HOUSE OF REPRESENTATIVES COMMONWEALTH OF PENNSYLVANIA

House Bills 2273 & 2406

House Judiciary Committee

Room 140, Majority Caucus Main Capitol Building Harrisburg, Pennsylvania

Thursday, July 9, 1998 - 10:00 a.m.

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BEFORE:

Honorable Thomas Gannon, Majority Chairperson

Honorable Jerry Birmelin

Honorable Craig Dally

Honorable Brett Feese

Honorable Thomas Caltagirone,

Minority Chairperson

Honorable Andrew Carn

Honorable Kathy Manderino

Honorable Joseph Petrarca

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5	David Krantz Minority Executive Director	
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7	John Ryan, Esquire Minority Chief Counsel	
8	Carolyn Snyder Director Democratic Data Processing	
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CHAIRPERSON GANNON: Public hearing on House Bills 2273 and 2406 will come to order. Our first witness is Heather S. Heidelbaugh, Esquire, Burns, White & Hickton, LLC. Heather, you may proceed when you're ready.

MRS. HEIDELBAUGH: Thank you, Representative Gannon, Chairman.

Good morning. Let me begin by thanking this committee for holding these hearings and specifically for inviting me today to attend and testify regarding one of the most important issues facing our time, the year 2000 computer problems.

Let me also introduce my colleague, Brian Silver. He is a law clerk at our firm and is currently attending his third year of law school, and is assisting me today in the technological aspects of my presentation.

Let me begin my remarks today,

Chairman, because I am the first speaker today

at the hearings, by providing a very simple

definition and overview as I see of the year

2000 problem.

Many computers on January 1, in the

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year 2000, and actually before -- it may begin on January 1, 1999--will not be able to recognize a double zero or a double ninety-nine as a correct date because the underlying programming language does not recognize those digits. the failure to recognize those numbers will either prevent the input or transmission of data, or at the very worst, crash the entire system and related systems.

Clearly, the biggest issue for those of us who have been dealing with this issue and care about the effects on our society is communicating the reality of the problem. There are many of those in our society, people of means, education, and wherewithal to become acquainted with the problem, simply are not dealing with the problem; and I commend you, Chairman, for having these hearings in regard to this. Hopefully, it will produce some more information in the state.

We must communicate that we must act now to fix or remediate the year 2000 problem, and we must communicate the urgency to act now.

While I have devoted a considerable amount of time and resources to learning about

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the year 2000 problem and the wide-spread ramifications, both legal, business, and technological, and I partner and chairperson my firm's year 2000 practice. My opinions, while well reasoned, I think, and well considered may not carry as much weight with this committee if they do not echo the opinions of other experts in this country who have spent an enormous amount of time and effort becoming acquainted with this issue.

For that reason, let me take a few moments of my testimony to review with you what the experts are saying in regard to the year 2000 issue and its ramifications.

Edward Yardeni is the Chief Economist at Deutsche Bank Securities. He is widely quoted in the press and in government as a world authority on the year 2000 issue. He was named by the Wall Street Journal as the top U.S. Economic Forecaster in 1997.

And he has stated, "I can no longer say with any confidence that there is enough time to avoid a global Y2k recession." And he stated that this month. He also stated that, "The probability of a global recession has

increased to 70 percent.

The well-regarded and well-known watchdog of the computer industry, the Gartner Group, conservatively estimates that 50 billion computer chips will fail as a result of the year 2000 problem. And the Gartner Group is known as the world's largest information technology research and advisory firm.

Unites States Senator Christopher

Kit Bond, Chairman of the Senate Small Business

Committee, said in May 1998, "We have found

there is significant likelihood that the Y2k

issue will affect many small businesses and

will most likely cause many small businesses to

close, playing a larger role in Federal Reserve

Chairman Alan Greenspan's prediction of a 40

percent chance of recession.

So, we have the Chairman of the Federal Reserve indicating that his prediction is there's a 40 percent chance of recession because of the Y2k problem, and Mr. Yardeni, who is the Chief Economist at Deutsche Bank indicating a 70 percent chance of recession.

The Gartner Group estimates that only 50 percent of enterprises worldwide will reach

operational sustainability by the year 2000.

Operational sustainability is not total Y2k

Operational sustainability is not total Y2k compliance. It's mission-critical systems that will allow the company to continue to operate.

The Giga Information Group which is also widely quoted in the press and deals with information technology issues, projects legal damages will be more than 1 trillion worldwide. And since I have been intimately involved with this, those numbers continue to climb.

Computer World Magazine randomly tested 500 personal computers for year 2000 readiness this spring. The magazine said that 47 percent flunked, including nine out of ten designed before 1997.

Windows 95 is not totally compliant.

There are three areas of problems in Windows

95; and that was just released by Microsoft on their web page.

Fixing lines of code in mainframe computers with millions of lines of code written in COBOL can cost anywhere from 40 cents to one dollar per line of code.

Taking up the worldwide estimate of millions and millions of lines of code times a dollar

you can quickly see why this is going to cost

the globe millions and hillions of dollars

the globe millions and billions of dollars.

The Giga Information Group estimates that up to 70 percent of PCs might need help rolling over to the year 2000. So, even if they appear to be year 2000 compliant, they may need manual assistance.

The Gartner Group, a consulting company that advised nearly 12,000 clients about the year 2000 problem, surveyed 2,300 companies in 17 countries and found that nearly 30 percent had not even started to address the year 2000 problem. That was as of March 1998.

Some of the problem with communicating the severity of this is a two-pronged opinion that this year 2000 problem is an attempt by computer hardware, software manufacturers, and consulting companies to increase sales for a magic bullet that will arrive on the marketplace.

There is no magic bullet. No one has any evidence that there's a magic bullet that can be inserted and this problem can be fixed. The Senior Manager of Ernst and Young stated the year 2000 issue is not an industry scam

created to sell more hardware, software, and services.

The CIA Director, George Tenet, is concerned about the year 2000 fixes. The federal government now is in a massive attempt to overhaul their systems, many of which are written in COBOL and require line-by-line manipulation.

He is concerned about the defense of our country because of the opening up of the federal computers and that many of the overhaul projects are being done by non-Americans and foreign nationals. There are more than \$1 trillion in global foreign exchange transactions a day, and more than 80 percent involve U.S. dollars reported by Representative John LaFalce, Democrat from New York.

Of course, our worry is that the financial markets aren't ready, and the sale of our dollars occurs on a nightly and weekend basis. We'll receive our funds back after the year 2000, or if we have to shut down the financial markets, what effect will that have?

The Health Care Financing

Administration which runs the health program

for the elderly has asked Congress to delay payment increases for the year 2000, which was a major component of the budget negotiations in regard to budgeting for the health care.

It has to seek a postponement of increasing the reimbursements because they are overhauling all of their computers. The Health Care Financing Administration relies on 60 contractors to operate and maintain data bases and software programs to process 900 million payments each year for 33 million Medicare beneficiaries all based on computer information. There's 22 million lines of software code and they're not done yet, June 28, 1998.

The Gartner Group estimates that the fix is 600 billion and rising to fix the Y2k problem. The United Nations recognizes that there is a global problem, and that most of the countries outside of Europe and North America will not, cannot, and will be -- will not and cannot be ready.

And they have adopted a resolution urging all countries to attach a high priority to solving the Y2k problems. A survey of

businesses, government agencies, and
information technology researchers in 16
countries suggest many nations are only now
beginning to realize that there may be a

problem.

Edward Yardeni, again, the Chief
Economist of Deutsche, said: If we have
everything fixed in the United States, but
there's major disruptions in Europe and total
calamity in Asia because they're diverted by
their own financial crisis in Latin America,
we're going to be affected in a very, very
adverse fashion.

Germany is lagging behind, Japan remarkably is lagging behind, and Russia is just beginning to realize it might be a problem.

Edward Yardeni again believes it will be impossible to make a phone call from the United States to Korea, Indonesia, Malaysia, or maybe even Japan in the first days of the year 2000. He and others are recommending that there be a global shutdown the first week of the year 2000, the costs of which are unimaginable because of the stress on the

system.

A survey by the Gartner Group found that half of 6,000 companies in 47 countries will not have at least 20 percent of their mission-critical systems fixed and tested in time for 2000. The problem with many of these companies is that they are suppliers to larger companies. So, even if the larger company is completely and totally compliant, if they can get no supplies, they can't make their product or provide their services.

Three trillion is transferred electronically every day on global markets, and the computer is an integral portion of that transfer.

And the most frightening quote and the one that sort of sent shivers up my spine as a mother of two children, one of Russia's most sensitive industries seems not yet to even understand the issue. We don't have any problem yet, the Atomic Energy Ministry's spokesman, Vladislav Petrov, said. We'll deal with the problem in the year 2000; Baltimore Sun, July 6, 1998.

On June 2nd of this year, the Center

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for Strategic and International Studies held a conference in Washington, D.C. regarding the year 2000 computer problem, and one of the speakers was United States Senator Robert Bennett, Republican from Utah, who is Chair of the Banking Committee who have began to hold hearings on the financial readiness -- on the Y2k readiness of the financial institutions in the United States.

Since then, he has been appointed by the Majority as Chair of the Special Select -- Senate Special Select Committee on the year 2000 computer technology because he and Christopher Dodd were able to convince the leadership that this was a problem of such global magnitude, second only to World War -- the readiness for World War II, that the Senate needed to begin a special select committee.

Senator Bennett began his remarks with a story which, I think, artfully describes the scope and severity of the problem, and I would like to play a very small portion of his remarks at this conference.

(Video presentation occurred)

MRS. HEIDELBAUGH: The year 2000

problem is not only a company, local, state,
and national concern; but also a global one.

The strategy must first be to communicate the
problem, which hopefully this hearing will

assist in accomplishing.

Second, an individual entity must fix their only internal computer system whether they be a sole proprietorship, a local government, the Commonwealth of Pennsylvania, a large Pittsburgh corporation, or a multinational conglomerate.

Third, each entity must encourage and then demand all entities with whom they do business, including suppliers, vendors, and customers become Y2k compliant. This includes government. Therefore, citizens must demand that the governmental units by whom they are governed, including local, state, and federal agencies are Y2k compliant.

And fourth, corporations in the federal government must work with foreign corporations and governments to demand their compliance because we are interconnected as a globe. And we realize that now, perhaps more so than we ever have before.

Failure to follow this four-step strategy will lead us all to uncertainty with minor disruptions at the very least, or wholesale panic and collapse at the worst.

The effect that panic can have on the populace was theatrically displayed in the film called "It's a Wonderful Life" when George Bailey, on his wedding day, is summoned away from his honeymoon because of a run on the Bailey Brothers Building & Loan.

In this short scene, Jimmy Stewart, who is, of course, a hometown boy from Indiana, Pennsylvania, displays reason, logic, and candor which not only saves the Building & Loan, but his depositors' savings. This is a two-minute take which displays what could happen.

(Video presentation occurred)

MRS. HEIDELBAUGH: That concludes that portion of my remarks which provided an overview of the problems that we as a society are facing. This is an opportune time for me to issue a personal bias -- is what I'm calling a personal bias disclaimer. Although it has been widely circulated in the press that

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lawyers are relishing this opportunity in order to make a bundle on the inevitable litigation explosion, as a mother of two small children, a wife, a citizen of the United States, a resident of the Commonwealth, I don't relish financial collapse or the interruption of the food supply.

When advising clients on this issue, I tell them that they must use candor. They must use reason and logic, and basically, litigation will be meaningless in the face of widespread catastrophe; and they must become compliant.

In regard to one of the Y2k issues, one of the responses many state governments now are proposing is to immunize Commonwealth agencies and employees and sometimes others for any damages that may be caused by the Y2k problem.

I was kindly invited here today to testify in regard to the pending House Bills 2273 titled, Immunity For Certain Erroneous Computer Information, and 2406 titled, Certain Computer Problems which have been modeled after, quote/unquote, model legislation in the 1 past in the State of Nevada.

I have four comments in regard to my review and analysis of the pending legislation.

One, the Commonwealth of

Pennsylvania, as the sovereign, has immunity

from lawsuits unless it specifically waives its

immunity from lawsuits. Up until 1980 the

Commonwealth enjoyed immunity from all suits

until the legislature deemed it good public

policy to enact certain well-defined and

limited exceptions to its immunity.

Those exceptions, as you all know, are outlined in 42 Pa. C.S.A. 8522. A fair reading of the current exceptions in my opinion would allow no lawsuit to proceed as a result of damages that may occur as a result of the failure of a computer to properly read the correct date.

Therefore, I question the necessity of House Bill 8531, because I believe the current rule of law that grants sovereign immunity absent an exception is sufficient to protect the Commonwealth, its agencies, and its employees.

However, if in the interest of

prudence or caution it's the desire of the legislature to clarify the exceptions to immunity contained in 8522, proposed 8531, I believe, should be changed to be an additional paragraph C at the end of current Section 8522 with some minor changes.

Point two. Proposed House Bill 8531, however, seeks to grant immunization to more than the Commonwealth, its agencies, and its employees. And because of that provision, I have some real questions. Section A titled, "General Rule" immunizes an entity called an immune contractor. And although the Nevada legislation defines the term immune contractor, the proposed Pennsylvania legislation provides no definition whatsoever.

