# Achieving Integrated IT Service Management

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**Increasingly, IT Infrastructure Library (ITIL) practices are being adopted to improve the quality of IT services and reduce operating costs. Fujitsu provides the Systemwalker products that support IT service management according to ITIL best practices. This paper discusses the Systemwalker solutions that implement ITIL-based integrated IT service management, with an emphasis on ITIL service support.**

## 1. Introduction

IT Infrastructure Library (ITIL) practices represent an accumulation of practical knowledge and expertise concerning IT operations. ITIL service support[1)] defines the IT service management processes of incident management, problem management, change management, release management, and configuration management.

Fujitsu provides the Systemwalker products that support ITIL-based IT service management. For example, Systemwalker IT Service Management, Systemwalker IT Process Master, and Systemwalker Centric Manager assist ITIL service support processes.

In addition, examples of successful ITIL implementations are quite useful for customers who want to realize high-quality IT service management at low cost. Systemwalker provides IT service management expertise as templates.

**Figure 1** shows the positioning of each product.

This paper briefly explains Systemwalker solutions in relation to each ITIL service support process.[2)]

## 2. Incident management

**Figure 2** shows an overview of the incident management processes. Enterprises can introduce ITIL-based incident management by following the series of processes shown in this figure. The roles of Systemwalker solutions in incident management processes are as follows.

1) Incident recording and integration

A vital part of incident management is recording and visualization of the various types of incidents. The difficulty here is how to record incidents efficiently without placing a burden on the support staff.

If the support staff are always busy and not a small amount of time is required to issue an incident, the incident might not be recorded.

In order to reduce the burden of incident recording for the support staff, Systemwalker integrates the event monitoring function of Systemwalker Centric Manager and the incident issuing function of Systemwalker IT Service Management. By using this cooperative function between these products, support staff can easily issue incidents for events that are detected in their IT systems (**Figure 3**).

In one application of Systemwalker, the total number of incidents increased by 20% because all the detected incidents could be recorded. As a result, the customer could visualize the incident

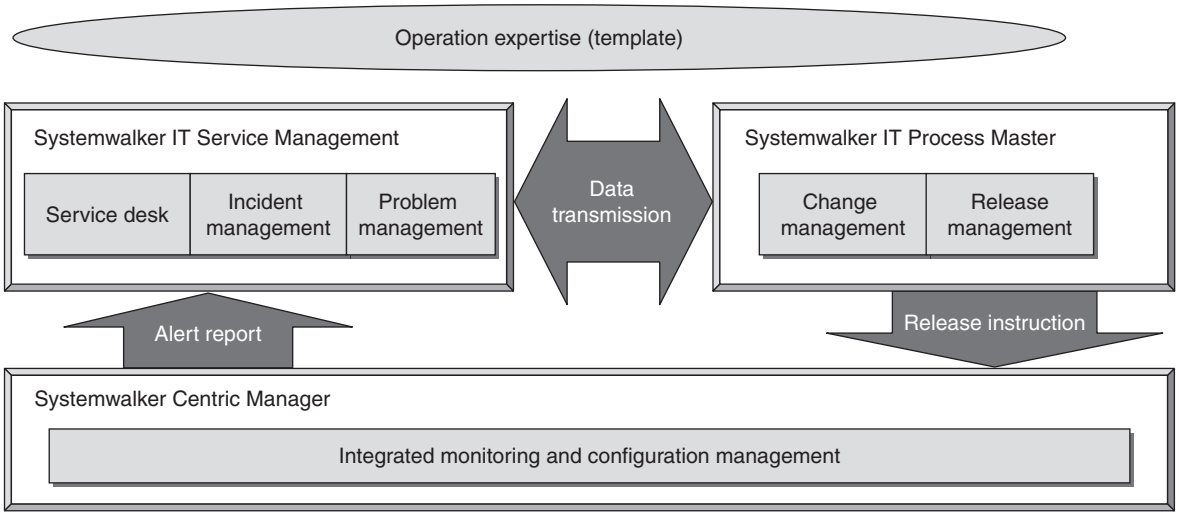



Figure 1
Systemwalker products that assist service support processes.

