

BUSINESS INTELLIGENT AGENTS FOR ENTERPRISE APPLICATION

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Abstract: : *Fierce competition in a market increasingly crowded and frequent changes in consumer requirements are the main forces that will cause companies to change their current organization and management. One solution is to move to open architectures and virtual type, which requires addressing business methods and technologies using distributed multi-agent systems. Intelligent agents are one of the most important areas of artificial intelligence that deals with the development of hardware and software systems able to reason, learn to recognize natural language, speak, make decisions, to recognize objects in the working environment etc. Thus in this paper, we presented some aspects of smart business, intelligent agents, intelligent systems, intelligent systems models, and I especially emphasized their role in managing business processes, which have become highly complex systems that are in a permanent change to meet the requirements of timely decision making. The purpose of this paper is to prove that there is no business without using the integration Business Process Management, Web Services and intelligent agents.*

JEL classification: classification: M15

Key words: business intelligence, intelligent agents, intelligent systems, management, enterprise, web services

1. INTRODUCTION

In recent years there have been major changes in the business world developed by most businesses and corporations worldwide. In the current globalization of business, the organizational environment of a company must adapt to the competitive market. Growth of a firm depends crucially on its ability to update and integrate, customize and expand computer applications in a flexible and fast manner, giving users instant access to all interactive and consistent model or data. The increasingly high needs for assuring flexibility, rapid response to actual market conditions, fierce competition locally or globally, have led companies to use modern information technology to transform and modernize the organization and management methods of the business. In this case, the development of Internet and web services has an impact on any enterprise, can influence the competitive system by putting in new products or services and expanding markets. This thing made it impossible to use self applications, thus passing their integration in complex systems to meet the timely decision making.

Enterprise Application Integration has been the answer for interconnecting applications in a company or a company network from the Internet.

Highly complex business environment requires managing business processes with the ability to adapt to changes and to collaborate in activities, e-Business becoming a priority to implement an integrated way of working in business, in order to adapt quickly to the global economy.

It is known that in any enterprise, the time factor was and remains a key element, thus reducing development time, production life-cycle or making decisions is a key role. For this purpose was called for businesses to use Web services management, developing business and intelligent systems based on intelligent agents that can transform information systems business model for such decisions are best made in a timely real.

Any transaction from an agent (human or legal entity) to another in a legal environment is through business. We live in a world ruled by money and economy. The survival of an individual or an entity depends on how well they know their environment and how well they can adapt or can control what surrounds them. For this they should show intelligence, have relevant knowledge and apply them. Business Intelligence incorporates these three characteristics. Expertise in Business Intelligence brings to any entity, human or legal, significant increase chances of survival and success.

2. OBJECTIVES THE CONCEPT OF BUSINESS INTELLIGENT (BI)

Although the concept of business intelligence exists since the early '70s¹, the term itself was coined by the Gartner Group in the mid 90s, when they started the development of various definitions. Basically, BI has replaced terms such as decision support and management information systems.

Business intelligence is a vague concept and can represent the use of high-class software for business applications². According to IBM³ business intelligence means using values of type data to make better decisions. It's about access, analysis and discovery of new opportunities. According to the Romanian Association for Economic Intelligence, business intelligence is all research activities, collection, processing and dissemination of useful economic information in order to gain competitive advantages by exploiting in a defensive and / or offensive manner.

Definition that is most representative for BI is that BI is a generic concept which brings together under one umbrella, business tools and computer science, used to transform data into information, information in decisions and decisions in actions.

The BI applications that support decisions facilitate many activities, including:

- decision support systems,
- reports and queries,
- online analytical processing of data, multidimensional analysis (OLAP - On Line analytics Processing),
- geospatial analysis,

¹ Zaman, M., *Business Intelligence: Its Ins and Outs*, www.technologyevaluation.com, January 10, 2005

² Bernstein, A. and co., *Business Intelligence: The Next Frontier for Information Systems Research?*, www.technologyevaluation.com.

³ Almeida, M. and co., *Getting Started with Data Warehouse, and Business Intelligence*, IBM Corporation, 1999.

- statistical analysis,
- forecasting,
- knowledge management,
- sorting the data to identify patterns and relationships (data mining) etc.

