations along with this Appeal Brief.

The Price reference is a college accounting textbook that describes accounting concepts and principles. Price does not disclose a process for determining object level profitability in a computer, providing a relational database management system operable in association with the computer, preparing information to be accessed electronically through the relational database management system, establishing, in the relational database, rules for processing the prepared information, using the relational database management system to independently calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information, using the relational database management system to calculate a fully absorbed profit adjustment value for each object being measured, and combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability, as recited in claim 1.

The Examiner has taken "Official Notice" that performing financial processing using computer software is common knowledge in the art. Applicant does not dispute this, and in fact in applicant's Specification applicant refers to prior art computerized financial statement generating systems. Mr. Lepman, in his Declaration, also eludes to the prior art use of computer software for performing financial processing.

The Examiner refers to Clancey, but mischaracterizes Clancey as having a relational database that a computer may populate to determine profit. In fact, Clancey is directed to the creating and editing of computer-readable electronic documents which are domain-specific to include a report, such as a financial statement (column 1, lines 25-30). A user inserts a formula into a cell for calculating values on a spreadsheet (column 1, lines 53-55) (not a relational database management system). More particularly, Clancey teaches of a method of generating a formula expression for a cell that is at an intersection of a row and a column to create a financial statement. The method includes obtaining a row definition for the row and a column definition for the column, and interpreting the row definition and the column definition to generate a formula expression for the cell. The row definition defines a term of the statement and the column definition specifies a period of time (column 1, line 63 - column 2, line 4). Essentially, Clancey is directed to a method of creating a row and column financial statement or spreadsheet. In fact, Clancey probably could be used in association with the accounting principles disclosed in Price, although the end result would be a financial statement, not the end result of object level profitability with increased resolution by machine scalable precision as in the present invention as the electronic devices used,

the data sources, the calculation logic and the processes performed are distinctly different from one another.

Mr. Tad Lepman, the inventor of the invention set forth in the above-identified application, has provided a Declaration in support of the patentability of the invention. In his Declaration, Mr. Lepman states that his review of Price has indicated that Price is directed to a college accounting textbook, which deals with what accounting is and how profit is different than cash by use of double entry bookkeeping methods. The method of accounting for cash flows and subsequent bookkeeping uses a fundamental accounting equation to guide ledger postings, each transaction's double entry amounts consisting of debits and credits, simultaneously increasing or decreasing financial amounts and distinct ledger values. The result is a financial statement from these ledgers once all debit and credit transactions have been processed following the end of the accounting period.

Mr. Lepman has indicated that the double entry bookkeeping method and fundamental accounting equation have been known since the Renaissance. Accounting and the theory and methodology of double entry bookkeeping has remained essentially unaffected and unchanged, including Price's college accounting textbook. Mr. Lepman further declares that through the use of computer technology, businesses have gone from manually posted ledgers to computerized processing of millions of debit and credit transactions daily using "double entry" and the "fundamental accounting equation".

Mr. Lepman states in his Declaration that Price's text regarding "management accounting" teaches how the accounting method of double entry bookkeeping develops

profit values at a managerially defined level using a ledger accounting system. Mr. Lepman refers to Figure 1 of his patent application which is directed to such prior art "management accounting", as described by Price.

Mr. Lepman states that Price actually teaches away from using detailed profit measures for management accounting, instead stating that detailed marginal contribution is more useful for most management, since these decisions are future oriented and indirect expenses would not be affected by such management action. Thus, Mr. Lepman declares that Price indicates the production of profit values (as is accomplished with the invention) is not useful in detailed profit accounting. Moreover, Mr. Lepman states that Price's accounting leads to the use of ledger accounting, which characteristically lacks multi-dimensional component aggregation integrity. Mr. Lepman states that nowhere in Price is there a discussion how ledgers, sub-ledgers, managerial assignments and/or allocations arise to produce multi-dimensional additive profit values leading to detailed object level profit measures, as in Mr. Lepman's invention. In fact, Mr. Lepman asserts that Price does not teach object level profit determination, and the profit addition amongst the pieces or objects could not be expected simply from Price's profit measures and accounting methods. Furthermore, in paragraph 30, Mr. Lepman asserts that even if the methodologies and teachings of Price were applied to a relational database management system, as in the present invention, the end resulting database would be fundamentally different than that of the present invention.

Mr. Lepman, in his Declaration, further asserts that Price does not teach the steps of determining object level profitability using a relational database management

- 15 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

system operable in association with a computer. Nor does Price disclose the steps of doing so by preparing information to be accessed electronically through the relational database management system, establishing, in the relational database, rules for processing the prepared information, independently calculating at least one marginal value of profit for each object using the established rules as applied to the selected set of prepared information, calculating for each object a fully absorbed profit adjustment value and the at least one marginal value of profit and the fully absorbed profit adjustment value being combined to create a measure for object level profitability. Moreover, in paragraph 10, Mr. Lepman declares that not only are these steps not taught in Price, but these steps would not take place or yield the same result if the accounting methodologies of Price were applied to relational database technology. Moreover, Mr. Lepman declares that Price's profit measurement methodology and the methodology of his invention are different in the use of information over time. Mr. Lepman declares that in his invention processing cannot begin until financial statements are prepared following the completion of an accounting period. Price and Clancey are both directed to the creation of financial statements, which are necessary before the processing of the present invention can even begin. Thus, Mr. Lepman's invention requires the existence of Price's profit calculations before the step of preparing information to be accessed, as recited in claim 1. The present invention, which builds a computerized profit apparatus utilizing relational database specifications and calculations, calculate profit at levels which are several levels of magnitude greater resolution than Price is capable of doing.

- 16 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

Mr. Lepman further declares that claim 1 is directed to a process for determining object level profitability, and Price is not. Mr. Lepman further declares that the preparing information step recited in claim 1 is not discussed or alluded to whatsoever in Price. In Price, data are debit and credit amounts with ledger account reference and possibly data attributes, nothing more. In Mr. Lepman's invention, these data include non-financial object level data used in de novo, object level computerized calculations and transaction level financial details (see paragraph 16 of Declaration).

In paragraph 17 of Mr. Lepman's Declaration, Mr. Lepman states that Price does not teach the step of establishing, in the relational database, rules for processing the prepared information. Instead, Price discusses that debit and credit classifications are part of the prepared information itself, not the calculation thereof. Moreover, Price's rules do not lend themselves into relational database management system (RDBMS) rules, since they were procedural in nature, that is they use if-then-else step-wise iterative logic.

In paragraph 18 of Mr. Lepman's Declaration, Mr. Lepman states that Price does not teach of using established rules applied to a selected set of prepared information to independently calculate at least one marginal value of profit for each object being measured, as recited in independent claim 1. Instead, Price teaches a sequential process, first classification and then aggregation. Calculations in Price are additions, without subsets.

In paragraph 19 of his Declaration, Mr. Lepman states that Price actually teaches away from the step of calculating a fully absorbed profit adjustment value for each

object being measured. In Mr. Lepman's invention, a financial statement must be prepared (as discussed in Price and Clancey) and the resulting data prepared, as indicated above, prior to the calculation of increased resolution detailed profit values.

In paragraph 20 of Mr. Lepman's Declaration, Mr. Lepman states that Price teaches a general ledger accounting system, wherein the data is presented simultaneously and no "combining" is required, as recited in independent claim 1. Instead, only financial statement preparation occurs. Of course, as indicated above, the present invention requires the financial statement preparation before conducting its steps.

Mr. Won declares that the Price reference is a college accounting textbook that describes accounting concepts and principles, and essentially Price discusses the creation and preparation of financial statements following the completion of an accounting period. Mr. Won states that this is done according to the well-known accounting principles of using debit and credit entries in a general ledger system.

By contrast, Mr. Won states that the Lepman invention is directed to a process for determining object level profitability, the methodology, steps and formulas for achieving this being significantly different than Price. Moreover, the level of profitability determined is much more focused and refined than that taught in Price.

Mr. Won declares that there is no mention in Price of preparing any information to be accessed electronically through a relational database management system, or establishing any rules for processing prepared information, as recited in independent claim 1 of Mr. Lepman's application. Mr. Won further states that the other steps of

independent claim 1 are not found in Price, and are beyond general accounting practices and principles. Mr. Won further states that the formulas of claims 11-32 for calculating net interest, other revenue, direct expense, indirect expense, and provisioning are not found in Price nor are they used in general accounting calculations.

Lastly, Mr. Won declares that as one of ordinary skill in the field of accounting, he does not view Mr. Lepman's invention as being contemplated or obvious by general accounting procedures and methodologies, such as that disclosed in Price. He asserts that one of ordinary skill in accounting would understand the methodologies that the Price college accounting reference discusses, but he does not believe that an accountant of ordinary skill would be able to recreate Mr. Lepman's invention even if he was aware of both Price and relational database computer technologies.