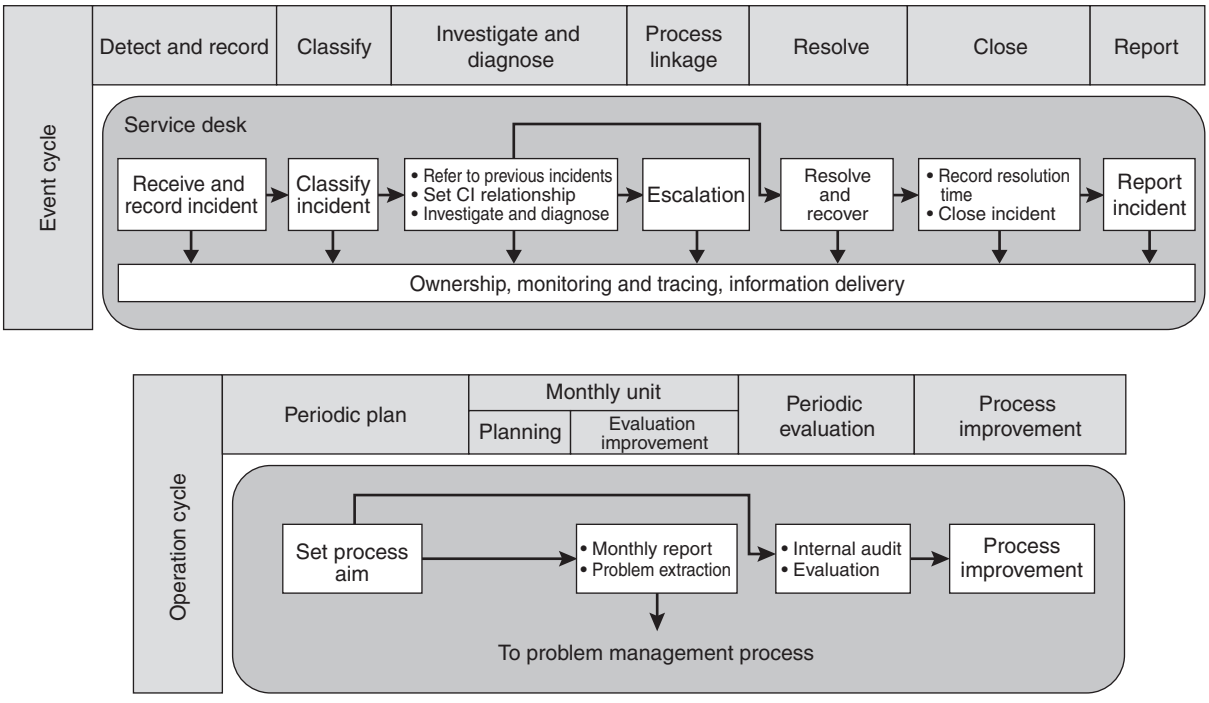



Figure 2
Overview of incident management processes.

