

Committee Meeting

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AD HOC COMMITTEE ON SOFTWARE TECHNOLOGY

"Discuss how the State and Legislature can better address the needs of the software industry in New Jersey through legislative initiatives and regulatory reform"

LOCATION: Room 319
State House
Trenton, New Jersey

DATE: August 22, 1995
10:00 a.m.

MEMBERS OF COMMITTEE PRESENT:

Senator Robert W. Singer, Chairman
Assemblyman Nicholas R. Felice, Vice-Chairman
Senator John H. Ewing

PUBLIC MEMBERS:

New Jersey State Library

Deborah Aguiar-Velez
John Bailye
John Martinson
William Mayhall
Joseph Shearn
William Kennedy



ALSO PRESENT:

Walter C. Kowalski III
Office of Legislative Services
Aide, Ad Hoc Committee on Software Technology

Hearing Recorded and Transcribed by
The Office of Legislative Services, Public Information Office,
Hearing Unit, State House Annex, CN 068, Trenton, New Jersey 08625

ROBERT SINGER

Chairman

NICHOLAS FELICE

Vice-Chairman

John Ewing

James McGreevey

Charlotte Vandervalk

Anthony Impreveduto

Public Members:

Deborah Aguiar-Velez

Mel Baiada

John Bailye

John Martinson

William Mayhall

Joseph Shearn

William Kennedy



New Jersey State Legislature

AD HOC COMMITTEE ON SOFTWARE TECHNOLOGY

STATE HOUSE ANNEX, CN-068

TRENTON, NJ 08625-0068

(609) 984-0445

A D H O C C O M M I T T E E N O T I C E

TO: MEMBERS OF THE AD HOC COMMITTEE ON SOFTWARE TECHNOLOGY

FROM: SENATOR ROBERT W. SINGER, CHAIRMAN

SUBJECT: AD HOC COMMITTEE MEETING - August 22, 1995

The public may address comments and questions to Walter C. Kowalski, III, Ad Hoc Committee Aide, or make bill status and scheduling inquiries to Cynthia D. Petty, secretary, at (609) 984-0445.

The Ad Hoc Committee on Software Technology will meet on **Tuesday, August 22, 1995 at 10:00 AM in Room 319, State House, Trenton, New Jersey.**

The Ad Hoc Committee on Software Technology will meet to discuss how the State and Legislature can better address the needs of the software industry in New Jersey through legislative initiatives and regulatory reform.

Assistive listening devices available upon 24 hours prior notice to the committee aide(s) listed above

Issued 07/17/95

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AD HOC COMMITTEE NOTICE

MEMBER OF THE AD HOC COMMITTEE ON SOFTWARE TECHNOLOGY

SENATOR ST. W. SINGER, CHAIRMAN

AD HOC COMMITTEE MEETING - August 22, 1995

The public may address comments and questions to Walter C. Zwickel, Director of the Committee, at the address above or by telephone at 609-747-2000.

The Ad Hoc Committee on Software Technology will meet on Tuesday, August 22, 1995 at 10:00 AM in Room 319, State House, Trenton, New Jersey.

The Ad Hoc Committee on Software Technology will meet in the State House and Legislature to address the needs of the software industry in New Jersey through legislative initiatives and regulatory reform.

Assessing the impact of software technology on the State and Legislature. To be held on August 22, 1995 at 10:00 AM in Room 319, State House, Trenton, New Jersey.

Issued 08/17/95

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SENATOR ROBERT W. SINGER: (Chairman) Thank you all for being here today in our third meeting of the software task force. I do have a couple of announcements before we go into the hearing. On a pleasant note, we have approval that Ira Hammer, of Crummy, Del Deo and Dolan, has been appointed as the official voluntary counsel to the software task force. I want to thank him and his firm for allowing him to be part of that. He's not here today, but he will be coming to meetings and advising us. We appreciate that. He has a lot of background in that area, and I'm sure he'll be an asset to the Advisory Board. So we thank him very much. I know Mike is here from the firm. We thank the firm for allowing him to take time to do that. On a second note, Mr. Massin, who was supposed to be here to testify today, unfortunately called late yesterday saying he may not be able to make it. If he does come, we are looking forward to his testimony because he had some serious concerns about what's happening. We will have him on, but he may not make it. It was a little disappointing because he had voiced some very strong concerns about here, but we'll hopefully have him at another meeting.

Other than that, I hope you're all having a good summer. The Legislature just had its -- one of its seminars up in Quebec, which was excellent. We enjoyed it very much. The weather was very nice. I would rather have had the Software Task Force up there, but unfortunately, we're restricted to New Jersey.

Nick, did you want to say anything as the Vice-Chair?

ASSEMBLYMAN FELICE: Yes, I would just like to add that this task force is very important to the overall picture

for the State. As many of you know, we have a commission that was formed by myself and Senator LaRossa. The task force we have is called the Information Resource Management Commission, and that Commission takes in the three branches of government, the executive, judicial, and the Legislative branch.

So this Committee -- task force on the technology and so forth is very important to the information and input that we will be using in conjunction with the Information Resource Management Commission.

So I commend the members of the Committee and also those who are giving us the type of input we need to make our Commission a lot better for the State.

I thank you, Mr. Chairman, for the opportunity to show how those three branches are working together including the OLS branch, which I serve as Chairman of the Executive Division, the Computer Division for the Legislature. So what we're doing here is very important to the overall picture for communication in the software and the technology force.

Thank you.

SENATOR SINGER: Senator, any comments? Any other member of the-- Do they have any opening statements they want to make? (no response) Seeing none--

You know, it's very timely we're having this meeting today, and somebody mentioned to me, too, with Windows 95 coming out in the big hype on Thursday. Many of us saw on Good Morning America and other stations about all the excitement going on.

One of the concerns, and it brings us to today's meeting, is it's always been the small companies being able to get money, the other two receive financing. This is an issue we

found very, very strong in the biotechnology industry, something that they had a difficult time with, and through working with the State -- I see Caren Franzini is here, and she'll be testifying later -- we're able to open up new doors and to provide, for the first time ever, funding of biotechnology firms through our own EDA.

But more important, also, I think, when that starts to happen, the private sector -- the banking community takes a different look at things. When a State is willing to commit its dollars, they suddenly say, "Well, maybe we should start looking at that." I believe that the software industry faces that same difficulty: a lack of understanding, a true lack of working with high technology type industries, small industries who don't have the hard goods that banks usually have. They don't have that fixed asset that they're used to financing, and therefore, they find themselves in difficult times finding money.

I'm hopeful that some of the people testifying today will shed some light on it. We'll be able to have a better understanding, and maybe we can open up some eyes to the realization that the software industry, which is 2000 companies strong in our State, has a tremendous future, and we have to be part of that future.

So without further ado, I'd ask that Marjorie Chertok, from Greenbaum, Rowe, Smith, Ravin & Davis, come up first, if you would.

M A R J O R I E F. C H E R T O K, ESQ.: Good morning.

Just for the record, my name is Marjorie Chertok from Greenbaum, Rowe, Smith, Ravin & Davis, a law firm in Woodbridge, New Jersey. Our practice involves corporate and commercial

litigation, as well as licensing. In the course of our practice, we represent a number of high-tech companies, as well as companies which acquire or develop computer software and not necessarily characterized by their SIC code as a high-tech type company.

Accordingly, my remarks will advocate an integrated approach to developing legislative initiatives for the high-tech industry. The remarks that I'm going to make are contained in an outline which is distributed to you and reflect comments from clients and friends of the firm.

However, the opinions that I express are my own, and I don't wish that any particular interest feel that I have taken a position against them at this point. So I'd like to make that clear on the record.

This presentation is being made to the Ad Hoc Committee on Computer Software in order to advise the Committee of the activities of other states and of the Federal government which are designed to enhance the economic development of the computer software and information technology industries and to suggest some legislative initiatives appropriate for the State of New Jersey and, also, to demonstrate to the Committee that some of the positions taken in this talk are not incredibly unique.

It is my suggestion that New Jersey, as I said before, take an integrated approach to making the State user friendly for the development and expansion of the software industry through a number of initiatives:

- 1) venture funding and loans;

2) encouraging telecommuting through tax incentives; we're certainly a commuter State, and if we can keep some of our people in the State, they might decide to start businesses here;

3) other tax rebates and economic incentives, including those proposed by Senator Singer, which are quite excellent;

4) revamping the state procurement methods so that there is equal access to technology at a certain amount of privatization to the extent that it's appropriate;

5) in addition to that, I suggest that we promote the public image of New Jersey as a Northeastern mecca for technology companies similar to the way Massachusetts and California have promoted their states.

Just to give you an idea of what some states are doing, I'd like to identify initiatives that were presented before the legislature of a number of state Senates.

For example, in Oregon, this year there is a six year extension of the research and development and pollution control tax credits. There is a deferral of capital gains if such gains are reinvested in start-up and/or expansions of high-tech companies. There is school reform legislation to pressure schools to work more closely with businesses, to help training and employment by giving them certain incentives.

In California, there is initiation of a research and development tax credit, and there are sales tax exemptions for acquisitions of information technology and/or software.

Florida has initiated tax rebates for the purchase of information technology resources.

Texas has initiated a telecommunications bill which establishes a telecommunications infrastructure of \$75 million per year for 10 years to assist public schools in purchasing high-tech equipment. In addition, they've continued funding for distance learning classrooms which allows students to telecommute. They've also initiated a bill which provides for a full retroactive sales tax exemption for the acquisition of clean rooms and clean room equipment.

Washington State has limited sales tax and use tax on machinery, including the manufacture of software and information technology. They've also developed and funded a Washington Technology Center, similar to the technology centers we have here in New Jersey.

Massachusetts has initiated, although not passed, the computer crime bill, which is similar to the Federal legislation before Congress, and that provides for the unauthorized -- penalties for the unauthorized copying of computer software. These criminal penalties would travel up on an escalating scale based upon the value of the software and the number of times which the copying was done. They've also talked about adoption of a Uniform Trade Secrets Act, which is something we might consider also, and they've looked at an electronics monitoring bill, which provides protection to employees through disclosure. In other words, they will disclose that they're monitoring computer usage and data files.

What I suggest for our State is that we look very seriously at Senator Singer's proposed bills, because I think they're an excellent, excellent place to start.

In addition, I think that we should consider sales tax rebates for purchases of new technology not only by software companies, because we should consider these initiatives on both a macro and a micro level. Computer companies need help, but legislation should help all of the citizens in the State of New Jersey because, frankly, all of the citizens in the State of New Jersey use computers in their daily lives. I don't think that you can get away from touching a computer. The minute you pick up the telephone you're talking about computer software and hardware.

In addition, there should be sales tax exemptions and/or income property tax exemptions for the acquisition or construction of clean rooms and data processing facilities.

I also suggest tax incentives for equipment, modernization and upgrades, and tax incentives for telecommuters. I will discuss this later in my remarks, but I think that that would be very helpful to the general populace who would like to probably stay at home one or two days a week. It would certainly help when we talk about an integrated approach to legislation in terms of the pollution legislation that New Jersey has passed recently regarding car pools and that type.

In addition, and I'm not sure that I advocate this, but I mention it because we have polled clients and friends of the firm. Every small business has complained to me about double taxation for subchapter S corporations. I'm not sure that I'm interested in taking a position on that at this point. I just mention it, but unfortunately, you need to make some money in order to pay some taxes.

I think the primary concern of computer companies and other companies in the State of New Jersey is to acquire computer technology, maintain computer technology, update it, and attempt to make a profit through the computer industry. A number of our clients have even -- that are not in the computer industry, per se, have initiated divisions because they developed cutting edge software. All of a sudden, they're software companies, because they have a product and they're going to be selling it in the State of New Jersey.

What we have discovered among the great problems faced by software developers is:

1) Their lack of business resources and acumen. I know the State has attempted to address that through the small business centers and through incubators, and that's really quite helpful.

2) Software developers' failure to establish and follow a business plan, which is something endemic to the business. It is something that is a difficult thing for a technical person to grasp, because they're so involved in creating that they don't focus on the business aspects, and they don't have the structure. Computer companies are notorious for not following structure because of the unlimited time within which you can work on a computer.

3) A software developer's lack of tangible assets which could be used as collateral or standardized collateral. The concept of collateral to a banking institution is, "Well, you have accounts receivable, you have inventory, and you have real estate. We'll take a lien against that, and we'll give you up to three-quarters of the value." Well, that is good and

fine. What happens if you don't own any real estate? You certainly don't have inventory that could be valued in the standard way, because appraisers will give you different values for the software and the technology, and you don't have accounts receivable because you're in the developmental stage. That is a big problem.

4) Tie that to the refusal of investors to lend to nontraditional businesses who offer, again, nontraditional collateral.

So what can we do?

There are a couple of things that I'm suggesting today. One is that we explore a modification of Article 9 of the Uniform Commercial Code and allow banking institutions to take a security interest, with teeth in it, in computer technology and license agreements and allow them to contact potential licensees and advise them that they have a security interest in this agreement, and if there is a default under the loan, be able to get the collateral back immediately through some sort of an escrow arrangement and obtain the royalty payments directly.

Now, some people would say that that might be covered under Article 9 already, but it doesn't exactly say that. I think that if you gave the bank some legislation with teeth in it, they would be happier to lend to these types of companies.

In addition, we should, as State legislators, establish standardized criteria for evaluating the value of intellectual property and software. Because as you well know, the government comes up with a criteria. In ten years, the rest of the industry will follow because it becomes a standard. So

databases that they both utilize, data centers that they both utilize, which would initiate a significant cost savings for the State.