In my research of all Pennsylvania cases through West Law Search and all Pennsylvania statutes, there is no definition of immune contractor. Therefore, that would have to be defined by a court in a lawsuit.

However, beyond that, here are some of my questions which I think this bill does not answer and which are important.

Is an immune contractor only a

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company that contracts with the Commonwealth?
Who will decide who's immune? Will it be the
legislature in a further bill, or will it be
with the courts? If it's the courts, you may
be defeating your purpose of preventing
lawsuits.

Philosophically, why are companies that don't win favorable contracts with the Commonwealth subject to lawsuits of Y2k failures; but companies that do do businesses with the Commonwealth are immune? companies who may have acted in bad faith by failure to devote an applicable labor and monetary resources to fixing the problem and failing to exercise reasonable business judgment going to receive a grant of immunity as an immune contractor, when other companies in Pennsylvania who have been prudent, extended resources that are not -- will not bring in one more customer or make one more product, not immune from lawsuits? Does this proposed bill prevent the Commonwealth, itself, from suing immune contractors if the Commonwealth has been damaged?

It appears that the immunity, once

attached, applies to all potential plaintiffs including the Commonwealth. Will taxpayers be angry if contractors supplying noncompliant Y2k 3 products or services have to pay for those products anyway under general revenue, but then the contractor can't be sued because they are immune?

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And then, of course, what message does this send to companies and Commonwealth agencies and employees regarding their incentive to complete their Y2k projects if they know they're going to be immune; which leads me to point number three.

All immunity legislation has a psychological effect on the behavior of those immunized. Mr. Justice Brandeis, a Justice in the United States Supreme Court, in the case of Olmstead v. United States, in a dissenting in 1928 said, "Our government is the potent, the omnipresent teacher. For good or ill, it teaches the whole people by its example."

Some immunity legislation advances public policy. For instance, in good Samaritan legislation, the behavior the legislature wants to encourage is individual behavior for the

good of society that may result in a lawsuit if it wasn't performed perfectly.

For instance, doctors providing medical assistance to emergency victims that they find on the side of road, some states immunize that behavior. That promotes a good thing. That's a good public policy. Where now, restaurants can donate food that they haven't used to homeless shelters, and they are immune from lawsuits regarding food that's been tainted.

outweighed by the potential losses that may be incurred by the Samaritan's acts. However, in this proposed legislation my question is, is the legislation promoting action which will serve a societal goal, or is it, in fact, promoting inaction failure to quickly remediate the year 2000 problem? If the agency's employees of the Commonwealth are immune from lawsuits, doesn't that encourage less than diligent efforts on their part and, of course, the same applies for immune contractors.

The largest thing that we have to keep considering in the year 2000 problems is

the ripple effect. The stone is thrown in the pond. Just because someone is compliant doesn't save them from financial ruin. If everyone they contract with or contact with is not compliant, they will fail. Therefore, the societal goal has to be to get everyone to become compliant. Then we'll all survive.

And my last point in regard to the proposed legislation is, I believe it is overly broad for the purposes that are trying to be served. The language states that the Commonwealth or its contractor would be immune, caused by an incorrect date being produced, calculated, or generated by a computer regardless of the cause or the error.

There is much more concrete language that can be used that are in other state bills, and it's in the literature that clearly defines what the year 2000 problem is. And in shorthand, it's the problem a computer has in recognizing the dates; the ninety-nine, and the zero zero. And you don't want to just say zero zero because the problem may well cost during ninety-nine. But this language indicates that any incorrect date, whether by computer

programmer error or even bad faith or intentional conduct would be immunized. I think it's too broad.

In summation, it's my opinion that
the sovereign is already immune from the year
2000 related lawsuits based on the current
state of the law. If the legislature believes
otherwise and further believes immunization is
needed to protect the resources of the
Commonwealth, Section 8522 should be amended to
clarify that the Commonwealth, its agencies,
and employees are clearly immune and no
exception applies to waive that immunity.

The legislature as a matter of public policy and fairness to those devoting substantial resources to correcting the problem should not immunize private-sector entities from lawsuits for damages that result from their failure to remediate the Y2k problem.

The severity of the year 2000 problem and the interconnectedness of all of us to each other requires instead of granting immunity to noncompliant entities, we demand as a society that they become compliant.

It is clear from Senator Bennett's

1 remarks that even the vigor and responsibility 2 of a company to become compliant will not save it from ruin, if its trading partners and 3 customers are not compliant. And as George 4 Bailey said, we have to have faith and all 5 6 stick together. To me that means we must all diligently work toward compliance without the 7 buffer of immunity as a safety net. 8 9 Thank you for this opportunity to address this important issue, and I welcome any 10 11 comments or questions. 12 CHAIRPERSON GANNON: Thank you, Mrs. Heidelbaugh. Just a clarification. In your 13 14 testimony you refer to Bill 8531. I think 15 you're referring to Section 8531 --16 MRS. HEIDELBAUGH: Correct. CHAIRPERSON GANNON: -- in the House 17 Bill 2271? 18 19 MRS. HEIDELBAUGH: I apologize. I just wanted 20 CHAIRPERSON GANNON: to make sure. That's what I thought your 21 22 meaning was. Representative Birmelin. 23 REPRESENTATIVE BIRMELIN: Now you 24 have me scared just like the Senator. And one

of the things that I really took note of in

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your testimony as you were speaking is the fact
you were talking about the possibility of
shortages and things, food among them.

We certainly don't want to panic as did the 1947-48 Bailey Savings & Loan people did. But, what in your realistic view of this is going to be -- Assuming that people catch on to this and really try to resolve this problem but don't by the year 2000, what's your realistic assessment of things like shortages, things that would affect people substantially in their everyday living?

MRS. HEIDELBAUGH: A lot of people ask me that question, and it is my hope that we're going to have what would be known as a brownout. I don't believe we'll have a total blackout where we have no telecommunications, no financial institution availability, no food. However, I do think there will be major disruptions.

Unfortunately, there are too many companies who have not taken this issue seriously and only are beginning now to begin to remediate their problems. There are approximately 530 plus days left to remediate

the problem. It is an immutable deadline. If people and companies, CEOs specifically, don't begin now to take this as the most urgent management problem that they will face in the next year and a half, we as a citizenry will feel the effects of all of that. We are very interconnected on an information technology basis.

maybe buying up a lot of these things, do you think you might need insurance for a brownout on them? What do you recommend to the general public that they do to prepare themselves, though they may personally not be business or in a situation where they have a computer system of their own that they are running, they are just an employee; they are just an average state representative or something of that sort?

MRS. HEIDELBAUGH: Well, Senator

Bennett had some great comments. And my

comments are based on the review of the

literature and a lot of other people who have

given this a lot of time and effort, and I'm

blending that with my own knowledge and common sense.

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One, it is not prudent for any of us to recommend that there be a panic mode that sets in when people start stockpiling or withdrawing funds. That certainly will behoove none of us, and it will create a panic. So, just like Franklin Roosevelt said, The only thing we have to fear, is fear itself. Fear can produce damage.

So, what I have recommended to people is that they first make sure their own house is clean; meaning, their own company. And even if you're a blue-collar worker or a secretary, it would behoove you and this country to make sure that your company is aware of this problem and that your company is doing something.

Then I would, as a state representative, I would make sure that the major companies in my district if you have the time -- Senator Bennett did in Utah. He called personally the major companies in Utah and spoke to the CEOs and said, this is a major problem. What are you doing? I want you to know I care about this issue. Please tell me what you're doing. So, you, sir, could have an enormous impact with the businesses and the

corporations in your district.

And then on a personal level, many advisors are recommending that the individuals have some cash reserves; and that does not mean going to the bank and withdrawing, or going to the stock market and pulling completely out.

But, it would not be imprudent to have two weeks of cash reserves. That's what many people are recommending.

REPRESENTATIVE BIRMELIN: One last comment, when we got here today, there was this booklet on our desks called <u>Executive Survival</u> <u>Guide for the Year 2000</u>. Are you familiar with this?

MRS. HEIDELBAUGH: I have not seen that, sir.

REPRESENTATIVE BIRMELIN: Apparently, you didn't hand them out then.

MRS. HEIDELBAUGH: No.

REPRESENTATIVE BIRMELIN: I just breezed through it, and it looked like it was pretty comprehensive in a lot of the areas which you have just indicated some things that should be done.

One of the things I intend to do --

And whoever handed these out or brought these 1 today, I want to see you before I leave. One 2 of the things I intend to do is to go back home 3 tonight, and I have four chambers of commerce in my district, and I intend to give them a 5 copy of this and ask that they make it known to 6 7 their members and have them access it as well. Because I can understand the problem is not 8 9 just with large companies, because they are dependent on smaller companies. Smaller 10 11 companies that I represent are all in 12 Pennsylvania. It would seem to me, that as you 13 said earlier, that everybody has to be a part of this solution. Only a large company if they 14 lose all of their suppliers, they're out of 15 16 business anyway. 17 18

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So, lastly, I just want to thank you for your effort in coming here today and the advice that you've given us. And, Mr.

Chairman, I would encourage you, if you could, to make sure that members of the General Assembly get copies of this. It's the first time I've seen it, and I'm aware of the Y2k problem. This would appear to be something that all members of the

House of Representatives and the Senate could use.

MRS. HEIDELBAUGH: I could just offer to you, Representative, that part of the reason I guess I'm here today is, I'm the author of this notebook, which is called The Year 2000 Compliance, Is Your Company Ready? And it is a notebook that companies can use that I represent to become compliant and to think about all of the issues.

For instance, one of the issues that a lot of people haven't thought about is employee benefits. ERISA requires that the plan administrator be personally liable for any failure to pay employee benefits. If the funds are deposited in financial institutions that do not survive the year 2000 crisis and the employee retirement funds are lost, the plan administrator will be personally liable. And most companies have a plan administrator now; and the experts are saying that that plan administrator, in order to be prudent, must exercise due diligence by finding out whether the funds are invested in institutions which are Y2k compliant.

1 REPRESENTATIVE BIRMELIN: Thank you 2 very much for your testimony. 3 CHAIRPERSON GANNON: Thank you, Representative Birmelin. Representative Dally. 4 5 REPRESENTATIVE DALLY: No. 6 CHAIRPERSON GANNON: All right. 7 Representative Manderino. 8 REPRESENTATIVE MANDERINO: Thank you. 9 I hope I'm not asking something that I missed the first few minutes I wasn't here. 10 11 actually have a problem. Okay. Here's what I 12 don't understand. Do we know how to fix it? 13 I'm a novice at this. I assumed that 14 sometime between now and the year 2000 I was 15 going to walk into a software store, buy some piece of software, load it on my home computer, 16 and it was going to fix the year 2000 problem. 17 Now, that's a very simplistic view of something 18 in somebody's own home. 19 20 I had this impression that the 21 problem was something out there that the 22 computer-tech folks were figuring out how to make adjustments to their software and then 23 give it to people. But, obviously that's not 24

And even if I call all these businesses in

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it.

my district and say, are you aware of the year 2000 problem, they're going to say to me, yeah. What do I do about it? And I don't know what to tell them.

MRS. HEIDELBAUGH: That's an excellent question, Representative Manderino, and let me try to answer that in two-prong fashion. Let's talk about small companies that are PC based and large companies that are mainframe based. Take a company like Aetna Life Insurance Company. They have mainframes.

When we were young, may I be so bold, as to say that we learned in college that a computer was the size of this room, and there was the little cards. And each little card had a line of code. Those are mainframe computers, and those are COBOL languages. Each line of code has to be checked. It's technologically very easy to do. The hard part is the labor to do it.

The answer to your question is,
people know how to do the problem. The problem
is more not technologically based, it's labor
and resource base. The time it takes to go
through millions of lines of code of the large

Aetna mainframe-type computer, and the cost is about a dollar per line of code. Aetna spent 140 million getting it mainframe computers Y2k compliant. That's the hard issue. So, when you talk to a company that has a mainframe, they know what to do.

When you talk to a company that's a small distributing manufacturer's rep company in your district, they have PCs. Windows 95 is basically compliant with some problems. They can go out and buy Windows 98. If they wanted to chuck their entire system, spend \$15,000 and buy new programming language. All right.

So, to answer your question directly, the technological aspect of the problem is not difficult to computer geeks, computer people.

You and I maybe are not computer people.

Here's the real problem. The real problem is getting the companies to focus on the business, management, legal aspects of this problem.

If the problem isn't fixed, they won't be able to operate their company. If they can't operate their company, they're going to affect an unknown stream of suppliers in their horizontal line or in their vertical

line. That's what we all have to be worried about.

REPRESENTATIVE MANDERINO: So, as a follow-up in a very practical sense, if I have the smaller concerns in my district who are PC based and are using a Windows operating system; if I say to them, you better make sure that you have Windows 98 and all your systems complying with that, because that fixes the year 2000 problem, am I telling them correct or incorrect information?

MRS. HEIDELBAUGH: The best information you could tell them if they have a computer, is to go to the web page of the manufacturer of their hardware or their software which will indicate whether the program that they have is Y2k compliant. And then the second thing you want to tell them is to test their applications.

