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The Ozone Layer and Environmentalists Organizations at Risk

Halon Gas is OUTLAWED by Many Cities - More Data Center Disasters Will Occur

We have all heard of the hole in the ozone layer. By now many of us have adapted to the fact that our car air conditioners will no longer be using the same gas as before. Refrigerators, spray cans and anything associated with the release of gas into the atmosphere are now regulated with new vigor by governments looking for ways to control everything in the name of saving the earth. In southern California even the

backyard barbecue has been regulated by the Environmental Protection Agency (EPA).

In the process, a unique problem has shown its face to business in general and IT professionals in particular. Over the last 30 years, halon gas has been the mainstay of seeing that "minor" problems

do not turn into disasters in most data centers. That gas is now on the endangered species list. Over 50 major municipalities have outlawed the use of the gas. Now, instead of letting the gas discharge in a "lights out" data center - minimizing both physical damage and financial loss - data centers now have to activate water based sprinkler systems.

I don't know the last time I was glad to be standing in a computer room when sprinklers sprayed water down on me and the equipment and then flowed directly into an electrical socket under the raised floor. The "Tree Huggers of the World" have gotten their way and

Companies That Do Not Know Status of Year 2000 Projects Are At Risk

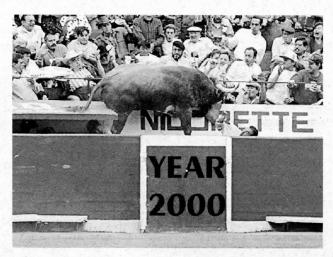
Legal bills will soon start to exceed conversion costs.

Every time I open my mail, look at a magazine or think about going to a conference, there is the Year 2000 problem. Programmers who know the "old" architectures are in high demand. Everyone is concerned about how much it is going to cost. We have even started to have the traditional firing of the CIO who has not gotten the message.

What is all of this hype about? We have known for years that this was coming and now that the millennium is almost upon us, there is unrest that runs very

> deep in most organizations. Companies are now starting to look the beast in it's eyes and see costs that exceed a \$1.00 to \$1.50 per line of code for "conversion" of existing systems. I know of one big six firm that billed a client well over \$3 million to implement a system a few years ago and now has the gall to quote fees in excess of \$5 million to convert the same system. Give me a break, they should have done it right the first time around. Doing some simple math, lets assume that you are a

\$150,000,000 annual sales



Many who think they are there to watch will become part of the action with Year 2000 issues

Put Organizations at Risk 1 Companies That Do Not Know Status of Year 2000 Projects Are At Risk 1

company. If you have 10,000 programs (not far from what is normal for that size organization) and each program/procedure/job stream is 1,500 lines in length, you have over 15 million lines of code. Now assume that only 10 percent of your programs are impacted by the Year 2000. Your "expected" exposure for compliance is between \$1,500,000 and \$2,250,000. That does not include the necessary conversion of the operating system nor the implementation of new versions of existing software packages you have.

How many people do you know that like to go to their boss and say that they have to spend anywhere from 1 to 2 percent of gross revenue to fix a

Contents

Market 4

Forecast for the

The Ozone Laver

Environmentalists

National

and

Information

Technology

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The Ozone Layer and Environmentalists Put Organizations at Risk

(continued from page 1)

now the IT profession and corporations around the world will need to find new ways to minimize losses due to sprinkler water damage. In 1991 there were over 1,000 discharges of halon gas that, under today's rules, would necessitate turning on the water. Assuming that each of these instances would cost an additional \$500,000 of loss, the additional loss would be 5,000,000,000. Where in the cost benefit equation has that cost been listed?

That issue aside, businesses are now faced with the reality of having to redo the disaster prevention process in most data centers. Many new things need to be considered. Most Disaster Recovery Plans (DRPs) have taken it for granted that fire damage would be minimized by the use of halon. At the same time they have assumed, and often times mandated, that sprinklers would be in "dry" pipes above the equipment. Now there is added exposure to breaks and leaks in pipes and sprinkler heads.

When the fire starts, people will ...

