

**Act Number:** 09-158

**Bill Number:** 1127

**Senate Pages:** 5394-5398, 5400-5401

7

**House Pages:** 9227-9234

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**Committee:** Judiciary: 4443-4459, 4511,  
4513, 4532, 4535-4537, 4653-  
4657, 4661-4665, 4672-4675,  
4768-4818, 4913-4916, 4988,  
4989, 4991

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SENATE**

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Will your remark further on Senate Bill 826 as amended by Senate A? Senator Harris.

SENATOR HARRIS:

Thank you, Mr. President. I want to thank Senator Witkos for his good work and help on this. And if there is no objection, I'd ask that this matter be placed on Consent.

THE CHAIR:

Is there any further discussion on Senate Bill 826 as amended by Senate A? If not, there's a motion on the floor to place the item on consent. Without objection, so ordered.

Mr. Clerk.

THE CLERK:

Calendar page 34, Calendar Number 502, File Number 721, Substitute for Senate Bill 1127, AN ACT CONCERNING APPLICABILITY OF CERTAIN STATE CONTRACTING NONDISCRIMINATION REQUIREMENTS, favorable report of Committee on Judiciary and Government Administration and Elections.

THE CHAIR:

Senator McDonald.

SENATOR McDONALD:

Thank you, Mr. President. Mr. President, I move

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acceptance of the joint committee's favorable report and passage of the bill.

THE CHAIR:

Acting on approval and acceptance, sir, would you like to remark further?

SENATOR McDONALD:

Yes, I would, Mr. President. Mr. President the Clerk, I believe, is in possession of LCO Number 8526. I ask that it be called and I be granted leave to summarize.

THE CHAIR:

Mr. Clerk.

THE CLERK:

LCO 8526, which will be designated Senate Amendment Schedule A. It's offered by Senator McDonald of the 27th District.

THE CHAIR:

There's a motion on the floor for the Senator for summarization. Seeing no objection, please proceed, sir.

SENATOR McDONALD:

Thank you, Mr. President. Mr. President, I move adoption of the amendment.

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Motion on adoption on the floor. Without objection, please proceed.

SENATOR McDONALD:

Thank you, Mr. President. Mr. President and members of the circle, this amendment does a couple of things. First of all, it adds mental disability to the nondiscrimination provisions of our state laws with respect to contracting.

Secondly, Mr. President, the amendment makes certain modifications to our contracting provisions relating to the documentation of the nondiscrimination policies of entities with whom the State of Connecticut contracts. In particular, it modifies the way in which contracts valued at less than \$50,000 a year would be documented by written representation that the company with whom the State is contracting complies with our nondiscrimination statutes.

And with respect to contracts of \$50,000 a year or more, it allows for documentation in, either in the form of a policy adopted by the board of directors of the cooperation or in a form that substantially complies with the policy as long as it is attested to by a cooperate officer who's duly appointed and is certified by the State of Connecticut to comply with

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our statutes. And I urge adoption of the amendment to  
-- by the members of the circle.

THE CHAIR:

Thank you, sir.

Senator Kissel.

SENATOR KISSEL:

Thank you very much, Mr. President. A question  
through you to the proponent of the amendment.

THE CHAIR:

Senator McDonald.

SENATOR KISSEL:

Am I correct in understanding that this amendment  
will not in any way limit the scope and applicability  
of Section 46A-81P to religious sponsored entities?  
Through you, Mr. President.

THE CHAIR:

Senator McDonald.

SENATOR McDONALD:

Thank you, Mr. President. Mr. President, through  
you to Senator Kissel, that's correct. This amendment  
does not affect the provisions of 46A-81P in any way.

THE CHAIR:

Senator Kissel.

SENATOR KISSEL:

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Thank you very much. Then I support the amendment, thank you.

THE CHAIR:

Will you remark further on Senate Amendment A? Will you remark further? If not, let me try your minds. All those in favor signify by saying aye.

SENATORS:

Aye.

THE CHAIR:

Opposed nay.

The ayes got it.

Senator McDonald, Senate Bill 1127, Amendment A.

SENATOR McDONALD:

Thank you, Mr. President. Mr. President if there's no objection might this item be placed on the consent calendar.

THE CHAIR:

Motion on the floor to place item on consent. Seeing no objection, so ordered.

Mr. Clerk.

THE CLERK:

Mr. President, I believe that completes those items previously marked go.

THE CHAIR:

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Senate on the consent calendar. Will all Senators please return to the chamber. Immediate roll call has been ordered in the Senate on the consent calendar.

Will all Senators please return to the chamber.

Mr. President the items placed on the first consent calendar begin on calendar page 4, Calendar Number 412, Senate Bill 931; calendar page 12, Calendar Number 643, Substitute for House Bill 6320; calendar page 32, Calendar Number 427, Senate Bill 826; calendar page 37 -- correction, calendar page 34, Calendar Number 502, Substitute for Senate Bill 1127;

Calendar page 37, Calendar Number 358, Senate Bill 1078; and calendar page 38, Calendar 472, Substitute for Senate Bill 1157.

Mr. President, that completes the items placed on the first consent calendar.

THE CHAIR:

We'll call for the consent calendar, the machine will be open.

THE CLERK:

The Senate is now voting by roll call on the consent calendar. Will all Senators please return to the chamber. The Senate is now voting by roll call on the consent calendar. Will all Senators please return

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to the chamber.

THE CHAIR:

Have all Senators voted? If all Senators have voted, please check your vote. The machine will be closed. The Clerk will call a tally.

THE CLERK:

Motion is on adoption of Consent Calendar Number 1.

Total Number Voting	36
Those voting Yea	36
Those voting Nay	0
Those absent and not voting	0

THE CHAIR:

Consent Calendar Number 1 passes. Senator Looney.

SENATOR LOONEY:

Yes, thank you, Mr. President. Would move for immediate transmittal to the House of Representatives of items acted upon today here in the Senate requiring additional action by the House.

THE CHAIR:

Without objection, so ordered.

SENATOR LOONEY:

Thank you, Mr. President. Mr. President, if we

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Those voting Yea	144
Those voting Nay	0
Those absent and not voting	7

DEPUTY SPEAKER McCLUSKEY:

Passes in concurrence with the Senate.

Will the chamber please stand at ease.

(Chamber at ease.)

DEPUTY SPEAKER McCLUSKEY:

Will the House please come back to order.

Representative Merrill.

REP. MERRILL (54th):

Yes, Mr. Speaker. I would move for the  
suspension of the rules for immediate consideration of  
Senate Bill 1127.

DEPUTY SPEAKER McCLUSKEY:

The question before the chamber is suspension of  
the rules for the consideration of the item. Are  
there any objections? Are there any objections? If  
not, the rules are suspended for consideration of the  
item.

Will the Clerk please call 1127.

THE CLERK:

Senate Bill Number 1127, AN ACT CONCERNING THE  
APPLICABILITY OF CERTAIN STATE CONTRACTING  
NONDISCRIMINATION REQUIREMENTS, favorable report of  
the Committee on Government Administration and  
Elections.

DEPUTY SPEAKER McCLUSKEY:

The honorable Chair of the Judiciary Committee,  
Representative Lawlor, you have the floor, sir.

REP. LAWLOR (99th):

Thank you, Mr. Speaker. Good morning.  
Mr. Speaker, I move acceptance of the joint  
committee's favorable report and passage of the bill  
in concurrence with the Senate.

DEPUTY SPEAKER McCLUSKEY:

The question before the chamber is acceptance of  
the joint committee's favorable report and passage of  
the bill in concurrence with the Senate. Will you  
remark, sir?

REP. LAWLOR (99th):

Thank you, Mr. Speaker. The bill makes certain  
changes to the existing nondiscrimination laws of our  
state, and in particular, makes change with reference  
to the obligation of state contractors to abide by our  
nondiscrimination laws for state contracts.

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Mr. Speaker, the Clerk -- the Senate adopted Senate Amendment A, which substantially rewrites the bill. The Clerk has LCO Number 8526, previously designated as Senate Amendment A. I'd ask the Clerk call and I be allowed to summarize.

DEPUTY SPEAKER McCLUSKEY:

Will the Clerk please call LCO 8526, previously designated Senate Amendment A.

THE CLERK:

LCO Number 8526, Senate A offered Senator  
McDonald.

DEPUTY SPEAKER McCLUSKEY:

The gentleman has asked leave of the chamber to summarize Senate Amendment A. Is there any objection? Is there objection? If not, sir, please summarize the amendment.

REP. LAWLOR (99th):

Thank you, Mr. Speaker. This amendment contains language making changes to the existing nondiscrimination laws as they relate to state contracting. One new addition is the category of mental disability which is defined in the amendment.

And in addition to that it provides a process which we believe will be much easier to use for the

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relatively small contracts that are entered into by state agencies. The distinction called for the amendment is contracts of less than \$50,000 per year and contracts greater -- \$50,000 per year or greater.

For the smaller contracts there's a number of alternatives provided for compliance. One could be the current requirement of a resolution of the board of directors, however as an alternative to that there would be procedure where there could be a written representation by -- that the company does comply with the nondiscrimination requirements of the State.

For the contracts in excess of \$50,000 a year, the two new alternatives would be a copy of a prior resolution of the board of directors, shareholders, et cetera, of the corporation indicating that they comply with these requirements, or the third alternative would be a statement, an affidavit which would consist of a statement by the chief executive officer, president, chairperson, or other corporate officer duly authorized, certifying that they intend to comply with these requirements.

There are additional definitions added in for mental disability and also for marital status which is protected under the current law. Mr. Speaker, I urge

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adoption.

DEPUTY SPEAKER McCLUSKEY:

The question before the chamber is adoption of Senate Amendment A. Will you remark? The Representative from New Canaan, Representative Hetherington, you have the floor, sir.

REP. HETHERINGTON (125th):

Thank you, Mr. Speaker. This amendment is well in order. It makes very realistic, while reliable, the ability of contractors to certify their compliance, to prove their compliance in dealing with the State.

It really simplifies the procedure for small contracts. It makes it, as I say, no less reliable. In the case of larger contracts it takes a realistic approach, realizing that large, national, international companies have a difficult time passing these board -- these resolutions through their boards of directors, which often don't meet as frequently as a small company and they have a very long agenda. And this is a very practical, and yet certain way to deal with this requirement. And I respectfully urge passage. Thank you.

DEPUTY SPEAKER McCLUSKEY:

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Thank you, sir, for your remarks. Will you remark further on Senate Amendment A? The honorable ranking member of the Judiciary Committee, Representative O'Neill, you have the floor, sir.  
REP. O'NEILL (69th):

Yes. Thank you, Mr. Speaker. And if I may, a, what I hope will be a brief question, to the Chair of the Judiciary Committee.

DEPUTY SPEAKER McCLUSKEY:

Please proceed, sir.

REP. O'NEILL (69th):

Thank you. For the purposes of legislative intent, is it true that a specific Board of Directors Resolution by the contractor would no longer be required under this amendment provided the contractor is able to supply a previous resolution or an official company or corporate policy that demonstrates compliance with all of these provisions, including the warranty of non discrimination? Through you, Mr. Speaker.

DEPUTY SPEAKER McCLUSKEY:

Representative Lawlor.

REP. LAWLOR (99th):

Thank you, Mr. Speaker. Yes. In fact, that is

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true. I know there was some concerns based on the original file copy. This amendment addresses those concerns, and as the Representative stated, those in fact are the -- those would become the new requirements. Through you, Mr. Speaker.

DEPUTY SPEAKER McCLUSKEY:

Representative O'Neill.

REP. O'NEILL (69th):

Thank you, Mr. Speaker, and I think the Chairman for his answer and I believe that this amendment should be favorably acted on by the house. Thank you.

DEPUTY SPEAKER McCLUSKEY:

Thank you, sir for your remarks. Will you remark further on Senate A? Will you remark further on Senate A? If not, I'll try your minds. All those in favor, please signify by saying, aye.

REPRESENTATIVES:

Aye.

DEPUTY SPEAKER McCLUSKEY:

All those opposed, nay.

The ayes have it.

Will you remark further on the bill as amended?  
Will you remark further on the bill as amended? If not, will staff and guests please come to the well of

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the House. Members, please take their seat. The machine will be open.

THE CLERK:

The House of Representatives is voting by roll call. Members to the chamber. The House is voting by roll call. Members to the chamber.

DEPUTY SPEAKER McCLUSKEY:

Have all the members voted? Have all the members voted? Will the members please check the board to determine if your vote is properly cast. All the members have voted. The machine will be locked. Will the Clerk please take a tally. Will the Clerk please announce that tally.

THE CLERK:

Senate Bill Number 1127, as amended by Senate A, in concurrence with the Senate.

Total Number Voting	142
Necessary for Passage	72
Those voting Yea	142
Those voting Nay	0
Those absent and not voting	9

DEPUTY SPEAKER McCLUSKEY:

Bill passes in concurrence with the Senate.

Will the Clerk please call Calendar 344.

**JOINT  
STANDING  
COMMITTEE  
HEARINGS**

**JUDICIARY  
PART 14  
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JUDICIARY COMMITTEE

March 19, 2009  
10:00 A.M.

the promptness with service has been absolutely great and in specific to the ones in the Suffield area, Marshal Bruce Cass has been just very, very professional and timely in everything we've had to do with him. So just a comment.

JAMES NEIL: Well, thank you.

REP. CONWAY: Thank you, Mr. Chairman.

JAMES NEIL: From where I sit, that's good to hear. Thank you.

REP. LAWLOR: Further questions? If not, thanks again.

JAMES NEIL: Thank you.

REP. LAWLOR: Next is Mr. Feldman.

BARRY FELDMAN: Thank you. Co-Chairs, ranking members, members of the Committee, my name is Barry Feldman. I'm the Chief Operating Officer for the University of Connecticut, and thank you for giving me the opportunity this afternoon to testify in favor of Senate Bill Number 1127 An Act Concerning The Applicability Of Certain State Contracting Nondiscrimination Requirements.

As you know, in 2007 the General Assembly enacted Public Act 07-142, which is an act concerning the procedures for the hearing of complaints against state contractors, subcontractors, by the Commission on Human Rights and Opportunities, and the documentation of nondiscrimination policies adopted by the state contractors, which is now codified as Sections 4a-60, 4a-60a of the Connecticut General Statutes.

UConn supports the goals of Public Act 07-142 to end discriminatory employment practices. As a public university, we are very committed to diversity and inclusiveness. We recognize, again, the critical role that business commerce plays in creating a work environment that accepts and embraces all opinions and lifestyles.

However, we do have concerns that if there are no changes made to the current law, there will be repercussions across the University that will impede the progress that we've made over the past decade to become one of the top-ranked national public universities, actually ranked 26th now nationally amongst all public research universities by *U.S. News and World Report*.

Accreditation for some of our academic programs could be jeopardized, and direct services to students such as grading and course schedule and financial aid packaging, standard services that are available that any other college campuses could be adversely impacted.

The continuity of patient care at the Health Center could be affected, and additionally, basic functions needed that we need to run the University like payroll and budgeting and accounting and so on, we believe are also at risk.

Senate Bill Number 1127 will address some of the concerns that we've just outlined about Public Act 07-142. However, the University respectfully asks that the Committee consider a few changes to help us meet the law's requirement but ease some of the time and some of the expense involved in doing so.

The University proposes the removal of a requirement that vendors with contracts \$50,000

or less have to provide written representation that they are in compliance with Connecticut's nondiscrimination laws, and that it be made clear that the \$50,000 level is an annual, is an annual contract amount.

This would essentially prevent the disruption or loss of a wide variety of highly specialized laboratory equipment, software, medical devices, and other services that are critical to UConn's array of professional, clinical and research programs.

We also request, the University of Connecticut also requests that in lieu of a board resolution, a vendor's chief executive officer or other corporate officer be allowed to certify that the company has a policy that complies with Connecticut's nondiscrimination statutes.

This would address the situation facing a number of major corporations like Oracle or Microsoft, which have implemented very progressive, nondiscriminatory policies but whose boards do not approve employment policies.

This change would solve the University's issue with respect to its contract with the Oracle Corporation, which is due to expire in June, 2009 unless CHRO extends its current waiver.

The Oracle Corporation provides the University with software technical support to manage all of our core businesses, like financial, academic and student operations, and specifically, these operations include all aspects of student data administration, academic information, financial data administration and human resource administration that we utilize daily to assist

our students, faculty and staff at the six campuses and at the law school.

While Oracle has a corporate policy that complies with our state's nondiscrimination statutes, its board simply does not act on that corporate policy as required by Public Act 07-142. Instead, it delegates that authority to a corporate officer. A similar situation exists with respect to the Health Center's contract with Microsoft.

The University believes with these two changes, it would significantly increase the University's ability to effectively contract for services that we need daily at our campuses, and would limit the request for exemptions while preserving the original goal's intent of Public Act 07-142.

Later on today you'll be hearing from our Dean of Engineering, and also from the head of our School of Business' Accounting Department, and also a representative from our Health Center has submitted written testimony to you.

They'll be able to provide you with a sense of the very broad impact that Public Act 07-142 is having on our students, on our patients, on the research and the scholarly activities that occur across the University of Connecticut.

Also attached to my testimony are some detailed descriptions of the type of contracts that have been affected by Public Act 07-142.

I'd like to thank the Committee again for raising Senate Bill Number 1127 and for your consideration of some suggested amendments to the legislation.

The University is grateful, again, to the Committee's continued support of all the work that we do.

SEN. MCDONALD: Thank you very much, Mr. Feldman, and there's nothing in here about a medical center, right? So this is the easy stuff, right?

BARRY FELDMAN: This is, in a way you're right, sir.

SEN. MCDONALD: So, but I certainly appreciate your testimony and have had an opportunity to sit down with folks from UConn to talk about some of these issues that are important, but probably issues only lawyers would love, right?

I've heard that there are a number of problems from UConn, and they've been conveyed to me through various sources. What is very remarkable to me, however, is that I haven't heard that other departments in the agencies are having any significant problems complying with the existing law.

I'm just wondering if you have any knowledge or understanding about why there would be such a disparate approach from UConn versus all of the other agencies of the state.

BARRY FELDMAN: Senator McDonald, I personally am not sure I can shed any more light on that, but if it would be permissible, I would like to invite a colleague of mine up. Perhaps he has more information to answer your question, if it's okay.

SEN. MCDONALD: Sure. Sure.

BARRY FELDMAN: Good. Tom Callahan, who's the Associate Vice-President for Operations join me?

SEN. MCDONALD: Good afternoon.

THOMAS CALLAHAN: Good afternoon, Senator McDonald and members of the Committee. We've had the opportunity to talk about this within the last three or four weeks, as you know.

The answer I gave then remains the answer. We have, I think there's two things that contribute to it. One is, it's a very large, complex place with a very broad array of products and services that need to be purchased for some combination of students, the physical assets that we own and maintain on behalf of the state, to support our faculty and the sponsored research that they do across the University, to support patient healthcare out of the Health Center.

So we have, I think perhaps more so than some other places, a very diverse and broad mission that suggests that we're buying things that are probably more diverse and a wider array of things.

So when you hear later today from the Dean of the School of Engineering, when you hear a little later today from the Chair of the Accounting Department, you'll hear about some specific software products, for example, that are well embedded in the teaching training for undergraduate programs and the research programs, I don't think that you'll find anywhere else in the state, for example, and I don't think that you'll see, and when they make their presentation, you'll see that there are not comparable products out in the marketplace, and if I have a problem with this particular vendor, that I have the ability to switch over and get a comparable product.

I think part of what you see, part of our issue is that that vast diversity of work that we do and frankly, I think we have been very, we've been pretty zealous in terms of working these issues, and staff has been very diligent in terms of getting contractors to comply.

But if they won't comply, and we don't have another option, or from an accounting point of view the potential impact to the University is going to be pretty disruptive as it would have been with Oracle, for example, had we not gotten the CHRO waiver at that point in time, that we do work pretty assiduously with the staff down at CHRO to see if we can't achieve a waiver while our discussions and negotiations continue.

SEN. MCDONALD: And, you know, we've certainly tried to at least initially look at some of the problems that you folks have identified and are looking for solutions to some of those problems.

But one of the things that I talked to you about in one of our prior meetings is the difficulty we have in ensuring compliance with our nondiscrimination laws when you are dealing with multi-national corporations and the authority to sign resolutions or make representations gets devolved or reduced down to much, I don't want to say lower level, but front line corporate officers who might not actually have any true authority to make representations or bind at the corporation at a corporate level for purposes of nondiscrimination provisions.

So I guess I'm trying to figure out, if this solution satisfies all of those concerns. I saw the dollar threshold issue, and we can talk

about that, but if this solution addresses the concerns identified by UConn.

BARRY FELDMAN: If I understand the question, Senator, the recommendations that we've outlined this morning, this afternoon now, would resolve the concerns that we do have, to allow that corporation official to certify.

SEN. MCDONALD: So, and Mr. Feldman, you and I haven't had the chance to talk about this but--

BARRY FELDMAN: No, we haven't.

SEN. MCDONALD: --I had had this conversation with Tom. In particular, we now have marriage equality for any two individuals who wish to become married, and our nondiscrimination statute identifies that there can't be any discrimination based on marital status in the performance of state contracts.

So, since that is true, and since that is the law, how would a corporation in Chicago or Seattle or Los Angeles know that by signing that declaration, they are agreeing that the nondiscrimination provisions would apply to marital status, including same sex marriages?

THOMAS CALLAHAN: I believe the bill as written makes that provision, a change in the definition of marital status to include marital status as it's defined in Connecticut. Correct?

SEN. MCDONALD: Right. But how do we, unless there is an acknowledgment of that fact at the corporate level by a board of directors, how do we have a guarantee that it is actually being implemented in the field, if you will?

THOMAS CALLAHAN: I think if the additional provision that we've asked for, Senator McDonald, that would allow for in an instance where either the chief executive officer or another corporate officer, which is essentially the situation at Oracle, for example, where the policy, the HR policy that governs within the company, you know, anti-discrimination related HR policy there, the board officer is duly authorized by the board to essentially set that policy.

And my sense is, if you have representation from that officer, that that should be satisfactory, that they understand essentially what the nature of the law is in the State of Connecticut.

To be frank with you, it's been, and I'm not a front line person here. I lead a group of people who are front line people, and the issues that have come up around this have little to do with essentially the classes of people who are identified in the statute, have more to do with whether or not the contract is sufficiently large, either to be of value to the company to go through the exercise in the first place, or would hit the boards as a matter of routine, as a matter of routine corporate business, hit the board's agenda, in terms of getting to a board agenda.

And so, it's those obstacles that, in terms of what we're wrestling with, that have more to do with the kind of the business of processing the contracts, than actually the issues associated with the categories, the classes of people that are covered under the anti-discrimination provision.

SEN. MCDONALD: Okay. And so you've identified previously a couple of contractors that were

fairly unique, specific sole-source providers, really.

Let's, I don't want to name anybody, so let's take a hypothetical of, you know, XYZ Corporation, and they are a sole-source provider for software that is crucial to your research, or the research of your graduate students.

And under this proposal or any modification of this proposal, they just say, you know what? We're not going to sign it even by an officer just because we disagree with the goals. We don't adhere to that as a company.

Is UConn willing to walk away from that vendor, even if it's a sole-source vendor who provides critical software to your research and your graduate students if they say we want to reserve the right to discriminate based on marital status, as we conceive of marriage?

THOMAS CALLAHAN: Are we willing to walk away? Yes. Are we willing to walk away immediately and cause a level of disruption throughout the institution that might impact things from accreditation to graduation for students and the rest of it, I think that has to be thought through in terms of, how do you get to the goal.