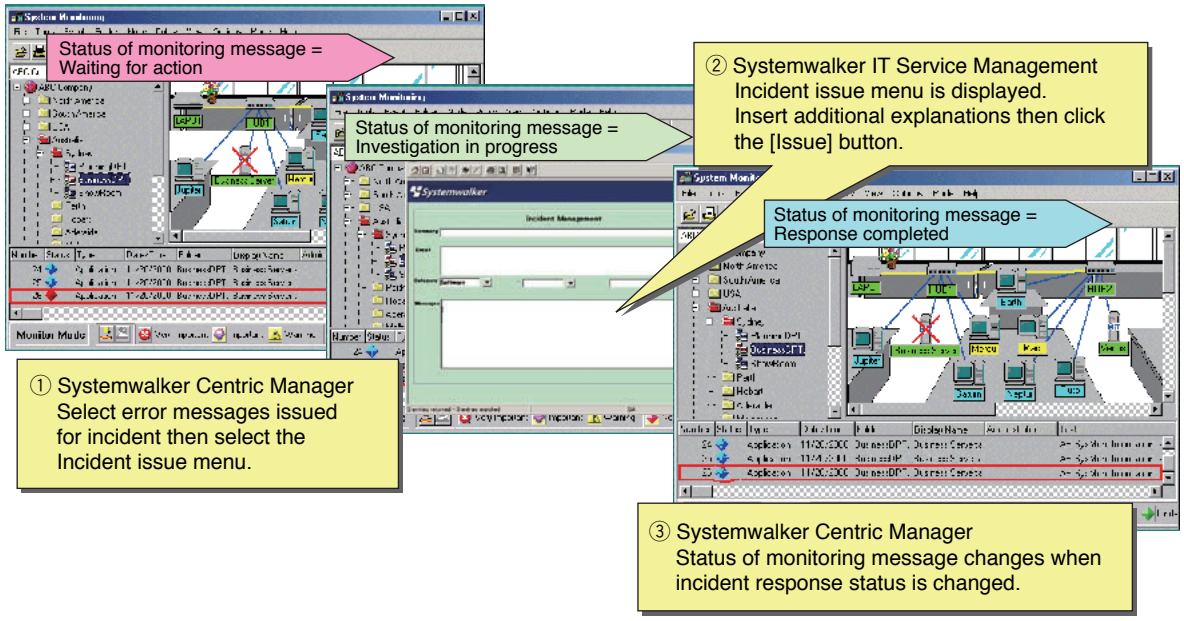



Figure 3
Incident issuing flow.

occurrence situation and thought highly of the effectiveness of Systemwalker.

ITIL recommends integration of the incident information of the service desk into an IT management tool on each IT system so customers can create ITIL service support processes much more efficiently by using incident information in the service desk.

In fact, many large enterprises are deploying multiple IT management tools provided by different vendors according to when their systems were constructed and which vendors constructed them. Unfortunately, if there are differences among the incidents issued by the IT systems of an enterprise, the effectiveness of introducing incident management can be reduced by as much as 50%.

To improve the above situation Systemwalker Centric Manager has functions for integrating IT management tools provided by different vendors. These functions collect event messages, inventory information, and other management information that has been collected by different IT management tools and normalizes it so it can be used by the standardized incident management processes. By using their existing IT management tools together with Systemwalker Centric Manager, customers can integrate every single incident of their IT systems at low cost.

2) Classification

Assigning incident priority is a vital part of incident classification, but it is a relatively hard task to do. If the priorities of incidents are decided individually by the persons in charge, it will be difficult for a company to achieve standardized assignment of incident priorities. In order to avoid this kind of difficulty, Systemwalker provides templates containing a mechanism that enables customers to automatically determine the priority of incidents (**Figure 4**).

3) Set process goals

The success of implementing ITIL depends on what kinds of goals the enterprise sets and how it intends to achieve continuous improvement of its management processes in order to meet those goals. However, not all enterprises that want to implement ITIL are able to