When the fire starts, people will have but one choice - leave. They will not take the time to put plastic sheets over the equipment. We only hope that the sprinkler activation systems will be linked to an automatic power shut off system. At the same time will all of the operating systems and applications be able to "shutdown" gracefully. This will to minimize the cost of recovery, if it is possible, with the equipment after the event.

New thought needs to occur. It is a little publicized fact that most of the damage that occurs in data centers is due to things other than fires and natural disaster. Rather, a significant amount of the damage is due to faulty equipment or broken pipes. In high rise buildings the "discharge" of sprinklers from some floor above the data center flows into the data center as it tries to exit the building. Factors like this need to be considered.

As a result, some forward thinking individuals have started to rethink how data centers are constructed as well as what additions need to be added to Disaster Recovery Plans. In New York city for example, it now is a common practice to construct a pan above a data center. What it is is a metal structure in the ceiling that separates the entire floor from the one above it. The pan is non porous and drains into the main sewer line out of the building. That way, if there is a discharge of water, on any floor above this one, the water is captured in the pan and then drained out. In that way no damage occurs on this floor.

The cost of the pan in one structure we looked at was less than \$60,000 in additional expense. Or put in another way, less than the cost of eight high powered PCs. Not a bad

investment even for floors in high rise buildings that have extensive paper, film, optical, magnetic or electronic file storage.

What needs to be checked

As enterprises face these new issues outsourcing begins to be a very viable option. Many think that they can just move the problem to someone else. Given all of the pressures that most organizations face, there does not need to be a significant amount of resources focused on reinventing what was done before. What is needed is almost a check list approach to what should be reviewed and monitored. This in turn will need to used to define changes in plans and operations

Items to be checked include:

- ⇒ Recent Legislation Federal, State, and Local such as limitations on usage of consumables and emission from operations.
- ⇒ Trading and commerce treaty impacts such as what is allowed in "less developed" countries versus what is allowed in your operational area.
- ⇒ Cultural differences in areas of new operations what is acceptable in your existing operational area may not be acceptable in another. For example, the landlord may have a set of rules that apply to data center operations for battery and generator backup that may be more stringent that current legislation because of "political correctness".

This is only a start. In a new HandiGuide that I am currently writing, "Information Technology - Plans and Procedures HandiGuide" I have identified at least twenty areas that are deficient in most Disaster Recovery Plans. For your information that book should be published this fall.

In that new book, there will be a shell Disaster Recovery Plan along with a series of other plans and check lists that will help you overcome these types of issues.

Outsourcing is a way out for many organizations

Many organization are now starting to look at this as one of the reasons why they should outsource the traditional data center operations. For the time being it is still okay to use halon gas in Plano, Texas. But even there the laws will be changed. It does not look like they will change in many "less developed" counties.

Look for more data centers to locate offshore and be linked via high speed T3 data lines. Now what types of issues does that raise. Unions have never been happy about foreign manufacturing - What about foreign processing?

Companies That Do Not Know Status of Year 2000 Projects Are At Risk

(continued from page 1)

problem that we have all known about for the last two decades?

Well fortunately for many Chief Information Officers they can lame their predecessors, since the average CIO has only been with his or her company for only a few years.

That is fine and good but now we have the problem of how to communicate the news of where we are and what the status is of the things that are in process. In the last few months we have spent considerable time creating a set of metrics that we can use to help organizations achieve both of these objectives. First we have created a process with which we can CERTIFY that the direction an enterprise is going is the right one. Second

we have come up with a REPORT CARD that clearly represents where an enterprise is in the process.

If you have not done this for yourself, your role in the organization is definitely at risk.

One of the sample metrics reports that we have created is shown here. It follows the guidelines and rules that we discussed in the last issue of our newsletter.

must follow is present data in terms that the viewer can grasp the importance or impact of the information.

Summarization is one of the best techniques to help you with this. By now all of us have or should have completed a preliminary impact analysis of what the enterprise faces in the Year 2000. The thing that you need to do is to create a report card that meets the following criteria:

- Communicates status to everyone in the enterprise,
- ⇒ Provides a tool to track costs,
- ⇒ Focus on the quality of the work, and
- ⇒ Defines what success is.

That may not seem like a lot, but of the 50 organizations we polled this last week only two had this in place.

