

# Chapter 8

## On the Features of Computer Collaborative Workflow

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**Abstract** At the present time, the computer technology has been widely applied to the modern business operation management, and also multiple management system models on the basis of the computer technology have received extensive applications in many areas. Among them, the workflow is a new computer automation management method, which can change the deficiencies of the traditional management models, promote the enhancement of the production and management efficiencies for enterprises, and ultimately accomplish a growth trend for the internal economic benefit. It is known that the workflow has exerted efficient management roles in many aspects. In connection with this situation, the features of the computer collaborative workflow are analyzed with an emphasis in this paper, and its applications in the actual business management are particularized as well.

**Keywords** Computer · Workflow · Features · Application

### 8.1 Advantages of Computer Collaborative Workflow

Actually, the workflow belongs to an automation management model, mainly realizes the computer operations necessary for the modern enterprises project implementation, and processes all kinds of business activities (e.g., file transfer, information transmission, and task assignment) by relying on the computer technology. It decomposes a complex problem into small parts and resolves them

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one by one. The introduction of the workflow concept into the modern business management has improved the automation level of the production and management efficiencies for enterprises. This not only helps the internal long-term development for the enterprises, but also ensures the best-quality and highest-efficient services.

At present, to seize advantages in the market competition, all enterprises have adopted the scale-expansion and business development models. However, subsequently, a series of management issues occur. Thus, how to make use of the existing resources to develop businesses and achieve the continuous growth of economic benefits is necessary for business operators to considerate actively. Driven by the development of the computer technology, the application of the “workflow” in the enterprise daily management has been valued greatly, because this new automation management model mirrors the advantages in many aspects.

**Business Expansion** The business development can be optimized based on the current business situation within enterprises, aiming to raise the business project to a higher position. The computer collaborative workflow is able to make the business operators transfer the most appropriate services to the users with needs at the most reasonable time [1]. At the mean time, in the course of the business operation, the workflow can let all staffs concentrate their energies on the business development, and hence the whole operation flow tends to be reliable without a hitch.

**Assisted Management** As a vivid metaphor, the “workflow” is a production line, in which each operation link has a close tie with the enterprise internal dynamics (see Fig. 8.1). The operators can clearly control their current business situation in time after knowing the specifics of workflow, and hence can monitor other managements within the enterprises. For example, when the customers are unsatisfied with the services provided by the enterprises, the operators can make relevant adjustments to their managements in accordance with the workflow.

**Resource Allocation** The optimization on the human, material, and financial resources within enterprises is another large advantage of the computer collaborative workflow. After the application of the workflow model, the utilization

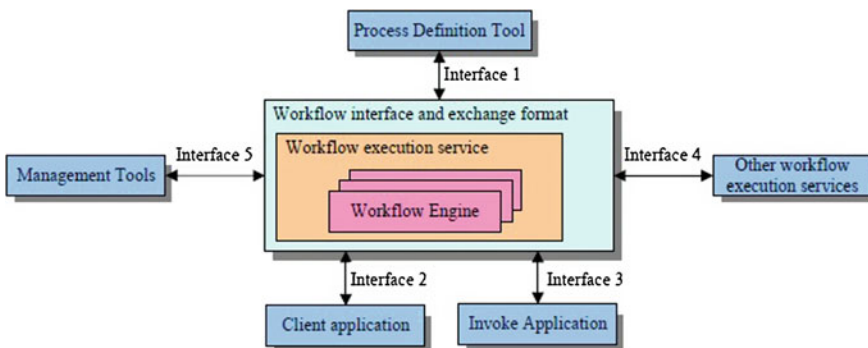


Fig. 8.1 Constitution of the workflow

efficiencies of all resources within enterprises are enhanced, and the trust relationship between enterprises and customers tends to be better as well. In addition, through the computer network, the business operators can negotiate the businesses with customers, and customize various services to meet the different needs of customers, which help enterprises in lower cost consumption.

**Data Collection** From the perspective of the financial management, the introduction of the workflow model has an obvious effect on the data collection. The application of computer can make full use of the utilization value of the backend database. For example, the multiple functions such as the report, search, statistics, retrieval, and analysis allow enterprises to obtain sufficient information as supports in the formulation of the financial plan, and hence the financial management tasks can proceed without difficulties [2].

**Procedure Standardization** In order to improve the service quality of enterprises, the reform and adjustment can be started from the existing service procedures, and drive the management ability to be strengthened. For example, the core business procedure within enterprises can be updated and converted so as to gradually adjust, reorganize and optimize them, and promote the competitiveness of the enterprises to be stronger. Also, the application of the workflow system can regulate the enterprise business procedures, and hence provides a guarantee for the scale expansion and competition participation of enterprises.

## 8.2 Implementation of the Workflow Database

As for different enterprises, the construction of the workflow can achieve an integrated management model in enterprises at most times, and lets the computer technology better serve the business management. In terms of the workflow operation principle, the core component of the workflow is the formation of the database, and it includes three major links (i.e., mapping, modeling, and management) in the implementation process. Each link has its own functions. The mapping mainly conducts the organizational and coordination on the current business procedures of enterprises; the modeling is creating the procedure models to reflect the services; the management means that the enterprises adopt a management model for the situation of the workflow. The specific implementation flow is described below.