REPRESENTATIVE MANDERINO: So, then they would do that for every system that they were using. They would do that for the software system they're using, for their accounting programs, the software system that they are using for their word processing

36 1 programs, the software that they might be using 2 for their purchasing or whatever? 3 MRS. HEIDELBAUGH: Correct. 4 REPRESENTATIVE MANDERINO: Thank you. 5 MRS. HEIDELBAUGH: Thank you. CHAIRPERSON GANNON: Representative 7 Caltagirone. REPRESENTATIVE CALTAGIRONE: 8 Thank 9 Attorney Heidelbaugh, for the members of 10 the public that are going to be viewing this 11 live now and later today and maybe later this 12 week, can you boil it down to some of the 13 basics as to what really is the problem? 14 is going to cause the problem with the double 15 zeros? MRS. HEIDELBAUGH: It all started 16 17 back in the '50's when they made lines of code. 18 They didn't have enough computer space to put

back in the '50's when they made lines of code.

They didn't have enough computer space to put in four digits for a date back in the '50's.

They put in two digits. Instead of putting 1950, they put 50 in their lines of code.

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Many computers do what's called date arithmetic. So, when they're inputting information, the line of code will tell the computer to add or subtract or to calculate.

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Now, when the line of code has a date arithmetic, if it hits the zero zero, it will revert back to the only zero zero it was programmed to understand, which is 1900. Some of the newer computers were not programmed to understand even 1900. When they hit zero zero, it will go back to 1980 or 1984.

The same thing would happen when it hits ninety-nine. April 9th, '99 is the 99th day of the year. It could hit on April 9th.

It could hit on September 9th, '99.

Further, the year 2000, if you want to really flip out on this one, the year 2000 is a leap year. February 29th is the leap day. In 1542, the Papacy enacted a law that required leap years would only occur on years that ended in zero zero divisible by 400.

Most computers have not been preprogrammed to recognize the year 2000 as a leap year, so they will go from February 28th to March 1st. So, all of these dates are potentially going to cause a problem because the computers are not capable of reading that date.

REPRESENTATIVE CALTAGIRONE: Okay.

That pretty well explains that, I think, for a lot of people that aren't familiar with exactly what the problems are going to be. And they probably even have it on the computers.

The other thing is, the legislation that both Chairman Gannon and myself introduced, and you as an attorney know that we live in an indigenous society that, just drop a hat and somebody is ready to start a lawsuit.

Don't you feel though, that there should be some type of protection for the governmental units both at the state, county, and local levels?

MRS. HEIDELBAUGH: I have no philosophical problem with immunizing the state and its agencies and employees because I believe that it's already in place, and you would have to do something affirmatively to deimmunize the sovereign. However, you'd have to keep in mind that immunization tends to send a message. And I think more so than any other area of law where there's immunity, this is not the message that we want to be sending to our state agencies.

We want to send a message to the

executive branch that has to allocate the resources, and the legislature that has to vote on the resources that the state has to be ready. We live in a culture where people, whether they be republicans or democrats, in times of crisis look for the government to assist them.

The state has to be ready. What if the worst would happen? What if there would be a blackout? What if there would be wholesale disruptions in the financial industries, in food supply, in telecommunications? Where would the first place be that the normal citizenry would look to? They would look to the State of Pennsylvania and their local governments.

If the local government and the Commonwealth of Pennsylvania isn't ready because we've sent a message that they're not going to be sued, then where are the citizens going to turn to?

REPRESENTATIVE CALTAGIRONE: Thank you.

CHAIRPERSON GANNON: Are there any simulations that have been done to simulate the

consequence of a system if it was compliant or was not compliant or somewhere in between?

MRS. HEIDELBAUGH: You mean is there testing going on?

REPRESENTATIVE CALTAGIRONE: Well, no. Has anybody actually taken the system or systems and simulated the year --

MRS. HEIDELBAUGH: Oh, absolutely.

CHAIRPERSON GANNON: -- to see what the consequence was when -- For example, I have a mainframe computer, and my programmers ran a simulation that this was January 1st, 2000 to see what would happen with this computer?

MRS. HEIDELBAUGH: The computer stops. Absolutely. The computer stops, or it will keep running and the information and data that is received is incorrect. A manual check will reveal that it's incorrect. This is not pie-in-the-sky theorizing of what's going to happen.

Godiva Chocolates cannot take a credit card with zero zero as an expiration date through their computer system. They can't swipe your card. They have to take a manual, like when we were kids, they have to write

everything down, send it to their corporate
headquarters, and it has to be processed
manually.

There's currently six lawsuits

pending in America that we were able to take

off the Internet. All courts are not

computerized. One of the very first lawsuits,

Produce Palace International, filed in

Michigan, and what happened was a customer at

the grocery store had a zero zero expiration

date on their credit card and went to the

checkout, the cash register swiped the card.

Not only did the computer where you check out

went down, the whole line of cash registers

went down. So, a lawyer sued the company that

had supplied the cash registers.

CHAIRPERSON GANNON: Is there a program that's been developed specifically designed to check a computer to see whether or not it's fully Y2k compliant or at least partially?

MRS. HEIDELBAUGH: There are a lot of software programs out there. They are touted with all kinds of different skills and what they can do. Clearly, there are software

programs that you can put on the PC that

markets its ability to tell you where date code

arithmetic exists in a line of code.

However, programmers who then test
and run that program based on fixing the tagged
lines of code will tell you that they missed
one out of four lines of data arithmetic code.
So, some of the those programs were scrapped
and manual review of lines of code.

Now, the other problem is well-reported in the press is that folks that programmed in the '50's were 30 years old. So, they're now 70. So, for instance, if that programmer at Aetna programmed the basic program that Aetna runs on for its life insurance policies, they're trying to find that programmer, find the documents that would read what he meant when he went 00/100/ and recreate that. That's part of the manpower problem of fixing.

These mainframe computers that run
the multi-national organizations and the
financial institutions and the
telecommunications industries are not PCs that
you can throw out and begin again. These are

programs that have been built and added onto and added onto, and the supporting documentation for what the line of code actually means sometimes just doesn't exist.

REPRESENTATIVE CALTAGIRONE: What percentage, if you know, of the issue is generated from hard code as on a chip as opposed to software? Actually, on the boards, are there chip problems?

MRS. HEIDELBAUGH: That's an excellent point which I didn't bring up in my testimony because it doesn't really affect the legislation, but embedded chips are a whole 'nother issue.

What I'm advising my clients, my corporate clients, is that, if you plug something in the wall, you have to check it for an embedded chip, which states nothing about the embedded chips that have been implanted by the medical device industries; the pacemakers that have computer date arithmetic; your HVAC system in your buildings, your elevator, your escalator, your traffic lights. There are billions of embedded computer systems, embedded chips, PCPs -- or PCL, programmable logic

chips. They have to be found. It has to be determined whether there's date arithmetic in them. If there is, they have to be extracted

and replaced.

REPRESENTATIVE CALTAGIRONE: Are there newer chips from the PC, like the Pentium and the A and D series?

MRS. HEIDELBAUGH: I don't know the answer to that.

REPRESENTATIVE CALTAGIRONE: You don't know whether they have addressed this issue. It seems to me also that you have a customer, a middleman, and then a supplier. That if the middleman has his system 2k compliant, the supplier does not, and he's got a middleman that has to do something with a customer, he's going to run into a problem down the line. It just seems to me that this is not something you can do in isolation.

MRS. HEIDELBAUGH: Well, it's the ripple effect which is well documented in the literature. And what's going on in America today is that every manufacturer, supplier, business is receiving Y2k compliance letters and surveys, and they're being asked basically

two questions. One, are you internally Y2k compliant? We want you to sign a document that certifies that you are; meaning, your company is compliant.

Number two, have you done a survey of your major suppliers, vendors, and customers, and are they Y2k compliant? General Motors, Ford, and Chrysler entered into a consortium in 1996, wherein, they agreed to share Y2k information and remediation information, and they sent out jointly to all of their suppliers, because they share suppliers in the automobile industry Y2k surveys and certification. There's millions of suppliers to the auto industry, and they ought to be required to certify that they are compliant.

The Big Three auto makers plan is after receipt of the surveys and certifications. If their suppliers are not compliant, they will move on to other suppliers.

REPRESENTATIVE CALTAGIRONE: It also seems to me that probably the two days that are going to be the biggest problem will be New Year's Day 2000 and New Year's Eve. That's

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always a problem; and also leap year, February 29th, because you're going to have some parts of the world that are going to be different years as opposed to different days. I mean, Asia might be December 31st, 1999, and someone else in the world January 1st, 2000. We'll have computers doing transactions because New Year's Day is not a holiday in every part of the world. Has anyone looked at that situation?

MRS. HEIDELBAUGH: That's what everyone is enormously concerned about. Asia, right now, as you know, is going through a major financial readjustment, shall we say? And their resources are being devoted both in time, energy, and money to try to fix that circumstance. They're not devoting their time, energy, and resources to discussing the Y2k problem.

And, for instance, one of my quotes from the newspapers is that the London Markets are enormously concerned that if they wire transfer their money to Japan overnight, will they ever receive it back. And one other point I didn't make in my testimony, but that

I'm personally concerned about and I'd recommend for all of my corporations is that, everyone should have a contingency plan.

If X, Y, and Z doesn't work, what are you going to do? We all know this problem is coming. We all know it's coming on January 1, 2000. We should all have a contingency plan. And I have recommended to Senator Murphy, one of your colleagues, that the Commonwealth of Pennsylvania to protect its citizens, should there be major disruptions, that there be a contingency plan. What will the Commonwealth do? What if there's a disruption in food? What if there's a disruption in the delivery of gas and electricity? It will be January.

CHAIRPERSON GANNON: Getting to the specifics of the bill, on the one bill the scheme was that the Commonwealth would be immune from any liability, but also what we'll call immune contractors. Let's assume that the Commonwealth has absolute immunity. We don't waive our sovereign immunity, but we do decide that other people including contractors in the Commonwealth should have some liability, what would be the recommended standard of care?

I think you put it'd be like a reasonable and prudent person as a standard for determining whether a person or company would be liable if there was a problem because their computers were not compliant or, perhaps, one of their suppliers or contractors were not compliant and causing a problem for a customer.

MRS. HEIDELBAUGH: This is all going to be evolving law because a reasonable person is judged by what's going on in the times. Our law evolves. What's reasonable? Was it reasonable for a very small, two-person manufacturing company in rural Pennsylvania to address this issue in 1996? Maybe not.

Was it reasonable for, to use one of the major financial institutions, would it be reasonable for Mellon Bank to have begun in '96? Probably unreasonable; should have begun early '90's because of the scope of the problem.

In conjunction, Mr. Chairman, we would have to take into consideration the Supreme Court adoption of the business judgment rule in regard to the review of officers and directors' actions as they apply to the

corporation and the business judgment rule
which is well-known in Delaware law and
throughout the country is, was it reasonable
and prudent that the officers and directors
undertook this course of action for the
corporation?

It doesn't require a perfect standard. No corporation would ever take a move, but it requires judgment, and that's decided on a case-by-case basis. And it's decided on a factual basis. What did they consider? What resources did they devote?

As I said, my personal belief is that it would be unwise for our Commonwealth as a whole society to immunize nonstate entities.

CHAIRPERSON GANNON: Well, what I'm getting to is, perhaps, there should be some standard of care enumerated in the legislation if we're going to have -- if we're going to let liability stand. Because I'm envisioning, you know, we've got maybe 20, 30 people in this room right now, maybe less. I would venture to say that if Welfare checks weren't being received, and Medicare payments, Medicaid payments weren't being made and we were holding

this hearing, they'd be outside the door and standing in the rotunda, and every major network would have cameras here and everybody would say, why didn't somebody see this was going to happen? And that would be the standard that we'd be judging then, and that liability would be all over the place.

So, it may be considerate to set up a standard now when we're a little more reasoned and less emotional and there's no panic to say if you're not compliant, you may be liable if you didn't conduct yourself a certain way as opposed to having a, you know, attorneys arguing, well, you should have seen this coming. Look at the chaos that's out there.

MRS. HEIDELBAUGH: Which is what's going to happen. I appreciate your point, and I would do you and the Commonwealth disservice to give you a standard of care off the top of the head as I sit here.

CHAIRPERSON GANNON: Yeah. I'm not asking you to do that.

MRS. HEIDELBAUGH: However, based on my memory which doesn't serve me too well at times, I believe that some of the pending state

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legislation has some of those considerations regarding the standard of care and what action should have been taken. And I believe you could with some time and some consideration and thought regarding and review of the literature, which there's so much out there now about this, you could develop a standard of care of what you would expect corporations to have done in order to receive the immunity from the Commonwealth.

CHAIRPERSON GANNON: Thank you very much for testifying before the committee today. We are going to take a little five-minute break.

(A short recess was taken)

CHAIRPERSON GANNON: All right. Our next witness is Mr. John Haldeman, Assistant Executive Director of Legislative Data Processing. Mr. Haldeman, you may proceed when you're ready.

MR. HALDEMAN: Thank you. Some of this is already covered, but I'll give a brief overview of what the problems are and how they are corrected, what we at LDPC are doing to prepare for the year 2000.

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The year 2000 challenge spans the entire information technology industry. It arises from the nearly universal practice over the years of using two digits rather than four to designate a calendar year.

The computer programs used a two-digit notation to save valuable storage space and data entry time. Although this practice is common, it can lead to incorrect results whenever software performs arithmetic operations, comparisons, or data field sorting involving years later than 1999.

