PSR Reviews

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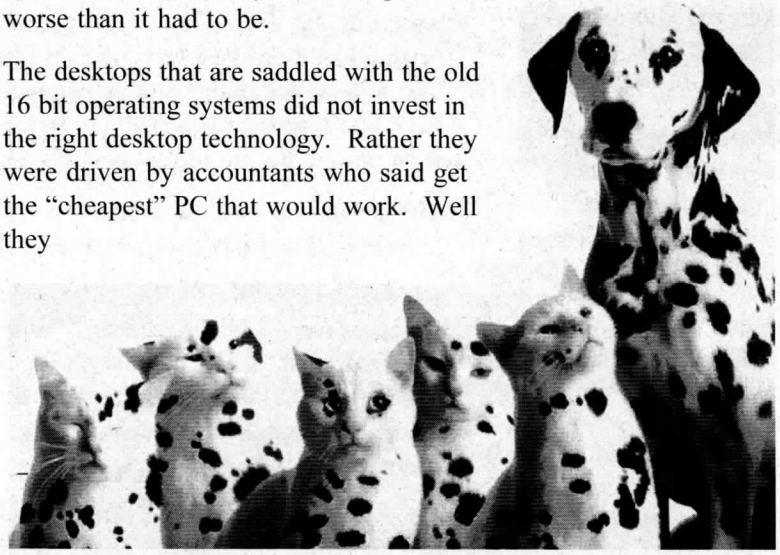
Microsoft and Intel to Make "Big Bucks"

Office 2000 and Windows 2000 Will Force Most to Get NEW PCs

As Microsoft is about to launch its next generation of Office products (Office 2000) and new operating system (Windows 2000), it is very clear that most desktop computers are boat anchors that will not be able to make the jump into the new millennium. Many enterprises that settled on Windows 95 or moved up to Windows 98 only made the problem worse than it had to be.

The desktops that are saddled with the old 16 bit operating systems did not invest in the right desktop technology. Rather they were driven by accountants who said get the "cheapest" PC that would work. Well they did and they created a huge sunk cost that will need to be written off quickly.



Did You Ever Have One of Those Days Where Everything Went Wrong?

Micorsoft has already positioned itself to tell organizations Windows 95 is NOT YEAR 2000 Compliant - nor will it be. Its public position is that home users should move to Windows 98 and corporate users to Windows Workstation 4.0. In addition many software vendors have stated that they will NOT support Windows 95 when they come out with their new version for Windows 2000 and Windows 98.

Take EDS, for example who manages over 100,000 Windows 95 and Windows 98 desktops. Assuming even the most minor upgrade with a cost of $1,000 per PC that amounts to $1 Billion dollars. That would be 40% for software and 50% for hardware. From just

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Technology is Everywhere and is the Great Equalizer

All Countries Can Use Our Technology to Overcome Many of the Shortcomings They Face

On a recent trip to a third world setting it became appartent to me the impact technology has had on primitative cultures. For example, in Columbia on a typical holiday weekend the traffic reports tell travelers where rebels have placed road blocks. Nothing really exciting about that unless you look at what the rebels are doing there. They have laptop computers that are powered by generators and linked via cell phone modems to DMV records in the capital.

The rebels are looking for people to kidnap and the purpose of the technology is to see who are the most likely candidates. Now that is what I call a creative use of technolgy.

As we move into the next millennium, the advantage we have held because of education will be overcome by technology. Now on CD and in the next few years via DVD all of the great books will be available to all. What are the other uses of creative technology?

Technology Drives our War Effort

$1 Million Smart Bombs Blow Up $5,000 Trucks!!!!

We are engaged in a war that is driven by technology. With our technology the object is to destroy our opponent's technology and ability to wage a comparable war. It is the war that we know how to wage and one that will limit the losses on our side to those of resources in the way of lost equipment and items expended. This is a war that the country with the best technology

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Microsoft and Intel to Make "Big Buck"

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this one entity Microsoft will make almost $400 million in revenue.

Now you say that you will do it over time. Well I say that is bull. If the user needs a new desktop to do a cost effective job they will get the latest and best.

Who has the courage to tell the secretary of the CEO or a key operating exectutive that he or she can not have the latest and fastest computer to do the business of the corporations.

