Supporting the Next Generation of Mission-Critical Systems

● Yukio Ishizaki

The changing cycles of IT system deployment require a review of ideas and a renewal of methodologies for support and service delivery. The previous swing to distributed, open-systems computing of the last 20 years has reversed, and a new generation of systems consolidation has begun. The ubiquitous growth of the Internet and increasing costs of server management have led customers to consider replacing their many small, dispersed servers with new, larger, and more flexible centralized mainframe-like systems. Distributed systems now restrict efficient growth and business agility because of their excessive management costs, duplication of resources, and fragmented use of applications. The Internet has shown it is no longer necessary to put processing power physically close to the end user. Today's systems must still meet local requirements, but to remain competitive, businesses must aspire to a more common consolidated goal of best business practice. Fujitsu has revised its service and support structure to improve support for the enterprise-class, open-system, mission-critical server PRIMEQUEST. This improvement minimizes the Total Cost of Ownership (TCO) through new, open-systems-based consolidation strategies and world-best application deployment.

1. Introduction

Fujitsu recently released the enterprise-class, open-system, mission-critical server PRIMEQUEST. The new server is based on large-scale (multiple) 64-bit Intel Itanium 2 processors and supports Microsoft Windows and Linux operating systems.

Because of its innovative design, PRIME-QUEST is the first IA server to compete strongly against UNIX systems. It delivers the lowest Total Cost of Ownership (TCO) with very high levels of performance and availability for business continuity.

However, advanced engineering and technical innovation alone do not enable enterprise-level customers to deploy this technology in their business. Drawing on its long experience of mainframe computing, Fujitsu has formed strategic alliances and prepared pre-sales consultancy and post-sales services to deliver sophisticated levels of support for the next generation of mission-critical computing.

2. PRIMEQUEST alliance partners

Windows and Linux can be used as is on PRIMEQUEST servers. However, Fujitsu is working with Microsoft and the open source community to add important additional features such as high availability that will make these operating systems even more functional for mission-critical PRIMEQUEST and other computer systems.

In addition to operating systems features, Fujitsu has strategic global support alliances with Intel Corp., Red Hat, Inc., Novell, Inc. to ensure that responsiveness, quality, and effectiveness in

mission-critical requirements are all maintained (**Figure 1**).

3. Fujitsu's global support structure for PRIMEQUEST

Fujitsu, as a long-standing supplier of mission-critical systems, has a worldwide infrastructure in place to provide all aspects of support from pre-sales solution consultancy to post-sales support to its clients.

Fujitsu provides full IT business support and management around the world on a 24-hour basis. Fujitsu Limited and its two regional operating entities, Fujitsu Siemens Computers in Europe and Fujitsu Computer Systems in the Americas, provide operational support for the three major 8-hour time zones of the world (**Figure 2**).

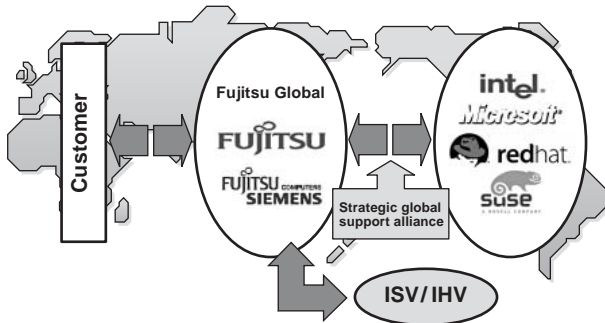Within this global structure, customers in each region receive support from local Fujitsu
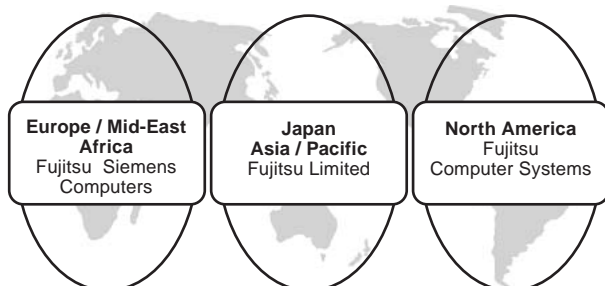
Group Companies (FGCs) and partners via an intranet Web of interconnected knowledge bases and information stores.

In order to provide support across the above areas, Fujitsu's expertise is organized into local, regional, and Head Office groups to optimize the availability of knowledge while structuring the support capability in an easily accessible hierarchy (**Figure 3**). This hierarchy is explained below in terms of pre-sales support and post-sales support structures.