The current BI type solutions can be considered as an important stage in integrating business and computer science, achieving a symbiosis of the latest IT technologies (artificial intelligence, expert systems, etc..) and those in management (Business Process Reengineering BPM - Business Process Management, Business Performance Management etc.).

Business Intelligence (BI) has evolved over the years and its importance in business is well established.

The usefulness of BI in a company is required for a company that wants a restructuring fund, with minimum risk and maximum efficiency in order to ensure survival or the achievement of competitive advantages found in a constantly changing environment.

Business intelligence is an iterative process:

- it starts from the operational environment;
- data are extracted from this medium and stored in data warehouses (the data warehouse is in the form of a central data container, separate from operational data);
- Decision Support systems are used by the decider to extract data from the data warehouse;
- holding this information, a decider can create action plans;
- this change in the operational information leads to a new iteration of the cycle business intelligence.

This cycle is shown in Fig. 1⁴.

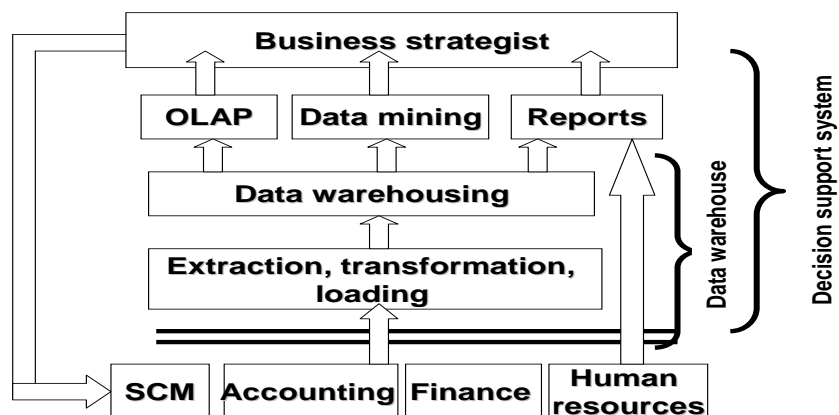


Fig. 1. BI Cycle

⁴ Giovinazzo, W., A., Internet - Enabled Business Intelligence, Prentice Hall PTR, 2002. Hyperion Solutions Corporation, Transforming Business Intelligence Into Business Performance Management: Competitive Advantage in the Information Economy, <http://www.technologyevaluation.com>, November 12, 2005, Vol.1, No.7.

In the first approach, BI mainly aimed at the needs of the top management of multinational corporations. But with prices democratization of BI solutions and hardware and software platforms, the reach of these systems has increased, both in terms of organizations eligible for such systems and the management and operational levels that can lower utility and accessibility of existing BI solutions.

Basically, both the fields of business, as well as departments that could benefit from such solutions and platforms, the possibilities are endless. And by the surplus value as a BI becomes even greater as the volume of data processed is greater.

Monitoring financial results, sales, inventory, receipts and expenditure are likely to be among the first areas that we think to apply BI, but reality shows us that the possible areas in which rapid and flexible analysis capabilities are needed are actually much broader.

An essential feature of BI systems is their ability to simultaneously connect to multiple and consistent sources of data, which may be different operating systems (accounting, ERP, CRM, SCM, MRP, etc..) market research results, activity logs and access, or anything that may be relevant to the recipient organization, usually structured information, but in formats ranging from text files (CSV) to structures stored in mainframe machines.

A successful implementation of BI solutions

For a successful implementation of BI solutions will be pursued the following objectives:

- ✓ Making a new approach to information infrastructure and functional (a virtual structure) of a company - from its address as a business. It starts with defining the primary data and reports focus on getting out, according to business requirements. The classical phase of the computerization of the company. If we stop at this level, the result will be achieved within the existing automation activities, and this is not BI.
- ✓ Shift from task-oriented thinking to a process-oriented (a grouping of resources and activities done with the aim of achieving value for the customer). Process management can be, in this case, an important component of BI type solution.
- ✓ Providing a comprehensive approach (end-to-end) business processes, facilitating a strong horizontal integration processes and, thus, decisively influence the results of its implementation. A fragmented approach is not a BI solution.
- ✓ Providing information needed for decision support at operational management level, in that they achieved an optimal management of resources (financial, human, material, etc..) project level, demand / order customer, organizational unit (with or without legal status) or individual level. It facilitates the achievement of a substantive restructuring of the business (the Business Process Reengineering).
- ✓ Providing decision support software required for the strategic management. Processes are provided: measuring and monitoring performance in real time on line, making scenarios "what happens if?" Required for forecasting and development.
- ✓ Transition from classical measurement-based performance evaluation tangible to intangible assets. This shift is necessary, first of all, because measuring only financial criteria is an unbalanced and sometimes late.

