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HOUSE OF REPRESENTATIVES  
COMMONWEALTH OF PENNSYLVANIA

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House Bill 1304

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House Intergovernmental Affairs Committee

Main Capitol Building  
Room 140, Majority Caucus Room  
Harrisburg, Pennsylvania

Wednesday, August 29, 2007 - 12:00 p.m.

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BEFORE:

- Honorable W. Curtis Thomas, Majority Chairman
- Honorable Bill Keller
- Honorable Joseph Preston
- Honorable James Roebuck
- Honorable Steve Samuelson
- Honorable David J. Steil, Minority Chairman
- Honorable John Bear
- Honorable Kerry Benninghoff, IT Subcommittee
- Honorable Mike Fleck
- Honorable Keith Gillespie, State Subcommittee
- Honorable Carl Mantz
- Honorable Duane Milne
- Honorable Scott Perry
- Honorable Todd Rock

1 ALSO PRESENT:

2 Patricia Custis  
Majority Executive Director

3  
4 Maribel Echevarria  
Majority Committee Secretary

5 Jeffrey Fox  
Majority Research Analyst

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7 Joyce Frigm  
Minority Executive Director

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1                   CHAIRMAN THOMAS: Good afternoon. I'm  
2 Representative Thomas, Chairman of the Governmental Affairs  
3 Committee. I'm glad to see my partner, Chairman Dave Steil,  
4 and it's really great to see the members of this committee.  
5 We all want the summer to start rather than jump to an end,  
6 and I'm glad to see panelists and other members and guests  
7 this morning.

8                   Our public hearing today is on House Bill 1304  
9 introduced by Representative Fairchild. This legislation  
10 would establish a Geospatial Coordinating Council and the  
11 Pennsylvania Mapping and Geospatial Technologies Fund.  
12 Geospatial technology utilizes a computer-based system or  
13 application to captures, store, analyze and display  
14 geographically-referenced information.

15                   The usefulness of geospatial systems is based on  
16 its ability to relate data in a geographic context. This  
17 data can include land, land cover, water volumes, highways,  
18 tax parcels and almost any other type of information.  
19 Selectively overlaying this data allows users to reach a  
20 conclusion about relationships between various data sets.  
21 Private businesses and governmental entities utilize  
22 geospatial technology to provide objective information and  
23 analysis in order to make critical decisions.

24                   The innovation and use of this technology is  
25 expanding rapidly and becoming more critical in day-to-day

1 operations. As such, there are many different public and  
2 private entities in Pennsylvania and throughout the nation  
3 collecting and analyzing geospatial data. The challenge,  
4 therefore, is the coordination, dissemination, management  
5 and utilization of this information in order to minimize  
6 duplication of effort and maximize the benefits and  
7 financial resources allocated to this endeavor.

8           This afternoon we will receive testimony on how  
9 geospatial technology can be improved in the Commonwealth of  
10 Pennsylvania through the eyes of House Bill 1304. We will  
11 be receiving testimony from three panel groups, one private  
12 and academic sector, county and municipal governments, state  
13 and federal agencies. After each individual panel presents  
14 their testimony, there will be an opportunity to ask  
15 questions of the panel on their respective testimony.

16           Again, let me thank everyone for their  
17 participation today. And with that I will turn to my  
18 partner the Minority Chairman for the House Governmental  
19 Affairs Committee for any comments. Following his comments,  
20 let us begin the process of the hearing.

21           And let me add just for the record this is not  
22 new. It is not one of those cases of first impression. We  
23 started this journey back in January 29th of 2003. And from  
24 January 29th of 2003 there has been a long and persistent  
25 effort to make a geotechnology advisory council a reality in

1 the Commonwealth of Pennsylvania. I trust and hope that  
2 this is the last affirmative step that we need in order to  
3 make this a reality.

4           So in that sense let me assure you, at least  
5 from my part, that we will probably not have any more  
6 hearings. We will hopefully come out of this hearing and  
7 take some real steps towards institutionizing this process.

8           So at this time let me turn to Chairman Steil.

9           CHAIRMAN STEIL: Thank you, Chairman Curtis. I  
10 very much appreciate the chairman's comments. I think he's  
11 adequately covered the subject of the hearing today. I just  
12 want to welcome everyone here and ensure that for all of us  
13 the issue is paramount, it's a high technology issue and one  
14 that we think that is very, very doable, and I'm looking  
15 forward to the testimony today. I think it will be a real  
16 education for the members of the panel. Thank you.

17           CHAIRMAN THOMAS: Yes. And prior to going to  
18 our first panel, let me ask the distinguished members of  
19 this stellar committee to introduce themselves. Let me  
20 start to my right.

21           REPRESENTATIVE MILNE: Mike Milne, 167th  
22 District from Chester County.

23           REPRESENTATIVE MANTZ: My name is Carl Mantz  
24 from the 187th Legislative District straddling Berks and  
25 Lehigh Counties.

1                   REPRESENTATIVE BEAR: John Bear, 97th District,  
2 Lancaster County.

3                   REPRESENTATIVE FLECK: Mike Fleck, the 81st  
4 District representing portions of Blair, Huntingdon and  
5 Mifflin Counties.

6                   REPRESENTATIVE ROCK: Todd Rock, 98th District,  
7 Franklin County.

8                   REPRESENTATIVE ROEBUCK: Jim Roebuck, 188th  
9 District, Philadelphia.

10                  REPRESENTATIVE GILLESPIE: Keith Gillespie, 47th  
11 District, York County.

12                  CHAIRMAN STEIL: Representative David Steil,  
13 31st District, Bucks County. And also to my left is Joyce  
14 Frigm who is the Executive Director of the Intergovernmental  
15 Affairs Committee on the Republican side.

16                  CHAIRMAN THOMAS: Again, W. Curtis Thomas,  
17 Majority Chairman House Intergovernmental Affairs Committee.  
18 And to my right is Miss Patricia Custis, Executive Director  
19 of the Intergovernmental Affairs Committee. And to my right  
20 and front Mr. Jeffrey Fox the Research Analyst for the  
21 Intergovernmental Affairs Committee. So as you can see,  
22 Pennsylvania is well represented this afternoon.

23                  Let us start with the first panel which will  
24 involve the private and academic agencies. And let me see  
25 if we're all assembled. Let me have you first introduce

1 yourselves, and then we'll move forward on your testimony.

2 MR. STROH: My name is Brady Stroh. I'm the  
3 Director of the Center for Geospatial Information Services  
4 at Penn State Harrisburg.