In addition, we would suggest that there be a centralized index for request for proposals in the computer industry or computer hardware and software. It's kind of interesting because most agencies will somehow interact with the computer industry at one point in time, and computer companies don't necessarily target these different agencies, because they don't realize that they're acquiring hardware and software until they read it in the newspaper, then it's too late.

In addition-- I think I've covered pretty much what I wanted to say on that.

Finally, in terms of a summary, I think there are some other commonsense things that we can actually do that will help, and they won't cost anything at all. We can publicize New Jersey as a State where a significant portion of the workforce is involved in software intellectual property and the communications industry. I think that most of the telecommunications in the Northeast -- the large telecommunications companies -- are located in the State of New Jersey.

In addition, we can encourage an integrated approach through the development of Silicon Valley by drawing upon the resources that have already been initiated through the Governor's Prosperity in New Jersey Campaign.

The other thing is that we should review these legislative initiatives in the State programs for redundancy. Because, in this time when we have very few dollars to spread

around and a great expense in terms of attracting people to New Jersey and developing technology and modernizing our State for ourselves, we certainly wouldn't want to waste any of these funds.

Just by way of conclusion, I provided the Committee with a summary of my suggested legislative reforms. I'll just zip through them so that, in case you fell asleep during some part of my boring program, you'll have an idea of where to look for them, and it's in the back of the outline. That is support the existing State technology infrastructure through technology offices, research centers, corporate, industrial parks, and incubators.

Those are programs we have already, but we shouldn't ignore them in the rush to develop new legislative initiatives, and we should make sure that they're adequately funded. We should also establish State grants for research projects. We should consider supporting the establishment of the venture capital fund described before. We should also support low-cost loans because you have to understand that certain companies will certainly not be interested in having a partner, particularly family-owned companies where the desire is to keep the entire family employed. A number of our clients who are represented on the list that you have are family-owned companies living in the State of New Jersey and working here.

In addition, we should support: proposed tax incentives including Senator Singer's bill, as well as sales tax rebates for purchase of a new technology; tax exemptions and income or property tax exemptions for the construction of clean rooms, data processing facilities; tax incentives for equipment

and modernization; most importantly, tax incentives for telecommuters. Certainly, everyone who is employed out of this State should be encouraged to come back and work with us.

Lastly, to initiate certain procurement reforms including: centralizing the computer and software technology acquisition process within this State; creating a centralized index; and advocating privatization of certain computer functions to the extent that it is feasible. That way the State could probably save money and have private industry developing systems for them without having to go through the acquisition process, which is time consuming. And by the time they acquire the technology, it's out of date, and then it is very hard to update and maintain.

I thank you very much for listening to my remarks, and I hope that I've been helpful.

SENATOR SINGER: I have a few comments, and then we'll ask if there are any other questions.

First of all, the telecommunicating idea is very interesting. I don't think the unions will be too happy with it. That would have to be something that we would need support from business and industry to push on, because the unions will object to it as they usually have, and that is one issue.

The issue talking about State computerization. I don't know if you're familiar with the OTIS situation that happened in this State a couple of years ago, but it was World War III down here. When we made the attempt to centralize that, departments claimed they could do it better and cheaper individually. So I agree with the idea, but you know we're

going to find ourselves in a tough sell when we start discussing that again, because it's everybody's turf.

MS. CHERTOK: Right. Well--

SENATOR SINGER: That's been a big problem here, and I agree with you that should be more centralized, but we'll take a look at it, but it was a turf battle.

The last thing, it's funny that you mentioned about wanting tax incentives and things like that. In this past budget, the Senate-- I think Vic mentioned, and Nick may remember if it passed the Assembly -- additional tax on packaging of software and software itself. Fortunately, it did not come through the Senate. It was a little embarrassing at the time we formulated this task force that we would have had to vote on a new tax on software when we're talking about trying to promote the industry. Fortunately, it did not come through. But that is an issue that is going to be revisited again, I'm sure, in tight budget time, so we're going to have to be on the defensive on that or we're going to find the industry taxed greater in this State than other states. Again, a discouragement for companies to retain themselves in New Jersey and move to New Jersey.

Ladies and gentlemen, anyone have any questions or comments?

ASSEMBLYMAN FELICE: Just briefly, I think one of the things that was mentioned OTIS, in its former state and the way it is now-- One of the reasons, by statute, we do have this new Commission that has been operating every two or three weeks is the fact that one branch of government could not talk to another branch of government. Each one had different software,

different hardware, and this new Commission oversees the three branches of government to make sure that the best software is used and that each branch of government can communicate with each other. Millions and millions of dollars were spent, and each division practically was an island unto themselves.

So with software that's workable, usable, and friendly to all branches of government, I think that is most important not only to encourage the best kind of software that we can get in the three branches of government, but also to make sure it's one that keeps up to the time. It can be enhanced as we go along and not every couple of years have to throw it out and change something completely new to accomplish what we're trying to do. So that is important that we have the software and the technology that can be utilized by all branches of government and that we don't go back to where we were before, where each division and each branch of government within a division even could not talk to each other. So that is important, and that is why these hearings are important to us here, especially in the Legislature.

SENATOR SINGER: Thank you.

MR. MARTINSON: On the issue of taxes, two states, Massachusetts and Pennsylvania, enacted taxes on computer services. The Massachusetts tax was quickly repealed. The one in Pennsylvania still has not, and it's a source of great controversy. But what it has clearly led to is computer service companies not locating in Pennsylvania, which has been a temporary boon to New Jersey and particularly into the Maryland and the Washington area.

It's, in my estimation, hundreds of jobs at this point that are at stake with that. So we need to be vigilant in that software is becoming a large industry and one with very visible revenues and that it not be singled out for special taxes, or that will certainly retard the growth.

MR. SHEARN: I think, just to follow on to that statement, we are under-- I won't say we're under siege, but I received, and I passed it out here to everyone, from the London, Ontario, I guess, it's the Chamber of Commerce, and they went through the pain of selecting various cities around the U.S. and comparing them: the cost of living, utilities costs, various corporate taxes. If I have one, I imagine that's probably a lot of people in this room and throughout the State of New Jersey. They're trying to entice us through direct mail to go elsewhere. So I think, in terms of what we have to do with taxes, at least that I really don't want to see us singled out to have additional taxes. Certainly, we have enough.

SENATOR SINGER: Thank you very much for your comments. We appreciate it.

MS. CHERTOK: Thank you.

SENATOR SINGER: I see that Joseph Massin came in. I'm glad to see you made it today.

We thank you very much for coming. We know you had a little bit of a problem and we appreciate it.

J O S E P H M. M A S S I N: You're quite welcome.

You know, it was interesting this morning. I was a little delayed, and one of the reasons was I was watching an interview on "Good Morning America" with Bill Gates about the imminent release of Windows 95 this Thursday. One of the

commentators indicated that he felt that 95 represented the fact that 95 percent of the hardware and software that's available in the world today will need to be significantly upgraded as a result of the release of Windows 95.

That's an interesting comment because it represents a potential revolution specifically in the public sector here in New Jersey, not only for State agencies, but for county and local agencies, and other political subdivisions of State government. So that in the coming year there will be significant emphasis on the State budget and its relationship with vendors in order to accommodate the changing technology that we're facing. It's my understanding that we're not seeing the end, that with the changes in hardware that are coming -- in software -- and, in the next few years, we need to look at things a little bit differently.

Just a bit of a background. I am a former municipal official -- a municipal finance officer here in New Jersey, and for the past -- close to 15 years, I've been a software, specifically municipal software, vendor here in New Jersey providing financial management systems, budget tax collection, utility billing, and other management applications for local government. I've also dealt with the State during that period, county agencies, and other agencies of local government throughout the State.

I was asked to address this Committee specifically in the areas of difficulty which software vendors have in dealing with State agencies and their political subdivisions. To summarize this at the beginning and then go into more detail, I have found, and I'm sure that my colleagues have found, that the

relationship as a vendor with the State of New Jersey specifically has been adversarial over the years at best. Let me go into some fair detail, and I've got some material I'll be working from, and then I've got copies to pass out to the Committee for your review.

Once every year, 18 months, or 2 years, whenever a cycle comes, vendors are asked to respond to a request for proposals for micro- and minicomputer systems and related products. This is a voluminous bid. I'm using this as an example because I think it's an excellent example.

Over the years that I've been responding to this bid and attempting to do business with the State government, we have found -- or I have found rather and the members of my company, and I'm sure my colleagues have found, that the structure of the bid -- the way the products are presented, the way the requests are made from the State -- does not necessarily reflect current industry standards, current technologies, market conditions, etc. Let me give you an example of that that occurred, I believe, roughly a year and a half ago during a prebid vendors conference which I attended.

One of the other vendors in the room -- a prospective vendor -- made a request for a clarification as to the specification for 486 computers, because the bid specifications did not say how a vendor was to base their bid.

The individual who was in charge of the meeting -- and, by the way, there were probably close to 500 prospective vendors in the room -- said that the vendors should base their bid on a 486 computer -- forgive me for being technical, I apologize -- with one meg of memory, no video, and an 80

megabyte hard drive. Now, for you in the room -- for you people in the room that will understand that technology, such a beast does not exist, never existed, and cannot exist in any technology that was available at the time or is available today, yet vendors were asked to base their bid on that particular type of structure.

In addition to that, we're asked to present bids which are based upon a percentage discount from the manufacturer's suggested retail price. More and more in the marketplace, and this is not restricted to merely technology, there are no manufacturer's suggested retail prices on which to base the bid, specifically in the area of hardware. A third, and what the problem with this is, is it encourages vendors who want to be and are thirsty to be successful bidders, so to speak, to, if you will, lowball basic configurations merely to be awarded a State contract number under which they can market thousands and thousands of what we call "associated products." It is a -- excuse me for saying this -- a feeding frenzy to get a State contract number and to present the lowest possible and sometimes bizarre numbers in your bid merely to be awarded that basic contract number.

So I think the structure of the way the State goes out and looks for vendors to supply commodities, if you will -- technology-related commodities -- to State agencies needs to be looked at and brought back to reality.

Now, how could we achieve that? Well, I think-- Rather, from another perspective, it does not appear to me as a vendor that there is or ever existed a partnership between the private sector and State agencies in order to develop a

framework for purchasing which meets not only the needs of the State, but which facilitates the vast knowledge and expertise, and the use of that expertise that exists in the private sector.

Vendors are not adversaries. In most cases, they're honest businessmen trying to provide products and services in a quality manner to public users. We are not adversaries; we're not here to steal from the State. There needs to be that partnership. It's my sense that over the years that that partnership hasn't existed, in fact, quite the opposite. To some degree it has been adversarial.

Certainly, in my dealings with the State Division of Purchasing, that has been the case. So I have some concerns in that area, and I think the ultimate users of technology are suffering as a result of that and clearly suffering. Ninety-five percent of the telephone calls that we get from State agencies, local government, etc., throughout the State -- those individuals are not quite sure what they want to purchase. They're relying on the vendor's experience, expertise, knowledge, and all of those related factors in their decision making process. That is an area that is simply not addressed in the State purchasing practices at this time.

All right, let me go a little bit further and one that is extremely important. Many of the software vendors, if you will, and/or hardware vendors that propose pricing under State contract are really not interested in only dealing with State agencies. The contract permits these companies and individuals to do business with county agencies, with local governments, with authorities, and commissions.

Quite frankly, many of the vendors who want to get a State contract number are really not specifically interested in dealing with State agencies due to the complexity of dealing with them, due to the length of time that we have to wait to get paid, which is a problem, but primarily we're interested in doing what we do as a speciality, and that is dealing with county and local governments to meet their needs.

County and local governments have long recognized that it is extremely difficult and costly to write bid specifications for financial -- specifically financial management systems. Rather, they rely on the experience, qualifications, expertise, and reputation of the vendors they're dealing with.

Unfortunately, the State contract which permits them to work with those vendors and avoid the lengthy, costly, and complex public bidding process -- and many local governments do not want to get into that process due to a length of time required and the complexity and the cost. So they rely on State contracts, but the way the State contract is structured it is a hardware down process, meaning hardware drives the purchase.

In the software industry, and for the time that I've been in this business, hardware no longer drives the process. Software drives the process, again: the software products that are offered by the vendor, the qualifications of the vendor, the experience, expertise, and the reputation of the vendor. As a result, whatever is required for those systems to run that is the hardware platform that is selected.

I'm going to select my system, and, Mr. Vendor, tell me what hardware I need. So that, as a result, the structure of the State contract does not readily facilitate the use of that

contract by local governments, counties, other agencies, and political subdivisions within the State of New Jersey for their particular needs.

Now, again, please understand that many State agencies look upon computers, equipment, software pieces as commodities. Local governments and other subdivisions of the State do not look at those products in that manner. They look at it in a quite different way.

Again, one of the other factors, and I addressed this earlier, so I'll skip over this very quickly, is that the way the contract or the RFP is written is based upon a percentage discount from the manufacturer's suggested list price. We don't have list prices, particularly those vendors that are manufacturing or -- better stated -- assembling their own systems, and this is quite common in the industry today. There is no manufacturer's suggested list price, and this encourages vendors to manipulate prices in their frenzy to be awarded a State contract number.

One of the things that is quite troublesome in acquiring State contracts is the requirement for a performance bond. In the software business today, and I spent a substantial number of hours researching in this area and searching for performance bonds, it is almost impossible for a software developer to obtain a performance bond. The lady that was speaking earlier indicated that what assets really do we have to secure that bond?

A bonding company is looking for collateral. What assets, but the value and future value of our intellectual property or developed products, if you will, do we have to

qualify for a performance bond? And perhaps, we're bearing the sins of our forebearers in the sense to break the grade that in the early years of the software industry, there were many vendors that failed in their attempts to implement systems, and as a result, the insurance industry is very wary of software developers.

