

2-28-03

CERTIFICATE OF EXPRESS OR
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EV031252070

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Signature
The Firm of Karl F. Ross, P.C.

Attorney's docket 22469

Box Patent Application
Commissioner of Patents and Trademarks
Washington, DC 20231

02/27/03
JCS25 U.S. PTO

NEW APPLICATION TRANSMITTAL

PATENT

Transmitted herewith for filing is the patent application of inventor:

First Name	Last Name	Residence	Citizenship
1. Michael	ROTHSCHILD	Ramot Hashavim 45930, Israel	Israel

For (title):

LOAD BALANCING WITH SHARED DATA

1. Type of Application

- ☒ Utility
- ☐ Design
- ☐ Plant
- ☒ Original
- ☐ Divisional
- ☐ Continuation
- ☐ Continuation-in-part

2. Benefit of Prior US Application(s) (35 USC 120) or foreign priority (35 USC 119)

- ☒ The new application being transmitted claims the benefit of a prior US application. See ¶17--20 below.
- ☐ Foreign priority claimed (see ¶9)

3. Papers Enclosed Required For Filing Date Under 37 CFR 1.53(b) (Ut.) or 37 CFR 1.153 (Des.)

- ☒ Pages of specification (14)
- ☒ Pages of claims (3)
- ☒ Pages of Abstract (1)
- ☒ Sheets of Drawing (4)
 - ☒ Formal
 - ☐ Informal

J1033 U.S. PTO
10/375893
02/27/03

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4. Additional papers enclosed

- ☐ Preliminary Amendment
- ☐ Information Disclosure Statement
- ☐ PTO-1449
- ☐ Citations (none)
- ☐ Declaration of Biological Deposit
- ☐ Submission of "Sequence Listing," computer-readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino-acid sequence
- ☐ Authorization of Attorney(s) to accept and follow instructions from Representative
- ☒ Other -- PTO Data Entry Form
- ☐ Other

5. Declaration or Oath

- ☐ Enclosed
original executed by
 - ☐ Inventor(s)
 - ☐ legal representative of inventor(s). 37 CFR 1.42 or 1.43
 - ☐ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or could not be reached
 - ☐ this is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached
- ☒ Not Enclosed
 - ☒ Application is made by a person authorized under 37 CFR 1.41(c) on behalf of all the above-named inventor(s).
 - ☐ Showing that the filing is authorized.

6. Inventorship Statement

The inventorship for all the claims in this application is:

- ☒ The same
- ☐ Not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made
 - ☐ is submitted.
 - ☐ will be submitted.

7. Language

- ☒ English
- ☐ non-English
- ☐ the attached translation is a verified translation. 37 CFR 1.52(d).

8. Assignment

- ☒ An assignment of the invention to CORIGIN LTD
 - ☐ is attached.
 - ☒ will follow.

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9. Certified Copy

Certified copy of application

Country

Number

Date

from which priority is claimed

- ☐ is(are) attached.
☐ will follow.

10. Fee calculation

- ☒ **A. Utility application**

CLAIMS AS FILED

	No. Filed	Base No.	No. Extra	Rate	Basic fee
Total claims	14	20	0	\$18.00	\$750.00
Independent claims	1	3	0	\$84.00	\$0.00
Mult. dep. claims	No	n/a	n/a	\$280.00	\$0.00

- ☐ Amendment canceling extra claims enclosed.
☐ Amendment canceling multiply dependent claims enclosed.
☐ Fee for extra claims is not being paid at this time.
 Filing Fee Calculation \$750.00
- ☐ **B. Design application**
 (\$0.00--37 CFR 1.16(f))
 Filing fee calculation \$00.00
- ☐ **C. Plant application**
 (\$490.00--37 CFR 1.16(g))
 Filing fee calculation \$00.00

11. Entity StatusApplicant herewith qualifies as a **SMALL** entity.Filing fee calculation (50% of A, B, or C above) \$375.00**12. Request for International-Type Search (37 CFR 1.104(d))**

- ☐ Please prepare an international-type search report for this application at the time when national examination on the merits takes place.

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13. Fee Payment

- ☒ Not enclosed.
☒ No filing fee is to be paid at this time.
☐ Enclosed.
☐ basic filing fee \$0.00
☐ petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or could not be reached \$0.00
☐ for processing an application with a specification in a non-English language \$0.00
☐ processing and retention fee \$0.00
☐ fee for international-type search report \$0.00
Total fees enclosed \$0.00

14. Method of Payment of Fees

- ☐ Check in the amount of \$0.00
☐ Charge Account 18-2025 for \$0.00. A duplicate of this form is attached.
☐ Charge to credit card (PTO-2038 attached.)

15. Authorization to Charge Additional Fees

- ☐ The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to account 18-2025.
☐ 37 CFR 1.16(a), (f), or (g) (filing fees)
☐ 37 CFR 1.16(b), (c), or (d) (extra claims)
☐ 37 CFR 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
☐ 37 CFR 1.17 (application processing fees)
☐ 37 CFR 1.18 (issue fee at or before mailing of Notice of Allowance pursuant to 37 CFR 1.31(b))

16. Instructions As To Overpayment

- ☐ credit account 18-2025
☐ refund

17. Relate Back—35 USC 120

This is a of copending application 60/363853 filed 13 March 2002.

18. Relate Back—35 USC 119 Priority Claim for Prior Application

The prior US application(s) identified above in ¶17 in turn claim(s) the following priority(ies):

Country	Number	Date
None	None	None

The certified copy(ies) has (have)

- ☐ been filed on _____ in the above-cited prior application 60/363853.
☐ is(are) attached

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19. Maintenance of Copendency of Prior Application

- ☐ Extension of time in prior application
- ☐ An extension request and fee extend the term in the prior application to .
- ☐ A copy of the extension request for the prior application is attached

20. Further Inventorship Statement Where Benefit of Prior Application(s) Claimed

- ☒ The inventors for this application and for above-cited prior application 60/363853 are the same.
- ☐ This application claims, in addition to inventors named in above-cited prior application 60/363853 the following additional inventors:
n/a
- ☐ The following inventors named in above-cited prior application 60/363853 are not claimed in this application:
n/a
- ☐ Submitted herewith is an explanation detailing the changed inventorship.

27 February 2003

The Firm of Karl F. Ross P.C.


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Application Information::

Title Line One:: LOAD BALANCING WITH SHARED DATA

Total Drawing Sheets:: 4
Formal Drawings?: Yes

Application Type:: Utility

Docket Number:: 22469

Secrecy Order in Parent Appl.?: No

Representative Information::

Representative customer number:: 535

Continuity Information::

This application is a:
>Application One:: 60/363853
Filing date:: 13 March 2002
Patent Number::

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LOAD BALANCING WITH SHARED DATA

SPECIFICATION

Cross Reference to Related Applications

This application is a nonprovisional application
5 corresponding to S.N. 60/363,853 filed 13 March 2002.

Field of the Invention

This invention relates to the field of sharing data and
workload between possibly heterogeneous computer systems.

More specifically, it deals with a way to split the
10 performance of a given task among a plurality of processing units
which can all access, directly or indirectly, the input data and
the devices on which the output data is to be stored.

Sort applications, statistical analysis batch applications
and report writing applications and database queries are examples
15 of applications that can readily enjoy this invention.

Background of the invention

With the constant improvement in telecommunication
technology and the increasing tendency to consolidate computing
resources, many computer sites contain a plurality of computers.
20 The load imposed on the various computers in these sites
is normally the result of the activities directed specifically to
these computers and the fact that one of them is especially
loaded while others are relatively idle does not affect the way

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work is distributed between them. As a result, in contemporary environments, much can be gained by the parallelization of some processes and their distributed execution across all available computing resources in a way that both speeds the execution of
5 the whole process and balances the load the various computers are subjected to.

Recent developments introduced the concepts of Storage Area Networks (SAN) and Network Attached Storage (NAS) devices to enable efficient usage of storage resources. These technologies
10 increase the symmetry of storage access in a multiple computer environment, increasing the benefits that can be expected from such a parallelization.

Objects of the Invention

The principal object of the present invention is to
15 enable the decomposition of a certain type of linear processes that currently use a single computer, into equivalent parallel processes that can efficiently use any number of potentially heterogeneous computers, taking the available capacity of each of these computers into account while optimizing execution.

20 A more general object is to improve processing efficiency of certain processes.

It is also an object to obtain better processor utilization.

Summary of the Invention

25 These objects and others which may become apparent

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hereinafter are achieved in a method which distributes the load of a process that normally reads an input file sequentially and processes its records one by one between a plurality of potentially heterogeneous processors through the logical
5 partition of the input and the activation of a plurality of sub tasks in said plurality of processors, each said sub task processing the partitions defined by said logical partition in a first come first serve basis.

The method of effecting a computer-executable process
10 according to the invention thus comprises the steps of:

- (a) automatically determining file allocation and logically subdividing records of the input file into a plurality of partitions;
- (b) distributing the partitions to a plurality of
15 processors and activating respective subtasks of the computer-executable process in each of the processors, each subtask reading and processing the partitions on a first come first serve basis; and
- (c) generating at least one output reflecting the
20 processing of the subtasks.

The automatic determination of file allocation and logical subdivision of records of said input file into said plurality of partitions in step (a) and the distribution of said partitions in step (b) can be carried out with at least one processor and the
25 processors used can include mutually heterogeneous processors. Each of the subtasks can produce a subtask output and the subtask outputs can be merged to produce the output of step (c). The

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output in step (c) can, however, be a succession of outputs from the subtasks in a one to one correspondence with the records of the input file. Alternatively, the output in step (c) can be an accumulation of output records from the subtasks in an arbitrary
5 order.

The input file can reside on a directly attached storage or on a storage area network (SAN) or on a network attached storage (NAS) and can be derived therefrom. The computer-executable process can be a sort process, a statistical analysis
10 process, a report creating process or a database query or a combination thereof. Without limitation thereto, the one processor can be part of a mainframe computer and the plurality of processors can be processors of at least one other computer or the plurality of processors can all be parts of a single
15 multiprocessor. The one processor can thus also reside on a machine which is not a mainframe.

Brief description of the drawing

The above and other objects, features, and advantages will become more readily apparent from the following description,
20 reference being made to the accompanying drawing in which:

FIG. 1 is a block diagram describing how a system according to the invention works;

FIG. 2 is a block diagram which describes the way the system works when the output file can be shared with no write
25 coordination mechanism;

FIG. 3 is a block diagram which describes the way the

FIG. 4 is a diagram which illustrates the application of the invention to a sort process.

FIG. 1 contains a top-level description of the invention and its workings. In the initiating system 10, the invocation of a process has been replaced by an invocation of a logically equivalent Process 101 that is based on the current invention, capable of delegating at least some of the load to the available helping systems. In this figure, only two such helping systems are depicted - helping system 1 and helping system 2 - but in general, any positive number of such systems can be used.

The Equivalent Process 101 accepts the same input, or
15 input with the same semantics, as the original Process. If the
original Process is a sort Process then, in most cases, it is
told by this input, what the file to be sorted is and what parts
of the records in this file constitute the key according to which
it is to be sorted. In this case the input also specifies the
20 data types of the various parts of the key. If the original
Process is one of statistical analysis then the various
statistics and the data for these statistics are specified by
this input. If the original Process is a report generator then
the definition of the various reports and the data files they
25 should be extracted from are parts of this input.

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depicted here as consecutive steps in one procedure but alternative embodiments could replace them by dependent tasks controlled by a job scheduler. In this case, the wait step 104 would be replaced by a dependency of the Merge step 105 on the completion of Sub Task 103, Sub Task 201 and Sub Task 202. More generally, the Merge step would have been instructed to start only after all the Sub Task steps have completed.

The first step of the Equivalent Process 101 is the Split step 102. This step combines the information contained in the parameters supplied to the Equivalent Process 101 as a whole (in the sort case, these parameters include the name of the file to be sorted 9 and the keys to be used), with the information contained in the configuration file 0 which includes the names of the servers available to perform this task and with information from the operating system about the size and location of the input file or files 9, to create the control file 4 specifying a logical partition of the input.

Input files 9 are, thus, logically partitioned into n logical partitions where n is a number the split step 102 has decided upon. In Fig. 1, these logical partitions are numbered as 1 to 6.