5 DR. BACASTOW: My name is Todd Bacastow. I'm  
6 with the Penn State Education Institute.

7 DR. ALTER: My name is Ted Alter. I'm a  
8 Professor of Agricultural and Regional Economics, Department  
9 of Agricultural Economics and Rural Sociology at Penn State.

10 MR. PAL: My name is Ashis Pal. I'm  
11 representing PA-MAPPS, the private sector organization which  
12 is a chapter of the MAPPS national organization. And I'm  
13 president of geographIT, a private company located in  
14 Lancaster. And proud enough to mention today in the 2007  
15 5,000 list of fastest growing companies we have been cited  
16 in there this year.

17 CHAIRMAN THOMAS: Thank you. Mr. Stroh, would  
18 you like to start.

19 MR. STROH: Chairman Thomas, Chairman Steil,  
20 Members of the Committee, friends and colleagues, thank you  
21 for the opportunity to provide this testimony this  
22 afternoon.

23 Since I'm serving as the leadoff batter today,  
24 I'd like to give a brief overview of where we've come from  
25 and where we're headed with geospatial technology in

1 Pennsylvania.

2           In the summer of 1977 I was looking to enroll in  
3 a graduate school, but I wasn't exactly sure what or where  
4 to study. And during my search I came across a program in  
5 regional planning at what was then called Penn State Capital  
6 Campus, now Penn State Harrisburg. The prospective student  
7 information packet included something I hadn't seen before,  
8 maps produced by a computer.

9           What I was seeing in those maps rendered by a  
10 line printer on a mainframe computer was the product of a  
11 primitive geographic information system, it happened to be  
12 called SIMMAP created by some bright, young geotechnologists  
13 at Harvard.

14           The first major project we put SIMMAP to work on  
15 at Penn State Harrisburg was the site analysis and new town  
16 design for the community of Nelson in Tioga County, where  
17 the U.S. Army Corps of Engineers was preparing to build the  
18 Cowanesque Dam, a dam that would flood the little community  
19 of Nelson.

20           The students of the graduate program at Penn  
21 State Harrisburg, under the direction of Professor Frank  
22 Ferguson, were pressed into service to build a GIS that  
23 planners and engineers would use for soils and slope  
24 analysis, demographic studies and site planning.

25           Within a few years the mission was

1 accomplished. Nelson was moved, the dam was built, and the  
2 people had a new community, thanks in part to this new  
3 geospatial technology. But after the celebrations and the  
4 pats on the backs for a job well done, some daunting  
5 realities had to be faced. We had used a primitive, yet  
6 relatively expensive, software tool that had to be run on a  
7 large mainframe computer, the kind only found in large  
8 government agencies, research universities and a few oil,  
9 gas and mineral exploration companies.

10           There was no spatial data. Topography, soils,  
11 land use, land cover, political boundaries, public lands,  
12 property boundaries and census tracts, they all had to be  
13 manually digitized on punchcards using a primitive  
14 mechanical digitizing machine. There was no aerial  
15 photography, only early satellite imagery that was  
16 unavailable to our project.

17           So how would geospatial technology live up to  
18 the dreams and expectations of the GIS community? We all  
19 had to create our own data. Who could afford the hardware  
20 and software? Certainly local government, police forces,  
21 fire departments, economic development organizations and  
22 most state agencies could not afford it. So there was a  
23 dilemma. Geospatial technology was developing very quickly  
24 but few could afford to use it.

25           Let's fast-forward 15 or so years. We all know

1 the story of computing technology, speedy processors, cheap  
2 storage and of course the internet. During the 1990s the  
3 cost of powerful hardware quickly came within the reach of  
4 many organizations, and both proprietary and open source  
5 software applications in GIS were coming onto the market.  
6 They were now affordable, highly functional and relatively  
7 easy to use. So people started thinking that they might now  
8 have half a chance of being able to use this phenomenal new  
9 technology.

10           Well, the floodgates opened and new users  
11 rapidly joined GIS community. But these users were not just  
12 the GIS pros. They were not just academics, large state and  
13 federal government agencies, and not just big oil and gas  
14 and the military. As we moved through the 1990s and the  
15 internet was discovered by the consumer nation, maps started  
16 to appear online. The American consumer without really  
17 thinking much about it was becoming GIS savvy and started to  
18 imagine the same possibilities as those graduate students  
19 and the professors at Penn State and other institutions did  
20 20 years earlier.

21           Then a watershed event occurred. Late in the  
22 Summer of 2005 a jazzy little tool called Google Earth came  
23 onto the scene. With its almost magical user interface and  
24 virtual tours of the planet, Google Earth allowed the  
25 American consumer, actually the global consumer, to become a

1 fairly sophisticated GIS user, clicking, panning, zooming,  
2 identifying, routing, turning layers on and off with ease.  
3 Suddenly every person on the planet with an 800-dollar PC or  
4 a MAC and a relatively decent internet connection could be a  
5 GIS user. They were awestruck - I can go anywhere, see  
6 anything, find anyone with my Google Earth.

7           But the shine soon wore off and the excitement  
8 of Google Earth quieted. It quickly became an everyday  
9 taken-for-granted feature of the internet. User  
10 expectations soared as they demanded much more than could  
11 actually be delivered, global coverage of high resolution,  
12 color orthophotography instead of those grainy, green  
13 satellite images, 3-D buildings in all cities, and people  
14 started talking about thinking that they could have near  
15 real-time imagery. So in a few short months internet users  
16 went from not having heard of GIS or Google Earth to  
17 expecting that it could answer any geographic question that  
18 they could come up with.

19           Finally the professional GIS community got what  
20 it had been waiting for, geospatial applications had become  
21 mainstream and were being used by the masses.

22           Concurrent with the exploding demand for  
23 geospatial information was the development of myriad  
24 applications, data, images, and mashups. Geospatial tools  
25 beyond Google Earth were quickly being built into websites.

1 And they continue to come online, not because of any grand  
2 GIS design, but from the same innovation and demand that  
3 fuels the Worldwide Web now and will so in the future.

4           Meanwhile what I would call the legacy  
5 geospatial community continues to be challenged by concerns  
6 of data standards, interoperability, transparency,  
7 liability, ownership, cost recovery, profitability, and it  
8 struggles to keep ahead of the geospatial wave. A lot of  
9 work has been done by a lot of people to address these  
10 issues. The Federal Geographic Data Committee at the  
11 national and international level, along with the Open  
12 Geospatial Consortium, Management Association for Private  
13 Photogrammetric Surveyors, MAPPS, NSGIC, University  
14 Consortium for Geographic Information Science, they've all  
15 made significant contributions.