So, could we walk away on a contract that's currently existing? There was no option. I'd say, not immediately, Senator McDonald, but it's not something that we'd want to be affiliated with it, and we'd go to work in terms of trying to see whether or not both, and when I say go to work, within the institution it's going to work with the faculty, helping them understand essentially what the issues are

at play, and then going really to work and see if we can't find another product.

It's not simple to do it, and I'll tell you, you know, some of these products are deeply imbedded in the institution within, you know, the School of Engineering, the School of Business and other locations, and to find a comparable product that can do the work at hand, might take a little time to do it.

SEN. MCDONALD: Well, I appreciate the answer. There are no easy solutions.

THOMAS CALLAHAN: There are none.

SEN. MCDONALD: I do suspect the answer would be slightly different if we were talking about any other protected classification. That if a company said we don't hire women, or we don't hire African-Americans, we just don't do it as a company, there would be a level of outrage that I think is not being given to all of the classifications for nondiscrimination under our statute.

And I don't think, frankly, that we should be in a, in the business of allotting different public policy commitments to protected classifications just because it might not be administratively or organizationally convenient.

But I understand your problem. I just put that out there because I think that if we were talking about any other protected classification it probably wouldn't rise to the level that we would be talking about if we were talking about women or minorities. Maybe I'm wrong.

THOMAS CALLAHAN: I guess I really want to go back just one step and I want to make it very clear. The discussions and the difficulties that the University is having with respect to the provision is the seeking of a board resolution.

In the issues that, in the elements that I have been drawn into, particularly a contract that I have been drawn into, Senator McDonald, the issues have not been about protected class or who's in the protected class, who's protected and who's not protected. That's not really been the discussion.

The discussion has been whether or not this contract is of sufficient value, as I said before, sufficient value to take to the company going forward, whether or not it reaches a threshold amount for the board of directors, whether or not there's somebody duly authorized within the company by the board to make those decisions and sign on board.

It has not been a discussion of whether or not it's one of the protected classes that are included in Connecticut that may not be included in other locations.

SEN. MCDONALD: And I wasn't suggesting that it was for you, but I know of another situation where, with a department, where that was the situation, and the entity with which the state wanted to contract was in a jurisdiction where there was a constitutional amendment that said that marriages only between a man and a woman, and even though our statute is very specific, that it's only in the performance of the contract in Connecticut--

THOMAS CALLAHAN: Right.

SEN. MCDONALD: --that it would apply. This company refused to sign it, and a representative of that agency came to me and said, what do we do. My response was, go find somebody else to do business with.

But, so I'm not directing this at UConn. We're looking at a public policy for the entire state. I just don't know that that level of commitment, unless we actually have something very firmly established in our statutes, is going to be equally applied across all agencies and departments of the state unless we have that kind of bright line test.

And it's probably only a matter of time before you guys run into somebody who wants to reserve their right to discriminate and you need that contractor, and I need to know what your response is going to be.

THOMAS CALLAHAN: Before I bid on it. And I think it's a very direct and honest response, and that is, institutionally and personally, institutionally, officially and personally, you will not find anyone within the institution that's going to support or want to do business with somebody who essentially wants to discriminate specifically against one of the protected classes. I'm absolutely clear on that.

The issue then becomes practically, how do you get to the point that you've just identified and say, okay, when do you pull the plug on that, and after what level of engagement and negotiation in terms of trying to bring them around.

You know, one of the things that you mentioned a little while ago, which I think is absolutely true, is sometimes these discussions get locked

into what I'll call the sales and marketing side of the organization, and they get locked in with the contractual legal staff.

If you move, and we have, that discussion outside of that chain, to some combination of the people who are concerned about reputation, image in these types of issues, we have more success when we run into a wall in terms of moving them along.

And sometimes that takes a while. We just work with the contractor. Got a resolution with the contractor just last week, where it literally took nine months to get it there, but once we got it outside of the chain in front of a group of people who understood what the implications were, and understood that we were serious, they moved in a very different direction very quickly.

SEN. MCDONALD: Well, certainly this is not a static piece of legislation. I appreciate your thoughts and comments and certain other members of the Committee probably have questions.

But we'll be happy to continue to work with you guys. I can say for myself, it's been a pleasure working with your staff trying to come up with a workable solution that meets your goals but preserves our policy interests; so thank you.

Representative O'Neill.

REP. O'NEILL: I have a couple of questions, different areas of this. One of them is, I mean, you're saying that we're not hearing from anybody else, especially in the education field because of the uniqueness of what UConn is doing, and yet the contracts you're talking about, you're saying that they're so small that

the companies just don't think that they're worth going to the trouble to get a resolution through its board of directors to deal with this thing.

And so, at least to me that those two seem to be kind of a little bit at odds. I mean, but if nobody else in Connecticut is doing this, so that whatever this product is that you're buying from Oracle or Microsoft, they can't be selling very much of it.

So it's not like, in other words, I'm trying to figure out what it is that maybe the next witness will talk to us about that or somebody else, but I'm just trying to understand.

What kind of software is this? I mean--

THOMAS CALLAHAN: Well, it's a variety of different pieces. The Oracle package, for example is, we have two enterprise-wide, very multi-million dollar systems. It's not a small purchase on the Oracle side that include--

REP. O'NEILL: Well, let me stop you there.

THOMAS CALLAHAN: Okay.

REP. O'NEILL: Because this is all applicable to stuff less than \$50,000 as I'm reading the bill.

THOMAS CALLAHAN: No. No, no, no, no. This, the changes that are being proposed here to the existing legislation would essentially, would apply to those contracts under \$50,000.

For those over \$50,000, the same requirements would continue to be in place but for the change that we've asked for, which would allow for a duly authorized corporate officer, either

the CEO or another duly authorized corporate officer, to properly represent that they're in compliance with the state's, with Connecticut's antidiscrimination provisions.

REP. O'NEILL: Okay, because I guess I must have missed that part of it in your original testimony. So this would apply to multi-million dollar contracts--

THOMAS CALLAHAN: Absolutely.

REP. O'NEILL: --not just \$50,000 contracts.

THOMAS CALLAHAN: Absolutely. Absolutely.

REP. O'NEILL: Okay, and then I don't know how much of a role you had in drafting what's before us, but with respect to the \$50,000 or less, there's this language about, I'll just read it.

Prior to entering into a contract, the contractor shall provide the state or such political subdivision with a, with documentation in the form of a company or corporate policy adopted by resolution of the board of directors, shareholders, managers, members or other governing body.

And the new language talks about a written representation to support the nondiscrimination agreement and warranty under Subdivision 1, which seems to be aimed at the less than \$50,000 people.

I'm just wondering why the, if you know, why not just use the duly authorized person and then just add them to that list at that point saying you know, the board of directors, the members and so forth, or such other duly authorized person.

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I don't understand this written representation to support the nondiscrimination agreement and warranty. I'm kind of puzzled.

THOMAS CALLAHAN: It's, the language in the bill is not our language, Representative O'Neill.

REP. O'NEILL: Okay. Then that answers the question.

THOMAS CALLAHAN: It does move in the right direction, but it is not our language as it's currently crafted.

REP. O'NEILL: Okay. Thank you, Mr. Chairman.

SEN. MCDONALD: Thank you. Are there any other questions? If not, thanks for your time.

THOMAS CALLAHAN: Thank you.

SEN. MCDONALD: Is Representative Megna here?

REP. MEGNA: Chairman McDonald and honorable members of the Committee, I'm State Representative Robert Megna. I'm here in support of House Bill Number 5174. It's a concept I put in front of your Committee, and I'm very thankful that you had raised it.

What House Bill Number 5174 does really, is a clarification of Section 52-261 with respect to service of process on foreclosure.

Here I have a typical foreclosure complaint and attached to it, or an exhibit to it is a lis pendens, just a description of the property that's filed down the town hall for those of you who don't know, and I believe according to 52-261, the delivery of this one complaint would constitute a service, \$30 under that section.

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PETER WOLFGANG: Thank you, Representative, and members of the Committee.

REP. FOX: Next we have Bob Brother. Is he still here?

ROBERT BROTHERS: Good afternoon. My name is Bob Brothers. I'm the Acting Executive Director for the Connecticut Commission on Human Rights and Opportunities.

HB 6673  
SB 1127  
HB 6452

The Commission supports Senate Bill Number 1003 An Act Concerning Affirmative Action Plans. The primary purpose behind this bill is to establish an affirmative action plan that is submitted more than 90 days after the date scheduled shall be deemed disapproved.

This standard was long thought to exist as a result of administrative interpretation, but in actuality there's no basis in law. This bill also addresses and eliminates some of the reporting requirements and allows plans submission schedules to be adopted administratively versus by regulation, which currently is the existing practice, all reflective of staff reductions and the need to economize our resources with the ongoing fiscal struggle that we all have.

We have also submitted a technical amendment to this bill in the form of Attachment A.

We also support Senate Bill Number 1125 An Act Concerning The Comprehensive Revision Of The Human Rights And Opportunities Statutes.

Over the course of the many years amendments to the CHRO statutes have made them difficult for members of the public to understand and use. Since we should be one of the most accessible

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This bill also addresses an issue that arose in a court case, Sanchez v. Brookstone Court wherein the court implied a limitation on legal fees based on the amount of an award.

Finally, I'd like to comment briefly on Senate Bill Number 1127 An Act Concerning The Applicability Of Certain State Contracting Nondiscrimination Requirements.

This bill as drafted presents some questions and interpretations and applications. I'm currently having two attorneys work on this bill for some revisions that the Commission will be submitting.

I'd like to thank you for the time that you've given me. Thank you for raising the bills that we've requested, and I would be pleased at this time to answer any questions that you may have.

REP. LAWLOR: Thank you, Mr. Brothers. Are there questions? Senator Kissel.

SEN. KISSEL: Thank you very much. What's, do you folks have any specific concerns regarding the entire transgender issue, or would you like to comment in more detail regarding that?

HB 6452

ROBERT BROTHERS: Transgender has been an issue that the Commission has identified back in a declaratory ruling, Jane Doe some ten years ago. The Commission's position is that that class basis is protected, has been protected and will continue to be protected whether or not legislation is adopted or not.

SEN. KISSEL: And given that ruling by the Commission on Human Rights and Opportunities, does that have any bearing on if someone was involved in a local elementary school right now, is it your position that given the fact

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They shouldn't have to think twice about a choice that made them feel better and made them feel like the person they know they should be.

JFK once said, my fellow Americans, ask not what your country can do for you, ask what you can do for your country.

I've done what I can for my country, now do your part and make equality equal among all of us. By doing so, you're making it so that one less person gets fired, one less person commits suicide, and one less person has to take crap from another because they are different.

Thank you for your time. I truly hope that I won't be sitting here next year.

REP. FOX: And thank you for your testimony. Are there any questions from members of the Committee? Thank you again for your testimony.

VICTORIA HIVELY: Thank you.

REP. FOX: Next is Deborah Fuller. Hi, Deb. Good afternoon.

DEBORAH FULLER: Good afternoon. Representative Fox, Representative O'Neill, Senator Kissel and other members. I'm here today to talk about, well, I have three bills that I'm talking about on the subject of foreclosure. I also have two other bills that I just wanted to mention.

SB619  
HB6681  
SB1127

On the subject of foreclosure, I'd like to talk about Senate Bill Number 644 An Act Limiting Fees Related To A Foreclosure By Sale On Residential Property, House Bill Number 6166 An Act Concerning And Maintenance Of Residential Real Property Subject To Foreclosure and House Bill Number 5174 An Act Concerning Service Of Process Fees In Foreclosure Actions.

Branch really does not want to take over service of process.

Finally, on Senate Bill Number 1127, you don't have written testimony yet, because I didn't quite get to the point where I finished it, but I'll get it over.

That is the bill about the, that's the bill that talks about the applicability of certain state contracting nondiscrimination requirements, and that's the bill that UConn testified on.

We also have had problems with the statute that was passed in 2007. It took us a little while to have them sort of catch up with us, but we have had issues.

We have potential sellers of goods and services to Judicial. Some of them have failed to complete the corporate resolution that's currently required for a variety of reasons. Many, for some of them, it's just that they don't actually have a meeting of their board of directors more than once a year, international corporations, and quite frankly, if they have a small contract from Connecticut and they're going to have to have a special meeting just to do that, just to enact this resolution they really don't care that much about having our business to even do it.

One area where we really felt this was with our infractions booklets that we print every year, the ones that the State Police, that all the police carry around with them that lists all the infractions, violations and fines.

And this year the vendor that we've used for many years, R.R. Donnelly, was not willing to comply with the law requiring the resolution,

and we could not go with them. They were the lowest best qualified bidder and we had to go with somebody new, so this year our infractions booklet will be printed by somebody new who is inexperienced, and we just hope that they do a good job, and it comes out on October 1st, and hopefully that will go smoothly.

But the cost is, we're going to have to spend about an extra \$100,000 on it. So while we certainly understand the intent of the legislation, and all our contractors as a condition of their contract, agree to comply with all the laws of the State of Connecticut, we don't really think that it should cost the state money.

And especially if you're talking about something like an infractions booklet, I don't think they produce it within the State of Connecticut. I can't say that for sure. I didn't look. But you know, I think sometimes you're talking about goods where the employer may not even be employing somebody in the State of Connecticut.

So that's our concern with that, but I will get you something written on that, that has more examples, and unfortunately Senator McDonald isn't here to, because I know he's very concerned with that issue. Thank you.

REP. FOX: Thank you. I have one question on the foreclosure, the provision as to what's on top of the writ, summons and complaint. And as I understand it, last year we, the legislation that we passed said that the notice of medication and the phone numbers, the contact information would be right in front.

The goal was to be right in front. However, what the language was, I think it's on top of

the complaint, which therefore left some discretion and people would actually do the summons, then the notice, and then the complaint and it wasn't as clear, and that's why people may or not have noticed that they have this right to mediation, et cetera. That is the goal of this whole process. Is that correct?

DEBORAH FULLER: That's correct. Absolutely correct, yes.

REP. FOX: Okay, and I thought I understood that the Judicial Branch actually did it on their own to try to change the format.

DEBORAH FULLER: We did develop another form to go on top. The Bench Bar Foreclosure Committee I believe had that. They did develop a form that's going to go on. I'm not sure where that is in implementation, but we prefer to have it stated in the statute.

REP. FOX: Well, they should be, the Judicial Branch's policy should be consistent with what the statute is, so we should fix the statute if we have to.

DEBORAH FULLER: We always try really hard, and we're very literal when we interpret. So when our legal services people saw this, I mean house counsel basically saw the language and that's when they said, no, it's not on top of the whole thing. It's only on top of the complaint.

REP. FOX: But I think they wanted the same attention, at least, and we'll get that resolved soon, I hope.

DEBORAH FULLER: Yes.

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should protect the people who haven't received those protections up to this point.

SEN. MCDONALD: Well, thank you very much, and you're more than welcome to stick around and spend the rest of the evening with us, too.

SELENA WELBORN: I'm going home, so good luck to the rest of you and have a good evening.

SEN. MCDONALD: Thank you very much.

SELENA WELBORN: Thank you.

SEN. MCDONALD: Mohamed Hussein, followed by Mike Klinger. Is Mr. Klinger here? You'll be next, Sir.

MOHAMED HUSSEIN: Good afternoon.

SEN. MCDONALD: Good afternoon.

MOHAMED HUSSEIN: Co-Chairs, ranking members, members of the Committee, my name is Mohamed Hussein. I'm a Professor and head of the Accounting Department and the Faculty Director of the Office of Diversity Initiatives and the Teenage Business Program in the School of Business at the University of Connecticut.

I'm here to testify in favor of Senate Bill Number 1127 An Act Concerning The Applicability Of Certain State Contracting Nondiscrimination Requirements.

You have already heard from some representatives of UConn, and you'll be hearing from others after me, so I will limit my testimony to some economics and financial data, data bases that are used in the School of Business for teaching and research.

We've been working very hard with our suppliers of these data bases to make sure that they comply with the nondiscriminatory law. Most of them are in agreement with the rules of the law. However, they resisted complying with the requirement of having boards of director resolutions.

We are very constrained in our ability to pressure them into accepting that for two reasons. Reason number one, most of them are sole sources of these data bases.

And the second is that we get these data bases at greatly discounted prices, and our contracts represent very insignificant amounts of their revenues, and let me give you just one example of one of these companies, and that is Bloomberg Financial.

We use Bloomberg Financial data base in our in-class instructions for students' projects, for dissertation research by (inaudible) of these students and for faculty research.

We, Bloomberg has 250,000 of these terminals where the full subscription fee is \$18,000 a year. We get the terminals for \$8,100, and so our ability to really influence and force Bloomberg is very limited.

We have already lost several data bases and we are in the process of losing several others in the near future. The loss of these data bases impact greatly our ability to, and the quality of our teaching. It also impacts the research of our graduate students and of our faculty.

So we would like to get the change done.

SEN. MCDONALD: We're working on it.

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MOHAMED HUSSEIN: Okay.

SEN. MCDONALD: And I thank you for your testimony. More concise and precise than some of the other folks that I've heard from, from UConn, but I appreciate it and in reviewing this legislation, does this give you a comfort level that this would still allow you to comply with the goals of the state, but work through your operational issues?

MOHAMED HUSSEIN: I think so. It does that because as I said, in many cases when we looked at the antidiscrimination policies of many of these companies, they really include everything that is in the Connecticut statute.

The problem again, as I said, many of them are not willing to do the board resolutions, I think at least from our discussions with them. For many of them they feel that they already have that, the boards have delegated the authority for those policies to senior executives, so they--

If I might add just one other item, and that is, if we don't have those, we would have a hard time recruiting those faculty and (inaudible) students.

Furthermore, research projects usually take a couple of years to complete, so we have several dissertations that are already in progress, and we have faculty members with our research projects that are in progress.

So if we lose a data base that a student has been using, the student might have to transfer to another school to be able to complete.

SEN. MCDONALD: And I appreciate the problems you are having on that end, but I'm more, I have

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been more focused on, I don't, I'm confused to why these vendors won't adopt the resolution, and I've heard from others that it's really just administrative inconvenience, which to me is not a terribly satisfying answer about why they won't provide the necessary resolution.

And in your experience with these folks, have they done, have they given you any answer other than saying it's administratively inconvenient for them?

MOHAMED HUSSEIN: Well, most of the time it's administratively inconvenient. Mr. Callahan said earlier, we have been even moving up the ladder into the companies and trying to push them into trying to get the resolutions, okay?

We hope we will be able to succeed with some of them. The problem is that in many cases this is taking a significant amount of time, and in some cases they will cut, you know, the service, and if they cut the service we can't even use the data that we have downloaded because we, according to the contracts, we don't own the data. We own the right to use the data as long as the contract is there.

SEN. MCDONALD: I suspect that's how Mr. Bloomberg got so rich.

MOHAMED HUSSEIN: Absolutely. And you know, our \$8,100 represents nothing for the Bloomberg Financial, you know, financial services. We actually have, he has another contract with the Walton Research Data Services, which is very critical to what we do that was supposed to expire on March 15th.

Through a personal appeal by our Dean with the Dean of the Wharton School, we got a temporary extension until we can work out the issues. So

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the ability to be able to go to CHRO and get, you know, the ability to continue with the contract until we can get some resolution becomes also critical to us.

SEN. MCDONALD: Thanks very much.

MOHAMED HUSSEIN: You're welcome.

SEN. MCDONALD: Any questions? Thanks for your time.

MOHAMED HUSSEIN: You're welcome.

SEN. MCDONALD: Mike Klinger, followed by Mun Choi.

MIKE KLINGER: Good evening.

SEN. MCDONALD: Good evening. I'm not giving it evening until ten more minutes, but--

MIKE KLINGER: I've been here all day, so good evening for me. I'm a concerned parent who's here today to not support the bill, House Bill Number 6452 An Act Concerning Discrimination.

I don't feel that our children should be subjected to sexual identity confusion in the schools. I don't this is something that, most parents would probably agree with me in the State of Connecticut but can't be here because they wouldn't give up a day's pay as I did.

My children are my life. I love them, and I would never teach them to not respect every citizen in this society of ours. But it is not the place of government to tell me as a parent, what I should morally be teaching my children from a classroom and then have to respond to a little innocent child's questions that I do not want to raise with them at that time.

should not be legislated from the bench onto children in school. That is wrong.

That would be wrong if I was to say, for instance, my religious beliefs should be legislated from the bench onto all people in the society or whatever else. That is a sensitive subject that we don't all agree on.

Now, is there pain in this room today? Do I have a human heart? Yes, I do. Okay. But I think that there are other ways to resolve these issues, and forcing it upon people makes people angry and is not the right way to do things.

And unfortunately, our government has taken a lot of proactive steps in this direction on many controversial issues that I think is handled wrong.

SEN. MCDONALD: Well, thanks very much for your testimony. Are there any other questions? Thanks a lot.

MIKE KLINGER: You're welcome.

SEN. MCDONALD: Mun Choi, followed by Diana Lombardi.

MUN CHOI: Thank you. Good afternoon.

SEN. MCDONALD: Good afternoon.

MUN CHOI: My name is Mun Choi. I'm the Dean of Engineering at UConn. I'm here to speak about Senate Bill Number 1127 as it relates to the purchase of software.

As you know, the software they use for education and research are very important for many reasons, especially for data collection,

analysis and computational simulation, and modeling and simulation software has become so important that it has really become a central part of how we teach our students and how we perform research.

Now, for example, in the School of Engineering we have many software products such as Cadence, Aspen, Abaqus and Fluent. These are very specialized software and they're very sophisticated and in many cases, they are the industry standard for engineering, and they're also in many cases the sole option.

So not having access to this type of software really does hurt our ability to train our students and for our faculty members to perform research.

If I can give you some examples of what our faculty and students use these software for, for example, they do safety analysis of bridges. They may design new fuel cells and solar cells that have higher efficiencies, or design (inaudible) that are used for tissue engineering.

Without access to the software, these types of teaching and research tools will disappear and that will place UConn and the State of Connecticut at a serious disadvantage.

For example, our students when they get recruited by top companies, whether they're General Electric, UTC, or Electric Boat, are expected to be competent in these software, which are the engineering standards.

So by not being able to use the software, they may be placing themselves out of the job market, and their competitiveness with respect

to their colleagues from Massachusetts and Rhode Island is diminished.

Also, it prevents faculty members from pursuing creative, innovative research, especially at a time when that focus is so important with the stimulus funding that's available for academic R&D.

So in summary what I would like to say is that the current restrictions, they remain in force, the University of Connecticut, the State of Connecticut will be at a disadvantage in our ability for workforce and innovation development. So thank you.

SEN. MCDONALD: Thanks very much for your patience sitting around for a good chunk of the day. I hope you brought some other work with you while you were sitting here.

MUN CHOI: I did. Thank you.

SEN. MCDONALD: Let me ask you. I'm just confused about why the resistance by vendors that I've heard about today and before today seems predominantly associated with software. I mean the State of Connecticut buys all sorts of things, right?

MUN CHOI: Right.

SEN. MCDONALD: From nuts to bolts, and it seems to be the real problem area that's been identified is with software developers and licensors. Do you have any insight on why it seems to be isolated in that one area?

MUN CHOI: I think it's because of the availability of the software as opposed to some of the hardware products. For example, if we want to purchase a laser, and let's say that laser

vendor was not suitable, we could always go find another laser vender.

When it comes to software, the software are very specific, very specialized. For example, if I can give you an example of Cadence, which is used to design semi-conductor devices.