As a result, we are forced as vendors to put up, in some cases, substantial amounts of cash in the way of certificates for deposits, which cannot be redeemed during the term of the contract or cash itself in the form of certified checks, in order to provide performance bonds which are frankly unnecessary, and let me explain why. Because remember that the State agencies, under the terms of the contract, are allowing them sales of very, very long evaluation periods during which they can evaluate. If they're unhappy with products that they've received, return those products with immunity to vendors. What is the point to a performance bond other than an outdated burden on the vendor.

Secondarily, the bulk of the products that are purchased by State agencies are covered by manufacturers' warranties.

Thirdly, once a State agency or any user breaks the seal, specifically on software, they can't return it anyway. They accepted the terms of the licensing agreement.

The licensing agreement specifically says that it is the responsibility of the purchaser to make sure that what they've purchased is applicable to their specific needs. So under those circumstances, that licensing agreement is contrary to the terms of the State contract requirements and provisions

of evaluation. So as a result, not only is a performance bond or cash performance bond unnecessary and outdated in this particular industry, but more so it's contrary to the conditions and technological developments and legal considerations in the industry, if you will.

The amount of the performance bond and a development by the Division of Purchasing on how much an individual developer or vendor must put up as a performance bond is quite frankly, to us in the industry, a mystery also.

In fact, in all the years that I've been involved with State contracts, I've never gotten an adequate explanation as to how the Division of Purchasing develops the dollar amount that they want to see as a performance bond. It appears to be somewhat arbitrary in nature and unfair.

So the State needs to look at, I believe, how it develops those requirements for bonding, because in this particular industry, it's a very, very difficult requirement for individual vendors. Quite frankly, given the cash flow nature of the industry for smaller companies, it is an impossible burden -- an absolutely impossible burden -- because that company would have to go out and borrow money on personal guaranties in order to put up that performance bond, and that certainly discourages commerce with State agencies.

All right, let me just move along if I may, and I apologize for rambling.

I have the following recommendations for the Committee:

- 1) I see that the development -- or I recommend that the development of requests for proposals among State agencies

be turned over to a commission, if you will, and that term "commission" is one that is used loosely, which involves clearly not only State officials, but local and county officials and vendors in addition to that.

Vendors, again, have more expertise typically than the end user and are expected to have more expertise and knowledge of the industry and can make very substantial contributions to that process.

2) In its effort to protect, if you will, political subdivisions and allow for the flexibility for those subdivisions to work with vendors adequately, I believe there should be a classification under State contract, if you will, which prequalifies vendors based upon those subjective areas as: expertise and experience, professional reputation, performance in the past, etc. So that those individuals and companies can do business with political subdivisions without being tied to a request for proposal or a State contract structure which is contrary to the needs of those political subdivisions.

Many of the vendors in the software industry, and I'm not exclusive in this area, are former public officials, who had and have maintained professional licenses. Those professional licenses, and in my case, I'm a certified municipal finance officer -- I have been for many years. Those professional licenses provide us with very special qualifications to support -- to install, develop, and support municipal financial management specifically and other management applications. As a result, there needs to be a clarification with the State laws dealing with professional licenses, so that those people who are doing business in this new technology area and utilizing their

experiences as a basis for their qualifications are permitted to do business, just as any other professional would, and given, if you will, wide and liberal birth.

It is in fact quite common, for example, for certified public accounting firms to market software to their clients for specific purposes and under their license be exempt from public bidding. That should apply to other licensed individuals in the State of New Jersey. So we need that clarification in the law.

In addition, because of the complexity in the subjective nature in selecting the technology vendor, many other states have recognized the need to informalize, if you will, the public bidding process. I've heard that term applied as an RFP, request for proposal, where such subjected factors as experience in expertise and qualifications can be taken into account rather than in a structured bid which is akin to a road construction project, if you will, because it is not a road construction project that these agencies are entering into.

There are two provisions of the local -- the present local public contracts law. I've addressed one of them.

- 1) The issue of professional licenses and professional services.

- 2) The area which is a very outdated statute dealing with extraordinary and unspecifiable services.

There has been an argument for many years that technology vendors, specifically software vendors, should fall under that provision in the law. For a time, State regulators argued that the law was not intended to included software developers and software vendors.

Many local attorneys who review local contracts have disagreed with the State and as have auditors who felt that, clearly, technology vendors fall under that category. So that we need either regulatory or, if necessary, legislative revisions in order to facilitate the use of our statutes in a world of changing technologies, and we need that very, very rapidly.

I just received a notice from the State of New Jersey Division of Purchasing that it intends to go, again, another round of State contract bidding in the very, very near future. They requested -- they wanted to know if we wanted a copy of the bid specifications. Certainly we do. But I suggest very strongly that the regulatory agencies look at how we utilize present statutes before the Division of Purchasing goes another round and another series of years based upon outmoded provisions of the law and regulations, and I thank the Committee for its time.

SENATOR SINGER: Just one question, if I might. Would you think that something like the home owner's warranty be set up like bid bonding for a small company? In other words, you would buy in if you're a software company, and every time you would bid on a State contract you'd pay a fee into the fund. They provide you with that form of bonding and some reasonable type of fee. Would that solve the problem?

MR. MASSIN: Are you suggesting a quasi-public insurance agency which would facilitate technology areas?

SENATOR SINGER: Something like I said, like the home owner's warranty.

MR. MASSIN: It would make some sense, but please understand that, with respect to packaged products, I'm not sure there is a need for a performance bond, because it's implicit, I think, that a purchaser understands its need before purchasing. It's implicit that a purchaser make sure that, one, they have a need; what do they need; and that they're going to use that product.

Let me give you an example of how the current structure can be used against the vendor. There is a current provision, and I don't remember the exact words, but under the State contract, there is a current provision which says that the purchasing State agency, and I believe, it's anywhere from 30 to 45 days which to evaluate a product during which there has to be a minimum number of operational hours. The vendor has absolutely no control.

For example, if a computer is purchased and lays dormant for a period of time, under the strict terms of the contract, the State agency is not obligated to pay for that equipment for that extended period of time and, again, can return that equipment. I know I'm getting away from your question, but the point I'm trying to make is that I'm not sure that in many cases there is a need for that bonding.

I will tell you the only area that I would say there is probably a need for bonding. That is where a State agency is contracting for the development of products.

1) They are relying on the expertise hopefully of the vendor, and if they're not they ought to be.

2) Where the State will incur substantial time and cost and where if the vendor, through its inability or

unwillingness to fulfil the contract, walks away from the contract, there may be a need to reimburse the State or local agency for their cost and proceed against the bond. However, I think that's probably the only area where it's required.

3) This leads to another area. If you establish such an agency, there has to be a third party, impartial arbitration arm of that agency.

SENATOR SINGER: There always is -- there is now with that.

MR. MASSIN: Okay, because currently, the individuals at the Division of Purchase and Property would seem to have an almost unlimited authority to cancel -- or cancel contracts out or discipline vendors based upon supposed complaints without any hearing whatsoever.

So there is a problem in that area, but again, dealing with the issue of bonding, I think that most vendors would probably welcome the opportunity to make it economically palatable in any way that we can with the State.

SENATOR SINGER: Any questions?

ASSEMBLYMAN FELICE: Yes.

I've been following that very carefully, you know. How does the State or local or county -- how do they protect themselves whether it's software technology, engineering, or architecture? There has to be some way that when a vendor or consultant comes to him and says we can do this job, they proceed with the job, and they find out that they haven't performed--

Does the State agency or the local agency-- How do they protect themselves other than having a performance bond?

The best of agencies, the best of engineering companies, architectural firms, because of certain problems internal or otherwise, sometimes fail.

I can remember, when I was mayor, we built a \$2 million library. We had one of the best contractors in the State -- reputation top notch. He failed. We got called into a bonding company. The second contractor failed. If we don't have a way that those people that are elected to protect the interest of government, then you must have a performance monitor. Whether it's a software technology or anything else, it's a business, and we know-- Right here, in the State of New Jersey, we had a company that came in and said, we're going to do this job, and we can do it. We have egg all over our face, besides the thousands of hours lost because they did not perform.

I can understand, and I agree with the Chairman, there are other engineering, medical groups that have gotten together and paid the fee and have a protection. There is no reason that the software technology industry cannot do the same thing. I understand. I was a small-businessman, being in an engineering company in New York and in aviation. We got together and protected ourselves, and I think the software industry has to do the same thing.

It is very difficult for a small business to do it alone. But together-- Because you have to realize, if you're not performing, then you're hurting the industry and hurting your chances, especially with State contracts or local contracts or county contracts.

I have to disagree with you. Whatever it takes there has to be a way to protect those people that are so -- that this technology will solve their problem, and it doesn't. Besides the lost hours and time and aggravation, the money that is involved is there, and I, as a small-businessman, I realize the concerns that you have, but there has to be a way to find a way to get that.

MR. MASSIN: Well, sir, I agree that there has to be a way in certain circumstances. Remember that, and we asked how do local governments, for example, protect themselves. Well, it's a very simple method. If they feel, and I've been in this situation as has any other vendor, if they feel that the vendor has not performed, the vendor is notified that the vendor is not going to receive payment.

SENATOR SINGER: I think, I think--

ASSEMBLYMAN FELICE: May end up with a lawsuit.

MR. MASSIN: And in most -- almost every contract, and almost every contract that I've ever signed with a local government, there is a period of time detailed in the contract which gives the new user the opportunity to evaluate the product and to determine whether the product provided was the product that was marketed, and if it's not, yes, agreed. If it's not, the bill doesn't get paid.

But let's go a little bit further into that. We have a factor that we use in the software industry, and you're going to probably chuckle, it's called the "happiness factor," and no, it's not some pill that someone takes, or it's not a little funny cigarette.

The happiness factor is one that the user in purchasing does not clearly understand its own needs, does not adequately specify those needs or relate those needs to the vendor, the vendor provides in good faith a product or service, and the purchaser says, "I'm just not happy with the product."

It's interesting. I've had conversations with a number of attorneys who defended vendors in these areas, and to my knowledge, in all the years in this business, and I've been involved in this-- To my knowledge, not one software vendor has ever had its performance bond proceeded against successfully, because of that factor. Because we are, as vendors, subject to the willingness of the purchaser to use the product. We're subject to the qualifications of the user in utilizing the product.

Let me give you an example, if I market a financial management or an accounting package -- software package -- to a local government, but the local government's employees and officials are not qualified in their job areas, whether they have a computer or not, there is a strong likelihood that the implementation of that system, at no fault to the vendor, will be unsuccessful. In that case, it is almost impossible in any event for the unit of a local government to be able to proceed against that performance bond and defend their position.

I think the point I'm making is that I agree with the Chairman. That there has to be a happy medium, but that decision and how to develop that structure cannot be made in a vacuum. It must include the very direct participation in developing a solution -- very direct participation of the private sector in this particular industry.

SENATOR SINGER: Thank you.

MS. CHERTOK: (speaking from audience) Excuse me.

SENATOR SINGER: Marjorie, we'll never get done if we do it that way.

MS. CHERTOK: (speaking from audience) Well, I understand. I just want to make one comment which is, there are insurance policies -- they've covered software development in lieu of bonds.

SENATOR SINGER: Well, they're similar. I'm not going to get into a lengthy debate about it. Your answer is, when the program doesn't work properly and time has been expended from the government aspect, and they're entitled to some reimbursement back, that's our aspect of it, and we have to live with the--

Yes, Senator, you wanted to ask a question?

SENATOR EWING: What do other states do?

MR. MASSIN: Well, I do business in several other states, sir. Quite frankly, in most of the other states that I do business in, and that includes Pennsylvania, New York, the State of Florida, and other areas, there is some latitude in the state public contracts law which allows the local governing body to determine whether it is feasible to utilize a structured bid with performance bonds or to, if you will, go about purchasing in lieu of that process in the RFP.

Quite frankly, the only time when I have had to actually put up a performance bond, in all my years in business, has been when I've been involved in State contracts in dealing with local governments. Quite frankly, after some discussion,

typically the local governments feel that that is unnecessary and it's really -- and we have not been asked to put that up.

SENATOR EWING: Well, there must be an association of software dealers, isn't there?

MR. MASSIN: Unfortunately, there has not been such an association.

SENATOR EWING: My God.

MR. MASSIN: I have suggested over the years to--

SENATOR EWING: Some lobbyist hasn't gotten a hold of you guys? Holy crow, I can't believe it. (laughter)

MR. MASSIN: I have suggested to my colleagues over the years that we form such an association of representing our common needs in the industry. Unfortunately, there tends to be some degree of suspicion and secrecy among software vendors, if you will. They are very suspect of other vendors and potentially revealing, if you will, trade secrets.

SENATOR SINGER: Let me just say this to you that there could be nobody more aware of that than the biotechnology industry.

MR. MASSIN: Yes.

SENATOR SINGER: They formulated their own industry association. They were hoping that from these hearings and meetings that the software industry would do the same. There is strength in numbers, it makes good sense.

MR. MASSIN: I agree.

SENATOR SINGER: Every industry has to be represented by a trade association, and hopefully, this will come out of that. So what I'm saying to you is, you're right, when we deal with all the high-tech industries, they're all very concerned

about the stealing of employees, the stealing of everything else like that. It can be done, and I think that it'll come about this way.

SENATOR EWING: You could go, I mean if you have an association, go to some of the major insurance companies and see if they'd set up a safety group, like they have for hairdressers or opticians or things like that. So it's amazing that the lobbyists haven't gotten ahold of you. Also, I don't think we have -- we don't have any bonding of lawyers -- do we? -- and they certainly don't do a good job all the time.