A logical partition in this context is a well-defined part of the input or output. A very simple way to define a partition, which in many cases is the most efficient, would be to define the partitions as consecutive ranges on the input or output, ranging from one relative byte address to another relative byte address or from one relative track address to another.

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Of course, as we normally process full records, the partition boundaries or the way they are interpreted should take this fact into account. For example, if the beginning of a range falls within a record, this record can be said to belong to the
5 previous range. Other partition definitions can be used with no impact on the rest of the embodiment.

Note that the number of input partitions is not necessarily the number of helping systems. Normally, the number of logical input partitions will largely exceed the number of
10 helping systems.

Note that the logical partition does not rely on actual reading of the file. The actual reading of the file is reserved to the subtasks which read the partitions allocated to them. A splitting function may be allocating offset 0 to offset 100000 to
15 a first partition, offset 100001 to 200000 to the second partition, offset 200001 to 300000 to the third partition and 300001 to the end of the file to a fourth partition.

The split step 102 could rely on additional information that could also be contained in the configuration file 0. It
20 could, for example, take into account the power of each available server and the current load of this server.

When the split step terminates, the various Sub Tasks (in this case: 103, 202, 203) can be activated. This activation can be initiated by the split step 102 itself or by an external
25 scheduler. Each Sub Task finds the subdivision of the input in the control file 4. Each such Sub Task then repeatedly tries to allocate for itself and then process, an input partition that has

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not been allocated yet. In the embodiment described in Fig. 1, the output of the various Sub Tasks has to be further processed to create an output that is equivalent to the one expected from the original process. This is why each Sub Task creates its
5 output on dedicated output files. In this case, Sub Task 201 creates Output1 (301), Sub Task 202 creates Output2 (302) and Sub Task 103 creates Output3 (303).

Reading, processing and writing, are not necessarily straight forward since all the input and output files are shared
10 by the potentially heterogeneous systems and while the Sub Task itself is also performed in these potentially heterogeneous systems, the results should look as if they have all been created by the Initiating System 10.

This is why the various Sub Tasks may have to use
15 heterogeneous read and write functionality to read and write their corresponding Input Partitions (see my commonly owned copending application S.N. 10/209,673 filed 31 July 2002, which is hereby incorporated in its entirety by reference).

This is also why, if the original Process is a sort
20 Process, depending on the type of the input key, parts of the key's data may or may not be converted from the Initiating System's representation to an equivalent representation on the Helping Systems and then, after being sorted, converted back to the Initiating System's representation.

25 If, continuing with the sort example, the Initiating System 10 is an IBM mainframe and the Helping Systems 20 and 30 are HP-UX machines then character strings should not be converted

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- from EBCDIC to ASCII since the order we want to create is the EBCDIC order. In this case, binary numbers should not be converted either since their representation is the same on both systems but the mainframe's floating point numbers should be converted to HP-UX floating point numbers and back and packed decimal numbers should be converted to and from some HP-UX appropriate representation like, depending on the precision, short, long or long long binary numbers or even character strings.
- 10 Once all the Sub Tasks have terminated, the Merge Step 105 can be initiated. To initiate the Merge Step 105 at the appropriate time, the Wait Step 104 can be used, as depicted in this figure, to periodically verify the Control file 4 and detect the completion of all sub tasks and then schedule the Merge Step
- 15 105. Another alternative for the timely activation of the Merge Step would be to use some existing scheduler, as already mentioned.

- 20 Note that although the Merge Step 105 is depicted as running on the Initiating System 10, this should not necessarily be the case.

It can be the task of the Split Step 102 to decide where the Merge Step 105 should run or the processor that was the fastest in processing the last input partition it processed can be automatically selected for this purpose.

- 25 The Merge Step 105, as the Sub Tasks preceding it, may have to use the heterogeneous read and write functionality and the appropriate type conversions of parts of the data. What the

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Merge step 105 does is, of course, to merge the outputs of the various Sub Tasks into the result output file or files, represented in this figure by Output 4. Once the Merge Step 105 has completed, the whole Equivalent Process 101 is complete.

- 5 The Merge step 105 only needs to be performed in cases where there are more than one Sub Task. Otherwise it is not needed.

If the original Process is a sort Process then there are some additional cases, beyond the simple sort of an input file for the creation of an output file where the same technology can
10 be used to at least some extent.

A typical case is when the sort to be replaced uses exits like the input and output exits supported by all conventional IBM mainframe sort utilities, termed, in this environment E15 and E35.

- 15 Such exits could be handled in any of the following ways or a combination thereof:

Provide equivalent exit routines in all the relevant Helping System. This requires some work and is not always possible but when implemented, it is the most efficient solution.

- 20 Note that the input exit only needs to be implemented where Sub Tasks are performing and the output exit only needs to be implemented where the Merge Process or the only Sub Task is being performed.

Use communication, either over telecommunication lines, or
25 through the disk controller, to communicate between an exit running on one system and a Sub Task or Merge Process running on another. This alternative is not as efficient as the other ones,

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but it could be the only available one.

Run the Merge Process on the Initiating System 10 just to avoid the need to perform the output exit elsewhere.

Run on the initiating System 10 Pre Sort and Post Sort
5 conversion steps with the sole purpose of running the exits.

FIG. 2 depicts an embodiment that can improve performance in some very special cases.

The special cases where this embodiment would be preferable are those where there is a one to one correspondence
10 between the input records and the output records, the size of the output generated for a given input partition can be predicted and there is no harm in placing the output records in the same order as their corresponding input records appeared in the input file.

In such cases, output partitions are logically allocated
15 on an output file in a one to one correspondence with the input partitions and the Sub Tasks write the output resulting from processing a specific input partition to the corresponding output partition. The Merge step can then be obviated.

In the specific example of Fig 2, the output created from
20 processing input1 1 is placed in output1 401, the output created for input2 2 is placed on output2 402 etc.

The Terminate step 106 is only there to signal the termination of the equivalent processes. In an environment where process scheduling is performed by a scheduler, this step can be
25 obviated.

In this embodiment, as well as in that of Fig. 1, there is a simple way to reduce the risk of failure resulting from one of

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the systems becoming inoperative.

All that is needed is some mechanism to detect the failure of a system (based, for example, on some heart beat mechanism) and return the partitions for which the failing system was
5 responsible to the general pool where the remaining systems will then take care of them.

FIG. 3 depicts yet another special embodiment that is preferable in applications where the output created by the various Sub Tasks is small when compared to their input, where
10 the order of the resulting records is immaterial and where a mechanism exists for simultaneous writes on a single file.

Note that in the embodiment of Fig. 2 there where simultaneous write operations directed at the same file as well but since the various parts of the output file were preallocated
15 and no two Sub Tasks wrote to the same logical partition of the output, there was no need for a special mechanism to coordinate these simultaneous writes. This is not the case in this figure. Here, the output records are written to the output file 408 at an arbitrary order and there is no prior knowledge of their quantity
20 and size. Therefore, the write operations must be coordinated and it is the assumption of this embodiment that they are.

A special case where such an embodiment might be interesting is that of a query that selects rows from a database table without requiring any special ordering of the output. In
25 this case, there might be a process that first scans the index to detect interesting row identifiers and puts them on the input file 9 that serves as an input for the whole process depicted in

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this figure. Both this input file 9 and the output file 408 can be virtual. The input file may be a memory resident list and the output file may be the screen of a terminal.

FIG. 4 describes a sort process. In the example depicted in Fig 4, two subtasks - Sub Task 1 and Sub Task 2, are invoked to perform a sort.

The input file 0 is (logically) partitioned into six partitions.

Sub Task 2 is, for some reason, faster than Sub Task 1 (it may be running on a faster processor or on one on which the current load is lower). This is why Sub Task 2 manages to do a larger part of the job.

First, Sub Task 2 updates the control file to take responsibility of Input 1.

Then Sub Task 1 starts processing Input 1. While this is happening, Sub Task 2 takes responsibility (using the control file) for Input 2 and starts processing it.

While Sub Task 1 processes Input 2, Sub Task 2 finishes the processing of Input 1, takes responsibility for Input 3 and processes it, then it takes responsibility for Input 4 and starts processing it.

While Sub Task 2 processes Input 4, Sub Task 1 finishes processing Input 2, takes responsibility for Input 5 and starts processing it.

While Sub Task 1 processes Input 5, Sub Task 2 finishes processing Input 4, takes responsibility for Input 6, and processes it.

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When both Sub Tasks terminate the processing of their last input partition they put the sorted output on their respective output files.

Then the merge step is initiated and merges the two output
5 files into one merged output file.

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I CLAIM:

- 1 1. A method of effecting a computer-executable process
2 comprising the steps of:
 - 3 (a) automatically determining file allocation and
4 logically subdividing records of said input file into a plurality
5 of partitions;
6 (b) distributing said partitions to a plurality of
7 processors and activating respective subtasks of the computer-
8 executable process in each of said processors, each subtask
9 reading and processing said partitions on a first come first
10 serve basis; and
11 (c) generating at least one output reflecting the
12 processing of said subtasks.
- 1 2. The method defined in claim 1 wherein the automatic
2 determination of file allocation and logical subdivision of
3 records of said input file into said plurality of partitions in
4 step (a) and the distribution of said partitions in step (b) is
5 carried out with at least one processor in addition to the
6 subtask processors formulation.
- 1 3. The method defined in claim 1 wherein each of said
2 subtasks produces a subtask output, said method further
3 comprising the step of merging said subtask outputs to produce

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4 the output of step (c).

1 4. The method defined in claim 1 wherein the output in
2 step (c) is a succession of outputs from said subtasks in a one
3 to one correspondence with said records of said input file.

1 5. The method defined in claim 1 wherein the output in
2 step (c) is an accumulation of output records from said subtasks
3 in an arbitrary order.

1 6. The method defined in claim 1 wherein said input file
2 resides on a storage area network and is derived therefrom.

1 7. The method defined in claim 1 wherein said input file
2 resides on a network attached storage and is derived therefrom.

1 8. The method defined in claim 1 wherein said computer-
2 executable process is a sort process.

1 9. The method defined in claim 1 wherein said computer-
2 executable process is a statistical analysis process.

1 10. The method defined in claim 1 wherein said computer-
2 executable process is a report creating process.

1 11. The method defined in claim 1 wherein said computer-
2 executable process includes a database query.

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1 12. The method defined in claim 1 wherein said one
2 processor is part of a mainframe computer and said plurality of
3 processors are processors of at least one other computer.

1 13. The method defined in claim 1 wherein said plurality
2 of processors are all parts of a single multiprocessor.

1 14. The method defined in claim 1 wherein the automatic
2 determination of file allocation and logical subdivision of
3 records of said input file into said plurality of partitions in
4 step (a) and the distribution of said partitions in step (b) is
5 carried out with at least one processor, and said one processor
6 and said plurality of processors are all parts of a single
7 multiprocessor.

