

Real-Time Enterprises' Financial Information Integration Based on the Internet Environment

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Abstract

With the development of IT, Internet has been applied to every field of enterprises' financial information management. The computer network and the database technologies are the basis of the achievement of the RTE. The RTE integrates the financial information of enterprise and utterly reconstruct the business process. Moreover, it converts the key part of financial process from measurement to management and provides accurate data for executives' decisions of the enterprise.

Keywords: Internet Environment, Real-Time Enterprise, Financial Information Integration

1. Introduction

A Real-Time Enterprise (RTE) needs to be a highly integrated enterprise to make the dream of "real time" a reality. On the whole, it contains four levels of integration: hardware integration, business and application integration, enterprise interior integration and enterprise exterior integration. To gradually realize and carry out a higher level of enterprise integration, it is essential to make the business process of the enterprise be fairly flexible in the network environment and under the dynamically changing demands of the market. That is to say, the RTE can be able to adjust its business process in real time according to the change of situation.

When the business process reengineering, it's important to adjust the existing information systems, integrate the raw data that is accumulated and separated mostly, fully integrate the multi-application and the multi-function, so that achieving a high degree of integration at different levels is possible. For 70% of the integrated information in an enterprise is financial information, the integration of financial information are apparently more important.

In recent years, the theoretical fields have paid attentions on the enterprises' financial information management in the Internet environment and researches have been done. However, the related deep research is still few. At present, the research of the construction of RTE, the integration of resource internal and external, and the integration of financial information in the Internet environment are all in primary stage in our country. And this paper will research the enterprises' financial information reintegration, and put forward an integration model from a new angle.

2. The concept of RTE

The Gartner Group Enterprise in America defines the RTE as a kind of enterprises that by using the latest information can actively avoid the delay in management and execute of the crucial business process so that the enterprises can compete with others. The concept of RTE is borrowed from the concept of real-time operation and time-sharing operation in computer field. It means that the enterprises can respond to the clients' real-time request dynamically and providing productions or service.

In short, RTE is not a kind of technology, it is a kind of business ability, which can solve the delay in enterprises' crucial business process, and just by which the enterprises can improve their efficiency and realize the business value. RTE is a sort of enterprises that take fast response as the management idea, which integrates the financial information of enterprise, and use reasonable database management system based on the network technology, database warehouse technology and a series of other modern computer technologies.

In the Internet environment, the management and the personnel in enterprises can be aware of the competition

situation of the enterprises at any time, and can know the changing of logistics, capital flow, information flow, manpower resource and others in the enterprises. They can react to these changes as soon as possible. Also, they can make full use of enterprises' resource, adjust business process in time, and even adjust the strategy of the enterprises. And in key operation process, they can shorten the period of business circle and avoid the time lag in management and promote the competition advantage of the enterprises.

3. The character of the RTE's financial information

The character of an enterprise determines the character of the enterprise's financial information. No matter the traditional enterprise or the RTE, their financial information have some basic characters, which are born with the financial information, such as the opposition and the unification of reliability and relativity; evident, dynamicity; interiority, materiality, confidentiality, standardization and etc. Apart from these traditional characters, the RTE's financial information also have some new characters as below.

3.1 The real-time

Real-time is a main character that distinguishes real-time enterprises' finance from traditional enterprises' finance. The accounting measurement of RTE will make account work from calculate afterwards to real time, turns static calculating to dynamic calculating, and makes financial management realize online management, which will easily output every kind of dynamic information that reflects managing and financing status. The financial data can be processed in time. Once businesses occurred and been confirmed, they will be recorded in corresponded servers and be put into financial information systems immediately, and then be checked. The business information can be transmitted into financial information automatically in real time.

3.2 Integration

The integration of information is the foundation of the RTEs. In generally, the integration of information is the integration on four levels as mentioned in the introduction part. In narrow sense, it means that any data inputted into systems by one of the personnel in a department will be stored in appointed database immediately and be automatically appeared in all relative notes and reports, and won't need a second department or any other personnel to input it again anymore.

Since the management of a RTE will turn into the management that focuses on knowledge and information, it requires highly integration of enterprises' information and highly sharing of financial information resource. The development of network information technology will make this highly integration possible.