The Examiner has failed to show that the teachings of Price could be combined with computer software (such as Clancey) which is common knowledge in the art to arrive at the present invention. As stated in M.P.E.P. 2144, it is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 ("[T]he Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). Even if the teachings of Price were applied to the computerized spreadsheet teachings of Clancey, this combination would not teach the steps recited in the claims of the application, and would not provide the resolution to the

profit data to arrive at the object level profitability, nor the machine scalable precision offered by the present invention. In essence, the steps taken and the end result would be significantly different. Furthermore, Mr. Lepman has declared that even if the methodologies and calculations of Price were passed through a relational database management system, they would yield a different result, clearly indicating that Price cannot be combined with known computer software to arrive at the present invention.

From the foregoing, it is clear that neither Price nor Clancey is directed to a process for determining object level profitability, let alone a process for determining object level profitability in a relational database management system operable in association with a computer. In the rare case where the prior art does not appreciate the existence of the problem solved by the invention, the applicant's recognition of the problem is, in itself, strong evidence of the non-obviousness of the invention. *In re Nomiya et al.*, 184 USPQ 607, 612-613 (CCPA 1975).

Furthermore, the references do not teach all of the claim limitations of the currently pending claims. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. §2143.03 (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970)). It is very clear that the combination of Price, "Official Notice" and Clancey do not teach or suggest each of the claim limitations of independent claim 1, thus independent claim 1 is patentably distinct from Price, and a *prima facie* case of obviousness has not been established. Thus, the rejection of claim

1 should be withdrawn.

In paragraphs 21-29 of Mr. Lepman's Declaration, Mr. Lepman addresses the dependent claims and the differences between the invention and the Price reference. The "Official Notice" and Clancey fail to cure the defects that Price presents with respect to the claims. Of course, if independent claim is in condition for allowance, those claims depending therefrom are also patentably distinct from the Examiner's refusal, as if an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

4. Conclusion.

From the foregoing, applicant respectfully asserts that the present invention is directed to statutory subject matter. Moreover, claims 1-32 meet the requirements of 35 U.S.C. §§ 101 and 112. Furthermore, claims 1-32 have been improperly rejected under 35 U.S.C. §103(a) and is not obvious nor unpatentable over Price et al. in view of Official Notice and Clancey et al. Neither Price nor Clancey are directed to the same end result as that of the present invention. Moreover, these references fail to disclose each of the recitations of the currently pending claims. In fact, in some instances, these references actually teach away from these steps and recitations. Thus, the currently pending claims are patentably distinct from these references and the rejections should be withdrawn and the claims allowed.

VIII. CLAIMS APPENDIX

1. A process for determining object level profitability in a computer, comprising the steps of:
 - providing a relational database management system operable in association with a computer;
 - preparing information to be accessed electronically through the relational database management system;
 - establishing, in the relational database, rules for processing the prepared information;
 - using the relational database management system to independently calculate at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information;
 - using the relational database management system to calculate a fully absorbed profit adjustment value for each object being measured; and
 - combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability.
2. The process of claim 1, wherein the relational database comprises a structured query language (SQL).
3. The process of claim 1, wherein the preparing step further includes the step of calculating opportunity values of funds used or supplied by each object being measured.
4. The process of claim 1, wherein the establishing step includes the steps of providing the information necessary to select objects, and performing the correct profit calculus.

5. The process of claim 1, wherein the step of calculating at least one marginal value of profit includes the steps of calculating net interest (NI), other revenue (OR) and direct expense (DE), wherein net interest (NI) is the summation of interest income, value of funds provided and earnings on equity funds used less the sum of interest expense and costs of funds used, other revenue (OR) is a measure of profit contribution from non-interest related sources, and direct expense (DE) is the profit value reduction due to marginal resource consumption by the object.

6. The process of claim 1, wherein the step of calculating at least one marginal value of profit includes the step of provisioning (P) for the selected set of prepared information, provisioning being the expected profit value adjustment for future outcomes related to the object.

7. The process of claim 6, wherein the step of calculating a fully absorbed profit adjustment value includes the step of calculating the value for indirect expense (IE) which is an apportioned profit value adjustment for all non-object related resource consumption.

8. The process of claim 7, wherein the combining step includes the steps of adding net interest (NI) and other revenues (OR), and subtracting therefrom direct expense (DE), provisioning (P) and indirect expense (IE).

9. The process of claim 8, including the step of adjusting the measure for object level profitability for taxes and/or object economic value.

10. The process of claim 3, wherein the opportunity values are based on matched maturity funds transfer pricing theory, where the values are market alternative supplies or uses of funds having matched interest and payment characteristics.

11. The process of claim 5, wherein the Net Interest (NI) is calculated as:

$$\begin{aligned} \text{Int Inc } (o_i) &= \text{Interest Income of object } o_i \\ - \text{COF } (o_i) &= \text{Cost of funds used by object } o_i \\ - \text{Int Exp } (o_i) &= \text{Interest Expense for object } o_i \\ + \text{VOF } (o_i) &= \text{Value of funds provided by object } o_i \end{aligned}$$

according to:

$$\begin{aligned} \text{Int Inc } (o_i) &= \text{AAB } (o_i) * \text{rate}_{\text{asset}}(o_i), \text{ only if object attribute doesn't exist,} \\ \text{COF } (o_i) &= \text{AAB } (o_i) * R_t \\ \text{Int Exp } (o_i) &= \text{ALB } (o_i) * \text{rate}_{\text{liability}}(o_i), \text{ only if object attribute doesn't exist,} \end{aligned}$$

and

$$\text{VOF } (o_i) = \text{ALB } (o_i) * R_t,$$

wherein:

$$\begin{aligned} \text{AAB } (o_i) &= \text{Average Asset Balance of the object } o_i, \\ \text{ALB } (o_i) &= \text{Average Liability Balance of the object } o_i, \\ \text{rate}_{\text{asset}}(o_i) &= \text{Effective interest rate for object } o_i \text{ as an asset balance,} \\ \text{rate}_{\text{liability}}(o_i) &= \text{Effective interest rate for object } o_i \text{ as a liability balance, and} \\ R_t &= \text{Treatment rate based on the identified treatment for the} \end{aligned}$$

object's product attributes.

12. The process of claim 11, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$\text{EOAE}(o_i) = R_{\text{equity}} * \text{ER} * \sum \text{AB}_{(\text{asset}, t)}(o_i), \text{ wherein:}$$

$$\text{AB}_{(\text{asset}, t)}(o_i) = \text{Average Asset balances of the object } o_i, \text{ including any allocated asset balances,}$$

$$\text{ER} = \text{Equity Ratio, and}$$

$$R_{\text{equity}} = \text{Treatment Rate for equity.}$$

13. The process of claim 11, including the step of calculating earnings on allocated equity according to:

$$EOAE(o_i) = R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio], \text{ wherein:}$$

Amount(o_i) = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter,

Wt(type(o_i)) = Code needed to identify the weight for object o balances, at the object-type level,

W(Wt(type(o_i))) = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

14. The process of claim 11, including the step of calculating earnings on allocated equity, according to:

$$EOAE(o_i) = \sum R_{equity} * E_{cohort}(o)(Amount(o_i)), \text{ or } \sum R_{equity} * [\alpha +$$

$\beta * Amount(o_i)$], wherein:

Amount(o_i) = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$,

Cohort(o_i) = The cohort of objects in which object o is a member,

$E_{cohort}(o_i)$ = The equity allocation rule for the cohort of object o,

according to a linear (two-valued) function that operates on Amount(o_i) of the form $\alpha + \beta * Amount(o)$, and

R_{equity} = Treatment Rate(s) for equity for the Amount(o_i) value(s).

