



Disaster Recovery: Finding ROI without the Disaster



Rob Humbach
Area Sales Manager



Today's Agenda

- ◆ Should It Take a Disaster to Recover Your Investment?
- ◆ The Availability Spectrum
- ◆ Common 'Disaster-Driven' ROI Solutions
 - Focused on Unplanned, Unpredictable Downtime (5%)
- ◆ Managed Availability ROI
 - Everyday ROI Focusing on Predictable Planned Downtime (95%)
 - Automatic Protection & ROI for Unpredictable Unplanned Downtime (5%)
- ◆ MIMIX Managed Availability Solutions
- ◆ MIMIX ROI Testimonials
- ◆ Questions & Answers



[Should it Take a Disaster to Recover Your Investment?](#)

Disaster Recovery: A Grudge Buy or Providing ROI?

- ◆ *“The fact that most organizations are unlikely to ever use the full extent of the services they have paid for has in the past made disaster something of a “grudge buy “ and not something that most companies are eager to spend money on.”*

From ITWEB
25 September 2001



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Disaster Recovery: Bottom Line or Bottomless Pit?

- ◆ *“Recovery services don’t add anything to the bottom line, but the consequences of not having a plan in place can be disastrous.”*

Dave Linacre
Managing Director
IBM Business Continuity and Recovery Services

from ITWEB
25 September 2001



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Disaster Recovery: Probability or Availability?



- ◆ *“...the probabilities associated by corporate management with the occurrence of most disasters are so low that the expected value of most disaster recovery programs does not begin to cover the costs required to implement (or purchase) them.*

William Cappelli
Disaster Recovery Program Costing: The Missing Element

from GIGA
 22 January 1998



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What's on the CIO's Mind

- ◆ Survey of Global 1000
 - System Reliability / Availability / Security 56%
 - How to Manage the Data 46%
 - System Performance 16%
 - Total Cost of Ownership 10%

THE WALL STREET JOURNAL.

U.S. View ▶ ASIA ▶ EUROPE ▶ Set Default View

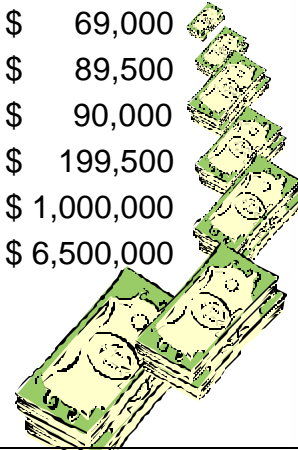


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Real World Impact \$\$

Average Hourly Cost of Downtime

◆ Telephone Ticket Sales	\$ 69,000
◆ Airline Reservations	\$ 89,500
◆ Retail Catalog	\$ 90,000
◆ Infomercials / Promotion	\$ 199,500
◆ Retail Banking	\$ 1,000,000
◆ Retail Brokerage	\$ 6,500,000



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Impacts on the Cost of Downtime

Tangible Costs

- ◆ Lost Revenue
- ◆ Lost Wages
- ◆ Remedial Labor Costs
- ◆ Lost Inventory
- ◆ Marketing Costs
- ◆ Bank Fees / Penalties
- ◆ Legal Costs

Intangible Costs

- ◆ Lost Opportunity
- ◆ Employee Retention
- ◆ Loss in Share Value
- ◆ Goodwill
- ◆ Brand Damage



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Is Your DR Solution an Expense?

- ◆ Can You Predict Your Next **UNPLANNED** System Outage?
- ◆ Can You Predict the Duration and Amount of Losses?
- ◆ Can you place an ROI on Your Disaster Recovery Solution?
- ◆ Does Your Disaster Recovery Solution Provide Benefits or Alternate ROI Without A Disaster?



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Or, Is Your DR Solution Also an Investment?