Secondly, it should be kept in mind that the present market value of a company is given a rate of over 70% of intangible assets. This shift is based, mainly, on the use of OLAP technology and new methods of assessment (and management) BSC (Balanced Score Card), Six Sigma, EVA (Economic Value Added) etc. Using Six Sigma principles (reduce defects to 3.4 / 1 million products and increase the quality) and in other fields than that of process manufacturing, for example in the services sector, business has led to remarkable results. It is based on a combination of methodologies in business, statistics and engineering processes to improve performance, decrease variation and to maintain a consistent output quality processes. This leads to defect reduction and to the improvement of profit, product quality and customer satisfaction.

3. BI TRENDS

A very important aspect of business intelligence is the performance of these systems in a context of increased use. It seems that the future will make these systems to the inability to provide promised benefits.

Increasingly more companies are beginning to use business intelligence systems, making them increasingly better. In such circumstances, a company could never hold a competitive advantage by running the same activities that other companies run.

Business intelligence is also exclusively focused on providing understanding of the data and does not provide the necessary tools to implement operational changes.

According to the study sap.info, the solution to the limitations of business intelligence, business model lies in Corporate Performance Management (CPM), a model that *combines business intelligence with business performance management*. This new business model enables companies to align with business goals and processes for conducting daily business activities. Only a few of the benefits of this new business model [technology] a much faster response to changing conditions and market opportunities, strong customer orientation, increased operational efficiency, better alignment of budget and planning business strategies, increased income from investments in information technologies.

In addition to corporate performance management, another trend in business intelligence is *analytical forecasting*⁵ – used to determine possible future outcomes of an event or the probability of occurrence of a given situation. Analytics forecast is used for automated analysis of huge amounts of data with different variables, this technique include decision trees, market basket analysis, neural networks, genetic algorithms, text mining etc.

Business intelligence is also a story without end, an area applicable to the audit, in risk management, diplomacy and lobbying. I presented some of the trends in this area. And other trends are just emerging. This would be the merger situation between business intelligence and artificial intelligence fusion that would lead to the birth of a new concept, business artificial intelligence (ABI).

⁵ Zaman, Mukhles *Predictive Analytics: the Future of Business Intelligence*, www.technologyevaluation.com, November 8, 2005.

In such circumstances we must admit that these technologies are at the beginning of a long journey in a world where the key to success lies in its ability to make better decisions in a much shorter time than the competition. Moreover, the life of a company depends increasingly more on such decisions, which makes it impossible to deny the benefit of business intelligence.

4. INTELLIGENT AGENTS

Agents and multiagent systems are a new way of analysis, modeling and implementing complex systems. The vision based on agents offers today a wide range of tools, techniques and paradigms with a huge potential to improve the way people develop and use information technology. Agents are and will increasingly be used in a wide variety of applications, ranging from small systems such as e-mail filters or personalized shopping agents (shopbot) and up to large systems, particularly complex such as virtual organizations and economic systems.

The concept of agent has become, in the 90s and early 21st century, a central concept in several scientific disciplines with an explosive development of the law. In dictionaries, the agent is defined as someone who exercises power or produces an effect⁶. An agent is an entity that has capabilities of perception and action.

Summarizing the contents of the various definitions given to agents in the literature, it appears that there are two main types of such definitions: broad definitions and narrow definitions.