**Establishing a Project Team** As the first implementation link, it is necessary for enterprises to create a reasonable project management team for the workflow, which specially serves the workflow. In the selection of the project management members, the enterprise leaders are necessary to be evaluated in the aspects of the theory, practice, and skills, with the purpose to ensure all members exert the relevant role in the project management, such as the financial personnel, computer technicians, and product experts.

**Analyzing the Business Flow** After the establishment of the management team, it is necessary to specifically analyze and process the links which can be

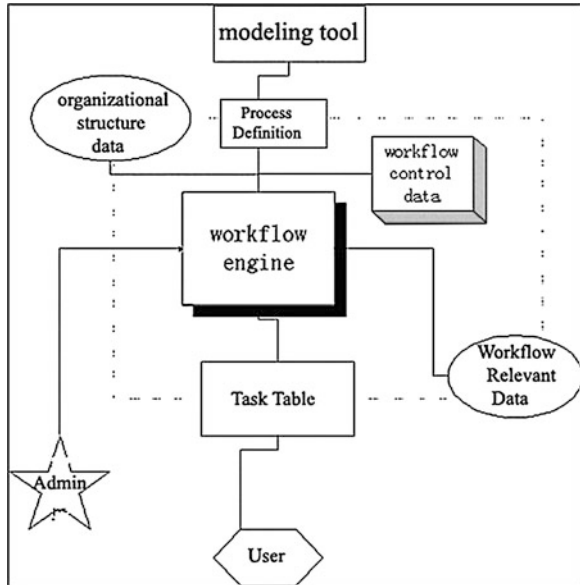
optimized or modified in the business flow in accordance with the current business situation that the enterprises have known. For example, in the customer service stage, the enterprises can provide the humanized service indexes, and hence provide more considerate products and services for customers. In addition, the economic influence of the business on the enterprises is necessary to be analyzed in detail, such as the sale volume and economic profit.

**Formulating Work Targets** The computer collaborative workflow, as a new management model in enterprises, must reflect sufficient utilization values. Therefore, in a certain period, the enterprise must formulate the work targets that comply with the actual conditions. For example, in order to shorten the time of the enterprises to issue the invoices, the relevant personnel necessarily know the time, track, accounting, invoice issuing procedures, and hence the workflow in enterprises can proceed without difficulties after the target is clear.

**Creating the Business Model** When both users and software suppliers show the workflow solutions, it is necessary to modify the workflow based on the specific requirements of users, and comprehensively consider the priority and then confirm the online time of all modules (see Fig. 8.2). The establishment of the business model can provide good analysis results for the workflow operation in enterprises. The users can contact the experts in the same type of software products to cooperate and exchange with each other, so as to maintain a balance between the usability and functional requirements.

**Implementation of the Operational Steps** Before the workflow is operated, the users need to carry out a test by combining the state of the mode, and hence ensure the whole workflow to accord with the actual needs [3]. If an error is discovered in the model after the test, it is necessary to make revision and

Fig. 8.2 The model of the workflow



adjustment timely, so as to improve the operation of the workflow without difficulties. The elimination or minimization of the redundant data among multiple systems is the key content integrated by the workflow, and also it requires the users that can copy the data necessary to be used among multiple systems.

### 8.3 Application of the Computer Collaborative Workflow

Nowadays, the computer collaborative workflow has exerted a very important role in the daily business management of enterprises, and also has attained a full promotion in all industries. Seeing from its application at the current market, the workflow has been used almost by all industries; its core tasks include the orders, quotation processing, procurement processing, contract examination and verification, customer-call processing, and supply chain management. Now, according to the classification of different industries, the application of the workflow is particularized below.

**Administrative Management** The administrative management is mainly required in the government bodies and departments. In this aspect, the application of the workflow is mainly reflected on the processing of the administrative forms, such as the business-trip application, overtime-work application, leaving application, office supplies application, purchase application, and so on. Thus, the workflow is able to supply government bodies with reference for their examinations and approvals.

**Personnel Management** The human resources departments within enterprises can take advantage of the computer collaborative workflow to operate the human resources optimal management with a gradual step at work, including the personnel training arrangement, performance evaluation, position alteration processing, staff archive information management, etc. [4].

**Financial Management** Financial tasks often require involving all kinds of financial information. Thus, the accounting personnel complete the statistics processing related to the funds skillfully. The application of the workflow also touches upon the payment request, account receivable processing, daily reimbursement processing, business-trip processing, capital budget, etc.

**Customer Service Management** As for the service industry, the workflow model can also be utilized to keep a long-term relationship with customers. For example, the customer information management, customer complains, request processing, and post-service management can be subject to a workflow model, so as to objectively evaluate the comments of the users on the services provided by the enterprises, and hence the service quality can be enhanced.

**Special Service Management** Each service industry has its own operation system. The commonly-used systems include the ISO series flow, quality management flow, product data management, trade company clearance, logistics company packages management. All these can be completed through a workflow model [5].

## 8.4 Conclusion

From the above analysis, the application of the computer collaborative workflow operation model within enterprises can continuously improve their business management, and also can drive the enhancement of the business efficiency. At the mean time, it can reduce the consumption of the cost necessary for the business operation, so as to fulfill the requirement of the modern managerial decision making. However, after the workflow management is introduced, the enterprises shall also lay a stress on the updates of the computer technology, for the purpose of keeping the smooth development of the workflow operations.

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