- ◆ Can You Predict Your Next **PLANNED** System Outage?
- ◆ Can You Predict the Duration and Amount of Losses?
- ◆ Can you place an ROI on Your Disaster Recovery Solution?
- ◆ Does Your Disaster Recovery Solution Provide and Benefits or ROI Without A Disaster?





[The Availability Spectrum](#)

Value Proposition Impacted by Type and Amount of Downtime

◆ Unplanned

- Unpredictable events which cause an outage .. typically related to power, natural disaster or human error.

Typically Less than 5% of All Downtime!

◆ Planned

- Daily / weekly saves, batch jobs, database reorganizations, application & system upgrades, system maintenance, performance tuning and others.

70-90% of all downtime (95+% on iSeries) is directly associated with planned activities.



[The Availability Spectrum](#)

Should It Take A Disaster To Recover Your Investment?



◆ 'Disaster-Driven' ROI Solutions...

- If Your Disaster Recovery Solution **ONLY** Addresses **UNPLANNED, UNPREDICTABLE DOWNTIME** (Less than 5% of Downtime) *it will take a disaster to find ROI*

◆ ROI Everyday DR Solutions

- If Your Disaster Recovery solution **ALSO** Addresses **PLANNED, PREDICTABLE DOWNTIME**. (95+% of All Downtime on iSeries), you'll find everyday ROI without the disaster!



[The Availability Spectrum](#)

Why Not Have Your Cake & Eat It Too?



◆ Managed Availability Solutions for iSeries

– Approaching iSeries Downtime As A Whole

- Reduce/Eliminate 95% Planned Downtime
- Protection Against 5% Unplanned Downtime



[The Availability Spectrum](#)

Managed Availability - Definitions

◆ Disaster Recovery

- In event of an unplanned site loss – recovery is made possible .. Data and objects are stored offsite.

◆ High Availability

- Applications and data are available and protected against downtime due to unplanned events during operating hours

◆ Continuous Operations

- Applications and data are available and protected against downtime due to planned events during operating hours

◆ Continuous Availability

- Applications and data are available and protected against downtime due to planned and unplanned events during operating hours .. often 24x7.



[The Availability Spectrum](#)

Signs You Need Managed Availability

- ◆ **Shrinking Back-Up Windows**
 - Shrinking by 66% per year (Gartner Group)
- ◆ **Expanded Internet Dependence**
 - e-Commerce / Web Enabled Information
- ◆ **Global Computing/Mobile/Remote Workers**
 - New Classes of Users / Driving 24x7 Requirements
- ◆ **Integrated Applications for Efficiency**
 - ERP / CRM / EAS – Exposes Entire Enterprise
- ◆ **Server Consolidation**
 - All Your Eggs in One Basket!



[The Availability Spectrum](#)

Managed Availability is...

- ◆ Driven by **documented** Service Level Agreements (SLA's) between Business Units & IT
- ◆ Designed to Business Functions or Applications - not systems or partitions; Measured by Recovery Point Objectives (RPO) & Recovery Time Objectives (RTO)
- ◆ Integrated Continuous Operations (CO) **and** High Availability (HA) solutions
- ◆ Based on "Known Recovery Points"
- ◆ Focused on Application Recovery – not replication



[The Availability Spectrum](#)

Should It Take A Disaster To Recover Your Investment?



- ◆ **What are Your Managed Availability Needs and Solution Expectations?**
 - Business Impact Analysis
 - Service Level Agreements
 - Your Desire for a Solution or a DR Requirement Check-off
- ◆ **Your Level of Optimum Investment Depends Upon...**
 - Your hourly cost of Downtime.
 - The adequacy of your available downtime window and your ability to perform Planned System Maintenance without affecting your users.
 - The true cost of your current/proposed DR solution.
 - The true value of your current/proposed DR solution.



[The Availability Spectrum](#)

RPO and RTO – Definitions

- ◆ **RPO** is the targeted tolerance threshold for lost business transactions. It defines how much data can be lost or how far you can go back in time to resume application functionality.
- ◆ **RTO** is the targeted amount of time required to resume and recover application functionality. Focus should be on how fast the application can be “restarted.”