4. PRIMEQUEST pre-sales support

The major areas of pre-sales support that are provided are:
1) Solution Architecture & Design
2) Product Selection, Sizing, and Configuring
3) Benchmarking and Proof of Concept implementation

PRIMEQUEST pre-sales support is provided to customers via local Fujitsu offices backed up with Regional Centers of Excellence in the three major regions, which in turn are backed up by Fujitsu's Head Office support organization.

Figure 1
Alliance partners.

Figure 2
Global support structure.

Figure 3
Pre-sales and post-sales support structures.

Figure 4 illustrates the global structure for PRIMEQUEST pre-sales support available to customers.

The integration of support material and know-how via Fujitsu's internal global intranet enables every support specialist and consultant to access the combined knowledge of the Group.

TRIOLE templates form a base of pre-tested hardware and software solutions for other members of the Fujitsu community.

5. PRIMEQUEST configuration tool

Fujitsu distributes a PRIMEQUEST configuration tool via their intranet to key users in each local Fujitsu office (**Figure 5**). This tool helps these users to determine the correct product components for their customer's needs. The output from Fujitsu's configuration tool is a Build to Order (BTO) sheet that generates instructions to be executed at a Fujitsu factory. The BTO sheet ensures that what is required is actually built and delivered. It also allows Fujitsu to add additional quality assurance by centralized vetting and testing of a required configuration to ensure its
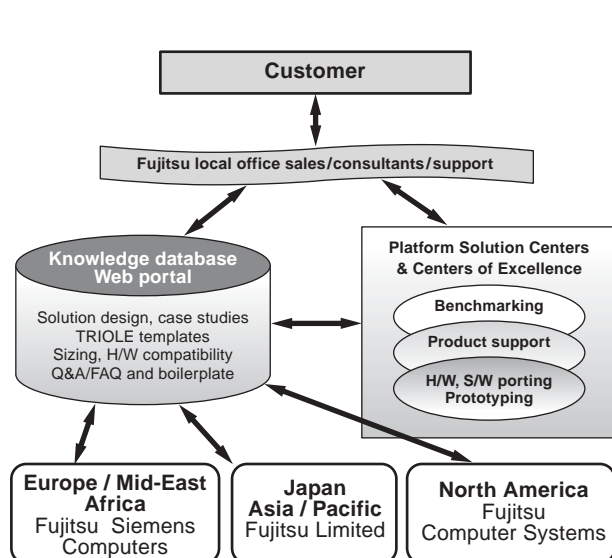
operational viability and reliability. In addition, each local office uses this tool to update the component price information and build the detailed structure of products.

6. Platform support centers

To handle system trials and testing—particularly for customers' mission-critical needs on PRIMEQUEST such as application benchmarking, software porting, and testing of innovative solutions—Fujitsu has implemented regional Platform Solution Centers (PSCs) to meet customers' business needs. These centers have sophisticated facilities and experienced staff, and each center can be directly linked to Fujitsu's prime Platform Support Center in Tokyo for realtime access to additional equipment and services.

In Asia Pacific, the Integration Support Center in Sydney (ISS) works in conjunction with the global PSCs to provide specialized pre-sales support to the region.

Figure 6 illustrates Fujitsu's global PSC structure.

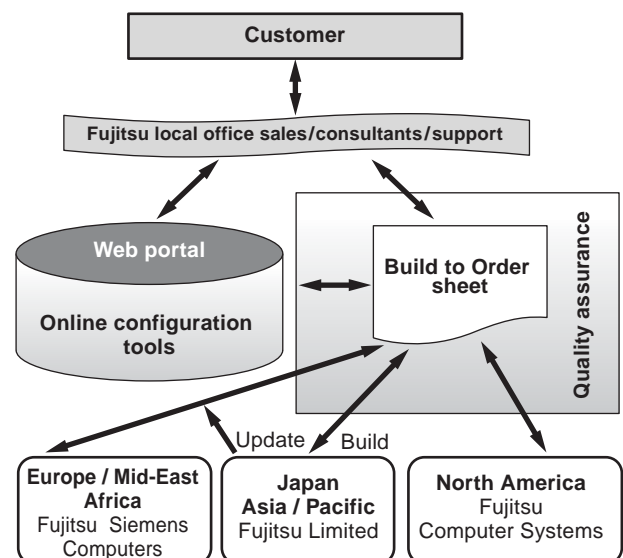The global geographic spread of all Solution and Support Centers is shown in **Figure 7**.

