



Time Is Money – Big Money – at Ciba

Electronic commerce can open new global markets, significantly streamline internal and supply-chain operations, and dramatically reduce costs. However, it presents a challenge. Total dependence on computerized data and applications means humans can no longer fill in for a crashed system. If your system stops, your business stops.

Ciba Specialty Chemicals' Colors Division came to this realization when it began to use EDI (Electronic Data Interchange) to interact with customers and suppliers. Manual processing was no longer an option. If an electronic transaction were lost, there would be no paper trail. In addition, since Ciba uses just-in-time manufacturing, a prolonged system failure would force Ciba to shut down operations when its supply of even the most trivial of raw materials ran out.

The scale of this threat became apparent when Ciba received a disaster-planning report that pegged the average cost of system downtime at **more than \$16 million per day!** That sounds frightening, but Ciba is

not worried. A MIMIX[®] for IBM[®] AS/400[®] and iSeries 400 Managed Availability solution from Lakeview Technology helps guarantee that the company will never lose access to its valuable data and applications.

A Long and Venerable History

Today, it seems that every enterprise more than a few years old claims to have "a long and venerable history." In the case of Ciba Specialty Chemicals, the claim is eminently valid. The company traces its history back to 1758, when J.R. Geigy AG began trading in chemicals and dyes in Basel, Switzerland. In 1971, Geigy merged with another well-established Basel-based chemicals company, Ciba, which was founded in 1884. The merged company became known as Ciba-Geigy Ltd.

In March 1996, after a merger with a large pharmaceuticals company, the specialty chemicals divisions of Ciba-Geigy were spun off to create Ciba Specialty Chemicals (Ciba). The new company's shares

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began trading on the Swiss Exchange in 1997 and on the New York Stock Exchange in August of 2000.

Today, Ciba, headquartered in Basel, Switzerland, is the world's second-largest specialty chemical maker, boasting more than 24,000 employees, 32 sites and sales in 117 countries. In 1999, the company's revenues were over \$6 billion. Its products add color, ensure durability



Ciba



MIMIX™

Constant Availability...No Exceptions

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and generally enhance a vast range of industrial and consumer goods in a wide variety of industries, including:

- Plastics
- Automotive
- Inks, paints and coatings
- Home and personal care
- Municipal and industrial pollution control and waste treatment
- Photographic and print
- Paper and packaging
- Fibers, carpets and textiles
- Extractive industries, such as mining and oil

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Ciba's Colors Division runs its business on two IBM AS/400 systems. Its software applications include SSA Global Technologies' BPCS®, an Enterprise Resource Planning (ERP) suite designed primarily for the industrial market, and a number of custom-developed applications. In addition, Ciba's systems control all of its production lines. The company depends on an AS/400 to process 8 to 10 million transactions every day.

The potentially high cost of system outages at Ciba created a business imperative to guard against downtime. To meet the need, Ciba opted for a redundant-system strategy. Under this approach, a real-time backup is available to immediately assume responsibility for operations if the primary system fails or must be taken offline for maintenance. Ciba achieved its High Availability and Continuous Operations objectives using a MIMIX Managed Availability solution from Lakeview Technology and EXOGEN AG, in Matzingen, Switzerland.

EXOGEN is a Lakeview Premier Marketing Partner for MIMIX and OmniEnterprise™, an IBM Premier Business Partner, and a Lotus Advanced Business Partner. EXOGEN specializes in "Platform Enabling," including:

- Installing and configuring servers, clients, printers and the corresponding operating systems;
- Implementing Lotus® Notes® and Domino™ projects;
- Installing, configuring and supporting highly available AS/400 environments using Lakeview Technology's MIMIX product suite;
- Deploying heterogeneous replication solutions, including replication among IBM DB2®, Informix®, Oracle®, Sybase® and Microsoft SQL Server® databases, using Lakeview Technology's OmniEnterprise™ solution suite.

The MIMIX Solution

Ciba Specialty Chemicals' Colors Division chose MIMIX and EXOGEN for a number of reasons:

- IBM Switzerland recommended MIMIX and EXOGEN to Ciba;
- MIMIX was tested and proven to work in Ciba's environment;
- Ciba visited an existing MIMIX customer and saw that MIMIX provided a superior solution;
- Lakeview Technology has a reputation as the worldwide leader in Managed Availability solutions for IBM AS/400 and iSeries 400;
- EXOGEN has extensive experience and expertise in those technical areas that are most important to Ciba: DB2/400, AS/400, OS/400® and MIMIX.

"Our contact at IBM Switzerland suggested we talk to EXOGEN and Lakeview," explained **Romain Kaufman, IT Director for Ciba**. "We chose MIMIX because it

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was the only solution able to provide both Continuous Operations and true High Availability. Lakeview's worldwide reputation for High Availability confirmed our decision."

EXOGEN provided needs analysis, consulting, network planning, implementation, training and testing as part of Ciba's Managed Availability solution.

In the past, Ciba ran its operations on a single AS/400 model 720. To implement the Managed Availability solution, Ciba acquired a second model 720 system. With the help of an EXOGEN consultant, Ciba then analyzed what critical applications, objects and libraries needed to be synchronized as part of the solution. After installing the hardware and software, moving the necessary applications, system objects and peripherals, and stress testing the backup system, Ciba's Managed Availability solution became operational in late 1998.

Realizing the Benefits

Prior to implementing MIMIX, Ciba needed a 12- to 24-hour downtime window to restore its databases and restart its systems after a failure. However, by using MIMIX to maintain real-time replica systems, Ciba can now recover quickly from any problem that may occur. Today, it can be back online, with a fully restored database, in less than 30 minutes after a total system failure.

In AS/400 and iSeries 400 environments, unexpected downtime events, such as system failures, are rare. However, users of these systems are not immune to the impacts of necessary hardware and software upgrades and database backups and reorganizations. In fact, in the typical AS/400 or iSeries 400 installation, planned events account for more than 95% of downtime.

Eliminating planned downtime is an added benefit of MIMIX. Ciba performs nightly backups, database reorganizations and other administrative functions on the backup system without affecting operations.

When an upgrade or other maintenance must be performed on the primary system, users are switched to the backup machine. MIMIX then captures any updates applied to the backup system databases. After users are switched back to the primary system, MIMIX automatically synchronizes data and other AS/400 objects on both machines.

In the future, Ciba plans to improve availability even further. It is considering deploying a geographically distributed backup strategy and using MIMIX Monitor™, which can automatically monitor systems, detect failures and quickly switch users to backup systems if necessary. When this advanced solution is in place, even a catastrophic event, such as a flood or other natural disaster, will not disrupt operations. Ciba will be able to quickly and automatically switch operations to the remote backup site.


Eliminate the Risk of Downtime

The trends of the past several years are absolutely clear: increased use of shop-floor automation to enhance productivity; increased use of just-in-time manufacturing principles to minimize raw-materials and finished-goods inventories; and increased use of system-to-system communications to eliminate cumbersome and costly human interactions.



These new business paradigms have delivered significant benefits, such as lower labor costs, improved product quality, reduced inventory costs and significantly streamlined operations. However, the benefits come with a threat attached. You are now totally dependent on your computer systems and there is no turning back. System failures threaten your busi-

ness. A sufficiently lengthy outage could shutter your enterprise.

You can simply live with the risk or you can, like Ciba, take action. For Ciba, the answer is MIMIX for IBM AS/400 and iSeries 400. MIMIX offers Ciba complete protection against all downtime, whether planned or unplanned. 



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