[Common 'Disaster Driven' ROI Solutions](#)

Solutions with 'Disaster Driven' ROI

(Primarily Addresses Unplanned Downtime)

- ◆ Backup & Restore
 - Tape Backup
- ◆ Backup & Restore at 3rd-Party Recovery Site
 - Sunguard / Comdisco
 - IBM BCRS Hot Site Offering
- ◆ SAN
 - EMC
 - Shark



[Common 'Disaster Driven' ROI Solutions](#)

Backup & Restore – Tape Backup

(Only Addresses Unplanned Downtime)

PRO's

- ◆ Sound Backup Policy and Procedures Are Good and Are A Piece of the total Managed Availability solution.
- ◆ Known DATA Recovery Point Set
- ◆ Perceived as an "Inexpensive" solution (until you actually have to recover from a backup)

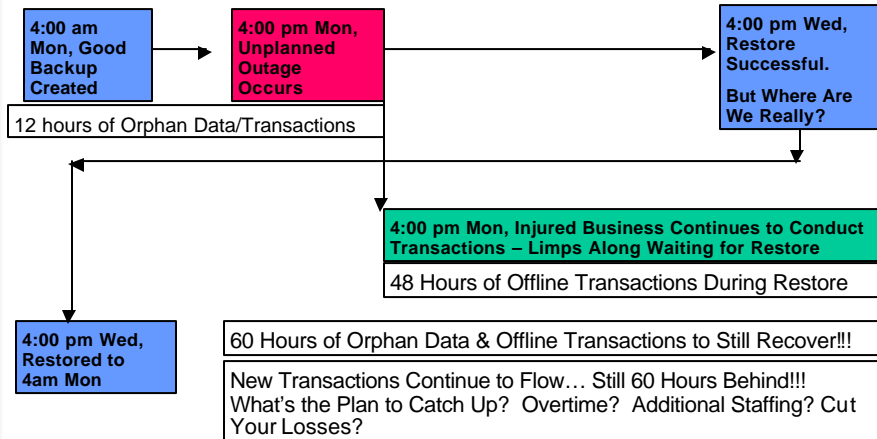
CON's

- ◆ Users Must Be Off System -- Causes of a majority of Planned Downtime pain
- ◆ 48 hours Average Time to Restore
- ◆ If Backup is corrupted, do you have time to redo it?
- ◆ Can you recover from your Backups? Have you tested / tried?
- ◆ High Cost & Time to Recover
- ◆ Only Recover to Last Good Backup!!!
- ◆ What about orphan data? Lost Transactions? What if you can't recover?
- ◆ Labor Intensive Disaster-Driven ROI

[Common 'Disaster Driven' ROI Solutions](#)

Backup & Restore – Timeline

(Only Addresses Unplanned Downtime)



[Common 'Disaster Driven' ROI Solutions](#)

3rd – Party Recovery Site Providers

(Only Addresses Unplanned Downtime)

PRO's

- ◆ If You Have a Site Loss
- ◆ Up-to-date equipment
- ◆ Staffed 24/7
- ◆ Perceived “Less Expensive” due to Monthly Payment Schedule
(Ask yourself what real value are you getting in return?)
- ◆ Meet minimum requirements for investors, banks, and regulators who want a DR option in place.

CON's

- ◆ Same as Backup & Restore, PLUS....
- ◆ First site choice and Access not always guaranteed – First Come, First Serve
- ◆ Lack of Autonomy/Ownership
- ◆ Limited Time for Recovery Tests/Practice
- ◆ You're Still On Your Own for Restoring
- ◆ COST – With current HW & SW leasing options you could own your own HA/DR solution in 3-5 years!
- ◆ Likely only to use in event of site loss.
- ◆ DR Contracts Auto-Renew. Your DR Plan may be managed by purchasing, not IT!