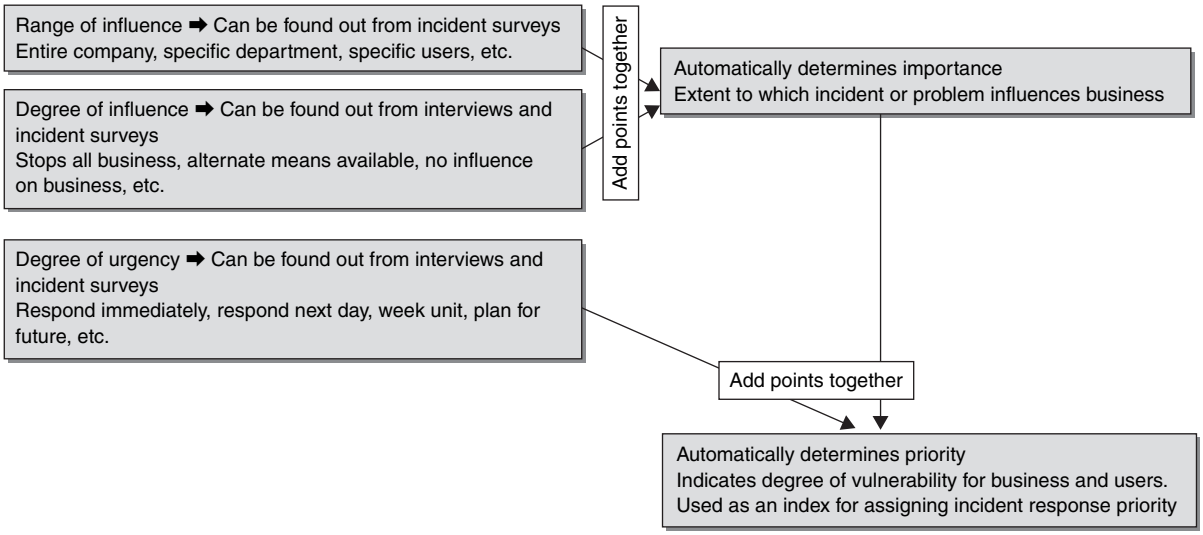



Figure 4
Overview of mechanism for automatically determining priority.

set appropriate goals and plans at the time of implementation.

Many enterprises worry about what target values should be set to obtain the best outcome from the introduction of incident management processes. Therefore, Systemwalker templates provide various default indices called key performance indicators (KPIs) based on Fujitsu's experiences of introducing ITIL (**Table 1**). Enterprise customers of Systemwalker can select their target values from these indices.

## 3. Change management and release management

This section describes change management and release management. It also describes the roles of Systemwalker solutions in change management and release management processes.

1) Work flow management

Change management and release management require complicated approval processes (**Figure 5**).

Moreover, the kind of approval processes that are required depends on the change details and release details, resulting in a wide variety of approval processes. For example, the internal system of Fujitsu Ltd. has about 30 types of change application forms and different approval processes are used based on the change details.

Systemwalker IT Process Master provides functions for managing these complicated approval processes (**Figure 6**).

When Systemwalker IT Process Master is used in the release management process, an applicant can simply select the required application type from the options menu, enter the required items in the most appropriate forms, and then set the approval operations to automatically start according to pre-defined processes.

2) Release automation

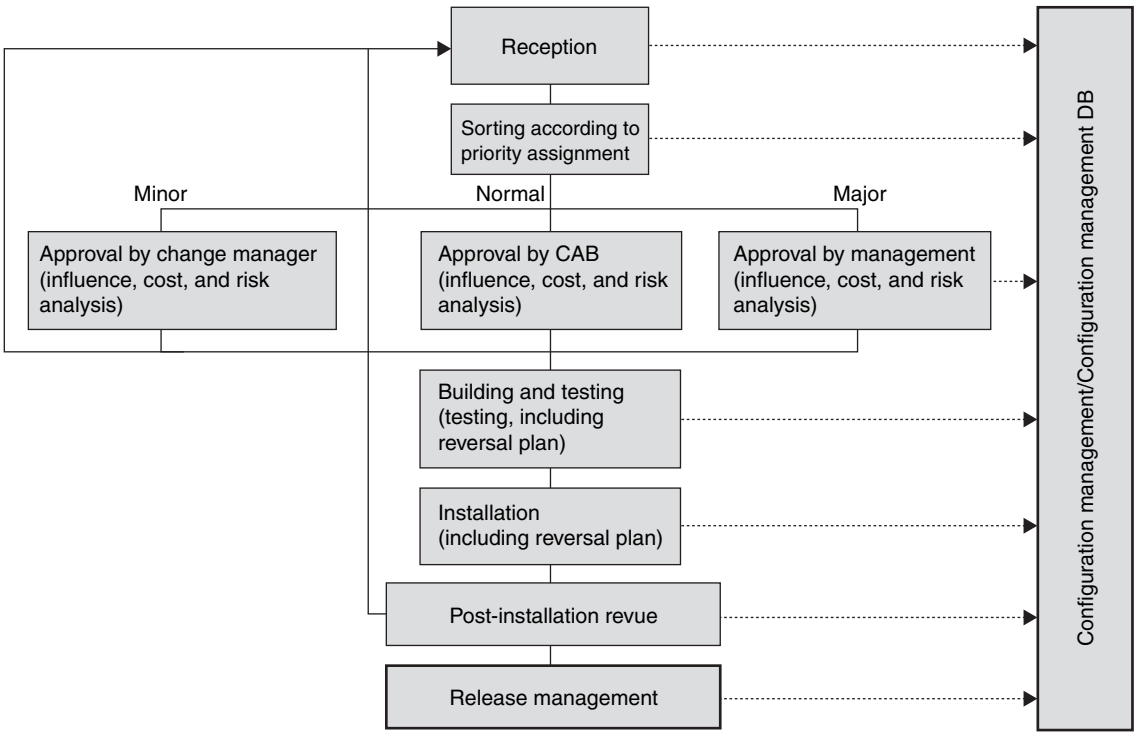
As a system becomes more complicated, there is a significant increase in the number of problems caused by incorrect system changes and release processes.