SENATOR SINGER: Well, soon we'll have--

SENATOR EWING: What? Do we have bonding of lawyers?

SENATOR SINGER: Well, they have malpractice insurance which is a similar type of thing.

SENATOR EWING: Well--

SENATOR SINGER: Thank you.

MR. MASSIN: Thank you.

SENATOR SINGER: Charles Merrill from McCarter & English.

C H A R L E S R. M E R R I L L, E S Q.: Good morning and thank you.

I come here today from the perspective of an attorney who practices computer law full-time. I'm with McCarter & English in Newark, and we also practice in Cherry Hill and some other places.

I'd like to go Mr. Massin one better where he says that software drives hardware. I'd like to say that not only does software drive hardware, but what we're really talking about, as the industries converge, is information or knowledge,

which is information without a lot of noise, is really driving the software decisions and the hardware decisions. It may not be immediately obvious to you in the year 1995, but as we see the direction companies, like Microsoft, take, I think it will be increasingly clear.

I also bring with me today the perspective -- a national perspective -- related to those areas. I am the national moderator on Lexis Counsel Connect; we're the E-mail and Electronic Commerce Forum. I'm also very active in an American Bar Association Committee called the Information Security Committee, and I'm going to talk about the perspective of both of these Committees in my suggestions to you today.

I have -- of all the things that I cast about to talk about today, I decided to pick two topics where I think one of them is quite immediate and something you can do something about very quickly.

The second topic is much more long range and is related to infrastructure building which I think will bear fruits, not this year in the software industry, but maybe the year after that or the year after that.

The immediate item is an appending bill in the hopper which has been in the hopper since May of 1994, which is Senate Bill No. 1068 and Assembly Bill No. 2372 which was-- The Senate bill is sponsored by Senators Bubba, Kosco, and Ciesla, and the Assembly bill is Assemblyman Azzolina and Russo. The bill basically directs the State to put its legislative information on-line in raw form, so that it becomes available to those who have access to nonproprietary, free, on-line networks. The bill

also provides for a number of other enhanced or added value services for which the State might charge.

The bill I think was recently amended in early 1975 and already has an appropriation figure of \$160,000. We -- lawyers in the State who have discussed this and the Computer-Related Law Committee in the New Jersey State Bar Association, of which I'm also a member, and also on the E-mail and Electronic Commerce Forum -- we really think this is a no-brainer. It's an opportunity for the State of New Jersey to bring itself up to some other states in the forefront that are putting, as a matter of democracy and information, and bringing thoughtful comment from those who are on-line. It's an opportunity for New Jersey to catch up with some other states.

So I urge you to put that on your list of things to look at, and see if we can bring that to the floor.

SENATOR SINGER: Let me just share one thing, as I just learned. That bill passed the Senate, the money is in OLS, and they've approved to do it. Once the bill passes the Assembly and signed by the Governor it can be done. So in essence that is moving in the right direction. We realize that, the Senate is taking action on that, and it's just in the Assembly now. So I think you're going to see that happen.

MR. MERRILL: Great.

I think what will happen when you put New Jersey legislative information on-line is you will bring into public discussion an entirely new dimension of democratic and really legal analysis which is being done by the on-line, E-mail, Internet community of which I--

SENATOR SINGER: Can we wait until the next election before we do that? (laughter)

MR. MERRILL: As with everything else, all good things are a double-edged sword. I also noticed that in this Committee, I don't see anyone with an E-mail address published. Is it possible that no members of the Legislature have one? I think if you do have one--

SENATOR SINGER: I have one.

MR. MERRILL: Well, I think you should publish it in the list of bodies such as this. I publish my E-mail address in everything I do, and I think it will expand your communication to those that can both hurt you and help you. Preferably in the other order.

The other item I bring to you today is a matter of information. It's described in great detail in two articles that I put in your folders this morning. They're both on the subject of cryptography in electronic commerce, and there might be a few more after your folders were filled up. Maybe there is some of these leftover, and if there are, they can be passed out if they still are around.

I'm not going to have enough time to explain in great detail. What I'm going to do is just take you through the highlights of why I think it's important that a legislative committee should be thinking about a subject which is so arcane that my second article is called, "Cryptography: The Second Revenge of the Nerds."

Why should we ask, first of all, the people in this room and the people that you're going to be reporting to in the Legislature to understand something which has mainly been the

province of science fiction, spy writers, and the national security agency?

The answer is that whether you have really experienced it or not, when you think about the newspapers and magazines you pick up everyday, it's impossible to deny that there is a pretty uniform agreement that moving some of the information in this society away from paper into a paperless society, one which can be communicated around on-line, has enormous advantages. I don't think I have to make that case.

I also think that-- Here's a magazine called, "Information Week," which came out this week -- just happened to pick it up. Internet theft.

The next problem about going on-line with much of this information is that the dark side is that the Internet and much of the on-line world is a very risky place to be. But as everything else, there are advantages and there are disadvantages. I think that we will be finding that we, as lawyers and the constituents that you represent, will increasingly depend upon the on-line, paperless world for a substantial part of our commerce.

I certainly think it's a forgone conclusion that this will drive much of the volume of the software industry and, after it, the hardware industry. We have a situation where the West Coast is probably, maybe a little contribution from Massachusetts, is king of the software industry, add Washington, because -- the State of Washington -- because of a certain very large software company. But as you look out in the map, in the West, you find Oregon, you find Utah, you find California.

I think that the area of the information, particularly because of the telecommunication industry centered in the State of New Jersey, is an area where New Jersey can take leadership.

The guts of what we're talking about is cryptography, which is the art in science of making information secure. Security means not just privacy, which is what you learned in your science fiction and your spy novels, but also guaranteeing that the information you get is authenticated as to the origin of it, namely who sent it, and after it was sent, did anyone have the opportunity to modify that information.

In the paperless world, although it's not perfect, we're all kind of used to what the expectation is about the immutability of a piece of paper with a signature on it. It's not perfect, it's klutzy, but over 500 to 1000 years, it's something that we've come to rely on. It's really very different when you move into the arena of on-line communication.

Those of you that do use the E-mail or Internet as a method of communication know that when you sign an E-mail message, it's just like typing your name in characters. There is no opportunity to put, in that message, a distinctive thing that someone else couldn't imitate. So that the science of cryptography has grown up and is reaching the marketplace in great quantity now to get around that problem to, first, equal the security and convenience of paper.

I think, in the coming two years, we'll demonstrate that it substantially exceeds the utility and security of paper, but only after we've done some infrastructure building.

What I'm trying to bring to you today is a little exposure of the infrastructure that you will need to bring to this State when the time is right.

Traditional cryptography that you learned with your Captain Midnight ring and your secret passwords and you use with your ATM machine and you use with a word processing program that's what I call conventional cryptography. It uses one key only to encrypt something.

Your software takes the key, puts it into a code no one can read, and for anyone else to read that, to get at it, they have to have the same key. It's a single key. That is awkward. It means that you have to share the knowledge of what that key is with someone else, which means that you have to trust that person. Right there is one of the big weaknesses of conventional cryptography, it isn't good enough.

The second problem is, the minute you're onto the Internet and you have a zillion people talking to each other pier to pier, anyone they want to, people they've never talked to in their life before -- they may never talk to again -- you don't have any familiarly or cues. You need to have a system which gets that private key or gets the key to the encrypted communication to the other side. Public key cryptography is the way this is done.

In a nutshell, you have two different keys that are connected mathematically. So that one key locks the knowledge, the other key unlocks it. The second principal is that if you have one of these keys made public to the whole world, the knowledge of that key cannot be used to derive the secret key, the one you keep.

Again, two keys related. One of which is published, and we want everyone to have knowledge of. The knowledge of it doesn't hurt the security. The other piece only I have, my secret key. The software does all this. There are a couple of products that are extremely well known to those pushing this envelope. One product is called RSA, which is a company in Redwood City, California, RSAD, the security, and the other one, which is really, really quite accessible, formally controversial but really fully licensed now and available now, is a product called, PGP, Pretty Good Privacy.

Now, I, as a practicing attorney, am using E-mail in my practice 90 percent of the time now. That means not just with my partners and my associates in the firm or at other offices, that means my clients, other law firms. I have the nature of business where people are using this because it is so strong as a communication tool.

My big worry as an attorney is that it is not confidential, because if I put that knowledge out on the Internet, it could be reached by hackers. Trust me it can. I'm not going to tell you how it is. So these programs-- PGP is now in use by a number of people. RSA is rapidly being disseminated. It is part of Netscape -- you may have heard of the company that went public.

So I want you to know these are here. The big gap in this is an infrastructure gap which the Legislature will someday need to address. There needs to be certification authorities throughout the country which will link my public key with my identity, so when I publish it or get it from some place, someone can rely upon that public key with confidence that it's

mine and not an imposter. Once that is done with satisfaction, then you have strong privacy. You have the ability to authenticate who sent it and also to prove that no one modified that communication.

In short, you have something better than paper ever was. The problem is that even after the certification authority has come into existence -- you already have a couple of them in the market now -- you will need a law like the Uniform Commercial Code throughout this country, and the State of New Jersey will, at some point, be considering a set of rules to say to what extent can someone rely upon that public key and trust it and risk money.

You are not going to be asked to draft this yourself. It's going to be coming probably from the Committee that I'm working on now, which is the American Bar Association Information Security Committee. This Committee succeeded in getting the State of Utah to pass a comprehensive digital signature law in March of this year, March 10, 1995. The citation is in your materials. It was quickly followed by California, Utah -- I'm sorry, California, Oregon, and Washington. California pulled theirs back into a much simpler version waiting until it has the final massaging.

The draft version of this law, which is guideline suitable for any jurisdiction, including worldwide, with a model act will become published in something like October of this year. I will, if you would like, I will submit to you a draft when it's made public by the Committee. It's expected to be finalized in Montreal next week.

I'd be delighted to bring it to you, let you become educated, follow it, and do anything more in the future. I'd be glad to answer any questions, but those are my remarks for today.

SENATOR SINGER: Thank you very much.

A. Jared Silverman, Esq., Hannoch Weisman.

A. J A R E D S I L V E R M A N, E S Q . : It's just Jared, your honor.

This is not my testimony, it's only the appendix to my testimony. I'm making available to the Committee the full text to my remarks which I'll abbreviate, and this is the appendix to the testimony. It consists of the compendium of statutes of other states.

I will specifically address the initiatives of other states and what they have done. When I include initiatives of other states, I mean only those bills that have been enacted and are currently law, not things that are pending. There are approximately 17 states that currently have statutes that effect the software industry or could have impacted the software industry.

But by way of introduction, my name is Jared Silverman. I am a Director of the law firm of Hannoch Weisman in Roseland, where I specialize in securities law and technology law. Immediately before joining the firm, I was the Chief of New Jersey Bureau of Securities, from October 1991 through January 1995, and, Senator Singer, I was a victim of OTIS.

While at the Bureau, I issued the first-in-the-nation cease and desist orders against unregistered securities offered in cyberspace. On a national level, I chaired the North

American Securities Administrators Association's Special Project on Abuse of Computer Bulletin Boards and was a member of its Enforcement Database Committee.

Prior to becoming Chief of the Bureau of Securities, I was an attorney in private practice specializing in providing legal advice to high-tech start-up companies, a position I went to after retiring from 20 years with AT&T having been there in the combination as an engineer systems analyst and senior attorney. I have two engineering degrees and two law degrees.

Currently, I was just appointed Chair of the ABA Intellectual Property Section Subcommittee on the Internet, and I'm the Comoderator of the Lexis Counsel Connect Forum on Corporations and Partnerships.

In reviewing the statutes of other states, one thing becomes clear: No state has specifically addressed the software industry while it has -- the software industry has been included in other statutes. This is because, in my opinion, that there is a merging of technologies, which Mr. Merrill just referred to, that we are now sort of in the second industrial revolution where we are looking at information services, and they have various components.

A very important part of the second industrial revolution is electronic commerce, and these are some examples of what I include in electronic commerce: E-mail; transfers of documents, which may be considered a subportion of E-mail; virtual banking, which is an up-and-coming field; securities offerings on the Internet, which is a favorite of mine; virtual casinos, which is causing a big to do -- there is a virtual casino that you can reach worldwide in Holland; and also the

cybermalls, where you can do your shopping from your home computer walking through cyberspace.

All of these things are really driven by software, as was mentioned earlier, and for this reason, I believe the initiatives of other states do not address the software industry directly; although, they are given favorite industry status in many statutes. The statutes will -- do discuss that, and you'll see the word "software" in many of them.

Mindful of the time and not to bore you with what's in my prepared testimony, I will say that there are generally five categories of initiatives:

1) Establishing of a corporation to administer a fund to provide grants or financing to start-up companies, meaning to specify criteria to commercialize promising research. States that have these types of statutes are Connecticut, Illinois, Kansas, Montana, and Oregon.

2) Providing project financing to a State authority. Examples of this type of initiative are in Connecticut, Pennsylvania, Vermont, Virginia, and Washington.

3) Granting tax credits and other incentives when jobs are created. This occurs in Mississippi, Tennessee, Virginia, and Washington.

4) Granting money or providing services to universities to further research and development partnerships with the software industry. This can be found in California, Connecticut, Illinois, New York, and Virginia; and last

5) There is the establishing of a computer network to assist businesses, and this is done in California and Hawaii.

A good portion of my testimony -- the prepared testimony -- goes into the details state by state. There are some general programs in the states of Iowa and Texas and in the Commonwealth of Puerto Rico which are broad enough to include the software industry without particularly addressing it. These are also included in the summary -- the testimony summary -- and in the appendix.