[Common 'Disaster Driven' ROI Solutions](#)

Storage Area Network (SAN, e.g. EMC)

(Addresses Unplanned Downtime & Limited Planned Downtime)

PRO's

- ◆ Data Storage for Multiple Platforms and Databases
- ◆ Replication Closer to Near Real Time than Backup and Restore (Tape Backup) – Net Net is Improved DR... but at what price?
- ◆ PERCEIVED as less complex of a solution.

CON's

- ◆ COSTLY SOLUTION! Twice the disk plus high bandwidth costs
- ◆ Finite probability for Data Corruption, especially during an unplanned outage!
- ◆ Only 1 Active Copy of the Data... no additional workload balancing benefits. No Queries, No Reporting off backup. Backup server must be idle until needed.
- ◆ All or Nothing proposition... Replication and Restore, all or nothing – Can't decide to replicate, switch or recover a single DB or Application on the server

No True "High Availability" Customer References – but positioned as HA.



[Managed Availability ROI](#)

Solutions with Everyday ROI

(Addressing Planned AND Unplanned Downtime)

- ◆ **Planned Downtime is a Daily / Weekly / Monthly Occurrence... Predictable!**
 - Daily / Weekly Backups
 - Database Reorg's / Application & System Upgrades
 - 95%+ All iSeries Downtime is PLANNED!
- ◆ **An Easy & Accurate ROI Calculation**
 - # Hours Per Month Planned Downtime Is Known!
 - Hourly Cost of Downtime is Known!
 - ROI, Time to Breakeven and Payback is Known!



[Managed Availability ROI](#)

Calculating Your ROI

(Just By Eliminating Planned Downtime)

EXAMPLES: (Assume 99.5% Service Availability*)

or 4.2 Hours Planned Downtime/MO

For A Small Business

X \$10,000 Ave Cost Per Hour
 = \$500,000 / Year in Savings!
 = ROI (Planned Downtime) = Payback in 2.5 Months
 = ROI in 12 Months = Net Return of +\$350,000 (Planned DT Only!)

For A Retail Catalog Operation

X \$90,000 Ave Cost Per Hour
 = \$4.5 Million / Year in Savings
 = ROI (Planned Downtime) = Payback in Month # 1
 = ROI in 12 Months = Net Return of + \$4 Million (Planned DT Only!)

* GARTNER GROUP, 2001: *Industry Norms Suggest that 99.5% service availability – or up to 50 hours of PLANNED Downtime and 43 Hours of UNPLANNED Downtime per year – is “Outstanding.”*



[Managed Availability ROI](#)

Calculating Your ROI

(Just By Eliminating Planned Downtime)

EXAMPLES: (Assume 99.5% Service Availability*)

or 4.2 Hours Planned Downtime/MO

For A Large Manufacturer

X \$200,000 Ave Cost Per Hour
 = \$10 MILLION / Year in Savings!
 = ROI (Planned Downtime) = Payback in 1 Week!
 = ROI in 12 Months = Net Return of +\$8.5Million (Planned DT Only!)

NOW ADD: 43 Hours/Yr of UNPLANNED Downtime!

- ◆ Small Business = \$10k x 43 = add \$430k
- ◆ Retail Catalog = \$90k x 43 = add \$3.87 Million
- ◆ Large Manufacturer = \$200k x 43 = add \$8.6 Million



[MIMIX Managed Availability Solutions](#)