15. The process of claim 5, wherein Net Interest (NI) is calculated as the summations over the possible balance variables for the object, according to:

$$\begin{aligned} \text{Int Inc}(o_i) &= \sum_{\forall c, t} AB_{(\text{asset } c, t)}(o_i) * \text{rate}_{(\text{asset } c, t)}(o_i), \text{ calculate only if object} \\ &\text{attribute doesn't exist,} \\ - \text{COF}(o_i) &= \sum_{\forall c, t} AB_{(\text{asset } c, t)}(o_i) * R_{(\text{asset } c, t)} R_{(c, t)}(\text{pt}(o)) \\ - \text{Int Exp}(o_i) &= \sum_{\forall c, t} AB_{(\text{liability } c, t)}(o_i) * \text{rate}_{(\text{liability } c, t)}(o_i), \text{ only if object attribute} \\ &\text{doesn't exist,} \\ + \text{VOF}(o_i) &= \sum_{\forall c, t} AB_{(\text{liability } c, t)}(o_i) * R_{(\text{liability } c, t)} R_{(c, t)}(\text{pt}(o)), \text{ wherein:} \\ AB_{(c, t)}(o_i) &= \text{Average Balances of the object } o_i, \\ \text{rate}_{(c, t)}(o_i) &= \text{Effective interest rate for the corresponding balance asset or} \\ &\text{liability,} \\ R_t(o) &= \text{Object } o\text{'s product type/group as needed to identify} \\ &\text{treatment rate,} \\ R_{(c, t)}(\text{pt}(o)) &= \text{Rate (treatment rate) for objects of this product type/group,} \\ &\text{given the balance class, and tier,} \\ \text{Int Inc}(o_i) &= \text{Interest Income of object } o_i, \\ \text{COF}(o_i) &= \text{Cost of funds used by object } o_i, \\ \text{Int Exp}(o_i) &= \text{Interest Expense for object } o_i, \text{ and} \\ \text{VOF}(o_i) &= \text{Value of funds provided by object } o_i. \end{aligned}$$

16. The process of claim 15, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$\text{EOAE}(o_i) = R_{\text{equity}} * ER * \sum AB_{(\text{asset }, t)}(o_i), \text{ wherein:}$$

$AB_{(\text{asset }, t)}(o_i)$ = Average Asset balances of the object o_i , including any allocated asset balances,

ER = Equity Ratio, and
 R_{equity} = Treatment Rate for equity.

17. The process of claim 15, including the step of calculating earnings on allocated equity according to:

$EOAE(o_i) = R_{\text{equity}} * \sum [\text{Amount}(o_i) * W(\text{Wt}(o_i)) * \text{Cap Ratio}]$, wherein:

$\text{Amount}(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object 'o_i' including any allocated asset balances, or may be an object parameter,

$\text{Wt}(\text{type}(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level,

$W(\text{Wt}(\text{type}(o_i)))$ = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

18. The process of claim 15, including the step of calculating earnings on allocated equity, according to:

$EOAE(o_i) = \sum R_{\text{equity}} * E_{\text{cohort}}(o)(\text{Amount}(o_i))$, or $\sum R_{\text{equity}} * [\alpha +$

$\beta * \text{Amount}(o_i)]$, wherein:

$\text{Amount}(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$,

$\text{Cohort}(o_i)$ = The cohort of objects in which object o is a member,

$E_{\text{cohort}}(o_i)$ = The equity allocation rule for the cohort of object o,

according to a linear (two-valued) function that operates on $\text{Amount}(o_i)$ of the form $\alpha + \beta * \text{Amount}(o)$, and

R_{equity} = Treatment Rate(s) for equity for the $\text{Amount}(o_i)$ value(s).

19. The process of claim 5, wherein Net Interest (NI) is calculated as the summations over the possible balance attributes for the objects, according to:

$$\begin{aligned} \text{Int Inc } (o_i) &= \sum_{\forall c, t} AB_{(\text{asset } c, t)}(o_i) * \text{rate}_{(\text{asset } c, t)}(o_i), \text{ only if object attribute} \\ &\text{doesn't exist,} \\ - \text{COF } (o_i) &= \sum_{\forall c, t} AB_{(\text{asset } c, t)}(o_i) * R_{(\text{asset } c, t)}(\text{type}_{p, a}(o_i)), \\ - \text{Int Exp}(o_i) &= \sum_{\forall c, t} AB_{(\text{liability } c, t)}(o_i) * \text{rate}_{(\text{liability } c, t)}(o_i), \text{ only if object attribute doesn't} \\ &\text{exist,} \\ + \text{VOF}(o_i) &= \sum_{\forall c, t} AB_{(\text{liability } c, t)}(o_i) * R_{(c, t)}(\text{type}_{p, a}(o_i)), \text{ wherein:} \\ AB_{(c, t)}(o_i) &= \text{Average Balances of the object } o_i, \\ \text{rate}_{(c, t)}(o_i) &= \text{Effective interest rate for the corresponding balance,} \\ \text{Type}_{p, a}(o_i) &= \text{Object } o_i \text{'s product and object attributes as needed to} \\ &\text{identify treatment,} \\ R_{(c, t)}(\text{type}_{p, a}(o_i)) &= \text{Rate (treatment rate) for this object's product type, given the} \\ &\text{balance class, and tier/tenor,} \\ \text{Int Inc } (o_i) &= \text{Interest Income of object } o_i, \\ \text{COF } (o_i) &= \text{Cost of funds used by object } o_i, \\ \text{Int Exp } (o_i) &= \text{Interest Expense for object } o_i, \text{ and} \\ \text{VOF } (o_i) &= \text{Value of funds provided by object } o_i. \end{aligned}$$

20. The process of claim 19, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$$\text{EOAE}(o_i) = R_{\text{equity}} * ER * \sum AB_{(\text{asset }, t)}(o_i), \text{ wherein:}$$

$AB_{(asset, t)}(o_i)$ = Average Asset balances of the object o_i , including any allocated asset balances,
 ER = Equity Ratio, and
 R_{equity} = Treatment Rate for equity.

21. The process of claim 19, including the step of calculating earnings on allocated equity according to:

$EOAE(o_i) = R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio]$, wherein:

$Amount(o_i)$ = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter,

$Wt(type(o_i))$ = Code needed to identify the weight for object o balances, at the object-type level,

$W(Wt(type(o_i)))$ = determined by the weight code,

$Cap Ratio$ = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

22. The process of claim 19, including the step of calculating earnings on allocated equity, according to:

$EOAE(o_i) = \sum R_{equity} * E_{cohort}(o)(Amount(o_i))$, or $\sum R_{equity} * [\alpha +$

$\beta * Amount(o_i)]$, wherein:

$Amount(o_i)$ = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$),

$Cohort(o_i)$ = The cohort of objects in which object o is a member,

$E_{cohort}(o_i)$ = The equity allocation rule for the cohort of object o ,

according to a linear (two-valued) function that operates on $Amount(o_i)$ of the form $\alpha + \beta * Amount(o)$, and

$R_{equity} = \text{Treatment Rate(s) for equity for the Amount}(o_i) \text{ value(s).}$

23. The process of claim 5, wherein Net Interest (NI) is calculated where summations are over the possible balance variables for the object, according to:

$\text{Int Inc}(o_i) = \sum AB_{(asset\ c, t)}(o_i) * rate_{(asset\ c, t)}(o_i) \text{ only if object attribute doesn't exist,}$

$- \text{COF}(o_i) = \sum AB_{(asset\ c, t)}(o_i) * R_{(asset, t)}(\text{type}_{p, a, b}(o_i)),$

$- \text{Int Exp}(o_i) = \sum AB_{(liability, t)}(o_i) * rate_{(liability, t)}(o_i) \text{ only if object attribute doesn't exist,}$

$+ \text{VOF}(o_i) = \sum AB_{(liability, t)}(o_i) * R_{(liability, t)}(\text{type}_{p, a, b}(o_i)), \text{ wherein:}$

$AB_{(c, t)}(o_i) = \text{Average Balances of the object,}$

$rate_{(c, t)}(o_i) = \text{Effective interest rate for the corresponding balance amounts,}$

$\text{type}_{p, a, b}(o_i) = \text{Object } o_i \text{'s product, object attribute, and behavior types as needed to identify treatment rate,}$

$R_{(c, t)}(\text{type}_{p, a, b}(o_i)) = \text{Rate (treatment rate) for objects of this product type, balance class, and tier/tenor,}$

$\text{Int Inc}(o_i) = \text{Interest Income of object } o_i,$

$\text{COF}(o_i) = \text{Cost of funds used by object } o_i,$

$\text{Int Exp}(o_i) = \text{Interest Expense for object } o_i, \text{ and}$

$\text{VOF}(o_i) = \text{Value of funds provided by object } o_i.$

24. The process of claim 23, including the step of calculating earnings on allocated equity, where the summation is taken over all asset balances, according to:

$\text{EOAE}(o_i) = R_{equity} * ER * \sum AB_{(asset, t)}(o_i), \text{ wherein:}$

$AB_{(asset, t)}(o_i) = \text{Average Asset balances of the object } o_i, \text{ including any allocated asset balances,}$

- 30 -

BERKEL-48526
SN: 11/354,798
APPEAL BRIEF

ER = Equity Ratio, and
 R_{equity} = Treatment Rate for equity.

25. The process of claim 23, including the step of calculating earnings on allocated equity according to:

$$EOAE(o_i) = R_{equity} * \sum [Amount(o_i) * W(Wt(o_i)) * Cap Ratio], \text{ wherein:}$$

Amount(o_i) = Amount(s) associated with object 'a' This may be the average asset balances of the object ' o_i ' including any allocated asset balances, or may be an object parameter,

Wt(type(o_i)) = Code needed to identify the weight for object o balances, at the object-type level,

W(Wt(type(o_i))) = determined by the weight code,

Cap Ratio = An appropriate risk-weighted capital ratio chosen, and

R_{equity} = Treatment Rate for equity.