Well, not included in my prepared testimony I -- yesterday I received copies of the legislative initiatives that were signed into law here in New Jersey last Monday on August 14, by Governor Whitman. It's part of a 12 bill initiative by the Assembly Task Force on Business Retention, Expansion, Export Opportunities.

We'll note that Assemblyman Felice was a cosponsor of all the bills enacted. These bills specifically are: The New Jersey Public-Private Regional Field Office Act; the Micro-Business Development Act; the New Jersey Industry Sector Network Development Act; the New Jersey Business Relocation Mission Private Partnership Act; the Export Financing Opportunities Act; and the New Jersey Purchase First Program Act.

Many of these bills may provide a good platform for what this Committee would like to accomplish. I will apologize, Senator Singer, I have not reviewed your bill. As I said, I only reviewed what is already enacted. I will note that the Micro-Business Development Act is similar to the initiatives of other states.

I will say that probably the financing levels are kind of low in comparison to what other states are willing to offer.

These states are Connecticut, Illinois, Kansas, Montana, and Oregon, where they have separate corporations for financing, and Connecticut, Pennsylvania, Vermont, Virginia, and Washington, where they use authority type financing.

Additionally, the New Jersey Industry Sector and Network Development Act has counterparts in California and Hawaii, as does the Export Financing Opportunities Act, also California and Hawaii.

Four of the Acts -- the New Jersey Public-Private Regional Field Offices Act; the New Jersey Industry Sector Network Development Act; the New Jersey Business Relocation Mission Private Partnership Act; and the New Jersey Purchase First Program Act -- all contain the concept of an industrial sector network, which is partially defined as clusters of two or more businesses which are within an industry that makes or could make an important contribution to the economy of this State.

The software industry is one of those enumerated industries falling into this category. Unlike the other three Acts, the New Jersey Industry Sector Network Development Act defines "industry sector network" in terms of businesses within a key industry, and the software industry is one of the enumerated industries.

I believe that it is a good platform to build on. I would like to transit a little bit to quickly address some of the remarks that were made earlier by other witnesses. First, I would emphasize that software developers, not all, but many, need more business acumen. I see some of the venture capitalists reacting to that.

In terms of financing, marketing, and being able -- no, let me just say marketing and financing -- and also dealing with larger companies, a lot of software developers are technical in nature. When I say technical, they're geared to technical thinking and not to outside business requirements, which makes it difficult for them to startup their own businesses, and they generally need to join expertise from the outside.

In this regard, incubators are a healthy development. We have a few in New Jersey. They probably could be made more widely available, places where you could have cooperative facilities, so you don't have to set up your own shop. To do so you can draw on the expertise of others, a common expertise, especially in the areas of financing and marketing.

Another problem that software developers have, and I'd say that this is perhaps not unique to software developers, but generally it applies to people in start-up technology type businesses, is dealing with larger companies.

In my experience, these companies are unevenly matched, I could say, with drawing on my experience with AT&T; I've dealt with smaller companies as an negotiator for AT&T. Now the roles are reversed, I'm dealing with smaller companies dealing with larger companies. And there has to be a way sort of equal--

SENATOR SINGER: Mr. Silverman, could you speak into the mike?

MR. SILVERMAN: I'm sorry.

SENATOR SINGER: That's better. Thank you.

ASSEMBLYMAN FELICE: Could you bring it a little closer to you?

MR. SILVERMAN: I'm sorry, is that better?

SENATOR EWING: Yes, put it in front of you.

MR. SILVERMAN: Okay, there you go, there you go.

What happens is that the small firms are unevenly matched with the larger firms. That goes to a question of finances, too. Like most lawyers, I like to get paid for my services. Venture capitalists like to get paid for their services. Investment bankers like to get paid for their services. That causes a problem for the small company as to where do they get the capital to put this all together.

There are many stages of capital development, as you know. I'll quickly run through some of them, but you have the seed money for, first, small firms start-up -- who have start-up funds; you have mezzanine financing; you have private placements; you have-- Eventually, the goal of everybody is to go like Netscape just did and go public and make a killing there. But you need money, and it's hard to get this money. At one time you relied on the SBA; SBA funding has dried up to a certain extent.

You, again, with apologies to my friends in the venture capital industry, venture capitalists sometimes do distract a large toll in the terms of ownership of a company, in terms of financing, as with other private placement types in financing. So what a small entrepreneur is facing is, in order to finance that person's dream, they're giving up a significant portion of the dream to make it viable.

Eventually, they may lose total control, either through financing mechanisms or through partnering mechanisms with larger firms.

Related to the ability to finance is the evaluation of the intellectual property. The fact that it's hard to put a dollar value on what the software program or copyright or patent is worth, and that is tied up with generally accepted accounting practices and also with the Federal Internal Revenue Code, which drives the deal of it. But anything that could be done to ease the financing burden of this industry, and that includes start-up and all forms of the high-tech industry, would be appreciated.

I'd like to thank you for the opportunity to testify, and look forward to working with the Committee in attaining its goals.

Are there any questions?

SENATOR SINGER: First of all, I'd like to thank you, Mr. Silverman, for the extensive report and all the back up information, and we appreciate it very, very much. It's enlightening to see what a lot of other states are doing. We know you put a lot of time in it, and I do appreciate that.

Are there any questions from the venture capital people over there? (laughter)

No pun intended.

MR. SILVERMAN: They're my friends.

SENATOR SINGER: Of course, some of your best friend are--

Yes.

LEONARD F. NEWTON: I'd just like to endorse your point about the evaluation of intellectual property at-- It seems like it's getting awful late for banks and financial institutions to recognize that there is more than real estate in the way of property. I mean we had mortgages for I guess 100 years or more, but to get any recognition of value in intellectual property is almost nonexistent.

I see headlines, once in a while, claiming it's possible, but when I check up on them, they don't know of any such case. They only mean they have a hope that it would happen someday. So I think there has to be some kind of a way to appraise intellectual property in an objective way, so that the financial institutions who don't have the expertise to do it they can go to somebody and get that appraisal done, and then they can borrow against it. I think that is a very important first step.

MR. SILVERMAN: Especially for start-ups or people who are just entering the market, because what will happen typically is, when you're going for financing, someone says, "What are operating results?" "Well, I don't have them." "We'll start for three years, do you have any?" "No, I've got six months. I've got the promise of contract. I've done some preliminary review, and I can't really reduce this to what I need to a tangible product unless I get this financing." It's sort of-- My wife is in the insurance industry, and she likes to make a joke about those who don't need insurance can get it, and those who need it can't. It's sort of in the same level.

SENATOR SINGER: With bank loans, yes, it is the same thing. The only thing I'll just-- One point, you mentioned an

incubator facility. We were working on that; we were very, very close to having a very large facility in the State that EDA is working with us.

We have run into a major problem. It's something called asbestos, which is really throwing a kink in the chain because we expected to be in the facility this year. It was 100,000 square foot facility over 40 acres redesigned as a high-tech incubator facility for both the biotechnology software, photonics, and electronics. We're not giving up on the projects, we just might have to switch gears, but we're aware of that, and that is something that we certainly intent to carry forward.

As a matter of fact, the Commission on Science and Technology had given us over \$2 million towards that project. Unfortunately, with the finding of asbestos, as I said, put things back a little bit, but we're certainly not going to give up.

MR. SILVERMAN: I'm glad to hear that. Relating to the incubators, I will mention that we do have a semi-incubator. We have many incubators in New Jersey, but a semi-incubator is Rutgers--

SENATOR SINGER: Right.

MR. SILVERMAN: --with its Centers for the Application of Advanced Technology. The one thing that you might want to look at is, many of the entrepreneurs that we're going to grow out of -- in the future, will come out of those Centers, and one of the problems that we're finding is the State conflicts of interest law -- as to how easy it is to transit from those Centers into the private enterprise zone. I would suggest that

you might, to encourage further the exploitation -- commercial exploitation -- for the benefit of the State, that those be revisited.

SENATOR SINGER: They've done a tremendous amount of that work with the biotechnology industry, especially in bioremediation, which Rutgers has lent itself to that licensor of those people and everything else. Very interesting.

Thank you.

MR. SILVERMAN: Thank you.

SENATOR SINGER: The last attorney of the day to speak, Michael Lerner of Crummy, Del Deo. We love your name, Crummy, Del Deo. That has to be made up, that can't be for real.

M I C H A E L J. L E R N E R, E S Q . : Once you hear it you don't forget it, right?

SENATOR EWING: Yes, but you have to get the rest of the names in the firm, too.

SENATOR SINGER: After you get past Crummy, Del Deo, what else is left, right?

MR. LERNER: Thank you, Senator Singer and other distinguished members of the Committee, for allowing me the opportunity to address the Committee on legislative initiatives and regulatory reforms by other states designed to aid the software industry.

As Senator Singer said, my name is Michael Lerner. I am a partner in the law firm Crummy, Del Deo, Dolan, Griffinger & Vecchione, in Newark, New Jersey. As I sat here, I ran the risk of being the fourth attorney to speak. Generally, all the words have probably have been taken already, so I will attempt

to keep my comments relatively brief to the extent that I do touch upon areas touched upon by some of the other speakers this morning. I would ask you not to blame me, but to blame Walter who told me what the topics were going to be so that I can -- you know. But anyway, your indulgence in connection with this -- with my comments this morning will be -- is requested.

As the economy shifts from the heavy manufacturing to the high technology and many economic burdens are transferred from the Federal to state levels, many states, including New Jersey, are faced with the issue of how to attract new, environmentally friendly businesses or support existing businesses in the area of high technology, so as to create jobs and improve the general economic condition and welfare of the State and its citizens.

Many states, as Mr. Silverman mentioned, have recognized the importance of developing and supporting high technology within their borders and have enacted legislation designed primarily to enable high technology and innovative businesses to locate in those states, thereby creating jobs and revenues for their treasuries.

Generally, the legislation has not specifically focused on the software industry but has taken the form, as Ms. Chertok suggested, as a macroapproach to the entire high technology field. This has taken a form of: economic development corporations with authority to make certain loans or other financial accommodations to qualified companies; certain tax benefits in the form of rebates or other tax credits or exemptions; the formation of industrial parks for companies

which locate within those parks are entitled to certain benefits, and also incubators and certain other facilities.

While many of the states have folded the software industry into the general legislation affecting high technology, my survey of all this legislation indicates that the state that is really focused primarily on the software industry specifically has been the State of Hawaii.

As early as 1979, the Hawaiian legislature, in developing the State's economic priority guidelines, recognized the importance of developing small businesses in the information field. In 1983, they established a High Technology Development Corporation whose purpose was to facilitate the growth and development of the commercial high technology industry in Hawaii.

That Corporation was empowered to: develop industrial parks; to provide support services; as well as to enter in the contracts in connection with the development of industrial parks; to issue bonds to finance the cost of a project; and to use those bonds and a lot of the money available to it in a lot of these projects.

In 1990, Hawaii thereafter established what was known as the Hawaii Software Service Center, within the High Technology Development Corporation, which was specifically established to foster and sustain Hawaii's software industry. I think, in connection with the Software Center, what they're doing in Hawaii addresses many of the concerns of the speakers today in that this Software Center:

New Jersey State Library

1) Basically provides access to market research services, including on-line and printed publications, for every software manufacturer in the state.

2) It develops and publishes and maintains a directory of Federal, State and county software development and service opportunities.

3) It develops a directory and maintains a directory of all software providers in the state according to their facilities.

4) They maintain a database for all opportunities for the Hawaiian software manufacturers on the mainland both through government prime contractors and private sector providers.

5) They maintain a catalog of all packaged software products produced in Hawaii.

6) They develop, publish, and maintain a list of qualified mainland software product packing providers.

7) They identify and maintain a list of domestic and international sales channels and distributions.

It goes on and on. I think this legislation is probably contained in the packet that Mr. Silverman has provided to the Committee. I think that, you know, that state support of the industry in Hawaii is important for this Committee to look at to see how we can service or provide information and data to the software industry within this State using that in part as a model, so that we can aid our industry which often doesn't have the personnel or the other -- you know, or the time to find out a lot of this information in the ever-changing business that they're involved in.

In addition, in 1994, Hawaii passed an amendment to its public procurement laws giving preference to any Hawaii software providers on public contracts. In that state, the extent that there is a public bid or a public contract out there, Hawaii software providers are given preference.

SENATOR SINGER: There is just one question on that, and I want to address that because it is always an issue when we talk about competitiveness, giving incentives to states. You could get away with that in Hawaii because there is no neighboring state. If we do that here, you will see retaliation from New York, Connecticut, and Pennsylvania who have warned us about that, and I think that you all know that many of our companies do tremendous business over in Connecticut and Pennsylvania and New York. So it's a double-edged sword.

MR. LERNER: I guess that is-- I agree with you, Senator.

This is just for informational purposes.

You know, there is that concern.

SENATOR SINGER: I know, but Assemblyman Felice has recommended we may have to firsthand go to Hawaii to see if that is accurate. (laughter)

MR. LERNER: Can I go? I'd be happy to be the tour guide.

The last subject of my remarks would just be to highlight some of the things that economic development corporations and some of the other states are doing.

The State of Washington has established an Economic Development Finance Authority, which the key thing about that is it can provide nonrecourse revenue bond financing to promote and

simulate and encourage the development of new products and innovations within the state solely in situations where financing would not otherwise be reasonable, available from commercial sources.

In other words, that state is becoming a lender to industries such as the software industry where a bank normally would not or other commercial lenders would not be interested in making such a loan. As collateral, the Authority can own or possess or take licenses into patents and other proprietary processes and charge fees for the use of these processes, obtain royalty payments and royalty stream income, etc.

Kansas, as mentioned by Mr. Silverman, has also established Kansas Technology Enterprise Corporation whose purpose is to encourage the growth of the computer software industry in Kansas, as well as their other high technology companies.