Meanwhile, the Internet environment makes finance and business consistent, and utterly achieves the principle of "one source, all shares". And through this integrated management of network information, enterprises can integrate their financial resource, and increase their competition advantage

3.3 The combination of universal and complication

When the RTEs are in the Internet environment, the users focus more on the value of intangible assets and future information. In the Internet environment, the enterprises' information of management and administration is all run by an electrical way, and the object and the process of enterprises' management are all digitized, so that management becomes a calculable activity. As a tool to reflect enterprises' activities, finance can reflect some uncountable information in traditional finance digitally, so as to reflect the enterprises' relative activities from all angles.

The area that RTEs' financial information covers include the supply chain which they're in and all the currency and non-currency information that the relative systems can offer. The timeline that information covers includes historical, current and future information. That will ensure the information used for reference and prediction. Each department in enterprises will provide all the information through its computer client windows to data warehouse. Then the information will be processed into the information that is needed by the users'. The complication of computer systems, the complication of information processing methods and all-around of financial information all result in the complication of financial information.

3.4 The unification of unique and sharing

In the Internet environment, the financial information will be opened and published more than before. A great deal of data is collected directly through enterprises' relative systems inside and outside through network. Moreover each department internal and external the enterprises will get the information from the web according to authorization.

As all of the RTEs' information is processed by the enterprises' data warehouse, the computers carry out the management process from accounting vouchers to financial reports. When a deal happens, the business data can be downloaded into financial systems directly. And financial information disposing process can be accomplished by itself according to operation order. The integration of information makes sharing of information widely possible.

The clients' get information is not passive but active. Clients can select financial information according to their own specific needs. And the computers deal with that select information automatically. The sharing of information reduces the information time-lag in main business process to the greatest extent and improves the efficiency of enterprises' business process.

Yet not all departments have the access to financial information. The financial information can also be divided into different levels of confidentiality. Some information can be shared commonly; some are only available to higher level managers of the enterprise. The RTEs' financial information is shareable, that only means RTEs is able to make this happen. But in practical application, the sharing is limited in a certain area. The unique of information cannot be neglected. The new features and new technology of RTEs determine that RTEs' financial information must have new characters to meet the challenge of the internal and external transformation of the enterprises. In order to meet the requirements of these new features, need integrate the enterprises' financial information all-around.

4. RTEs' financial information integration model in Internet environment

4.1 Set up of RTEs' financial information integration model in the Internet environment

The purpose of integrating RTEs' financial information in the Internet environment is to provide the real-time expense information, marketing information, product cost information, cash flow information, and etc. to financial information users. so as further to provide the real-time profit statement, balance sheet, cash flow table and other all kinds of financial information for enterprises' leaders to make decisions correctly and in time in the changing market economy.

In the Internet environment, integrating the RTEs' financial information must ensure that the information process synchronizes with the business process. And this includes the real-time of collecting data, the real-time of maintaining data and the real-time of information reporting. The real-time property of collecting data is that we must record and deal with relative data in accordance with business disposing rules and information disposing rules when business activities occur; the real-time property of maintaining data is that we can change relative system related reference data in time after enterprise management situation and business activities change; the real-time property of reporting information is that we can provide the information users with the latest enterprises' management status and administration information at any time with the support of data collecting and processing .

The RTEs' financial information integrating model in the Internet environment is shown in Figure 1.

Thus in the Internet environment, the RTEs' financial information integrating should adopt a variety of terminal equipments to collect voice, image, figure, file and etc. directly on the business level, so that all the needs have direct corresponding terminals. The collected information needs to integrate with Client Relation Management (CRM), Decision Sustaining System (DSS) and some other appliance systems according to business flow. From the depth of information using and managing, the original production plan and OLTP needed to be extended to cover OA, non-paper disposing downwards, to be extended to OLAP upwards, to be extended broadly to designing and engineering field. And all the software functions have corresponding hardware operation platform and network communications platform.

4.2 The illustration of RTEs' financial information integration model in the Internet environment

The web-based integration of the RTEs' financial information is business process-oriented integration. Business processing rules will be embedded into systems. Therefore, real-time information processing models are badly needed. That is to say, financial data collection, storage, process and transmission are all required to be embedded into business process systems.

EDI automatically transfers business information into standard format between different business organizations' computer systems, relatively connects each business process such as ordering, production, transportation, sales, and balance, accomplishes wholly digital and automatic in business process including transportation, banking, tax departments, so that we can collect financial and non-financial information in real time, and execute to process, and control rules when businesses occur.

The RTEs' financial information integration model in the Internet environment has three basic bases: database, method-base and model-base. These three bases integrate data by the middle real-time information processor to achieve the aim of processing data in real time.