Figure 4
Pre-sales support.

Figure 5
Configuration tool.

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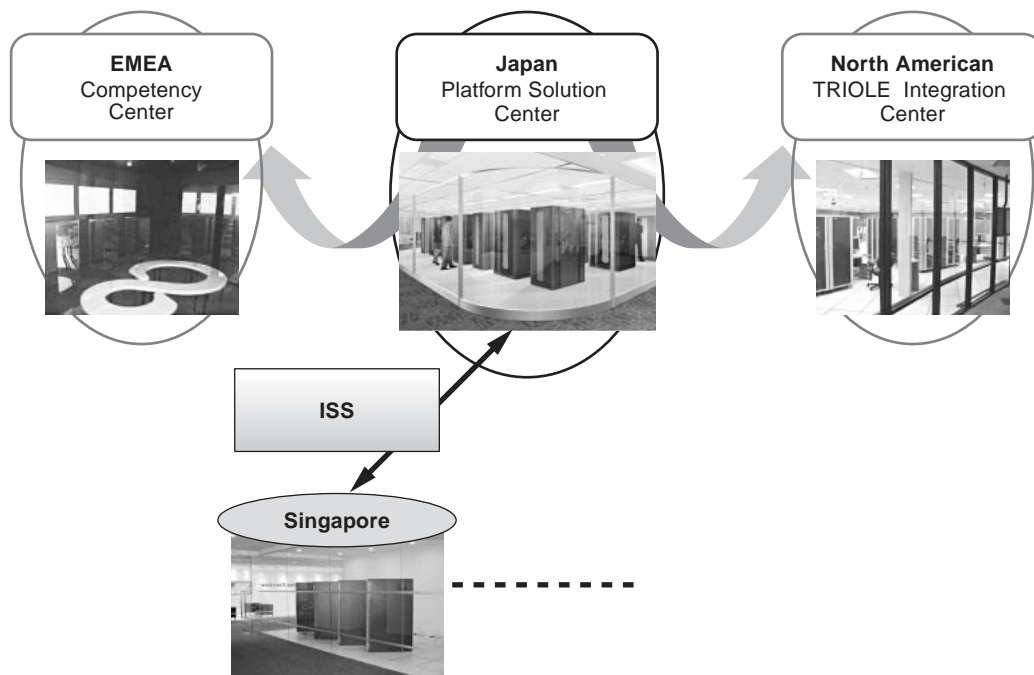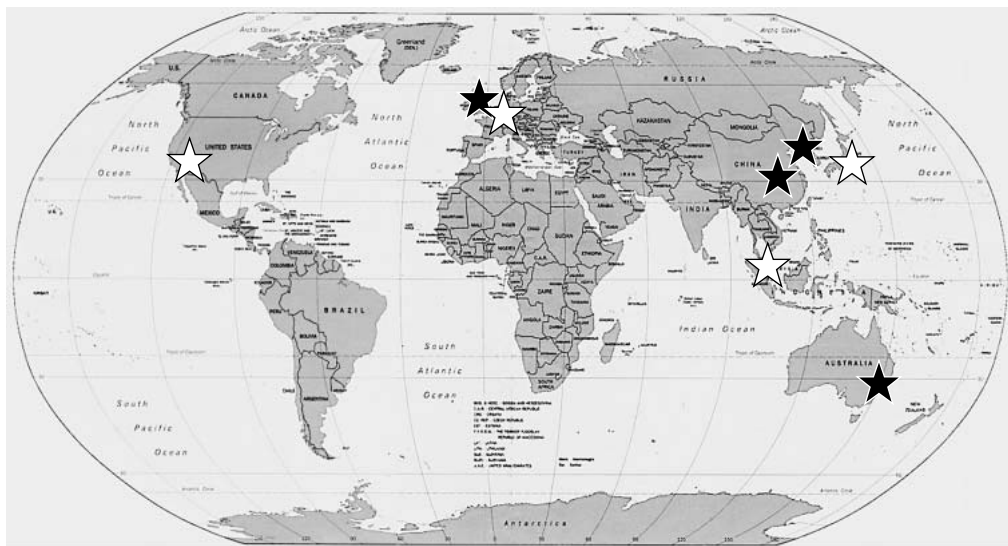FUJITSU Sci. Tech. J., **41**,3,(October 2005)

Figure 6
Global Platform Solution Centers.

