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EXPRESS MAIL LABEL NO. EE729018642US

Case Docket No 78-00

In re application of	PROMENIX, INC.
Serial No.:	Not Yet Assigned
Inventors:	Vincent R. Cyr, Kenneth Fritz
Filed:	Herewith
For:	**APPARATUS AND SYSTEMS FOR**

MEASURING, MONITORING, TRACKING AND SIMULATING ENTERPRISE COMMUNICATIONS AND PROCESSES

THE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C.   20231

Sir:

Transmitted herewith is an application for the above identified invention.

IxI Six sheets of drawings (in triplicate).

IxI Two declarations and powers of attorney.

IxI Verified statements to establish small entity status under 37 CFR 1.9(f)
and 1.27(c) are submitted herewith.

IxI Two Assignments.

IxI The filing fee has been calculated as shown below:

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							$355.00
TOTAL*	42	MINUS**	20	=22	X $9.00	=	$198
INDEP.*	7	MINUS**	3	=4	X $40.00	=	$160
TOTAL							**$713.00**

Ix I A check for $713.00 is enclosed.

IxI A triplicate copy of this sheet is enclosed.

Ix I The Commissioner is hereby authorized to charge payment of any other fees associated with this communication
or credit any overpayment to Deposit Account No. 500724. This sheet is being forwarded in triplicate.

IxI A return postcard to be stamped by the PTO.

Respectfully submitted,

Date: December 14, 2000

Joseph E. Chovanes
Registration No. 33,481
2047 Locust Street
Philadelphia, PA 19103
(215) 564-6363

APPARATUS AND SYSTEMS FOR MEASURING, MONITORING, TRACKING AND SIMULATING ENTERPRISE COMMUNICATIONS AND PROCESSES

The present invention relates to apparatus and systems for measuring, monitoring, tracking and simulating enterprise communications and processes. More particularly, the present invention relates to computer-based apparatus and systems for measuring, monitoring, tracking and simulating enterprise communications and processes in an asynchronous messaging environment.

BACKGROUND OF THE INVENTION

The activities of a business or enterprise can be grouped into processes. Processes are business operations that are separated as desired and usually occur across business units. For example, the process of taking orders and turning those orders into revenue may be known as Order to Cash. The processes are comprised of sub-processes. For example, Order to Cash may be broken down into sub-processes such as Receive Order Inquiry, Provide Customer Quotation, Create Customer Outline Agreement, Create Sales Order, Schedule Production, Manufacture Product, Ship Product and Invoice Customer. Each sub-process may in turn be broken down into discrete activities such as providing customer number, entering that customer number, establishing pricing, determining a shipping date, etc.

The processes, sub-processes and activities operate, in part, by communicating information. For example, users may communicate through email. As another example, applications may communicate amongst themselves through electronic data interchange ("EDI") and other similar services. Communication occurs horizontally, that is, among a

process, sub-process and activities, as well as vertically, that is, between processes, sub-processes and activities.

Whether communications occur horizontally or vertically, among applications or users, communications are increasingly asynchronous or message based. That is, enterprise communications were formerly primarily synchronous, or connection oriented, in which a connection is established with prior coordination between communication end points with data then being transmitted over the connection. Enterprise communications are now increasingly asynchronous, or connectionless, transmitting data without prior coordination between communication end points, such as through "event based" communications which use messages to move data instead of large files.

Asynchronous or message based communications permit loosely coupled connections among and between systems because the end points do not have to be prepared to receive the data when the message is transmitted. Loosely coupled connections permit more flexibility in assembling processes. Flexibility in assembling processes is desirable in order to permit quick reaction to changing business conditions: if a particular sub-process or activity becomes unusable, the process can be reassembled with a new sub-process or activity. For example, if a Manufacture Product sub-process in the Order to Cash process at Widget Co. enterprise has a specific factory identified to manufacture the product and that factory has a fire or other disaster, making it unusable, Widget Co. will need to substitute a new factory. The ripple effect of that substitution among all of Widget Co.'s processes will change any number of parameters. A loosely coupled asynchronous connection among Widget Co.'s processes provides rapid substitution of the new factory for the old because the end points of communication to the

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new factory do not have to be predetermined before communications begin with the new factory. Thus, the flexibility of the asynchronous message based communication has permitted quick response to changing business conditions.

Despite this flexibility, asynchronous or message based communications are problematic because of their loosely coupled nature. At any given time, precise information on the progress of the processes is difficult to obtain -- messages may be in transit and not instantly locatable. For example, if a customer calls for the status of an order, an enterprise customer service representative may be able to determine nothing more than the fact that the order has been received and that the scheduled ship date is X. There is often no ability to drill down into the information levels and review the status in more granularity, such as the location of the good, the manufacturing status, etc., because the information required to review that status is in transit and unable to be reviewed.

Of course, if the enterprise lacks the ability to access status information, business partners of the enterprise will similarly lack that ability. Thus, asynchronous communications may well increase inefficiency among business partners as well.

The difficulty in reporting caused by message based architecture also makes it difficult for the enterprise to measure the efficiency of its processes and their sub-process. Asynchronous messaging, with its indeterminate transmission of information, means a company may not be able to easily measure the interval between each sub-process, e.g. the time between Scheduling Production and the Manufacturing of a Product, and so easily measure the efficiency of their operations.

Finally, asynchronous messaging may provide an enterprise with an ability to model and simulate processes. That is, since information flows can be readily estimated through

enterprises with asynchronous messaging, and processes can be easily modeled from those flows, asynchronous messaging modeling provides the potential to model and simulate processes. That potential is not realized with present technology, however. Moreover, since as described above, enterprises lack information on the processes they have implemented, the enterprises are handicapped in their ability to modify those processes or plan new processes. A modeling and simulation tool, demonstrating processes, sub-processes and their activity or granular detail level would be extremely helpful, and would give the enterprise an opportunity to assemble, test, adjust, and simulate processes and their details.

Accordingly, it is an object of the present invention to provide a tool for simulating message based architectures.

It is a further object of the present invention to provide monitoring capabilities for enterprise processes.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a view of a process.

Figure 2 shows a view of a process of a preferred embodiment.

Figure 3 shows a screen of a preferred embodiment.

Figure 4 shows a screen of a preferred embodiment.

Figure 5 shows a screen of a preferred embodiment.

Figure 6 shows a partial view of a preferred embodiment.

Figure 7 shows a partial view of a preferred embodiment.

Figure 8 shows a partial view of a preferred embodiment.

Figure 9 shows a partial view of a preferred embodiment.

Figure 10 shows a partial view of a preferred embodiment.

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