◆ iSeries Managed Availability

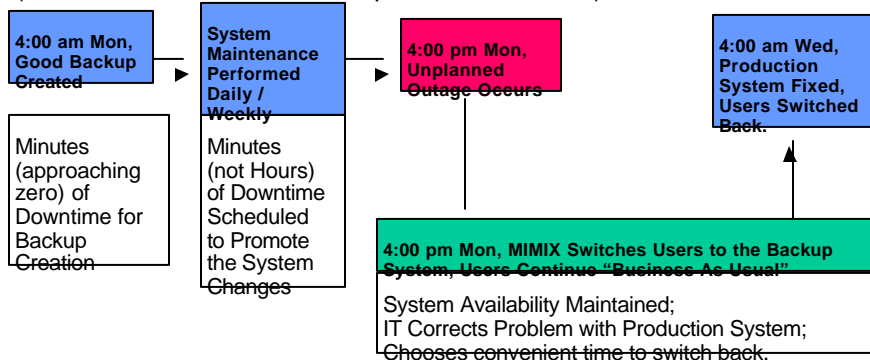
- Mission-critical systems/applications
- Real-time replication of data and objects
- Transparent automatic failover/switchover
- Application recovery oriented



[MIMIX Managed Availability Solutions](#)

MIMIX Managed Availability

(Address BOTH Planned & Unplanned Downtime)



Planned Downtime Reduced from Hours to Minutes!

Unplanned Downtime Eliminated with Switch to Backup!



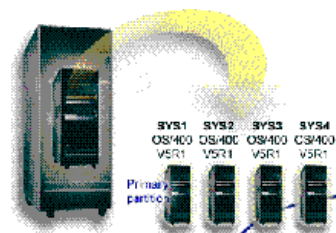
Managed Availability Strategies Backup Elimination



Managed Availability Strategies

Availability LPAR (Logical Partitioning)

- ◆ Planned Downtime
 - Backups
 - File Promotions
 - Application Upgrades
 - File Reorganizations
 - Batch Windows
 - Routine Maintenance
 - Reporting





Managed Availability Strategies

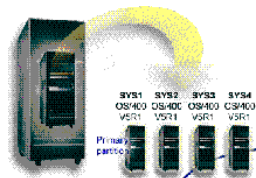
Availability LPAR

Advantages

- ◆ Less Hardware Costs
 - One Server
 - No Communication Planning or Costs
- ◆ Overall Less Investment
- ◆ Simpler to Implement
- ◆ Eliminates Planned Downtime

Disadvantages

- ◆ System Outages
- ◆ Disaster Recovery



Managed Availability Strategies: Continuous Operations (Unplanned and Planned Downtime)





Managed Availability Strategies

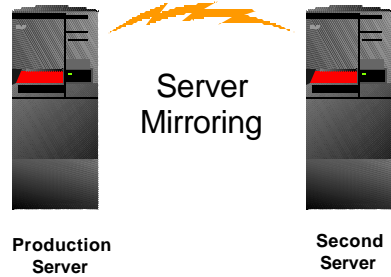
Two Server Configuration (Local)

◆ Reliability Issues

- System Outage
 - DASD Error
 - Processor Failure
 - Application Error

◆ Planned Downtime

- Back-ups
- Upgrades



Managed Availability Strategies: High Availability (Disaster Recovery, Unplanned and Planned Downtime)

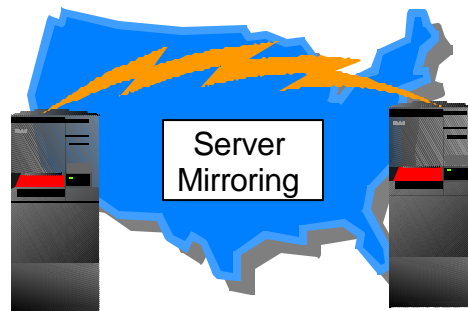




Managed Availability Strategies

Two Server/Two Location Configuration

- ◆ Disaster Recovery
 - Site Outage
- ◆ System Outage
 - DASD Error
 - Power Outage
 - Application Error
- ◆ Planned Downtime
 - Back-ups
 - Upgrades



[MIMIX Managed Availability Solutions](#)