16           And at the state level PAMGIC, PA-MAPPS, the  
17 state level, which you'll hear from the MAPPS organization,  
18 County Commissioners Association and others are working hard  
19 to make sure that Pennsylvania makes its contribution to the  
20 global sphere of geospatial knowledge. But a government  
21 structure that links the work of all these groups does not  
22 yet exist.

23           In Pennsylvania we struggle with geospatial  
24 coordination, collaboration, integration and communication.  
25 We struggle with some very specific questions like who is in

1 charge, who should be in charge, should anybody be in  
2 charge, how do we collaborate, how do we share, how do we  
3 recover our costs, what standards and data structures do we  
4 use, how do we protect our security and on and on.

5           Much of the Pennsylvania geospatial community  
6 will answer these questions in the spirit of a common wealth  
7 of geospatial knowledge. But all of us tend to keep one eye  
8 on self-preservation. I guess we reason that if we don't  
9 protect our own contribution, we may have no contribution to  
10 make. Unfortunately, that one eye too often looks down a  
11 narrow field of view and renders us blind to greater  
12 potentialities along the way.

13           Because of our nature, because of our history  
14 and because of our need for a common wealth of geospatial  
15 knowledge, H.B. 1304 should become law as the Pennsylvania  
16 Geospatial Coordinating Council Act. Today there will be  
17 many comments and testimonials, some written that will not  
18 be given orally today, on H.B. 1304. Hopefully most of  
19 these words will be spoken in the spirit of common wealth.  
20 But I would caution the committee that some of them may be  
21 spoken from that one eye that each of us continues to keep  
22 focused on ourselves.

23           H.B. 1304 is about growing our geographic  
24 knowledge. It's not just about administering the technology  
25 and this is not a redundant effort.

1 I support House Bill 1304 in its current form  
2 and urge the committee to work hard for its passage. This  
3 new act will give us what we urgently need to move forward,  
4 a broad-based geospatial coordinating council composed of  
5 knowledgeable, common-wealth spirited members who are  
6 empowered to craft and coordinate a forward thinking  
7 governance structure for geospatial technology and knowledge  
8 in the Commonwealth of Pennsylvania. Thank you.

9 CHAIRMAN THOMAS: Thank you. Next.

10 DR. BACASTOW: Chairman Thomas, Chairman Steil,  
11 Members of the Commonitte, my name is Todd Bacastow. It's  
12 truly a privilege to testify before this committee. You  
13 have my testimony, written testimony in front of you. I'm  
14 not going to go into my background but I will add this. I  
15 did have a role in the preparation of House Resolution 882  
16 and I'll refer back to that again.

17 And the other thing I'll mention is my  
18 background, academe is a second career for me. My first  
19 career was actually 20 years in the Army so I come at things  
20 with a little different perspective you'll probably see as I  
21 go through this.

22 I strongly support House Bill 1304 establishing  
23 the Pennsylvania Geospatial Coordinating Council. There's  
24 two reasons for this. First, House Bill 1304 makes academe  
25 a full partner in the Commonwealth's important and growing

1 geospatial community. And in a little bit I'll talk more  
2 about THIS term geospatial, what that community is. Without  
3 this, academia has no voice, certainly no permanent voice.

4           Second, and I really consider more importantly,  
5 the proposed council provides leadership that Pennsylvania  
6 needs to take full advantage of this technology and the  
7 economic opportunity associated with the technology.  
8 Without the council we will probably not have the type of  
9 leadership we need. And certainly the council sets an  
10 environment similar to what we had in the development of  
11 House Resolution 882.

12           Let me give a little of background for fear of  
13 being redundant with what Brady said, this is not just about  
14 GIS electronic mapping. Let me go back in time here a  
15 little bit. The geospatial sector has emerged very quickly  
16 but is very deeply woven into our culture today. Just  
17 consider 20 years ago a stranded driver along the road  
18 couldn't press a button, their On-Star button, and have it  
19 automatically send their location information to someone  
20 that would dispatch help. Twenty years ago only  
21 multimillion-dollar fighter aircraft had navigation systems.  
22 Today my wife said she won't buy a new car without one. It  
23 was difficult for even computers to track hurricanes. Today  
24 we track them all the time, a lot of other things too.  
25 Geospatial technologies were just beginning to be deployed

1 in government agencies and the military. Very few police  
2 departments and private firms or even higher education had  
3 much capability.

4           As Brady said, nothing illustrates the  
5 penetration in technology better than the online  
6 capabilities we have today. MapQuest is one, Google is  
7 another one. In 2005, a couple years ago, MapQuest in one  
8 week had over 50 million visitors. Google Maps at that time  
9 had about 11 million. Since that time Google Maps has grown  
10 at about 62 percent a year. I might add MapQuest is  
11 actually a Pennsylvania firm from Lancaster so we have a  
12 good base of technology here.

13           Perhaps even more important than that though,  
14 over the years we've come to realize that geospatial  
15 technology not only helps us to do a job, it can be a job.  
16 And in fact geospatial, meaning the broad context of  
17 geographic information systems, remote sensing, global  
18 positioning systems, is one of the leading high-tech  
19 industries. A snapshot of industry in the U.S. today shows  
20 it's a 30-billion-dollar-plus market. Large homeland  
21 security and defense market, rapidly, very rapidly emerging  
22 commercial market, and job growth in some sectors has been  
23 as high as 28 percent.

24           Well, what's education's role in this?  
25 Pennsylvania has always had a special place in innovation in

1 the United States. If you think about it, Pennsylvania's  
2 science and technology is very diverse, private sector,  
3 which the commentary is I think, or at least in my opinion,  
4 is highly under-appreciated. Strong academic research. We  
5 have federal laboratories. All these sectors frequently use  
6 or depend upon geospatial technology.

7 I already spoke about MapQuest. I should add  
8 though that Pennsylvania is also the home of Bentley  
9 Systems. Bentley is a leading innovator in geospatial  
10 technology with annual revenues of approximately 400 million  
11 a year.

12 These are just but a few examples of the  
13 opportunities for innovation and economic development. In a  
14 recent report, which I believe is actually out on the table,  
15 done by Xsalta, an independent technology assessment firm,  
16 identifies other promising economic opportunities for  
17 geospatial technology in Pennsylvania.

18 One key thing in that report though was the need  
19 for sound policy that supports these developments. Given  
20 the explosive growth of technology, Pennsylvania's place in  
21 innovation, the proposed council and Pennsylvania's colleges  
22 and universities have an important role in a number of  
23 areas. First is creating a pool of well-educated  
24 professionals in the area, assisting the transition of  
25 individuals from declining industry to this high-tech

1 industry, assisting the transfer of geospatial technologies  
2 to serve the public good, and an important one is  
3 formulating the development of sound public policy.