The most interesting aspect of this legislation is the creation of a seed capital fund which enables the Corporation to act in essence as a venture capitalist in providing funding to start-ups and growth stage companies in exchange for equity or royalties from previous gross sales in the corporations which they've funded.

Another interesting aspect of the Kansas legislation is the creation of a Technology Transfer Technical Referral Service, as well as an information database, to enable the exchange and dissemination of information by potential clients and the developers of the technology.

Other states that have also formed similar funds are Oregon -- another state is Oregon, which has similar legislation

and almost parrots the legislation enacted in Kansas. Other states have passed legislation involving and creating tax incentives.

West Virginia passed the West Virginia Capital Company Act which gives tax credits to -- which recognizes the need to promote investment in West Virginia. Under the Act, investors and qualified West Virginia capital companies are entitled to a tax credit equal to 50 percent of their investment.

These companies and thereafter are formed in order to invest in high technology and start-up companies. The state did, however, limit the amount -- the size of each of these capital companies, which are essentially venture funds between \$1 million and \$4 million, and have limited the amount of tax credit to \$2 million per company, and they also limit the amount of tax credits the entire industry as a whole can take. So they really put some pretty stringent constraints on that.

States that have promoted-- Louisiana has interestingly drafted a -- has sought -- I guess-- They're also concerned of the development of the health care and medical fields. They've enacted legislation for the development of a biomedical research and development park, which provides for tax exemptions for companies locating within the park. The statute includes certain software manufacturers and allows for rebates, exemptions, and other credits from state franchise and corporate income tax for companies located within the park.

Louisiana has also passed a Software License Enforcement Act which essentially provides that any person who acquires computer software or a copy shall be deemed to have accepted and agreed to all terms of a license agreement, which

is contained in the packaging there, while preventing people from copying or otherwise using that software illegally. I think that there is a lot of opportunities for this Committee to look at the legislation adapted in other states and pick the best of that legislation and apply it to New Jersey.

I guess the Hawaii procurement law is one that will pass on, but I think that there is -- a lot of other states have focused on it. I think that New Jersey can establish itself as a leader in the field by taking the best of that legislation and incorporating a new legislation here.

Thank you.

SENATOR SINGER: Thank you, Michael.

Any questions? (no response)

Thank you very much.

Dennis Lower, Executive Director of the University Heights Science Park.

We have one more speaker after Dennis, Caren, so you're next.

D E N N I S E. L O W E R: Thank you, Chairman Singer and members of the Committee.

It's my pleasure to be with you today, and my remarks, because of the hour, I will keep them brief, but in my perspective that I would bring to share with you today is from the perspective of a nonprofit corporation attempting to develop various high technology new companies and spin-offs from Factory Research located in Newark. We are particularly interested in the software industry because of our proximity to New York, and I would like to share with you what is happening to New York City, in particular, because I think that there is an organic

anecdote here that sort of mirrors some of what could happen in New Jersey.

I am, as I mentioned, the Executive Director of the University Heights Science Park. We are located in Newark adjacent to the four universities that are there, which include the University of Medicine and Dentistry of New Jersey, NJIT, Rutgers Newark, and Essex County College. Also, on our Board of Directors, we have four private industry sponsors.

They're important to us, as you will see in my testimony, because they will -- they're assisting us in formulating strategies to develop our Science Park. But those four industry sponsors are Bell Atlantic of New Jersey, PSE&G, Prudential, and First Fidelity.

The Mission of the Science Park is to employ the roughly \$50 million of annual research at these public institutions as a catalyst for economic and community development within the City of Newark and throughout the entire North Jersey Region.

The Science Park seeks to grow and attract technology based companies by forging business partnerships between academia and industry. As you're well aware with the significant reforms that are issuing from Washington, we feel that it's imperative that urban centers like Newark begin to identify and tap hereto for untapped resources so that they can continue to thrive.

In the Science Park, from our perspective, it is an economic bootstraps-development strategy, and our attempt is, over the next 10 to 15 years, to create 3000 direct new jobs

through the high technology industry and the commercialization of the research at these institutions.

There are four areas that we focus on: Biomaterials and medical devices, microelectromechanical systems, environmental technologies, and why I'm here today, information and multimedia technology.

We are a young organization, and we're in the process of beginning to develop our first building, which will be a 40,000 square foot software and multimedia facility, the Information Technology Business Center. It's a small effort. We would hope that as we become successful that a second, larger building would be built adjacent to this one.

One reason why information technology has been identified as one of the four areas for us to focus on is because, as I mentioned earlier, our proximity to New York City. The New York metropolitan area is a mecca for the creative arts, and New York City in particular is poised to become one of the country's centers for the emerging software media industry.

A few of the more recognized multimedia companies have already taken up residence in New York City. These include Viacom New Media, Time Warner Interactive, Delphi Internet Services. The Sega Channel and Prodigy will soon be moving into New York City. Obviously, the reason why they're doing so is because they have access to writers, graphic artists, musicians, filmmakers, etc.

North Jersey has historically enjoyed a symbiotic relationship with New York City. That economic relationship we feel positions us well with respect to the emerging software multimedia industry. Two agenda items for today's hearing

include what other states are doing and the availability of funding for software companies. What I would like to do briefly is to speak anecdotally about what our neighbor is doing because I believe that it pulls together five or six important initiatives that together are beginning to position it and can position New Jersey as we follow the same strategy.

Those elements that have been pulled together in the public and private sector sides include: research and education; the organization of a professional association -- we heard some testimony earlier about somewhat the lack of that here in this State; targeted legislative subsidies; the catalyzing of public and private leadership, which I think is important; the organization of the venture capital community, and the actual physical focusing of multimedia development in lower Manhattan.

First, an interesting initiative in research and education is that about two years ago, through the New York Science and Technology Foundation, the State of New York awarded a \$1 million grant to New York University to establish a center devoted entirely to new media. That is called the Center for Digital Media at NYU. The Center has both a research and an education mission. It has 25 full-time research staff that are exploring and developing new multimedia applications.

In addition, the Center offers multimedia information and training seminars and courses to students at NYU but, also and importantly, to small businesses, both software companies in New York State and also to companies that could better utilize multimedia technology in their businesses.

The entire thrust of this Center is to attempt to stimulate, through the University, the application in multimedia, and as more and more multimedia becomes introduced into business applications, it will stimulate the development and growth of small companies in the New York State region and in the North Jersey region, we believe.

The second effort is the emergence of a professional association. Less than a year ago, in October of 1994, a gentlemen, who is a venture capitalist actually, organized -- started with eight members -- a software development association, particularly a new media association. As a matter of fact, the organization is called the New York New Media Association.

Ten months later, today, August 1995, that Association has 1300 members. Obviously, this is a private sector initiative. It was initiated by a venture capitalist, and there is enlightened self-interest in mind there, but the intent is to create a focus, coming from the private sector side, in this Association.

The third area that has been stimulated, both through the public and private sectors, is this venture capital formation. As we heard from several other presenters this morning, a major problem that is faced by any technology company, and with software companies it's particularly difficult, is attempting to secure business capital for new products that are untested in the marketplace. High tech is high risk.

The traditional banking community has a very difficult time evaluating and understanding the nature and the products of

a software company. Bankers understand computer hardware because it can be seen, and it can be touched, but software, being intellectual property, unlike many high technologies, is not patented for a variety of reasons. Bankers have difficult -- a difficult time viewing software as an asset and see the product more theoretically and intangibly. Traditional lenders find it hard to evaluate a product's potential until it has established a market. The problem with that is that it's a chicken and egg problem. If the market was established, there would be less need for the software company to seek the financing.

We do have a small incubator that's operating, and we have a few software companies in that incubator. One lender recently told one of our Newark software firms who was seeking financing for a product that they "have nothing that can be banked." Now, this was told to that software company, even though they have successfully beta site tested a medical information technology product -- software product and have several significant buyers lined up. But because of the lack of familiarity with the bankability of a product, they've been unsuccessful to date, and they're still looking for financing. This is one reason why the mayor of New York City in January announced the formation of the New York City Discovery Fund. It's intended to capitalize this Fund at \$100 million but primarily through private sector investments.

To date, Con Edison and Brooklyn Union Gas have each deposited \$5 million into that fund, and there will be public contributions that would be coming on-line. It's anticipated that before the end of this year they will have it capitalized

to close to \$50 million. The emphasis in that Fund or at least a significant bias is towards software development and capitalization of small software development firms.

Three publishers, which include Time Warner, McGraw-Hill, and Forbes, are also meeting on a regular basis -- at this time, monthly basis -- trying to identify ways to finance new media companies, new software companies. They're meeting as well with a number of venture capitalists. Their self-interest is obvious. They recognize that 60 million homes will have CD-ROM personal computers before 1988 (sic) which creates a tremendous economic demand for entertainment education and home application software.

One of the other public private efforts is the coordination of leadership on the public and private side. Two and a half years ago, the New York City Partnership, NYNEX, IBM, and Con Edison began meeting and capitalizing on this emerging multimedia software industry. They were aware that hardware technology limitations would soon be overcome and true interactive, real time capabilities for both business and personal use would become widely available. They recognize that there was a window of opportunity to begin focusing and taking the assets to the greater New York area and focus in the software multimedia industry in that area.

The public and private alliance first kicked off its efforts two years ago by doing a market analysis -- detailed market analysis and did determine that what was key was trying to centrally focus physical properties clustered together to encourage to create a process in software development. Toward that end, they've identified the Rudin Company which has stepped

forth with a 400,000 square foot facility in lower Manhattan. It was the former offices of Drexel Burnham, and they're attempting to make this the cornerstone for the multimedia effort in lower Manhattan. Rudin is individually investing \$15 million of its funds into this gutted structure providing interactive conference facilities and an entirely new telecommunication infrastructure that includes single and multimode fiberoptics local and wide area networks and T3 to the Internet.

In this instance, the landlord is really a corporate angel, because it's anticipated that they will only be charging between \$15 to \$18 a square foot. This building in Manhattan, configured in this way, would lease for about \$25 to \$28 a square foot in this area.

Under the direction of Con Edison, architects are studying three adjacent buildings with the intent of tying those together with this first building, which would create a high-tech complex of approximately 2.5 million square feet for software multimedia developers.

The first building will house 150 software tenants that will average between 2000 to 4000 square feet each and a 10,000 to 15,000 square foot incubator that will offer space between 100 to 500 square feet for the tenants. The first tenant, a 12,000 square foot tenant, is expected to take occupancy in October of this year.

Finally, just a mention of what occurred with respect to additional subsidies not provided by the private developer. NYNEX, IBM, and Con Edison all reduced their telecommunications installation costs to launch this first building, looking at it

somewhat as a lost leader, in order to begin to create a focus in a Center.

The State provided an initial planning grant to begin to coordinate the public and private efforts that would be needed to focus on these buildings in lower Manhattan, and the State also approved the Real Estate Tax Abatement Program that was initiated by the City of New York in an attempt to attract business back to the downtown area of which this was the primary focus.

The Real Estate Tax Abatement provides for 50 percent rebate for three years gradually moving into a full taxable situation after six years.

In addition, the city waived its commercial rent tax, which was 6 percent, and electricity will be provided through a variety of means at a reduced rate of 49 percent of the full utility rate. So it truly is a collaborative effort which they're undertaking that cuts across the legislative efforts that are required on the State level, the local level; combining it with local realtors; finding corporate angels to launch some of these early efforts; and finally recognizing the importance of building on the resources that the greater New York region has.

The reason why the Science Park in Newark is interested in this is that we do have a sizeable portion of software companies in North Jersey. It is our attempt to begin to try and provide some focus with our first building being a 40,000 square foot business center. And the fact that we're located just four blocks from Bell Atlantic's first video insertion point throughout their entire seven state network we

feel will provide us with some early competitive advantage to be able to provide content providers the opportunity to insert into the video dial tone network there in Newark.

So we're attempting to position ourselves and to capture and focus along the model -- along the lines of the model that we have seen that's emerging in New York City.

Thank you.

SENATOR SINGER: Thank you.

We appreciate that -- some good comments.

Certainly, last but not least, Caren Franzini, New Jersey Economic Development Authority.

Caren, thank you for being patient. We purposely put you at the end to speak because we were hopeful that-- Your overview of what you heard today would be important to us and some of your thoughts on that.

C A R E N S. F R A N Z I N I: Thank you, Senator. We also called up and asked what time I should come today, and I was told to be here promptly at 10:00.

Actually, being last has the advantage to get to hear what everyone else has to say, and then you get to comment a little bit on it and not repeat what they said. So I'm going to try to do that in my brief remarks.

What I'm going to cover briefly are five areas: One, who is EDA -- actually, four areas -- who is EDA. Two, the good news, we actually did finance some software development companies. Three, what are some of our recent initiatives in the emergent technology area. Fourth, what do we plan to do specifically for the software industry.

It's interesting for me to hear this morning that part of the major problem is communication. Here we are talking about the software industry and communicating a new means, and I hear what is happening is we're not communicating with each other. With each other means: the bankers aren't talking to the software companies; aren't talking to other states on what we're doing; aren't talking to investors or the lawyers. They're talking to each other, but maybe not listening to each other on how to resolve the problem.

That is a backdrop. One is, who is EDA? We're a 20-year-old independent State authority who is what is called, "in but not of State government." For those of you who don't understand that, what that means is that the policy direction is strongly established by the Governor and by the Commissioner of the Department of Commerce and Economic Development, who is Gualberto Medina.

We do have an independent board that is also appointed by the Governor and the Legislature, and that board meets monthly, and approves all our financial decisions.