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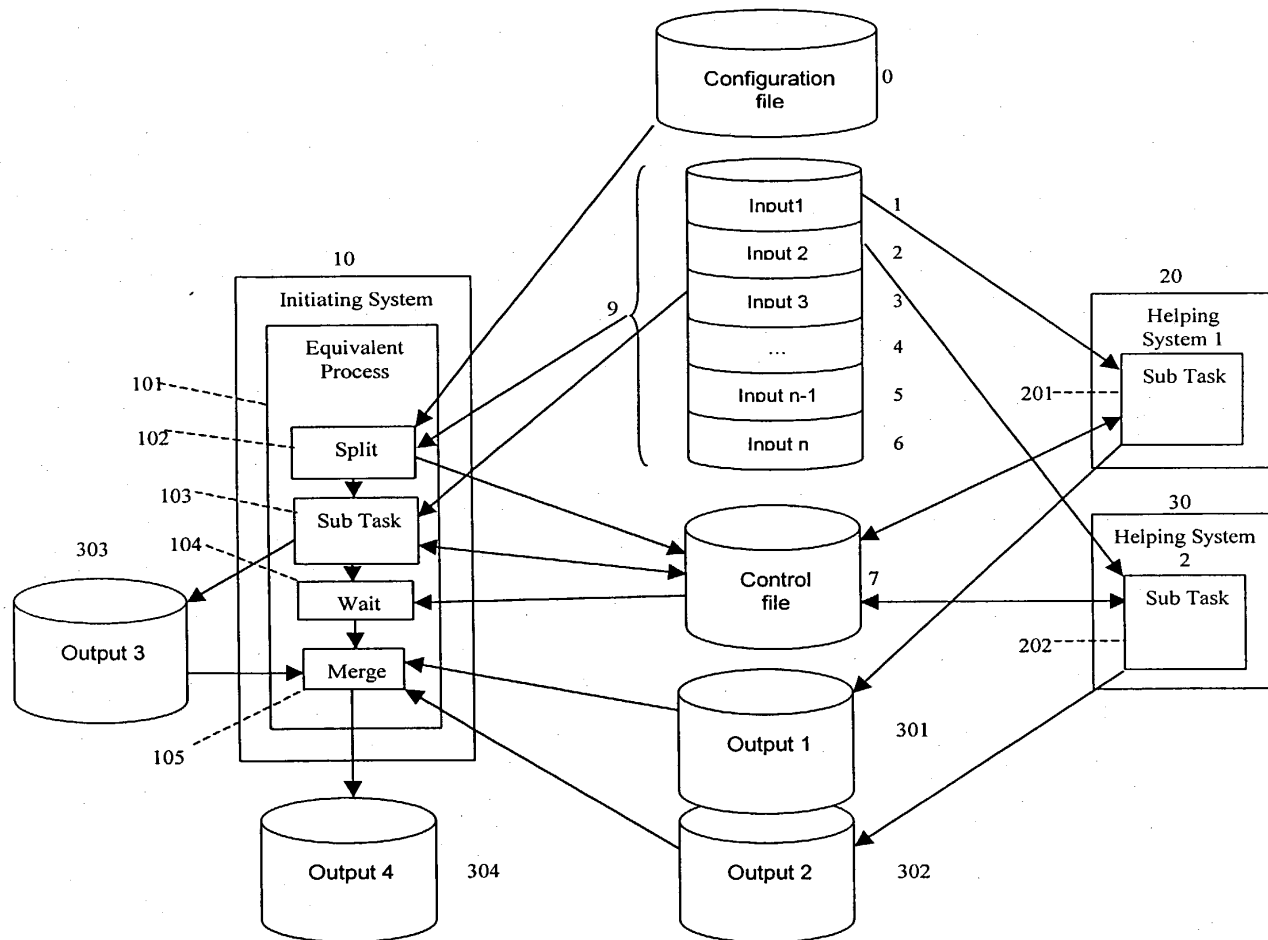
ABSTRACT OF THE DISCLOSURE

The input of a computer executable process, is logically subdivided, without reading, into a plurality of partitions which are distributed to a plurality of processors in which respective subtasks including the reading of those partitions, are carried out. The method allows distribution of processing of a large amount of data to a plurality of processors cooperating in a way that the load imposed on each processor is proportional to its capacity to do the work.

db-

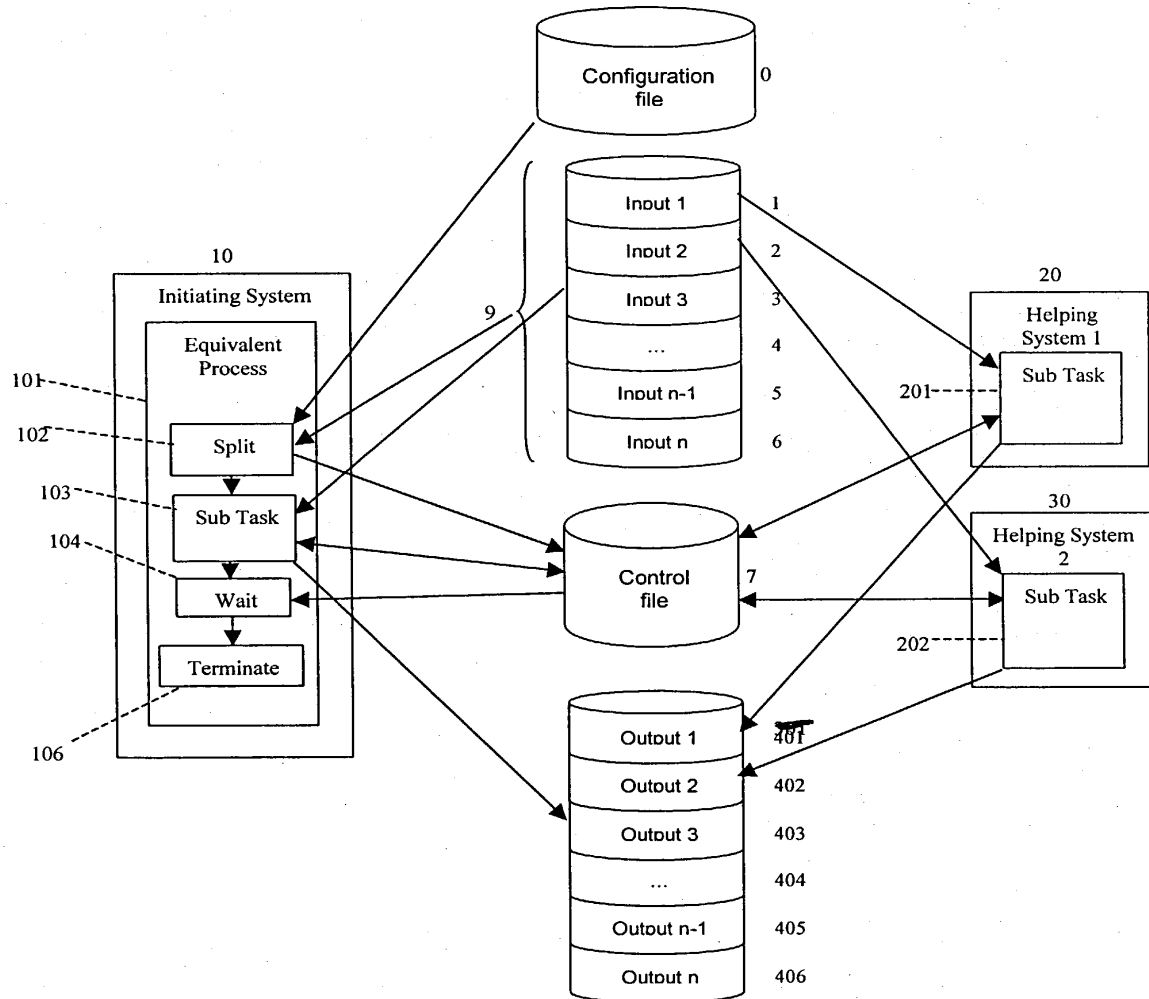
22469

Fig 1



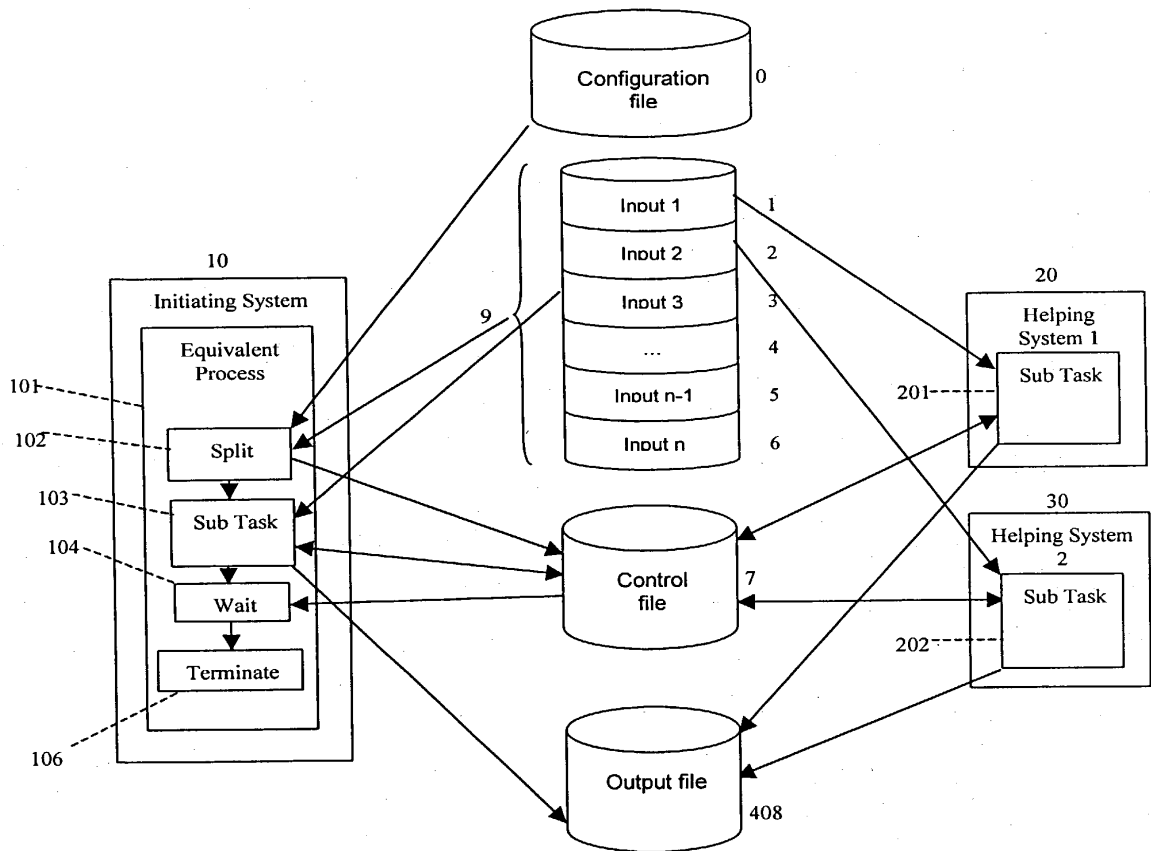
22469

Fig 2

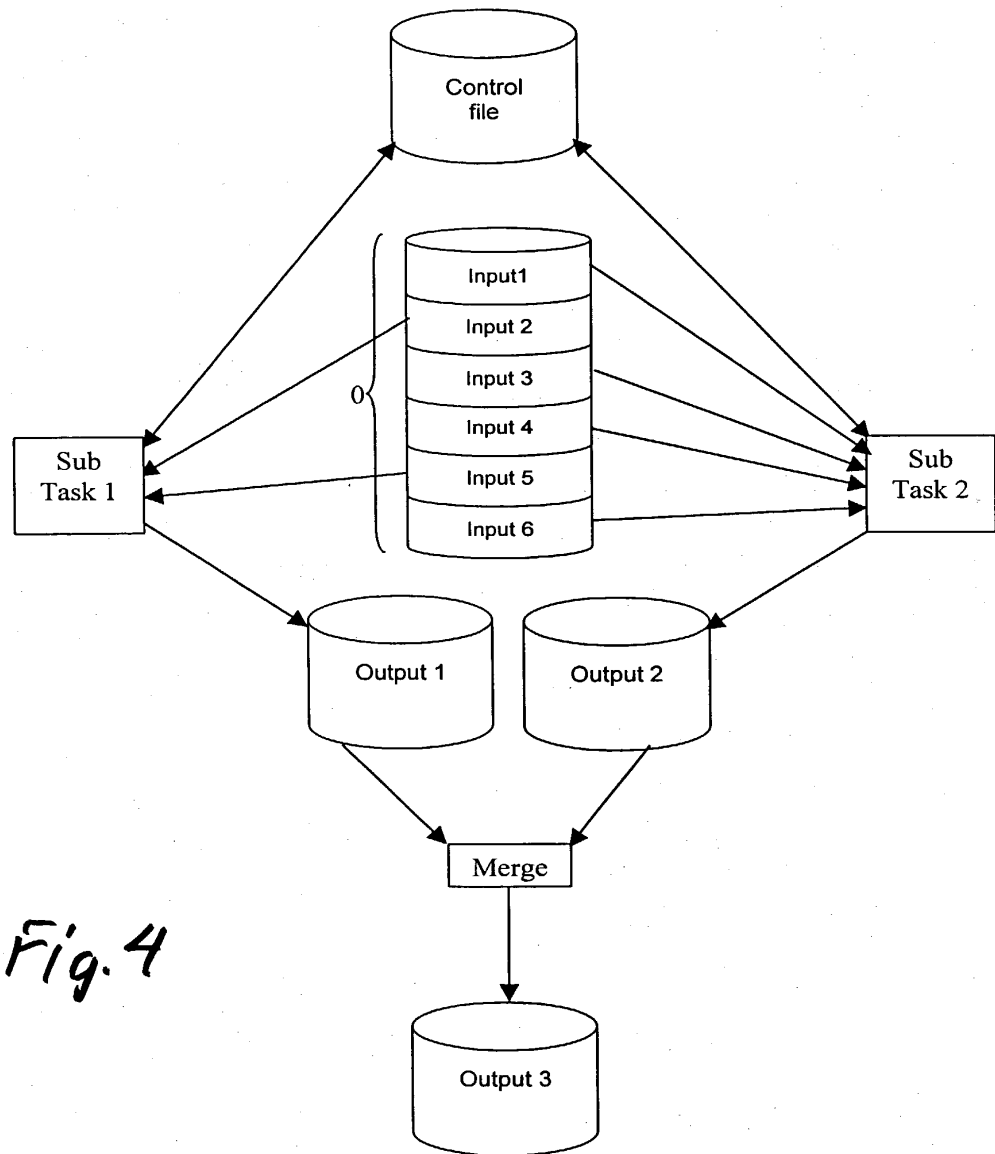


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Fig 3



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*Fig. 4*

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	14	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	14 minus 20 = *	
INDEPENDENT CLAIMS	1 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

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

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

Best Available Copy

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

* 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.