4           I mentioned the word leadership. Let me discuss  
5 that a little bit. Another report that's on the table, as  
6 people walk in, is by the Open Geospatial Consortium. The  
7 Open Geospatial Consortium, or also called the OGC, is an  
8 internationally recognized leader in geospatial planning,  
9 making standards and other things. They've actually done  
10 work for Australia, Canada, a number of other countries, and  
11 states in the U.S. They wrote a report identifying the  
12 extent of Pennsylvania's geospatial enterprise, the nature  
13 of data services that it needs to provide.

14           Let me just summarize that very quickly. The  
15 public good to the Commonwealth should involve a number of  
16 entities, including state and federal agencies, local  
17 political jurisdictions, citizen groups, commercial entities  
18 and academe. A very broad-based organization.  
19 And data and services should be coordinated but controlled  
20 independently. In other words, they pushed or recommended a  
21 federated approach.

22           The efforts as the Open Geospatial Consortium  
23 outlined in the report hardly ever fail because of  
24 technology. They fail because of poor leadership. Often  
25 times they end up doing the wrong things. A lot of times we

1 tend to mix management and leadership, the two terms.

2           Let me just talk a little bit about the  
3 difference. As Stephen Covey once said, management is  
4 efficiency in climbing the ladder of success. Leadership  
5 determines whether the ladder is leaning against the right  
6 wall.

7           Pennsylvania, in my experience, has exceedingly  
8 good management. Sometimes we fail in leadership. The key  
9 to success in Pennsylvania's geospatial enterprise is  
10 leadership and the type of leadership the council can  
11 provide. And I really would anticipate and hope that this  
12 council would carry on the spirit it was begun with House  
13 Resolution 882. It is this leadership that enables the  
14 exchange of ideas and a means of reconciling these views to  
15 the overall benefit of the Commonwealth. In other words,  
16 the entire community gets to place the ladder against the  
17 right wall.

18           A lot of times we tend to confuse governance  
19 with leadership, and there are some issues that this council  
20 may confuse with governance too. I disagree with that. In  
21 fact, if you look at academic literature, the proposed  
22 council actually meets some key principles for success,  
23 establishing information technology governance in  
24 multi-level organizations which we have here.

25           A study by the Harvard Business School points

1 out that large enterprises need to consider governance at  
2 several different levels and places. The starting point is  
3 enterprise-wide governance driven by a broad strategy and  
4 goals. Enterprises with separate functions and business  
5 units or geographies may require separate but connected  
6 layers of governance.

7           Let me be very clear what I just said coming out  
8 of this Harvard study. It is entirely consistent with the  
9 best practices to have geospatial governance activities in  
10 both a coordinating council chartered by the Legislature and  
11 within the Executive Branch. In fact, it's preferred.

12           In closing, I strongly support the passage of  
13 House Bill 1304. I would hope and anticipate it will  
14 recreate the spirit of which House Resolution 882 thrived.  
15 I don't believe this could be done adequately with an  
16 executive order. I'm honored to have the opportunity to  
17 address this committee. Thank you.

18           CHAIRMAN THOMAS: Thank you.

19 Let me thank you for your continuing support. You were  
20 there in the early days.

21           DR. ALTER: Chairman Thomas, Chairman Steil,  
22 Members of the Committee, my name is Ted Alter. I'm  
23 Professor of Agricultural Economics at Penn State. Thank  
24 you very much for the opportunity to speak to you this  
25 afternoon.

1           I believe that the proposed geospatial  
2 coordinating council would play a very vital role in  
3 assuring that Pennsylvania's geospatial data infrastructure  
4 is adequately funded over the long term. It will also be an  
5 important mechanism for developing and proposing public  
6 policies essential for achieving the economic and social  
7 promise of that infrastructure and ensuring the cooperation  
8 and data sharing and partnering between the public and  
9 private sectors that I believe is necessary to achieve that.

10           I mentioned funding first in my comment there  
11 because over the last year, along with several colleagues at  
12 Penn State, I have been focusing on the economic  
13 characteristics of our geospatial data infrastructure and  
14 the financing issue. Our work I would say at this point  
15 it's in the preliminary, it's exploratory. Certainly more  
16 to do. But I want to focus on that particular work in my  
17 comments this afternoon.

18           It's my belief in the research and the analysis  
19 that I've done to this point, relying on other sources like  
20 the Xsalta study that Professor Bacastow mentioned, that  
21 PAMAP specifically, but our geospatial data infrastructure  
22 more generally, in Pennsylvania we have the opportunity to  
23 enhance our technological base, our economic  
24 competitiveness, our protection against disaster, both  
25 man-made and natural. I think strengthening this

1 infrastructure will be a crucial resource for public and  
2 private sector planning and decision making, and I hope the  
3 promise for improving the quality of life in the  
4 Commonwealth for all people in ways that we can only imagine  
5 today.

6           I think the future implications for improving  
7 the quality of life, strengthening our economy are not  
8 totally clear, but we can image what they might be. And I  
9 am confident, given the nature of the history of technology  
10 and its evolution in our society, we have a case with our  
11 geospatial data infrastructure that we will indeed be able  
12 to enhance our living, our economy, our Commonwealth.

13           To get to that potential, to achieve that  
14 promise, however, we need to have a long-term funding  
15 strategy, sustainable funding strategy to get us there.  
16 We've already made considerable investment in developing our  
17 geospatial data infrastructure to date. Without a long-term  
18 strategy, the investments that we made, we have made today,  
19 made so far, may indeed be lost. What we've done to this  
20 point may deteriorate, may become obsolete. Without a  
21 long-term funding strategy, we run the risk of not achieving  
22 the promise that this technology holds for strengthening and  
23 improving the quality of life in our Commonwealth.

24           In thinking about the funding, long-term funding  
25 strategy for PAMAP, there are some big issues and complex

1 issues, there are also some small issues. They're not small  
2 but they're more easily addressed. One of those is the  
3 relationship between data collection and the actual  
4 budgetary cycle, the governmental budgetary cycle. There  
5 are certain times of the year that it's best to fly the  
6 state and gather information. You know, we need to be sure  
7 as we think about our funding strategy that we have funding  
8 available at those points in time when it's most optimal to  
9 gather the data. That seems to be something fairly easy to  
10 address.

11           Another issue that we need to think about and  
12 gain some comfort as we think about the funding long-term  
13 funding is right now, and I alluded to this, we have a  
14 considerable uncertainty with respect to the economic or  
15 social environmental implications of a stronger geospatial  
16 data infrastructure in the state 10, 15 years from now. So  
17 we're making an investment now, putting in place a funding  
18 strategy now where we maybe have a good clear view three,  
19 four, five years. But fifteen, twenty years, we don't have  
20 that. We have that uncertainty.