26. The process of claim 23, including the step of calculating earnings on allocated equity, according to:

$$EOAE(o_i) = \sum R_{equity} * E_{cohort}(o)(Amount(o_i)), \text{ or } \sum R_{equity} * [\alpha +$$

$\beta * Amount(o_i)]$, wherein:

Amount(o_i) = An amount or amounts related to the object, such as average balances of the object (denoted $AB_{(c,s,t)}(o_i)$),

Cohort(o_i) = The cohort of objects in which object o is a member,

$E_{cohort}(o_i)$ = The equity allocation rule for the cohort of object o,

according to a linear (two-valued) function that operates on Amount(o_i) of the form $\alpha + \beta * Amount(o)$, and

R_{equity} = Treatment Rate(s) for equity for the Amount(o_i) value(s).

27. The process of claim 7, wherein the value for indirect expense (IE) is calculated as:

$$\text{before deferral } IE(o_i) = IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \text{ added over each set } IE_k \text{ to which } o_i$$

is related,

$$= \sum_k^{o_i \in O(IE)} \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \right)$$

and each of these terms is deferred over its amortization period according to any of the amortization rules (cash, straight line, declining balance, or interest amortization calculations), and where $AM_1(L,R)$ is used to denote the amortization rule and its life:

$$IE(o_i) = \sum_k^{o_i \in O(IE)} AM_1(L,R) \left(IE_k * \frac{F(IE_k)(o_i)}{\sum_j F(IE_k)(o_j)} \right), \text{ and}$$

the result increased by the amounts with remaining amortization life for which amortization was begun in earlier periods.

28. The process of claim 6, provisioning (P) of each object is calculated according to:

$$P(o_i) = PG(o_i) * \frac{\text{Balance of } o_i}{\sum_k^{o_k \in RPG(o_i)} \text{Balance } o_k}, \text{ wherein:}$$

$PG(o_i)$ denotes the P group in which o_i is a member.

29. The process of claim 6, wherein provisioning (P) is calculated as:

$$P(o_i) = PG(o_i) * \frac{\text{Balance}(o_i) * RF(o_i)}{\sum_{o_k \in RFG(o_i)} [\text{Balance}(o_k) * RF(o_k)]}, \text{ wherein:}$$

$PG(o_i)$ denotes the P group in which o_i is a member, and

$RF(o_i)$ denotes the expected adjustment factor for o_i .

30. The process of claim 6, wherein provisioning (P) is calculated as:

$$P(o_i) = \text{Exposure}(o_i) * \text{Pr}(o_i) * \text{Expected Value Adjustment}(o_i) * \frac{1}{L_i}, \text{ wherein:}$$

$\text{Pr}(o_i)$ is a probability for object o_i , and

L is the expected number of reporting periods during the life of o_i .

31. The process of claim 9, wherein the step of adjusting the measure for object level profitability is calculated as:

$$\text{Profit}(o_i) = \{[\text{NIR}(o_i) + \text{OR}(o_i) - \text{DE}(o_i) - \text{IE}(o_i) - P(o_i)] * (1 - \text{EffectiveTaxRate})\} - \text{SVA}(o_i),$$

where

$$\text{SVA}(o_i) = \alpha(o_i) + \beta(o_i) * \text{Amount}(o_i),$$

and

$\alpha(o_i)$, $\beta(o_i)$ are functions for a cohort of objects in which o_i is a member, and $\text{Amount}(o_i)$ is given by a rule which maps o_i to a data value (such as balance, or allocated equity) also defined at the cohort level.

32. The process of claim 9, wherein the step of adjusting the measure for object level profitability includes the calculation:

$\text{Profit}(o_i) = [\text{NIR}(o_i) + \text{OR}(o_i) - \text{DE}(o_i) - \text{IE}(o_i) - P(o_i)] * (1 - \text{EffectiveTaxRate})$ where, for a two tier taxation system, Effective Tax Rate is calculated as:

$$\text{Effective Tax Rate} = (1 - \text{tax rate } 2) * (\text{tax rate } 1) + \text{tax rate } 2.$$

IX. EVIDENCE APPENDIX

Declaration of Richard Tad Lepman dated November 12, 2008; and

Declaration of Daniel W. Won dated November 12, 2008.

X. RELATED PROCEEDINGS APPENDIX

None.

Respectfully submitted,

KELLY LOWRY & KELLEY, LLP

/Scott W. Kelley, Reg. No. 30,762/

SCOTT W. KELLEY
Registration No. 30,762

SWK:nh
Enclosure: USPTO Fee

6320 Canoga Avenue, Suite 1650
Woodland Hills, CA 91367
(818) 347-7900

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	Group Art Unit: 3687
	)	
Richard Tad Lepman	)	Examiner: Andrew J. Rudy
	)	
Serial No. 11/354,798	)	
	)	
Filed: February 15, 2006	)	Docket No. BERKEL-48526
	)	
For: PROCESS FOR DETERMINING	)	
OBJECT LEVEL PROFITABILITY	)	
_____	)	

DECLARATION OF RICHARD TAD LEPMAN

I, RICHARD TAD LEPMAN, declare as follows:

1. I am the inventor of the invention set forth in the above-identified patent application.
2. As shown in my Curriculum Vitae, attached hereto as Exhibit "A", I obtained a Bachelor of Arts in Applied Mathematics from Claremont Men's College in 1975. In 1986, I received a Masters of Science in Industrial Engineering and Operations Research from the University of California at Berkeley. I have thirty (30) years experience in the Financial Services and Information Technology industries.
3. I have reviewed the May 12, 2008 Office Action, as well as the Price College Accounting reference.

BERKEL-48526
SN: 11/354,798
LEPMAN DECLARATION

4. Price is directed to a college accounting textbook, and deals with what accounting is and how profit is different than cash by use of double entry bookkeeping methods. In Price, the method of accounting for cash flows and subsequent bookkeeping uses a fundamental accounting equation to guide ledger postings, each transaction's double entry amounts consisting of debits and credits, simultaneously increasing or decreasing financial amounts and distinct ledger values. The resulting financial statement presentations are prepared from these ledgers once all debit and credit transactions have been processed, or posted, following the end of each accounting period.

5. Italian mathematician Luca Pacioli is regarded as the creator of the "double entry" accounting methodology. Giovanni Dé Medici built his famous Italian banking empire during the Renaissance due to Pacioli's then new measurement method. The bank expected its borrowers to produce basic economic information and verifiable financial statements following standard technique. Fundamentally, the method monetarily equates tangible cash flows with fungible values presented in financial statements, particularly a "balance sheet" and an income statement. Accounting theory and methodology of double entry bookkeeping has remained essentially unaffected and unchanged, including Price's *College Accounting* textbook.

6. Through the use of computer technology, businesses have gone from manually posted ledgers to computerized processing of millions of debit and credit transactions daily using "double entry" and the "fundamental accounting equation".

7. Price's text regarding "management accounting" teaches how the accounting method of double entry bookkeeping develops profit values at a managerially defined level using a ledger accounting system. In essence, this approach uses ledger values including allocations of non-cash, inter-entity debit and credit calculated transactions, also referred to as "transfer pricing". This allows the creation of financial statements for any management defined departmental or business entity. The same methodology may be used independently for other performance measurement dimensions such as product or location. In fact, Figure 1 of my patent

application is directed to such prior art “management accounting”, as described by Price.

8. However, Price actually teaches away from using detailed profit measures for management accounting. Price states that detailed marginal contribution is more useful for most management, since these decisions are future oriented and indirect expenses would not be affected by such management action. As such, Price indicates the production of detailed profit values is not useful in profit accounting.

9. Moreover, Price’s accounting leads to the use of ledger accounting, which characteristically lacks multi-dimensional component aggregation integrity. This is due to the use of allocations of certain ledger amounts to other columns or ledgers based on averages. When the details are added in other dimensions, object level profitability determination is violated. Nowhere does Price discuss how ledgers, sub-ledgers, managerial assignments and/or allocations arise to produce multidimensional additive profit values leading to detailed object level profit measures, as in my invention. In fact, Price does not teach object level profit determination, and the profit addition amongst the pieces or objects could not be expected simply from Price’s profit measures and accounting methods.

10. In my invention, as recited in independent claim 1, object level profitability is determined using a relational database management system operable in association with a computer, by preparing information to be accessed electronically through the relational database management system, and establishing, in the relational database, rules for processing the prepared information. At least one marginal value of profit for each object is independently calculated using the established rules as applied to the selected set of prepared information. A fully absorbed profit adjustment value is also calculated for each object being measured, and the at least one marginal value of profit and the fully absorbed profit adjustment value are combined to create a measure for object level profitability. These steps are not taught in Price, nor would these steps take place or the same result occur if the accounting methodologies of Price were applied to relational database technology.

