



## CIO Issues

### Visa CIO John Partridge on Reliability and Innovation

By Pam Baker

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**John Partridge has overall management responsibilities for Visa's global payment network, VisaNet, and he oversees technology development of new payment applications and services. That is no small feat. He must orchestrate changes and upgrades without ever shutting the system down.**

▶▶ A CIO by any other name is still head of I.T. So it is with John Partridge, who is president and CEO of Inovant LLC, Visa's global I.T. organization. He joined parent company Visa USA in October 1999 to lead the transformation of Visa's Shared Services Organization into a wholly owned I.T. subsidiary. Partridge has overall management responsibilities for Visa's global payment network, VisaNet, and he oversees technology development of new payment applications and services.

That is no small feat. He must orchestrate changes and upgrades without ever shutting the system down. "When Visa updates VisaNet, it's

like modifying a 747 engine while the plane is in the air and full of passengers," said Partridge. "The margin of error is zero."

The system runs in several data centers, all in secret locations around the world, and all on a single application copy. There is one virtual application with a common view and common rules used around the world. Visa loads code into a single data center and then switches one center at a time while traffic automatically routes to other centers. It is a system totally unique to Visa, and customers never see even a hiccup in the system's performance.

Across multiple time zones and in over 172 currencies, VisaNet connects 21,000 member financial institutions with more than 20 million merchant locations and 1.3 billion Visa cardholders worldwide seven days a week, 24 hours a day. One hundred million Visa transactions are processed per day, 5,546 per second in peak season. In 2004, VisaNet volume totaled \$1.7 trillion. Each transaction makes the entire electronic path in 1.4 seconds. And Visa pulls it off year after year at near 100 percent accuracy rates.

Partridge talked with CIO Today about the secrets to achieving a near-perfect record in I.T. performance at the world's leading payment brand. He is cordial and quiet; an understated intelligence belies his casual choice of words. Highly efficient and organized, he is a man of logic and forbearance.

**CIO Today: What are your top concerns as CIO?**

**Partridge:** Not concerns really, more a matter of focus. The largest area of focus for me is on the reliability and availability of the service. Every decision we make must be weighed against its impact on reliability and availability of the service.

The second area of focus is on flexibility. How do we architect and build the system so changes can be leveraged across numerous product and service platforms to better serve our customers?

For example, Visa is currently introducing account-level management that allows banks to customize payment changes, loyalty programs, and other services to fit the needs and wants of their individual customers.

The third area is efficiency. The fourth, of course, is [security](#) 📁.

Security issues are of broad concern to everybody these days. We have always maintained the highest of security measures, but because of the evolution of technology towards an open-systems component, we are continually looking for new tools, processes, and procedures to deal with that. That job will never end.

**CIO Today: Has the I.T. environment changed from five years ago?**

**Partridge:** For one thing, there is significantly more money being invested in security than there was five to 10 years ago.

Technology evolves over time. As a result, we are starting to see the reality of the Web in terms of becoming a mainstream portal.

And, services-on-demand architecture is more component-based and we can reuse those components across multiple applications. That drives down development costs and speeds up implementation time. That wasn't possible until recently.

For example, we moved from network- to router-based and we delivered in less than four months by reusing components, as compared to the full year it takes to implement the other way.

**CIO Today: How have new legislative demands affected the I.T. department and the CIO in particular?**

**Partridge:** It is a full-time job to keep current with all the various regulations around the world. We literally pinned a map to the board in a meeting recently trying to visualize them all.

As an illustration of the impact, consider the Sarbanes-Oxley regulation. It is cumbersome, costly and we've seen no significant benefit from it. Sarbox has helped us validate that our controls are adequate, but it did not help us find gaps in controls or processes.

It would be nice if all the regulatory parties around the world, or at least in a single country, could coordinate the examination and

certification process. As it is, we are undergoing repetitious examinations almost daily.

**CIO Today: Which enterprise component or technology will be growing most in terms of its slice of your company's budget in the next 12 months?**

**Partridge:** We are pretty balanced in our spending. We spend about a third of the budget on core delivery applications in the clearing and settling of accounts; a third in delivering value-added services like dispute management and loyalty and reward programs; and a third in developing, building, and enhancing applications.

We are spending more on development of open systems in this last category, but not significantly so. Visa's investment in open systems development increased by 9 percent from fiscal year 2004 to 2005.

**CIO Today: Can you walk us through the decision-making process of implementing a large-scale business-process management initiative?**

**Partridge:** We started the I.T. department as a company in 2001 with a five-year plan in place then. So we have largely already identified our needs.

We have a six-member executive team, and a 25-member operating committee, comprised of senior executives.

The operating committee participates in developing an operating plan and in identifying major processes and initiatives. It meets once a month.

The executive team is more focused on strategy and daily operations. It meets once a week.

There is a meeting agenda, work is assigned, and members report back with recommendations and solutions. The committee then makes a decision.

A large-scale development is different because it is driven by a customer who is paying for it. The executive team would have to sign off on

that only if the project entails a huge cash outlay, or expense liability, to Visa in the initial work.

**CIO Today: What are one or two software or hardware products your company uses that you would describe as outstanding?**

**Partridge:** We use a wide spectrum of products. There are so many variables. It would be difficult to name anything without a qualifier.

**CIO Today: Which emerging technology do you see as most important to the enterprise?**

**Partridge:** Tools that support component reuse. RFID and mobile payments are beginning to have an impact in our business.

**CIO Today: Where do you go to do your research on new technologies?**

**Partridge:** First of all, it's important to understand we are not interested in being a first adopter. We are a fast adapter.

I had rather let some of my friends in other industries try it out first and wrestle with the wrinkles.

But we do cover as much ground as possible to keep abreast of developments. We visit IBM, Sun, HP, Cisco and other company labs. We attend seminars and we do some of our own research. Then we pull it all through our CTO office.

