ITG STATUS REPORT

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IBM Transaction Processing Facility: Competitive Issues

Overview

The International Technology Group (ITG) is engaged in a major research project to evaluate the market position, technological viability and cost-effectiveness of the IBM Transaction Processing Facility (TPF) environment. Research is based on interviews with users of TPF and competitive systems, technical reviews conducted by leading industry professionals, and detailed cost analyses based on actual user experiences with TPF and other platforms.

This report presents preliminary conclusions from the study. These may be summarized as follows:

- **Market status**. TPF continues to run the world's largest transaction-processing systems. With a few exceptions discussed below, users remain satisfied with performance and availability – levels of 99.999% and higher are reported, and some organizations have operated for three years or more without visible outages. No significant rehosting has yet occurred, and most users have no plans for or serious interest in moving TPF applications to other platforms.

- **Technology base**. TPF is characterized by an extremely efficient process model, by highly effective management and throughput of large, volatile data volumes, and by exceptional capabilities for maintenance of response time, availability, data integrity and security. In its ability to handle extremely large transaction-switching workloads while maintaining high levels of service quality, TPF remains – by a wide margin – the industry's leading platform.

  Support for key industry standards significantly increases the potential to employ TPF in new roles. TPF offers a highly cost-effective solution for high-volume, business-critical Internet messaging; for new travel industry applications such as dynamic fare searching; for secure, real-time information management for customer relationship management (CRM) and business intelligence in financial services; and for a range of applications in other industries.

- **Competitiveness**. Claims by TPF competitors such as Compaq Computer have been found to be inaccurate. These are typically based on questionable methodologies; inappropriate comparisons between inefficient TPF and efficient competitive systems; optimistic assumptions about costs and difficulties of rehosting projects; and failure to review options for functional enhancement, higher development productivity and improved performance using TPF systems.

  For dynamic fare searching applications in a Global Distribution System (GDS) environment, for example, Compaq has claimed that its Himalaya platform offers a "40%" lower total cost of ownership (TCO) than TPF. The reverse is the case. Equivalent or superior functionality may be delivered by a modified TPF-based system with five-year hardware, software, and application development and maintenance costs which are at least 45% lower than for the Himalaya option.

The basis of these conclusions will be detailed in the full ITG report, to be published in May 2002.

Competitive Challenges

TPF users face many challenges. In the travel industry, growth in Web activity and disintermediation threats will continue to increase far into the future. In financial services, critical demands not only for new Web services, but also for greater flexibility of packaging, cross-channel integration, real-time use of information and personalized, responsive customer service must be met. In these and other industries, costs must be contained.

TPF systems form a critical component of user infrastructures. Even if it were technically feasible to replace them (which is by no means clear), it would be prohibitively difficult and expensive. Doing so could, moreover, easily undermine core competitive strengths of transaction-processing efficiency and service quality. New capabilities may be required. But this should not be an "either/or" choice. The real challenge is how to leverage established strengths while meeting new requirements.

Certain actions may be taken within the TPF environment. New tools and techniques may be employed to improve application development and maintenance productivity. Legacy code may be modified to increase performance and slow capacity growth. Data input structures may be redesigned to increase throughput and reduce load times.

Complementary approaches also offer new potential. Relational systems may be put in place to handle data preparation and exploit TPF-generated data for new applications without impairing transactional performance. Combinations of TPF and relational data stores will, moreover, deliver higher performance at lower cost in high-volume environments than executing transactions uniquely on a relational system. These and other possibilities will be detailed in the full ITG report.

TFP will, in most organizations, increasingly coexist with a broad range of other platforms. Technological change is a normal and inevitable process. But unnecessary change merely wastes resources that might have been used elsewhere, with greater impact, to meet more substantive challenges. For most TPF users, there are more important competitive priorities.

Himalaya Issues

Certain issues concerning the Compaq Himalaya platform should also be raised. The Himalaya is one of the computer industry's most proprietary environments. It is built around a largely unique dual-processor design, non-standard operating system, and massively parallel processing system architecture. The NonStop SQL database is one of the industry's least used and least supported relational platforms. Third-party applications software and tool support are limited.

Compaq plans to transition to Intel Itanium. Users deploying new solutions on Himalaya would be required to recompile them within a few years. The transition involves significant technical risks. It is not clear that Itanium will achieve its design goals, and it will not be easy to migrate the NonStop environment to or optimize its performance on this platform. There are broader risks associated with the Compaq-Hewlett Packard merger. These subjects will be discussed in depth in the full ITG report.

There may be legitimate reasons for wishing to move TPF applications or functionality to other platforms. But it is difficult to see the Compaq Himalaya as an attractive alternative. Other options should be explored first.

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