It is primarily a software application problem, but both hardware and software are involved. After determining that the hardware and operating systems are year 2K compliant in that order, hardware has to be compliant first, operating system has to be compliant, and at that point then, the applications have to be Y2k compliant.

After that, the change is fairly straightforward. Users must first determine whether the data that represent year is stored as two digits, and then find all the applications that use that data, and convert

that two digits to four digits and solve the problem. It's not always that easy to do.

At LDPC we have been converting all two-digit dates to four digits in the software that the center has written. Most of our software has been written by the center, so it's a little easier for us. And I've been there 30 years, so I'm familiar with most of it. It makes it easy.

Software could either be rewritten by converting to a four-digit year or by converting using a windowing technique.

Windowing is converting all two-digit years greater than 50 to 1900, and less than 50 to 2000. We're doing that on some of the applications that are going to be rewritten in the next few years, but that wouldn't be a permanent fix; but it's a temporary fix to speed up the process.

Applications that we have written in the last five years have been developed using four-digit years. Most of LDPC's applications are -- use a standard date routine which has made it easier for us, and this standard date routine we converted about five years ago. And

all new -- All new programs we have written and all programs that we have made changes to we have implemented either a new date routine and also converting the year to four digits.

And because of this date we have -And we do make a lot of changes, so that quite
a bit of our programs have been converted. I'd
say 90 percent of ours have been converted
already, and the rest will be converted way
before the end of -- or, hopefully, by the
beginning of 1999.

Application software programs are written to work in a specific operating system such as IBM. If the operating system is not the year 2000 compliant, applications software will not work properly. Most of our information is on the mainframe yet.

We maintain and update most of it through the mainframe, but we are converting it and displaying it through our Internet and we rarely have to accomodate it that way. I'm more familiar with mainframe, so that's easy for us. The conversion's a little easier there because there's a lot more involved when you're getting into numeral technology. And we're

just getting into it, so recently, most of it is compliant.

We are in the process of now updating our mainframe software to be the year 2k compliant. You might ask, why just now? Well, it's only been since 1996, probably early 1997 that most software was really compliant; so, and it's expensive having to maintain the operating systems and so forth, so we had to put new features -- coordinate new features along with the year 2k problem.

PCs: Not all PCs are compliant.

Everybody now, including all our people, have

PCs. There is software available to check PCs

to see if they're year 2k compliant, and we are

in the process of doing that.

Older models, the way I understand -I have a Gateway that we bought in October of
'96 and that's not compliant. So, the way I
understand most of them, late, late '96 is when
they are becoming compliant, so you are not
guaranteed. So they all, PCs, the structure of
PCs are easy to check.

There is software available. I think you can download it from the Internet. And

there's also fixes available, and that can be downloaded from the Internet. And for us and our users we are doing that now.

users that we buy PCs for. We have about 2000 users that use our system. And they all have to be checked. If the PC is noncompliant you can upgrade the BIOS. And as I said before, there is software that can be downloaded to do this. I'm told though, that if the models are too old, that probably wouldn't be a good idea. You are better off just buying a new PC. Even though you can upgrade them, it can lead to problems because then you're down the road.

Most software you buy now is compliant. As was stated earlier, Microsoft Windows 95, the earlier versions are not compliant; the newer ones are. You really need to check all your software starting with the PC. The software that the operating system is on is on there, and any applications that you might run on there and up through.

Networking software needs to be brought up to grade too. We are in the process of upgrading our network. Some of the old --

All the TCPIT term is pretty much compliant, and some of the older connections the SNA connections, to the mainframe is not; but we're converting all ours over to TCPIT and make them compliant. But it still has to be looked at.

Not everything is converted. That software also had to be brought up.

And as was stated earlier, it is a problem. It's easy to fix, but you do have to look at the code. You have to -- And we have probably 2,000 programs and most of them have been addressed. We have ways to search and you'll find out what uses a date and what doesn't.

So a lot of our applications are in this report and right now they print out month, day, and year, and the year the last two digits. They'll still print okay. They'll have zero zero on them. If it's a work report or something like that, we're not really concerned about it; but any time you do a date comparison you have to be concerned, and all of those have been converted and you need to deal with four digits to do it properly, and we have done that. And our administrative

applications, most of those have been rewritten
for four digits; so we are in good shape for
those.

January 1st, 2000 is on Saturday;
Saturday morning. In case there's problems, it
gives us the weekend. We'll be here checking
things out, making sure everything is converted
properly. I think we will be in good shape,
but you never know.

Well, I'm not fearful that anything will crash.

Now, I'm speaking just for our software and hardware. If it doesn't work it will be a data problem. Maybe we can't bring up some data that looks like it's lost, but it's not. We have to change the software to be able to access that data. I don't, you know, if we do our job properly, we won't have that problem.

I don't expect that.

It's always standard practice to back everything up, and we do that on a daily basis. So in the remote possibility that something would crash, maybe it wouldn't have to be because of our software or something like that. We have the data; it's maintained, and we can

1 recover from it.

And at that point we're -- I think our center's in good shape in dealing with the work we do. I can't vouch for any other. I think every company has to address the issue themselves, and it has to be addressed because there are problems out there.

And I'm open for questions.

CHAIRPERSON GANNON: I thank you, Mr. Haldeman. I'm delighted to see that our LDP has recognized this problem early on and is addressing it. And, hopefully, we won't see any problems January 1st, 2000, and after. Representative Caltagirone.

REPRESENTATIVE CALTAGIRONE: I'm just wondering, they just spent a ton of money at the House buying new computers in our district offices and Harrisburg offices. Are they ready?

MR. HALDEMAN: Well, that's a different caucus that's taking care of this. But if they just bought them, they probably would be. I would suppose the newer -- Anything bought this year, I think, is pretty much compliant. If it's the newer software,

1 it would be compliant. It's just earlier 2 than --REPRESENTATIVE CALTAGIRONE: Compaq. 3 MR. HALDEMAN: They probably, you 4 5 know, they still need to be checked. I mean it 6 still has to be verified; but I would say they 7 probably would be. REPRESENTATIVE CALTAGIRONE: I'm 8 9 sure that our caucus is fine. 10 MR. HALDEMAN: It's just getting back 11 into 1996, any software that you have that you 12 didn't update you really need to. I still would recommend verifying it, but you know if 13 14 it's 1996 or earlier we will have problems. 15 CHAIRPERSON GANNON: Representative 16 Dally. 17 REPRESENTATIVE DALLY: No. 18 CHAIRPERSON GANNON: It just seems to me that the old adage that the chain is only as 19 20 strong as its weakest link applies, if 21 anywhere, it applies here. Because you can 22 have -- You have what, 200 programs? 23 MR. HALDEMAN: 2,000. 24 CHAIRPERSON GANNON: 2,000. 25 you have 1999 programs that are compliant and

one that's not, that's going to affect the other 1999.

MR. HALDEMAN: No, no. They're not all tied together. It might be a hundred that are tied together, something like that.

CHAIRPERSON GANNON: I was thinking in terms of the network. If you have a network --

MR. HALDEMAN: Well, within a network, yeah, well, right. If one piece in the network -- One of the servers is not up to grade or something like that, you might have a problem on the network. I mean our data is still (inaudible word) because that's back somewhere else, but individual people might have problems, yes.

CHAIRPERSON GANNON: How about vendors that supply services to LDP? Do you have any outside programmers that provide commercial software that go off the shelf, and how are you determining compliance on that?

MR. HALDEMAN: Well, we do have outside software we purchase, and most of the vendors we deal with you can verify whether their software is compliant or not, and we're

1 making sure what versions we are using are 2 compliant. But right now, like I said, we are operating our mainframe software now and we 3 4 are -- what they we call using an L-par 5 (phonetic) system where we can bring the mainframe into pieces. Once that's upgraded, 6 7 we are going to test everything to 2000, bring 8 it in, change the date to the year 2000, and 9 pretty much test all of our applications. 10 CHAIRPERSON GANNON: To your 11 knowledge, is there any industry, software 12 industry, or hardware industry certification 13 that a particular software or particular 14 hardware is compliant? A customer/consumer can 15 say, oh, great, this has the seal of approval 16 or something like that? 17 MR. HALDEMAN: Other than from 18 individual vendors, no. CHAIRPERSON GANNON: So you just have 19 20 to rely upon representation by the individual? 21 MR. HALDEMAN: Right. 22 CHAIRPERSON GANNON: There's no 23 standard for certification of compliance.

MR. HALDEMAN: Yeah, most of them, I mean they tell you they're compliant. You can

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usually access all that through the web nowadays.

CHAIRPERSON GANNON: It just seems to me that even though technologically this isn't a complex problem, it seems to me that there are a lot of nuances to this Y2k issue. It's not simply, you know, zero zero; it varies. Software handles things differently --

MR. HALDEMAN: That's correct.

CHAIRPERSON GANNON: -- for different reasons. So that compliance, does that mean, well, yeah, you know, that this computer's zero zero means 2000; but if you're going to use some fairly complex mathematical formula it may not recognize it. I mean, there seems to be degrees of compliance here or potential degrees of compliance.

MR. HALDEMAN: There are. I mean, if it's compliant, it's going to treat it as a four digit. I'm not sure how they handle their PCs and so forth.

CHAIRPERSON GANNON: I just envision a vendor saying, well, you have a problem here with this program. You said it was going to be compliant. He says, well, you didn't tell me

you wanted a program to do that. It's

compliant if you're calculating change, but if

you're going to do a more complex it's not.

That's my concern about that.

MR. HALDEMAN: I suppose that's possible. I mean, depending on what you're doing, you won't have the same effect. In displaying dates, and so forth, you wouldn't have a problem. Your date would display wrong, but it wouldn't have any effects. But if you're doing calculations or sortings, and so forth, it needs to be --

CHAIRPERSON GANNON: Again, to the liability issue, if you had a vendor who -Let's suppose the vendor told you that this was compliant, and it turns out that it's not.

What would you expect would be the obligation once you determine that this software is not compliant, even though it was represented to be compliant? And I don't mean it's totally noncompliant. I mean partially or something, but it didn't fulfill your particular needs because of the Y2k problem. What would you expect that the obligation of that vendor to be to you in that situation?

MR. HALDEMAN: We would expect the vendor to give us an upgrade to make it

3 compliant.

CHAIRPERSON GANNON: Would you expect the vendor to reimburse you for any cost that you might incur to work around the problem as it's presented to you until you had software that's upgraded?

MR. HALDEMAN: Well, it's not normally the way it works because, in data processing it seems like there's always -- I don't care what software you get, there's always data versions and there's always problems with it, and they'll give you new versions to fix it; but there's never -- you're never reimbursed for your time put in to fixing it. It's seems to be a standard practice.

CHAIRPERSON GANNON: Well, thank you very much, Mr. Haldeman, for appearing before the committee and sharing your testimony with us. It's been very helpful.

Our next witness is Mr. Larry Olson,

Deputy Secretary for Information Technology,

Office of Information Technology for the

Commonwealth of Pennsylvania, and Charles F.

Gerhards, Director of the Commonwealth

Technology Center. Welcome, gentlemen, and you

may proceed when you're ready.

MR. OLSON: Thank you very much,
Chairman. A few things I might want to cover
here at the very beginning. I certainly
enjoyed Heather Heidelbaugh's discussion this
morning. I think it was very on-line as it
relates to a lot of the year 2000 issues.

One thing I would like to add at this time is that, as a lot of people discuss, well, we have until December '99 or January 1st, year 2000, we do not believe that is the case.

As far as we're concerned, we feel the deadline is December 31st, 1998. We feel most programs, once you get into January of '99, start having data rising calculations of zero zero and beyond, and at that time the computer programs will start to fail or you'll start getting incorrect information from that.

So, I did want to kind of stress
that; that a lot of people feel we do have a
year and a half left. We do not feel there is
a year and a half left for computer systems. I
also want to reinforce what she had mentioned

as it relates to what this problem is.

We feel this is also a management and leadership issue. It is not a technology issue. The technology actually is the least part of the whole response to the year 2000 we feel, and I'll talk more about that later. I also agree that it is a global issue. The supply chain impact to businesses, governments, whoever is significant, both to the suppliers, your tier one, tier two, tier three suppliers and also to your customer base.

One example I like to use to get
people to understand what this really means is
the impact that the two-week UPS strike had on
non-UPS workers. During that two-week period,
people completely unrelated to UPS started to
be affected; customers of UPS, suppliers to UPS
were affected. You start seeing those stories.
So that kind of gives an idea of the ripple
effect; that one major company, if they don't
operate for a week to two-week period will have
on the overall economy.

A couple examples that I have seen recently in a recent discussion with the chief information officer for General Motors. He was

telling me that in '95 they went to one of their factories in Canada and tested over the weekend what would happen to their systems, complete systems in their entire factory on the year 2000 if they mainly pushed up the clock to zero zero. The factory completely shut down, and they learned a very good lesson at that time.

We've also seen in a couple of examples as it relates to embedded technology, the chips within different systems. One Pennsylvania corporation that we talked to, the CIO of that corporation had tested out a security system where you went through a secured door with some kind of security card, it opened up; you went through; it recorded who came in, made sure it was the right people.

They went ahead and tested that,
moved up the date to see what would happen. It
completely fried the system, and they still
don't have it working after three or four
months. So, they now go through an unsecured
door because they still can't get it fixed.
So, when you test out especially embedded
technologies, we strongly advise you to be very

very careful on the impact because it could, in essence, ruin your entire system; so that's one thing that I would like to mention.