Now, in the industry that is a standard, and that is what Into expects our students and our faculty members to use. So if they don't use that software, they're going to be at a serious disadvantage.

And in many cases as Dr. Hussein mentioned, it may be because of the administrative hold back from the board in terms of approving the CHRO regulations, and I think it may be because of the dollar amounts that are usually considered.

For Cadence, for example, the price of that software in the open market could be hundreds of thousands of dollars, but for the University of Connecticut they provide it for less than \$10,000.

SEN. MCDONALD: Okay, well, thank you very much. Are there any other questions? Representative O'Neill.

REP. O'NEILL: The, do you run into the problem of lasers or other equipment, hardware, I guess, where there are multiple vendors but there is one that has the same kind of policy as Oracle and these other companies?

MUN CHOI: Yes. In those cases, we do have much more flexibility in choosing another vendor.

REP. O'NEILL: Okay, so it's because of the, essentially the copyright that these software creators have.

MUN CHOI: Sure.

REP. O'NEIL: That there's nobody else that can duplicate what they're producing--

MUN CHOI: That's right.

REP. O'NEILL: --as opposed to a laser, which lots of different companies can manufacture.

MUN CHOI: That's right.

REP. O'NEILL: Okay. Do you know if other states have similar kinds of policies as Connecticut with respect to this requirement for nondiscrimination?

MUN CHOI: I only have anecdotal information from my colleagues, who are also deans at other state universities, and it seems like we are, in this region, the New England region, we're the only ones that are facing this issue.

REP. O'NEILL: Okay.

MUN CHOI: So that does place our students at a serious disadvantage.

REP. O'NEILL: Thank you, Mr. Chairman.

SEN. MCDONALD: Any other questions? See what you can do about UConn Law School for me? All right?

MUN CHOI: I'll talk to my colleagues. Thank you.

SEN. MCDONALD: All right. Thank you very much. Diana Lombardi, then followed by is it Wavis Washington.

WAVIS WASHINGTON: Yes.

Once again, let me restate it. We agree that restraining orders are an important component of the system, but we look forward to helping to make it better. Thank you very much.

SEN. MCDONALD: Thanks very much for your testimony and the offer of assistance. I'm sure we'll be needing some as we move through the rest of the legislative process.

DAVID HUBBS: Not a problem.

SEN. MCDONALD: Any questions? Thanks a lot.

DAVID HUBBS: Thank you very much.

SEN. MCDONALD: Ed Marth, followed by Antonia LoConte.

ED MARTH: Good evening.

SEN. MCDONALD: Good evening, Sir.

ED MARTH: Mr. Chairman, or Honorable Chairs, members of the Committee, my name is Ed Marth. I'm the Executive Director of the AUP, that's the faculty union at the University of Connecticut.

I'm here to support the changes sought in Senate Bill Number 1127 by the University of Connecticut. Time and again, we have heard frustrations of faculty about the difficulty in keeping students current in their fields of study due to the restrictions of the law, which mandates limiting purchases to those companies who meet the state standard of nondiscrimination and enforcement of that.

This extends even to those who are willing to donate software to the University, as that

requires a contract regarding use and licensing.

It has been pointed out to me by a member of the University community, one of our members, that in his research he found out that passage of the change of the law cited a fiscal note that said there was no cost to the change. This is simply not true, although OFA may have thought so at the time.

The good intentions have led to bad and costly results. We support all efforts to eliminate discrimination of any sort. How that is done is the question today.

If it is impossible for the University to purchase software from a company that has not had the mandated change in its corporate rules, even if in practice they do not discriminate in actually meeting the state standard, a third party could set up a shell company, pass the corporate resolution meeting the state standard, buy from that, from the one that does not, mark up the product and sell it to the University or another agency of the state.

Simply a shell game for a profit could skirt the intentions, the good intentions of the bill, the original bill, and make the state pay more than it should.

The University spends a small fortune on enforcing nondiscrimination rules, but this one is imposed and enforced at another level and ripples through to the classrooms denying timely and quality goods, chiefly as I said, but not exclusively, I'm sure in software.

Why would the state seek to add costs at a time when we're trying to save money in all kinds of ways? To deny quality to students I call into

question the advancement of an otherwise noble in purpose but failed in tactic objective.

The law must be changed. Its initial approval was based on a false premise of cost and its result is nothing short of disaster in implementation. I hear this time and again from people in very, in all kinds of disciplines where they do a lot of studies in education, in school districts and psychology.

You've heard from the Dean of Engineering and from the School of Business, former Dean and Department Head and Professor who was saying a few minutes ago.

We really agree with the intended purposes but the way it has rolled out, and chiefly as you noted earlier, Senator McDonald in the area of software and for reasons explained best perhaps by Dean Choi, it has a terrible effect when students cannot get the kind of software they need for applications in their field.

I know that's not anybody's intention, but when that's the result as you heard a few minutes ago, there has to be a better way to get to the same end result, and I think there's been some suggestion to you, and we hope that you will consider it, those things in that light.

SEN. MCDONALD: Thanks very much, and absolutely we will consider them. Do you know if any of your colleagues in any of the branches of the Connecticut State University system have had similar problems, because we haven't heard from them and I'm still trying to get my head wrapped around why it's only, why all of this impact is being felt by UConn, and we don't hear anything from DCF or DSS or DMHAS or any of the rest of them.

ED MARTH: I have heard from other, from people that, quite frankly, say they're ignoring it. UConn's not ignoring it, and I think maybe the volume of it at UConn and perhaps the more extensive use of it may make it all the more important to be sure that the, and they do try to follow things to the letter.

You know, we're just so overrun with red tape it's unbelievable, but that's another story.

SEN. MCDONALD: Yeah. Well, you know, if that's true that's incredibly discouraging that people would willfully ignore a law passed by the General Assembly and signed by the Governor, but I guess it speaks highly to you folks who are actually trying to work with the law, and so we will work with you.

ED MARTH: We really are. Thank you so much.

SEN. MCDONALD: Thank you.

ED MARTH: Appreciate it.

SEN. MCDONALD: Antonia LoConte followed by Sally Zanger. Is Sally here? Amy Miller? Amy Miller? Rose Bottinick? Daniel Streche? Lee Stang? Please proceed.

ANTONIA LOCONTE: Good evening. My name is Antonia LoConte. I'd like to thank everybody on the Committee for allowing me to testify in support of House Bill Number 6452 An Act Concerning Discrimination. I'm hoping this is the year it passes.

Before I get into my story, I just wanted to address a point that was brought up a little earlier, and it had to do with a question whether or not an employer could reasonably keep a transgender employee from performing

The University of Connecticut Chapter of

THE AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS, INC.

1875 Storrs Road  
Storrs, Connecticut 06268  
Campus Mail: AAUP, U-6028  
WWW.UCONNAAUP.ORG  
Telephone: (860) 487-0450  
Fax: (860) 487-0341

**TESTIMONY  
SENATE BILL No.1127**

March 19, 2009

Edward C. Marth  
Executive Director

**HONORABLE CHAIRS, MEMBERS of the JOINT COMMITTEE ON JUDICIARY:**

This is to support the changes sought in SB1127 by the University of Connecticut.

Time and again we have heard frustrations of faculty about the difficulty of keeping students current in their fields of study due to the restrictions of the law which mandates limiting purchases to those companies who meet the State's standard of non-discrimination. This extends even to those who are willing to donate software to the University as that requires a contract regarding use and licensing.

It has been pointed out to me by a member of the University community that in his research he found that passage of the change in the law cited a fiscal note that there was no cost to the change. This is simply not true, although OFA may have thought so at the time. The good intentions have led to a bad and costly result.

We support all efforts to eliminate discrimination of any sort. How that is done is the question today.

If it is impossible for the University of Connecticut to purchase software from a company that has not had the mandated changes in its corporate rules (even if in practice they do not discriminate in actually meeting the state standard), a third party could set up a shell company, pass corporate resolutions meeting the state standard, buy from the one that does not, mark up the product and sell to the University or another agency of the State. Simply a shell game for a profit could skirt the intentions and make the State pay more than it should.

The University spends a small fortune on enforcing non-discrimination rules, but this one is imposed and enforced at another level and ripples through to the classrooms denying timely and quality goods, chiefly, as I said, but not exclusively I am sure, in software.

Why would the state seek to add cost, deny quality to students, and call into question the advancement of an otherwise noble in purpose, but failed in tactic, objective?

The law must be changed. Its initial approval was based on false premise (cost) and its result is nothing short of disaster in implementation.

Thank you for your assistance.

**Judiciary Committee Public Hearing****March 19, 2009****Testimony****By****Mohamed Hussein, Professor of Accounting and Department Head  
University of Connecticut**

Co-Chairs, Ranking Members and Members of the Committee, my name is Mohamed Hussein. I am a professor and head of the accounting department and the faculty director of the Office of Diversity Initiatives and the Teenage Business Program in the School of Business at the University of Connecticut. Thank you for giving me the opportunity to testify today in favor of *Senate Bill 1127, An Act Concerning the Applicability of Certain State Contracting Non-Discrimination Requirements*.

I would like to state that we in the School of Business are in agreement with Dr. Feldman's statement that UConn supports the goal of PA 07-142 to end discriminatory employment practices. In the School of Business we teach and practice diversity and inclusiveness. We have also been working hard with our external constituencies including vendors and employers to ensure that they follow nondiscriminatory policies and practices. However, in our efforts with our database suppliers we met with resistance to the procedures requiring board decisions rather than resistance to meeting the goals of the law. Our efforts are hampered because most of our data base suppliers are sole source suppliers who charge us discounted prices; thus our business represents an insignificant portion of their total revenue. As our discussions continue with many of these suppliers, several contracts expired and some are about to expire. The results were that we lost access to some databases, and we are at risk of losing others. These databases are critical to the School's ability to fulfill its teaching and research missions. Please allow me to use two suppliers to illustrate the problem and then discuss the expected impact on the School.

**Bloomberg Database**

The Finance Department had a long-standing contract with Bloomberg, which provides faculty and students internet access to market and historical data services provided by Bloomberg L.P. The Bloomberg system for accessing market information and analyzing securities and portfolios is the "gold standard" of the finance industry. Bloomberg provides information on equity securities, fixed-income securities, commodities trading and futures markets as well as a wide array of derivative securities. Because of its unique position in the marketplace, the Bloomberg system is one of the very few sources for accurate pricing information on securities traded in the over-the-counter (OTC) markets (e.g., most fixed income securities) and newly emerging securities such as credit-default swaps and other derivatives.

The system has been used in the teaching of undergraduate and graduate classes to demonstrate markets and securities analysis, and by the undergraduate and graduate managers of the student managed fund to analyze their investment decisions and by individual students to become "Bloomberg Certified" by taking and passing online tutorials. The detailed information provided by the Bloomberg system on pricing securities—especially over-the-counter securities such as fixed-income and derivatives—is a valuable research tool. In recent years, we had two Ph.D. students who used Bloomberg data as part of their dissertations. Several faculty members also use the terminal to obtain needed data for research.

Our Bloomberg contract was not renewed when it expired in June, 2008. Bloomberg has a standard form contract which does not address the state law. Bloomberg is not willing to modify its contract

form. We do not have leverage because Bloomberg has 250,000 subscribers paying \$18,000 a year compared to our discounted price of \$8,100. Consequently, we are unable to continue to subscribe to this valuable financial tool.

#### **WRDS (Wharton Research Data Services)**

WRDS provides an internet-based interface with numerous databases, including Compustat and CRSP. WRDS provides multiple ways for researchers to access the data and provides further enhancements of the data to facilitate merging. The interface and expertise provided by WRDS is not replicable, and as such WRDS is a sole source provider. Our contract was scheduled to expire on March 15<sup>th</sup>, 2009. A personal appeal by Dean Christopher Earley, the Dean of the Business School, to the Dean of the Wharton School bought us some time until we can come up with a resolution.

The loss of these services and several others where contracts are scheduled to expire in the near future can have the following impact:

#### **Impact on Faculty**

**Faculty Research:** Within the accounting and finance departments, nearly every tenure track faculty member has at least one research project in progress (and most have many more) that must be abandoned, unless he/she can find a co-author at another university that has access to the databases to join the paper and agrees to perform all of the data-related work.

**Faculty Recruiting and Retention:** Given the standards of tenure and promotion, as well as the research and educational missions of the School, it would be impossible to recruit, and retain, faculty in accounting and finance without the databases. All universities from which UConn recruits faculty and targets for placement of PhD students have these databases. A survey of the untenured faculty at Storrs in accounting and finance confirms this: none of them would have accepted our offers if the databases were not available on WRDS.

#### **Impact on PhD Students**

**PhD Student Research.** A PhD student must produce an independent dissertation and cannot rely on a co-author from another school to obtain data for a dissertation. Thus, all PhD students using any of these databases for their dissertations will have to transfer to other universities to complete their degrees. This would subject them to great hardships and delay their graduation.

We are currently in the process of evaluating applications for admission. Access to the databases is essential to the operation of our PhD program since we specialize in empirical archival research. The current group of applicants to the UConn accounting and finance PhD Program are also applying to the following schools: Bentley, Boston University, Drexel, Michigan State University, Penn State, Temple, University of Arizona, University of Colorado, University of Florida, University of Illinois, University of Iowa, University of North Carolina, University of Oregon, University of Pittsburgh, University of Rochester, and the University of South Carolina. All of these schools have the databases that we are at risk of losing.

#### **Impact on Undergraduate and Masters Education**

WRDS is currently used in several undergraduate and masters level classes because its interface allows students to easily obtain data from various sources for analysis. Without WRDS, and its ease of use, it would be nearly impossible to use these databases in the classroom. Over the past few years WRDS has been used by a number of our undergraduate Honors students in their senior theses. Without WRDS, classroom and undergraduate research using these databases would be eliminated.

#### **Impact on Accreditation Requirements**

The School of Business will be evaluated for maintenance of AACSB accreditation in 2010. The AACSB standards require that the school provides resources to its faculty sufficient to achieve its mission. The School's mission statement declares: "The School's goal for the next decade is to gain recognition for our

ability to generate top-quality academic research on global business problems and for our ability to have real impact on business practice and education.” In accounting and finance top-quality academic research depends on the availability of financial and economic data that is available through few databases suppliers.

Thank you for giving me the opportunity to address you on behalf of the School of Business. I hope I have provided sufficient evidence to you of the potentially disastrous consequences of the loss of these services.

**TESTIMONY**  
**Judiciary Committee Public Hearing**  
**March 19, 2009**

Co-Chairs, Ranking Members and Members of the Committee, my name is Dr. Bruce Liang. I am the chief of cardiology at the University of Connecticut Health Center. Thank you for giving me the opportunity to provide written testimony in favor of *Senate Bill 1127, An Act Concerning the Applicability of Certain State Contracting Non-Discrimination Requirements*.

As a physician my number one concern is providing quality patient care. This means I must be ready to provide urgent cardiovascular care without delay and our organization must be ready to make the necessary purchases in order to provide the physicians with tools, equipments, and medications to care for citizens of Connecticut. Our patients and residents of the State of Connecticut deserve no less from its public academic medical center.

Because of the requirements in PA 07-142, we have been faced with situations between delaying a certain procedure or using supplies or devices that may be less than ideal or optimal. We have delayed some of the procedures because of lack of needed supply items, equipment, or software. These are some examples where the law, as currently drafted, has created some unintended consequences. We are concerned these delays could at some point be catastrophic- we can't let that happen.

I join with my colleagues from Storrs and thank the Committee for raising Senate Bill 1127 as it will address some of the concerns we have identified in PA 07-142. I am pleased that prior board resolutions will be acceptable and that contracts with the federal government, municipalities, other states and foreign countries are exempted. Also, the bill makes it easier for contracts under \$50,000 to meet Connecticut's non-discrimination statutes. I understand that the University is respectfully requesting the Committee consider a few additional changes to the bill before you that will help us meet the laws' requirements but ease the time and expense involved.

Anything you can do to assist us in meeting our obligations to our patients is greatly appreciated.

**I urge passage of SB 1127. Thank you for your consideration.**

Bruce Liang, MD

Chief of Cardiology, University of Connecticut School of Medicine



# University of Connecticut

## Judiciary Committee Public Hearing

March 19, 2009

Testimony

By

Barry Feldman

Vice-President and Chief Operating Officer

University of Connecticut

Co-Chairs, Ranking Members and Members of the Committee, my name is Barry Feldman and I am the Vice-President and Chief Operating Officer at the University of Connecticut. Thank you for giving me the opportunity to testify today in favor of Senate Bill 1127, An Act Concerning the Applicability of Certain State Contracting Non-Discrimination Requirements.

As you know, in 2007 the General Assembly enacted Public Act 07-142, *An Act Concerning Procedures for the Hearing of Complaints Against State Contractors and Subcontractors by the Commission on Human Rights and Opportunities and the Documentation of Nondiscrimination Policies Adopted by State Contractors*, which is now codified as sections 4a-60 and 4a-60a of the Connecticut General Statutes. PA 07-142 requires contractors doing business with the State of Connecticut to provide documentation in the form of a company or corporate policy adopted by the company's board or other governing body that they are in compliance with Connecticut non-discrimination statutes.

UConn supports the goal of PA 07-142 to end discriminatory employment practices. As a public university committed to diversity and inclusiveness, we recognize the critical role that commerce plays in creating a work environment that accepts and embraces all opinions and lifestyles.

However, we remain deeply concerned that if there are no changes to the current law, there will be repercussions across the University that will impede the progress we have made in the past decade to become the top-ranked public university in New England and ranked 26<sup>th</sup> amongst all public research universities by US News and World Report. Accreditation for some of our academic programs may be jeopardized and direct services to students such as grading, course scheduling, financial aid packaging, and standard services available at any other college campus may be adversely impacted. Continuity of patient care at the Health Center may also be affected. Additionally, basic functions needed to run the University like payroll, budgeting, and accounting are also at risk.

As the state's only public research institution, we must procure for our faculty and students the basic tools – software, equipment, journals and databases -- available at all other major research universities in the nation. Without these tools, it will be difficult for our faculty to publish and compete successfully for federal research grants, which are necessary for tenure and for faculty to be productive members of the UConn community. Similarly, students at the undergraduate, graduate and doctoral level must conduct research in order to graduate and earn their degrees. If the University is unable to purchase these tools, our ability to compete for federal grants, and retain and attract the best faculty and students will be diminished.

Please know that the University has been diligent in implementing both the letter and the spirit of PA 07-142. Our purchasing staff has worked skillfully and assiduously to secure the necessary Board resolutions from vendors. While many have complied, our efforts have all too often been unsuccessful, requiring the University to obtain 45 waivers from the Commission on Human Rights and Opportunities (CHRO) in order to ensure the availability of essential services to students, patients, and faculty. The University has gone to CHRO for 60 different contracts and I would like to stress that -- during a time of diminishing state resources -- significant staff and faculty time has been devoted to this effort both to get vendors to comply as well as to apply for waivers. In addition to the purchasing staff involved, each affected department has dedicated faculty and staff time to secure the required board resolution or the waiver. While the University is committed to enforcing PA 07-142, please understand that this commitment is diverting staff and faculty time from our core missions of teaching, research and patient care.

I would like to take a moment to characterize why the CHRO waivers have been necessary. Some of them were needed because the value of the contract was not significant enough to justify the vendor's legal costs associated with compliance. In other instances, the purchase amount failed to exceed established contract dollar thresholds that would have triggered board consideration. In others cases, corporate policy decisions are not made at the Board level. In these latter two instances especially, seeking a Board resolution is sometimes viewed as an unwarranted intrusion into the internal governance of the enterprise.

The University thanks the Committee for raising Senate Bill 1127 as it will address some of the concerns we have identified about PA 07-142. In fact, we appreciate that prior board resolutions will be acceptable and that contracts with the federal government, municipalities, other states and foreign countries are exempted. Also, the bill makes it easier for contracts under \$50,000 to meet Connecticut's non-discrimination statutes. However, the University respectfully asks that the Committee consider a few additional changes to help us meet the law's requirements but ease the time and expense involved.

We propose the removal of the requirement that vendors with contracts of \$50,000 or less have to provide written representation that they are in compliance with Connecticut's non-discrimination laws and that it be made clear that the \$50,000 level is an annual contract amount. This would essentially prevent the disruption or loss of a wide variety of highly-specialized laboratory equipment, software, medical devices, and other services critical to UConn's array of professional, clinical and research programs. Since PA-07-142 was enacted, the University has found that many vendors -- which provide specialty or niche products and services needed by our students, patients or faculty for graduation, healthcare or federal research grants, respectively -- often lack a financial incentive to comply with the new law. For example, the School of Engineering is required by national accreditation standards to train students on particular software prior to graduation. The ramifications of such losses to the University's students and to its reputation as a research institution are extremely serious and could take years to restore. The University has discovered that the vendors selling this software do not want to pay the legal fees necessary for the board of directors resolution requirement of 4a-60 and 4a-60a just to make a software license sale to UConn that is often less than \$10,000. Unfortunately, alternative vendors are often times not an option as many of these highly-specialized purchases are sole sources with no other providers. Additionally, some of the applications are embedded systems, such as Oracle, and would cost tens of millions of dollars and take years to replace.

UConn also requests that in lieu of a board resolution, a vendor's chief executive or other corporate officer be allowed to certify that the company has a policy that complies with

Connecticut's non-discrimination statutes. This would address the situation facing a number of major corporations – like Oracle Corporation and Microsoft --which have implemented very progressive non-discrimination policies, but whose boards do not approve employment policies. This change would solve the University's issue with respect to its contract with Oracle Corporation which is due to expire in June 2009 (unless CHRO extends its current waiver). Oracle Corporation provides the University with software and technical support to manage all of its core business, financial, academic and student operations. Specifically, these operations include all aspects of student data administration, academic information, financial data administration and Human Resource administration utilized daily by our students, faculty and staff at our six campuses and Law School. While Oracle has a corporate policy that complies with Connecticut's non-discrimination statutes, its Board simply does not act on corporate policy as required by PA 07-142. Instead, it delegates this authority to a corporate officer. A similar situation exists with respect to the Health Center's contract with Microsoft.

We believe these two changes would significantly increase the University's ability to cost-effectively contract for services needed daily at our campuses and limit requests for exemptions while preserving the original goals of PA 07-142.

As you consider our proposed changes to SB 1127, please keep in mind that the University and the Health Center vie for students, patients, faculty and sponsored research in a highly competitive environment. Our "customers" pay for these goods and services and have legitimate expectations for the quality and timeliness of products and services that the University's purchases on their behalf. We manage six campuses, the Law School and the Health Center that are twenty-four hour per day, seven-day per week operations. The Health Center, for example, routinely serves medical emergencies, a rapidly growing outpatient population, and a diverse inpatient population, including pediatric patients, geriatric patients and all ages in between. Connecticut public higher education institutions generally, and the University of Connecticut specifically, exist in a market environment, which distinguishes us from other state agencies. All of our "customers" choose UConn and pay with dollars borrowed from long-term loans, personal savings, and retirement accounts, and other means for their education, clinical services or as a place to teach and conduct research. To continue to compete effectively, it is essential that we have the ability to serve our "customers" with the products and services they need at a competitive price.

Later on today you will be hearing from our Dean of Engineering, and the head of our School of Business' Accounting Department, and a representative from our Health Center has submitted written testimony. They will be able to provide you with a sense of the broad impact PA 07-142 is having on students, patients, research, and scholarly activity across the University. Also, attached to my testimony are some detailed descriptions of the types of contracts that have been affected by PA 07-142.

Thank you again for raising SB 1127 and for your consideration of some suggested amendments to the legislation. The University remains grateful for the Committee's continued support of UConn.