21           So we've got to come to grips I think with being  
22 comfortable with the promise that this infrastructure holds  
23 for us and being willing to make investments to achieve that  
24 promise forward in time. That's a challenge as we think  
25 about and deal with the funding issue.

1           And, third, I think another aspect that's  
2 important to consider when you think about funding strategy,  
3 and that is what is or what should be the relative roles and  
4 relationship between the public and private sectors in  
5 funding. I would argue that from a public sector point --  
6 or actually from an overall point, what we're really  
7 investing in when we're investing in geospatial data  
8 infrastructure is we're investing in knowledge, knowledge  
9 that can be used in multiple and many different ways. Some  
10 we know, some we don't know. In effect, we're investing in  
11 the knowledge to come when we're investing in the geospatial  
12 data infrastructure.

13           And we know today and we know going forward that  
14 investments in the knowledge to come, that idea, that  
15 concept, is really what drives our economic prosperity,  
16 growth of jobs, growth of income and our overall economic  
17 prosperity.

18           So what is the public sector role in that, the  
19 private sector role in that, and maybe more importantly,  
20 most importantly, what is the public sector-private sector  
21 partnership role in our estimates for our funding, our  
22 long-run funding strategy for geospatial technologies?

23           I would argue that geospatial data  
24 infrastructure, that technology, is in fact a generator of  
25 knowledge. As economists would say, it's a knowledge

1 instrument. Since it's a knowledge instrument, it varies,  
2 it's different in certain ways than say the loaf of bread or  
3 a car that we buy.

4           First of all, knowledge, once it's generated and  
5 available, it's available to everybody. My use of it  
6 doesn't exclude your use of it. Okay. It's inexhaustible.  
7 It's always there to be used by whomever. The consequence  
8 of that from a funding point of view is that it creates a  
9 real question as to whether the private or public sector  
10 ought to be involved.

11           Given those characteristics, economic theory  
12 would argue that it's really a public sector role to fund  
13 knowledge instruments like our geospatial data  
14 infrastructure because once it's available everyone can use  
15 it. My consumption and use of it doesn't affect yours.  
16 There's no incentive for me as an individual or a firm to  
17 pay for it because once it's there, I can use it. So I'm  
18 going to wait for it to be there and I'm going to make use  
19 of it.

20           In effect, the market fails in this situation.  
21 It's the classic situation where there's a role at least  
22 initially for public investment to provide a platform for  
23 moving -- for positioning the technology and moving it  
24 forward in society.

25           So I would argue, just to reiterate, that our

1 geospatial data infrastructure resembles, is a knowledge  
2 instrument, has these characteristics, and we have two ways  
3 that we can move forward it seems to me in principle in  
4 terms of funding. We can provide it freely, the  
5 infrastructure and the knowledge that comes from it, or it  
6 can be provided in a way where we try to recover some of the  
7 cost associated with the development and use of that  
8 infrastructure. If it's provided at no cost, we're talking  
9 reliance on public sector revenues, taxation and  
10 appropriations to fund the infrastructure and its  
11 development. If we think of a cost recovery approach, there  
12 is some opportunity, I would argue, from the public sector  
13 approach for cost recovery.

14           There may be also opportunity as the technology  
15 evolves, its uses evolve, the private sector becomes more  
16 involved in generating products based on this knowledge that  
17 the infrastructure provides that there may be the  
18 opportunity for fee arrangements, licensing arrangements,  
19 public-private partnership arrangements, whereby revenues  
20 can be generated to help as part of the long-term funding  
21 strategy.

22           Given all of this uncertainty with respect to  
23 the future use implications both in the public and the  
24 private sector and the products that might be forthcoming,  
25 it strikes me that that situation underscores the need for a

1 flexible funding strategy as we move forward. There's  
2 clearly I believe a role for the public sector, for  
3 government early on to ensure that the necessary investments  
4 are made, the infrastructure is maintained, the private  
5 sector involvement is catalyzed, and synergies come with  
6 that and new products are developed. In effect it's venture  
7 capital that helps strengthen not only our public sector  
8 uses but also products that might come from the private  
9 sector.

10           So from a funding -- economics and funding  
11 perspective, as I've looked at our geospatial data  
12 infrastructure issues, as I think about House Bill 1304, it  
13 seems to me that the coordinating council established by  
14 House Bill 1304 -- the proposed council can play an  
15 instrumental, positive role in helping to identify and meet  
16 the challenges of the financing issue, as well as other  
17 issues associated with the geospatial data infrastructure  
18 relevant here in Pennsylvania. Thank you.

19           CHAIRMAN THOMAS: Thank you. Before our last  
20 presenter, let me acknowledge the presence of our good  
21 friend the Honorable Benninghoff who has joined us. Is  
22 there anybody else? And also the Honorable Scott Perry has  
23 joined us, and we want to thank him.

24           Now to our last presenter. And I hope our  
25 members are getting their questions ready so that following

1 this presenter we can overwhelm you with our burning  
2 questions.

3 MR. PAL: Just some talking points. I don't  
4 know whether you can see from there. Thank you.

5 Mr. Chairman, Chairman Steil and the Honorable  
6 Members of the Committee, today it is my honor to appear  
7 before you as the presenter of the project geospatial  
8 organizations in the Commonwealth of Pa. I am the president  
9 of the PA-MAPPS association. They're the private geospatial  
10 firms in the Commonwealth of Pennsylvania. And PA-MAPPS is  
11 a state chapter of MAPPS, the only national association  
12 exclusively comprised of private firms in the spatial data  
13 and geographic information systems in the United States.

14 PA-MAPPS the organization strongly supports H.B.  
15 1304. We believe the codification of the Pennsylvania  
16 Geospatial Coordinating Council by statute is a desirable  
17 action for the General Assembly.

18 Just to take a moment, you heard from Brady and  
19 Todd about the GIS. It looks like you folks know a lot of  
20 it. But to digress, just to give a little example of the  
21 geospatial applications in the state and the agencies, from  
22 dispatching and routing emergency vehicles to mapping and  
23 analyzing crime patterns, from tracking and modeling the  
24 quality of ground and surface water, to creating imagery to  
25 manage roads, utilities and other physical facilities, from

1 optimizing the delivery of health and medical services, to  
2 fighting forest fires, from assessing hurricane damage to  
3 advancing economic development, to promotion of detailed  
4 asset information and tracking and modeling, the spread of  
5 pollutants or destructive biological agents, everything you  
6 can think of, geospatial technology can enhance the  
7 security, quality of life and improve the delivery of all  
8 the services.