What I'd like to kind of mention, kind of go through right now is where we are in Pennsylvania state government. We started in 1996, in working on the year 2000. Frankly, I think it was probably a little late, but we galvanized very quickly. And the reason that I think we are where we are right now, and I'll mention that in a minute, is that it was a priority from the very beginning, a very vocal priority by the Governor, by the Cabinet, and by ITR organizations within state government.

Immediately we started looking at exactly accessing what we had to do. We've identified 45,502 programs that need to be complete. That's both mission critical and nonmission critical. We're anticipating 1,337,085 hours to complete all the work. That relates to \$39,227,995 to complete this work of -- for state government; again, mission critical and nonmission critical.

Sixty percent of that is being done by Commonwealth employees. The other 40

percent is being done by 15 different vendors.

Of those 15 vendors, 88 percent of those vendors are Pennsylvania companies or offices here in Pennsylvania. So, most of the work is

being done within Pennsylvania. We're very

6 happy to say that.

As a lot of different companies and state governments and federal agencies have been complaining that there is a shortage of people to respond to the work that's needed, we have not seen that there is a shortage at least for us. A lot of what we've seen is that, companies have been very select on actually who they contract for because of the liability issue. If they think the client is someone that doesn't have the management capabilities to really accomplish their work, there is a higher risk, liability risk for that vendor, and so we've seen a lot of the different companies being very select on who they work with because there is a shortage out there.

In one case the state just north of us had requested, I guess last fall, if they could actually buy off of our contracts because they still had not been able to get a contract

to do the work, and we kindly refused and said

we would like to keep our contractors within

Pennsylvania. So, we think they happened to

have some people to do some work for them.

The deadline that we imposed, the Governor imposed back in '96 was to complete mission-critical work. Again, out of the 45,502 programs, we've identified 27,297 programs that are mission critical, about 60 percent of the work. That deadline is June 31st, 1998, just this last month; and I'll talk about the status of that.

The nonmission critical work our deadline is December 31st, 1998. This is the most aggressive deadline schedule of any state or federal jurisdiction in the United States, and also anywhere else that we've seen because the U.S. is typically thought of as a leader as it relates to responding in the year 2000.

Our approach, from the very beginning we clearly understood that a strong management approach was required. One that was common throughout all agencies, really an enterprise approach to managing this IT project which is considered the largest IT project in history.

It certainly is for us.

As it relates to that, we developed an automated tracking system that would track every deliverable, every milestone that each agency would be working on. And we took -- Again, there's 45,000 programs, and identified three deliverables or milestones that we were tracking.

First was the correction of the program itself, the testing of the program, and the implementation of the program. So, from automated basis, we have been basically tracking on a monthly basis 136,506 deliverables every month completely electronically.

As other states and federal agencies have developed very large, let's say, bureaucratic central organizations to manage this, we've used technology to manage this. And basically, I have one person managing all state agencies because, again, we're using technology and management systems to know what's going on.

Each agency team meets with us on a monthly basis and reports all their completed

work by the 10th of the following month.

2 Again, that is submitted to us electronically.

We also do have quality assurance teams that go

4 out to verify agency results and performance,

5 and we have seen that agencies are pretty much

6 | right on line with what they report. So we

feel very confident on the results that we've

8 been receiving.

This approach to managing the year 2000 has actually garnered quite a bit of national attention. The director of G.A.O, the General Accounting Office in Washington, D.C., Joel Rolinson, considers us the best practice in the nation.

We have been advising both

Congressman Horn and Congressman Morella who

chairs the House committees in Washington on

the year 2000, and we've also been advising

Senator Bennett's office on the different

areas that they've requested information from

us on.

We've also been working quite closely with some of the top federal CIOs of the different federal agencies; mainly because, they are probably our biggest data partners,

and it's a major concern to us. So we have a

very good relationship in Washington, and

actually, a year and a half ago I testified

before Congress. We have been the only state

that's been asked to testify before Congress in

Washington.

A little about where our status is.

We have preliminary June figures right now.

The finals are due out next week, and we will be making a more formal presentation on our results, I believe on July 22nd. The preliminary figures that we have clearly shows that we've maintained our budget down to the line. Overall on our program, we are a hundred and ten percent ahead of schedule. Again, it is a very aggressive schedule I wanted to reinforce.

Mission critical, it shows that we have completed 96 to 98 percent of all our mission-critical work including not only correction, but testing and implementation.

This is by far the strongest statement that any government jurisdiction has been able to make to date whether in the U.S. or abroad from what we've seen.

Overall, we are 83 percent complete.

Again, that is mission critical and non-mission critical. And we feel extremely confident that all of our work will be complete by our final deadline of December 31st, 1998.

A couple of other areas that we've monitored and we've been working on quite a bit, you've heard today about the impact of PCs; and a lot of PCs that do not work. We have gone through working with each of the state agencies and have tested our 47,000 PCs in state government.

We've identified roughly around 7,000 PCs that could not be fixed or the BIOS chip could not be fixed, and we had to have those replaced. We have been doing that from just the annual operating budgets, and currently I think we now only have somewhere around a thousand to be replaced out of the 7,000; so we feel this is not a concern to us in state government. And again, agencies will maintain this through their normal operating budgets.

Embedded technologies as you heard earlier is a major concern to us. We have been working very closely with the Department of

General Services and each of the state agencies to look at this. There, as heard earlier, there are millions of embedded chips out there. Some have bigger effects than other ones. You heard about stoplights. We've also looked at issues for local government of sewer plants. The valves that release sewer can be affected, and so we've been discussing a lot of those things.

We've been doing a lot of research on this, working with universities and some of the national groups to better understand the embedded chip aspects. We feel we are in good shape on the embedded chips, but there's certainly a lot to continue to do.

On the embedded chip technology, I might add, we feel we do have until December '99 because that basically does not get affected until the actual move over to 2000. So we have a little more time on that.

One of the areas that usually is not considered, it has been a priority for us, has also been the inuser applications. You've heard about the different software programs that are compliant.

Microsoft does have a few things that need to be fixed on Windows 95, and some of their programs we've actually been working with their top year 2000 person. So we feel very confident as it relates to any Microsoft product.

And we've also monitored -- We've taken actually the top 100 programs used by state agencies and used a computer program by Datapro to run them to see if there is a problem on that. So we feel confident that generally the computer -- the PC base software that's out there, that we're using we are not -- we don't have a problem on it.

The one area that most people forget about is that you might have, let's say,
Microsoft Excel for a spreadsheet, and that's perfectly fine, there's no problems with it.
But, if the inusers when they made their spreadsheets themselves only put in the spreadsheet two digits for the year, that spreadsheet will have a problem with that calculation because they don't have a four-digit category in the spreadsheet. So, those are inuser applications, and a lot of

times just one person has developed that and is running that on their own PC.

So, we have been working with all the different agencies to better identify that.

And this fall we will start a new campaign directed to each user of the PC within state government for them to start looking at each of their spreadsheets, each of their inuser applications because it's really that individual person is the only one that can fix that. So we're clearly aware of that, and we're working very diligently with all the different agencies to respond to that issue too.

One of the additional reasons we felt it was critical to be complete by the end of '98 was that, not only did most of the computer programs, but their mainframes have date calculations beyond one year, so we had to worry about that; but also, we knew that there are going to be surprises.

You know, embedded chips, other software programs that kind of pop up that we're not aware of necessarily. You know, we know there are going to be a few surprises.

And what we felt very critical about was that, we needed to get the vast majority again, you know, 98 percent of all our mission critical were already done, everything else will be complete.

We can get all that out of the way, so as surprises come up in '99 whether it's embedded chip, whether it's inuser applications, whatever; that we will have the resources and capacity to quickly and proactively address those and not have to worry about stopping other important IT applications and state agencies to do -- to respond to that or just forget about it and worry about the business continuity and disaster recovery.

That's not acceptable to us.

From our discussions on the national and international basis, we are the only jurisdiction that really has looked at it that comprehensively to date. And so, we feel comfortable, we feel confident; but we also recognize that surprises will occur and that we will be on top of those and have the resources to quickly respond to those.

And I would like to at this time

thank the General Assembly for their support in our budget request and the different agency budget request during the last two years because that's made all the difference for us, and I certainly appreciate their support.

Some of the lessons learned during this period have been, and as I mentioned earlier, that executive leadership in volume is critical. And that is not only for a government but for a business, anything else. If an executive of an organization does not buy into it, does not support it, the organization will not succeed. We feel very strongly about that.

We've seen a lot of different state governments that have had no interest from the top on responding in the year 2000, and those states are in very bad shape. In general, we feel there might be four to five states that will be in very good condition, ours being one of them. Ten states that are probably on the -- kind of on the borderline, quite frankly; that they will have some significant disruptions probably, but there's good hope and the other states will not be in very good shape

at all. You know, almost a write-off. And we have done whatever we've been able to do to assist those states.

We actually had been working for about a year every month doing a teleconference with 17 other states to give them advice and give them suggestions on what we are doing.

We've also sent out our management tracking template, a copy of that to, I think, 12 states for them to use at no cost and also some of the major counties around the U.S. at the same time.

We also have -- One of the lessons that we've learned is just how important project management is to information technology. In most project management that you've seen has been in the construction industry, in that area. IT has not really used project management systems and tracking systems very effectively. And one thing that we've been able to show by having a strong project management system, an automated management system in place that IT projects can be held to budgets, can be held to schedules, and can be delivered as originally thought.

agencies, their IT organizations should be applauded by their actions in what they have been able to do over the last two years on this largest IT project in history, at least for a state government and most other organizations. And it's been a major accomplishment for us, but it really has gone and showed all of us, I think, the importance of project management and really making sure that we know and manage and

track what we're doing both financially and

also deliverable wise too.

And I think the Cabinet, the state

Some of the things that we've been doing on average beyond state government, because as you've heard earlier not everyone is an island, you know, on this you are connected to everyone. Whether it's local governments, businesses, federal agencies, whatever, we are all connected. It's a global issue, and we all have to be concerned about that.

And again, I just want to stress the supply chain issues for companies, for governments, whatever, are so, so critical. In a much earlier conversation with the Deputy Secretary for Transportation they were talking

about how they made this such a high priority.

We started discussing some of the other

3 impacts, and in most times people think about

4 their partners as partners that share data.

5 And, you know, they're data partners

6 themselves. Well, we start talking about --

Well, you know, it's not just data partners.

What about if, let's say this is going to be in December, January, all of a sudden you need additional salt on the roads because it's a major snowstorm, and you make a call to the salt supplier up in New York only to find out that their inventory control system or their payroll personnel systems no longer are working and they're shut down for a week or two weeks or three weeks.

The salt's up there, but you can't get it. So people need to understand that food, different commodities like that, it's not -- Again, it's not a technology problem.

It's a business (inaudible word) problem. So we really like to stress that whenever we can.

As it relates to outreach, one of our concerns a year and a half ago was, there was very little communication between state

governments and federal agencies. Again, we are so dependent upon our communications, electronic communications with the federal agencies and them with us. We have seen very little communication really occurring as it

related to 2000.

I spend quite a bit of my time in
Washington, D.C., especially back then
advocating for stronger communications and more
cooperation. And actually, a year ago this
month Governor Ridge called for a state federal
CIO summit on year 2000 to really start
discussing and building the bridges between
states and federal agencies.

That was held in Pittsburgh in

October of '97 and we had CIOs or senior IT

executives from 43 states and 21 federal

agencies, including from Health and Human

Services in Washington, their chief financial

officer, the number two person in the entire

agency attend that.

That was an incredibly good first step. It was the first time that that level of IT officials from federal governments, state governments had ever gotten together on any

issue at all. And we were able to produce results in one day by the assistance from the University of Pittsburgh, Penn State
University, and Carnegie Mellon University in doing some collaborative interactive sessions using computers, we were able to actually

accomplish work.

During that day, it was kind of interesting. Again, these are extremely important high-level people within their different organizations. They all buckled down and really got to work on it, and we actually only gave them 15 minute lunch breaks. And at the end of the day, at 4:30, we did a survey on how they felt about that, you know, about the entire day, and overall, the hundred and thirty people rated it at a 92 percent of excellence, and it was a great day for all of us I think.

One of the things that we've been doing within Pennsylvania on awareness, over the last two years we've been working very closely with a number of local chambers and also the state chamber to have different conferences, regional conferences for awareness conferences. Also universities, East

Stroudsburg University, Bloomsburg University have had regional conferences that we have 2 supported sending speakers; myself, Charlie, 3 and other groups and we spread out around the 4 5

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6 Pennsylvania that we've sent speakers to; 7 again, whether they're associations, township

supervisors associations, 8

> university-sponsored organizations, local meetings, chamber meetings, whatever. And now we --

We have had 28 different events within

I might add, that was one of the top priorities from the very beginning of our program. Now quite a few other states are now taking that lead and working within the business community around their states. In two weeks on the 22nd of July we will also start a new statewide campaign, building awareness and action.

One of the things that were discussed earlier was the Executive Survival Guide that you have at your desk. This is something that we have completed recently in cooperation with -- in partnership with the federal government of Canada actually, and you'll see that on the

front. Canada considers us the most prepared jurisdiction on year 2000, and has partnered with us in cooperating and finding out ways to build awareness in Canada using a lot of what we're doing here in Pennsylvania. So we have completed the Executive Survival Guide.