11. In fact, Price's profit measurement methodology and that of my invention are different in the use of information over time. The present invention processing cannot begin until financial statements, as shown in Price, are prepared following the completion of an accounting period. My invention requires the existence of Price's profit calculations (e.g. "preparation" (Price, Figs. 2-6, pg. 39) of the "income statement" (Price, page 34)) before the step of preparing information to be accessed, as recited in claim 1.

12. Price does not discuss the data processing environment necessary to accomplish financial statement presentation. Moreover, Price is silent on the technical difficulty of providing daily profit data in large-scale organizations, nor are alternative technical environments mentioned. The present invention uses actuarial formulas to transform the stock and flow approach of traditional accounting to an object level by use of a machine parallelizable method of profit calculations which are far behind Price's teaching. The present invention is directed to building a computerized profit apparatus utilizing relational database specifications in machine parallel mathematical terms using non-iterative calculations to determine and calculate profit at detailed levels which are several levels of magnitude greater than Price's managerial accounting is capable of doing.

13. The complexity of maintaining an accurate financial accounting process has obscured the measurement of profit contribution at a very detailed level due to the use of profit aggregations and subsequent apportionment. The accounting process based on aggregates, such as Price, has led to blindness by business of incremental customer profit contribution measures necessary to implement customer level decision making, particularly in large businesses with many millions of customers.

14. To gain this new level of profit resolution, my invention is designed to use micro profit measurement rules applied at a granular level consistent with the standard accounting practice, using a combination of actuarial science and mathematical set theory. The invention is designed to utilize massively parallel computing operations using relational database management techniques enabling profit measurement at a

level not available today in a large individual customer scale business. The invention does this through a consistent application of measures to a class of business entities which represent the smallest common component of profit measurement desired - the profit object.

15. With reference to independent claim 1, the invention is directed to a process for determining object level profitability in a relational database management system. In Price, the lowest level of profit object is a “center”, either a product or a department. In the invention, an object is common to the business organizations, products or customers, and for example an airline may use a seat for the profit object, an insurance company may use a policy as the object, or a bank may use an account as the object.

16. Claim 1 further recites preparing information to be accessed electronically through the relational database management system. This is not discussed or alluded to whatsoever in Price. In Price, data are debit and credit amounts with ledger account reference and possibly data attributes, and nothing more. In the invention, these data include non-financial object level data used in de novo object level internal calculations and transaction level financial details.

17. Claim 1 further recites the step of establishing, in the relational database, rules for processing the prepared information. This is a computer formula for use in a non-iterative and standard actuarial formula along with dynamic data in an RDBMS calculation. In Price, the debit and credit classifications are part of the prepared information itself, not the calculation thereof. Price’s rules do not lend themselves into RDBMS rules, since they are procedural in nature, i.e., use if-then-else stepwise iterative logic.

18. Independent claim 1 also recites the step of independently calculating at least one marginal value of profit for each object being measured using the established rules as applied to a selected set of prepared information. The invention allows for four of the five factors to be processed in parallel by a relational database management system (RDBMS) using formulas using selected object level data directly. Price

teaches a sequential process, first classification and then aggregation, calculations are additions, without subsets. Thus, Price does not teach of using established rules applied to a selected set of prepared information to independently calculate at least one marginal value of profit for each object being measured.

19. Independent claim 1 further recites the calculation of a fully absorbed profit adjustment value for each object being measured. In the invention, a financial statement must be prepared and the resulting data prepared, as indicated above, prior to the calculation. Price actually teaches away from this step of a fully absorbed profit measure in management accounting.

20. Claim 1 further recites the step of combining the at least one marginal value of profit and the fully absorbed profit adjustment value to create a measure for object level profitability. As Price teaches a general ledger accounting system, the data is presented simultaneously and no “combining” is required, only financial statement preparation.

21. Claim 2 recites that the relational database comprises structured query language. The invention requires the use of an electronic relational database management system having parallel operation and calculation capabilities, which can be run using structured query language. There is no such discussion in Price of a relational database management system or structured query language.

22. Claim 3 recites that the preparing step further includes the step of calculating opportunity values of funds used or supplied by each object being measured. In contrast, Price discusses “transfer pricing”, using debit and credit transactional data and possibly sub-ledger processing.

23. Claim 4 recites that the establishing step includes the steps of providing the information necessary to select objects, and performing the correct profit calculus. Price does not teach a method for such calculation using standard “double entry bookkeeping”.

24. Claim 5 recites the step of calculating at least marginal value of profit, including the steps of calculating net interest, other revenue and direct expense,

wherein net interest is the summation of interest income, value of funds provided in earnings on equity funds used less the sum of interest expense and cost of funds used, other revenue is a measure of profit contribution from non-interest related sources, and direct expense is the profit value reduction due to marginal resources consumption by the object. In general ledger systems, such as that taught by Price, the data is a debit or credit pre-calculated amount for each ledger account. In my invention, the profit metric components are categorized, as indicated in this claim.

25. Claim 6 recites the step of calculating at least one marginal value of profit, including the step of provisioning for the selected set of prepared information. In Price, this profit item is discussed as part of the balance sheet valuation of receivables. The methodology is based on pooling and expected amounts and usually posted directly into ledgers. There would be no reason for Price to calculate this as the present invention does, or to subject it to a relational database management system instead of directly into ledgers.

26. Claim 7 recites the step of calculating a fully absorbed profit adjustment value including the step of calculating the value for indirect expense, which is an apportioned profit value adjustment for all non-object related resource consumption. Price enters this amount into ledgers as debits or credits, usually through internal transfers. It would not be calculated in any relational database management system itself. The invention requires the existence of a prepared income statement to calculate these amounts at the object level of detail using dynamic data.

27. Claim 8 recites that the combining step includes the steps of adding net interest and other revenues, and subtracting therefrom direct expense, provisioning and indirect expense. This sequential step is required in non-procedural language. In Price, by contrast, no combining is required since this occurs in financial statement preparation.

28. Claim 9 recites the step of adjusting the measure for object level profitability for taxes and/or object economic value. The present invention uses simple

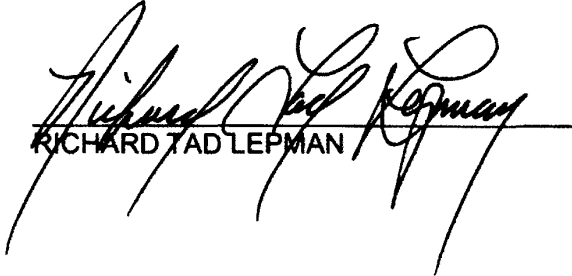
effective rates for detailed calculations. Accounting methods, such as Price, require ledgers for deferred taxes and timing differences which is complicated.

29. Claims 11-33 are directed to formulas which are used in association with the computerized relational database management system to perform the calculations and computations necessary to determine the object level profitability which is the intention of the invention. None of these formulas are indicated in Price, and are well beyond the scope of Price.

30. As one of ordinary skill in the field of the invention, I disagree with the Examiner's assertion that it would have been obvious to take the teachings of Price and combine them with the relevant relational database technology to arrive at the present invention. In fact, even if the methodologies and teachings of Price were applied to a relational database management system, the end result would be different than that of the present invention.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Executed on November 12, 2008, at Charlevoix, Michigan.


RICHARD TAD LEPMAN

Curriculum Vitae

Richard Tad Lepman

(510) 524-5838

tad@bieor.com

Thirty years experience in the Financial Services and Information Technology Industries. Accomplishments utilised knowledge of financial evaluation, technological development, operations research and banking. Consistently contributes to improvement of shareholder value.

Employment History

- **1993 to Present -- Berkeley*IEOR, President**
Founded company, provides consulting services specialising in large scale decision support systems and analyst empowerment. Develops detailed risk adjusted profit measurement processes and solutions. Lectures and provides management consulting on performance measurement and application of information technology in the Financial Services Industry.
- **1995 to 2001 -- NCR, Global Solution Consultant**
Key member of Customer Relationship Management initiative and provided product line development and customer support for the Financial Services Industry. Presented and consulted solutions to NCR's banking customers world-wide. Work included solution design, funds transfer pricing concepts, costing methods, data modelling, profit measurement theory, customer implementation, development specification and solution testing.
- **1993 to 1996 -- Barclays Bank, Data Warehouse Consultant**
Advised executive management on uses of large scale decision support opportunities using Teradata technology. Worked with Group Treasury and Group Portfolio Management to establish a sound decision support environment providing immediate and strategic value. Deliverables included: customer segmentation, maturity profiles, risk vs. return portfolio analysis, analyst training and development.
- **1992 to 1993 -- WhiteLight Systems, Consultant**
Founding member of company. Beta tested software in a business consultant role, helping create a customer's "off-shore" strategic plan, including the consolidation and long term plan for 50+ full or partially owned foreign subsidiaries plus new investments and divestments.
- **1976 to 1992 -- Bank of America, Vice President & Sr. Manager of Finance**
Analytical corporate level roles including: mergers & acquisitions, performance measurement policies, asset sales and servicing, long term capital planning, capital investment analysis, tax planning, funds transfer pricing, budget and planning, and management science projects (e.g., credit scoring, check sorting, mail and courier routing, mainframe replacement, premises planning and customer retention.)