In the next few months 550 mHz or faster processesors roll out and there will be more pressure to get new applications on to the desktops of users. Gone will be the excuse that there is not enough power for the user to query gigabyte data bases and generate the information necessary to make the decsions for day to day operations.

With all of this power available, workstations that are not upgraded will be viewed as "unworkable" and not productive. What manager is going to say that a key employee can not have a workstation that will let them do their job?

The configuration that will be demanded will be one that will make it so that new high cost operating systems will be able to function effectively. The configuration for a typical user will be:

- 500 mHz processor
- 128 Meg memory
- 8 Gig of disk storage
- 19 inch monitor
- 100 Base T connection (in office)
- 56 KB modem, DSL or cable modem connections for remote users)
- Office Suite
- Anti-virus
- E-mail account
- Internet connectivity.

Now that will cost more than $2,500 per user and both Microsoft and Intel will get a big piece of the pie. And who says that Microsoft and Intel have reached their limit in growth.

In today's environment there are four things that are sure - death, taxes, more processing power will continued to be put on the desktop and more money will be spent in keeping up. ◂PSR▸

Technology Drives our War Effort

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and the greatest capital resources expended will win.

In the current war, as of the day this was written, not a single soldier is on the ground, there are no casualties. Yet over $4 billion has been expended, there are an estimated 400,000 refugees outside of the country and well over 1,000,000 homeless. Yes we have lost a few planes but this has been the lowest cost war we have ever engaged in from the standpoint of human life on our side.

It is almost like the game that Microsoft sells, the Age of Empires. Everything is done remotely with limited risk to our combatants. We can all sit in our living room and watch the art of war being waged via CNN.

This is the war of the future. Many of our targets are the communications and computer infrastructure of the nation we are at war with. Key targets include traditional broadcasting facilities like television as well as advanced targets like cellular communication transmission towers. As we have impacted the medias ability to report the war there has been more criticism of that than for the war.

The question is how successful have we been in this effort. Based on what I have seen - not very successful.

For example, after three weeks of bombing, when the prisoners were released, the first thing that Jesse Jackson did was to dial, via his cellular phone, the families of the prisoners to let them talk by phone. Even with all of the precision weapons at our disposal that means of communication was still operational.

How can it be that with all of our resources simple things like the phone continues to work. Well one thing that is clear is the technology that has been developed and deployed is very resilient. It can take a hit and keep on ticking.

For example, a few years ago after an earthquake in Southern California, there was one key computer at a bank that was responsible for all ATM transfers. It fell over and continued to process transactions for a full 38 minutes until its power ran out. Now the technology has moved ahead and the focus is a mean time to failure that is so high it would be cheaper to replace the technology versus repair it.

The same is the case today with many of the targets that have been the focus of this effort. The technology has been designed is such a way that they are far from fragile. Rather they are modular and use an approach called "open architecture" that lets the user mix and match parts to make it work. When you have a simple cellular transmission site it can run on battery or self generated power. The cost is less than $50,000 versus an air launched cruise missile that costs over $2,000,000.

When the missile hits, if it does not destroy everything, the pieces and parts can be used to create a new transmission Plus the sites can be placed a little further apart and still provide some of the same features and functions.

Like in Terminator II, our machines wage war on their machines. If it were not for the misery of war it is almost antiseptic.

On the other side of the equation, missiles have so much computer technology imbedded in them they would be able to rival most corporate Data Centers a decade ago. There has been so little collateral damage because of the reliability of the technology.

The technology in cruise missiles include everything from pure processing for trajectory calculations to communication links to satellite communication and locator systems. Self destruct computers are included, if one of these marvels does not reach its target it will destroy itself.

There are also the high speed antiradiation or HARM missiles. They are used to knock out antiaircraft defenses and have very sophisticated satellite positions systems, as well as onboard signal tracking systems.

Then there are the smart bombs that are controlled by laser painting of targets or fly-by-wire. Included are cameras and transmission processors to get images back to the pilot. These are the weapons that the military likes to show to the media to show how precise the conduct of war is today.

Sure they still use traditional weapons like dumb bombs dropped from high altitudes from B-52s. However the collateral damage is too great. As a result our military has learned how to adapt the technology in our high cost weapons to our traditional ones. They have learned how to add robotic technology to these weapons. The cost to strap a Global Positioning System to a dumb bomb is approximately $24,000. That on a bomb that only cost a little over $10,000.