Although a rigid change management can generally prevent the occurrence of problems caused by lack of planning, problems that arise from human error or misunderstanding cannot be avoided.

Systemwalker IT Process Master can help IT system managers and administrators correctly understand changes by showing infor-

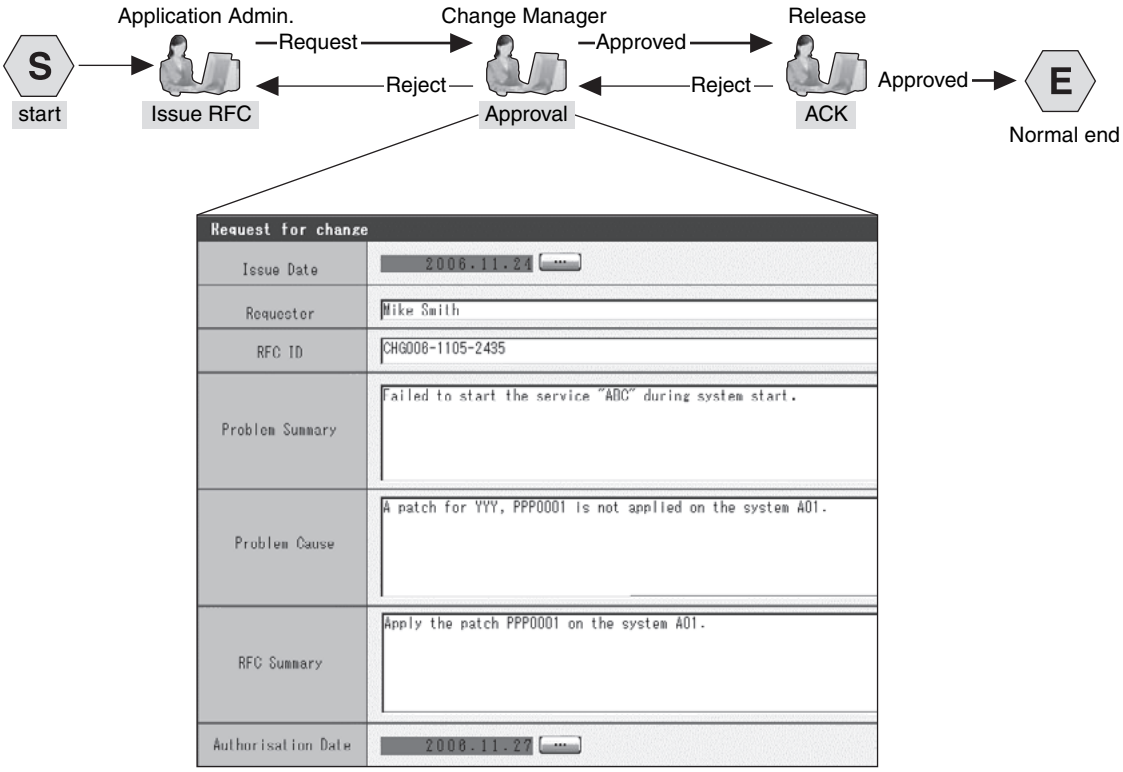
Table 1
Example of KPI provided by Systemwalker template.