9           Many branches of the state government and the  
10 private sector firms are carrying out this day-to-day task  
11 of reducing crime, enhancing public health and safety,  
12 containing costs, managing growth, improving accountability,  
13 the protecting of the environment. Nearly all of them rely  
14 on geospatial technology to make decisions that directly  
15 affect citizens and determine our quality of life.

16           And geospatial technology has been identified as  
17 one of the 14 sectors that will experience tremendous growth  
18 in the coming years. That's a federal study that came out  
19 with that.

20           So given that, House Bill 1304 would establish  
21 by statute activities that go beyond those currently being  
22 carried out by executive order. We believe doing so would  
23 give permanency, transparency and influence to the  
24 coordinating council so that it can lead the Commonwealth's  
25 important geospatial activities for the good of the overall

1 geospatial community, business, academe, national, state,  
2 local governments, community organizations and the citizens.

3           We support Pennsylvania's Geospatial  
4 Coordinating Council to take advantage of the increasing  
5 demand for geospatial data and services that is fueling this  
6 job growth in the Commonwealth. The council will help to  
7 assure the citizens of Pennsylvania that government at the  
8 federal, state and local levels, as well as the business,  
9 academic community and private sectors, are coordinating and  
10 using geospatial data in the most efficient way possible.

11           Coming from the private sector, we have a little  
12 bit different tilt from the universities. We believe that a  
13 Pennsylvania Geospatial Coordinating Council provides a  
14 suitable forum to propose a private-public partnership for  
15 acquiring and processing the Commonwealth's geospatial data  
16 and positioning Pennsylvania as a leader in geospatial  
17 technology innovation and utilization.

18           Such a partnership will help define the  
19 appropriate roles of government and the private sector in  
20 order to maximize and leverage each other's resources and  
21 avoid duplication and eliminate the spectre of government  
22 competition with the private sector.

23           It will also sustain the valuable efforts  
24 undertaken by the Department of Conservation and Natural  
25 Resources through its PAMAP program. You might be aware of

1 the PAMAP program. It's a mapping effort going on in the  
2 state right now for the entire state of seamless mapping.  
3 The PAMAP program is a collaborative federal, state and  
4 local government initiative supported by Pennsylvania  
5 private sector involvement to build a seamless, consistent,  
6 high-resolution, high-accuracy set of digital geospatial  
7 data products.

8 PAMAP has become a critical part of the  
9 Commonwealth's geospatial infrastructure. A program such as  
10 PAMAP could benefit from private-public partnership as a  
11 creative means to establish a sustainable program with  
12 sustainable funding sources that would form a solid  
13 foundation for economic growth and innovation in the  
14 Commonwealth. I think Ted elaborated on that quite a lot.

15 House Bill 1304 is also consistent and  
16 complimentary with the Federal Government's "Fifty States  
17 Initiative" designed to bring all public and private  
18 stakeholders together in a statewide GIS coordination body  
19 that will help to form effective partnerships and lasting  
20 relationships. And there is a critical need to coordinate  
21 geospatial activities on a statewide basis to eliminate  
22 waste and improve efficiency in government.

23 As envisioned, the Pennsylvania Geospatial  
24 Coordinating Council will take a leadership role in  
25 development of policy, creation of coordination mechanisms,

1 coordination of standards, and facilitation of cost-sharing  
2 partnerships. We support those roles and believe they are  
3 the proper function of a government entity.

4           With that, we have just a couple of suggestions  
5 for 1304 which we would like to raise in hopes of working  
6 with the General Assembly to resolve as the bill moves  
7 through the legislative process.

8           First, we believe the bill should make clear  
9 that the Pennsylvania Geospatial Coordinating Council will  
10 be a policy and multi-jurisdictional, multi-sector  
11 coordination organization. Specifically, we believe the  
12 provision on Page 8, Line 10 to 13, regarding contracting  
13 authority of the council should specify that contracting  
14 should be primarily with the private sector to avoid  
15 government, non-profit or university competition with  
16 legitimate business activities. And, B, that such  
17 contracting be limited to supporting the purpose of the  
18 council. This is to say the council doesn't become a  
19 central geospatial contracting entity for the Commonwealth.

20           Second, we believe that it is in the interest of  
21 the Commonwealth to encourage innovation and economic  
22 development within the Commonwealth's private sector  
23 geospatial industry, thereby resulting in the creation of  
24 geospatial technology employment opportunities. Therefore,  
25 we encourage the addition of wording that favors the

1 contracting of firms with offices located within  
2 Pennsylvania. And that is within the Page 8, Line 10.

3           As I indicated in my introduction, PA-MAPPS is  
4 an association of private geospatial firms in the  
5 Commonwealth of Pennsylvania. What happened in the process  
6 of being established in H.B. 2871, we had an organization at  
7 that time with a different name so we're requesting the name  
8 to be changed to PA-MAPPS. And the committee has been  
9 notified of the name change. So we deeply appreciate the  
10 assistance of the committee and strongly support the  
11 amendment so we are properly named as the private sector  
12 with a seat on the council.

13           In summary, we are strongly supporting H.B. 1304  
14 to become into law. This will allow the most qualified  
15 people in the Commonwealth to be involved for the growth of  
16 geospatial industry in the state. This will allow the  
17 private sector a seat on the council and the council will  
18 help to establish and to encourage the public and private  
19 sector partnership for the economic and job growth in the  
20 committee.

21           With these clarifications and modifications,  
22 PA-MAPPS can enthusiastically and unequivocally support H.B.  
23 1304. We commend the sponsors for introducing it and are  
24 grateful to you, Mr. Chairman, and the Committee for holding  
25 this hearing. We look forward to working with you to enact

1 H.B. 1304 into law.

2                   CHAIRMAN THOMAS: Thank you. Let me acknowledge  
3 the presence of our advisor the esteemed Honorable Bill  
4 Keller from Philadelphia and our Consumer Affairs Chairman,  
5 the Honorable Joseph Preston from Pittsburgh and Allegheny  
6 County. Is there anyone else?

7                   So to that end, let me again start to my right  
8 in the back for questions. Representative Milne.

9                   REPRESENTATIVE MILNE: Thank you, Mr. Chairman.  
10 Thank you all for being here for your testimony. It's very  
11 helpful, very informative for our thinking.

12                   I'm always somebody who's curious what the  
13 models are in other states. And I just wondered if you  
14 could provide me with some perspective about the strengths  
15 and weaknesses of what you've seen other states doing in  
16 this regard, particularly so we can try and capture others'  
17 best practices as we think about how to proceed from here.