Education

- University of California at Berkeley, School of Engineering, Masters of Science in Industrial Engineering and Operations Research; 1976
- Claremont Men's College, Bachelor of Arts in Applied Mathematics; 1975

EXHIBIT "A"

Work Products

Decision Support Systems

- FFAPM™ invention
- funds transfer pricing methodology
- liability mark-to-market accounting
- customer relationship tracking
- investment decision analyser
- loan profitability measurement tools
- three generations of corporate planning and budgeting processes
- two generations of transfer pricing accounting processes
- daily settlement risk and liquidity monitoring & valuing
- interest rate forecasting tool development
- tax position forecasting tool development
- check processing volume forecasting
- loan and credit card loss methodology, scoring and research
- cash and regulatory reserve position forecasting and control
- foreign exchange dealer support system design

Financial Analysis

- debt/equity transaction evaluations
- litigation reserve estimations
- product profitability analyses
- cost accounting methodology
- incentive stock option evaluation
- employee benefit costing

Capital Budgeting

- over 35, \$5 million+ capital investment decision financial reviews of:
 - branch automation
 - premises acquisition
 - mainframe investments
 - business acquisition/ divestment
 - corporate-wide investment expenditure policy and control
 - premises planning and investment optimisation
 - lease-buy fixed asset acquisition
- decision support
- computer technology
- procurement financial review

Asset Backed Securities

- negotiated and managed the sale and servicing of \$1.3 billion of automobile receivables
- managed tax receivable sale, \$77 million private placement
- asset value adjusted preferred stock (NYSE: BAC pfd. C) transaction support

Merger & Acquisition

- SeaFirst Corporation merger financial evaluation
- 50+ deposit base evaluations, public and private purchases by Bank of America
- Security Pacific Corporation merger retail liability base evaluation
- Managistics payroll services acquisition evaluation
- Decimus Computer Leasing Corporation divestment
- AT&T, Chemical & Bank of America electronic banking partnership development
- Bank of America, Canada consolidation financial analyst

Operations Research

- credit scoring research and tracking development
- courier routing (transportation model heuristic)
- mail room work flow optimisation
- float optimisation in check processing
- customer retention estimation using renewal theory

Strategic Planning

- de-novo bank start-up
- bank liability base deregulation financial strategy development
- branch bank functional reengineering financial modelling
- technology direction financial evaluation and methodology
- bank item processing evolution
- strategy financial evaluation

Tax Planning

- tax room measurement and control
- tax position optimisation
- accounting impact analyses (e.g., new regulations or litigation reserve estimation)

Planning

- consolidated corporate plan analyses, three annual budget cycles
- strategic business unit annual plan review, two budget cycles
- econometric sensitivity analyses
- earnings sensitivity modelling under different interest rate and credit loss scenarios
- budget variance reporting and analyses

Long Term Planning

- capital planning using Monte Carlo and linear programming
- dividend modelling and decision support
- debt/preferred stock/common stock structuring analysis

Direct Supervision

- workflow consulting projects: two management scientists
- capital budgeting reviews: three financial analysts
- loan sales servicing: one analyst and one systems analyst
- intangible accounting and valuation: two financial consultants
- foreign exchange dealer control: two control officers

Project Management

- financial tasks: teams of two to fifteen officers and analysts one week to six months
- systems development: project manager of five large scale IT development efforts
- asset sales servicing: matrix managed four geographically dispersed loan servicing centres

Technical Experience

- Operating Systems: MS-DOS v3.x & 4; Windows v3.0a & 3.1 & 9x & 2000 & XP; OS/2 1.x & 2.0; MP-RAS; Linux; MVS; VM/CMS; VP/CSS; TPF/ACP; MacOS v6, 7, 8, 9 & X; InGrid; TOS; and EXEC.
- Database Management Systems; Teradata; Sybase; Oracle; Nomad; Versant, {IDEF - Data Modelling.}
- Programming Languages: SQL x, TQL; TSQL; SQL-Plus; Object-C; C-Shell; Unix tools (BSD4.3 & NFS); Nomad; REXX; FORTRAN; PL/I; APL; RPG; System 360 Assembler/Macro; Lotus; Excel; Javelin; Mesa; Paradox PAL; and Improv.
- Hardware: NCR/Teradata Worldmark & DBC/1012; IBM PS/2 and PC compatibles (Wintel); NeXTStep; IBM Systems 360/70, 36, & 3090; Digital PDP-8 & 11; Sperry Univac 1108; Apple Lisa, Macintosh, PowerBook, iMac, G4; and Grid Compass.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	Group Art Unit: 3687
	)	
Richard Tad Lepman	)	Examiner: Andrew J. Rudy
	)	
Serial No. 11/354,798	)	
	)	
Filed: February 15, 2006	)	Docket No. BERKEL-48526
	)	
For: PROCESS FOR DETERMINING	)	
OBJECT LEVEL PROFITABILITY	)	
	)	

DECLARATION OF DANIEL W. WON

I, DANIEL W. WON, declare as follows:

1. I am making this Declaration in support of the patentability of the above-identified application.
2. I have twenty-five (25) years experience in public accounting, working primarily with businesses and in international tax planning. I hold an MBA degree from California State University East Bay, and have served as an adjunct professor for the University of California at Berkeley. I am a certified public accountant, and an alumni of Price Waterhouse. I am a member of the American Institute of CPAs, the California Society of CPAs, and a non-attorney member of the Bar Association of San Francisco.
3. I am aware of Mr. Lepman's invention and his patent application, and have reviewed the May 12, 2008 Office Action, and the cited College Accounting, 7th edition, by Price, Haddock, and Brock (Price).

BERKEL-48526
SN: 11/354,798
WON DECLARATION

4. The Price reference is a college accounting textbook that describes accounting concepts and principles. The portions cited describe analyzing business transactions including the accounting cycle, accounting for assets and liabilities, including accounts receivable and uncollectible accounts. Essentially, Price discusses the creation and preparation of financial statements following the completion of an accounting period. This is done according to the well-known accounting principles of using debit and credit entries in a general ledger system.

5. The Lepman invention is directed to a process for determining object level profitability. The methodology, steps, and formulas for achieving this are significantly different than Price, and the level of profitability determined is much more focused and refined than that taught in Price.

6. In the Lepman patent application, the independent claim recites the step of providing a relational database management system operable in association with a computer, and the steps of preparing information to be accessed electronically through the relational database management system, and establishing, in the relational database, rules for processing the prepared information. There is no mention in Price of preparing any information to be accessed electronically through a relational database management system or establishing any rules for processing prepared information.

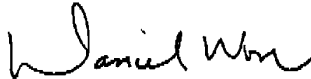
7. Claim 1 also recites that the relational database management system is used to independently calculate at least one marginal value of profit for each object being measured, using the established rules as applied to the prepared information, and calculating a fully absorbed profit adjustment value for each object being measured. The marginal value of profit and the fully absorbed profit adjustment value are combined to create a measure for object level profitability. These steps are not found in Price, and are beyond the general accounting practices and principles.

8. Moreover, the steps and formulas of claims 11-33 for calculating net interest, other revenue, direct expense, indirect expense, and provisioning, are not found in Price, nor are they used in general accounting calculations, such as those disclosed in Price.

9. I consider myself at least of ordinary skill in the field of accounting, and do not view Mr. Lepman's invention of a computerized relational database management system having rules, formulas, preparation of information and the like being contemplated or obvious by general accounting procedures and methodologies, such as that disclosed in Price. Although I believe that one of ordinary skill in accounting would understand the methodologies that the Price College Accounting reference discusses, I do not believe that an accountant of ordinary skill would be able to recreate Mr. Lepman's invention even if he was aware of both Price and relational database computer technologies.

I declare under penalty of perjury, under the laws of the State of California that the foregoing is true and correct.

Executed on November 12, 2008, at San Francisco, California.