(Last Updated: February 2009)

## Software and services unlikely to be considered for additional CHRO exemptions

The following vendors, unless otherwise noted, have already been granted an exemption by the CHRO and are unlikely to receive another one. If the vendors do not sign the mandatory nondiscrimination certification, the University will not be able to renew our services with them.

### Teaching and Research Applications

#### Dassault/Abaqus

Software title, service or use: Abaqus is a commercial Finite Element Analysis (FEA) program that is used extensively in academia and industry to solve highly complex problems in many different fields of engineering. Use of any FEA program, such as Abaqus, requires a significant amount of training. Abaqus, for example, is distributed with 20 different user manuals and their parent company, Dassault, offers over 50 different Abaqus training courses worldwide.

There are two graduate level courses in FEA in the School of Engineering (SoE) that are used to train graduate students for research and engineering practice. These courses are offered yearly and typically draw over twenty students indicating the high demand for FEA education. Graduate students from three SoE departments (Civil, Mechanical and Materials Science) regularly take these courses as do numerous part-time students from industry, such as Pratt & Whitney and Electric Boat. I have taught both of these courses for over twenty years at UConn so am very familiar with the history of FEA usage at UConn.

Approximately five years ago, a group of interested SoE faculty members met to adopt standards for FEA software in the SoE. This was necessary because of the large amount of training that is required to become proficient in the use of a specific FEA program. There was a need to select one FEA program for training graduate students and develop the corresponding course material to train the students. The group selected Abaqus and the course material was developed and has been refined over the years. We also worked out a license arrangement with Dassault to provide both "academic" and "research" licenses of Abaqus at a fraction of its commercial value<sup>1</sup>.

For people not familiar with FEA, it is a common misconception that it would be easy for an organization to change from an established FEA program to a new one. As indicated in the previous paragraphs, this is not true.

<sup>1</sup> An academic license provides software with limited capabilities. These capabilities are generally adequate for teaching but are not adequate for research purposes. For example, academic versions do not include the ability to include "user subroutines" which are a critical capability needed for research

Renewal Date: September 30, 2009

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Annual Renewal Cost: ~\$9,000.

Department contact: (School of Engineering)

Impact to UConn: There will be immediate and long term negative consequences in the UConn SoE if the Abaqus license is not renewed. There is also the potential for legal consequences.

The first immediate difficulty will be to identify an alternate FEA program that will be suitable for teaching and research that is affordable. In the past, we have used the Ansys FEA program for teaching. Abaqus and Ansys are generally considered to be the two industry leaders in FEA software. We were not able, however, to purchase a research license for Ansys because it was cost prohibitive. We have been unsuccessful in our past negotiations with Ansys to secure a research license at an affordable price.

The second immediate difficulty will be that dozens of ongoing research projects in the SoE that currently utilize Abaqus will grind to a halt. Even if we are able to purchase a research license for an alternate FEA program, such as Ansys, it will take at least two years to redevelop expertise in the new software and train graduate students and the typical duration of a research project is two to three years. For example, I recently completed a major research project for the Office of Naval Research that made extensive use of Abaqus. The two doctoral students who worked on the project were both required to take special Abaqus training (which was provided at a substantial discount by Dassault). As part of the project deliverables, we developed thousands of lines of software that can only be used within Abaqus. If the Abaqus license were not renewed during this project, we would have cancelled the project because it would have been impossible to change the FEA software during the project duration. We are fortunate to have completed this project prior to the current license renewal difficulties. As another example, there is an Assistant Professor in the Civil & Environmental Engineering Department who currently has an NSF CAREER project that runs through 2011 and uses Abaqus extensively. He and his graduate students have become proficient in the use of Abaqus and they are making excellent progress on this project. If the Abaqus license is not renewed, progress on this project will be significantly impeded while the SoE transitions to a different FEA program.

There are several long term difficulties that will occur if the Abaqus license is not renewed. First, it will be difficult to retain excellent faculty and recruit new faculty if the SoE can not reliably provide FEA software for teaching and research. I have been involved in the hiring of two faculty members in recent years where availability of FEA software (specifically Abaqus) was discussed during the interview. The Department of Civil & Environmental Engineering currently has two vacant faculty positions in Structural Engineering. We will need to demonstrate to candidates that we have an established procedure for teaching and conducting FEA research to recruit the top candidates. If the Abaqus license is not renewed, we will be lacking in this area for at least two years.

A second long term difficulty will be to reestablish our FEA teaching capacity if we switch to alternate FEA software. I, personally, have invested hundreds of hours developing FEA course ware that is based on Abaqus. There is little incentive for a faculty member to redevelop the same course ware twice. If we fail to redevelop our FEA courses, then the SoE will be unable to train engineers in FEA for the Connecticut workforce. As previously mentioned, FEA is a commonly used tool in numerous companies such as Pratt & Whitney and Electric Boat.

Finally, I believe that there are serious legal issues that potentially could arise if we are not able to renew our Abaqus license. The probationary period for an Assistant Professor is five years and their evaluation for permanent academic tenure occurs in the sixth year. During their probationary period, they are expected to develop a nationally recognized research program. For Assistant Professors that require FEA software for their research, they will experience a significant disruption in their research program if the Abaqus license is not renewed since this is the currently established FEA software in the SoE. There are at least five Assistant Professors in the SoE to which this currently applies. Given that it would take two years to reestablish our FEA capability if we were required to change software, this is an unacceptable disruption to their progress. One could effectively argue that such a disruption represents an institutional barrier towards meeting tenure requirements.

## MatLab/MathWorks

Software title, service or use: MatLab is a statistical software tool provided by MathWorks.

Renewal Date: June 30, 2009

Annual Renewal Cost: ~\$12,000.

Department contact: (Engineering)

Impact to UConn:

Losing SPSS would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D and MSA students.
- retain tenure-track faculty.

Matlab is installed in computer labs throughout the College of Liberal Arts and Sciences. If it were to become unavailable, required courses across several disciplines would have to be cancelled.

Matlab is a high-level language and environment that enables faculty and students to perform computationally intensive tasks faster than with traditional programming languages such as C, C++, and Fortran. It is used by the Math and Engineering Departments, and is used in business school research as well. It is critical to perform analysis on large datasets. Losing Matlab would prevent many faculty and graduate students from properly analyzing their research data, especially in the Marketing and Finance fields. These faculty would be in danger of having competing researchers elsewhere publishing findings on similar topics more quickly, which will negatively affect the reputation of our faculty and our school.

MatLab is used by several researchers (faculty and graduate students) in three of the Department of Psychology's graduate training programs; specifically, in Behavioral Neuroscience, Developmental Psychology, and Perception-Action-Cognition, which includes researchers in the Department's Center for the Ecological Study of Perception and Action (CESPA). Without the availability of MatLab, these researchers would be severely affected in terms of (1) maintaining their current levels of research productivity, (2) obtaining external grant funding and fulfilling existing commitments to funding agencies, and (3) teaching and training graduate students to facilitate their careers as professional psychologists. To a lesser extent, the non-availability of MatLab would diminish the Department's ability

to (4) teach and train undergraduate students in several of our advanced undergraduate research courses.

**Overview:**

The Department of Psychology's program in Ecological Psychology is a world leader in the dynamical approach to cognitive systems. This approach requires that we seek other natural systems that display similar behavior to a cognitive system of interest (semantic memory, perceptual learning, anticipation, pattern recognition, word identification). This allows insight into the kind of system cognition is. System identification is where MatLab shines. It allows sophisticated mathematical and physical techniques to be mastered, developed, and shared. Our courses on nonlinear dynamics have influenced the evolution of dynamical approaches in psychology. Other psychology departments try to emulate them. The American Psychological Association now funds Advanced Training Institutes in the Application of such methods to Psychology. The National Science Foundation has run workshops to get these methods into the hands of behavioral scientists. NSF has added funding programs in Human and Social Dynamics and, just recently, in Complexity, in response to the influence of what they call the UConn Mafia – our students who are major players in the field. If we don't continue in this direction we will not be able to keep up with the field, let alone keep our standing as leaders.

A huge portion of our research relies on MatLab – everything from experimental setups to data analysis to exploring concepts. MatLab is the means to do any non-linear as well as advanced linear analysis of long time-series (thousands of data points). Such time series are generated by any kind of movement research (bimanual coordination, postural control, haptic exploration), as well as by new methodologies we are developing that allow dynamics into the cognitive decision process (e.g., continuous cursor control using stylus and track pad, mouse-tracking). MatLab allows us to implement mathematical models of data in order to run simulations that test the non-linear analyses we use (e.g., drift diffusion, phase space reconstruction, recurrence quantification) and thereby allow better understanding of them. It helps establish ranges of parameters that should be expected when using such analyses, as well as limitations and strengths of their applicability.

We use MatLab routinely in our graduate courses (Introduction to non-linear dynamics, Advanced non-linear dynamics, Applied time-series analyses, Complex systems, and in any Psychology 5800 course involving research in time series, simulations, modeling). It has allowed us to teach the things that make CESPAs students marketable (it makes them productive and it enables them to teach dynamics). Just over the past two years, MatLab has figured prominently in 6 funded grants and/or their continuations (as well as two large grants at Haskins Laboratories) and 6 more proposals in preparation (for early 2009 deadlines), 35 manuscripts that have been published or accepted, 25 that are under review or in preparation, and 53 presentations (poster or platform). Six ongoing dissertations depend on MatLab. It has been cited as an available resource in all currently funded grants and applications.

**Implications of the loss of Matlab:** For our students, MatLab is the great equalizer. As you can see from the comments below, it is embraced by the expert and the novice, those who are technically sophisticated and those who are not, those who can program and those who cannot. The nature of MatLab is such that people with good intuitions can create and operate programs and models without having to be computer geeks. Computer geeks can develop new methods without being bogged down .

in the technical gymnastics that would slow their progress. Somewhat ironically, given the State's rationale for abandoning this program, its loss would be more damaging to the female students. Of our current cohort of students, half of the males are real programmers but none of the female students are. But the work being done by all is technically sophisticated because of the equal-opportunity tools provided by MatLab.

If MatLab had to be replaced, the scripts we have developed (essentially, programs that do all of the things we need) would be worthless. Only the programmers could do research at anything approximating the same level. The more intuitive students would not have the intuitions because they would not have had MatLab in their classes to learn them. In keeping with the season, CESPA is Bedford Falls and MatLab is George Bailey. Without it, we're Pottersville!

**Comments from Faculty Members Regarding Research Productivity without MatLab:**

Professor, Hartford Regional Campus: I used Mat-Lab sporadically and am just starting a series of experiments that require it. I would lose 6 months work invested so far if this program was no longer available.

Professor: We cannot lose MatLab. Thousands of programming hours are invested in that platform. These are complex tools that are absolutely indispensable to current research projects (including many of my own), grants (including mine), and to grant proposals in the works. Retooling in another language would require years of full-time programming. Graduate training in my lab, CESPA labs, and many other PAC labs would come to a halt. There would be no way to analyze the data. In some cases, no way to collect it easily either.

Professor: I would simply be unable to continue my research without access to MatLab. It provides the basis of SPM, shareware that is critical for fMRI data analysis. There are lengthy routines and scripts that have been written to support research activities; recreating these in a new program would simply be impossible (for MatLab/SPM).

Professor: Out of my latest 9 accepted papers, 7 papers involved extensive MatLab calculations. Out of the 10 papers submitted or planned, 9 include MatLab calculations. In the worst case I would need to retrieve submitted papers. When I no longer have access to MatLab, I would be unable to make revisions in the calculations (if required by referees). Without MatLab my research productivity would go down by 80 percent for a considerable period of time.

Professor: My research would be severely impacted—in effect, rendered dead in the water—by the loss of Matlab. I use it to collect data. There is no other software on the market (that I am aware of) that allows me to do what is called “hardware-in-the-loop” experimental control so easily and for such a low cost (if you want more details on what this is I can give them to you). I then analyze all the resultant time series data with Matlab itself—so it’s all incredibly well integrated. I have written well over 100 analysis routines in Matlab. Losing Matlab, I would have to start programming them all from scratch in some other language. I’d estimate one solid year of my time to switch over, doing absolutely nothing else in the meantime

Professor: We use MatLab extensively in my lab. It is the primary tool we use for data analysis and some aspects of speech processing and synthesis. We use several free "toolkits" that are add-ons for crucial work, such as: 1. iLab: eye tracking analysis software, 2. eegLab: EEG/ERP analysis software, and 3. OXlearn: neural network simulation toolkit. Even the possibility of using the current version of MatLab 'forever' is not plausible. As MatLab is updated, these toolkits are also updated to take advantage of new features, optimization, etc. This usually means the toolkits become incompatible with older versions of MatLab.

Professor: Modern research in psychology relies very heavily on the computer. A computer is hardware and software. MatLab and SPSS are the primary software packages for running and analyzing experiments. Computers without these packages are like cars without gas. My own research would come to a screeching halt without MatLab. Period. There would be no experiments, no publications, and no funding opportunities.

Professor: I've just started using this one--had an undergrad working with me design 3 programs so far to do more detailed analyses of my eye-movement data. It's only just finished and already producing lovely time-course graphs of where the kids look when. For kiddie data, these are very cutting edge analyses, and I've been asked to write a paper for a developmental methods journal on these analyses--so in the limit, if we couldn't use the software any more, I wouldn't be able to continue analyzing my data this way. What a waste of resources--I've been paying this undergrad to write this program, for nothing?!! I conjecture that with these new programs, I could write approximately 5 papers with the data I already have (including the methods one), with more, of course, in the wings as I collect more data.

Professor: SPSS and MatLab are deeply embedded in our ongoing projects. Losing MatLab would essentially end 3-5 of these projects, and losing either MatLab or SPSS would severely hamper all of the others (perhaps 8-10 in total). I'd estimate that for us to switch to other packages would cost us about a year, on the assumption we could even find and pay for the substitutes. It would be devastating.

Professor: I use MatLab on an almost daily basis, mainly for research but also often for teaching. In particular, a major part of my research employs computational modeling. I use MatLab for over 90% of this work. The other major part of my research employs psychology laboratory experiments. I often also use MatLab for organizing and analyzing data from experiments (approximately 60% of this work would be severely hampered if MatLab were not available). Currently, I support 2 graduate students and 4 undergraduates who are working on independent projects. Roughly 70% of the computing work on these projects is MatLab-based.

Professor: MatLab is really crucial for my research because ALL my data analysis programs, as well as programs for some of my experiments, and some computer simulations are in MatLab. These programs were created by me, my students and my collaborators over many years. If to imagine (for a very dark second...) that I have to switch them all to another programming environment, it would mean that I must stop any experiments, stop processing of the existing data, and as consequence - stop writing papers and grant applications, but instead spend next year (or so ?) re-writing the programs. So, my (1) research productivity and (2) ability to obtain

external funding will be essentially knocked out for a long while. (3) graduate training will be also affected substantially, because of the above effect on my research.

**Comments from Faculty Members Regarding Their Ability to Obtain External Grant Funding Without MatLab Availability**

Professor : Writing grant proposals without MatLab would be as twice as difficult.

Professor : My NSF grant that I have would be severely impacted, as some of the most crucial experiments rely completely on MatLab, using the hardware-in-the-loop system

Professor : Every externally funded project in my lab utilizes at least two of these toolkits (among others). Without MatLab, we would have to find alternatives that would likely be much more expensive -- even assuming we could find CHRO-approved vendors. The consequences would be devastating, requiring vast amounts of time and money to develop new tools to replace our long-standing 'workhorses' within MatLab. For example, commercial alternatives to eegLab typically require *annual* license fees of \$2000-\$4000, and would require significant new training for me and my students.

Professor : Developing new analyses for looking at the autism data using MatLab was another big promise in my last grant proposal--if I couldn't follow through, I doubt I would get another renewal (5-year grant, \$1.3 million).

**Comments from faculty members regarding graduate training programs & undergraduate teaching without MatLab**

Professor : My teaching would be severely impacted. I use MatLab to generate visual and auditory demonstrations for PSYC 3501 (Sensation & Perception), and mathematical demonstrations for PSYC 2100WQ (Principles of Research). I use it daily in my graduate nonlinear dynamics seminar—it is an incredible teaching tool. The students use it with me in class for a truly hands-on learning experience. Again, finding a new platform would set me back incredibly in this regard.

Professor : In my graduate course on Connectionist Models (PSYC 5515), I employ a hands-on component where students are trained to conduct simulations of artificial neural networks. This training is an essential part of the course. Also, several of the course projects have turned into research projects resulting in one conference-presentation with several more expected, a paper in preparation, and important pilot data for a grant proposal that will likely be submitted in 2009. Similarly, many of my students use MatLab, and for a variety of purposes—certain kinds of data analysis, simulations of neural network models, and simulations of dynamical systems. It would be extremely difficult to find, acquire, and learn a substitute for MatLab—difficult to the point that I don't think it would be worth it. If we lose MatLab several of our graduate training programs would have to be overhauled, and significantly weakened as a consequence.

I use MatLab regularly for both teaching and research. There would be no point in doing these projects without the analytic tools available from MatLab or a comparable package. To

switch to a different package now would be costly in terms of the time to retrain all of the students (and me), to say nothing of the monetary and IT costs. Similarly, many of my students use MatLab, and for a variety of purposes--certain kinds of data analysis, simulations of neural network models, and simulations of dynamical systems. It would be extremely difficult to find, acquire, and learn a substitute for MatLab--difficult to the point that I don't think it would be worth it.

Professor : I teach a graduate course, Dynamics of Language and Cognition (PSYC 5564), which exposes students to the ideas behind and the formal methods of my field. This coming term (Spring, 2009) I have arranged to use MatLab as the central computing tool for this course (essentially 100% of the course). Losing this ability would essentially prohibit me from teaching this course in the future. Currently, I support 2 graduate students and 4 undergraduates who are working on independent projects. Roughly 70% of the computing work on these projects is MatLab-based.

I teach an undergraduate course, Psycholinguistics Laboratory (PSYC 3551W), in which students get hands-on practice in experimental design, analysis, and reporting. MatLab is not the central platform for this course, but I use it as an ancillary tool for data processing and simulation that cannot be handled by the other software tools (perhaps 15% of projects depend on MatLab support).

#### **Dissertations currently underway using MatLab**

Arzamarski, R. Learning and Attunement in Haptic Exploration

Ishenower, R. J. Toward an Ecological Theory of Emotion

Lopresti-Goodman, S. Phase Transitions in Functional Behaviors

Olmstead, A. Embodied language comprehension from the perspective of coordination dynamics.

Schultz, A. P. Cognition as a Dynamic, Self-organizing System

Silva, P. L. Coordination Dynamics and the Haptic Subsystem of Dynamic Touch

#### **Graduate Courses using MatLab**

(a) MATLAB in PSYC 353 (Introduction to non-linear dynamics), PSYC 360 (Advanced non-linear dynamics), PSYC 376 (Current Topics in Cognitive Systems: Applied time-series analyses), PSYC 376 (Current Topics in Cognitive Systems: Complex systems), PSYC 304 (any research involving time series, simulations, modeling).

(b) CESPA mini-course. Recurrence Quantification Analysis. Aaron Schultz taught faculty and graduate students basics of RQA as well as his new developments.

(c) CESPA mini-course. Intro to Programming. Nigel Stepp taught graduate students basics for setting up and analyzing experiments. He used MATLAB as the language of study.

**TAs**

MatLab is used in 297s with students whose dependent variables produce time series (any coordination, mouse-tracking, even response time distributions).

**Grants Reliant on MatLab****Funded**

CAN (Cure Autism Now) "Assessing Synchrony as a Basis for Social Connection in Autism," Kerry L. Marsh, PI (M, S)

NSF. (2004-2008) "The information for learning to act." Kay, B. A., PI. (Continuation)

NSF. (2002-2007) "Coordination dynamics." M. T. Turvey, PI. (Continuation)

NSF. (2006-2009) "Dynamics of representational change." Principal Investigator: J. Dixon. (M)

NSF. 2003-2007 "Informational Constraints on Interpersonal Coordination." Carol A. Fowler (PI), Kerry L. Marsh & Michael J. Richardson, Co-PIs. (M, S)

NSF. 2004-2007. "Affordances for Cooperation as a Dynamical System." Kerry L. Marsh (PI), Reuben M. Baron, Claudia Carello, & Michael J. Richardson, Co-PIs (M, S)

NIH. All Haskins speech grants use Matlab.

**Grant proposals in preparation or under review reliant on MatLab**

NIMH. (in preparation) "Implicit Condom Attitudes and Impulsive HIV-Risk Behavior in Virtual Contexts." Kerry L. Marsh (PI) (Based on UCRF internal grant). (S)

NIMH. (under review) "Implicit Attitudes and HIV Risk Behavior," Kerry L. Marsh (PI)

NIH. (in preparation). "Dynamic Touch in Clinical Populations" Claudia Carello, PI.

NSF. (in preparation) "Behavioral and cognitive systems." Marsh, K. L. (PI). Unfunded. To be revised for January 2009. (M, S)

NSF. (in preparation) "Time-scales, noise, and symmetry in self organizing. Frank, T. D. (PI) & Turvey M.T. (Co-PI). (M). Originally unfunded. To be revised for January 2009.