18                   MR. STROH: I don't believe that any of us up  
19 here are best equipped to answer that question, and it's  
20 something you might want to ask of others who provide  
21 testimony also. But I might say that each state is  
22 different. I don't know that there's one model that we can  
23 look to as a model that we should adopt in total.

24                   I mean there are examples of things that are  
25 being done in states like North Carolina that we've looked

1 to fairly carefully and a lot of other states. But we have  
2 to really look at our situation here, our unique  
3 environment, our unique characteristics with respect to our  
4 political interests, our economic interests and so forth.  
5 So I would just encourage us to look toward other states for  
6 examples but not necessarily as a particular state or model.

7           We, I believe, are way out ahead. We're always  
8 hard on ourselves here. And if you look back over what  
9 we've accomplished with programs like PAMAP, with things  
10 that are being done in the executive branch for coordinating  
11 geospatial activities, all the different organizations that  
12 I think all of us have mentioned here, we're well along.

13           Our problem is we need to communicate better.  
14 We need to be looking out for one another. We need to be  
15 thinking in the spirit of common wealth.

16           So I think in terms of models, other states can  
17 be instructive, that we should keep in mind. We need to  
18 give ourselves a pat on the back in that we are leaders in  
19 this area so we can look inwardly for that direction also  
20 and then just maintain good communication, good open, honest  
21 discussion and discourse on what our model should be. And I  
22 think if we take that approach, we'll all come out winners.

23           REPRESENTATIVE MILNE: Maybe I can rephrase it  
24 slightly. In your various testimonies you identify a number  
25 of potential end applications of the technology so there's

1 several potential paths for this technology. Is there sort  
2 of a dominant use that has sort of emerged in other states?

3           In other words, are all these separate states  
4 using the different end applications roughly equally or has  
5 it turned out, as practice and applications has moved ahead,  
6 certain functions of the technology are just simply more  
7 practical or prevalent or just turned out to be what states  
8 tend to gravitate using it towards?

9           DR. BACASTOW: Let me address that. And,  
10 actually, Mr. Alter come in here at one point. I would say  
11 all the states have a very common base of use of the  
12 technology. When I talk about geospatial technologies, I'm  
13 talking about low intensity geographic information systems,  
14 positioning GPS, and the suite of analysis capabilities on  
15 top of that. They all have sort of common characteristics.  
16 Emergency management, use of government is important.  
17 There's commercial applications, navigation. These are sort  
18 of common.

19           There are some differences based on location.  
20 We don't have to worry about hurricanes as much as other  
21 places. In Florida, the Gulf Coast are more concerned about  
22 applications related to that. In the West it may be fires.  
23 But they're all sort of emergency management.

24           The one big area of difference is agriculture  
25 where -- and this is not my area, but the field size in

1 Pennsylvania is of such a size that precision agriculture in  
2 Kansas doesn't tend to work as well. But by and large the  
3 site applications are very similar.

4           I would say Pennsylvania has a major opportunity  
5 in terms of being the corridor from New York to Washington  
6 in terms of commercial application or sometimes called  
7 location-based services, navigation systems, location-based  
8 advertising, you drive by and it sends you an e-mail on your  
9 phone that you just drove by a favorite restaurant. So in  
10 that sense, you know, other than the ones I've mentioned,  
11 we're all very much the same in terms of uses.

12           I would reiterate a little bit what Brady  
13 said -- maybe emphasize -- Pennsylvania is a commonwealth.  
14 And with 67 counties and then civil divisions that have a  
15 great deal of autonomy, we need to take a very broad and  
16 collective approach to this. If you don't have an  
17 atmosphere where you can have an open exchange of ideas and  
18 come to some resolution, as I said, find where you want to  
19 place the ladder against the wall, the right wall, we could  
20 very easily be going off on the wrong direction.

21           So the commonwealth nature is unique to  
22 Pennsylvania. You don't find it in the southern states, you  
23 don't find it in the western states. That is one factor  
24 that I think would be of great importance when you consider  
25 Pennsylvania.

1 DR. ALTER: Two things quickly in response. On  
2 the funding issue, the funding models, long-run, sustainable  
3 funding, in many ways in my experience looking across the  
4 states is that we're cutting a new trail here. We're having  
5 this discussion about economics and funding of geospatial  
6 data infrastructure, trying to figure how to do it. So I  
7 think we're cutting a new trail. I'm not sure that there  
8 are any specific other models fully developed out there.

9 Second, to relate it to the point that I made  
10 about technology and uncertainty, I think we see some  
11 applications now here in this commonwealth, but if you  
12 believe, as the history of technology shows, that as  
13 technology plays out and we gain more experience and we have  
14 innovation occurring both in the public and private sector,  
15 new things emerge that we can't even imagine.

16 And it strikes me that with our geospatial data  
17 infrastructure we have the opportunity here in Pennsylvania,  
18 if we have faith in that kind of future, to create a context  
19 within which the public and private sector can interact and  
20 innovate, and it will, I believe, lead to a stronger  
21 environment, a better social context for us and a stronger  
22 economy. I can't say exactly 15 years from now what it's  
23 going to look like.

24 REPRESENTATIVE MILNE: Sure. It's very  
25 exciting. Thank you, Gentlemen.

1                   CHAIRMAN THOMAS: Thank you, Representative  
2 Mantz.

3                   REPRESENTATIVE MANTZ: Thank you very much,  
4 Gentlemen. I think your comments are very informative. I  
5 have one question I wanted to ask.

6                   What forms -- what forms currently exist to  
7 collect, store, share and preserve the geospatial technology  
8 knowledge that's been already collected among -- between the  
9 public and private sectors in Pennsylvania?

10                  MR. STROH: I've been sort of taking the role  
11 here in providing the general and then letting the other  
12 experts put some flesh to it. There's no one store. You  
13 know, we have programs, we have a program that we're  
14 spending a lot of money on, a lot of time now called PAMAP  
15 which is providing us with aerial imagery and various  
16 high-tech elevation data that we can use for things like  
17 flood plain mapping that municipalities can use for  
18 planning, that we can use for all sorts of things. That  
19 obviously resides within the government sector. It resides  
20 as a public good as Professor Alter has told us. But in  
21 creating that, there's a private sector is collecting the  
22 data. A university is storing the data for public use.  
23 State government is maintaining the data for internal  
24 government use and a variety of uses.

25                  So in that particular instance, that data

1 resides -- our essential base data, what we call framework  
2 data, the base layer, things that you would find on a map,  
3 on an old topographic map that you may be familiar with,  
4 roads, streams, elevations, topography, that type of thing,  
5 and now with the technology allowing us to see actual  
6 imagery, that is obviously because it's a public good and  
7 it's a large data set that's stored in one location,  
8 disseminated in many different locations.