DANIEL W. WON

Electronic Patent Application Fee Transmittal				
Application Number:		11354798		
Filing Date:		15-Feb-2006		
Title of Invention:		Process for determining object level profitability		
First Named Inventor/Applicant Name:		Richard Tad Lepman		
Filer:		Scott W. Kelley/Nancy Hoover		
Attorney Docket Number:		BERKEL-48526		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Filing a brief in support of an appeal	2402	1	270	270
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				270

Electronic Acknowledgement Receipt	
EFS ID:	5237571
Application Number:	11354798
International Application Number:	
Confirmation Number:	9571
Title of Invention:	Process for determining object level profitability
First Named Inventor/Applicant Name:	Richard Tad Lepman
Customer Number:	26252
Filer:	Scott W. Kelley/Nancy Hoover
Filer Authorized By:	Scott W. Kelley
Attorney Docket Number:	BERKEL-48526
Receipt Date:	29-APR-2009
Filing Date:	15-FEB-2006
Time Stamp:	12:10:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$270
RAM confirmation Number	7690
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
-----------------	----------------------	-----------	-------------------------------------	------------------	------------------

1	Appeal Brief Filed	48526_AppealBrief.pdf	148493 095cd915a16fcbef6be08ccf5c684242378598f1	no	35
Warnings:					
Information:					
2	Affidavit/Dec/Exhibit after Notice of Appeal	48526_LepmanDeclaration.pdf	143040 542d8e6e22a764c7c7ce69c033ed1994be79a0a	no	11
Warnings:					
Information:					
3	Affidavit/Dec/Exhibit after Notice of Appeal	48526_WonDeclaration.pdf	44294 25e9e042d103549fd9273eb09eadce1ea478eca9	no	3
Warnings:					
Information:					
4	Fee Worksheet (PTO-875)	fee-info.pdf	30169 93c3f4cdc3af65c865c2682ee66180d7e22ea257	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			365996		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26252 7590 08/07/2009

KELLY LOWRY & KELLEY, LLP
6320 CANOGA AVENUE
SUITE 1650
WOODLAND HILLS, CA 91367

EXAMINER

RUDY, ANDREW J

ART UNIT

PAPER NUMBER

3687

DATE MAILED: 08/07/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,798	02/15/2006	Richard Tad Lepman	BERKEL-48526	9571

TITLE OF INVENTION: PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	11/09/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26252 7590 08/07/2009

KELLY LOWRY & KELLEY, LLP
6320 CANOGA AVENUE
SUITE 1650
WOODLAND HILLS, CA 91367

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

11/354,798 02/15/2006 Richard Tad Lepman BERKEL-48526 9571

TITLE OF INVENTION: PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	11/09/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
----------	----------	----------------

RUDY, ANDREW J 3687 705-035000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,798	02/15/2006	Richard Tad Lepman	BERKEL-48526	9571
26252	7590	08/07/2009	EXAMINER	
KELLY LOWRY & KELLEY, LLP 6320 CANOGA AVENUE SUITE 1650 WOODLAND HILLS, CA 91367			RUDY, ANDREW J	
			ART UNIT	PAPER NUMBER
			3687	
DATE MAILED: 08/07/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 301 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 301 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed April 29, 2009, with respect to claims 1-32 have submitted have been reviewed. Applicant's two separate affidavits filed April 29, 2009 have been reviewed. The Final Rejection of February 9, 2009 has been withdrawn.

Allowable Subject Matter

2. Claims 1-32 are allowed.

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Scott Kelly on July 29, 2009.

4. The application has been amended as follows: Claim 33 is cancelled.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Joseph Rudy whose telephone number is 571-272-6789. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on 571-272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

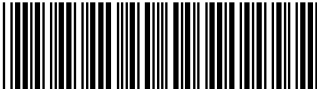
/Andrew Joseph Rudy/
Primary Examiner, Art Unit 3687

Issue Classification 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	11/354,798	LEPMAN, RICHARD TAD	
	Examiner	Art Unit	
	Andrew Joseph Rudy	3687	

ISSUE CLASSIFICATION									
ORIGINAL				CROSS REFERENCE(S)					
CLASS		SUBCLASS		CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
705		35		705	38				
INTERNATIONAL CLASSIFICATION									
G	0	6	Q						
				40/00					
				/					
				/					
				/					
				/					

XXXXXXXXXXXXXXXXXXXXX (Assistant Examiner) (Date)		/Andrew Joseph Rudy/ July 30, 2009 (Primary Examiner) (Date)		Total Claims Allowed: 32	
(Legal Instruments Examiner) (Date)				O.G. Print Claim(s) 1	O.G. Print Fig. 2

☒ Claims renumbered in the same order as presented by applicant										☐ CPA		☐ T.D.		☐ R.1.47		
Final	Original		Final	Original		Final	Original		Final	Original		Final	Original		Final	Original
1	1		31	31		61	91		121	151		181				
2	2		32	32		62	92		122	152		182				
3	3			33		63	93		123	153		183				
4	4			34		64	94		124	154		184				
5	5			35		65	95		125	155		185				
6	6			36		66	96		126	156		186				
7	7			37		67	97		127	157		187				
8	8			38		68	98		128	158		188				
9	9			39		69	99		129	159		189				
10	10			40		70	100		130	160		190				
11	11			41		71	101		131	161		191				
12	12			42		72	102		132	162		192				
13	13			43		73	103		133	163		193				
14	14			44		74	104		134	164		194				
15	15			45		75	105		135	165		195				
16	16			46		76	106		136	166		196				
17	17			47		77	107		137	167		197				
18	18			48		78	108		138	168		198				
19	19			49		79	109		139	169		199				
20	20			50		80	110		140	170		200				
21	21			51		81	111		141	171		201				
22	22			52		82	112		142	172		202				
23	23			53		83	113		143	173		203				
24	24			54		84	114		144	174		204				
25	25			55		85	115		145	175		205				
26	26			56		86	116		146	176		206				
27	27			57		87	117		147	177		207				
28	28			58		88	118		148	178		208				
29	29			59		89	119		149	179		209				
30	30			60		90	120		150	180		210				

Search Notes 	Application/Control No.		Applicant(s)/Patent under Reexamination	
	11/354,798		LEPMAN, RICHARD TAD	
	Examiner		Art Unit	
	Andrew Joseph Rudy		3687	

SEARCHED			
Class	Subclass	Date	Examiner
705	35,36R,37,38	7/23/2009	AJR

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner
705	35,36R,37	7/30/2009	AJR
705	38	7/30/2009	AJR

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Appeal Conference held with Mr. Vincent Millin, Appeal Specialist, Tech Center 3600 and Mr. Matthew Gart, SPE, Art Unit 3687.	7/29/2009	AJR
All prior art and searches from Parent Application, 09/545,628 reviewed. Note NPL search conducted in January 2009.	7/23/2009	AJR
All prior art and searches from Application, 11/355,034 reviewed.	7/23/2009	AJR

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

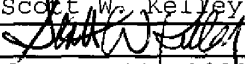
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26253 7590 08/07/2009
KELLY LOWRY & KELLEY, LLP
6320 CANOGA AVENUE
SUITE 1650
WOODLAND HILLS, CA 91367

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Scott W. Kelley (Depositor's name)
 (Signature)
 August 10, 2009 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,798	02/15/2006	Richard Tad Lepman	BERKEL-48526	9571

TITLE OF INVENTION: PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	11/09/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
RUDY, ANDREW J	3687	705-035000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 **KELLY LOWRY & KELLEY,**
 2 **LLP**
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

BERKELEY *IEOR

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

BERKELEY, CALIFORNIA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

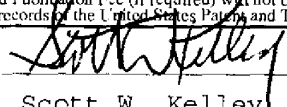
- ☐ A check is enclosed.
☒ Payment by credit card. XXXXXXXXXXXXXXXXXXXX
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature



Date **August 10, 2009**

Typed or printed name **Scott W. Kelley**

Registration No. **30,762**

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal				
Application Number:		11354798		
Filing Date:		15-Feb-2006		
Title of Invention:		PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY		
First Named Inventor/Applicant Name:		Richard Tad Lepman		
Filer:		Scott W. Kelley/Linda Boehme		
Attorney Docket Number:		BERKEL-48526		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1055

Electronic Acknowledgement Receipt	
EFS ID:	5861431
Application Number:	11354798
International Application Number:	
Confirmation Number:	9571
Title of Invention:	PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY
First Named Inventor/Applicant Name:	Richard Tad Lepman
Customer Number:	26252
Filer:	Scott W. Kelley/Linda Boehme
Filer Authorized By:	Scott W. Kelley
Attorney Docket Number:	BERKEL-48526
Receipt Date:	10-AUG-2009
Filing Date:	15-FEB-2006
Time Stamp:	18:32:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1055
RAM confirmation Number	4901
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
-----------------	----------------------	-----------	-------------------------------------	------------------	------------------

1	Issue Fee Payment (PTO-85B)	48526_Issue_Fee.pdf	64001 1c7d963d4626635937d44ebdbff466ddc8a5bb07	no	1
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	32051 7859b8228b9caaf7bda306c254f74d6d179e0e31	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			96052		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,798	09/29/2009	7596521	BERKEL-48526	9571

26252 7590 09/09/2009
KELLY LOWRY & KELLEY, LLP
6320 CANOGA AVENUE
SUITE 1650
WOODLAND HILLS, CA 91367

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 301 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Richard Tad Lepman, London, UNITED KINGDOM;

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of Illinois on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 17cv7472	DATE FILED 10/16/2017	U.S. DISTRICT COURT Northern District of Illinois
PLAINTIFF Berkeley*IEOR a Nevada Corporation doing business as B*IEOR		DEFENDANT W.W. Grainger Inc. et al
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2 7596521		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK Thomas G. Bruton	(BY) DEPUTY CLERK Jacqueline Hollimon	DATE 10/18/2017
---------------------------	--	--------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

(12) **United States Patent**
Leppman
 Patent No.: **US 7,596,521 B2**
 Date of Patent: **Sep. 29, 2009**

(13) **PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY**

(14) **INVENTOR**
 Richard Ted Leppman, London (GB)
 Assignee: Berkeley *TEOR, Berkeley, CA (US)
 Subject to any disclosure, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 301 days.