In the field we have "real time networks" that are used for communications. These include secure routers and firewalls. As well as medics in the field there now is a need to have a "Network Administrator" deployed to the front so that we can talk to each other.

This is creating a need for a new type of soldier and support mechanisms. In the case of the Apache Helicopter it takes over 1,600 individuals to support 24 of them. In general they know how to use communications and a computer and apply it to the process called war.

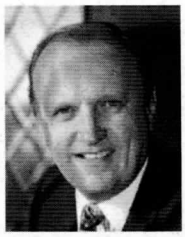
What we have created is a new opportunity for our best and our brightest to create new tools that can be used in this war game process.

In the long run our competition will come up with weapons that will counteract the ones that we have. Weapons that we must be most concerned about are those that will make our technology inoperative. Jamming systems and ways to interfere with our satellites will be the ones that have the greatest potential for doing damage to us.

Much has been made of the fact that when there is a real war with a real competitor the attacks will destroy our ability to have an advantage. The targets they will attack will be in the sky, not on the ground. The first things that they will hit will be our satellites that we use to look down on them as well as our communication and positioning systems.

Simple things like funds transfers will be eliminated and there will be no electronic money. At that point the question will be can we operate as a society without this technology? Think about everything that we do that depends on computers and communication technology. Credit card authorizations, stock trading, e-mail, airline reservations, and ATM cash withdrawals to mention a few.

If any country is going to look at doing damage to us they will not blow up our buildings rather they will do things like send a virus that will wipe out all of our C: drives and where will we be then???



Forecast for the National Information Technology Market

WAR - Positive impact for IT is seen by a revival of the defense industry

by M. Victor Janulaitis
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With all the bad news associated with any war, it is strange to say that it will have a positive impact on the US economy in general and the IT job market in specific. Let's review why this is the case.

First, at the conclusion of the Gulf War the United States government had pulled forward all of the production of its combat missiles and rockets. This included the keystone weapon in our arsenal, the cruise missile. At that time there was a finite supply of these weapons and no new orders were placed. One of the results of this was the consolidation of the defense industry with the mergers associated with Boeing, TRW, Hughes, Northrop, Raytheon, Lockheed and others.

The plans and tooling for missiles were "mothballed" by the prime contractors. The Clinton administration then proceeded to become the policeman for the "New World Order" and at the drop of a hat would launch 100 to 200 missiles at third rate powers to show our might.

Before the war in the Balkans, based on media reports the administration used over 500 cruise missiles at $2,000,000 each. A cool $1 billion dollars. In the first week of the Balkans war another 500 missiles were used. At that time media reports said that they had used 1/4 of our total inventory and cruise missiles were put on an allocation plan. So much for our ability to fight two wars on two fronts at the same time.

As the war dragged on the administration said they would need $1 billion, then $3 billion and now a significant portion of the budget surplus to "restock" our inventory. Now when was the last time that the military settled for last year's model when it was time to restock. Well they will not and we will see a new generation of smaller, smarter, better, and faster missiles that will cost between $2 and $3 million each.

To do this, new IT functions will have to be created quickly using the latest technologies and the best of the legacy infrastructure systems. This will be a boon for IT professionals.

New opportunities will abound with the defense contractors and the associated support organizations. The stock market has already seen this and has rapidly bid up the prices of the winners of this shift in policy towards the industry.

As we look around there are several major searches going on for top IT professionals who will be able to step up to the challenge. The one nice thing about products designed for war like missiles, they are one time use items. As they are used up there is a need to make more.

The development of systems to support this type of product development and manufacturing is very difficult and very demanding. For every engineer who will need a high powered workstation there will be the backup support of IT professional project managers who will direct the activity, accountants who will "count the beans" and bureaucrats who will report all of this activity to the government. What a boon for the legacy IT organization structure that will be needed to support this.

The job markets in Seattle, Southern California, Texas and Boston will be the ones that will be impacted the most as this happens. The only one that has any extra capacity is Southern California but even there, there will not be enough resources to make it happen quickly.

Look for the next four years to be one in which the defense industry will reshape itself and that is where there will be some great opportunities for all of us as employees and contractors.

Vic

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

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