We also do not receive any annual State appropriations for our investment, which means, if we make a loan into a company or provide a guaranty to a bank or financial institution, and that company goes under, we do not have an ability to replenish it with other funds. So what that means is we have less money to lend out to the next person who comes to our door. So like bankers -- we are like a bank, except we don't accept deposits, but we have to look at collateral as one of our analysis to ensure that if we don't get paid back from

the ongoing concern, we have an ability to get back the funds. That's who we are.

Second, the good news. I wanted to bring to you a couple of examples of companies we actually did help in New Jersey, and we helped them through a new program we established a couple of years ago, again working in partnership with the banking community. We listened to the banking community and found out why, back in 1991, they weren't lending in New Jersey or throughout the country. We sat down with them, with 12 banks. We came with a program, and they hated it. So we rewrote the program with them, and we developed what was called a Statewide Loan Pool for Small Business in New Jersey. We started out with 12 banks, hoping to do \$30 million in two years. The program is three years old, we've approved \$250 million in loans to 450 businesses in New Jersey, and we now have 83 banks in the program. So we listened and it works.

To the companies that participate in this program -- one is a software development company called NCS. It received a million dollar pool loan with us and Carnegie Bank. The way the loan program works in this example, a million dollar loan, EDA provides a direct participation of 25 percent from the million dollar loan. Our direct loan was \$250,000 in a subordinated basis, which means the bank gets to go after the collateral first, and they're \$750,000, and we're in second position.

In addition, we provided a 25 percent guaranty on the bank's \$750,000. Why does the program work? Because everyone is a winner. The bank is a winner because its exposures are reduced. Rather than providing a million dollar loan itself,

its exposure is reduced with a guaranty in participation to around 54 percent. We're a winner because we sure don't have enough money to give million dollar loans out all the time, and we get to leverage our funds on a 4 to 1 basis. We're only providing \$250,000 instead of \$1 million.

Most importantly, the company is a winner. The company is a winner for several reasons. One, it's doing business with a bank, which it should be. It shouldn't be doing business with a State authority. Two, it has the ability to borrow money at a lower cost. Our cost of capital is below market rate. So our cost of capital combined with the bank's cost of capital brings the interest in lower, so everyone is a winner. Another company we helped, called Multiforce Systems, is in the hardware and software company for fleet manufacturing, and they received a \$250,000 loan, again with Carnegie Bank and our participation. So that's good news, but that doesn't help everyone.

My third point, I want to talk about some recent initiatives, and Senator Singer -- I had the opportunity, fortunately, in the past two years to work with him, and the Governor and Commissioner Medina on working with the biotech industry, and that is a good example because I know about as much about biotech as I do about the software industry. But the biotech industry came to us as a group. They were organized. They came to us, and they said to Senator Singer, "We have problems. Can you help us?" We testified in a panel similar to this. We came up with solutions at the end of it.

One of the major solutions that the Senator referred to earlier is the development of a high-tech research park. We

did have some glitches with the structure. We're working now with the Commission on Science and Technology, and we're looking at the facility now really as a research park for the emerging technology businesses in general in the State of New Jersey. We're starting off with the first building, and it's going to be for biotech. The second building -- I'd love it to be for the software development company. There is 47 acres of developable land on Route 1 that's already ready for development, so we're very excited about this prospect. So we're going to have the first building up and running, but there is land there to build buildings two, three, and four.

The one thing about this, not only did we listen to the industry in New Jersey, we went to other states to find out what they were doing. We went to Massachusetts; we went to New York; we went to Pennsylvania; we went to Maryland, all on Amtrak. We went to hear how they started their research parks on a statewide basis, what their pitfalls were in the beginning, so we could hear what they went through, so we don't make the same mistakes or try not to make the same mistakes they did.

So that was one area in terms of what we heard over and over again from the biotech industry. "We have a lot of venture capital money in New Jersey, not a problem for us, but we can't use our money for tenant improvements." Their tenant improvements are \$250,000 a square foot. We're talking about wet lab space is very expensive to do. Banks do not want to finance it, because there is no cash flow coming in. The banks will come to us and ask for basically a 100 percent guaranty. The company walks away. The developer is sitting there with a fully tenanted building, and we have no collateral. We said,

"That doesn't make sense," and that's why we came into conclusion with the research park.

The second area was financing biotech company themselves. They were high-tech companies. EDA were bankers -- the staff at EDA and our commercial lending group are former bankers. We know how to look at cash flows, financial statements, collateral, and make financial decisions. When we have an interesting company coming into New Jersey, we turn to our friends at the Commission of Science Technology and say, "talk to them," as your first step in knowing how to do business in New Jersey.

But what was needed was an investment in venture capital. Since we do not have the expertise by any means in investing in these start-up companies, we thought we should invest in a company that does. So we formed a committee and did a R of P on a national basis and proud to say that we selected a homegrown New Jersey venture capital fund, Edison Fund, in which we made a \$2.5 million investment in a \$60 million fund. They've already made an investment in a New Jersey based company, too, as a matter of fact. So we're very excited about that.

So that is two of the recent initiatives that we came up with working and listening to panels such as this that the Senator put on into the community. So what do we do for the software industry itself? First is, please call me up and I'll go and speak at any of your functions. I listened to several attorneys this morning and other individuals, and it seems like no one knows that EDA is in existence.

During our 20 years, we provided \$10 billion of financial assistance, so we're doing something right. But we just have to get the word out better. So I'm available, as well as several people at our Authority, to go out on speaking engagements to get the word out on how to access our traditional financing programs.

The second area, and I'd like to ask your assistance as a task force, is that the task force can form a subcommittee. What I would be interested in is a subcommittee that we will participate on with bankers, with companies, with lawyers, and also call in people from other states, working in a very small group of five to six individuals and try to figure out what can be done on the financing end for businesses. EDA alone, with our limited resource, cannot take the risk to make the money, to make the investments.

What we need to learn about is, how do we value intellectual property? How do we look for other sources of collateral and put a value on it? Sitting here today, I don't know how to do it. Maybe there is a bank somewhere in California or somewhere else that's doing it. Let's find out about it. Let's steal-- My theory is steal what others are doing well, and do it here. So let's figure out what other people are doing, and do it here in New Jersey.

The third area is, due to our limited resources, we only put \$2.5 million in a venture capital fund. If the need is venture capital investment, and I'm not sure if that is a need, but other state resources, namely -- and this is music to many people's ears -- the state pension fund, perhaps, need to be looked at as one of the resources. Our neighboring states,

Pennsylvania, New York, Ohio, and Maryland, all have the state pension fund investment, venture capital.

So in summary, I told you about who we are, some of the good news, some of our recent initiatives, and some ideas from our perspective and what we can do. I can just explain-- On behalf of Commissioner Medina, I'm glad to be here as well. He is very interested in working with the high-tech industry and worked hand and hand with the Senator on the biotech. I'm sure he'd be open and available to do all the things within the Department of Commerce.

SENATOR SINGER: Just one last thing here. Senator, do you have a question?

SENATOR EWING: Have you checked with Rollie Machold as to the feasibility of tapping into it-- (indiscernible)

MS. FRANZINI: That's beyond it. No, I'm--

SENATOR EWING: Well, I think it would be interesting to do that before we start giving out things, because I'm very skeptical of tapping into the pension plan.

MS. FRANZINI: I agree that it's difficult. I used to be in the Treasurer's Office, and on that conservative hat probably wouldn't agree to invest in venture capital, because it's high risk. What do other -- how do other states do it, again, if they're doing it?

MR. MARTINSON: But the point that I think we need to make is the software industry is no longer high risk. Today, it's a \$4 billion industry in New Jersey. There are 3500 companies. The issue, and I think Bill Kennedy put together some good statistics here, the issue for us is we're not having

trouble getting software companies started in New Jersey, we have hundreds of them.

What we're having trouble with is building Microsoft and Oracles and the great software companies. We had some good successes in the second quarter. We had three outstanding companies go public. Novadign in Mahwah, Computron in Rutherford, and John Bailye's company, Dendrite, in Morristown all went public with top investment bankers and market caps of \$150 million or more, and they were truly great companies.

Now, how they got financed, and these are the very best in New Jersey. Only one by a New Jersey venture capitalist, all from outside the state, and none by a New Jersey banker -- backed any one of these three companies, and these are three of our very best companies.

So to me the issue is not, is the software industry risky? It's how do we bring the conventional financing sources -- you know, bankers to lend against receivables, bankers leasing companies to lend against equipment, investment bankers to do private placements, -- so we build our five to ten million software companies into 100 to 200 to 500 million companies.

One of the shames that has happened in New Jersey is our very best software companies, the one's that were known, ADR, OnLine, Information Science, all were bought by companies outside of New Jersey who then chose to just concentrate development here. There was tremendous downsizing in those organizations. What that leaves us with is we have no software company in New Jersey with greater than 1000 employees and very few with 500 or more. Yet, this is an industry dramatically on

the move, growing, booming. We need to get the message out that we need to support this industry and attract--

SENATOR SINGER: John, the point I was going to make was that I think at this time that's why we had asked, if she couldn't come, she'd send someone else -- I wanted the Commissioner of Banking here. I think this is an integral part of not just EDA, but our Banking Commissioner to be involved in.

You know, we made a biotechnology loan out of EDA, and that was brought about -- which could not have been made, by the way, five years ago. You would not have made that same loan you made now -- you've made recently -- based on the initiative of Commissioner Medina, the initiative of the Governor to be involved in high technology.

The player we must bring to the table is not just EDA alone, it is the banking groups themselves. The person who best can do that is the Commissioner of Banking. I will ask again for her. I know a representative is here, but I would ask again that she take an active role in understanding that this is an important aspect of that Department: Helping us create an air of business flavor within New Jersey to encourage New Jersey banks.

Unfortunately, what is happening, as you know better than I do, many of the New Jersey banks are being swallowed up by New York banks -- to understand it is, if they're not going to invest in New Jersey, don't buy us. I have a real problem with that because I see that's happening more and more. I see that if you notice with the New York banks, they buy here, they cut the staffs in half, they close half the branches, and they take the money out of New Jersey. Now, maybe we're going to

have some type of legislation to counteract that, but I want to see an initiative from the Commissioner of Banking. If we don't see that initiative, they'll be a penalty I think for that.

MS. FRANZINI: For your information, Senator, the Governor just signed a bill appointing the Commissioner to the EDA Board of Directors, so we're very pleased about that involvement in economic development.

SENATOR SINGER: Jennifer, do you want to say something?

JENNIFER ZIMA: (speaking from audience) Yes, I'm here -- my name is Jennifer Zima. I'm the Legislative Liaison for the Department of Banking. I think I'm here on behalf of Commissioner Randall. Unfortunately, she was not able to attend, but I think she is very aware of the concerns raised today and wants to become an integral--

SENATOR EWING: Could you speak louder, please?

MS. ZIMA: (speaking from audience) I think she wants to become an integrate part of the process. We also have another suggestion to bring the New Jersey Bankers Association to the table if a subcommittee of something to that effect is formed. We think it's important that they be brought to the table, because the Bankers Association not only has all of our State chartered banks, of which we regulate, but has all the national banks, the bigger banks that will be coming into New Jersey, such as First Union and PNC Bank, which will be coming to New Jersey soon.

SENATOR SINGER: Well, you know, let me just say, we're going to look at that. I have a lot of problems with the Bankers Association, in general. They came to the table and

wanted to be part of the restructuring of the investments of our pension systems. I waited for them for eight months to come up with a piece of legislation, they did not. That's why we moved our legislation, and it was signed into law. They're still working on their legislation. So the answer is we'll gladly do that, but as far as a positive action group, they haven't shown that to us, and on top of that, I want--

You know, you're right. We're going to form that subcommittee. We're going to get the Commissioner involved in this. This is a critical issue to all of high technology in the State, whether it be biotech, whether it be software, whether it be photonics or electronics. That we have to take an active role to see that our banks in New Jersey, whether they're owned by New York banks or not, play an active role in the growth of our State. So, you know, I hope you take that message back.

Yes.

MR. NEWTON: Senator Singer, I'd like to endorse and expand on Martinson's ideas briefly. The word "leverage" came up several times today, and I think we need to look at what we have in New Jersey and leverage on that. One thought I had was combining these high-tech software resources with our manufacturing resources. This is still a manufacturing State. We got started with a number of good pharmaceutical companies and others, and the area of quality has certainly been helpful to many of America's leading industries when they found out how to do it right the first time.

We have, in New Jersey, a lot of interest in quality, but it seems that, at this point, there is still a lack of awareness that software has a great role to play in the quality

area. We have some leading companies in the State that have developed software for quality, but they're still small. They're not getting the funding they need. They're not getting the recognition they need, and it's very interesting that we're getting some of the more interest out of Asia than we are out of companies in New Jersey.

This is sad because we can't afford to lose our manufacturing base. We certainly want to keep working for high tech, but there are parts of high tech that can support our manufacturing base. That's where there are real jobs and real incomes, and, at this moment, I don't see that happening. So I wanted to call that to your attention.

SENATOR SINGER: Thank you.

MR. MARTINSON: I wanted to advocate one other thought, idea here. In the software industry, and we think of the software industry as development of new products and programmers, yet if you went to most software companies, programmers actually who are developing packaged or new products comprise maybe only 10 percent of the workforce. The bulk are sales and marketing, customer support people, applications people, and they tend to be spread around the country.

So even though an Oracle maybe headquartered in California and a Microsoft in Washington, they have thousands of people throughout the country. So one of the opportunities we have in New Jersey is we're sitting in the center of the customer base in the Northeast. But we ought to aim to become the marketing or support headquarters, at least for the Mid-Atlantic region or maybe the Northeast, and work to try to attract those companies and take an inventory of who's there.