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	\$375
X\$ 9=	
X42=	
+140=	
TOTAL	

RATE	FEE
BASIC FEE	\$750
X\$18=	
X84=	
+280=	
TOTAL	

SMALL ENTITY ☐

OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
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TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
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X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X42=	
+140=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X84=	
+280=	
TOTAL ADDIT. FEE	



Commissioner for Patents
Washington, DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/375,893	02/27/2003	Michael Rothschild	22469

CONFIRMATION NO. 6365

FORMALITIES LETTER



OC000000009776705

535
THE FIRM OF KARL F ROSS
5676 RIVERDALE AVENUE
PO BOX 900
RIVERDALE (BRONX), NY 10471-0900

Date Mailed: 04/04/2003

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
Applicant must submit \$ 750 to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).
- The oath or declaration is missing.
A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$880** for a Large Entity

- **\$750** Statutory basic filing fee.
- **\$130** Late oath or declaration Surcharge.

*A copy of this notice **MUST** be returned with the reply.*

Phair

Customer Service Center

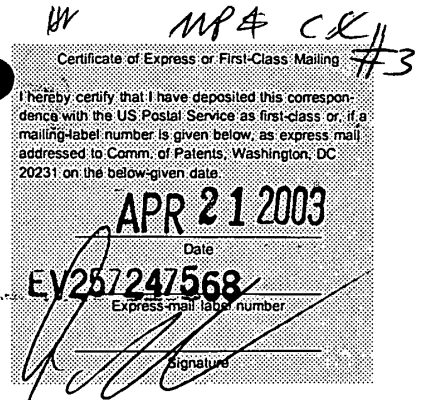
Initial Patent Examination Division (703) 308-1202

PART 3 - OFFICE COPY

22469



4-22-03



IN THE U.S. PATENT AND TRADEMARK OFFICE

Inventor Michael ROTHSCHILD
Patent App. 10/375,893
Filed 27 February 2003
For LOAD BALANCING WITH SHARED DATA
Art Unit Not known
Hon. Commissioner of Patents
Box 1450 Alexandria, VA 22313-1450

Conf. No. 6365

COMPLETION OF FILING REQUIREMENTS

In reply to the Notice to File Missing Parts of Application under 37 CFR 1.53(d) dated 4 April 2003, applicant herewith submits the following:

■ Declaration	
■ PTO-2038 for Official Fees	
■ Patent Basic Fees (Small Entity)	\$375.00
☐ Independent claims in excess of 3	\$00.00
☐ Claim in excess of 20	\$00.00
■ Late-document or -fee surcharge	\$65.00
Total	\$440.00

Please charge any fees not covered by an enclosed PTO-2038 to account 18-2025 of the undersigned.

18 April 2003

Customer Number 535
5676 Riverdale Ave. Box 900
Bronx, NY 10471-0900
Tel: (718) 884-6600
Fax: (718) 601-1099
je

Respectfully submitted,
The Firm of Karl F. Ross P.C.

Herbert Dubno, Reg. 19,752

#3



Commissioner for Patents
Washington, DC 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/375,893	02/27/2003	Michael Rothschild	22469

CONFIRMATION NO. 6365

535
THE FIRM OF KARL F ROSS
5676 RIVERDALE AVENUE
PO BOX 900
RIVERDALE (BRONX), NY 10471-0900

FORMALITIES LETTER



OC000000009776705

Date Mailed: 04/04/2003

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

04/23/2003 GWORDOF1 00000048 10375893

FILED UNDER 37 CFR 1.53(b)

01 FC:2001
02 FC:2051

375.00 OP
65.00 OP

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
Applicant must submit \$ 750 to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).
- The oath or declaration is missing.
A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$880** for a Large Entity

- **\$750** Statutory basic filing fee.
- **\$130** Late oath or declaration Surcharge.

*A copy of this notice **MUST** be returned with the reply.*

Thane

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



#3

22469

DECLARATION AND POWER OF ATTORNEY

As a below-named inventor, I hereby declare that: My residence, post-office address, and citizenship are as stated below next to my name,

I believe that I am the original, first, and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

LOAD BALANCING WITH SHARED DATA

the specification of which was filed 27 February 2003 as application 10/375,893.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim the benefit under 35 USC 120 of the United States Application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States Application(s) in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose material information as defined in 37 CFR 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Serial Number	Filing Date	Status
60/363853	13 March 2002	Pending

I hereby appoint as attorneys to prosecute this application and to transact all business connected therewith:

Herbert Dubno, Reg. 19,752; Andrew Wilford, Reg. 26,597; Jonathan Myers, Reg. 26,963 and each of them individually.

Address all correspondence to:

The Firm of Karl F. Ross, P.C.
Customer Number 535
5676 Riverdale Avenue, Box 900
Bronx, NY 10471-0900
(718) 884-6600

Direct all telephone calls to:

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 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole inventor:

Michael ROTHSCHILD

Inventor's signature

M. Rothschild

Date:

April 3, 2003

Residence: Ramot Hashavim 45930, Israel

Citizen of Israel

Post-office Address: Magen Street 8, Ramot Hashavim 45930, Israel



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.
10/375,893	02/27/2003	Michael Rothschild	22469	6365
535 7590 12/08/2006 THE FIRM OF KARL F ROSS 5676 RIVERDALE AVENUE PO BOX 900 RIVERDALE (BRONX), NY 10471-0900			EXAMINER WU, YICUN	
			ART UNIT 2165	PAPER NUMBER

DATE MAILED: 12/08/2006

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

Office Action Summary	Application No.	Applicant(s)	
	10/375,893	ROTHSCHILD, MICHAEL	
	Examiner	Art Unit	
	Yicun Wu	2165	

-- 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 27 February 2003.
- 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) 1-14 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) 1-14 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 27 February 2003 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) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

Y. Lee
Patent Examiner
Technology Center
2100

III. DETAILED ACTION

1. Claims 1-14 are presented for examination.

Claim Rejections - 35 USC § 103

2. 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 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 the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitsuregawa et al. (U.S. Patent 5,603,028) in view of Pian (U.S. Patent 5,357,632).

As to Claim 1, Kitsuregawa et al discloses a method of effecting a computer-executable process comprising the steps of:

(a) automatically determining file allocation (i.e. a plurality of data. Col. 3, lines 61-65) and logically subdividing records (i.e. a total Nx number of data. Col. 4, lines 55-60) of the input file (Col. 4, lines 55-60) into a plurality of partitions (Col. 4, lines 55-60);

(b) distributing (i.e. transferred. Col. 4, lines 55-60 and abstract) the partitions to a plurality (i.e. second group. Col. 4, lines 55-60) and activating respective subtasks of the computer-executable process in each of the processors (Col. 4, lines 55-60), each subtask reading and processing the partitions on a first come first serve basis (Col. 4, lines 55-60); and

Art Unit: 2165

(c) generating at least one output (i.e. output. Col. 5, lines 11-22) reflecting the processing of the subtasks (Col. 5, lines 11-22 and Col. 4, lines 55-60).

Kitsuregawa et al does not explicitly teach a plurality of processors.

Pian teaches a plurality of processors (i.e. a plurality of control processors. Col. 1, lines 49-67 and fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kitsuregawa et al to include a plurality of processors.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kitsuregawa et al by the teaching of Pian to include a plurality of processors with the motivation to more improve distributed data flow signal network as taught by Pian (column 1, line 50-55).

As to Claim 2, Kitsuregawa et al as modified teaches a method wherein the automatic determination of file allocation and logical subdivision of records of the input file into the plurality of partitions in step (a) and the distribution of the partitions in step (b) is carried out with at least one processor (i.e. a first group of N memories. Kitsuregawa et al Col. 4, lines 49-55 and col. 2, lines 27-30) in addition to the subtask processors formulation (i.e. a second group of N memories. Kitsuregawa et al Col. 4, lines 49-55).

As to Claim 3, the teachings of Kitsuregawa et al as modified has been discussed above,

Kitsuregawa et al does not explicitly teach merging the subtask outputs to produce the output of step (c).

Pian teaches merging the subtask outputs to produce the output of step (c).
(i.e. joins. Col. 10, lines 1-14).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kitsuregawa et al to include merging the subtask outputs to produce the output of step (c).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kitsuregawa et al by the teaching of Pian to include merging the subtask outputs to produce the output of step (c) with the motivation to more improve distributed data flow signal network as taught by Pian (column 1, line 50-55).

As to Claim 4, Kitsuregawa et al as modified teaches a method wherein
the output in step (c) is a succession of outputs from the subtasks in a one to one
correspondence with the records of the input file (Kitsuregawa et al Col. 4, lines 49-60).

As to Claim 5, Kitsuregawa et al as modified teaches a method wherein
the output in step (c) is an accumulation of output records from the subtasks in an
arbitrary order (Kitsuregawa et al Col. 4, lines 49-60).

As to Claim 6, Kitsuregawa et al as modified teaches a method wherein

the input file resides on a storage area network and is derived therefrom (fig. 3).

As to Claim 7, Kitsuregawa et al as modified teaches a method wherein
the input file resides on a network attached storage and is derived therefrom (fig. 3).

As to Claim 8, Kitsuregawa et al as modified teaches a method wherein the
computer-executable process is a sort process (a sort process is considered intended use) .

As to Claim 9, Kitsuregawa et al as modified teaches a method wherein
the computer-executable process is a statistical analysis process (statistical analysis
process is considered intended use).

As to Claim 10, Kitsuregawa et al as modified teaches a method wherein
the computer-executable process is a report creating process (report creating process is
considered intended use).

As to Claim 11, Kitsuregawa et al as modified teaches a method wherein
the computer-executable process includes a database query (database query is considered
intended use).

As to Claim 12, Kitsuregawa et al as modified teaches a method wherein

the one processor is part of a mainframe computer (a mainframe computer is considered intended use) and the plurality of processors are processors of at least one other computer (i.e. a plurality of control processors. Pian Col. 1, lines 49-67).

As to Claim 13, Kitsuregawa et al as modified teaches a method wherein the plurality of processors are all parts of a single multiprocessor (Pian Col. 1, lines 49-67 and fig. 1).

As to Claim 14, Kitsuregawa et al as modified teaches a method wherein the automatic determination of file allocation and logical subdivision of records of the input file into the plurality of partitions in step (a) and the distribution of the partitions in step (b) is carried out with at least one processor (Kitsuregawa et al Col. 4, lines 49-60), and the one processor and the plurality of processors are all parts of a single multiprocessor (Pian Col. 1, lines 49-67 and fig. 1).