☆ **Global Proof-of-Concept (POC) Centers and Centers
  of Excellence**
  Germany
  Singapore
  United States
  Japan

★ **Centers of Excellence**
  Australia
  China
  Republic of Korea
  U.K.

Figure 7
Solution and Support Centers.

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7. PRIMEQUEST post-sales support

While PRIMEQUEST has been engineered to meet the stringent requirements of high-availability business systems, Fujitsu's customers expect a comprehensive range of 24/7 hardware and software post-sales services. These services not only ensure the shortest possible downtime in the unlikely event of a fault, but also offer a pro-active approach to fault prevention.

It is here that Fujitsu's many years of experience with the stringent uptime requirements of mainframe computing prove to be a unique advantage.

Fujitsu's post-sales service offerings meet the service level agreements (SLAs) expected by Fortune 500 companies while providing locally tailored services to match the varied needs of customers in any region of the globe.

The major areas of post-sales support that are provided are:
1) Technical support
2) Warranty support

Figure 8 illustrates Fujitsu's global post-sales support structure for PRIMEQUEST business.

1) Call management, liaison, and escalation

In each country, the local Fujitsu company provides incident logging, call management, and liaison with customers' staff to ensure immediate and accurate communications with engineers so they can solve complex problems. At all levels, early escalation is provided to ensure the highest skills are applied to solve problems.

2) Knowledge database

Local support engineers have direct access to a global incident database that enables rapid searching of fault reports and provides informa-
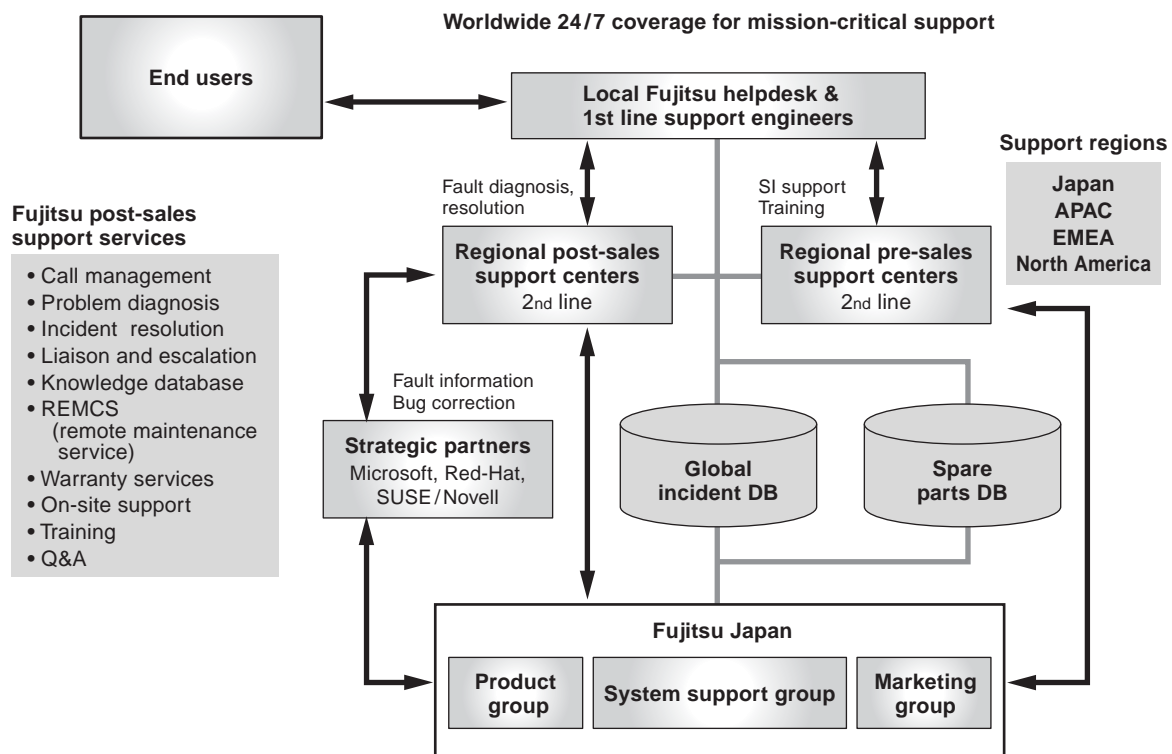

Figure 8
Global post-sales support structure.

tion on known bypasses and full resolutions for problems.