Well as time goes on there will be some causalities of Information Technology professionals. In a conversation with a CEO this week, he told me that Year 2000 was not an issue for him. All of his mainframe systems were converted and up to the challenge of Year 2000. Only after we talked for a while did he realize that his entire POS

system needs to be replaced before Jan 1, 2000.

As I have stated before, in the next several months there will start to be a movement by organizations to just convert to NEW systems because that will be more cost effective.

One of the first rules as you recall is that the data presented provides some trend information. In that way, the report itself provides some preliminary analysis. The second rule that you

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Forecast for the National Information Technology Market

It is getting crazy out there - Few good resources are available and average performers are getting "big bucks."

by M. Victor Janulaitis
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The job market is becoming tighter as business continues to expand. Even with slumps in the stock market of 100 to 200 points in a day, job demand continues to far exceed supply. This is true throughout the country. In the San Francisco - Santa Clara market key development resources are being absorbed almost faster than resumes can be updated. In one recent period we counted over 600 jobs being available for titles comparable to Vice President or Director of Product Development. In that market venture capitalists are driving companies to deliver new products in shorter and shorter windows.

One company offered a pay package of over one quarter of a million dollars plus stock incentives to senior developers only to have the former employer match and then exceed the offer to keep this individual. The sad part of the story is that the individual in question - though a "very nice person" - had never been anything other than a bureaucratic technologist who was not capable of leading either company in the direction they need to go.

What is happening is that really good talent is being husbanded by all. One firm we know of now no longer publishes a paper or electronic telephone directory. It has instructed all of its staff, in addition to its telephone operators to not transfer any calls to people who ask for particular titles versus names. All of those calls are

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now directed to human resources.

There still is the push for Year 2000 Cobol programmers, but now we are starting to see additional pressures on the full range of "development"

positions. The one area where that there seems to be an excess supply is in data center operations. The exception to

this is in the Dallas and Mid-Atlantic markets. It seems that outsourcing has made its mark.

The movement of key technology off shore is continuing. We recently met with a company that has its programmers based in India and is linked to a data center on the West Coast. They are planning to expand their programming staff by over 1,000 people and focus on Year 2000 conversion work. They are trying to position them selves to get the surplus of work they think will be there in the next two years.

An interesting occurance is that many organizations are now starting to ask WHY they are converting. One company had budgeted \$6MM to make an existing system Year 2000 compliant. After the initial "impact" analysis the vendor said it

would cost more. Once only 50,000 lines of code were converted the vendor presented the enterprise with an "estimate" of \$14MM to complete the effort. The process was stopped, another vendor was called in. They feel that it will cost the company between \$12-\$15MM to complete the task. The president of this second vendor told me he did not want to "scare" away the customer so he would tell them it could be done for less given the following conditions.....

Regional Hourly Internet Rates

Region	Internet Generalist	Web Design	Web Authoring	Java Coding	HTML Coding
Northeast	\$50 - \$120	\$100 - \$145	\$50 - \$100	\$85 - \$100	\$25 - \$50
Southeast	\$60 - \$100	\$75 - \$125	\$65 - \$125	\$60 - \$100	\$60 - \$100
Midwest	\$80 - \$120	\$90 - \$150	\$80 - \$125	\$100 - \$250	\$60 - \$80
West	\$50 - \$140	\$50 - \$150	\$95 - \$120	\$95 - \$115	\$88 - \$130

The company on the other hand is seriously thinking about just "re-doing" the application with some new rapid development tools. Or better yet seeing if they can sell the division in question to someone else.

As they have looked at that they came up with an interesting revelation. Once you put the Year 2000 on any activitiy, the cost esclates. Venors have two price lists, one for the Year 2000 and another for everything else. For example, one company in India charges \$25.00 for a "programmer" with a specified skill set. That same individual on a Year 2000 project is \$75.00 per hour.

What kind of a mess have we gotten ourselves into?

Location	Prospects Short Term	Prospects Long Term	
Northeast	Excellent	Excellent	
Mid Atlantic	Excellent	Excellent	
Southeast	Good	Fair	
South	Good	Fair	
Midwest	Excellent	Excellent	
Southwest	Good	Good	
West	Good	Excellent	
Pacific Northwest	Excellent	Good	
Best Location	Midwest	Midwest	