| Critical success factor (CSF) | Report type | Key performance indicator (KPI) |
|---|---|---|
| IT service quality guarantee | Trend in number of incidents issued for each priority level, importance level, and category | Rate of reduction in number of incident occurrences |
| | Trend in average time taken to resolve incidents for each priority level, importance level, and category | Rate of reduction in average time taken to resolve incidents |
| | Trend in rate of meeting target resolution time | Proportion of incidents resolved within response time defined for each priority level |
| | Trend in intervals between incident occurrences (average, longest, shortest) for each priority level, importance level, and category | Duration in which no incidents occurred with an importance rating of "High" |
| Increasing IT service productivity | Trends for first response rate and immediate reply rate | Rate of increase in number of incidents resolved at first contact |
| | | Rate of increase in rate of immediate reply at first contact (KEDB effectiveness) |
| | Trend in number of incident responses for each group and person | Rate of increase in number of items processed per group and person |
| Critical success factor (CSF) | Report type | Monthly assessment meeting indicator |
| Achieving continuous improvement | Trend in number of incident responses for each group and person | Visualization of bias towards a group or person ➡ Encourage KEDB creation and eliminate personal operations |
| | Trend in incident response time for each group and person | Detection of group or individual bottlenecks ➡ Understand and remove reasons for delays |




CAB: Change Advisory Board

Figure 5
Overview of change management and release management processes.




RFC: Request for change ACK: Acknowledge

Figure 6
Process flow of Systemwalker IT Process Master.

mation about the relationships between the change application, its approval processes, and the release operations according to pre-defined processes and can reduce the problems caused by human error.

Regarding patch deployment, the applicant submits the patch file together with a change application form. Then, the change manager works in conjunction with the release manager to decide the change plan, test the application after it has been updated by the patch, and approve the patch application if the test results are satisfactory. After approval, the patch file is automatically distributed at the requested date and time and then applied to the designated system. Like the above patch deployment process, Systemwalker IT Process Master can manage the flow of tasks for change and release processes.

## 4. Configuration management

To realize management based on ITIL practices, it is important to manage the relationships between the various types of management information. The relationships between system configuration elements must be identified, and the relationships between incident and change management information and the system configuration elements must also be identified.

To perform management based on ITIL practices, it is essential to build a configuration management database (CMDB). Systemwalker service support products, Systemwalker IT Service Management, Systemwalker IT Process Master, and Systemwalker Centric Manager can cooperate with each other to build a CMDB.

1) Correlation management of system configuration elements

Systemwalker Centric Manager provides

functions for managing the parent-child and contextual relationships between system configuration elements. The managed objects include network devices and other hardware devices, as well as program files, databases, and other software. This enables the configuration elements to be understood from an availability viewpoint of IT services. In fact, when a device fails, managers can use the correlation information to determine which services have been affected so they can quickly start recovering them (**Figure 7**).

2) Relationship management of system configuration and incident/change information

The configuration information held by Systemwalker Centric Manager can also be used by Systemwalker IT Service Management and Systemwalker IT Process Master.

Incident management automatically records problem location information such as the name of the device that caused the problem, the package module name, and the server IP address, which is detected by Systemwalker Centric Manager, as incident information. This establishes the relationships between system configuration elements and incident information.