3)   On-site support

In the rare event that specialist engineering or diagnostic services are required on-site, the regional post-sales support centers provide highly skilled and experienced engineers to help local engineers solve problems.

4)   Training

The regional post-sales centers are staffed by highly experienced and trained staff. These engineers take great pride in not only maintaining their own standard of excellence, but also in sharing their knowledge by acting as trainers for local Fujitsu engineers.

5)   Q&A

The post-sales regional support centers provide a 24/7 Q&A service to local Fujitsu engineers so they have the most accurate information about their customer's situation.

8.   PRIMEQUEST warranty services

To ensure the speediest replacement of faulty components under warranty, a global spare-parts database can be accessed via a Web-based application that provides an illustrated parts list. This visual confirmation facility minimizes the possibility of supplying an incorrect part chosen purely by part number (**Figure 9**).

9.   Conclusion

Because of its experience with mainframe and large UNIX systems, Fujitsu is uniquely qualified to provide next-generation, large-scale, mission-critical systems.

The use of Intel architecture and open systems for critical business functions, formerly only attempted on more restricted proprietary and tailored systems, requires a different set of processes and support strategies. Support no longer
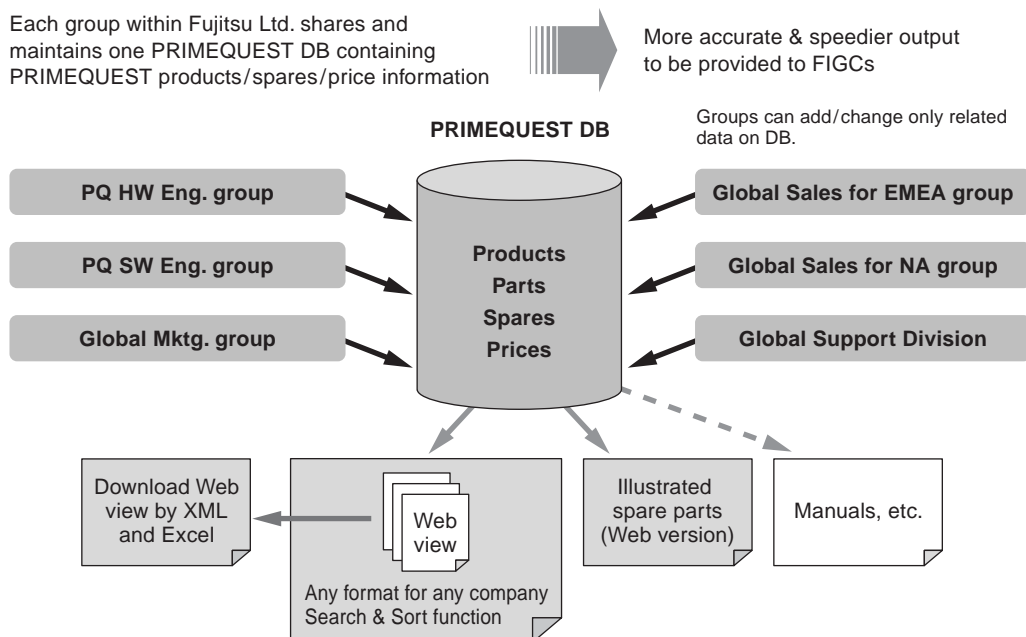

Figure 9
Warranty service.

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resides within a single company. Instead, suppliers must forge support alliances and relations with key partners that go beyond simple baton passing to a more intimate sharing of planning, development, and service strategies. Equally, as customers move from distributed to consolidated environments, sophisticated porting and testing environments and skilled personnel must be readily available and located in the same time zones as the customers they support. In addition, the knowledge gained from partners, developers, benchmark centers, application porting, field experiences, and other sources must be available to everyone supporting customers, wherever they are located.

Fujitsu's strategy takes all of the above requirements into consideration in support of its next generation of mission-critical servers. This is the only way open systems technology can deliver the robustness and business continuity required for continuous operation using industry-standard components and globally available applications.

For tomorrow's consolidated open systems to succeed, the distributed open systems promise of "Doing more with less" that was expounded during the previous cycle of IT infrastructure deployment must now be extended to "Doing more, more often, at less cost, and with greater flexibility and continuity."

Yukio Ishizaki received the Bachelor of Arts in Law degree from the Law Faculty of Niigata University, Niigata, Japan in 1988. He joined Fujitsu Ltd., Tokyo, Japan in 1988, where he has been engaged in global marketing for server systems.

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