Some of the things that Canada has done, which we will have complete access to here in Pennsylvania, is a very detailed year 2000 workbook which will answer some of the representatives questions about if you talk to somebody and they say, yeah, we understand, but what do we do? This will have even much more detail than the Executive Survival Guide. And we will be looking at making this available. Actually, our Executive Survival Guide is available now to be downloaded on our web site www.oit.state.pa.us, and we'll be making this available for anybody to reproduce also.

We already have the State of Michigan wanting to reprint 10,000 of these. Canada actually will be taking our Executive Survival Guide, again, with Pennsylvania on the front cover, and they are tending to print one million to be sent throughout Canada to people,

businesses, and local governments and schools everywhere.

One of the areas that we've also stressed is our schools. The Department of Education has very uniquely had workshops throughout Pennsylvania to start building awareness for superintendents and also principals about the impact of the year 2000 within their own systems; personal payroll systems, also scheduling systems, things like that. So, we will be working with the schools in that area too.

One of the things that we also have is -- I might like to just show you, and we do have a couple of copies of this already; and again, this is one of the parts of the partnership. We have a series of five posters to build awareness on year 2000, very professional posters.

Again, Canada has done that; but they actually have given us, as you can see, top billing on it. And this is being distributed throughout Canada and we'll be distributing these throughout Pennsylvania also, and also be making available to federal agencies in other

states for their -- you know, to reproduce and send around the nation too.

Statewide awareness program is, next week we'll have 80 community leaders from Team

Pennsylvania Center for Local Government and also Penn State's outreach program coming into Harrisburg. Charlie and his staff will be going through a day-long Train the Trainer

Program to train them as community speakers on year 2000 because, again, our staff is extremely limited and this is one way that we could get speakers out to more people around Pennsylvania to talk about the need for

Again, this campaign is only the first phase of it. Over the next couple of months we will be expanding this and trying to build even more momentum throughout the state.

Again, because as Pennsylvania businesses respond and get prepared, that is good news for us because we feel it's an economic development issue for states.

responding on year 2000.

Actually, if anyone saw in <u>Business</u>
Week's special recently on the year 2000 zap,

what they're calling zap, how the computer bug
will hurt the economy, Pennsylvania was the
only state requested to be quoted. Both myself
and Governor Ridge was quoted in here, and the
Governor actually talked about that by making
Pennsylvania year 2000 friendly; in essence,
getting businesses prepared for it. As
businesses and other states fail, that this
could be a market opportunity for Pennsylvania
businesses that are prepared that we can go in
and take advantage of that. So, there's an

opportunity there I think.

week, if you're familiar with it, The National Journal, which is one of two publications that are read very closely in Washington D.C. I did a story on the year 2000, and I might just read the headline, "House States Are Getting Ready;" and the subtitle to it is, "In It's Beat the Clock Struggle With The Milliennium Bug, Pennsylvania Has Been Working at a Megahertz Pace." And it goes on to really highlight Pennsylvania as the top example in the nation on responding to year 2000.

So, as it relates to what we're doing

within government, and also outside the government, I think that gives you a better idea of where we are. Some of the things that I would suggest that you do consider as it relates to the two bills that you're looking at, one of the first things that I think about is, and it sounds like it's shared with you, of course, is that litigation, as it relates to the year 2000, starts to really concern me.

You know, when we hear about Lloyd's of London predicting \$1.2 trillion worth of litigation in the U.S. alone, and then only to find out that that's probably a low estimate. And also see different, you know -- Because we work so much on a national basis, we also track very closely the kind of litigation that's happening. You know, the first lawsuit that was filed in Detroit by the grocer against the manufacturer of his light machine because it wouldn't read zero zero, and he felt he was losing business. So we certainly are concerned about that.

The one thing, as you heard earlier, too, that concerns us that any kind of legislation, also, is so complex because

immunity or, you know, holding people harmless
or anything like that on this issue it is going
to be so, so complex. That's one thing to
really be very careful about if you do consider
legislation in this because the ripple effect

impact, you know, I think could be very

7 significant.

The Commonwealth, again, as you've seen, we have 15 vendors that we're working with. We do have very specific language in that for accountability and performance on year 2000, and it actually lasts to the 2001 in case anything that they do now doesn't seem to work for that next year. So we would be somewhat concerned about our ability to hold vendors liable for any work that they do and accountable for them.

Also some of the things to consider are the effects on the marketplace. We clearly see that there are a lot of very good companies, very honest companies that are working diligently to respond to our needs and other clients' needs around Pennsylvania.

We would be somewhat concerned that if there was a blanket immunity with that also

1 increase a lot of companies that really don't 2 3

consider.

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have the expertise to pop up because they feel that they might be protected. Again, I don't know if that would happen or not, but that would be something that you might want to

And also, as we heard before, to us the most important thing that needs to occur is action. And top-down priority leadership is so, so critical. You know, so anything that would lessen the priority of working on year 2000 would be a concern of mine. And it would be something that, you know, hopefully it wouldn't be the case; but in some states like Washington, Nevada, that has a legislation, if that would lessen the priority that year 2000 has in the business organization within government, or whatever, that would be a concern if all of a sudden they felt that they didn't need to respond as effectively or as fast.

Again, in state government, for Pennsylvania, we feel we are very aggressive and we will maintain our schedule no matter what, so we feel confident that it won't affect us in any way. Those are my basic comments.

I'd be happy to respond to any questions.

A lot of people do talk about silver bullets, magic bullets. We feel the only silver bullet that's out there is action and the executive leadership. There is not going to be a technology silver bullet that solves all the problems automatically. It really takes a lot of time.

The one thing I might just show you just to better understand what the whole issue is about, this is one of our programs. One of the 45,000 programs that we have to fix, and you see all the lines of code in this program. Basically, you have to go through each line of code and identify which line is affected by year, date calculation. And it's a very time consuming -- It's not a complex issue, but it's a very time-consuming issue.

This is what we started working on over two years ago. But this kind of gives you an idea of what it might mean. And also, I'd like to offer my office's assistance to your staff, committee staff on anything as it relates to year 2000. We'd be very happy to

1 help out in any way. I'd be very open to any 2 questions or comments. Thank you. 3 CHAIRPERSON GANNON: Thank you, Mr. Do you have any comments, Mr. Gerhards? 4 Olson. 5 MR. GERHARDS: No. 6 MR. OLSON: He's the technical guy. In case you ask any real technical questions, 7 8 Charlie's going to take those. CHAIRPERSON GANNON: Representative 9 10 Caltagirone. 11 REPRESENTATIVE CALTAGIRONE: Yes. 12 Responses to what you've been doing and the costs, I'm curious if you may respond to that? 13 14 MR. OLSON: To the cost? 15 REPRESENTATIVE CALTAGIRONE: Yes. MR. OLSON: Well, we feel -- Again, 16 we are looking at \$39 million. That's 17 18 basically what we estimated. Actually, we estimated around 42 million to start with and 19 20 we've been able to stay actually below that 21 cost. We've been able to maintain that. It's 22 not a guesstimate. 23 A lot of states you'll still see --This is amazing. You'll still see states 24

estimate that their cost are going to run from

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a hundred to \$200 million. This late in the game, if you don't have a really concrete dollar amount, there's something wrong as far

as we're concerned.

California, just a month ago, they had been showing a cost of \$250 million and now the CIO out there had to admit that now it could be somewhere around \$500 million. Again, if you're off that much, by order of magnitude, you know, cost isn't the problem; management is the problem. You know, so we feel very confident, and actually, ours is -- In a recent publication, Pennsylvania's costs per program was the second lowest in the nation.

REPRESENTATIVE CALTAGIRONE: You had mentioned a number of people that attended the conference and whatnot. I was just wondering in response to what we have done in Pennsylvania to those that have participated.

MR. OLSON: On the State Federal

Summit, again, that was a major -- Pennsylvania

acted basically as a national leader, as a

catalyst to make that happen. We've had very

good responses after that. The National

Association's State Information Resource

executives, the counterpart of the states' CIOs had decided to go ahead and take a lead on a national basis with the federal agencies on working out interfaces within states and federal government.

Since October they've only issued one memo, and we've been a little concerned about that, so we decided just to go directly to federal agencies. And we've actually now been partnering directly with federal agencies and used Pennsylvania as their model on how to deal with a state government, which obviously gives us their top priority. And once they figure out how to work with us because we are so far ahead, then they have a better idea of how to work with other states.

REPRESENTATIVE CALTAGIRONE: Some of the arms of state governments and national conferences of state legislatures will be meeting this summer, and some of the other statewide CIOs, counsel of state governments, have you had any contact with them or will you be making any presentations at their conventions this summer?

MR. OLSON: I believe they have asked

us on that. Actually, in the last -- their last publication that came out about a week ago or whatever there's a year 2000 article. We participated in that article and there's quite a bit about Pennsylvania in that article, all positive I might add. And I'm not really sure, but I believe somebody from that organization has talked to us. And we'd be happy, either myself or Charlie, to participate in this if they would like us to.

REPRESENTATIVE CALTAGIRONE: Thank you. Thank you, Mr. Chairman.

CHAIRPERSON GANNON: Representative Manderino.

REPRESENTATIVE MANDERINO: Thanks for your testimony and congratulations on where we are in Pennsylvania. I didn't know that.

That's encouraging to hear. And in light of what you've said, I'm left with the impression that we're as prepared as we're going to be and that I don't know that legislation gets us anywhere. And while you didn't say it directly, I wondered if you shared the concerns --

I don't know if you were here for the

earliest speaker, Mrs. Heidelbaugh, when she
said she thought legislation granting immunity
would send the wrong message. And I wondered

if you had any thoughts on that.

MR. OLSON: As it relates to state government, it's my feeling -- I mean, we're going to be complete. Again, we're 98 percent complete for mission critical right now, and everything else will be finished by December. So, I think that's the message that we'll be sending; that we will be prepared no matter what.

As it relates to local governments and other jurisdictions, I'm not really sure. I do know that a lot of county governments and local governments are not anywhere close to the level of preparedness that we are, and that's why we're starting our campaign, awareness campaign. We start building action and we try to help out any way we can; myself, Charlie. A lot of my staff have been meeting at different associations around Pennsylvania, and we will continue to do that as much as we can.

So, I'm not really sure. Not being an attorney, I'm not really that up-to-speed as

it relates to sovereign immunity, and what the impacts would be, so I can't really respond to that portion. But, as it relates to state government I think our message will be that we will be prepared.

And again, I think we're in very good shape; but I do want to caution that we also clearly know that there are going to be surprises, and we're going to do whatever we have to do to respond to that and be very direct as it relates to working with our state agencies.

REPRESENTATIVE MANDERINO: Thank you.

Thank you, Mr. Chairman.

CHAIRPERSON GANNON: It seems to me that there's really a two-prong issue. One is the technical and the other one is what you called leadership in management issue. The technical one seems to be pretty easy to solve.

And with respect to the liability, we have been rolling around the standard that we would apply because I can envision you would have a company or an organization that would have good leadership and good management; but the technical person they hired didn't have a

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clue, and they'd end up with a disaster. you'd have a company that was just totally clueless as to the management and leadership side, which it did nothing. And I just wonder if the results of both of those are the same, whether we should have the same standard of liability for each or have a degree with respect to that company acting in good faith and good management and good leadership but poor technical expertise where the company just said or the organization, whether it be a local government or state government said, we'll address it when it happens and worry about it then.

I know you said you weren't attorneys, but I'm just commenting on what you said. It brought out the fact that the -- and the leadership and management problem is a paramount issue here. And, of course, from your testimony and what I've seen and heard, I think the Commonwealth of Pennsylvania is light years ahead of every other state in dealing with this issue.

And you're to be commended on the work that you've done and the work that

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Governor Ridge has done on this because I don't think -- I think there's a lot of people out there even today that don't realize the seriousness of this issue, and they're going to find out the hard way.

MR. OLSON: I totally agree. We've actually in one communication -- I don't know if you saw the -- oh, about four months ago, the big <u>USA Today</u> first page big year 2000 kind of issue, and then two full pages within Section A. One state, that will go nameless, was listed that they were 25 percent complete at that time, and actually that was one state that we communicate with. One of my staff that knows that state was thinking, geez, they're not even close to 25 percent, you know, and called down to the person down there and said hey, what's going on? I thought you were like four to five percent complete, and I see 25 percent there. And the person says, well, what the heck was I going to do, you know, a reporter from <u>USA Today</u> calls me. I'm going to say four or five percent complete? I just pulled something out of the air and said 25.

So I do think a lot of people are not

prepared, and in any way that we can help out,
we certainly will be there. Again, we have
limited resources. Certainly the top priority
is now, and will continue to be, Pennsylvania,

of course.

CHAIRPERSON GANNON: Is your organization going to be in a position to help local governments as this gets closer, or are we past that date when problems present themselves?

MR. OLSON: Well, what we're trying to do -- Again, my organization really doesn't have staff to do those kind of things.

Actually, I might add, that as other state organizations and federal organizations brought in new positions, in some case, in one state 25 new people just to manage the central organization. We have not increased our staff at all to manage and to deliver what we've been able to deliver.