The concept of *agent* is used *broadly* to a system (entity) with the following computational properties:

- *autonomy*: the agent operates without direct intervention of humans or other systems and has some kind of control over actions (activities) and its internal state;
- *reactivity*: the agent perceives the environment (which may be physical reality, a user via a graphical interface, a lot of other agents, Internet or intranet, a combination of others) and is responsible for a certain manner to the continuous changes and unanticipated occurring in the environment;
- *proactive*: agent does not react only in response to changes in the environment, it is able to be geared towards achieving behavior goals, having this on its own initiative;
- *social ability*: the agent interacts with other agents (and possibly humans) using a communication language that is understood by all other agents (including humans).

Sometimes, the concept of agent has a narrower and more specific meaning. For example, the notion of agent is used in AI, software or technology of distributed control processes, it is associated, in addition to general properties introduced above, and other properties which are not found and other staff. Such attributes characteristic of the *agent in a narrow sense*, may be:

- *mobility*: the agent has the ability to go to a network (eg the WWW);
- *capabilities*: agent does not communicate false information;
- *benevolence*: the agent has no conflicting goals compared to other agents and always run what is required;

⁶ The Concise Oxford Dictionary, of Current English, (7 th edition), Oxford University Press, 1999

- *intelligence*: the agent acts similar in some aspects, with an intelligent being.

Regarding the last feature, the intelligence, it involves equipping an agent with qualities such as knowledge, belief, intention, obligation, emotions etc. Over the intelligent agents we will return in detail in a later paragraph.

Intelligent agents (IA) - is one of the most important areas of artificial intelligence (AI), which deals with the development of hardware and software systems able to reason, learn to recognize natural language, speak, make decisions, to recognize objects in the work environment, etc..

Intelligent agents are software programs to achieve specific tasks, partly autonomous, interacting with the environment of interest.

Intelligent agents highly streamlines the work, reducing the time required for specific activities. They can check and filter the massive amounts of information that a person without their help would not have time to process.

Teleworking encounter in their work, special problems due to heavy traffic of electronic communication. Thus, there are problems with unwanted advertisements, Internet information search, etc. Also, work or business opportunities on specific sites and mailing lists must be constantly sought. However, like other issues are specific areas of application of intelligent agents.

Ideally, an intelligent agent will make the best decision for action in a given situation. The main characteristics of intelligent agents can be summarized as follows:

- ◆ interact and cooperate with other agents or other programs and entities in their work environment;
- ◆ agents are not objects - have autonomy (the ability to make decisions);
- ◆ the structure of intelligent agents is: **Agent = architecture + program** where program staff implements mapping between perception and action, and the computing architecture is the device running this program;
- ◆ in a complex, uncertain, open and dynamic environment, intelligent agents have properties of flexibility, autonomy and robustness of learning;
- ◆ allow mediation between various technologies, can add functionality by inheritance.

Agent-based theory and methods is today a growing field of view not only theoretical but, in practical applications too. If the original agent-based systems were implemented in areas such as production, process control, telecommunication systems, air traffic control, road transport and traffic management, information filtering and gathering, electronic commerce, business management, healthcare and others, today more and more new areas of applications are dealt with in order to introduce multiagent systems.

Most complex real-world problems are solved using distributed systems. The current requirement is to develop software but as soon as possible which is why developers resort to similar existent functionality components, adapt them to meet new requirements and integrate them into the new software.

Growing interest in developing multi-agent systems is due to their advantages, including the ability to solve complex problems faster and with a higher confidence level. Multi-agent systems offer many advantages, among which:

- ✓ decentralized control: is the most important characteristic of multi-agent systems, implies that each agent acts in an independent manner;

- ✓ robustness: it is a feature of decentralized control, and implies that system continues to function even if some agents do not work;
- ✓ extensibility: a consequence of decentralized control, can be easily add new agents;
- ✓ exchange between agents;
- ✓ sharing resources.

5. BUSINESS PROCESS MANAGEMENT AND WEB SERVICES

From a business perspective, Web services can be regarded as the most recent, being a dynamic phase in the evolution of e-business.

A web service is a software that is available on the Internet and uses a standardized XML-based messages. Software applications written in different programming languages and running on various platforms can use Web services to exchange data via a network (Internet), in a manner somewhat similar to the inter-process communication on a single computer.