In this model, business event database is used to record basic business information in economic activities. When business events occur, all the original data is properly processed into standard coded source-data which records the individual character and property of business events, then is integrated into a business event data warehouse, but not some low coupled systems in which data is dispersed and stored repeated. Business event data warehouse not only records business affairs in compliance with accounting proceeding definition, but also records all the business events

that managers want to plan, control and evaluate, and stores all kinds of detailed information of business activities. Any authorized client can define and obtain useful information through data that stored in business event data warehouse. While, classification, gathering, and balancing measurement disposals are all belong to report inquiring output process.

The model-base is used to store all kinds of models that clients question related, such as special models, general models and temporary models that established when problems are being figured out, such as management control model, financing decision-making model, investment decision-making model, enterprise's economic value evaluation model, cost analyzing model, profit analyzing model and etc. and some math models used in decision-making of science and technology, economy, and society development

The method-base is used to store information sampling, processing and operational control rules, and different rules for the confirmation and measurement (including accounting rules and non-accounting rules, accounting rules are one of the methods in rules). The method-base also contains some basic math method, statistic method, economy math method, predicting method, evaluating method, optimizing method, simulation method, decision-making method, invest-output method and etc.

So the accomplishment of network technology and database technology can be used to achieve real-time financial information and non-financial information collection, centralized storage, processing in-time, completely sharing and random visiting. The focus is integration. That is, the integration of business processing and information processing, the integration of financial information and non-financial information, and the integration of measurement and management.

5. Conclusion

Once RTEs' financial information integration in the Internet environment is achieved, can offer data and information to managers in all levels with fastest speed, help to analyze, evaluate and decide enterprises' financial situation and management situation, innovating financial methods, analyzing financial data in a deeper level, can enhance the quality of financial decision-making such as investing and financing, can build the controlling ability and resisting risks ability. The essence of the RTEs' apperceiving and responding in time requires the integration of financial information to be controlled at real time.

The financial real-time controlling means that financial personnel use modernized technologies to compare and analyze the enterprises' management activities process in real time, and interfere in enterprises' management by directing, adjusting, restricting, promoting and etc. to improve enterprises' profit and finally achieve the ultimate goal of value adding. The real-time financial control problem awaits further study in the future.

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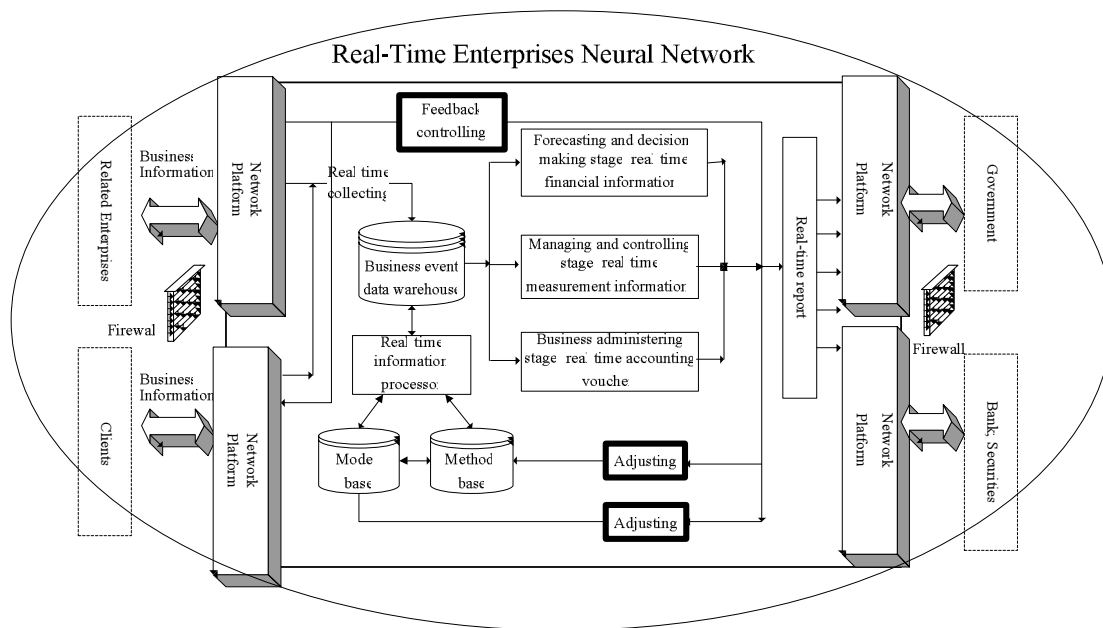


Figure 1. the RTEs' financial information integrating model in the Internet environment