Points of contact

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yicun Wu whose telephone number is 571-272-4087. The examiner can normally be reached on 8:00 am to 4:30 pm, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Yicun Wu 
Patent Examiner
Technology Center 2100

December 5, 2006

Notice of References Cited	Application/Control No. 10/375,893	Applicant(s)/Patent Under Reexamination ROTHSCHILD, MICHAEL	
	Examiner Yicun Wu	Art Unit 2165	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,357,632	10-1994	Pian et al.	718/105
*	B	US-5,603,028	02-1997	Kitsuregawa et al.	718/105
*	C	US-5,835,755	11-1998	Stellwagen, Jr., Richard G.	707/3
*	D	US-5,926,833	07-1999	Rasouljan et al.	711/147
*	E	US-6,061,067	05-2000	Silva et al.	345/619
*	F	US-6,275,867	08-2001	Bendert et al.	719/316
	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					
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	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.



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. 6365

SERIAL NUMBER 10/375,893	FILING OR 371(c) DATE 02/27/2003 RULE	CLASS 707	GROUP ART UNIT 2165	ATTORNEY DOCKET NO. 22469	
APPLICANTS Michael Rothschild, Ramot Hashavim, ISRAEL; ** CONTINUING DATA ***** <i>verified</i> This appln claims benefit of 60/363,853 03/13/2002 ** FOREIGN APPLICATIONS ***** IF REQUIRED, FOREIGN FILING LICENSE GRANTED** SMALL ENTITY ** ** 04/04/2003					
Foreign Priority claimed ☐ yes ☒ no 35 USC 119 (a-d) conditions ☐ yes ☒ no ☐ Met after Allowance Verified and Acknowledged <i>[Signature]</i> Examiner's Signature <i>y</i> Initials		STATE OR COUNTRY ISRAEL	SHEETS DRAWING 4	TOTAL CLAIMS 14	INDEPENDENT CLAIMS 1
ADDRESS 535					
TITLE Load balancing with shared data					
FILING FEE RECEIVED 440	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		

Index of Claims 	Application/Control No.		Applicant(s)/Patent under Reexamination	
	10/375,893		ROTHSCHILD, MICHAEL	
	Examiner		Art Unit	
	Yicun Wu		2165	

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

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Search Notes 		Application/Control No. 10/375,893		Applicant(s)/Patent under Reexamination ROTHSCHILD, MICHAEL	
		Examiner Yicun Wu		Art Unit 2165	

SEARCHED			
Class	Subclass	Date	Examiner
707	1-10, 100-104.1 200-206	12/1/2006	YW
718	105	12/1/2006	YW
719	316	12/1/2006	YW
703	23	12/1/2006	YW
705	35	12/1/2006	YW
711	147.3	12/1/2006	YW
711	133	12/1/2006	YW

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
inventor search (double patenting) uspto uspgpub epo jpo ibmtech derwent	12/1/2006	YW
acm ieee citeseer internet Search strategy attached	12/1/2006	YW
consulted Diane Mizrahi	12/1/2006	YW

03-07-07

2165



22469

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IN THE U.S. PATENT AND TRADEMARK OFFICE

Inventor Michael ROTHSCHILD

Patent App. 10/375,893

Filed 27 February 2003

Conf. No. 6365

For LOAD BALANCING WITH SHARED DATA

Art Unit 2165

Examiner Wu, Y

Hon. Commissioner of Patents

Box 1450

Alexandria, VA 22313-1450

FIRST AMENDMENT

In response to the Office Action mailed 08 December 2006,
please amend the above-identified application as follows:

CLAIM AMENDMENTS

1 1. (currently amended) A method of effecting on a
2 preexisting input file a computer-executable process comprised of a
3 plurality of subtasks, the method comprising the steps of:

4 (a) automatically determining file allocation and
5 logically subdividing records of said input file into a plurality
6 of partitions;

7 (b) distributing descriptions of all of said partitions
8 to each of a plurality of subtask processors and ~~activating~~

9 (c) simultaneously executing at least a respective one of
10 the subtasks of the computer-executable process in each of at least
11 some of said processors on a respective one of the partitions with
12 [[,]] each subtask reading and processing [[said]] the respective
13 partition [[s]] so as to process the respective partition and
14 produce respective subtask output and;

15 (d) thereafter repeating step (c) in at least some of the
16 subtask processors each with another unprocessed partition on a
17 first-come/first-served basis; and

18 [[(c)]] (e) generating at least one output combining all
19 of the subtask outputs and reflecting the processing of all of said
20 subtasks.

1 2. (currently amended) The method defined in claim 1
2 wherein the automatic determination of file allocation and logical
3 subdivision of records of said input file into said plurality of

4 partitions in step (a) and the distribution of the description of
5 all of said partitions in step (b) is carried out with at least one
6 further processor in addition to the subtask processors
7 formulation.

1 3. (currently amended) The method defined in claim 1
2 ~~wherein each of said subtasks produces a subtask output, said~~
3 ~~method,~~ further comprising the step of merging said subtask outputs
4 ~~to produce the output of step (c) in step (e).~~

1 4. (currently amended) The method defined in claim 1
2 wherein the output in step ~~[(c)]~~ (e) is a succession of outputs
3 from said subtasks in a one-to-one correspondence with said records
4 of said input file.

1 5. (currently amended) The method defined in claim 1
2 wherein the output in step ~~[(c)]~~ (e) is an accumulation of output
3 records from said subtasks in an arbitrary order.

1 6. (original) The method defined in claim 1 wherein
2 said input file resides on a storage area network and is derived
3 therefrom.

1 7. (currently amended) The method defined in claim 1
2 wherein said input file resides on a network-attached storage and
3 is derived therefrom.

1 8. (original) The method defined in claim 1 wherein
2 said computer-executable process is a sort process.

1 9. (original) The method defined in claim 1 wherein
2 said computer-executable process is a statistical analysis process.

1 10. (currently amended) The method defined in claim 1
2 wherein said computer-executable process is a report-creating
3 process.

1 11. (original) The method defined in claim 1 wherein
2 said computer-executable process includes a database query.

1 12. (currently amended) The method defined in claim
2 [[1]] 2 wherein said one processor is part of a mainframe computer
3 and ~~said plurality of the other~~ processors are processors of at
4 least one other computer.

1 13. (original) The method defined in claim 1 wherein
2 said plurality of processors are all parts of a single
3 multiprocessor.

1 14. (currently amended) The method defined in claim 1
2 wherein the automatic determination of file allocation and logical
3 subdivision of records of said input file into said plurality of

4 partitions in step (a) and the distribution of the descriptions of
5 all of said partitions in step (b) is carried out with at least
6 one processor, and said one processor and said plurality of
7 processors are all parts of a single multiprocessor not including
8 said one processor.

Remarks:

This amendment is submitted in an earnest effort to advance this case to issue without delay.

The claims have been amended to clarify their language and defined the invention with somewhat greater particularity over the art.

The primary difference between the instant invention and the processes disclosed in US 5,603,028 of Kitsuregawa and 5,357,632 of Pian is that these systems rely on a special control process that uses load information to distribute the load between processors that share the load. With the instant invention as defined in the claims there is no such special process. The prior art's load information is not created with the process of the instant invention. Instead, the load sharing is done as a byproduct of the fact that the load-sharing process take parts of the load on a first-come/first-served basis.

A comparison would be to a road intersection where, according to the prior art, there is a traffic light that determines who can go when. The instant invention is more like such an intersection with a four-way stop so that the individual drivers determine who can go and when.

This is a major improvement since in addition to eliminating the control process it also eliminates the need to

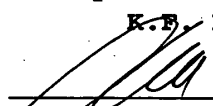
collect and maintain load information, which it is very difficult to do and almost impossible to define so as to anticipate all possible processors that might execute the subtasks.

The amended claims, refer to a distribution of a description of the work to be done. The sharing process can use such a description to distribute the load without a special load process.

For these reasons the instant invention is clearly allowable over the cited art. Notice to that effect is earnestly solicited.

If only minor problems that could be corrected by means of a telephone conference stand in the way of allowance of this case, the examiner is invited to call the undersigned to make the necessary corrections.

Respectfully submitted,
E.B. Ross P.C.


by: Andrew Wilford, 26,597
Attorney for Applicant

02 March 2007
5676 Riverdale Avenue Box 900
Bronx, NY 10471-0900
Cust. No.: 535
Tel: 718 884-6600
Fax: 718 601-1099

Enclosure: None.

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 10/375,893		Filing Date 02/27/2003		☐ 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 (\$)			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), (j), 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 \$	=			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	03/06/2007	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	* 14	Minus ** 20	= 0	X \$25 =	0	OR	X \$ =		
	Independent (37 CFR 1.16(h))	* 1	Minus *** 3	= 0	X \$100 =	0	OR	X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE		
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	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		OR	TOTAL ADD'L FEE		
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>										

Legal Instrument Examiner:
Deborah Nash

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.



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NOTICE OF ALLOWANCE AND FEE(S) DUE

535 7590 04/05/2007
THE FIRM OF KARL F ROSS
5676 RIVERDALE AVENUE
PO BOX 900
RIVERDALE (BRONX), NY 10471-0900

EXAMINER	
WU, YICUN	
ART UNIT	PAPER NUMBER
2165	
DATE MAILED: 04/05/2007	

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/375,893	02/27/2003	Michael Rothschild	22469	6365

TITLE OF INVENTION: LOAD BALANCING WITH SHARED DATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	07/05/2007

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)

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.

535 7590 04/05/2007

THE FIRM OF KARL F ROSS
5676 RIVERDALE AVENUE
PO BOX 900
RIVERDALE (BRONX), NY 10471-0900

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.
10/375,893	02/27/2003	Michael Rothschild	22469	6365

TITLE OF INVENTION: LOAD BALANCING WITH SHARED DATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	07/05/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, YICUN	2165	707-001000

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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/375,893	02/27/2003	Michael Rothschild	22469	6365
535	7590	04/05/2007		
THE FIRM OF KARL F ROSS 5676 RIVERDALE AVENUE PO BOX 900 RIVERDALE (BRONX), NY 10471-0900			EXAMINER WU, YICUN	
			ART UNIT	PAPER NUMBER
			2165	
DATE MAILED: 04/05/2007				

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 955 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 955 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.

Notice of Allowability	Application No.	Applicant(s)	
	10/375,893	ROTHSCHILD, MICHAEL	
	Examiner	Art Unit	
	Yicun Wu	2165	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY 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.

1. ☒ This communication is responsive to amendment filed 3/6/2007.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☐ 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 the:
 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)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. ☐ Notice of References Cited (PTO-892) | 5. ☐ Notice of Informal Patent Application |
| 2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. ☐ Examiner's Amendment/Comment |
| 4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. ☐ Examiner's Statement of Reasons for Allowance |
| | 9. ☐ Other _____ |

Yicun Wu
 Patent Examiner
 Technology Center
 2165

Issue Classification 	Application/Control No. 10/375,893	Applicant(s)/Patent under Reexamination ROTHSCCHILD, MICHAEL
	Examiner Yicun Wu	Art Unit 2165

ISSUE CLASSIFICATION											
ORIGINAL				INTERNATIONAL CLASSIFICATION							
CLASS		SUBCLASS		CLAIMED				NON-CLAIMED			
707		10		G	06	F	17	/30			
CROSS REFERENCES											
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)										
707	104.1										
								Total Claims Allowed: 14			
(Assistant Examiner) (Date)				 (Primary Examiner) 3/27/07 (Date)				O.G. Print Claim(s)		O.G. Print Fig.	
(Legal Instruments Examiner) (Date)								1		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	Final	Original				
1	(1)		31		61		91		121		151		181				
2	2		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		45		75		105		135		165		195				
	16		46		76		106		136		166		196				
	17		47		77		107		137		167		197				
	18		48		78		108		138		168		198				
	19		49		79		109		139		169		199				
	20		50		80		110		140		170		200				
	21		51		81		111		141		171		201				
	22		52		82		112		142		172		202				
	23		53		83		113		143		173		203				
	24		54		84		114		144		174		204				
	25		55		85		115		145		175		205				
	26		56		86		116		146		176		206				
	27		57		87		117		147		177		207				
	28		58		88		118		148		178		208				
	29		59		89		119		149		179		209				
	30		60		90		120		150		180		210				

U.S. Patent and Trademark Office

Part of Paper No. 20070327

Search Notes 		Application/Control No. 10/375,893		Applicant(s)/Patent under Reexamination ROTHSCILD, MICHAEL	
		Examiner Yicun Wu		Art Unit 2165	