World's most popular Managed Availability solutions for the iSeries

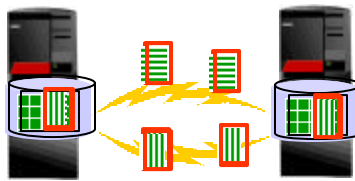
MIMIX Components

- ◆ MIMIX Replicator™ - integrated replication components for complete system replication
 - MIMIX DB2 Replicator for iSeries
 - MIMIX Object Replicator for iSeries
- ◆ MIMIX Monitor™ for iSeries
- ◆ MIMIX Promoter™ for iSeries
- ◆ MIMIX for IBM MQSeries
- ◆ MIMIX for SAP R/3



MIMIX DB2 Replicator for iSeries

- ◆ Ensures data availability
- ◆ Real-time replication of DB2 data between one or more iSeries or AS/400's
- ◆ Supports high-transaction environments
- ◆ Integrated with MIMIX Object Replicator



MIMIX Object Replicator for iSeries

- ◆ Ensures application availability
- ◆ Real-time replication of iSeries objects
- ◆ Commonly replicated objects:
 - Programs, files, data queues and data areas
 - User spaces, profiles and passwords
 - Configuration objects
 - IFS, DLO and Spool Files





MIMIX Monitor for iSeries

- ◆ Operations automation
- ◆ Detects system outages and initiates the MIMIX recovery process
- ◆ Switches users to an available system automatically
- ◆ UPS monitoring and management



MIMIX Promoter for iSeries

- Allows multi-system database reorganizations and application file updates with virtually no downtime
- Complete process status information for ease of operations
- Flexible design with data and control exits for customization in specific environments
- Works with database files associated with any iSeries application software





[MIMIX ROI Testimonials](#)

Plastipak ROI: \$3 Million/Year from MIMIX!

Plastipak

- Privately held producer of rigid plastic containers
- HQ in Plymouth, MI -- 11 manufacturing plants operating 24 / 7

Planned Downtime Threat – Plastipak’s Biggest Threat

- Systems had to be stopped regularly (running SAP R/3)
 - to save and reorganize databases
 - to upgrade hardware and software.

Cost of Downtime

- Plastipak conservatively estimated their downtime costs at \$250,000/hour in lost revenue and other operational costs.
- MIMIX has reduced Plastipak’s downtime by at least two hours a month
- Very Conservatively, Plastipak reports a savings of at least \$3 Million per year!



[MIMIX ROI Testimonials](#)

www.lakeviewtech.com/news/case/Plastipak.pdf



Plastipak ROI: \$3 Million/Year from MIMIX!

ROI from PLANNED DOWNTIME... (High Availability)

“MIMIX gives me a free ticket to do whatever type of upgrade or maintenance that I need to do. We just switch users to the backup system during maintenance operations. If necessary, we can even leave them there for a day or two while we do whatever needs to be done.”

Potential ROI from UNPLANNED DOWNTIME... (Disaster Recovery)

“MIMIX is also a great help if the system goes down. With MIMIX, we just switch users to the backup and it’s business as usual.”

Bill Peedle, SAP basis manager
Plastipak

[MIMIX ROI Testimonials](#)

www.lakeviewtech.com/news/case/TransActionSolutions.pdf



Promising < 10 Minutes Downtime/Mo, TransAction Solutions Counts on MIMIX to Make It Possible!

TransAction Solutions

- They are the IT strategist, facilities manager, and data processing bureau for 11 of Australia's Credit Unions.

Planned Downtime Threat

- System Maintenance Threatening SLAs (running Fiserv's ICBS)
 - to integrate newly developed custom functionality with no downtime.
 - for future system upgrades that to be performed within current SLA parameters of 10 minutes or less downtime per month.

Cost of Downtime

- TransAction Solutions estimates the downtime costs for their Credit Union customers as much as \$130,000/hour.
- Penalties for not meeting SLAs of no more than 10 min downtime/mo.

[MIMIX ROI Testimonials](#)

TransAction Solutions Achieves < 10 Minutes Downtime/Mo with MIMIX!