If, for example, a manager wants to know which incidents have occurred previously at a particular server, a search for previous incidents managed by Systemwalker IT Service Management can be made using the name that Systemwalker Centric Manager uses to

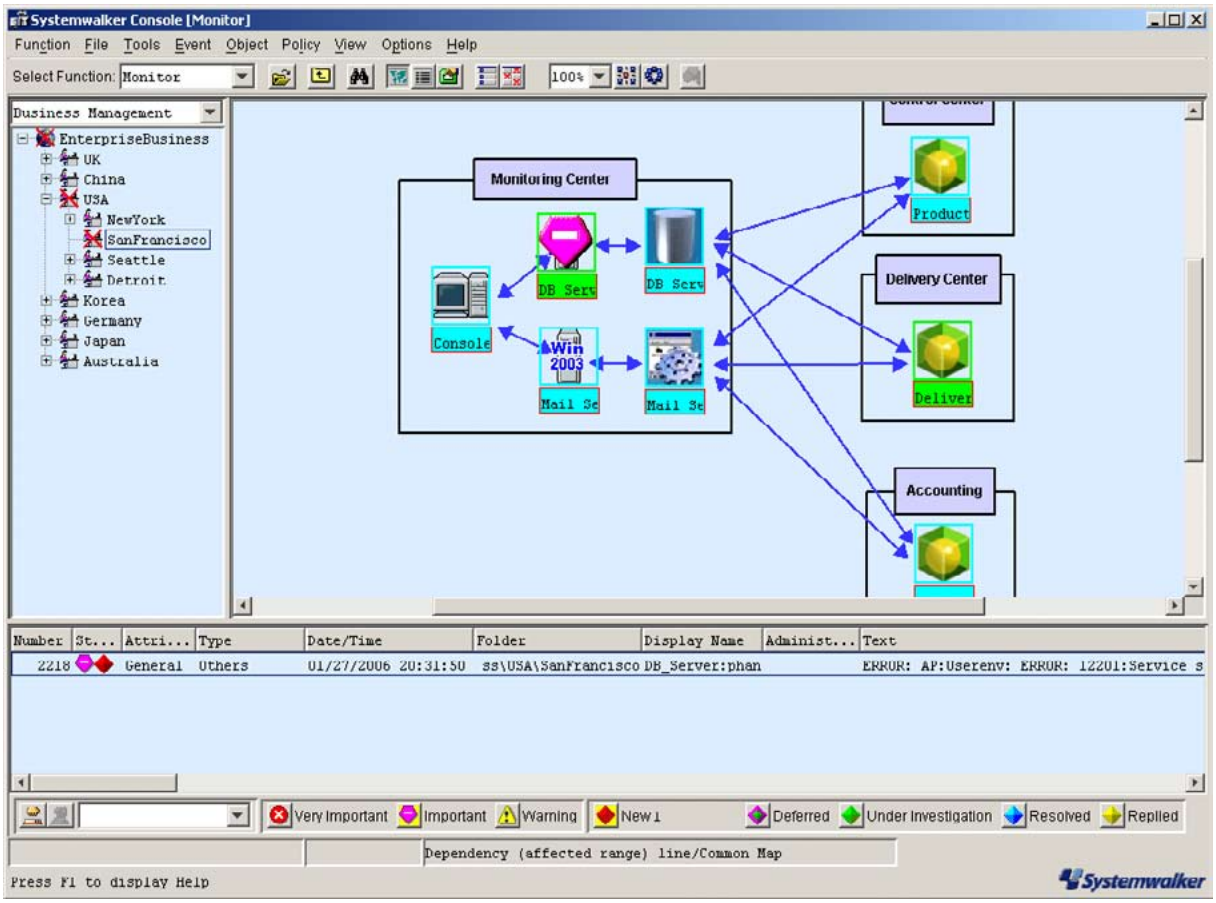



Figure 7
Systemwalker Centric Manager correlation management screen.