NSF. (in preparation). "Multifractality of categorization." J. Dixon (PI) & Damian Stephen (Co-PI). (M)

**Publications 2007-2008 dependent on MatLab****Published or in press research papers (42) reliant on MatLab**

Arzamarski, R., Harrison, S. J., Hajnal, A., & Michaels, C. M. (2007). Lateral ball interception: hand movements during linear ball trajectories. *Experimental Brain Research*, 177, 312-323. (M)

Chemero, A., & Turvey, M. T. (2008). Autonomy and hypersets. *Biosystems*, 91, 320-330. (M)

Fowler, C. A., Sramko, V., Ostry, D., Rowland, S. & Halle, P. (2008). Cross-language influences on the speech of French-English bilinguals. *Journal of Phonetics*, 36, 649-663. (M)

Fowler, C. A., Richardson, M. J., Marsh, K. L., & Shockley, K. (in press). Language use, coordination and the emergence of cooperative action. In A. Fuchs & Viktor Jirsa (Eds.), *Coordination: Neural, behavioral and social dynamics*. New York: Springer. (M)

Frank, T. D. (2008) Markov chains of nonlinear Markov processes and an application to a winner-takes-all model for social conformity. *Journal of Physics A*, 41, 282001-10. (M)

Frank, T. D. (2008) Nonlinear Markov processes: deterministic case. *Physics Letters A*, 372, 6235-6239. (M)

Frank, T. D. (2008). Nonlinear Markov processes. *Physics Letters A*, 372, 4553-4555. (M)

Frank, T. D., Mongkolsakulvong, S. (2008) A nonextensive thermostistical approach to the Haissinski theory of accelerator beams. *Physica A*, 387, 4828-4838. (M)

Frank, T. D., Richardson, M. J., Lopresti-Goodman, S. M., & Turvey, M. T. (in press). Order parameter dynamics of body-scaled hysteresis and mode transitions in grasping behavior. *Journal of Biological*

- Physics*. (M)
- Galantucci, B., Fowler, C. A., & Goldstein, L. (in press). Perceptuo-motor compatibility effects in speech. *Perception & Psychophysics*. (M, S)
- Gontijo, A. P., Mancini, M. C., Chagas, P., Sampaio, R., Silva, P. L., Fonseca, S. T. (2008). Use of neuromotor strategies by toddlers with down syndrome and toddlers with typical development during the acquisition of independent gain. *Human Movement Science*, 27, 610-621. (M,S)
- Goodman, J. R. L., Isenhower, R. W., Marsh, K. L., Schmidt, R. C., & Richardson, M. J. (2005). The interpersonal phase entrainment of rocking chair movements. In H. Heft & K. L. Marsh (Eds.), *Studies in Perception and Action VIII* (pp. 49-53). Mahwah, NJ: Erlbaum. (M, S)
- Hajnal, A., Fonseca, S., Kinsella-Shaw, J., Silva, P., Carello, C., & Turvey, M. T. (2007). Haptic selective attention by foot and by hand. *Neuroscience Letters*, 419, 5-9. (S)
- Hajnal, A., Isenhower, R. W., Harrison, S. J., & Michaels, C. F. (2005). An information-based account of lateral interception: Coupling of hand movements to optics in novel trajectories. In H. Heft & K. L. Marsh (Eds.), *Studies in Perception and Action, VIII* (pp. 136-138). Mahwah, NJ: Erlbaum. (M, S)
- Harrison, S. J., Lopresti-Goodman, S., Isenhower, R. W., Hajnal, A., & Kinsella-Shaw, J. (2005). Perceived heaviness with variation in rotational inertia and static moment. In H. Heft and & K. L. Marsh (Eds.), *Studies in Perception and Action, VIII* (pp. 103-106). Mahwah, NJ: Erlbaum. (S)
- Holden, J., Van Orden, G., & Turvey, M. T. (in press). Dispersion of response times reveals cognitive dynamics. *Psychological Review*. (M)
- Isenhower, R. W., Arzamarski, R., & Michaels, C. F. (2007). Grasped diameter and the information space for haptic length perception. In S. Cummins-Sebree, M. Riley, & K. Shockley (Eds.), *Studies in Perception & Action IX* (pp. 168-171), New York, NY: LEA. (M, S)
- Isenhower, R. W., Marsh, K. L., Carello, C., Baron, R. M., & Richardson, M. J. (2005). The specificity of intrapersonal and interpersonal affordance boundaries: Intrinsic versus extrinsic metrics. In H. Heft & K. L. Marsh (Eds.), *Studies in Perception and Action, VIII* (pp. 54-58). Mahwah, NJ: Erlbaum. (S)
- Kay, B., Rhodes, T. G., Hajnal, A., & Isenhower, R. W. (2005). Stability of coordination between upper and lower body rhythms during treadmill walking: Response to changes in walking speed. In H. Heft & K. L. Marsh (Eds.), *Studies in Perception and Action, VIII* (pp. 211-213). Mahwah, NJ: Erlbaum. (M,S)
- Lopresti-Goodman, S. M., Kallen, R. W., Richardson, M. J., Marsh, K. L., & Johnson, L. (in press). The influence of heightened body-awareness on walking through apertures. *Applied Cognitive Psychology*. (S)
- Lopresti-Goodman, S. M., Mancini, M., Schmidt, R. C., Kay, B., & Richardson, M. J. (2007). Comparing the attractor strength of intra- and interpersonal interlimb coordination. In Cummins-Sebree, S., Riley, M. A., & Shockley, K. (Eds.), *Studies in perception and action IX: Fourteenth International Conference on Perception and Action* (pp. 83-86). Mahwah, NJ: Lawrence Erlbaum Associates, Inc. (S,M)
- Lopresti-Goodman, S. M., Richardson, M. J., Baron, R. M., Carello, C., & Marsh, K. L. (in press). Task constraints on affordance boundaries. *Motor Control*. (S)
- Lopresti-Goodman, S. M., Richardson, M. J., Marsh, K. L., Carello, C., & Baron, R. M. (2007). Task constraints on affordance boundaries. In Cummins-Sebree, S., Riley, M. A., & Shockley, K. (Eds.), *Studies in perception and action IX: Fourteenth International Conference on Perception and Action* (pp. 218-221). Mahwah, NJ: Lawrence Erlbaum Associates, Inc. (S)
- Lopresti-Goodman, S. M., Richardson, M. J., Silva, P., & Schmidt, R. C. (2008). Period basin of entrainment for unintentional visual coordination. *Journal of Motor Behavior*, 40(1), 3-10 (S,M)
- Lopresti-Goodman, S. M., Richardson, M., Silva, P. L., & Schimdt, R. A. (2008) Period basin of entrainment for unintentional visual coordination *Journal of Motor Behavior*, 40. (M,S)
- Lukatela, G., Eaton, T., Moreno, M., & Turvey, M. T. (2007). Equivalent inter- and intra-modality long-term priming: Evidence for a common lexicon for words seen and words heard. *Memory & Cognition*, 35, 781-800. (S)

- Michaels, C.F., Arzamarski, R., Isenhower, R.W., & Jacobs, D. M. (2008). Direct learning in dynamic touch. *Journal of Experimental Psychology: Human Perception and Performance*, 34, 944-957. (M)
- Ocarino, J. M., Fonseca, S. T., Silva, P. L., Mancini, M. C., Goncalves, G. P. (2008). Alterations of stiffness and resting position of the elbow joint following flexors resistance training. *Manual Therapy*, 13, 411-418. (M,S)
- Rhodes, T. & Turvey, M. T. (2007). Human memory retrieval as Lévy foraging. *Physica A*, 385, 255-260. (M)
- Richardson, M. J., Lopresti-Goodman, S. M., Mancini, M., Kay, B., & Schmidt, R. C. (2008). Comparing the attractor strength and noise of intra- and interpersonal interlimb coordination using cross-recurrence analysis. *Neuroscience Letters*, 438, 340-345. (S,M)
- Richardson, M. J., Marsh, K. L., & Baron, R. M. (in press). Judging and actualizing intrapersonal and interpersonal affordances. *Journal of Experimental Psychology: Human Performance and Perception*. (M)
- Richardson, M. J., Marsh, K. L., Isenhower, R. W., Goodman, J. R. L., & Schmidt R. C. (2007). Rocking together: Dynamics of intentional and unintentional interpersonal coordination. *Human Movement Science*, 26, 867-891. (M, S)
- Richardson, M. J., Marsh, K. L., & Schmidt, R. C. (in press). Joint action. In L. Feldman Barrett, B. Mesquita, & E. Smith (Eds), *The mind in context*. New York: Guilford Press. (M)
- Silva, P. L., Fonseca, S. T., Ocarino, J. M., Mancini, M. C., Goncalves, G. P. (in press). Contribution of co-contraction and eccentric activity to the regulation of joint stiffness. *Journal of Motor Behavior*. (M, S)
- Silva, P. L., Moreno, M., Mancini, M. C., Fonseca, S. T., Turvey, M.T. (2007). Steady-state stress at one hand magnifies the amplitude, stiffness, and non-linearity of oscillatory behavior at the other hand. *Neuroscience Letters*, 429, 64-68. (M,S)
- Stephen, D. G., & Dixon, J. A. (2007). Fractality and the attunement of perceptual systems. In S. Cummins-Sebree, M. A. Riley, & K. Shockley (Eds.), *Studies in Perception and Action IX: Proceedings from the 14th International Conference on Perception and Action* (pp. 172-175). New York: Erlbaum. (M)
- Stephen, D. G., & Dixon, J. A. (in press). The self-organization of insight: Entropy and power laws in problem solving. *Journal of Problem Solving*. (Invited manuscript). (M)
- Stephen, D. G., Dixon, J. A., & Isenhower, R. W. (in press). Dynamics of representational change: Entropy, action, and cognition. *Journal of Experimental Psychology: Human Perception and Performance*. (M)
- Stephen, D. G., Stepp, N., Dixon, J. A., & Turvey, M. T. (2008). Strong anticipation: Sensitivity to long-range correlations in synchronization behavior. *Physica A*, 387, 5271-5278. (M)
- Stepp, N., & Turvey, M. T. (2008). Anticipating synchronization as an alternative to the internal model. *Behavioral and Brain Sciences*, 31, 216-217. (M)
- Turvey, M. T. (2007). Action and perception at the level of synergies. *Human Movement Science*, 26, 657-697. (M)
- Wagman, J., Carello, C., Schmidt, R. C., & Turvey, M. T. (in press). Is perceptual learning unimodular? *Ecological Psychology*. (M, S)

#### Research Papers under review or in preparation (29) manuscripts reliant on MatLab

- Arzamarski, R., Isenhower, R.W., Kay, B.A., Turvey, M.T., & Michaels, C. F. (revision under review). Effects of intention switching and feedback on attunement in dynamic touch. *Journal of Experimental Psychology: Human Perception and Performance*. (M)
- Boncoddo, R. A., Stephen, D. G , & Dixon, J. A. (in preparation). Dynamics of representational change in preschoolers. For the special issue "Complex Systems Approach to Cognitive Science" (D. G. Stephen & G. C. Van Orden, Eds.) in *Topics in Cognitive Science*. (M)

- Bonnet C.T., Kinsella-Shaw J.M., Frank T.D., Bubella D.J., Harrison S.J., & Turvey M.T. (under review). Deterministic and stochastic postural processes: effects of age, task, environment, *Journal of Motor Behavior*. (M)
- Dixon, J. A., Stephen, D. G., Boncoddò, R. A., & Anastas, J. (in preparation). Multifractality and dynamics of problem solving. For a forthcoming volume (B. Ross, Ed.) of *The Psychology of Learning and Motivation*. (M)
- Frank T. D. (under review). On the linear discrepancy model and risky shifts in group behaviour: a nonlinear Fokker-Planck perspective. *Journal of Physica A*. (M)
- Frank, T. D., Blau, J., Turvey, M. T. (under review). Nonlinear attractor dynamics in the fundamental and extended prism adaptation paradigm. *Physics Letters A*. (M)
- Harrison, S. J., Lopresti-Goodman, S. M., Isenhower, R. Hajnal, A., & Kinsella-Shaw, J. (in preparation). Perceived heaviness with variation in rotational inertia or static moment. (S)
- Isenhower, R. W., Richardson, M. J., Carello, C., Baron, R. M., & Marsh, K. L. (under review). Affording cooperation: Embodied constraints, dynamics, and action-scaled invariance in joint lifting. (S)
- Isenhower, R. W., Marsh, K. L., Richardson, M. J., Schultz, A. P., Helt, M., Verbalis, A. D., Schmidt, R. C. & Fein, D. (in preparation). Intrapersonal coordination in autistic and typically-developing children. (M, S)
- Jacobs, D. M., Silva, P. L., Yague, J. C. (under review). An empirical illustration and formalization of the theory of direct learning: the muscle-based perception of kinetic properties. *Ecological Psychology*. (M)
- Olmstead, A. J., Viswanathan, N., Aicher, K. A., & Fowler, C.A. (under review). Sentence comprehension and bimanual coordination: implications for embodied cognition. *Psychonomic Bulletin and Review*. (M, S)
- Olmstead, A. J., Viswanathan, N., Silva, P.L., & Fowler, C.A. (in prep) Embodied or embrained cognition? Examining accounts of embodied cognition. (M, S)
- Olmstead, A. J., & Fowler, C.A. (in prep) The effect of listener's comprehension on co-speech hand gestures. (M, S)
- Richardson, M. J., Marsh, K. L., Isenhower, R. W., Goodman, J. R. L., & Schmidt, R. C. (revision resubmitted). Rocking together: Dynamics of intentional and unintentional interpersonal coordination. *Acta Psychologica*. (M)
- Richardson, M. J., Marsh, K. L., & Schmidt, R. C. (in preparation). Informational and environmental constraints on joint action and interpersonal coordination. *Cognitive Science* {special issue: Joint Action}. (M)
- Romaniak-Gross, C. A., Isenhower, R. W., Arzamarski, R., Turvey, M. T. (in preparation). The role of haptic information and gait symmetry in reproducing distance traveled. (S)
- fl Schultz, A., & Michael Turvey (under review). In action-Based Recurrence Plots. *Physica D* (M)
- Schultz, A., & Whitney Tabor (under review). Response Time Distributions in Sentence Processing. *Journal of Memory and Language* (M)
- Schultz, A., Holden, J., & Carello, C. (in preparation). An experimental method to study cognition as a dynamic, self-organizing system. (M)
- Silva, P. L., Kinsella-Shaw, J. M., Harrison, S., Turvey, M. T., Carello, C. (under review). Perceiving object length by dynamic touch after stroke: A case study. (S)
- Stephen, D. G., Arzamarski, R., & Michaels, C. F. (in preparation). The role of fractality in perceptual learning: Exploration in dynamic touch. (M)
- Stephen, D. G., Boncoddò, R. A., Magnuson, J. S., & Dixon, J. A. (under review). The dynamics of insight: Phase transitions and entropy in mathematical discovery. (M)

- Stephen, D. G., Mirman, D., Magnuson, J. S., & Dixon, J. A. (under review). Lévy diffusion in spoken-language diffusion. (M)
- Stephen, D. G., Mirman, D., & Magnuson, J. S. (in preparation). Interaction dominance of cognition in visual tasks. (M)
- Stephen, D., Stepp, N., Dixon, J., & Turvey, M. T. (2008). Strong anticipation: Sensitivity to long-range correlations in synchronization behavior. *Physica A*. (M)
- Stepp, N., & Frank, T. (2008). A data-analysis method for decomposing synchronization variability of anticipatory systems into stochastic and deterministic components. *European Physics Journal*. (M)
- Stepp, N., & Turvey, M.T. (under review). On strong anticipation. *Cognitive Systems Research*. (M)

#### Research Presentations (57) Reliant on MatLab

- Arzamarski, R., Isenhower, R. W., Turvey, M. T., & Michaels, C. F. (2008, June). Style of exploration as a determinant of locus in information space. Poster presented at A Natural Physical Perspective on Perception-Action-Cognition, Storrs, CT. (M, S)
- Arzamarski, R., Isenhower, R. W., Turvey, M. T., & Michaels, C. F. (2007, July). Perceptual learning and information space: Local effect of feedback, nonlocal effect of intention. Paper presented at the 14th International Conference on Perception and Action, Yokohama, Japan. (M,S)
- Blau, J. J. C., Frank T. D., Turvey, M. T. (2008). Nonlinear attractor dynamics in prism adaptation and readaptation curves. Poster, International Conference on "A natural-physical perspective on perception-action-cognition," June 19-21, 2008, University of Connecticut, Storrs, USA. (M)
- Boncoddio, R. A., Stephen, D. G., & Dixon, J. A. (2007, August). Dynamics of representational change in preschoolers. Paper presented at the 2<sup>nd</sup> annual Workshop on Dynamics and Cognition at University of Connecticut, Storrs, CT. (M)
- Boncoddio, R. A., Stephen, D. G., & Dixon, J. A. (2008, May). Self-organization and embodiment: Evidence from preschoolers' problem solving. Poster session at the annual meeting of the Association for Psychological Science, Chicago, IL. (M)
- Bonnet, C. T., Frank, T. D., Carello, C., Turvey, M. T. (2008). Age-related changes in postural sway in visual conditions: Instability or adaptation? Oral presentation, Annual Meeting of the North American Society for the Psychology of Sport and Physical Activity (NASPSA), June 5-8. 2008, Niagara Falls, Canada. (M)
- Dixon, J. A., & Stephen, D. G. (2008, August). Thermodynamics of a developmental system. Paper presented at the 3rd annual Workshop for Dynamics and Cognition at University of Connecticut, Storrs, CT. (M)
- Fowler, C. A., Richardson, M. J., Marsh, K. L., & Shockley, K. (2007, February). *Language use, coordination, and the emergence of cooperative action*. Invited symposium to be presented at Coordination: Neural, Behavioral and Social Dynamics conference, Boca Raton, FL. (M)
- Frank T.D., & Blau, J. J. C., Prism adaptation: a dynamic systems approach. Invited oral presentation, 3rd UConn Workshop on cognition and dynamics, Aug 20-21, 2008, University of Connecticut, Storrs, USA. (M)
- Gifford, T., Frank T. D. (2008). Using delay variability to increase efficiency in dynamic performance for robot navigation. Poster, International Conference on "A natural-physical perspective on perception-action-cognition." June 19-21, 2008, University of Connecticut, Storrs, USA. (M)
- Isenhower, R. W. (2007, October). Intra- and Interpersonal Coordination in Autistic and Typically-Developing Children. Paper presented at the Developmental Brown-Bag, Department of Psychology, University of Connecticut, Storrs, CT. (M, S)
- Isenhower, R. W. (2008, November). Valenced Events: Preliminaries to an Ecological and Dynamical Approach to the Study of Emotion. Paper presented at the Emotion Interest Group, University of Connecticut, Storrs, CT. (M, S)

- Isenhower, R. W., Marsh, K. L., Richardson, M. J., & Schmidt, R. C. (2008, June). Intra- and interpersonal coordination in autistic and typically-developing children. Poster presented at A Natural Physical Perspective on Perception-Action-Cognition, Storrs, CT. (M, S)
- Isenhower, R. W., Marsh, K. L., Richardson, M. J., & Schmidt, R. C. (2007, July). Interpersonal coordination in autistic and typically-developing children. Paper presented at the 14<sup>th</sup> International Conference on Perception and Action, Yokohama, Japan. (M, S)
- Kay, B., & Silva, P. L. (2007). A Fully-Coupled Metronome/Actor System. *Motor Control*, v.11-supplement (Progress in Motor Control VI), S75. (M,S)
- Lopresti-Goodman, S. M. (2007). *Period basin of entrainment for unintentional coordination*. Paper presented at the New England Sequencing and Timing Conference, University of Connecticut, Storrs, CT. (S, M)
- Lopresti-Goodman, S. M. (2008). *Sequence, timing and cognitive constraints on affordance boundaries*. Paper presented at the New England Sequencing and Timing Conference, Haskins Laboratories, New Haven, CT. (S)
- Lopresti-Goodman, S. M., Muzzy, A., Richardson, M. J., & Marsh, K. L. (2006). *Sequence, perturbations and perceived affordance boundaries*. Poster presented at the International Society of Ecological Psychology Conference. University of Cincinnati, Cincinnati, OH. (S)
- Lopresti-Goodman, S. M., Richardson, M. J., & Frank, T. D. (2008). *A model for understanding bifurcations and hysteresis in body scaled grasping transitions*. Poster presented at A Natural Physical Perspective on Perception-Action-Cognition Conference. University of Connecticut, Storrs, CT. (M)
- Lopresti-Goodman, S. M., Richardson, M. J., Marsh, K. L., Carello, C., & Baron, R. M. (2008). *Task constraints on affordance boundaries*. Poster presented at A Natural Physical Perspective on Perception-Action-Cognition Conference. University of Connecticut, Storrs, CT. (S)
- Lopresti-Goodman, S. M., Richardson, M. J., Silva, P. L., & Schmidt, R. C. (2007). The role of Period Differences on the Emergence of Unintentional Visual Coordination. *Motor Control*, 11-supplement (Progress in Motor Control VI), S71-72. (M,S)
- Marsh, K. L., Isenhower, R. W., Richardson, M. J., Helt, M., Verbalis, A. D., Schmidt, R. C. & Fein, D. (in preparation). Pulled toward another?: Interpersonal coordination in autistic and typically-developing children. (M, S)
- Olmstead, A.J. (2008, August) Sentence comprehension and coordination dynamics: implications for embodied cognition. Paper presented at the 3<sup>rd</sup> UConn Workshop on Cognition and Dynamics. (M)
- Olmstead, A. J., Viswanathan, N., Aicher, K.A., & Fowler, C.A. (2007, November). Sentence comprehension and bimanual coordination: implications for embodied cognition. Poster presented at the 48th annual meeting of the Psychonomic Society. (M)
- Olmstead, A. J., & Fowler, C. A. (2007, April) Hand gestures and storytelling: context effects. Poster presented at the 2<sup>nd</sup> Joint Action Meeting. (M)
- Olmstead, A. J. (2007, July) Effect of listener context on speaker's hand gestures in storytelling. Paper presented at the 14<sup>th</sup> International Conference on Perception and Action. (M)
- Olmstead, A. J., & Fowler, C.A. (2006, November) The effect of listener confusion on speakers' nonlinguistic communicative behavior. Poster presented at the 47<sup>th</sup> annual meeting of the Psychonomic Society. (M)
- Olmstead, A. J. (2008, Spring) Sentence comprehension and bimanual coordination: implications for embodied cognition. *Language & Cognition Lunch Talk*, Department of Psychology, University of Connecticut. (M)
- Olmstead, A. J. (2007, Spring) The effect of listener comprehension on speaker's hand gestures *Language & Cognition Lunch Talk*, Department of Psychology, University of Connecticut. (M)

- Petrusz, S. C., Stepp, N., Frank, T. D., Turvey, M. T. (2008). Conditional learning in bimanual coordination. Poster, International Conference on "A natural-physical perspective on perception-action-cognition," June 19-21, 2008, University of Connecticut, Storrs, USA. (M)
- Richardson, M. J., Marsh, K. L., & Schmidt, R. C. (2007, April). *Informational and environmental constraints on joint action and interpersonal coordination*. Invited talk in the 2<sup>nd</sup> Joint Action Meeting, Rutgers University at Newark, Newark, NJ. (M)
- Romaniak-Gross, C. A., Isenhower, R. W., Arzamarski, R., Harrison, S. J., & Turvey, M. T. (2007, July). Reproducing Distance Traversed: Role of Haptic Information and Gait Symmetry. Paper presented at the 14th International Conference on Perception and Action, Yokohama, Japan. (S)
- Schultz, A. P. (2004). Something Dynamical: Explaining positively skewed reaction times as the result of a self-organizing process. *Language and Cognition Brownbag*. (M)
- Schultz, A. P. (2006). Hierarchically Embedded Systems and Complexity. Perception Action Workshop. (M)
- fi Schultz, A. P. (2006). Recurrence quantification analysis and speech analysis. UConn Workshop on Cognition and Dynamics (M)
- fi Schultz, A. P. (2006). Recurrence Quantification Analysis of Speech. Poster presented at the 151st Meeting of the Acoustical Society of America (M)
- fi Schultz, A. P. (2007). Speech Analysis using Recurrence Quantification Analysis. Presentation to the Second International Workshop on Recurrence Plots. (M)
- Schultz, A. P. (2007). Using Surveys to Inform Pedagogy. North East Writing Center Association conference. (M)
- Schultz, A. P. (2008). An overview of recurrence plot analysis. Perception Action Workshop. (M)
- Silva, P. L., Mancini, M. C., Fonseca, S. T., Moreno, M., Turvey, M. T. (2007). Remote effects of a locally produced force on rhythmic movement dynamics. XIV International Conference on Perception and Action. Yokohama, Japan, July. (M, S)
- Silva, P. L., Mancini, M. C., Fonseca, S. T., Moreno, M., Turvey, M. T. (2007). How does steady state force production by one hand affect the oscillatory dynamics of the other? New England Sequencing and Timing Meeting (NEST), New Haven, CT. (M, S)
- Silva, P. L., Mancini, M. C., Moreno, M., Turvey, M. T. (2007). How does steady state force production by one hand affect the oscillatory dynamics of the other? *Motor Control*, v.11-supplement, Progress in Motor Control VI, 578-79. (M,S)
- Stephen, D. G. (2007, December). Dynamics of problem solving. Invited colloquium for the Workshop for Complexity, Cognition, and Coordination at University of Connecticut, Storrs, CT. (M)
- Stephen, D. G. (2007, December). Dynamics of problem solving. UConn Workshop on Cognition and Dynamics, University of Connecticut, Storrs, CT. (M)
- Stephen, D. G. (2007, February). Cognitive representation as a thermodynamic phenomenon. Invited colloquium, Perceptual-Motor Dynamics Lab at University of Cincinnati, Cincinnati, OH. (M)
- Stephen, D. G. (2007, January). Cognitive representation as a thermodynamic phenomenon. Perception-Action Workshop at University of Connecticut, Storrs, CT. (M)
- Stephen, D. G. (2008, July). Cognition as the breaking and reforming of constraints. Invited symposium paper presented at the 29th annual meeting of the International Congress of Psychology, Berlin, Germany. (M)
- Stephen, D. G., & Arzamarski, R. C. (2008, February). A nonlocal anatomy of error and learning. Perception-Action Workshop at University of Connecticut, Storrs, CT. (M)
- Stephen, D. G., Boncoddo, R. A., Dixon, J. A., & Magnuson, J. S. (2007, November). Cognitive dynamics from eye-movements: Representational change as a phase transition. Paper presented at the annual meeting of the Psychonomic Society, Long Beach, CA. (M)

- Stephen, D. G., & Dixon, J. A. (2007, July). Fractality and the attunement of perceptual systems. Poster session at the 14th biannual International Conference of Perception and Action, Yokohama, Japan. (M)
- Stephen, D. G., Mirman, D., Kukona, A. P., Magnuson, J. S., Rueckl, J., & Dixon, J. A. (2008, August). Scale-Invariant foraging at the vision-language interface. Paper presented at the 3rd annual Workshop on Dynamics and Cognition at University of Connecticut, Storrs, CT. (M)
- Stephen, D. G., Stepp, N., Dixon, J. A., & Turvey, M. T. (2007, August). Strong anticipation strikes back: Data and more. Paper presented at the 2<sup>nd</sup> annual Workshop on Dynamics and Cognition at University of Connecticut, Storrs, CT. (M)
- Stephen, D. G., Sullivan, R. A., Dixon, J. A., & Isenhower, R. W. (2007, July). Dynamics in development: New structures through self-organization. Invited symposium paper presented at the 14<sup>th</sup> biannual International Conference of Perception and Action, Yokohama, Japan. (M)
- Stephen, D. G., Whitney, P. G., Green, J. A., Dixon, J. A. (2007, March). Dynamical organization of infant crying. Poster session presented at the biannual meeting of the Society for Research in Child Development, Boston, MA. (M)
- Stepp, N., & Turvey, M. (2007). Strong anticipation, weak anticipation, and ecological psychology. Conference Presentation. Yokohama, Japan. (M)
- Stepp, N. (2008). Strong Anticipation: Coordination with the Future. Symposium Presentation. Storrs, CT. (M)
- Stepp, N., & Frank, T. D. (2008) Data analysis method for determining stochastic and deterministic components of anticipatory systems. Poster presented to "A natural-physical perspective on perception-action-cognition," June 19-21, 2008, University of Connecticut, Storrs, USA. (M).