(15) **Appl. No.: 11/394,798**
 Filed: Feb. 15, 2006
 Pub. No.: 2006/0178960 A1
 Pub. Date: Aug. 10, 2006
 US 2006/0178960 A1
 Filed: Aug. 10, 2006
 Continued from application No. 09/545,628, filed on Apr. 7, 2000, now abandoned.
 Provisional application No. 60/128,766, filed on Apr. 8, 1998.

(16) **Related U.S. Application Data**
 (17) **Field of Classification Search**
 705/36 R, 37, 38
 705/35
 705/36, 705/38
 (18) **U.S. CL.**
 705/36, 705/38
 (19) **Int. CL.**
 G06Q 40/00 (2006.01)
 (20) **References Cited**
 See application file for complete search history.
 (21) **U.S. PATENT DOCUMENTS**
 5,445,800 A 8/1997 Baskin et al.
 5,615,100 A 1/1997 Eilat
 5,713,007 A 1/1998 Marks et al.
 5,721,001 A 2/1998 Marks et al.
 5,721,003 A 2/1998 Marks et al.
 5,995,214 A * 12/1999 Moss et al.
 6,038,283 A 2/2000 Kabanoff

22 Claims, 12 Drawing Sheets

ABSTRACT
 (23) **Summary**
 A process for determining object level profitability includes the steps of (1) preparing information to be accessed electronically; (2) establishing rules for processing the prepared information; (3) calculating at least one marginal value of profit using established rules as applied to a selected set of prepared information; (4) calculating a fully absorbed value of profit adjustment using established rules as applied to the selected set of prepared information; and (5) combining the at least one marginal value of profit and fully absorbed value of profit adjustment to create a measure for object level profitability. The inventive process gives management enhanced profit sources tailored to its need for accurate decision oriented profit information required to manage a large organization based on profit measurement.



23

(12) **United States Patent**
Lepman(10) **Patent No.:** **US 7,882,137 B2**
(45) **Date of Patent:** **Feb. 1, 2011**(54) **PROCESS FOR DETERMINING OBJECT-LEVEL PROFITABILITY**(76) **Inventor:** **Richard Tad Lepman**, 64610 M-66
Highway North, Charlevoix, MI (US)
49720-9516(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 134 days.(31) **Appl. No.:** **12/401,101**(22) **Filed:** **Mar. 10, 2009**(65) **Prior Publication Data**

US 2009/0162883 A1 Jul. 30, 2009

Related U.S. Application Data

(66) Division of application No. 11/354,798, filed on Feb. 15, 2006, now Pat. No. 7,596,521, which is a continuation of application No. 09/545,638, filed on Apr. 7, 2000, now abandoned.

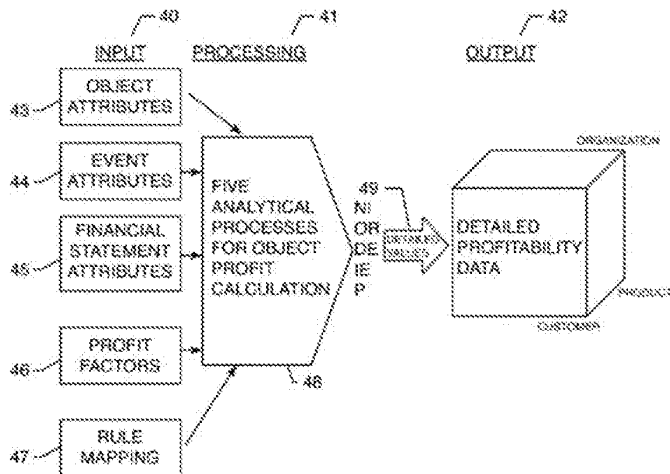
(60) Provisional application No. 60/128,769, filed on Apr. 9, 1999.

(51) **Int. Cl.**
G06F 7/00 (2006.01)
G06Q 40/00 (2006.01)(52) **U.S. Cl.** 707/793; 707/944; 707/950;
705/35(58) **Field of Classification Search** 707/713,
707/715, 731, 736, 737, 760, 769, 790, 793,
707/802, 944, 950, 999, 104; 705/35, 36 R,
705/37, 38; 708/206, 217, 219, 23
See application file for complete search history.(56) **References Cited****U.S. PATENT DOCUMENTS**6,148,293 A * 11/2000 King 705/35
6,881,023 B1 * 12/2005 Hamilton et al. 708/208
7,596,521 B2 * 9/2009 Lepman 705/35

* cited by examiner

Primary Examiner—Andrew Joseph Brady(74) **Attorney, Agent, or Firm**—Kelly Leary & Kelley, LLP(57) **ABSTRACT**

A process for determining object level profitability includes the steps of (1) preparing information to be accessed electronically, (2) establishing rules for processing the prepared information, (3) calculating at least one marginal value of profit using established rules as applied to a selected set of prepared information, (4) calculating a fully absorbed value of profit adjustment using established rules as applied to the selected set of prepared information, and (5) combining the at least one marginal value of profit and fully absorbed value of profit adjustment to create a measure for object level profitability. The inventive process gives management profit measures tailored to its need for accurate decision oriented profit information required to manage a large organization based on profit measurement.

30 Claims, 12 Drawing Sheets

(12) **United States Patent**
Lepman

(10) **Patent No.:** **US 8,612,316 B2**
(45) **Date of Patent:** **Dec. 17, 2013**

(54) **PROCESS FOR DETERMINING OBJECT LEVEL PROFITABILITY**

(56) **Field of Classification Search**
USPC: 705/28, 30, 35, 36 R, 36 T, 37, 38, 39, 705/400; 703/27
See application file for complete search history.

(76) **Inventor:** **Richard Tad Lepman, Berkeley, CA (US)**

(56) **References Cited**
U.S. PATENT DOCUMENTS
5,970,470 A * 10/1999 Fahey 705/28
6,393,387 B1 * 5/2002 Adriano et al. 703/27
6,400,998 B1 * 6/2002 Rothberg et al. 700/83
7,575,501 B1 * 6/2006 Molnar 454/5
7,996,521 B2 * 9/2009 Lepman 705/35
7,892,137 B2 * 2/2011 Lepman 703/27
* cited by examiner

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 496 days.

(21) **Appl. No.:** **13/017,952**

(22) **Filed:** **Jan. 31, 2011**

(65) **Prior Publication Data**
US 2011/0125021 A1 May 26, 2011

Related U.S. Application Data

(60) Continuation of application No. 12/401,101, filed on Mar. 10, 2009, now Pat. No. 7,682,137, which is a division of application No. 11/554,798, filed on Feb. 15, 2008, now Pat. No. 7,596,521, which is a continuation of application No. 09/545,628, filed on Apr. 7, 2000, now abandoned.

(60) Provisional application No. 80/128,769, filed on Apr. 9, 1998.

(51) **Int. Cl.**
G06Q 40/00 (2012.01)

(52) **E.S. Cl.**
USPC: 705/30; 705/36 T

30 Claims, 12 Drawing Sheets

(74) **Attorney, Agent, or Firm:** **Kelly & Kelley, LLP**

(57) **ABSTRACT**
A process for determining object level profitability includes the steps of (1) preparing information to be accessed electronically, (2) establishing rules for processing the prepared information, (3) calculating at least one marginal value of profit using established rules as applied to a selected set of prepared information, and (4) combining the at least one marginal value of profit and fully absorbed value of profit adjustment to create a measure for object level profitability. The inventive process gives management profit measures tailored to its need for accurate decision oriented profit information required to manage a large organization based on profit measurement.