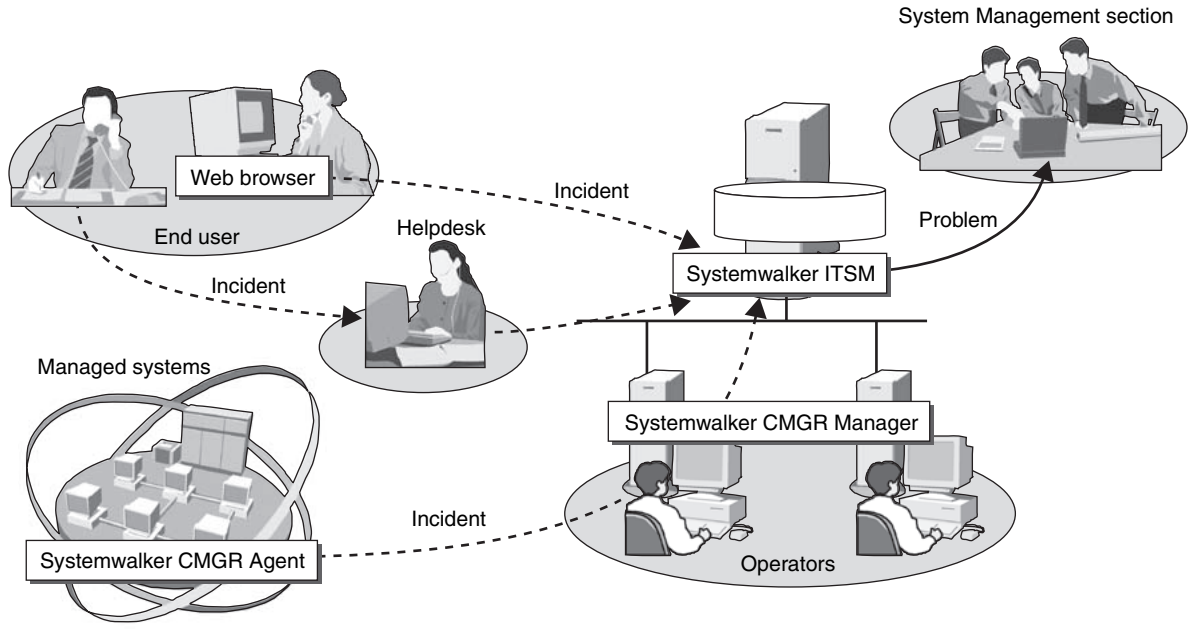



Figure 8
Overall image of IT operation management system for Ryoshoku Ltd.

manage the server and the search results can be displayed.

In addition, the inventory information collected by Systemwalker Centric Manager can be shared to improve the efficiency of problem investigations.

## 5. Example of Systemwalker installation

This section describes an example application of Systemwalker solutions.

Ryoshoku Ltd. is a top-class distributor of food commodities within Japan.

The company uses Systemwalker products as infrastructure tools of the IT service management that support system operations for the hundreds of open system servers and mainframes that constitute the Ryoshoku system.

**Figure 8** shows an overview of the Ryoshoku IT service management system. Systemwalker Centric Manager provides integrated monitoring of the mainframes and open system servers. If an event occurs, Systemwalker Centric Manager issues an incident to Systemwalker IT Service Management. In addition, the display of real-time graphs of unresolved incidents and numbers of problems enables the quality of system service support operations to be visualized.

Moreover, the end user's request to the system management section is also sent via Systemwalker IT Service Management.

## 6. Conclusion

Systemwalker provides various functions that enable customers to effectively and efficiently realize IT service management.

To summarize this paper, Systemwalker:

- Provides functions and templates based on Fujitsu's experience of introducing ITIL

Systemwalker provides functions and templates such as automated incident prioritization and a standard KPI model based on Fujitsu's experience of introducing ITIL. By using Systemwalker, customers can easily introduce IT service management according to ITIL best

practices.

- Integrates process management based on ITIL service support and provides a function for automating various IT management capabilities

By using Systemwalker, customers can realize all of the ITIL service support processes, for example, incident, change, and release management. Also, Systemwalker functions for automating IT management capabilities such as release process automation and automated collection of configuration information enable the customers to realize their ITIL service support processes much more effectively and efficiently.

By enhancing these features of Systemwalker, we hope to continue to provide solutions that can maximize the customers' benefits of introducing ITIL.

## References

1) Central Computer & Telecommunications Agency (CCTA): Service Support (IT Infrastructure Library Series). Stationery Office, 2000.
2) Office of Government Commerce (OGC): Service Delivery (IT Infrastructure Library Series). Stationery Office, 2001.

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