Perhaps charge the Department of Commerce or other organizations to focus on this: Can we attract the major software information providers in America to see New Jersey as an ideal place to locate their field people. This is actually greater in number than the headquarters development type.

The second thought is I wanted to -- on Charles Merrill's point on security-- That is a big issue in our industry. Probably the model legislation for that has been enacted in Massachusetts -- no one presented that today -- on computer fraud. We need to consider that in New Jersey -- to establish those guidelines. I won't extend it, but they did a very good job in that state in putting it together.

SENATOR SINGER: Senator.

SENATOR EWING: Mr. Martinson, I was going to say, the people you work with, are they able to get the employees that are educated well enough, or do we have problems in our students that are coming out to get the jobs?

MR. BAILY: I might answer that from our experience.

Our--

SENATOR EWING: Where are you located?

MR. BAILY: We're in Morristown.

Our experience has been that the second and tertiary degrees coming out of the learning houses are pretty good for the technical skills. So a straight bachelor's degree out of any of the -- or a first degree coming out of Rutgers in computer science very rarely has students ready for the real world. By the time they've got to a master's or doctorate degree, we're usually able to find appropriate skill sets.

We have a wealth of training and support skills in the State, which is another hidden but a very important part of the software industry. But in terms of technical skills, countries like Ireland are much better at producing, from the first level of graduates, skill sets appropriate to industry. We're still finding the skill sets are focused on the previous type of technology and the previous type of software -- the mainframe-oriented tasks compared with where the leading edge companies are today, when you look at the -- not just at Rutgers, but NJIT and others.

From our part, we have tried to work with these schools to give them insight into what's necessary, but it is a long process because obviously there are curricular and there are faculty that need to be brought up to speed, but it is an ongoing problem.

However, I think that one of the issues we have to address is that this is intellectual property, and I mean that from the point of view of each programmer. The time will come very soon when their physical location will be different from where they contribute to their work, and by videoconferencing, desktop videoconferencing, and other tools, we're looking at a time when we can move intellect independent of bodies. So I think the issue in terms of one particular state's commitment to education for these particular skill sets is going to become less profound.

What I think will become absolutely profound is the fact that because this is an intellectual game, the point at which the assets are owned is going to become a financial discussion, and New Jersey doesn't do a very good job at that.

From our point of view, we came to this State to set up-- We came here because we service the pharmaceutical industry. We set up a business from scratch, and we have 500 employees in eight years. So we very much are the type of business I think that is aimed at providing the economic growth for the State.

But we are now getting -- since we've been publicly listed, we're getting a lot of appeal from other governments -- other state governments -- who want us to move large parts of our business out of the State. The most pressing reasons they all put forward are not necessarily the quality of the educated people they could put forward as employees, but it's usually economic in terms of training and taxation benefits. They're the two things that I believe in speaking to John's point. Nurturing a business and getting it going from firsthand experience, I can say that they're at a lot of facilities in the State which, while they may not be fully attuned to the needs, are nevertheless growing into the demand.

But there is a second part which is keeping hold of the economic ownership after a business becomes sizeable, and I haven't heard anything today or in the first session which gives me comfort that we are addressing that.

I'd ask the Committee to look to finding more information and more tangible information about how states are being involved in keeping the economic benefit here. Because it's only an accounting exercise. To move our business to Florida is an accountant's exercise that is particularly bad for the State, and we've got to be able to, I think, nurture an environment here which gets start-up businesses to really mature

organizations and make sure that they continue to economically contribute.

SENATOR SINGER: Bill, we're going to look at you for the next meeting. We'll be discussing that with you.

MR. KENNEDY: Yes, that would be good, late in September or close to that.

SENATOR SINGER: I thank you all for coming.

(MEETING CONCLUDED)

organization and... time to...
CONTINUED

SENATOR SIMON... the next meeting...
MR. KENNEDY... would be...
September...
SENATOR SIMON... thank you...
(ALL THIS CONCLUDED)

APPENDIX

INDEX

Greenbaum, Rowe, Smith, Ravin & Davis

Counsellors At Law

**PRESENTATION OF MARJORIE F. CHERTOK, ESQ.
GREENBAUM, ROWE, SMITH, RAVIN AND DAVIS
TO THE AD HOC COMMITTEE ON COMPUTER SOFTWARE
AND INFORMATION TECHNOLOGY**

This presentation is being made to the Ad Hoc Committee on Computer Software in order to (1) advise the Committee of the activities of other states and the Federal Government which are designed to enhance the economic development of the computer software and information technology industries and (2) suggest legislative initiatives appropriate for the State of New Jersey. It is my suggestion that New Jersey take an integrated approach to making the state "user friendly" for the development and expansion of the software industry through:

- a. venture funding & loans;
- b. encouraging telecommuting through tax incentives;
- c. other tax rebates & economic incentives;
- d. revamping state procurement methods;
- e. privatizing certain data processing computerized resources; and
- f. promoting the public image of New Jersey as the Northeastern "mecca" for technology companies.

These suggestions advocate a multi-faceted approach to making the State of New Jersey more "user friendly" for the development of software and high technology businesses not only through the above-described legislative initiatives, but through continued support of incubators and educational programs on the state, local and private levels; the dissemination of information regarding state initiatives and resources to software professionals and the public, and public-private partnerships such as Prosperity for N.J. which the Governor has already set in place.

I. WHAT ARE OTHER STATES DOING? AND, MOST IMPORTANTLY , WHAT SHOULD WE BE DOING OR CONTINUE DOING?

Overview of Pending State and Federal Legislative Initiatives for 1994/1995 Sessions

A. Oregon.

1. Six year extension of the research and development and pollution control tax credits.
2. Deferral of certain capital gains if said gains are reinvested in start-up and or expansions of hi-tech companies.
3. School reform legislation to pressure schools to work more closely with businesses to help training and employment programs for the hi-tech industries.
4. Continued funding of cooperative education in research efforts for higher education.

B. California

1. Initiation of a research and development tax credit of 8%.
2. Sales tax exemptions for acquisition of information technology and/or software.

C. Washington State

1. Elimination of sales and use taxes on machinery and equipment directly used for manufacturing, including the manufacturer of software and information technology.
2. Development of and funding for the Washington Technology Center in MASA projects for the development of software and high technology projects.
3. Funding for higher education.
4. Development of a manufacturing extension center by the National Institute of Standards and Technology.

D. Texas

1. Initiation of Telecommunications Bill HB 2128 which establishes a telecommunication infra structure of \$75 million dollars per year for 10 years to assist public schools in purchasing equipment.
2. Continued funding for "distance learning classrooms", which allow students in rural areas to telecommute and for higher education equipment and curriculum development in the areas of high technology.
3. Initiation of SB 640 which provides for a full retro active sales tax exemption for acquisition of clean rooms and clean room equipment.

E. Florida

1. SB 872 - tax rebates for the purchase of information technology resources

F. Massachusetts

1. Computer Crime Statute which provides criminal penalties and fines for unauthorized copying of computer technology. This is similar to the proposed Federal Criminal Copyright Improvement Act of 1995. [under consideration]
2. Adoption of the Uniform Trade Secrets Act. [under consideration]
3. An Electronics Monitoring Bill - Provides protection to employees through disclosure. Requires employers to inform employees regarding electronic monitoring of business activities. [under consideration]
4. Renewal of Massachusetts development grants for development of technology companies.

G. Federal Initiatives for 1995

1. Proposed amendment to the Copyright Act entitled Criminal Copyright Improvement Act of 1995.
2. Proposed Amendment(s) to Patent Act entitled Patent Extension Act of 1995.
 - a. HR359/S284 - proposed 20 year patent term
 - b. HR1733 - 18 month publication of patent applications
 - c. Patent extensions for unusual Patent and Trademark Office delays

II. MAKING THE FUNDING CLIMATE MORE USER FRIENDLY

One of the greatest concerns expressed by high technology and software companies is the difficulty obtaining conventional financing from banking institutions. We have solicited comments from clients and friends. Virtually every person who has offered comments has cited this as the central problem impeding substantial growth in the software and high technology industries. Factors which create this problem include:

- d. Software developers' lack of business resources and acumen.
- e. Software developers' failure to establish and follow a business plan.
- f. Software developers' lack of tangible assets which can be used as collateral.
- g. Software developers' lack of an effective marketing strategy.
- h. Refusal of investors to lend to non-traditional business enterprises who offer nontraditional collateral.

What Can We Do?:

A. Various states have explored modification of Article 9 of the Uniform Commercial Code in order to afford banks the ability to obtain a security interest in software and information technology while allowing the owner of the technology flexibility to license the technology. Modification of the Uniform Commercial Code would allow banks to inform licensee's that they hold a security interest on the information technology and that upon default of the loan, the bank is authorized to collect royalties directly from the licensee. The modifications would also provide the lender with the right to execute on their security interest without initiating a lawsuit (a type of non-judicial foreclosure).

B. Establish standardized criteria for evaluating the value of intellectual property for SBIC or EDA loans which will hopefully become the base line standard for granting loans by private lenders.

C. The Commission for Science and Technology is in the process of establishing a seed fund for small New Jersey technology businesses and start ups. The Commission will function as limited partner and advisor to the fund. A relatively small investment on the Commission's part will be used to leverage significant federal and private monies for development of technology business within the State. However, this is a new program for the Commission, and

funding for the program is not secure in the coming fiscal year. The Legislature should authorize funding for this program.

One of the greatest concerns expressed by high technology and software companies is the difficulty of obtaining financing from banks and financial institutions. We have solicited comments from clients and friends, particularly every person who has offered comments has cited this as the central problem impeding substantial growth in the software and high technology industries. Factors which create this problem include:

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- e. Software developers' failure to establish and follow a business plan.
- f. Software developers' lack of tangible assets which can be used as collateral.
- g. Software developers' lack of an effective marketing strategy.
- h. Return of investors to long term non-traditional business enterprises was often non-traditional collateral.

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B. Establish standardized criteria for evaluating the value of intellectual property for SBC or TIA loans which will hopefully become the base line standard for creating loans by private lenders.

C. The Commission on Science and Technology is in the process of establishing a Seed Fund for small New Jersey technology businesses and start-ups. The Commission will function as limited partner and advisor to the fund. A relatively small investment on the Commission's part will be used to leverage significant Federal and private monies for development of technology business within the state. However, this is a long term program for the Commission, and

III. MAKE NEW JERSEY USER FRIENDLY FOR TELECOMMUTERS

- A. Meaningful "Homestead Rebates" for home offices.
- B. Inexpensive or reduced telephone costs for data lines installed in the home office. It is suggested that this reduction can be realized by eliminating tariffs on these lines.
- C. State income tax deductions for persons who work at home more than 3 days per week.
- D. Offering state workers the ability to telecommute. Thereby setting an example for private companies.
- E. Offering state contracts to or giving preference on state contracts to businesses which promote telecommuting.

IV. RE-EXAMINE STATE PROCUREMENT METHODS

- A. Privatization of technology so that government agencies may lease computer systems from third party vendors in lieu developing state on-line systems. In this manner, the state can invest in technology without the up front costs.
- B. Revamp the state's acquisition program for software and information technology.
 - 1. Allow individual departments within the state or agencies to purchase this technology directly rather than through the State Division of Purchasing.
 - 2. Authorize state agencies to pool funds budgeted for data processing purposes with other agencies, including other state agencies, federal agencies, and local governments for the acquisition of shares information technology.
 - 3. Authorize state agencies to share resources, including equipment and databases.
 - 4. Develop a mechanism for all state agencies to share public information through remote electronic means funded jointly by these agencies.
 - 5. Establish uniformity of data processing equipment and programming standards for state agencies to promote sharing of resources.
 - 6. Establish a well publicized central index of all contract RFPs, including data processing and intellectual property contracts.

V. OTHER COMMON SENSE OBSERVATIONS/CONCLUSIONS

- A. Publicize New Jersey as the state where a significant portion of the work force is involved in the software, intellectual property and communications industries.
- B. Encourage an integrated approach to development of a "silicon valley" in New Jersey by reaching out to other industry groups i.e., real estate developers and educators.
- C. Review legislative initiatives, state programs and state and local procurement methods for redundancy. Although technology initiatives are important, it is equally important that we do not have several groups looking at the same issues or, similarly, have several agencies purchasing the same technology when this technology can be shared. Planning should be done on a macro level after receipt of the input from not only the software industry, but also the photonics and biotech industries. Legislative initiatives should address common issues where possible. In addition, each industry should also have the ability to have separate programs where their specialized needs can be addressed in a flexible manner.

VI. SUMMARY OF SUGGESTED LEGISLATIVE REFORMS

1. Support the existing State technology infrastructure:
 - a. Technology Offices similar to those at Brookdale Community College (Rutgers), NJIT and Princeton;
 - b. Research Centers;
 - c. Corporate/Industrial Parks devoted to the needs of technology based companies; and
 - d. Incubators.
2. Establish State grants for research projects;
3. Support the establishment of venture capital funds such as the one contemplated by the New Jersey Commission on Science and Technology;
4. Support Low cost loans backed by State pension plan money or other funds;
5. Support proposed Tax incentives:
 - a. Sales tax rebates for purchases of new technology;
 - b. Sales tax exemptions and/or income or property tax exemptions for the acquisition of and construction of clean rooms and data processing facilities;
 - c. Tax incentives for equipment modernization and/or upgrades.
 - d. Tax incentives for telecommuters.
 - e. Eliminate double taxation for Subchapter S Corporations.
6. Initiate procurement reforms:
 - a. centralize computer and software technology acquisition
 - b. create a centralized index of state software and technology contracts
 - c. advocate privatization of certain computer systems development and database maintenance functions

7. Modification of Article 9 of the Uniform Commercial Code.

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