So we are stretched, but what we've been working on are ways -- instead of us just doing it ourselves and being the bottleneck, we've been working with the universities and also especially Penn State's, their Outreach

and their Extension Service Group and also other chambers. And again, this is part of our train the trainer approach to start finding out how we can -- Instead of having to come to us, is there ways that we could bring some expertise whether on-line like the Executive Survival Guide, the workbook, and other areas that we're going to be expanding on that will make information available.

One of our parts with our partnership with Canada is, they have produced a very expanded web site on the year 2000, and will actually be answering questions, a help-desk type of thing. That will be available for Pennsylvania companies and local governments there too.

So, we're going to be looking at ways that we can effectively help out, and I think there are going to be ways. It's not just going to be us. We'll be able to pull in a lot of groups; actually, a lot of national groups.

The Gartner Group, which you heard about earlier, I had met with their senior vice president in charge of worldwide operations, and they have offered any help to Pennsylvania

whatsoever; just name it. So we are looking at actually producing a special local government web site just to respond to issues and assistance for local governments directed toward Pennsylvania; but since it's on the worldwide web, it would be available to anybody else.

So we have a lot of major national partners that are offering assistance in Pennsylvania because we're a leader, and that's going to help us out a lot.

CHAIRPERSON GANNON: Thank you.

Representative Manderino, did you have a

follow-up question?

REPRESENTATIVE MANDERINO: Yeah,
thank you. One of the things that you hinted
at and other staff is the embedded technology.
And it seems to me that that's where,
particularly in the local government level, we
may not even be prepared to think of where do
we have that?

People have mentioned stoplights that

I assume are synchronized or timed in such a

way that there's embedded technology. But are

there other kinds of obvious things that local

government is using, or some of our quasi public or public authorities might have as regular use that we should be, like, telling people to check on? It's not just the computers working the payroll in your office but, you know, here's the other things and the vendors you need to return to to see if it's working or ready.

MR. OLSON: There's going to be quite a bit. And this is the toughest part about it, is that, as you're able to identify lines of code and know that that has to be fixed, there is no certainty at this time of what embedded technology has to be corrected.

At one time there was a lot of discussions that the chips in cars would malfunction for maintenance and things like that. But now, more research has happened and that doesn't seem to be a concern. But as it relates to traffic lights and other issues of global positioning, GIS type of systems will be affected. One thing I heard earlier, you know as an embedded chip, this is certainly not local government, but one question comes up about what about all the satellites that are 20

and 25 years old? You know, do those chips --

Who's going to go up there and replace those

chips? I'm certainly glad that there's not a

U.S. representative on the MIR at this time

either. But one thing I might like to do is --

Charlie has been spending quite a bit of time with the township supervisors' group and some other local government groups to concentrate on some of the issues that could

affect local governments. Charlie.

MR. GERHARDS: Some of the areas that we recommend local government look at, there's storage plants, water treatment plants have flow controls on them. In some cases they are managed electronically by computer. That is, that they don't stick open and discharge waste into streams, or close and not allow flow.

911 systems, many of those are computerized, PC-based or technology-based with embedded chips. Are they going to function properly? Obviously, the traffic signals in some cases they are synchronized. Maybe they'll go out, may lose their pulse and go in opposite direction. We aren't actually sure.

Elevators, prisons; county prisons,

obviously, have lots of security systems involved, just to name a few.

MR. OLSON: I might mention one thing on the prison. Luckily this was not a county in Pennsylvania, it was one in New England.

Actually, last year released a prisoner because the record showed that he had served his time because it was a 06. So they went ahead -- It was supposed to be 2006, but the computer program read it as 1906, and that he should be released and they released him. They did get him again, but luckily, that was not a Pennsylvania county though.

So that is an issue, and it's not an issue that you can put your hands around. But, we have been working again with Canada, with other groups to try to better understand that. And as soon as we get that information, we will make that information available.

CHAIRPERSON GANNON: Thank you very much, Mr. Olson and Mr. Gerhards, for appearing before the committee today and sharing information and testimony with us. We appreciate it.

Our next witness is Mr. John

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Berkheimer, President of Berkheimer & Associates, Inc. I welcome Mr. Berkheimer, and you may proceed when you're ready.

MR. BERKHEIMER: Okay. Thank you very much. I would just like to say I am certainly heartened and would like to commend the legislature in Pennsylvania for certainly being right out in front of this issue. makes me feel personally a lot better. That is the good news.

Unfortunately, that is also the bad news, as you've heard, because there are so many other places that are not at the same juncture. So going back to one of the remarks of the committee before, the chain is only as strong as its weakest link, I think that that really is the crux of my remarks and concerns.

And primarily, that in my view based on the interdependency of data both here and in the nation, there is no way that we are going to have a smooth transition from millennium midnight into the next six, eight, ten, or twelve months.

I have a few paragraphs of prepared testimony, and I think you have a copy of the complete packet with some appendixes, and I'll just review those and take any questions.

My name is John Berkheimer. I am the chief executive officer of Berkheimer

Associates, a firm that has specialized in administration of local taxes for school districts and municipal governments throughout the Commonwealth since 1946.

I appreciate the opportunity to testify today on the year 2000 indemnification issue. I guess the title of my remarks is <u>Year 2000: We need remediation; not retribution.</u>

I can really jump right to the conclusion here, and that is that the functions performed by elected and appointed tax administrators on a local level maintain the flow of income to local government is, in my opinion, no less important to the safety and infrastructure of every locality, than the Pennsylvania Department of Revenue is to the state.

Without certainty provided by specifically and narrowly delineated indemnification, there is, in my opinion, significant risk that potential problems

arising from Y2k may not be adequately addressed, or worse, not addressed at all by local tax offices who will be unwilling, unable, or otherwise cease to function under the dual burden of actual problem remediation and defending against causes of action resulting from real or perceived disruption.

In other words, if the impact of events precipitated by the year 2000 problem doesn't halt local government operation in some way, left unchecked, the litigation aftershock most certainly will.

The result of such a breakdown will be a lack of predictable funding to grass roots government necessary for the provision of mission-critical services to constituents at a time when they are most needed.

I guess you've heard a lot of the background relative to the problem, and it's my opinion that the committee certainly has a pretty good understanding of it. But, when thinking about it myself, the parallels between the disease, cancer, and Y2k problems are remarkable. Each can exist for a long time unnoticed, the symptoms at onset can be both

rapid and painful, neither go away of their own accord, and each have the capability to be deadly. Many armed with a layman's knowledge of cancer remain baffled that so many years after putting a man on the moon, we can't

conquer this killer.

One of the reasons is that the umbrella cancer covers many manifestations. In fact, cancer is many diseases. I would submit that Y2k computer problems are likewise; not one problem, but literally millions that can't be left to the techno-nerds to solve. Calling in an army of bespectacled pocket protector types won't stop this problem from happening.

My views are shared by some internationally respected experts, not the least of whom is Doctor Edward Yardeni, Ph.D., and Chief Economist at Deutsche Bank Securities. Doctor Yardeni has been a frequently relied-upon authority during numerous federal government hearings on this subject.

He has had the ability to distill a building avalanche of data on the problem into some very insightful information. I have

attached a copy of his just-released report on
exactly nine days ago as Appendix 1 to my
testimony.

Really, it all boils down to, as you've heard before, does anybody really know what time it is? Since hard data on the local level is somewhere between scarce and non-existent, and extrapolation from progress and events experienced by the feds can be of some guidance.

The following is an excerpt from

Doctor Yardeni's report on the subject of the

OMB, Office of Management and Budget, and their
report released in mid-June.

In May 1997, OMB reported that roughly 21 percent of government's mission-critical systems were ready for Y2k. A year later, approximately 40 percent of the 7,336 such systems were compliant. Unless remediation progress improves dramatically, a significant number of mission-critical systems will fail in 2000.

No one is even assessing the status of the 1,020 mission-critical systems that are being replaced. These are especially

vulnerable to missing deadlines, since new information technology systems are rarely finished on schedule. The fifth report by OMB observed:

Nine of the 24 federal agencies have renovated less than 40 percent of vital systems, two having fixed less than 50 percent. Five agencies, Department of Defense, Health and Human Services, Justice, Transportation, and Treasury have not even completed the initial assessment phase, nearly a year behind OMB's government-wide target of June 1997.

Only 11 of 24 agencies have completed inventories and/or assessments of their telecommunication systems. Only six reported that they had completed inventories and/or assessments of their embedded systems.

of progress or lack thereof consider this: The number of working days remaining to January 1st, 2000, allowing for annual leave, a few sick days, and public holidays, about 340. If a medium-sized enterprise commits 10 percent of their time to this project, only 34 days remain to completion. I think you get my point.

In my opinion, we are beyond the
juncture where any solution or group thereof
will eliminate the possibility of disruption.

The deadline is one that can't be moved. There simply is not enough time to identify,

remediate code, and test prior to January 2000.

So, in my opinion the time has come to insure that the correction of the inevitable cascade of problems, not able to be solved in time, will be a series of positive steps forward to resolution and not a legal admission of guilt.

There's no time left to completely do things right. We must now resolve to do the right thing. Cut the legal mercenaries out of an already complicated equation to insure the most rapid recovery possible from January 2nd, 2000 going forward.

We've included some specific language to that effect in Appendix 2 relative to the two bills that you're considering. I'd be happy to take any questions.

CHAIRPERSON GANNON: Representative Caltagirone:

REPRESENTATIVE CALTAGIRONE: No

1 questions.

2 CHAIRPERSON GANNON: Representative

3 Dally.

4 REPRESENTATIVE DALLY: Thank you. M:

committee.

REPRESENTATIVE DALLY: Thank you, Mr. Chairman, and thank you, Mr. Berkheimer, for appearing today and testifying before the

As we heard from Mr. Olson before, it appears that the Commonwealth is on target in terms of being prepared for the year 2000.

Now, your line of work you deal with local municipalities for the most part; is that correct?

MR. BERKHEIMER: That's correct.

REPRESENTATIVE DALLY: And we had Leroy, your clerk, assure that from Mr. Olson and perhaps you can elaborate on your opinions where these municipalities are as far as the year 2000 is concerned.

MR. BERKHEIMER: Well, it's kind of scary, in my opinion, because, first of all, there is a lack of total information to assess where the entire municipal community is, whether it be municipalities, counties, or school districts in Pennsylvania; and I think

we're working on that. But, there is a lack of information out there.

I think the State is certainly moving in a direction to solve that, to at least make people aware. From our particular perspective, the function, the narrow function that we define and do which is basically the local Department of Revenue function. Fortunately, we control all of our source code. We have ten full-time programmer analysts, and we had to do that because the Department of Revenue's software is not something that Microsoft has yet shrink-wrapped. So, we've taken that responsibility and remediated that code, and we will be responsible for that.

Our concerns going forward kind of broaden to the responsibilities and concerns of every business that rely on networks, shrink-wrapped software, and the integration; and when you start looking at programs that touch one another when you get from network to network, it's logarithmic. So to the extent that the municipalities are not in-house with a number of these resources, I would still remain concerned.

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REPRESENTATIVE DALLY: Now, I reviewed some of your language in your appendixes as far as proposed amendments to this legislation to expand immunity, certain entities. How broad do you foresee this to be or should it be?

MR. BERKHEIMER: I think the committee certainly and the legislature has to walk a very narrow balance, and I understand that; but they'll have to decide what specifically delineated things, boil down to mission critical, and that may not be able to be done at this juncture. But I think the immunity would have to be limited in scope and, in turn, the real request that we bring is that, people who are responsible who are making all the rights steps and, in fact, may be a hundred percent Y2k compliant are going to be impacted by data interchange from individuals and their data partners that they have no control over.

In our particular instance, when I sit down and think about it, that could expand as broadly as everybody in our world being competent, complete, and tested except for the

Federal Reserve. Our product is money for the municipalities. If I can't get it from my office to their coffers, I failed.

REPRESENTATIVE DALLY: We talked about the Commonwealth and local subdivisions. What about private tax agencies such as yours? Are they compliant with Y2k?

MR. BERKHEIMER: Well, as I said, in our particular case we are compliant relative to our own software. We are confident that we will be compliant, remediated and tested for all of our systems. Our problem is that we have no control over other tax agencies and/or data partners.

MR. DALLY: Thank you.

CHAIRPERSON GANNON: The thought occurred to me in reading your comments and also reading your suggested language with respect to liability, limitation of liability for private contractors that would work for the state agency or a local taxing authority. It seems to me that you want to extend the liability immunization to that private contractor to some extent.

Would it be fair to say that --

Because we don't really know, we have some speculation here, some idea of what the consequences involve. We won't know the specifics until it actually occurs. And we'll probably see some of the predictions come true, and we'll also see probably some surprises that nobody expected. But the thought occurred to me as if we -- And your emphasis was remediation, so the problem occurs, let's get it corrected and get it fixed.

Then if we have a kick-in period -
In other words, we say, look, your liability -you're immune from liability for a period of
time; and then, of course, if you're not fixed
by that time period, the attemps of remediation
would also come into play in terms by the
extent of what the liability would be. And
that's just a thought.

Rather than have a specific effective date, you know, of 1/1/2000 to somehow put it out later on and see how the problems arise and provide some limited immunity for a period of time with the expectation that companies who were having a problem and knew that they were going to be confronted with a liability

situation they'd fix it, would be encouraged to
fix it rather than just let it go.