Integrating web services and software agents brings a clear benefit: connecting area by activating a web service application to invoke (call) a service agent and vice versa. However, this interconnection is more than a simple discovery and invocation across fields, will allow also complex compositions of Web services and agent services to be created, coordinated and administered by the agency controller type.

Several arguments have been established to support this event, including those made by Richards, Laukkanen and Helin, all of which are supported by clearly stated made in the Web Service Architecture, which expresses the notion that "agents are software programs that run invoke Web - both of which are implemented in a way that computational resources be accessed as acting on behalf of a person or organization. "

From the perspective of agents, computational web services are entities that can be called up to perform one or more reactive operations discovered or warned. For Web services, whether human or computational agents can be a strong sense of indirectiei by attaching to redirect Web services, aggregate, integrate and manage. Redirect describes where Web services may be unavailable for some reason, or the holder of a temporary web service wants to redirect the call to another web service and not to erase the initial implementation. Aggregation allows Web services composed several interconnected logic clusters, providing abstractions modeled behavior that can be accessed through a single service interface. Integration describes the meaning of creating web services available to clients who already use it, or plan to use his staff for their application platform, covering aspects of management and administration of automated web services, where the agent administered independently one or more Web services without the need for intervention from the human user.

Business Process Management allows managers to have the best software to achieve an efficient management of business processes. Thus, in addition to facilitating the integration, these solutions must minimize costs, protect investments in software. All previous solutions hindered its adaptability to a continuously growing market momentum.

Combining BPM and Web services offers companies a powerful set of benefits:

- ✓ increase efficiency and flexibility;
- ✓ reduce costs, and protects software investments by integrating and recombining with the company's existing systems,
- ✓ provides real time visibility in processing systems,

- ✓ provides a way to monitor and evaluate key performance indicators - the prerequisites needed to implement a continuous improvement program.

The foundation for BPM and Web services is a service-oriented architecture (SOA). Web services is a tactical implementation of SOA, which bridges the gap between businesses and IT through a set of business-aligned services using a unique set of design principles, patterns, and techniques.

SOA involves the dynamic discovery, organization, and description of services, which enables companies to select, bind, and invoke a service over the Internet. A service-based architecture is part of an SOA.

The major components of an SOA are:

- a service directory, a service directory,
- a service provider, the service provider,
- a service requestor. the service request.

The service directory contains information about all the available services. The directory service contains information about all the available services. A service provider publishes a service by adding the appropriate entries to the directory, which a service requestor uses to find the appropriate service. A service provider publishes a service by adding the Appropriate entries to the directory, the service request Which uses to find the Appropriate Service.

When a service requestor finds a match, it binds to the provider using information maintained by the directory. When a service request Finds a match, it binds to the provider Using information Maintained by the directory. The binding information contains the protocol specifications that requestors must use as well as the structure of the request messages and the resulting responses. The binding information contains the protocol Specifications That requestors must use as well as the structure of the request messages and the resulting responses. The two companies then form a "business partnership." The Two Companies THEN form of "business partnership."

When the service requestor no longer needs the provider's services, it dissolves the partnership. When the service request Needs no longer the provider's services, it dissolves the partnership. It then forms new requirements and puts them into a query called a locator, which is run against the service directory. New Requirements and Forms THEN it puts into the query Called Them the lessor, Which is run Against the directory service. The locator returns a list of possible providers, from which the service requestor chooses a new business partner, and the whole process starts again. The locator returns a list of Possible providers, the service request from The which chooses a new business partner, and The Whole process starts again.

When the business partners bind, they create a "virtual" application. When the bind business partners, they created a "virtual" application. The partners temporarily combine their services to meet an immediate need and capture a business process. The partners combine Temporarily Services to Meet Their Need immediate year and capture the business process. Once captured, the business process is automated using workflow management technology. Once captured, the business process is automated Using workflow management technology. The applications are then integrated and work is routed to the appropriate departments. The applications have integrated and THEN work is routed to the Appropriate Departments.

Businesses who want to deploy an SOA face three considerations. Businesses Who Want to Make Three considerations deploy SOA year.