SEARCHED			
Class	Subclass	Date	Examiner
707	1-10, 100-104.1 200-206	12/1/2006	YW
718	105	12/1/2006	YW
719	316	12/1/2006	YW
703	23	12/1/2006	YW
705	35	12/1/2006	YW
711	147.3	12/1/2006	YW
711	133	12/1/2006	YW
updated search		3/27/07	Y

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner
707	10, 104.1	3/27/07	Y

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
inventor search (double patenting) uspto uspgpub epo jpo ibmtech derwent	12/1/2006	YW
acm leee citeseer internet Search strategy attached	12/1/2006	YW
consulted Diane Mizrahi	12/1/2006	YW
updated search	3/27/07	Y



UNITED STATES PATENT AND TRADEMARK OFFICE

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 United States Patent and Trademark Office
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 Alexandria, Virginia 22313-1450
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Bib Data Sheet

CONFIRMATION NO. 6365

SERIAL NUMBER 10/375,893	FILING OR 371(c) DATE 02/27/2003 RULE	CLASS 707	GROUP ART UNIT 2165	ATTORNEY DOCKET NO. 22469
APPLICANTS Michael Rothschild, Ramot Hashavim, ISRAEL; ** CONTINUING DATA ***** <i>verified</i> This appln claims benefit of 60/363,853 03/13/2002 ** FOREIGN APPLICATIONS *****				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED** SMALL ENTITY ** ** 04/04/2003				
Foreign Priority claimed ☐ yes ☒ no 35 USC 119 (a-d) conditions ☐ yes ☒ no ☐ Met after met Verified and Acknowledged <i>Allowance</i> Examiner's Signature <i>[Signature]</i> Initials <i>in</i>		STATE OR COUNTRY ISRAEL	SHEETS DRAWING 4	TOTAL CLAIMS 14
				INDEPENDENT CLAIMS 1
ADDRESS 535				
TITLE Load balancing with shared data				
FILING FEE RECEIVED 440	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	

7-5-07
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

C.C.

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 other correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated or corrected below or directed otherwise in Block 1, by (a) specifying a maintenance fee notification.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

535 7590 04/05/2007
THE FIRM OF KARL F ROSS
5676 RIVERDALE AVENUE
PO BOX 900
RIVERDALE (BRONX), NY 10471-0900
07/05/2007 EAYALEW2 00000037 10375893

01 FC:2501 700.00 OP
02 FC:1504 300.00 OP

I hereby certify that I have deposited this correspondence with the US Postal Service as first-class or, if a mailing-label number is given below, as express mail addressed to Comm. of Patents, Box 1450, Alexandria, VA 22313-1450 on **JUL - 3 2007**

EM093306612

E. Rap

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/375,893	02/27/2003	Michael Rothschild	22469	6365

TITLE OF INVENTION: LOAD BALANCING WITH SHARED DATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	07/05/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, YICUN	2165	707-001000

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 ANDREW WILFORD
(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)

CORIGIN LTD

Or-Yehuda, ISRAEL

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 18-2025 (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 _____

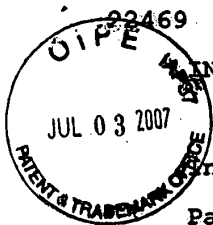
Date 13 June 2007

Typed or printed name ANDREW WILFORD

Registration No. 26,597

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.



IN THE U.S. PATENT AND TRADEMARK OFFICE

Inventor Michael ROTHSCHILD
Patent App. 10/375,893
Filed 27 February 2003 Conf. No. 6365
For LOAD BALANCING WITH SHARED DATA

Art Unit 2165 Examiner Wu, Y
Hon. Commissioner of Patents Allowed: 5 April 2007
Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL DECLARATION

As the below-named inventor, I declare:

That the information given herein is true and that I believe that I am the original, first, and sole inventor of the invention that is described and claimed in the specification and claims of the above-identified application.

That the subject matter of the amendment filed in this application on 6 March 2007 was part of my invention and was invented before the filing of the above-identified application.

That I do not know and do not believe that the invention was ever known or used in the United States of America before my invention thereof or more than one year prior to this application or, if this application is entitled under 35 USC 120 to the filing date of a predecessor application, more than one year prior to the effective date of such predecessor application.

That the invention has not been patented or made the subject of an inventor's certificate issued before the filing date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application or to the predecessor application and has not been abandoned.

That no application for patent or inventor's certificate on this invention has been filed by me or my legal representatives or assigns in any country foreign to the United States of America prior to the present application, or to the predecessor application except as has been set forth in the Oath or Declaration or any Substitute Oath or Declaration filed in the above-identified application;

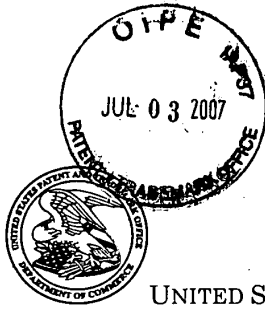
That I hereby acknowledge a duty to disclose information of which I am aware and which is material to the examination of this application; and

That I hereby ratify all transactions in the United States Patent and Trademark Office carried out in the prosecution of this application by my attorneys and agents of record and ratify the appointment of my attorneys, Andrew Wilford, Reg. 26,597 and Jonathan Myers, Reg. 26,963, The Firm of Karl F. Ross, P.C., 5676 Riverdale Avenue, Box 900, Bronx, NY 10471-0900, Tel. (718) 884-6600.

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 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 23 APRIL 2007

M. Rothschild
Michael ROTHSCHILD



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Commissioner for Patents
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Alexandria, VA 22313-1450
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Serial No. 10/375,893
Applicant : Rothschild
Filing Date 02/27/2003
Date Mailed : 06/08/2007

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Notice of Allowance Mailed

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

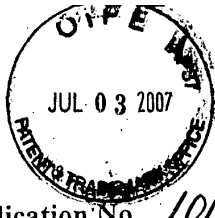
Applicant is given 60 days from the mail date of this Notice within which to correct the informalities indicated below. If the informality pertains to the abstract, specification (including claims) or drawings, the informality must be corrected with an amendment in compliance with 37 CFR 1.121 (or, if the application is a reissue application, 37 CFR 1.173). Such an amendment may be filed after payment of the issue fee if limited to correction of informalities noted herein. See Waiver of 37 CFR 1.312 for Documents Required by the Office of Patent Publication, 1280 Off. Gaz. Patent Office 918 (March 23, 2004). In addition, if the informality is not corrected until after payment of the issue fee, for purposes of 35 U.S.C. 154(b)(1)(iv), "all outstanding requirements" will be considered to have been satisfied when the informality has been corrected. A failure to reply will result in the application being ABANDONED. This period for reply is NOT extendable under 37 CFR 1.136(a).

See attachment.

*A copy of this notice **MUST** be returned with the reply. Please address response to
"Mail Stop Issue Fee, Commissioner for Patents,
P.O. Box 1450, Alexandria, VA 22313-1450".*

Nadine Clark

Office of Patent Publication
Phone: 703-308-9250, ext.144



Application No. 10/375,893 Drawings filed 2/27/03

IDENTIFICATION OF DRAWING DEFICIENCIES

- ☐ There is a hole or the image thereof within the illustration. FIG(s) _____
- ☐ The character of the lines, numbers and letters is poor. FIG(s) _____
- ☐ The illustration is penetrated or traversed by a solid or broken line that is not intended to be part of the drawing, such as a dark line caused by a flaw in the copying process. FIG(s) _____
- ☐ An ink stamp or an image obscures part of the illustration. FIG(s) _____
- ☐ The drawing is marred by black smudges, obliterations, or fax/copier marks. FIG(s) _____
- ☐ Figure numbers are duplicated or missing. FIG(s) _____
- ☒ Numbers, letters, or reference characters in the drawing have been crossed out by hand or are illegibly handwritten. FIG(s) 2
- ☐ The drawing's background shows that the original drawing was made on graph paper or other paper with a pattern or decoration. FIG(s) _____
- ☐ The FIG. number label is placed in a location that causes the drawing to be read upside down. FIG(s) _____
- ☐ Data, a reference number, or part of the drawing is truncated or missing. FIG(s) _____
- ☐ The drawing is continued onto a second page (or more) without proper labeling under 37 CFR 1.81(u)(1). FIG(s) _____
- ☐ The drawing and/or the FIG. label contain(s) foreign language. FIG(s) _____
- ☐ Color drawings are present in this application but the following CFR 1.84 (a) requirements have not been met*:
 - ☐ Petition filed
 - ☐ Petition fee
 - ☐ 3 sets of color drawings
 - ☐ Color drawing paragraph

*If color drawings are not elected, then applicant **must respond** so stating. Also, references to color drawings in the specification, if any, must be amended.

COMMENTS:

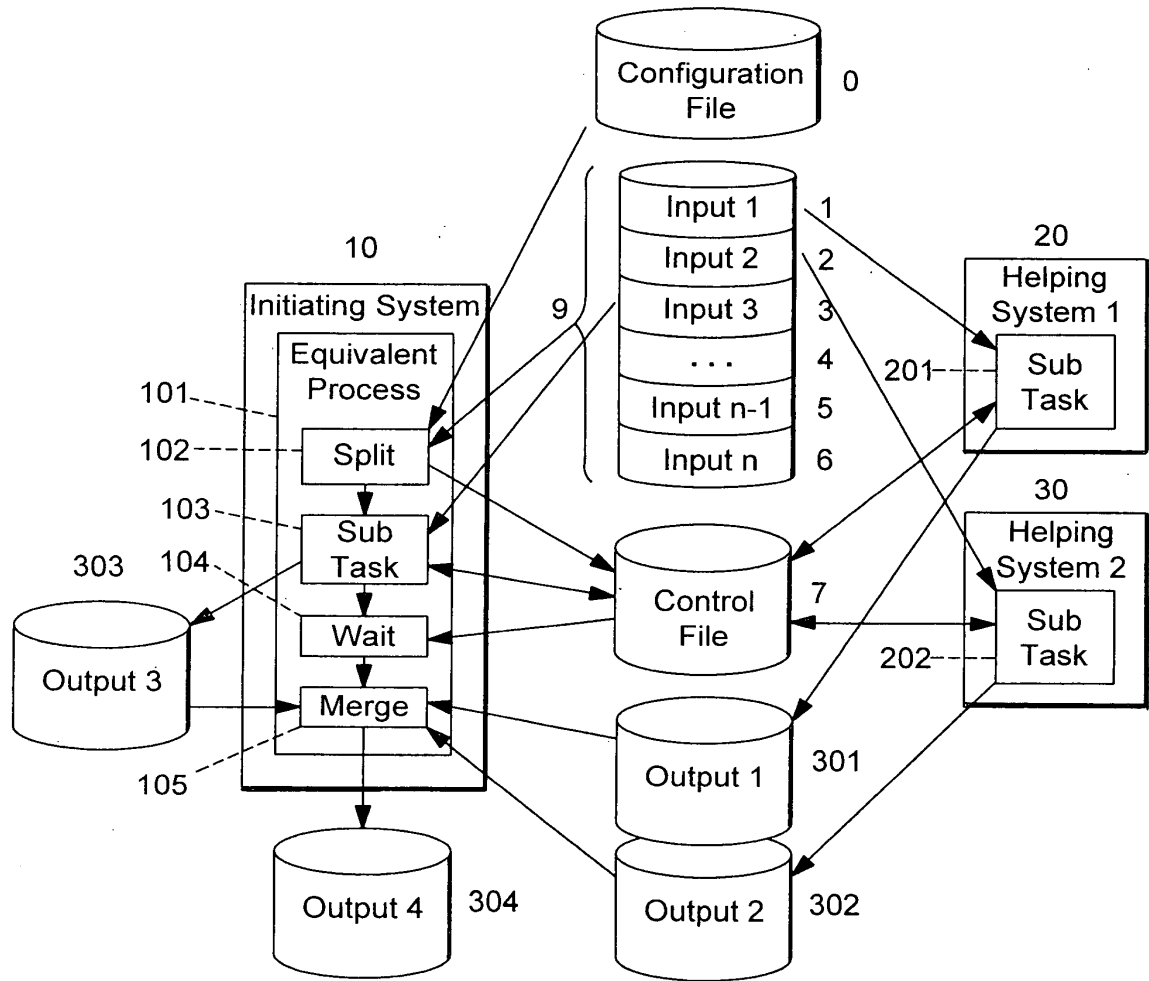


Fig. 1

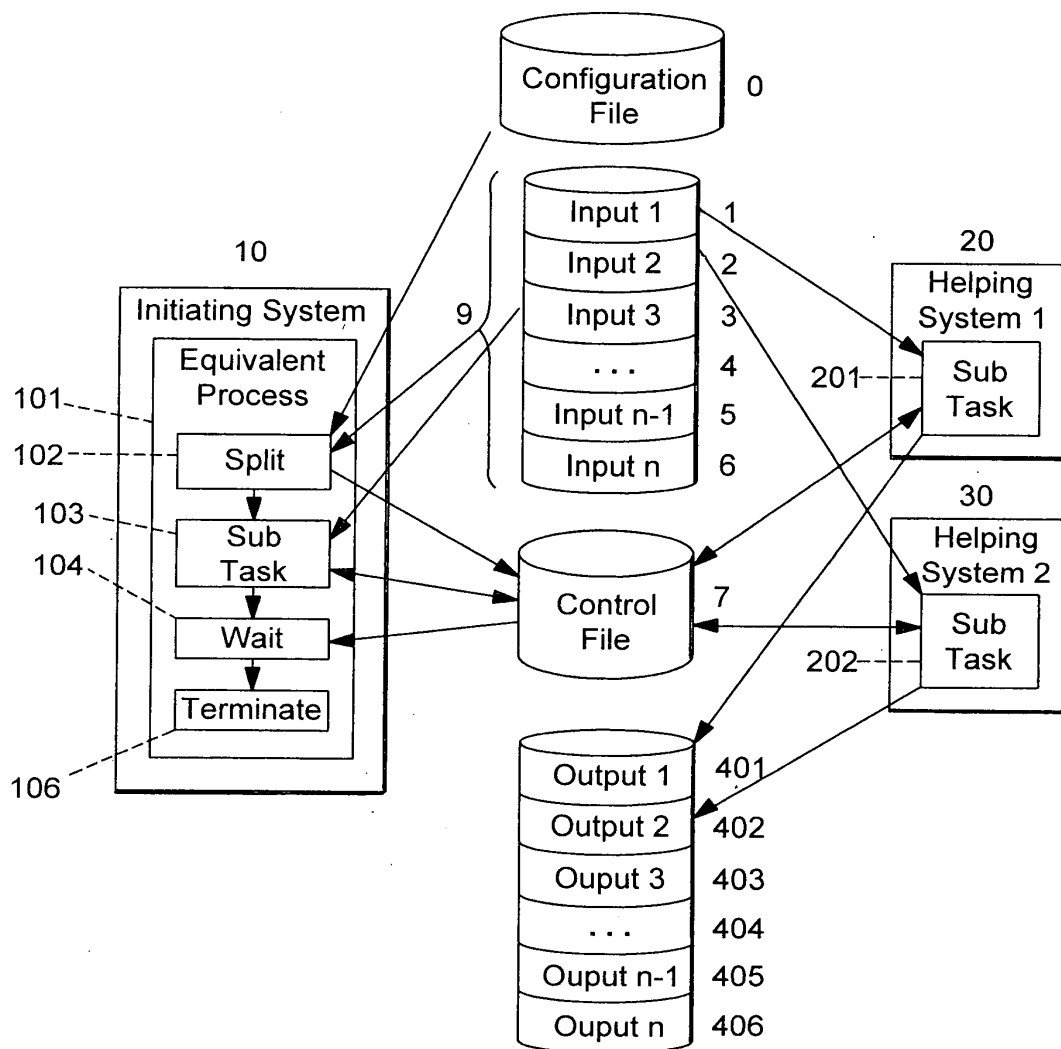


Fig. 2

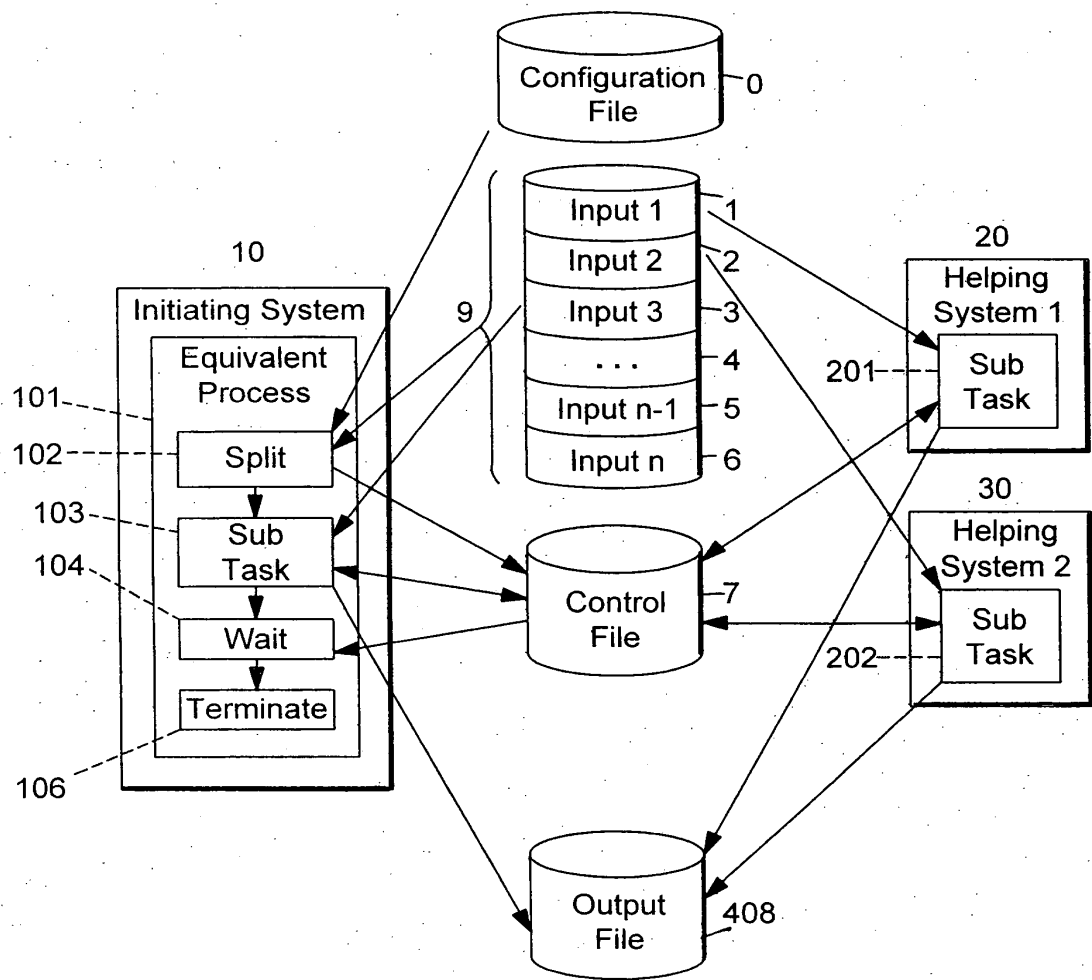


Fig. 3

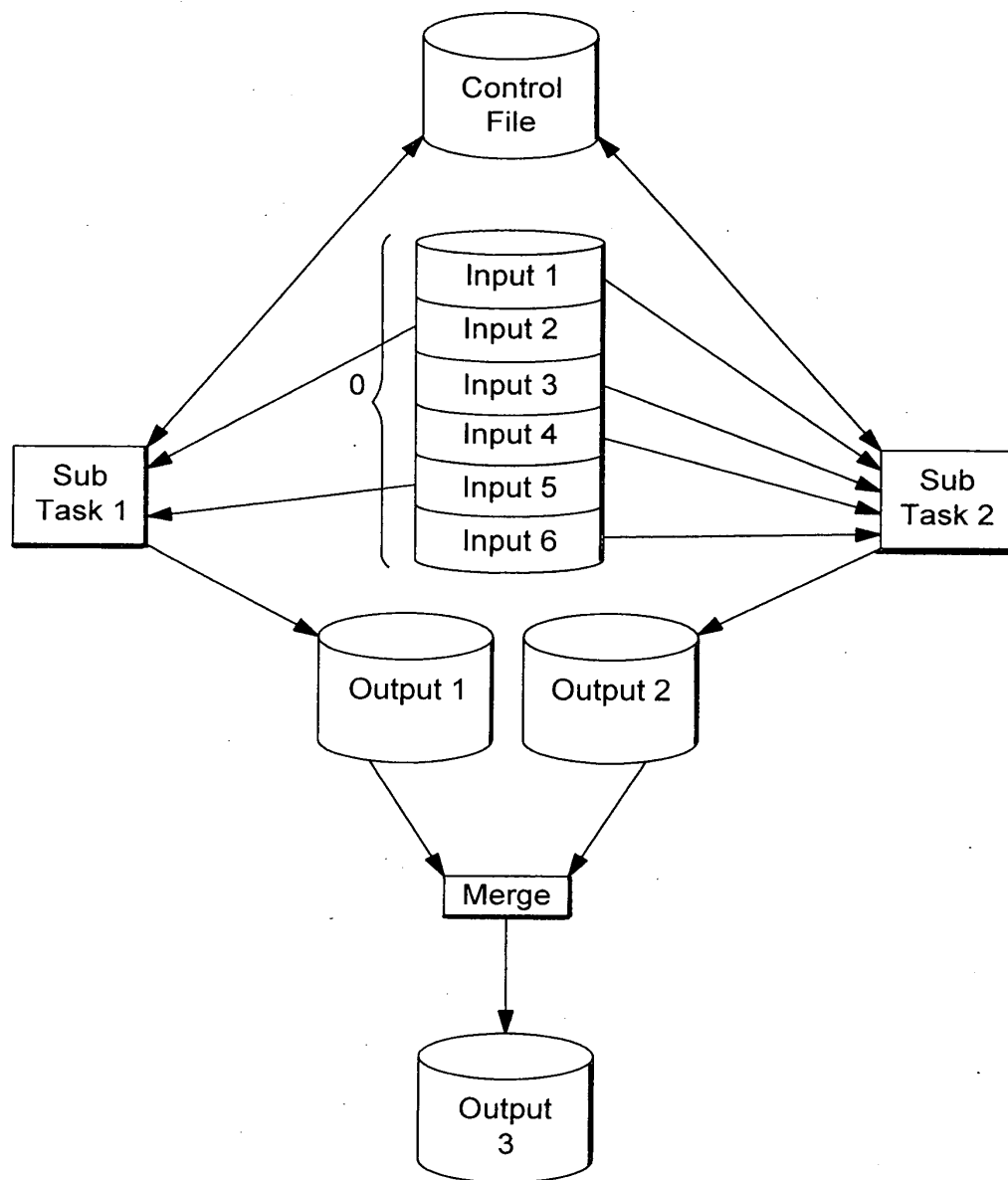


Fig. 4



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Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/375,893	08/14/2007	7257582	22469	6365

535 7590 07/25/2007

K.F. ROSS P.C.
5683 RIVERDALE AVENUE
SUITE 203 BOX 900
BRONX, NY 10471-0900

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 912 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):

Michael Rothschild, Ramot Hashavim, ISRAEL;

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number: 75671

OR

☐ Practitioner(s) named below (If more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☒ The address associated with Customer Number: 75671

OR

☐ Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address:

Otic Investments Limited Liability Company
2711 Centerville Rd, Suite 400
Wilmington, DE 19808

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	6-10-2008
Name	Jeff Kern	Telephone	
Title	Authorized Person for Otic Investments Limited Liability Company		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 3 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.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Otic Investments Limited Liability Company

Application No./Patent No.: 10/375,893 Filed/Issue Date: February 27, 2003

Entitled: LOAD BALANCING WITH SHARED DATA

Otic Investments Limited Liability Company, a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest
(The extent (by percentage) of its ownership interest is _____ %)

in the patent application/patent identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Michael Rothschild To: CORIGIN LTD
The document was recorded in the United States Patent and Trademark Office at
Reel 013985, Frame 0119, or for which a copy thereof is attached.
2. From: CORIGIN LTD. To: Michael Rothschild
The document was recorded in the United States Patent and Trademark Office at
Reel 019527, Frame 0110, or for which a copy thereof is attached.
3. From: Michael Rothschild To: Otic Investments Limited Liability Company
The document was recorded in the United States Patent and Trademark Office at
Reel 021074, Frame 0517, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Michael K. Colby
Signature
Michael K. Colby, Reg. No. 45816

22 May 08
Date

Printed or Typed Name

509-755-7262

Telephone Number

Attorney of Record

Title

This collection of information is required by 37 CFR 3.73(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.