ROI from PLANNED DOWNTIME... (High Availability)

"We develop additional capabilities and new functionality for the network offline, and can have it integrated into the system very quickly. We know within five years we're going to have to do system upgrades without taking the network down – a feat that without the Continuous Operations features of a robust solution like MIMIX, we just wouldn't be able to do."

Potential ROI from UNPLANNED DOWNTIME... (Disaster Recovery)

"If our network goes down, it can cost our member credit unions as much as \$130,000 an hour. MIMIX allows us to guarantee our SLA's with customers that call for no more than 10 minutes of downtime per location per month. And, unlike others in the IT industry, we don't roll up that 10 minutes a month cumulatively... 10 minutes means 10 minutes!"

Guy Light, General Manager
TransAction Solutions



[MIMIX ROI Testimonials](#)

'Save the Children' Keeps Planned Downtime from Shutting Down its Web Enabled Donor Systems

Save the Children

- A Leading international nonprofit child-development and relief organization working in over 40 countries worldwide.

Planned Downtime Threat – The Web Never Sleeps!

- Regular system maintenance must be done without disrupting new Web-enabled donor application.
 - upgrading hardware and software.
 - saving and reorganizing databases.

Cost of Downtime

- Potential opportunity loss of donor contributions and donor satisfaction with this charitable organization.



[MIMIX ROI Testimonials](#)

www.lakeviewtech.com/news/releases/SavetheChildren.asp

'Save the Children' Keeps Planned Downtime from Shutting Down its Web Enabled Donor Systems

ROI from PLANNED DOWNTIME... (High Availability)

In the past, upgrading software and hardware and saving databases could mean shutting down its systems for an evening, or even for much of a weekend to accommodate complex tasks. When donor systems are connected to the web, an unavailable system could result in lost donations if frustrated sponsors simply gave up. And fewer donations means less help for the people who need it most, the children.

Now, with MIMIX, system downtime won't have to translate into application downtime. Save the Children will simply switch over to the fully redundant backup system whenever necessary. Donors will likely never see any service interruptions.

Robert Taulty, IS operations manager
Save the Children



Summary

Should It Take A Disaster To Recover Your Investment?

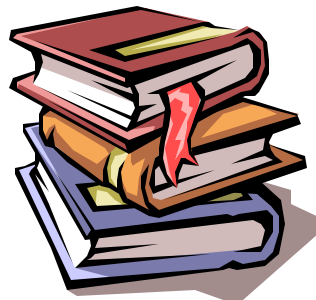
- ◆ A DR Expense = A 'Disaster Driven' ROI
- ◆ Primarily Only Unplanned Downtime Solutions
- ◆ DR Expenses
 - Backup, Save and Restore
 - 3rd-Party Recovery Sites
 - Storage Area Network (SAN)
- ◆ Have to First Restore, then Recover Before You're Operational Again

- ◆ A DR Investment = Everyday ROI
- ◆ Solutions for Planned Downtime that Provide Unplanned Downtime Protection too!
 - MIMIX Managed Availability Solutions
 - Predictable Planned Downtime Reduced
 - Clear ROI Calculated
 - Disaster-Free Benefits
 - DR Automatically covered
- ◆ Switch During an Outage, Switch Back After



Additional Information & Resources

- ◆ IBM i-Series Website: www-1.ibm.com/servers/eserver/ieseries/ha/
- ◆ Lakeview Technology Website
 - www.lakeviewtech.com
 - www.MIMIX.com
- ◆ Other Sites
 - www.availability.com
 - www.ContingencyPlanning.com
- ◆ References / Case Studies
 - IBM / Lakeview / LUG / Redbooks
- ◆ COMMON and other Users Groups
 - [Sessions / Ask the Experts](#)
- ◆ Analysts
 - [Gartner Group / Meta Group / Giga / ITWeb / ITWhitepapers.com](#)
- ◆ Customers / References
 - Over 2500 MIMIX Customers Around the World
 - www.lakeviewtech.com/news/case.asp





LAKEVIEW TECHNOLOGY



Thank You for Participating!