First, current object-oriented analysis and design (OOAD) methods don't address the primary elements of an SOA: services, flows, and components for realizing services. First, current object-oriented Analysis and Design (OOAD) Methods do not address the primary elements of year SOA: services, Flows, and components for realizing services. Companies must develop or acquire the techniques and processes required to identity, specify, and realize the individual services. Companies Must Develop or Acquire the Techniques and Processes required to identity, Specify, and realize the individual services. The also need the enterprise-wide components to ensure the quality of services. The enterprise-wide Also Need the components to ensure the quality of services.

Second, a shift in corporate mindset must occur. Second, the shift in corporate mindset must occur. Companies must shift their thinking from strictly a production-oriented goal to the key SOA objective: enhanced customer service. Companies Their thinking must shift from a production-oriented goal Strictly The Key to SOA objectives: enhanced customer service. Whether its Web services or another implementation, SOA is designed to provide customers with services that meet their unique requirements. Another ITS Whether or Web services implementation, SOA is Designed to Provide Customers with Unique Services That Meet Their Requirements. That's a major leap for some companies but making the transition is a must obtain SOA's benefits. That's a major leap But for Some Companies making the transition is a must Obtain SOA's benefits.

Third, applications created for one business or product line can now be used in a supply chain and be exposed to business partners who might compose, combine, and include them into new applications, creating what some analysts are calling the service ecosystem or a service value-net. Third, applications created for one business or product line now CAN BE used in the supply chain and business partners to Be Exposed Who Might compose, combine, and includes new applications into Them, Creating What Some analysts is calling the service or the ecosystem service value -net. Executive must accept this possibility. Executive must accept this possibility.

Companies need to address these considerations before deploying an SOA. Companies Need to address tissue considerations Before Deploying SOA year. Unless they do, they won't reap the benefits of an SOA. Unless they do, they Will not Reap the benefits of SOA year. Nor will they have the adaptability need to compete successfully in the days ahead.

BPM technology provides the tools and infrastructure to define, simulate, and analyze this business process model. It does so in such a way that the process is manageable from a business perspective using business solution management tools.

Business analysts then compare readouts to key performance indicators to evaluate the processes performance. If a process is not meeting its objectives, executives change the process. It's here where methodologies, like Six Sigma, are implemented as part of a continuous improvement program. The goal, of course, is to provide customers with the highest quality services.

Combining BPM technology and Web services represents more than just an advanced approach to automating business processes. It takes it to a whole new level. With support from SOA, the combination provides benefits cost-conscious enterprises want from their IT solutions-increased flexibility, ease of integration, protection of existing investments, and a quick return on investment.

INTELLIGENT SYSTEMS

Intelligent systems are, at this time, leading information technology, able to identify the elements essential for running businesses, perhaps even crucial for the evolution of the company, any structures and relationships that could transform business and management practices. Intelligent systems have a repertoire of techniques such as artificial intelligence, neural networks, genetic algorithms, expert systems, fuzzy systems (vague) and hybrid systems, with which the effective information's some areas of management, there has been considerable human expertise.

Research has proven specialty smart economic systems, in applications such as dissolution of banking products, investments in portfolios, banking supervision, planning, insurance, financial diagnosis, management of human resources, accounting and auditing, taxation and many other problems worse structured type diagnosis, planning, design, control and monitoring.

Intelligent systems plays an interesting role in the knowledge management policies relating to:

- firm competitiveness,
- total quality,
- rapid response to competitors,
- cost reduction,
- coherent and dynamic behavior.

Connectionist hypothesis, more present since the '90s, refers to neural modeling enterprise, based on the concept of perception and recognition, artificial neural networks resulted in a distinct category of intelligent systems.

In terms of technology, intelligent systems are located along the area of enterprise technologies such as:

- ✓ electronic document management,
- ✓ technology working groups (groupware),
- ✓ technology cooperative processes (workflow Processes),
- ✓ electronic mail (E-mail),
- ✓ videoconferences,
- ✓ data warehouse technology (datawarehouse), a decision support and management of the last generation, used for analyzing and managing enterprise much more evolved than the existing DSS (Decision Support Systems), EIS (Executive Information Systems) etc.