## SPSS

Software title, service or use: SPSS

Renewal Date: 7/4/09

Annual Renewal Cost: \$52,219.00

Department contact(s):

Impact to UConn:

Losing SPSS would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D and MSA students.
- retain tenure-track faculty.

SPSS is a statistical software package that is used heavily by nearly all researchers in the social sciences, and by many researchers in both the biological and physical sciences. For example, members of the Department of Psychology (i.e., faculty, graduate students, undergraduate students) in the College of Liberal Arts and Sciences rely heavily on SPSS to (1) maintain and increase research productivity, (2) obtain external funding and fulfill commitments to funding agencies, (3) teach and train graduate students and promote their careers as professional psychologists, and (4) teach and train undergraduate students to make them competitive in today's job market and to increase their opportunities to further their educations beyond the BA/BS level.

**The impact of not having SPSS readily available to members of the Department of Psychology would be devastating in each of the above four domains.**

**(1) Research Productivity:** In 2007-2008, members of the Department of Psychology in the College of Liberal Arts and Sciences produced a total of 624 scholarly products, including one book, 17 chapters appearing in prestigious edited volumes, 157 research articles published in extremely competitive, high impact journals, 227 papers or posters presented at international, national or regional conferences, 146 research talks, twelve plenary or keynote address, and 28 "other" scholarly products. These scholarly products serve to advance the reputation of the Department of Psychology, the College, the University, and the State of Connecticut, and would have been quite impossible without the availability of SPSS as a data analysis tool. Psychology graduate students were represented in 288 of these research products, and 41 of these graduate students won prestigious, high competitive national research awards and/or fellowships in part as a result of their research productivity. Psychology undergraduate students were represented in 105 of these research products, which contributed in part to 19 students graduating "with Honors," 21 designated as "Babbidge Scholars," 32 as Phi Beta Kappa scholars, and 101 as New England scholars. Most of these undergraduate awards likely would not have occurred without having SPSS available to these students to facilitate their research.

**In short, the research productivity of faculty members, graduate students, and undergraduate students in the Department of Psychology would be severely diminished without the ready availability of SPSS as their statistical analysis tool (please see comments below by individual faculty members below).**

**(2) External Funding:** In FY08, members of the Department of Psychology in the College of Liberal Arts and Sciences had 59 active external grants with total costs of over \$11M dollars. Most recent rankings by the National Science Foundation show that UConn's Department of Psychology was ranked 5<sup>th</sup> (among 226 psychology departments) in terms of research expenditures. The Department of Psychology's external grants contributed over \$1.9M in recovered indirect costs to the University in FY08. Importantly, over 90% of these grants rely on the availability of SPSS to analyze grant related data, and involve a University of Connecticut commitment to our granting agencies to do so.

**Without the ready availability of SPSS, we likely would have to forfeit our existing federal grants and definitely be unlikely to obtain future grants from federal granting agencies (please see comments below by individual faculty members below).**

**(3) Graduate Student Teaching and Training:** The Department of Psychology in the College of Liberal Arts and Sciences currently has 155 graduate students enrolled in its graduate training programs. The Department graduates 30 Ph.D.s annually (more than any other unit in the University), and the future prospects and eventually success of these graduate students depend heavily on their ability to analyze data (i.e., SPSS). The present and future success of these graduate students will contribute to the reputation of the Department, the College and the University in terms of established rankings and likely future UConn Foundation contributions. SPSS is the major data analytic tool for our graduate students, and is presented to them in our two graduate courses required of all of our graduate students – Statistics 3115Q and Statistics 5105. Without the availability of SPSS, these graduate courses would not be available. Further, one of the Department of Psychology's strategic areas of growth is Quantitative

Research Methods. This growth area attracts many graduate students from several departments to enroll in the above two graduate courses, and in as many as five other advanced graduate courses that focus on the quantitative analysis of data (e.g., causal modeling, meta analysis, measurement and scaling, longitudinal data analysis, etc.). All of these graduate training courses rely heavily on the ready availability of SPSS. The annual research productivity of our graduate students, their success in obtaining prestigious first positions, and their ultimate success as professional psychologists, depends heavily on the ready availability of SPSS.

**Without SPSS, our graduate training program would be gutted, our graduate students would not be competitive in the current job market, and their ultimate success as professional psychologists would be jeopardized (please see comments below by individual faculty members below).**

**(4) Undergraduate Student Teaching and Training:** The Department of Psychology awards approximately 340 BA/BS degrees each year, has the largest number of undergraduate majors (about 1400) of any unit in the University, and involves approximately 480 undergraduates in individualized research projects each year. Psychology is a research oriented department, and we expect our undergraduate students to be sophisticated in data analysis techniques and to be continuously engaged in the research process during their undergraduate careers. For example, the only required course for Psychology majors is Psychology 2100WQ, which fulfills the GEOC requirement of a "W" course in the major enrolls about 400 undergraduates annually. Subsequent advanced laboratory courses which we offer to our majors (in nine different research areas) each depend heavily on the availability of SPSS as a research tool, and enroll about 100 undergraduates annually. Over 60% of our psychology majors state that they intend to pursue an advanced degree upon graduation, and their ability to do so depends on their training in and ability to use SPSS as a data analysis tool.

**Fulfilling the above GEOC requirement, fulfilling the department's research expectations for our majors, and insuring the eventual success of our undergraduate majors in professional careers and the advancement of their education beyond the BA/BS degree would be impossible without the ready availability of SPSS (please see comments below by individual faculty members below).**

#### **COMMENTS BY FACULTY MEMBERS**

##### **(1) Relevant to Research Productivity**

Professor : Is it possible to carry out statistical analyses without benefit of SPSS. Yes, it is possible, it has always been possible (SAS, R, Systat, etc are alternative statistical software packages -- of course many of them would run into exactly the same problems as SPSS with the state). I think that one thing we need to keep in mind is this: Our department, our faculty, and our students need access to statistical analysis software that handles a variety of different data management and data analysis needs. Without that basic tool, our instruction and our research will be seriously damaged. So the question is not "can we live without a large, flexible, multipurpose statistical analysis software package?" (the answer to that is simple: NO, we cannot) The question is whether there are viable alternatives to something like SPSS, and whether those alternatives meet the criteria set by CHRO (or by the legislation that has prompted CHROs determinations).

Professor (Stamford Regional Campus): I can't imagine doing any research without SPSS. What would people use, Excel?!!!!!!! Or maybe we could just do ANOVA's by hand - I think I remember how to use a slide rule - Maybe we could teach the slide rule in the research methods course - abacus, too.

Professor : I'll focus my comments on SPSS. For me, the possibility of losing SPSS is almost as bad as the possibility of losing Microsoft Word or Excel. SPSS is a utility that I have used on every research project I have ever worked on to analyze data. No other statistics package is as comprehensive and user-friendly, and to compensating for losing this program would likely necessitate piecing together analytical tools in several other statistical packages. Obviously, such stats-packaging patchwork ends up being more costly than purchasing SPSS outright, so losing SPSS would essentially amount to requiring me to do nearly all data analysis by hand. I would estimate that analyses that before would take me 1-2 days to do in SPSS would take me 3-4 weeks to do without it. Moreover, this would practically preclude collaborating with colleagues outside of the University, who also use SPSS as their primary statistics tool. Sharing datasets would essentially require asking these colleagues to convert SPSS files into text files. From the perspective of colleagues at other universities, working with me and my limited technology might be more trouble than it would be worth. Given that SPSS is such a powerful tool for many in the social sciences, I can only imagine the reputation UConn would get in the academic community for pulling such an essential tool out of researchers hands, and, beyond the considerably lengthened time span, I am sure that such a reputation would affect considerations for grants. If losing SPSS is being put on the table, I hope the administration is also considering relaxing tenure requirements for pre-tenure faculty. If you take away workers' backhoes and leave only shovels, you shouldn't be shocked when they dig less.

Professor : SPSS (and SAS) are the main statistical packages used in the behavioral sciences (including Psychology departments). Basically, SPSS allows us to communicate our research findings with our colleagues and the public at large. All of my current datasets are analyzed using SPSS. Losing SPSS would significantly impact research productivity, including scholarly products such as conference presentations, empirical articles, and grant funding. All of my graduate and undergraduate students also use SPSS. Losing SPSS would impair the training of our graduate students, especially in the clinical division, as well as the research training of our undergraduates in our undergraduate research courses and in our research labs. BTW: The majority of other state and private universities utilize SPSS, so losing it would not only decrease our ability to communicate with other researchers but might also dampen collaborations as well.

Professor : I would simply be unable to continue my research without access to SPSS. SPSS is analytic software that is critical for ongoing work. There are lengthy routines and scripts that have been written to support research activities; recreating these in a new program would be prohibitively costly (requiring access to a programmer, the likes of which we don't have in our department), in the case of SPSS. I can't provide a dollar figure; just that the University's

investment in me, as a researcher, would be useless if I can't have access to SPSS. This is just crazy

Professor : I heard with great dismay about the possible loss of SPSS to our department. The consequences of this are hard to compass. Personally, I am not sure how my entire research program (with two large current NIH grants) would be able to proceed. I know that my last 10 years or so of publications, which allowed me to receive these grants, would not have been possible if the department had not supported SPSS, and trained the graduate students in its use in their statistics courses so that they could perform the analyses for our many presentations, publications, theses, and dissertations. If we lose this capacity, this will cost us dearly, both in terms of research productivity, and grant dollars, way beyond the actual cost of SPSS to maintain and support. It will also make our students much less competitive on the academic job market, and make it harder for us to attract good graduate students. And this is not even discussing any impact on the undergraduate program. I sincerely hope this possibility is reversed before it becomes a reality.

Professor : Losing SPSS is obviously a huge problem. I almost can't believe that this is possible and that we have to respond to it in such a harried fashion. Losing SPSS would severely hamper my research productivity, as I use this software nearly every week of the year. And, in certain periods, I use this software every day of every week.

Professor : Without access to SPSS, I simply cannot do my research. All my data and syntax files are in SPSS. I do have files for LISREL and HLM. But, those are specialty programs. Basic and advanced, nuts and bolts, programming extensions, all are grounded in SPSS files.

Professor : Modern research in psychology relies very heavily on the computer. A computer is hardware and software. Matlab and SPSS are the primary software packages for running and analyzing experiments. Computers without these packages are like cars without gas. My own research would come to a screeching halt without Matlab. Period. There would be no experiments, no publications, no funding opportunities.

Professor : In a time of budget crisis, abandoning (or, at least, postponing or easing) the CHRO mandatory nondiscrimination clause is one area that could save the state thousands of dollars. It's not just that our research efforts will be seriously -- and negatively -- affected by the loss of products like SPSS, but that literally hundreds of hours are spent negotiating contracts for the University to meet this state-imposed requirement. Although I absolutely appreciate nondiscrimination efforts, the CHRO clause requires out-of-state vendors to demonstrate equal policy as the State of CT. We're talking \*policy\* ... the kind of thing that has to have board-level approval, etc. I seriously believe that this is one very simple change that the state could make and that would save thousands of dollars. More to your point on how the loss of SPSS would affect my own research efforts. I would estimate that about 95% of the analyses from my research lab are conducted using SPSS. My research lab is one of the labs noted in our NIOSH-supported training grant in Occupational Health Psychology. If I am unable to adequately train my doctoral students in OHP, I do not believe that we can ethically continue to accept the NIOSH funding for this training grant. I realize that the dollar amount for training grants is

minute compared to other research grants. However, I would note that the NIOSH training grant has absolutely led to UConn's involvement in the NIOSH-supported Center grant (Center for the Promotion of Health in the New England Workplace, CPH-NEW), as well as Janet Barnes-Farrell's involvement in her MSD/aging grant. Clearly, such collaborative efforts would be jeopardized with less-than-adequate training on the part of our doctoral students.

Professor : In terms of research, we have several ongoing projects in which data is maintained and analyzed using SPSS. Without exaggeration, I use SPSS probably at least 3 days a week. My students use it weekly. I'm not sure how we would publish or present findings without being able to analyze data to actually get findings? As somebody who does a lot of complex analyses with longitudinal techniques and structural equation modeling, I do require the latest versions of spss. These "sophisticated" techniques are becoming increasingly necessary to publish in top journals that focus on developmental psychopathology, so not having access to programs that handle complex analyses would also "lower" the quality of journals we could publish in. Reduced publications obviously has a negative impact on individual faculty, department ratings, and our ability to get grants. So, there's my two cents. I know I am a closet stats geek, but I truly can't imagine being at a university where there is no access to major statistical programs. It seems like a fundamental necessity of psychology departments at any research university--like having a photocopier or email.

Professor : I use SPSS for all correlations/regressions for my research. So losing this program would make me unable to figure out, for example, what aspects of autistic kids' behavior at time1 predicts their behavior in the future. Of course, I could, I suppose, change to SAS but first off, I don't 'know' SAS (necessitating time away from thinking about research just to learn the program) and second, from what I gather, SAS is inherently more time-consuming such that I couldn't just sit down and do 'quick-and-dirty' partial correlations to see what is predicting what without a lot of extra prep time. So I conjecture that my productivity would be slowed by about 1 paper/year.

Professor : I could not do any of my research if I could not run SPSS. I often collect several hundred cases per experiment and it is not tenable to analyze such data with excel or minitab, for example. SPSS does a mixed-models analysis that replaces SOREMO and HLM. It would set me back a year if I had to switch to some other program, and I have scores of programs of SPSS code I have written that would be unreadable without a license

Professor (Waterbury Regional Campus): My research lab uses SPSS software for 3 current research projects, and will continue to use SPSS software in foreseeable future research projects. One project underway involves 1500 school children in the Wolcott school district in conjunction with the Waterbury regional campus. Losing SPSS would negatively impact my longitudinal research project at this branch campus and in the Waterbury school district. The loss of this research and SPSS will also negatively impact my 4 graduate students, 3 of which are currently conducting their doctoral dissertations, and 1 of which is currently conducting her master's thesis. They complete their degrees at the Storrs campus. The loss of this program will severely impact their ability to complete their degrees in a timely manner.

Professor : Losing SPSS would seriously hamper my research. It is the primary stats package that I use. A number of longitudinal data bases and analytic projects are reliant on it. Manuscripts in preparation, in review, and in the revision phase all have been completed in SPSS - losing it would disrupt progress on these papers. In addition, I collaborate with colleagues from other universities - always using SPSS - so not having this any longer would interfere with this work.

## **(2) Relevant to External Grant Funding**

Professor : I use SPSS every day. I use it for every empirical research project I conduct, including unfunded projects, IPAC projects, and externally supported research grants and contracts. Currently the IRB has over 20 active projects with me listed as the PI; data analysis for all of them would come to a halt if we lost our SPSS license. This includes projects supported by IBM, the Volpe Transportation Center, the Federal Railroad Administration, NIOSH, and the National Society of Black Engineers. I would not be in a position to provide the deliverables that were promised in the contracts and would have to backtrack, locate and purchase alternative software, learn how to use it, transfer data sets, etc. I can't speak for the rest of the Psychology Department, but I can speak for the I/O Division on this: Every faculty member in the I/O Division uses SPSS as an important tool in their data analysis toolbag.

Professor : The Center for Promotion of Health in the New England Workplace, one of three federally-supported (NIOSH, CDC, DHHS) centers for research excellence, requires analysis of survey data with SPSS. Survey analysis work currently fully supports one graduate student (20 hrs/wk) and partially supports another (5 hrs/wk RA). Loss of SPSS could result in the loss of support for both students.

Professor : Losing SPSS would hurt my ability to obtain external grant funding, as I would have to include costly individual licenses and support as part of the proposed budget. This would inflate the budget in ways that other researchers could avoid. In fact, including such expenses in a budget may lead the reviewers and/or funding agency to wonder what sort of institution does not provide statistical software and support to its researchers.

Professor : Note that Professor David Kenny and I teach a summer workshop (DATIC Structural Equation Modeling) that is attended by people from across the country and abroad (grad students, post docs, faculty, professionals in other fields). This course requires SPSS and AMOS. Without these programs, we would not be able to hold these nationally attended workshops anymore.

Professor : In my most recent grant (5 years, began funding 7/1/09, \$1.3 million), these regressions (and my promise to carry them out) played a huge role. If I couldn't do them, my future with this funding would be suspect.

Professor : I have a current NSF grant for which computers and statistical software were part of the promised facilities. Thus, it might break a grant contract if that support were taken away.

**(3) Relevant to Graduate Education and Training**

Professor : Do our graduate students need access to SPSS? Absolutely. Skill in conducting data analysis using SPSS (and AMOS, which is bundled with SPSS) is ASSUMED by employers in our field. Students need to use SPSS to conduct their own research, they need to use SPSS/AMOS in their coursework as they are learning about multivariate data analysis procedures, and they need to develop proficiency in writing SPSS syntax (a proficiency that our students quickly put to use when they are hired for internships and postdoctoral positions). Our students would be at a serious disadvantage if they did not have access to this software resource during their studies here. Furthermore, students who are being recruited to our graduate program would be seriously UNimpressed if they were informed that they would NOT have access to SPSS if they came to UConn to study. (I think it would be informative to do a quick survey of all research universities in the US and find out if there is even ONE that does not have some kind of licensing agreement to provide access to SPSS. My guess is that the number is very close to zero; that how basic SPSS is to data analysis in the social sciences.

Professor : Perhaps the only more absurd thing than doing my research without SPSS would be teaching my class on graduate level statistics without SPSS. As would be the case with my own research, losing SPSS would also mean students would be forced to complete nearly all of their analyses in this course by hand. I certainly realize that there is educational merit being able to perform analyses by hand so that students understand the workings within the "black box" of the program—this is why I build in some problem sets to be done by hand. However, to ask students to complete all analyses in the class by hand simply occupies so much of students time "plugging and chugging" in formulas as to preclude greater understanding of more complex statistics that are necessary to train these graduate students as not only sophisticated but purely competent readers and producers of research. Covering the same material in an SPSS-free course would essentially require my class to be expanded into a two-semester sequence, and I can only dread the headaches it would cause to penalize students who become sidetracked when they forget to "carry a 1" on an assignment.

Professor : Our STAT 3115Q course should make students familiar with SPSS. SPSS provides all the analysis tools that they need. Other STATs programs cannot compare with SPSS. Teaching STAT 3115Q without SPSS would become more difficult (Frank). In their future jobs, our graduate students will most likely be asked to use SPSS. The chance of students to find a job will be lower if our department does not teach them in SPSS.

Professor : Our federally-funded (NIOSH, CDC, DHHS) graduate training program in occupational health psychology depends on the availability of SPSS in our laboratories in the Industrial/Organizational Division. SPSS was listed as one resource that would be available for trainees. Our training grant ends in June 2010, and loss of adequate laboratory resources could jeopardize its renewal. All three of my graduate students depend on SPSS for their thesis and dissertation research.

Professor : Losing SPSS would devastate our graduate training programs (i.e., graduate courses and graduate student research). Students must use this software to conduct their research and to

complete required coursework. Requiring students to purchase their own software and support would put us at a competitive disadvantage in recruitment of new students. It would also give existing students and undue financial burden during a period where our financial support of them is likely to contract.

Professor : I use SPSS in my graduate research methods course. Being able to conduct data analysis is an essential skill for doctoral students in psychology. Several weeks of the class focus on using SPSS for specific applications related to improving the quality of students research (e.g., preliminary data analysis, assessing psychometric properties). Students do not learn this material in any other course since the stats courses focus more on mathematics. The quality of grad student research in the clinical division would be significantly impacted without access to SPSS in this course. Although some students may continue to have access to the latest versions of SPSS in their lab, other students would not. This creates additional discrepancies in the resources available to students. In my experience at other universities, differences in students' access to needed resources impacts the graduate school culture in an overtly negative way (e.g., less collaborative efforts between students, more dropping out, more negative comments to potential incoming students we are trying to recruit, etc).

Professor : New courses would need to be developed to teach other statistical software programs, as most grad students come in with some knowledge of SPSS already. Right now, with SPSS, I can ask my grad students to do their stats themselves, and know that they will be done correctly.

Professor : All my graduate students are mentored in how to analyze their data using SPSS. I don't think we can pretend that graduate students in psychology do not need a high-level flexible data analysis package and SPSS is certainly the most common one in use in our department. A few people use SAS. I haven't heard of anyone here using BMDP.

#### **(4) Relevant to Undergraduate Teaching and Training**

Professor : I teach an advanced undergraduate course (PSYC 3600) in which students conduct empirical research projects. We rely on SPSS for data analysis, and one of the skills that students acquire is the ability to conduct and interpret data analyses using SPSS. Also, students who enroll in PSYC 3889 with me generally learn about using SPSS for database management and data analysis. Developing those skills is something that they are able to proudly claim on their applications to graduate school, and it is something that graduate admissions committees pay attention to (Barnes-Farrell).

Professor, Waterbury Regional Campus: SPSS is critical for Psychology 2100WQ in all of its aspects. I also use SPSS for both teaching and research. The program and its updates cannot be allowed to lapse, period.