Electronic Acknowledgement Receipt	
EFS ID:	3457286
Application Number:	10375893
International Application Number:	
Confirmation Number:	6365
Title of Invention:	LOAD BALANCING WITH SHARED DATA
First Named Inventor/Applicant Name:	Michael Rothschild
Customer Number:	535
Filer:	William Breen/Danielle moya
Filer Authorized By:	William Breen
Attorney Docket Number:	22469
Receipt Date:	13-JUN-2008
Filing Date:	27-FEB-2003
Time Stamp:	19:31:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA.pdf	223995	no	2
			794ad34c798db4c14a3a1422acbc62014b7a5b6e		

Warnings:

Information:

Total Files Size (in bytes):	223995
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.7,257,582
Confirmation No.6365
Issue Date August 14, 2007
5 Inventorship Michael Rothschild
Assignee Otic Investments Limited Liability Company
Group Art Unit.....2165
Examiner Yicun Wu
10 Attorney's Docket No. OTIC0002
Title: LOAD BALANCING WITH SHARED DATA

NOTIFICATION OF LOSS OF ENTITLEMENT TO SMALL ENTITY STATUS

15 To: Honorable Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

20 From: Lance R. Sadler 509-755-7262; Fax 509-755-7252)
Sadler, Breen, Morasch & Colby, p.s.
422 W. Riverside Avenue, Suite 424
Spokane, WA 99201

Customer No. 75671

25 Due to an assignment of ownership in the above patent, the entity status of the Assignee in
this patent should be changed to Large Entity Status.

Respectfully Submitted,

30 Date: 16 June 08

By: Michael K. Colby
Michael K. Colby
Reg. No. 45,816
Attorney for Applicant
Sadler, Breen, Morasch & Colby, PS
422 W. Riverside Avenue, Suite 424
Spokane, Washington 99201
Telephone: (509) 755-7254
Facsimile: (509) 755-7252

Electronic Acknowledgement Receipt	
EFS ID:	3465025
Application Number:	10375893
International Application Number:	
Confirmation Number:	6365
Title of Invention:	LOAD BALANCING WITH SHARED DATA
First Named Inventor/Applicant Name:	Michael Rothschild
Customer Number:	535
Filer:	William Breen/Danielle Moya
Filer Authorized By:	William Breen
Attorney Docket Number:	22469
Receipt Date:	16-JUN-2008
Filing Date:	27-FEB-2003
Time Stamp:	18:53:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	EntityAssertion.pdf	28437	no	1
			4270553e2414a5166711fce273d104df9c6b072c		

Warnings:

Information:

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.



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/375,893	02/27/2003	Michael Rothschild	22469

535
K.F. ROSS P.C.
5683 RIVERDALE AVENUE
SUITE 203 BOX 900
BRONX, NY 10471-0900

CONFIRMATION NO. 6365
POWER OF ATTORNEY NOTICE



OC000000030605797

Date Mailed: 06/23/2008

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/13/2008.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/s/brahim/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/375,893	02/27/2003	Michael Rothschild	22469

75671
Sadler, Breen, Morasch & Colby, ps
422 W. Riverside Ave, Suite 424
Spokane, WA 99201

CONFIRMATION NO. 6365
POA ACCEPTANCE LETTER



OC000000030605809

Date Mailed: 06/23/2008

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/13/2008.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/s/brahim/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number: 20322

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☒ The address associated with Customer Number: 20322

OR

☐ Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone			Email

Assignee Name and Address:

Otic Investments Limited Liability Company
2711 Centerville Rd, Suite 400
Wilmington, DE 19808

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	12/21/10
Name	Dana Morris	Telephone	
Title	Authorized Person for Otic Investments Limited Liability Company		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 3 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.

DECLARATION REGARDING AUTHORITY TO SIGN
ON BEHALF OF A LEGAL ENTITY
37 C.F.R. 3.73(b)(2)(i)

I, Dana Morris (whose title is supplied below), hereby declare that I am authorized to sign documents on behalf of Otic Investments Limited Liability Company.

Dana Morris

Dana Morris

Authorized Person for Otic Investments Limited Liability Company

12 / 21 / 10

Date

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.

STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Otic Investments Limited Liability CompanyApplication No./Patent No.: 7,257,582Filed/Issue Date: August 14, 2007Titled: LOAD BALANCING WITH SHARED DATAOtic Investments Limited Liability Company, a Limited Liability Company

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;
2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)
- the patent application/patent identified above, by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Michael Rothschild To: Corigin Ltd.

The document was recorded in the United States Patent and Trademark Office at
Reel 013985, Frame 0119, or for which a copy thereof is attached.

2. From: Corigin Ltd. To: Michael Rothschild

The document was recorded in the United States Patent and Trademark Office at
Reel 019527, Frame 0110, or for which a copy thereof is attached.

3. From: Michael Rothschild To: Otic Investments Limited Liability Company

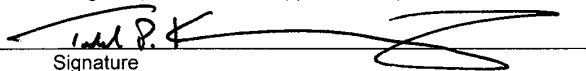
The document was recorded in the United States Patent and Trademark Office at
Reel 021064, Frame 0887, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.


Signature

Todd P. Komaromy

Printed or Typed Name

11/17/11
Date

Attorney for Assignee

Title

This collection of information is required by 37 CFR 3.73(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.

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.
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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.
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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)).
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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.

**CHANGE OF
CORRESPONDENCE ADDRESS
Patent**Address to:
Mail Stop Post Issue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Patent Number	7,257,582
Issue Date	August 14, 2007
Application Number	10/375,893
Filing Date	February 27, 2003
First Named Inventor	Michael Rothschild
Attorney Docket Number	59656.0100

Please change the Correspondence Address for the above-identified patent to:

☒ The address associated with Customer Number:

20322

OR

☐ **Firm or
Individual Name****Address****City****State****ZIP****Country****Telephone****Email**

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

This form will not affect any "fee address" provided for the above-identified patent. To change a "fee address" use the "Fee Address Indication Form" (PTO/SB/47).

I am the:

- ☐ Patentee.
- ☐ 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 64,680

Signature

Typed or
Printed Name Todd P. Komaromy

Date

Telephone 602-382-6321

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.

This collection of information is required by 37 CFR 1.33. 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 3 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: Mail Stop Post Issue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.
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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)).
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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 Acknowledgement Receipt	
EFS ID:	9243681
Application Number:	10375893
International Application Number:	
Confirmation Number:	6365
Title of Invention:	LOAD BALANCING WITH SHARED DATA
First Named Inventor/Applicant Name:	Michael Rothschild
Customer Number:	75671
Filer:	Todd P. Komaromy/Kelsi Rigby
Filer Authorized By:	Todd P. Komaromy
Attorney Docket Number:	OTIC0002
Receipt Date:	17-JAN-2011
Filing Date:	27-FEB-2003
Time Stamp:	14:35:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		596560100POA.PDF	454246 d0cf91213c836ad372e48a48efdcdbd77a058c5f	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Power of Attorney	1	3
	Assignee showing of ownership per 37 CFR 3.73(b).	4	5
	Change of Address	6	7
Warnings:			
Information:			
Total Files Size (in bytes):		454246	
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>			



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/375,893	02/27/2003	Michael Rothschild	59656.0100

CONFIRMATION NO. 6365

POA ACCEPTANCE LETTER



OC000000045617619

20322
SNELL & WILMER L.L.P. (Main)
400 EAST VAN BUREN
ONE ARIZONA CENTER
PHOENIX, AZ 85004-2202

Date Mailed: 01/24/2011

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/17/2011.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/s/ibrahim/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/375,893	02/27/2003	Michael Rothschild	OTIC0002

75671
Sadler, Breen, Morasch & Colby, ps
601 W. Main Ave.
Suite 1300
Spokane, WA 99201

CONFIRMATION NO. 6365
POWER OF ATTORNEY NOTICE



OC000000045617597

Date Mailed: 01/24/2011

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/17/2011.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/s/brahim/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
10/375,893	7257582	2165	9200



Correspondence Address/Fee Address Change

The following fields have been set to Customer Number 86244 on 02/11/2011

- Correspondence Address
- Maintenance Fee Address

The address of record for Customer Number 86244 is:

86244
Snell & Wilmer L.L.P., (Komaromy)
One Arizona Center
400 East Van Buren Street
Phoenix, AZ 85004-2202

PART 1 - ATTORNEY/APPLICANT COPY

page 1 of 1

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.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number: 86636

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☒ The address associated with Customer Number: 86636

OR

☐ Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address:

Otic Investments Limited Liability Company
2711 Centerville Rd, Suite 400
Wilmington, DE 19808

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	<i>Dana Morris</i>	Date	12/12/2011
Name	Dana Morris	Telephone	
Title	Authorized Person for Otic Investments Limited Liability Company		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 3 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.

DECLARATION REGARDING AUTHORITY TO SIGN
ON BEHALF OF A LEGAL ENTITY
37 C.F.R. 3.73(b)(2)(i)

I, Dana Morris (whose title is supplied below), hereby declare that I am authorized to sign documents on behalf of Otic Investments Limited Liability Company.

Dana Morris

Dana Morris

Authorized Person for Otic Investments Limited Liability Company

12 / 21 / 10

Date

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Otic Investments Limited Liability Company

Application No./Patent No.: 7,257,582

Filed/Issue Date: 08/14/2007

Titled:

LOAD BALANCING WITH SHARED DATA

Otic Investments Limited Liability Company

, a Limited Liability Company

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;
2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Rothschild, Michael

To: Corigin Ltd.

The document was recorded in the United States Patent and Trademark Office at
Reel 013985, Frame 0119, or for which a copy thereof is attached.

2. From: Corigin Ltd.

To: Rothschild, Michael

The document was recorded in the United States Patent and Trademark Office at
Reel 019527, Frame 0110, or for which a copy thereof is attached.

3. From: Rothschild, Michael

To: Otic Investments Limited Liability Company

The document was recorded in the United States Patent and Trademark Office at
Reel 021064, Frame 0887, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

- ☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/David S. Lee/

Signature

David S. Lee

Printed or Typed Name

March 1, 2012

Date

Patent Attorney for Applicant

Title

This collection of information is required by 37 CFR 3.73(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.

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 Acknowledgement Receipt	
EFS ID:	12198695
Application Number:	10375893
International Application Number:	
Confirmation Number:	6365
Title of Invention:	LOAD BALANCING WITH SHARED DATA
First Named Inventor/Applicant Name:	Michael Rothschild
Customer Number:	86244
Filer:	David S. Lee/Kristin Huber
Filer Authorized By:	David S. Lee
Attorney Docket Number:	59656.0100
Receipt Date:	01-MAR-2012
Filing Date:	27-FEB-2003
Time Stamp:	10:31:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	0988-Otic_POA.pdf	90926	no	2
			ac013ad8241c2f17fd6cd0a66f5406b8d325a241		
Warnings:					
Information:					

2	Assignee showing of ownership per 37 CFR 3.73(b).	2152-373b.pdf	432175 69ef00b1bf38270825e7907561b0e9a946e92a43	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			523101		
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>					



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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/375,893	02/27/2003	Michael Rothschild	59656.0100

86636
BRUNDIDGE & STANGER, P.C.
2318 MILL ROAD, SUITE 1020
ALEXANDRIA, VA 22314

CONFIRMATION NO. 6365
POA ACCEPTANCE LETTER



OC000000052957918

Date Mailed: 03/07/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/01/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/vvan/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/375,893	02/27/2003	Michael Rothschild	59656.0100

CONFIRMATION NO. 6365

POWER OF ATTORNEY NOTICE



OC000000052957917

86244
Snell & Wilmer L.L.P., (Komaromy)
One Arizona Center
400 East Van Buren Street
Phoenix, AZ 85004-2202

Date Mailed: 03/07/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/01/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/vvan/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101