A very important aspect in the knowledge society is that computer programs which take the form of artificial agents collaborate with people in rational behavior to achieve goals. So, at the level of intelligent system, we need software agents, because:

- everyday tasks are based on the computer;
- the world is in the midst of a revolution of information, involving large amounts of dynamic and unstructured information;
- increasingly more users are untrained - and therefore, users are seeking help to understand the complex world base don technology. Number and type of fields of application, the agent-based technologies are applied or investigated include: workflow management, network management, air traffic control, process re-engineering of business, data mining, information retrieval / management, commerce, education, personal digital assistants (PDAs), scheduling / diary management etc.

In the company the agents can be used for filtering the collaboration, data fusion, gathering and analyzing logical real-time data sets, and then view these large data sets at a glance. Intelligent agents also can monitor user behavior to automate repetitive tasks.

Efficient use of intelligent agents that are applied in the company include data mining, profile manager, privacy management, rules management, and application management.

INTELLIGENT MODEL FOR ASSESSING FINANCIAL RISK

In this section I wanted to present a model of intelligent system considering the risk of an entrepreneur with help of intelligent systems of the type of intelligent expert systems, which can be integrated with hypertext and hypermedia systems.

According to the literature on the risk category of the entrepreneur, is entered: economic risk, financial and bankruptcy risk. All three of these manifestations of risk must be evaluated both separately and globally to provide an overview of the level of risk assumed by an entrepreneur. What complicates this assessment is that this can be done at different times, with complete or incomplete information, inside or outside the economic entity analyzed from the standpoint of current or future owner, for an economic entity in the open or not a stable or unstable economic environment.

Intelligent applications of this type would be a point of great interest in the business world on the financial diagnosis and risk in particular. In these circumstances an investor or manager at any level, would be interested in the possibility of coupling a knowledge base to inform and advise him on how to present financial situation in terms of risks to be expected. Such intelligent systems, to the extent that there is specialized information can be very interesting for an investor must determine whether the entity in which to invest and which presents a particular risk is.

All these issues were the basis for developing a prototype intelligent system which addresses the risk for specific diagnosis of a trader. Intelligent application will be designed to provide users information on the degree of risk, the opportunity to place money in a business to an investor, and some possible directions for the forward in mitigating the impact.

Bankruptcy risk will be assessed on account of five economic indicators - financial, after which it will award a score for risk and return, which will underpin the bankruptcy risk assessment, placement and type of cases / directions that must go. Indicators that will consider are: Broad economic, indebtedness, financial balance, the liquidity and speed of rotation of capital.

Among these indicators can do a number of combinations to assess the risk of bankruptcy by the end user perspective of financial management in the field of intelligent systems. These aspects will be taken into account in achieving an expert system, which depending on the level of knowledge of a user (entrepreneur) on the entity in question on the above issues, will evaluate the overall risk in three groups: low risk, uncertainty and highest risk. Along with this overall assessment is taken into account and interpretation of economic risk by the financial sector.

CONCLUSIONS

The term BI (Business Intelligence) is becoming increasingly used in Romania, the field is very dynamic. BI Type current solutions can be considered as an important stage of integration of the business field in computer science.

Efforts have been made in research on one hand the association with BPM WSS and second connecting intelligent agents with WSS. In our work in applied economics, we are building a technical and economic framework in which EAI BIA will be made for using the Internet, by combining BPM, WSS and intelligent agents, and therefore, closer business ties by ICT services.

BI and intelligent agents have emerged as different research areas, which are often linked in recent research trials. While BI is used successfully in providing structured sources of information often fails to provide information from distributed sources of information if it is placed in unstructured documents. Besides the fact that there are other unresolved problems existed within BI frameworks. We know that some of them could be solved with an integration of intelligent agents in BI.

Applications of agents and agent-based models are extremely diversified in the following areas: economic, industrial, commercial, financial, military, computer, etc.

Business Process Management allows managers to have the best software to achieve an efficient management of business processes. Integrating web services and software agents brings a clear benefit: connecting area by activating a web service application to invoke (call) a service agent and vice versa. Efficient use of intelligent agents that are applied in the company include data mining, profile manager, privacy management, rules management, and application management. Intelligent systems are, at this time, leading information technology, able to identify the essential elements for business course for evolution of the company. Thus, the last part, we presented a model of intelligent system for financial risk assessment, which I intend to develop it in the future to be implemented.

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