Professor: As a professor of research-related classes at the undergraduate and graduate level, the loss of SPSS would be dramatic. I use SPSS in PSYC 2100WQ to teach statistics/research methods to the undergraduate course. As you highlight, the research projects/poster night would not be possible without student access to SPSS. Perhaps as important, students training

in SPSS in PSYC 2100WQ is a bridge to other research experiences--it gives them "skills" to be useful in joining faculty labs and is also something that they write about in their applications to graduate school. I think many graduate schools would not consider a student without some experience with SPSS. I know we here at UConn usually do not. Thus, there would likely be a real impact to undergrads who want to attend grad school.

Professor: I use SPSS with my lab in developmental course--I rely on the undergrads (15+/year) having had the intro to SPSS in 2100WQ; then they get more experience using SPSS to analyze their developmental-kiddie data. There is no way, in the amount of time we have, that they could acquire enough knowledge of SAS to use that software correctly. Result? They could collect data, but wouldn't get the experience of actually analyzing it, trying out various different tests, etc. So they wouldn't really know their data and that produces a travesty of science.

Professor: I have about 19 students taking the social psychology lab course (psych 3750) use it each year to analyze their data. I haven't used minitab since I was an undergraduate. It would be impossible for me, this spring, to do the graduate advising that I must (1 student I am chairing who will defend and 3 others defending for whom I am a committee member) while finding how to do this undergraduate teaching in some other venue.

Professor: I use both SPSS and Matlab regularly for both teaching and research. In the advanced undergraduate Lab in Cognition course (PSYC 3550W), we use both Matlab and SPSS for data analysis. I could not run the course as I do (with students designing experiments, collecting and then analyzing data) without software of this sort, and SPSS is particularly useful because we students already know it from PSYC 2100. In individualized research courses (PSYC 3889 and PSYC 3899), virtually of the students who take an independent research course with me use SPSS for data analysis. There would be no point in doing these projects without the analytic tools available from SPSS or a comparable package. To switch to a different package now would be costly in terms of the time to retrain all of the students (and me), to say nothing of the monetary and IT costs.

Professor, Stamford Regional Campus: I'm sure I would only repeat what others have said, but I think another thing to add is the negative impact on the careers of students who do not choose psychology as a profession but rather who will end up using SPSS in a corporate setting. I have several students over the years who have advanced their careers in marketing and advertising because of their ability to use SPSS and understand the statistics. It's a real resume builder. The negative impact on a course like PSYC2100Q goes without saying, but I use SPSS to demonstrate the application of statistics in my PSYC 1100, PSYC 1103, PSYC 2301, PSYC 2501, and PSYC 3550 courses. The facility with which one can illustrate data analysis makes SPSS an ideal educational tool, not to mention an essential tool for our method of research.

Professor, Waterbury Regional Campus: My undergraduate research assistants will be negatively impacted, affecting approximately 10 undergraduates a year at both the Waterbury and Storrs campuses. Undergraduate psychology majors, one of which each year is usually an Honors student, will not be able to complete their senior independent research projects, nor assist in my research. As I am the main researcher at the Waterbury campus, the loss of SPSS

will basically shut down access to research at the Waterbury campus for all psychology majors. I will also speak briefly of the critical importance of SPSS to the Research Methods Course at Waterbury and Torrington in case my colleagues are unable to respond. Jared Look teaches the Research Methods Course approximately once per year in the fall semester or summer session at the Waterbury campus to 19 students. This is the psychology majors' only access to a research methods course at Waterbury, and the inability to use SPSS will severely hamper this course, as well as the Waterbury Research Poster Session held at the end of the course for the whole Waterbury campus. \_\_\_\_\_ teaches Research Methods at the Torrington campus to 19 students. Similar negative impact will result to this course for psychology majors at the Torrington campus, as this is their only access to research at this regional campus, as well as to the Torrington Research Poster Session.

## Novell

Software title, service or use: Novell

Renewal Date: July 31, 2009

Annual Renewal Cost: \$7,673.50

Department contact(s): (Psychology)

Impact to UConn: The snapshot below is hardly a complete picture of the Psychology Department nor does it adequately present the dynamic nature of the environment where teaching, research and publication are essentially intertwined activities requiring active and flexible collaboration between faculty, staff, graduate students and undergraduates.

Most of that collaboration is enabled by products we rely on from Novell. We have been successfully using its directory services capabilities to authenticate and control access to computers and network space far longer than Microsoft has had a directory. An element we rely on daily allows our faculty, staff and graduate students the capability to manage controlled access to their network space for collaborative purposes. That space adds up to terabytes and is accessible across the internet via common protocols (i.e., sftp, ssh, CIFS, webDAV, AFP, etc.) or, in many cases, limited to only one computer and specific days and times of the week. It allows for the creation and/or editing of documents without worry of deletion unless that is also a desired capability. File storage is only one service, albeit an important one, provided through Novell. Printing to network printers is also provided with quota capabilities and automatic print driver configuration. EMail has always played a major part in collaborative efforts. When the University provided EMail proves unable to provide the service level needed for many research projects (e.g. space, multiple users, etc.), the EMail server provided by Novell and integrated with eDirectory is used and is available with minimal delay. These are all ways in which Novell effectively enables collaboration and extends productivity.

The same Novell package also provides authenticated access to workstations on the network using the same credentials used for server access. It provides, via ZenWorks, workstation remote control, remote

application installation, and a HelpDesk utility for users. Given the dispersed nature of our users, the remote capabilities are especially appreciated on the administrative side.

Novell also provides SUSE, a supported Linux server, required and utilized in many of our research projects where protocol requires a Linux environment. The directory services provided by Novell extend to allow user management on the Linux servers.

Could the above services be provided without Novell products? Absolutely. Microsoft Active Directory and servers could be used to provide the file server environment and is already used to some extent in our department. Unfortunately, Microsoft is on the same list of companies that we are not likely to be able to purchase software or services from. Additionally, it has not provided anywhere near the same level of trouble-free platform independent access that Novell has. The latter is an important issue when 45% of collaborator workstations are not of Microsoft origin. It also would not allow management as Novell does by other users. That is an extremely important capability missing to a large extent with a Microsoft solution

We could use Red Hat as a replacement for required Linux servers. It would not integrate into a Microsoft Active Directory as it does with eDirectory. That is a problem when multiple faculty, graduate student and undergraduates require access.

We could, and do, use Microsoft WSUS for patch support on Microsoft Windows computers. Unfortunately, it was not designed, or intended, to allow remote application installation and configuration. Novell ZenWorks is designed to do just that in addition to remote control and is used heavily to manage our classroom environment. We could use Microsoft Active Directory and associated policies to approximate the remote application installation capabilities of ZenWorks but it would lack HelpDesk and remote control capabilities. The remote control/HelpDesk recently purchased by UITS (NTR) could fill that gap.

Even if we could dismantle what has taken years to develop and recreate it using other products, the effort would require significant manpower and time and, at the end of the day, would still require prohibited products on the same list as Novell. Any possible migration would assuredly consume huge resources during a time when resources are not to be found and result in a more complex and costly environment to manage while providing less effective collaboration.

Department info: 2007-08

**Personnel:** 212 member department NOT including 155 active graduate students  
**Enrollments:** 1408  
 Psychology undergraduate majors

10958 undergraduate enrollments (2,327 Psyc1100, 456 Psyc2100, 4,746 upper level)  
**Scholarly Productivity (Faculty):** 624 scholarly products; 157 published articles in refereed journals or conference proceedings; 227 papers or posters at international, national, regional and local conferences; gave 146 invited talks, colloquia or symposia presentations; delivered 12 plenary or keynote addresses, and produced 28 other scholarly products (i.e., non-refereed articles, student manuals, long software programs, technical reports, reviews, and miscellaneous publications).  
 (>12/tenure track faculty member n=50).

**Scholarly Productivity (Graduate Students):** 155 active Our graduate students appeared 123 times as co-authors on books or refereed journal articles, and 265 times as sole or co-presenters of papers, posters, or symposia at regional national or international professional meetings. There was involvement in a total of 338 research products.

**Scholarly Productivity (Undergraduate):** Undergraduate students in Psychology 1100 conduct informal experiments as well as participate in actual research experiments. Undergraduate engagement in research is the centerpiece of our Psychology 2100WQ course, where approximately 400 students conduct research projects and present their research at two research poster sessions. Almost 500 undergraduate students took higher level individualized research courses in Psychology, with a resulting 105 research products involving them. Of that number 22 received University or national research awards, 18 presented their own research at local, regional or national conferences and an additional 62 appeared as co-authors on refereed journal articles or as co-presenters on papers or posters given at regional or national conferences. And this is from undergraduates, not Graduate students or faculty.

**Workshops:** Data Analysis Training of Connecticut (DATIC): This is a workshop series, presenting four separate five-day workshops that annually attracts over 70 social science researchers from around the world to Storrs.

**External Grants:** The most recent data from the National Science Foundation (FY06) ranked our department 5<sup>th</sup> in terms of total grant funding out of 550 departments of psychology in the US. In real dollar terms, in FY08, 16 different faculty were awarded 20 new externally funded grants with over \$5M in total costs. That represents slightly less than half the \$11+M attributable to our department.

## Aspen Technology

Software title, service or use: This software is used to manage computer clusters, including one housed in the Math Physics building.

Renewal Date: August 31, 2008

Annual Renewal Cost: \$2,000

Department contact(s):

**Impact to UConn:** This is managed by Prof. of the Department of Physics. Significant upgrades to the cluster itself and the cooling and electrical infrastructure in the facility are currently taking place to allow for grant-funded work by the Department of Statistics. The Statistics Department, in addition to its own research, provides statistical analysis to the UConn Health Center and others. Besides ongoing research, analysis and infrastructure investment, a significant amount of grant funding is at risk if this facility becomes inoperable. Important research would be disrupted or halted.

## Bloomberg (not exempted as of this date)

Software title, service or use: Bloomberg is a standard financial database available at all competitive business schools.

Renewal Date: Unable to renew, access discontinued, contract and CHRO certification currently under re-negotiation.

Annual Renewal Cost: \$18,000

Department contact:

Renewal Date: Multiple PO's are renewed throughout the year

Impact to UConn:

Bloomberg is one of the top 5 financial databases used in business today.

Because a Bloomberg terminal is unique, working knowledge of the command-based keyboard is important for those students planning to work on Wall Street or any sector of the financial industry. Employers seeking to fill finance positions requiring an MBA expect students to have Bloomberg working knowledge.

The business school has lost access to Bloomberg due to contract issues, including the CHRO. The Bloomberg terminal is brought into the classroom to use in teaching both MBA and undergrad classes. Students can watch and then later practice the steps traders follow to analyze a potential investment. Bloomberg is also used by students in the SMF and PHD students and faculty for research purposes. On occasion the terminal is used to obtain the data necessary for dissertations. The terminal provides access to many "hard to find" items such as credit default swaps (both current and historical), OTC bond prices (current and historical) etc. The terminal also provides access to various analytical routines and calculated variables. For example, in the MBS area, one can find current pricing current and historical prepayment experience for similar pools, predicted prepayment experience from all major Wall Street firms and an analytical tool that combines selected inputs and calculates future cash flows, durations, Z-spreads, option adjusted spreads etc. Learning to use these features requires more knowledge and skill than copying data from the screen and should make it clear why a terminal is required for MBA students.

In recent years, students have begun to be aware of the value industry places on some familiarity with tools like this and expect access to a wide range of databases, including Bloomberg.

Losing Bloomberg would result in the risk of being unable to

- publish in-progress work.
- attract new MBA and some Ph D students.
- continue state of the art teaching.
- attract new faculty, especially in accounting and finance.
- retain tenure-track faculty.

## Compustat (not exempted as of this date)

Software title, service or use: Standard and Poor's Compustat North America is a financial business databases accessed via the WRDS interface.

Renewal Date: August 1, 2008

Annual Renewal Cost: \$34,000

Department contact: (School of Business)

### Impact to UConn:

Compustat is used by several departments on campus and is essential for business Ph.D. candidates and research-active faculty. It is also used by other departments on campus including economics, engineering, and math and actuarial sciences. Compustat offers access to current and historical time series financial data and includes over 500 field tags.

Removing access to Compustat would immediately stall most of our Ph. D. candidates across several business school departments, including accounting and finance, who would be unable to finish their dissertations. Accessing Compustat at another school would be a punishable breach of contract. Faculty working papers and research-in-progress based on data from Compustat would halt or be suspended indefinitely unless the UConn faculty member can team up with someone at another university with access to Compustat. As Compustat is a critical database for several business departments granting Ph. Ds, without access UConn's Business School risks losing the recently acquired 2<sup>nd</sup> tier ranking in Business Week, and falling behind in our U.S. News and World Report ranking. Losing Compustat would inhibit the Business School's hiring abilities because tenure-track faculty must produce publishable research, which frequently involves analyzing data from Compustat. Prospective faculty actively seek universities with strong data sources. Faculty working on tenure may leave for universities with stronger resources. Aside from research use, Compustat is also used in the classroom for undergraduate and graduate classes in accounting and finance.

Losing Compustat would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D students.
- continue state of the art teaching.
- attract new faculty, especially in accounting and finance.
- retain tenure-track faculty.

## CRSP (not exempted as of this date)

Software title, service or use: CRSP is the leading provider of the most comprehensive US historical stock market databases to academic institutions and financial services firms.

Renewal Date: July 1, 2008

Annual Renewal Cost: \$9,700

Department contact:

Impact to UConn:

Faculty in the Business School rely on CRSP data for both research and education. CRSP's database of historical stock market data, US Treasury Bonds, Mutual Funds, and 10-K SEC Filings are the most comprehensive of its kind and is used extensively by Accounting and Finance faculty. Access to CRSP is required for students to successfully complete the Accounting Ph D or MSA (Master of Science in Accounting) programs. In addition, many faculty use CRSP heavily to conduct their research and publish. Losing CRSP would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D and MSA students.
- continue state of the art teaching.
- attract new faculty, especially in accounting and finance.
- retain tenure-track faculty.

## I/B/E/S (not exempted as of this date)

Software title, service or use: The Institutional Brokers Estimates System (I/B/E/S) provides consensus and detail forecasts from security analysts, including earnings per share, revenue, cash flow, long-term growth projections and stock recommendations.

Renewal Date: July 1, 2008

Annual Renewal Cost: \$13,500

Department contact:

Impact to UConn: I/B/E/S was the first (and remains the premier) supplier of earnings forecasts used by investment professionals globally. Current services include both current and historical forecast data, with access covering 45,000 companies in 70 markets. I/B/E/S data is critical for Business faculty, especially in the accounting and finance fields, to publish in premier journals, which in turn affects merit and tenure. In addition, graduate students also use I/B/E/S data in order to complete research required to earn their Ph D. Undergraduate students will also be affected, as faculty uses I/B/E/S to teach institutional investing and money management. Many business students will graduate without cutting

edge knowledge of their fields. The longer Business students and faculty are denied access to this service, the more negatively the future impact will be on alumni donations.

Losing I/B/E/S would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D students.
- continue state of the art teaching.
- attract new faculty, especially in accounting and finance.
- retain tenure-track faculty.

## Misys (Allscripts)

Software title, service or use: EMR (Electronic Medical Records) System, administration and financial operation of the Nayden Clinic

Renewal Date: May, 2009

Annual Renewal Cost: ~\$23,000.00

Department contacts:

### Background:

The Nayden Clinic was made possible by the generous donation of Mr. Dennis Nayden and Mrs. Britta Nayden, and was named in honor of Mrs. Nayden. The donation made it possible to renovate the former Fleet Bank office on 14 Dog Lane converting the building into a 2,000 sq ft. rehabilitation clinic. Our clients include students, faculty, staff and people from the community at large. The clinic is designed to become the cornerstone for educating and developing the skills of future Doctors of Physical Therapy (DPT). The clinic is structured to provide real time integration of didactic knowledge and laboratory learned psychomotor skills in an operational rehabilitation clinic. Physical therapy students, during their first, second and third years, work directly with our clinical faculty to utilize and expand upon skills learned in laboratory and throughout their didactic preparation.

For both legal and financial imperatives, the Nayden Clinic has been working for three years on a separation from the Windham Hospital and establishing itself an independent business operation and profit center. The Misys (Allscripts) EMR system is critical to replacing the business and financial services that can no longer be provided by the Hospital for a fee and it offers a significant reduction in these operating costs. Misys (Allscripts) provides a turnkey system that is compliant with all state and federal regulations related to privacy of personal and medical records as well as the University of Connecticut policies and procedures covering data privacy and financial operations.

Impact on UConn:

The EMR (Electronic Medical Records) System purchased from Misys (Allscripts) is mission critical software for the administration and operation of the Nayden Clinic, an integral part of the Physical Therapy Department in the Neag School of Education. This system is used to manage our all core business operations including patient scheduling, patient treatment records and all financial administration (billing, patient insurance filings and collections, accounting operations, etc.). In addition to the system also serves as a data repository for clinical research data for the Physical Therapy Department. Without this EMR system and the support and services provided by Misys (Allscripts) the Nayden Clinic would be unable to manage these core business and academic operations. To replace these systems would require well over a hundred and fifty thousand dollars and a year or more to accomplish.

The consequences of non-approval of the purchase orders and service contracts could have catastrophic consequences to the operations and mission(s) of the Nayden Clinic, the NSoE Physical Therapy Department, the Neag School of Education and the University of Connecticut. The forced abandonment of Misys (Allscripts) as a vendor will make the significant investment of both time and money to date a total loss. The clinic may have to significantly restrict or totally suspend operations while a vendor that is willing to comply with Connecticut General Statutes is found, contracted and the product is installed.

In addition, if a vendor willing to comply cannot be found and the clinic is forced to close:

- If the clinic were to close, it would represent over a \$2,000,000 loss to UConn the first year.
- Over one Million dollars will have been spent in the renovation, furnishing, and equipping the new facility to house the Nayden Clinic with a significant percentage written off as a loss. This space is fairly unique in its design and will require a rework at additional costs to be utilized for typical University use – classroom and/or office space.
- The Department of Physical Therapy will not have a clinic for academic training and research. This will significantly weaken that program in a fairly competitive market, and may result in the closing of that department, especially in these times of budget cuts.
- The Nayden Clinic has experienced significant growth over the past few years and is positioning itself to insure continued growth in customer base and financial strength, creating a positive cash flow for the University.
- 60% of the clinic's patients are from the University community. A reduction of the Nayden Clinic ability to treat patients will be a reduction of available services to UConn students, faculty and staff and will increase travel time and expenses for those patients.

Summary:

The financial and business operations of the Nayden Clinic are totally reliant on the services provided the EMR (Electronic Medical Records) System with projected annual revenues of \$750,000.00 and a positive cash flow to the University. The Misys (Allscripts) products and services are *equally as essential* to the operation of the Nayden Clinic and the Physical Therapy Department as Oracle is to the University. Equality of treatment should be extended to this product with regard to exemptions, etc.

as it is to any other mission critical software or service here at UConn, regardless of the size of the unit or population involved. The current financial forecasts for UConn, Connecticut and the United States continue to be pessimistic with predicted deficits across the boards. Yes, sacrifices have to be made, priorities need to be set, and laws may need to be amended and requirements waved to insure survival. Altruism may be a luxury that we can ill afford. Now is not the time to jeopardize any unit that is currently and can continue to operate independent of tuition support and ultimately create a positive cash flow for the clinic, the program and the University.

### WRDS Interface (not exempted as of this date)

Software title, service or use: The Wharton Data Research Service provides a uniform access point to numerous business databases

Renewal Date: July 1, 2008

Annual Renewal Cost: \$35,000

Department contact:

#### Impact to UConn:

WRDS is a premier service that provides UConn faculty and students online access to numerous business databases, including CRSP, Compustat, and I/B/E/S (below), as well as Global Insight, FDIC database files, IRRR, Federal Reserve Banks Reports, and Foreign Exchange Rate databases. These databases are used by students and faculty across the entire University, and are especially critical for Business faculty research and teaching. Losing access to WRDS would cause indefinite interruptions in research and cause some working papers not to get published. Students would not be able to complete deliverables expected in their courses. The entire course catalog for the Masters in Accounting has been structured around WRDS access after undergoing a rigorous process of instructional design. Redesigning these courses would come at a considerable cost to the Business School. In addition, WRDS access is standard among most top Business Schools, and removing this access would affect our ability to retain high quality prospective students. Our enrollments, our ranking among other business institutions, and possibly our accreditation status would be jeopardized.

Losing WRDS would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D students.
- continue state of the art teaching.
- attract new faculty, especially in accounting and finance.
- retain tenure-track faculty.

Losing SPSS would result in the risk of being unable to

- publish in-progress work.
- graduate current Ph D and MSA students.
- retain tenure-track faculty.

## Administrative Applications

### Oracle

Software title, service or use: Oracle provides UConn with Brio & PeopleSoft software as well as consulting services & upgrades

Renewal Date: Multiple PO's are renewed throughout the year; first renewal is June 30, 2009

Annual Renewal Cost: >\$2,870,000.00

Department contact:

#### Impact to UConn:

Oracle is essential to the ongoing administrative and academic operations, for technical support for several of our enterprise systems. These (enterprise) systems are used to manage our core business operations including Student data administration, financial data administration and Human Resource administration among others. Without these systems and the support of Oracle we would be unable to manage these core business and academic operations using automation. To replace these systems would require tens of millions of dollars and several years to accomplish.

#### **Student Administration**

Recently the University invested \$6M to upgrade its Student Information System to a new version. The primary reason for performing this upgrade was that the older version would no longer be supported by Oracle. This condition is an unacceptable one since we must maintain compliance with Financial Aid regulations and we must provide the ongoing updates to insure the security protection this support provides. In addition, this support resolves software "bugs" to address performance and usability issues with this system as these may arise. At time, these repairs may be absolutely critical to ongoing operations.

In addition to the critical software support need, there are ongoing requirements throughout the year for training staff on the new functions and techniques to be deployed.

The consequences of non-approval of the following purchase orders could have catastrophic consequences on activities pertaining to student administrative processing since the lack of support could make this system unusable to us.

The involved Purchase Orders include:

- Oracle Database Enterprise Addition

- Student Administration Annual Maintenance (3)
- Oracle/Hyperion Brio Site License
- Upgrade Training

The specific consequences of non-renewal could result in the following impact on our Student Administration systems and management functions:

- Inability of the University to Admit and Register students
- Inability to produce Transcripts, Class Rosters and produce grade reports
- Inability of faculty and advisors to advise students on their degree requirements.
- Inability to manage the University's \$250M financial aid program.
- Inability to produce management and operational reports for business operations of all kinds such as census reports, institutional research reports and business operations reports.

#### **Human Resource Administration**

The University is currently in the process of replacing its Human Resource system with a new enterprise solution from Oracle. The old system operates on old technology that is at risk of future non-support and imposes redundant costs. The work to replace this system has been in progress for over the past two years. It is a project costing millions of dollars to implement. Oracle maintenance support is absolutely essential as we configure, install and implement this system in order to resolve bug fixes, security patches, and functional and usability improvements. This system will replace the current system that interfaces to the State's CoreCT system. It will significantly improve our ability to recruit, manage records and store more comprehensive information on our 5,000 employees. It will also significantly improve our reporting ability by offering a new data reporting warehouse.

Included in the University's ongoing implementation are:

- Oracle Database Enterprise Addition
- Human Resource Data warehouse maintenance
- HCM System and Annual Maintenance (3)
- Oracle/Hyperion Brio Site License

The consequences of non-renewal could result in the following impact on our planned Human Resources system and management.