And there also comes an issue of a local government attempting to solve the problem also understanding litigation because of something that a contractor did or that they did. Do you want to comment on that?

MR. BERKHEIMER: I would agree with that. I think that you don't want to set up a scenario, whereby, the indemnification is so broad that anybody can jump under it. And by the same token, you don't want to have it out there for such a length of time that it can be a perpetual excuse. So there I think is part of the challenge.

Witnesses had said that if you throw out this blanket of immunity, then this doesn't encourage anybody to do anything. On the other hand, we have a lot of enterprising attorneys in Pennsylvania seeking damages, consequential damages, cumulative damages. I'm not too sure I want to subject this or our local governments to those types of liabilities, or something that they may not be able to deal with now or

may not have presented itself as yet in the form that they would expect.

Thank you very much, Mr. Berkheimer, for coming before the committee today and sharing your testimony. We appreciate it.

Our next witness is Kathryn Keith,

News Media Director of the Pennsylvania

Newspaper Publishers' Association. Welcome,

and proceed when you are ready to proceed,

whenever the stenographer is ready.

MS. KEITH: Thank you very much for allowing me to come and testify. I'm Kathryn Keith and I'm the media director for the Pennsylvania Newspaper Publishers' Association. This is Joe Leighton. He's one of our lawyers on staff, just in case I get in trouble.

I'm not going to go over what the problem is. I mean, we've been sitting here for hours. We know that it is a date-related computer problem. One of the things that I didn't hear mentioned was that September 9, 1999 is also a problem because some computers recognize 9999 as end of file. So that's another date.

You know, it kind of reiterates what

the OIT guy was saying that we're not okay
until January 1, 2000. This is going to start
happening now, and it already actually has
started happening now. Especially for software
programs that, you know, project dates out.
They can't function.

So the answer, as we've heard, is to rewrite the code; and that's pretty simple. The complexity arises out of the incredible number of lines of code that needs to be rewritten. And the problem's compounded, as you heard, by embedded computer chip technology, which is difficult to find and expensive to replace.

I liked what the director, the OIT was saying that it's a leadership and management program. I believe that. Anyway, I'm just going to continue reading.

While the physical problem is relatively easy to fix with a little money and a little persistence, but as you had said that the real problem is in the supply chain. One company can be compliant, and whoever supplies that company could not, and then, incidentally, it just breaks.

I have a hypothetical here that I just kind of made up. The Pennsylvania

Newspaper Publishers' Association has a for-profit organization which places advertising in newspapers. Let's say that we're compliant by September 8th, 1999, and on January 3rd, a local car dealership is supposed to run a full-page color ad in ten daily newspapers in Pennsylvania.

The dealership's ad is created at an ad agency in New York City. That ad agency is an expert at electronic delivery of advertising. They got it. They're compliant, but the computer that is supposed to send the ad -- It's all electronic, and it's worked up until that point. The computer that's supposed to send the ad doesn't send the ad. So the newspaper doesn't receive the ad, and they're forced to run some local promotion of some obscure event that's going to happen, you know, in February, a Valentine's Day parade or what have you.

So, who's going to get the money?

Who's going to be paid for that mistake because
the ad agency was not compliant? We deserve

some, the newspaper deserves some. Now, should the ad agency be able to turn around and sue the computer company that told them that, yeah, you'll be okay? I'm not sure. The car dealer, he loses revenue too because the ad didn't get placed and it was an ad for his New Year's sale. You know, when he stocked his lot with tons of cars, and now they're still sitting there because the ad didn't go out and nobody knew about the sale.

So, let's say that the ad agency is aware of its electronic delivery problem, and so they choose to use Federal Express. Now, Federal Express is diligent and they tested and they've implemented all their fixes, and they've retested their fixes, and their computer systems are great; but they missed that one embedded chip that's in the delivery truck. So the ad is on the truck and the driver goes to turn the truck over, and it doesn't work.

So, you know, we're back to the same thing; the ad agency, Fed-Ex, PNPA, the ten newspapers, and the car dealer were all working in good conscience to fix this problem, one

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embedded chip was missed and so the whole chain is derailed.

So given the breadth of an expensive Y2k, our association is taking proactive steps to ensure that our operation is compliant. sure you've heard of the six-step action plan; awareness, assessment, detailed analysis, planing, system conversion, and testing, implementation, and post-implementation.

We are currently in the assessment phase, and we're sending out letters to our suppliers, vendors, and customers, which include our members. Just a little note on the letters. They really don't mean anything. send out a letter, and somebody sends back a form letter that says it may or may not work; and we are working on it.

So the problem remains within PNP to make sure -- It's our responsibility to make sure that our computers are okay. Nobody, nobody is going to say we guarantee, you know, even Microsoft. We operate under Windows NT server platform. And okay, they have a table in which a lot of their ninety-nine dollar software programs are compliant. Window NT's

really expensive and it's compliant with minor issues. Nowhere on their web site do they define what minor issues are. And our entire network is on Windows NT platform, 4.0, newest version.

So, we plan to conduct our analysis by August 31, take necessary steps to convert tests and implement, and test again.

Admittedly, we're late joining the Y2k compliance game. Last September I heard about the Y2k problem. I was in another position in Washington State.

And then I came here, and in June I heard a presentation given by the Office of Information Technology in Pennsylvania; and that's where I really opened my eyes and I started asking questions around the office.

You know, are we compliant? What's going to happen if this ad doesn't get sent out?

I realize the scope and potential role that PNP could play. We could either be a part of the problem or part of the solution.

And so, I chose to be a part of the solution.

My boss and my co-workers all support that.

We've done awareness programs within

our own association. A lot of our, you know,
we have outside sales people. They have cell
phones. They have cars that they need in order
to conduct business. They need to know about

this problem.

I think that PNP is typical of small businesses in Pennsylvania. You know, I'm not a computer expert. I just see that this is a problem that needs to be taken care of, and so I've taken the steps to insure that it will be. A lot of people believe Y2k is computer only, and they don't think it will affect them.

They don't understand that if a supplier is not compliant, their business could be affected. And I think these people need to be educated. I just off the top of my head wrote down a list of embedded technology.

Pacemakers is a big one, elevators, escalators, sprinkler systems, VCRs, cell phones, 911, parking meters, satellite dishes, fire alarms, closed-captioned television. We're all in this mess together.

You know, as I'm sure I don't have to tell you, the economy is intertwined. We're all linked somehow. And House Bill 2406 and

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2273 which advocates governmental immunity, I think represents an unfair advantage over the rest of us in the boat down here.

Traditionally, the government can claim sovereign immunity except when, as in the case of real estate, highways, sidewalks, potholes, and dangerous conditions, there was a foreseeable risk of injury.

When I was home in Boston over the 4th of July weekend, I was speaking with somebody who works in a fairly technical literate company, he said they've been working on the problem since 1986. I think this is a foreseeable risk. So the government should not excuse itself and leave the rest of the state at risk.

I think everybody should enjoy some level of protection. What good will come from a liability feeding frenzy? When the supply chain is disrupted, thousands of people in businesses are affected. And as I said, it won't matter if one business is compliant. Ιf the business in the supply chain is not compliant, something will suffer. Businesses will bankrupt. Some will be crippled. Why add

the burden of lawsuits to an already damaged economy. And buying protection is not an option. There's I think four companies, insurance companies, now that are selling coverage for the year 2000; and it's prohibitedly expensive.

I have a friend who works at an insurance company here who looked at buying this for themselves, and they couldn't do it. They have to spend, you know, hundreds of thousands of dollars to make their own systems compliant.

this. There is a reference in a newsletter that was brought to my attention. The newsletter is called The Final Countdown and EDS, which is local Electronic Data Systems, is expecting more Y2k projects and will ramp up for the workload by hiring 1,400 people world-wide over the next two years. They expect to generate \$1.3 billion in business from these Y2k projects, more than offsetting its own internal Y2k costs of about \$144 million.

The fact is that there are billions

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of embedded computer chips in things that the average Joe would never suspect. We've gone over those. Vending machines is another one.

Automobiles is one.

Somebody told me a story about a Buick automobile, and it is a 1998 model. A lot of the automobiles now, as you know, are run by an embedded chip. They have computers that run the engine. So they did a test and they forwarded the clock on this car and they tried to turn it over, and it wouldn't turn It wouldn't start. So they brought it over. to a mechanic. The mechanic put in a new engine. And they did it again. They forwarded the clock and again, the car wouldn't start. So they called the manufacturer and they said, look, every time we forward the clock over to January 1, 2000 the engine won't turn over, and the manufacturer told them not to do that.

So obviously, it's quite possible that embedded chips will be missed, and some business will be disrupted. A cap on liability for the general public should be considered. The problem is everyone's. So everyone should work to fix the problem and be encouraged to

fix the problem.

Large law firms have already established the year 2000 work groups to prepare clients for litigation. The focus should not be on who to blame, but how to persevere.

We're working with one law firm to conduct sessions for our members just to make them aware of the problem even more so than they are. And the title of the brochure that I made is, Who Will Pay? It's kind of sad. So here I think the Commonwealth of Pennsylvania can play a proactive role.

You already have an excellent year 2000 action plan as was discussed earlier by the OIT office, and its success is widely recognized in North America. The Commonwealth's Office of Information Technology is an expert, and they communicate the problem excellently. They were the ones that put on that conference in June.

And since the Commonwealth is ahead of schedule and was just awarded \$10.9 million by the U.S. Department of Labor to upgrade its mission-critical systems, why not spread the

knowledge. After all, it's in the
Commonwealth's best interest if the majority of
Pennsylvania businesses survive the year 2000

buq.

Failed businesses result in lost tax revenue, an influx on the welfare roles, thanks to unemployment, and a general economic slump complete with disgruntled workers. You have the opportunity to help your constituents.

Part of Governor Ridge's year 2000 Action Plan is a state-wide outreach program. And I encourage you to help accelerate the program.

Add resources to OIT's staffs so that the message is communicated to every Pennsylvania business. And I'm not getting paid by them.

It's really good.

The Governor's year 2000 Action Plan is excellent; and should be given the proper amount of resources to continue aggressively helping the citizens of Pennsylvania. Instead of just taking care of itself, the Commonwealth can take care of its constituents.

I think the potential monetary windfall would be better spent prior to the problem, rather than to fend off lawyers.

Education is the key. The citizens need to be aware of this problem so that they can start

3 cleaning house and protecting themselves.

The lack of awareness is a daunting one, but under the Commonwealth's leadership that ignorance can be wiped out and the citizens can be given the tools they need to survive. I don't think I need to remind you, but we're running out of time. And I'd be more than happy to answer questions and help in any way that I can. Thank you.

CHAIRPERSON GANNON: Thank you very much, Ms. Keith. Well, there's no questions; just a comment, though. It seems to me that what you're suggesting is that, rather than liability immunity for just the Commonwealth that we extend that into all parties with respect to this Y2k problem.

MS. KEITH: Well, that might have come from the federal government, and maybe not immunity but a cap definitely.

CHAIRPERSON GANNON: It seems to me just going back briefly to what I said before that we don't know exactly what the nature and consequences of a lot of the problems

are. We can make some projections, but there are a lot of speculation here also. That we have maybe a time period when immunity would expire. In other words, there would be immunity during a certain time, and then that would expire. Then we would have to consider whether there would be a cap on damages or limitation of liability because again you get into several different standards here.

You had mentioned insurance, and I really hadn't picked up on that. More likely than not, even if I couldn't buy insurance, first-party insurance for myself because the cost prohibited it; if somebody I engage as a contractor to write programs and make sure my system was all right, but they were negligent and it didn't solve the problem, and they have some unexpected loss that their liability insurance would have to pay me for the consequences of their negligent conduct, so we would have a negligent standard or some other type of standard. That's something that we have to consider, so that there are some consequences for people who were negligent or don't really want to address this issue or

they're just too lazy to do anything about it.

Figure, well, we wait until January 1st, 2000

and see what happens and then take a look at

it.

But on the other hand, there are a lot of folks, like yours, that are out there working very diligently to try to remediate or prevent something from happening. Yet even for all your work and, you know, something can go wrong that you didn't anticipate or perhaps missed, but not because you were not being diligent. It's just something that went by the boards.

When you mentioned the newspaper ads,

I think all of us up here have a very personal interest in that because in the year 2000 is going to be the primary election in the beginning of the year. We want to make sure that advertisement appears in the paper.

MS. KEITH: We're just down the street, so you walk it down there.

CHAIRPERSON GANNON: We don't want that ad to be missed. But with those comments, I want to thank you for appearing before the committee and sharing your testimony with us.

We appreciate it. MS. KEITH: Thank you very much. CHAIRPERSON GANNON: This meeting of the public hearing on House Bills 2273 and 2406 is adjourned. (At or about 12:56 the meeting concluded)

CERTIFICATE

2	I, Amy Patterson, Reporter, Notary
3	Public, duly commissioned and qualified in and
4	for the county of York, Commonwealth of
5	Pennsylvania, hereby certify that the foregoing
6	is a true and accurate transcript of my
7	stenotyped notes taken by me and subsequently
8	reduced to computer printout under my
9	supervision, and that this copy is a correct
10	record of the same.
11	This certification does not apply to

This certification does not apply to any reproduction of the same by any means unless under my direct control and/or supervision.

My commission expires 5/21/01

Dated 17th this day of August, 1998

Amy J. Patterson - Reporter Notary Public