- Inability to move forward with our system implementation due to lack of maintenance support resulting in project delays or suspension of the project would add significant new costs for consulting. These costs are incurred at a rate of hundreds of thousands of dollars each month.
- Delays in implementation will impact ongoing costs by requiring the University to maintain the aging computer platforms that require redundant staffing, space, infrastructure and software.
- Delays in implementation will result in the University not having available the improvements and business benefits and efficiencies from this multi-year project at the earliest possible time.

### Financial Administration

The Financial operations at the University are totally reliant of reporting solutions software from Oracle to provide the complete array of financial reports needed for an operation the size of UConn. These systems help manage a \$1B annual budget and expenditure. Many of the regular production reports as well as ad hoc reports for special needs and analysis use this software.

The consequences of non-renewal could result in the following impact on our planned Human Resources system and management.

- Without licensing and maintenance authority to use and support this software we will not be able to produce our essential business reports that are critical to the fiscal operations of the University.

### Other Specialized Applications

Dozens of other more specialized University systems are built on the Oracle database platform (Oracle Database Enterprise Edition) and include the following:

- WebCT – Instructional content delivery (thousands of courses and classes involved)
- Pinnacle – Telephone systems management
- FAMIS – Facilities and Capital Assets management
- e-Policy – University policy administration
- Emergency Communications Registration– Cell phone registration for text messaging
- e-Portfolio – Student personal and academic portfolio
- Athletics and Recreation – exercise training and equipment management.

## Microsoft

Software title, service or use: Microsoft

Renewal Date: June 30, 2010

Annual Renewal Cost: ~\$250,000.

Department contact:

Impact to UConn:

MS Windows is installed on the majority of computers at the University. MS Office represents the coin of the realm in terms of proprietary application formats for word processing, spreadsheets, presentations, media, etc. If we were required to remove this from existing machines, all administrative work, teaching and research at the University would be severely disrupted and in many cases brought to a halt.

Software title, service or use: Microsoft Campus Plan and Select Agreement

Renewal Date: 6/30/10

Annual Renewal Cost: ~\$250,000.

Department contact:

Impact to UConn:

**The Campus Agreement provides the following products:**

- Windows Operating Systems
- Windows and Macintosh Office PRO (Word, Excel, Access, and PowerPoint)
  - Note: Access is not available for the Macintosh
- CALs (Windows, Exchange, SMS, and Sharepoint Portal)

The Campus Agreement provides UConn with the ability and authority to distribute the products listed above to all UConn owned personal computers (staff, faculty, labs, and high technology classrooms). In addition, there is a home option and a student option associated with the main Campus Agreement.

**The Campus Agreement supports the following UConn programs:**

- HuskyPC Program; Standard Computer Purchases for Intel & Macintosh
- Work at Home Program
- Student Laptop Programs
- UConn Employee E-Mail (Exchange)
- UConn Active Directory
- UConn Sharepoint

**HuskyPC Program (Standard Computer Purchases):** Every HuskyPC purchased for employees, labs, and technology classrooms over the past five years has installed from the Campus Agreement, Microsoft's Operating System and Office PRO. In addition, with the agreement, for fiscal year 2007, to save money UConn was able to purchase software at a lower version (i.e., Home Edition) and then upgrade to the latest version (i.e., XP).

**Macintosh Program:** UConn owned Macintosh computers were able to install, through the Campus Agreement, the Microsoft Office suite.

Year	Quantity
FY05	2426
FY06	1898
FY07 (estimated)	1674

## Guidance Software

Software title, service or use: EnCase Forensic

Renewal Date: November 4, 2009

Annual Renewal Cost: \$6,777.95

Department contact(s): (UITS)

Impact to UConn: Encase Forensic software is used to perform forensic analysis of computer hard drives. It is generally considered the industry standard in forensic analysis and, thus, provides a consistent means to present evidence related to computer investigations and eDiscovery. This is a critical tool to the University's Information Technology Security Office since without it computer investigations could come under question as to the integrity of the forensics being performed, jeopardizing litigation in which the University is involved.

Furthermore, because the University is undergoing a process to encrypt computer hard drives, it is essential that the IT Security Office have a software tool which will allow a forensics investigation to take place even in situations where data is inaccessible due to encryption. The EnCase tool allows the University to do this in conjunction with the encryption software in use at UConn (SafeBoot), whereas this functionality is not available in forensics products that contain similar functionality.

The loss of the EnCase Forensics software would put the University in the position of not having the ability to perform computer forensics investigations and put at risk the University's ability to provide reliable digital evidence.

## IntelliWorks

Software title, service or use: iRM

Renewal Date: July 1, 2009

Annual Renewal Cost: \$98,000.00

Department contact: (University Communications)

Impact to UConn: Annual license maintenance and hosting support for iRM software for use by all undergraduate schools & colleges at UConn.

The University of Connecticut has made a strategic, long-term commitment to leveraging electronic communications as a mechanism for achieving goals outlined in the academic plan, including: raising national reputation; increasing undergraduate student quality; growing student satisfaction and retention, and elevating alumni relations.

While the use of electronic communications is becoming widespread among peer institutions in higher education, the University's procurement of the Intelliworks Constituent Relationship Management (CRM) software application puts us at the forefront of this trend employing highly targeted communications, most significantly in the student recruitment effort.

To stay competitive in the higher education marketplace, University Communications is committed, in partnership with Enrollment Management and UITS, to expanding electronic communications efforts to meet institutional priorities. At this time, the financial investment and implementation of the Intelliworks product has been substantial, as has the investment of University staff time and training. To not renew Intelliworks would cripple our electronic communications which have become a critical component to leveraging our current success and advancing strategic initiatives.

Furthermore, the implementation costs that would need to be incurred for a second time, after returning to the marketplace to find another CRM solution that meets CHRO guidelines, are prohibitive. This is inadvisable due to added financial burden and the disruption to business continuity that would result, essentially bring our student recruitment efforts to a halt.

To date we have realized notable success using Intelliworks CRM as our communication efforts supporting undergraduate student recruitment have expanded beyond using printed materials to now include highly personal electronic communications. This past year, we experienced a 100 percent growth in the response rate in our high achieving high school sophomore and junior recruiting.

Further, our electronic marketing to UConn students encouraging them to enroll in summer and winter session classes has yielded substantial enrollment and revenue increases the past two years and advances the University's "finish in four" initiative. Using Intelliworks CRM the University has generated over a million dollars in new net revenue.

**UConn Employee E-Mail (Exchange):** The UConn employee e-mail system is Exchange. Exchange utilizes Client Access Licenses (CALs) for each full-time equivalent.

**UConn Central Active Directory:** The UITS Active Directory, as well as some departments with Active Directories, utilizes Windows Client Access Licenses (CALs) for each full-time equivalent.

The software licenses purchased through the Microsoft Campus Plan are not perpetual but expire after one year; therefore, if the contract is not continued there is a cost associated; a mandatory buy out of the software for continued use.

- Operating System Upgrade \* number of HuskyPCs and Student Program PCs purchased with Windows Home over 3 years
- Office PRO \* number of HuskyPCs and Student Program PCs purchased over 3 years
- Office Suite \* number purchased for Windows users over 3 years (home use)
- Operating System \* number purchased for Windows over 3 years (home use)
- Client Access Licenses (CALs) for both Windows and Exchange \* number of users on each system

YEAR 2007 AND 2008 (prices will have increased)

WinXP Pro Upgrade	3711	\$199.99	\$742,162.89
WinXP Pro Full	93	\$299.99	\$27,899.07
Office 2003/2007 Pro	6023	\$499.99	\$3,011,439.77
CALS	5040	\$799 for 20	\$201,348.00
Office 2008 S/T Ed.	1235	\$149.99	\$185,237.65

## MIT

Software title, service or use: Annual fees for participation in the Northern Crossroads Connection for Internet2

Renewal Date: June 30, 2009

Annual Renewal Cost: \$145,000

Department contact(s): (UITS Telecommunications)

Impact to UConn:

MIT hosts the Northern Crossroads New England Gigapop for Internet2. The Northern Crossroads (NOX) is a consortium of New England based schools that formed a cooperative agreement to access the Internet2 Higher Education Research network through Interconnections in Boston and a single connection to Internet2. Internet2 in and of itself is a single-provider of advanced research network capacity for Higher Education Research and Academic purposes. Internet2 is a consortium of higher education institutions who have built a nationwide high speed research and education network. There is not a commercial equivalent to Internet2 and no alternatives exist that provide equivalent services to what Internet2 provides to UConn and the institutions in Connecticut who connect via UConn to the Northern Crossroads (NOX) and Internet2.

The University of Connecticut, and other institutions of Higher Education in Connecticut, use this high bandwidth network to support academic computer-intensive research in the areas of Physics and Engineering such as, data mining, medical imaging, and particle physics. There are no commercial aspects of Internet2; it only supports academic and research.

The New England Gigapop is the most cost-effective entry point to Internet2 in New England. Alternatives to using MIT and the NOX ultimately would result in the University of Connecticut directly

connecting to the Abilene backbone in New York City. Given minimum commitment levels to directly connect to Abilene of nearly \$750,000.00 per year, this alternative consortium connection through MIT is the most cost-effective choice.

All Connecticut based institutions connected to Internet2 come through the University of Connecticut connection to the NOX through MIT. This includes the University of Connecticut, the Connecticut State University System, the Connecticut Community Colleges, Wesleyan, the US Coast Guard Academy, Trinity College, K12 schools, public libraries, and other institutions in Connecticut.

Internet2 and the NOX are consortiums of Higher Education institutions formed specifically to create a national research and education backbone.

If the University cannot renew its agreement with MIT then it will be forced into a situation that will have a severe economic impact to the University and to the 265 k-12 & Votech schools, 175 Libraries and 51 Institutions of Higher Education who depend on Internet 2. The additional increase in access fees and new infrastructure expenses will exponentially increase the cost of gaining access to Internet2.

#### Other Impacts of PA 07-142

The impacts of PA 07-142 have been felt across the University. In some cases contracts were delayed due to the requirements of the Act, in other cases, unique opportunities were lost. Some examples include:

The Health Center was delayed on a service contract to maintain and repair high frequency ventilators for the neonatal intensive care unit.

The Health Center has also lost the ability to enter into several contracts with United Technologies Corporation to provide medical services to its many business units across the state.

The University has lost the opportunity to start using iTunes as a provider of educational content for UConn students because Apple is unwilling to change its standard contract language.

A number of software purchases for a range of academic uses have been delayed, and the University has had difficulty in placing nursing students in clinical settings required for graduation and licensure.

The School of Engineering has had services disconnected and delays in obtaining software for applications that are critical to research and teaching such as Mathworks and Abaqus-Dassault.

Microsoft, similar to Oracle, is not willing to comply with the Board of Director's resolution requirement of PA 07-142, but nevertheless UConn and the State of Connecticut relies on this operating system which would be costly to replace.

The University experienced a delay in acquiring health insurance for students.

The University lost the opportunity to show live transmissions from the Metropolitan Opera.



University of Connecticut  
*School of Engineering*

Office of the Dean

**Judiciary Committee**

**Thursday, March 19, 2009**

**Testimony of Dean Mun Y. Choi, Dean of Engineering, University of Connecticut**

**S.B. No. 1127: An Act Concerning the Applicability of Certain State Contracting  
 Nondiscrimination Requirements**

Committee Co-chairs: Sen. Andrew J. McDonald and Rep. Michael P. Lawlor  
 Vice Chairs: Sen. Mary Ann Handley and Rep. Gerald M. Fox  
 Members

***Background:*** The importance of software packages to the mission of any college or university – including the University of Connecticut – cannot be overstated. In fact, I would argue that software underpins nearly every aspect of the modern academic environment and is, as such, the soft Achilles heel of contemporary life. Software is:

- Critical to classroom laboratories, where students learn to transform theory into practice;
- Vital to ongoing classroom instruction (for analysis, characterization, quantification, design, data collection and interpretation, perform massive computing calculations, etc.);
- Invaluable to our students' required in-class and special projects; and
- Inseparable from ongoing research efforts of our faculty and students.

Software packages are also heavily integrated into the very functioning of the University as an organization, allowing the institution to conduct all facets of business:

- Maintain student records, from the time they apply to college until they graduate – and beyond;
- Maintain accounts payable/receivable and transfer funds;
- Maintain payroll and other HR records;
- Communicate within and outside of the academic setting;
- Maintain inventories of equipment and other holdings;
- Submit and track orders with vendors;
- Maintain the heating, cooling, water supplies and energy of the entire campus infrastructure;
- Maintain the information technology function; and
- Countless other day-to-day functions.

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Beyond these uses, software is critical to the University's interactions with those beyond the University community. For example:

- o Employers – such as UTC, Pratt & Whitney, GE, Electric Boat and IBM, to name a few among thousands – expect our graduates to be well versed in the leading software packages common to their profession. Graduate programs of other universities expect our students to be fully competent in various software packages common to the degree program.
- o Many external organizations expect information to be shared in a familiar format.
- o Federal agencies, foundations and other funding agents dictate that proposals, reports and study results be submitted in prescribed formats.
- o Vendors and suppliers to the University expect that necessary specifications will be provided in familiar formats.

**The current restrictions on software contracts are notably, negatively impacting our workforce development; if the current restrictions remain in force, Connecticut industry and the State economy will almost certainly suffer long-term consequences.**

*The software packages in question are indeed packages that are considered the leaders in their specific application areas.*

I refer Committee members and other interested parties to a summary report prepared by the University of Connecticut Purchasing Department titled “**Software and services unlikely to be considered for additional CHRO exemptions.**” This report contains many specifics associated with several packages along with details of importance of those packages to ongoing efforts of faculty, staff, and students.

The testimony discussed below pertains primarily to the software packages having significant usage within the School of Engineering.

*General University-wide Software Packages:* Several software packages are in general use across the University as well as within the School of Engineering. Examples include:

- o General Microsoft suite (e.g., Word, Office, Excel, Outlook, etc.)
- o Comsol; and
- o Mathworks Matlab and others.

Generally, except for Matlab, these packages incur annual charges that **exceed the \$50,000** level included in the Senate bill.

Please remember: these software packages are widely acknowledged as the standards in their application areas – across academia, industry, business and government. The use of alternatives, in fact, sometimes invites concerns – even suspicion.

Besides the arguments in favor of current use and widespread standardization is the argument of transitional difficulty. By this, I mean that transitioning from currently-used

packages to the alternatives would be long, fraught with difficulty, require user retraining, and be potentially risky in terms of *lost data*. Meanwhile, the hard work of our mission – education, research, reporting and day-to-day functioning – would come to a virtual standstill.

The University has invested significant time – sometimes years – in tailoring these packages for specific uses and in integrating them to smoothly align with other software packages in use. To change from these tailored software systems would require that we repeat these prior efforts before the new packages become useful to us and our constituents. More time, more effort would be lost in repetition while the mission was delayed.

*It should also be noted that there is no reason to believe these new suppliers would be any more open to State regulations than the current suppliers.*

*School of Engineering Software Packages:* The School of Engineering is a major user of software packages. Among the many on which we rely, several play broad roles in the ongoing efforts of faculty, staff, and students in the school. These include:

- Cadence [Electrical & Computer Engineering]
- Aspen [Chemical Engineering]
- Ansys Fluent [Mechanical Engineering]
- Dassault Abaqus [Civil & Environmental Engineering, Mechanical Engineering]
- UGS [Mechanical Engineering]

These packages are (except for Dassault Abaqus, which enjoys widespread if not ubiquitous use within the engineering community) *the clear choice of the engineering community – if not the sole option.* They have been widely use within the School of Engineering for four years or longer.

Currently, each of these packages has annual costs **below the \$50,000** level mentioned in the Senate bill.

The previous testimony relative to software package contracts in general, and those noted specifically in university-wide use, remains applicable to the School of Engineering packages as well.

*Process:* The process for securing contract approval is as follows:

- School of Engineering personnel submit a purchase order request along with the associated detailed information. This often requires that the prospective purchaser, along with Engineering Computing Services personnel, communicate with informed contacts and the vendor organization to seek support for the vendor's approval. Occasionally, outside contacts who may be able to influence the contract negotiation are also called upon to assist in the process. [Engineering personnel have also participated in CHRO exemption requests when they are presented for consideration.]
- School of Engineering personnel supply additional information as needed, and answer questions posed to/by the Purchasing Department or the Attorney General's office.

- The University's Purchasing Department and Office of the Attorney General review requests and approve contracts only after being fully satisfied that the requested software is required and that all paperwork has been completed accurately.

From the first requisition of the software package to the final resolution of contract discussions, the School of Engineering has been heavily involved in all efforts.

It is estimated that in the last **18-30 months**, School of Engineering personnel have expended the following levels of effort toward securing software approvals:

- 20+% of the Director, Engineering Computer Services' time
- 10+% of the Associate Dean for Academic Affairs' time
- 5-10% of various departmental/program administrative assistants' [or their designees'] time
- 5% of various department heads'/program directors' time
- 5% of the Dean of Engineering's time
- Up to 5% of the software package requestors' time

This time commitment is significant.

Given that the Senate bill under consideration has a \$50,000 threshold that would not be exceeded by any of these software packages, the legislation would/should make it far easier for the vendors to comply with the requirements – thereby reducing an enormous burden and allowing us to focus on our pressing obligations as the State's flagship educational institution.

*Summary:* It bears reiterating that these School of Engineering software packages are clearly the choice of the engineering/industrial community. Their use ensures our students are equipped with the skills required to succeed in their careers, permits us to conduct and maintain basic administrative and infrastructure functions, underpins critical research, and permits the smooth interaction of University personnel with outside groups.

Efforts to switch to alternatives (viewed widely as inferior in capabilities, efficiencies or both; and uncertain to be void of contract concerns) would severely hamper productivity during and after the switch and likely reduce effectiveness in the longer term.

The School of Engineering believes the proposed legislation represents a significant improvement in the approach to software contracts. The change in threshold would result in dramatic improvements for our engineering constituents and the University as a whole. Most important, the proposed change would reverse the current, mounting risk to the competitiveness of Connecticut industry and the State economy.

We believe also, however, that the \$50,000 threshold in the Senate bill is likely to negatively impact overall University efforts for those software packages whose prices exceed the threshold.

**JOINT  
STANDING  
COMMITTEE  
HEARINGS**

**JUDICIARY  
PART 16  
4929 - 5265**

**2009**



JUDICIATRY COMMITTEE  
 MARCH 19, 2009

HB6673 SB1127

Good morning, Senator McDonald, Representative Lawlor and members of the Judiciary Committee. My name is Bob Brothers. I am the Acting Executive Director of the Commission on Human Rights and Opportunities.

The Commission on Human Rights and Opportunities **SUPPORTS SB 1003, AN ACT CONCERNING AFFIRMATIVE ACTION PLANS**. The primary purpose of this bill is to establish that an Affirmative Action Plan submitted more than 90 days after the date scheduled shall be deemed disapproved. This standard was long thought to exist as the result of administrative interpretation, but no basis in law actually exists. The bill also reduces or eliminates some reporting requirements and allows plan submission schedules to be adopted administratively, all reflective of staff reductions, and the need to economize our resources within the ongoing fiscal situation.

We have submitted a technical amendment to this bill in the form of Attachment "A".

We also **SUPPORT SB 1125, AN ACT CONCERNING THE COMPREHENSIVE REVISION OF THE HUMAN RIGHTS AND OPPORTUNITIES STATUTES**.

Over the course of many years amendments to the CHRO statutes have made them difficult for members of the public to understand and use. Since we should be one of the most accessible of state agencies we find this unacceptable and took it upon ourselves to rewrite our laws to make them as uncomplicated, comprehensible and harmonious as possible.

To that end we have:

- adjusted language to improve reading and understanding
- corrected grammatical errors
- deleted extraneous language and section references
- provided conforming language for consistency
- consolidated and reordered the definitions section
- made our statutes gender-neutral
- reduced or eliminated some reporting requirements
- clarified the role and responsibilities of human rights referees
- made the order and wording of references to protected classes consistent throughout while consolidating all protected classes, including sexual orientation, together
- recognized court decision *Kerrigan v. Commissioner of Public Health*, 289 Conn. 135 (2008) regarding the right to same-sex marriage;
- transferred the retaliation and aiding and abetting of a discriminatory practice from 46a-60 and expanded it to apply to public accommodation and credit as well as employment and housing



- required contractors to comply with orders of referees
- made the definition of "individual with a disability" consistent with Sec. 46a-51
- deleted the anachronistic wording of section 46a-81a, "but excludes any behavior which constitutes a violation of part VI of chapter 952" which the Commission views as offensive and demeaning
- made failure to post Commission notices a discriminatory practice
- transferred sections that are criminal provisions to the Penal Code
- set standards for the reconsideration of dismissed cases
- clarified the conciliation process
- clarified the role of the Commission legal counsel

Other changes would better accommodate the public by allowing complainants to bring civil action in the judicial district in which they live, and by allowing the Commission to grant a release of jurisdiction after 180 days instead of the present 210 days.

We have also made changes relative to the Commission and the court by establishing that no objection that has not been raised before the Commission to defeat or excuse compliance with a subpoena may be presented to, or relied on, by the court. The bill would give us the authority to intervene in court action involving CHRO cases. We would also be permitted to bring action in the Hartford Judicial District.

A civil penalty would finally be established for failure to comply with sexual harassment posting requirements. This sexual harassment enforcement tool has long been needed.

The Commission on Human Rights and Opportunities is proud to proactively advance legislation that serves the public, eliminates discriminatory language in our statutes, and creates administrative efficiencies during these lean economic times. We urge the Judiciary Committee to approve this bill and help us to better serve the public.

The Commission also **SUPPORTS** as written **HB 6673, AN ACT CONCERNING HOUSING DISCRIMINATION AND ATTORNEY'S FEES**. This bill which the Commission requested is inspired by three legal cases. Section 1 adds a definition to conform with federal law. Section 2 makes complainants parties to cases and clarifies their right to that status. Requests for filing appearances in two cases, Kilby v Litchfield Housing Authority and Bowen v Brookside, were opposed by defense counsel and the court denied complainants the right to intervene in their own cases. CHRO wants to head off the use of this tactic of exclusion.

Sections 3 and 4 of the bill address an issue that arose in Sanchez v Brookstone Court wherein the court implied a limitation on legal fees based on the amount of an award.

Finally, I would also like to comment on **SB 1127, AN ACT CONCERNING THE APPLICABILITY OF CERTAIN STATE CONTRACTING NONDISCRIMINATION REQUIREMENTS**. The bill as drafted presents some difficulty in interpretation and application. We discuss these issues fully in Attachment "B."

## Attachment "B"

SB 1127, AN ACT CONCERNING THE APPLICABILITY OF CERTAIN STATE CONTRACTING NONDISCRIMINATION REQUIREMENTS

While we appreciate the Committee's intent to reduce the number of exemptions that come to CHRO for consideration, while increasing efficiencies at the agencies effected, we believe the language is somewhat ambiguous. Which employee of a contractor would submit "a written representation to support the nondiscrimination agreement?" We believe it should be an officer of the corporation or some other responsible party. The \$50,000 amount is also problematic. Does the Committee intend this to be per contract or would it be a cumulative amount over a fiscal or calendar year? Additionally, we would request clarification of whether the use of the term contract and its application in lines 62 through 68, and as repeated later in the bill, mean a contract between any parties and any of the delineated entities or only contracts between such entities?

Relative to the definition of marital status, since we have addressed this in HB 1125 we respectfully ask that this portion of SB 1127 be deleted.