9           When you get to the other data, data about  
10 various topics, epidemiological data, socioeconomic  
11 characteristics, financial information, economic  
12 information, the repositories for that, where that is all  
13 stored, both the knowledge for using that, the tools for  
14 using that and the data itself is as dispersed as the  
15 worldwide web itself, which is exactly one of the problems  
16 we're dealing with here.

17           Dr. Bacastow in his comments talked about a  
18 reference to architecture, building this infrastructure in  
19 the future. And one of the models that we look at which is  
20 probably not one that will work for any of us is a central  
21 repository, the old idea of dumping all of our tools, all of  
22 our data and everything into one place. Because it's  
23 evolving so quickly, because so many folks are creating new  
24 data, they may not know the extent to which they can share  
25 it, how liable they are for it and things like that. But

1 because of the velocity of the developments, I think we  
2 would all agree that we can't look toward a central  
3 repository.

4           So the answer to your question then is it's all  
5 over. It's as the worldwide web is and it's growing every  
6 day. Will we ever get to the point where we can have it in  
7 one central repository? Probably not. Do we need to work  
8 toward an organization through something like the  
9 coordinating council who would be able to make linkages to  
10 all these locations, whether it be the tools, the data, the  
11 knowledge and so forth? Yes. That's what we need to do.

12           We need to understand. We basically need to map  
13 out our map data, our geospatial data to know where it is,  
14 know how we can use it and so forth. But if we look toward  
15 the old model of a central repository and trying to at any  
16 one point in time know where all the data is and you all  
17 using it, we'll probably be frustrated.

18           MR. PAL: Let me add to that a little bit. As  
19 we mentioned here, the problem -- there's one major problem  
20 we have as a commonwealth, the data is created by all the  
21 counties, not by the State. The State has the PAMAP program  
22 which it has taken the PAMAP program which is the digital  
23 interpreter and which is the topographical data, but in  
24 order to drive on a road, the linkage of the roads is being  
25 created by the 67 counties. So data is created by the

1 State, by the counties and some major cities, Bethlehem,  
2 Philadelphia -- it's a county city -- Allentown, Pittsburgh,  
3 they're also building their own data sets.

4           So technology will come -- it's coming right now  
5 which is called web services. That means everybody who's  
6 the owner of the data will maintain the data, but the  
7 council, when it is formed, will be the actual linkage which  
8 will coordinate with all the counties so everybody is  
9 maintaining the data but everybody else can use it.

10           So there are many people creating data, many  
11 people storing data, and technology is already there for  
12 people to share it through proper leadership.

13           REPRESENTATIVE MANTZ: I presume from what  
14 you're saying is there's some duplication as well?

15           MR. PAL: Oh, yeah. Oh, yeah. There is a  
16 tremendous amount of duplication, yeah.

17           REPRESENTATIVE MANTZ: So for economy's sake,  
18 that's one of your big reasons for promoting this particular  
19 council is economy?

20           MR. PAL: Exactly. Yeah. And if you have the  
21 slide, I've written there one point which says that, reduce  
22 duplication. With having so many entities creating data,  
23 there will be duplication.

24           REPRESENTATIVE MANTZ: Thank you very much.

25           CHAIRMAN THOMAS: Thank you. Representative

1 Bear.

2                   REPRESENTATIVE BEAR: You're talking about data.  
3 And I've heard a lot. And in my past life I did a lot of IT  
4 consulting, so my natural question would be because I don't  
5 know a lot about this technology, geospatial, what's your  
6 coordination with like OIT, Office of Information  
7 Technology, or other state offices, that kind of stuff? Do  
8 you have coordination? And why isn't maybe an organization  
9 like that heading this up versus creating a new council?

10                   I need educated on this because I don't know  
11 what the difference is. You're obviously dealing with data  
12 sharing at the state and county level, the complications,  
13 things like that. So I'm just kind of curious, you know,  
14 what's the reasoning and logic behind it?

15                   MR. PAL: Very good question.

16                   DR. BACASTOW: Let me start addressing that one.  
17 I think the quote I gave about various levels of governance.  
18 Pennsylvania is a pretty diverse and complex enterprise if  
19 you think about it. We have  
20 five-thousand-two-hundred-and-eighty-some entities of local  
21 government, if you include the counties, municipal  
22 subdivisions, school districts, et cetera. A lot of these  
23 are creating some sort of geospatial data.

24                   Give you an example. School districts do school  
25 bus routing, and that requires spatial data. The enterprise

1 is much more than just government too. It includes  
2 business. And part of the report is the PAMAP referenced  
3 architect workshop that defines the broadness of the  
4 enterprise, academe, government, federal, local government,  
5 commercial entities. I mean just to name a few.

6           So this council would be a forum for those  
7 entities to come together to begin to -- not control,  
8 because you can't control the Commonwealth. What you can is  
9 guide, you can lead, you can get an opportunity to express  
10 views and to develop the standards in interoperability  
11 capabilities.

12           And that is about the only way to attack this.  
13 You cannot -- it's not a command control structure. We are  
14 just too diverse in what we do, which is actually the  
15 strength of Pennsylvania in many ways because we really do  
16 have local government. So the council would give the  
17 opportunity to bring those groups together to begin to  
18 development a common vision, a common need, business would  
19 have a seat at the table to begin to develop services they  
20 could then be provided across the entire Commonwealth as an  
21 enterprise.

22           REPRESENTATIVE BEAR: The other question I have  
23 as a follow-up is you talk about funding. Do you have any  
24 idea of what kind of funding we'd need to get this thing  
25 going? Any estimates as to dollars?

1 DR. BACASTOW: I really have no idea. I would  
2 imagine someplace they'd have -- there would have to be  
3 staff. But in terms of services, I think quite honestly, if  
4 I look at my experience in working on House Resolution 882,  
5 there was probably minimal resources put into that, and that  
6 had a major impact. That was one of the first times that we  
7 had this group together talking about issues that were  
8 important to all of them.

9 I mean I could think of privacy is an issue,  
10 begin to discuss these things in a forum. So there would be  
11 resources necessary, but I think we're talking certain, at  
12 least in my mind, tremendous resources. What we're talking  
13 about is an opportunity to bring all these -- collectively  
14 these people together at a table where we're equals in a  
15 permanent sense, something that's not at the desire of one  
16 individual. As we have administrations change, we have some  
17 permanence to it.

18 REPRESENTATIVE BEAR: Thank you.

19 CHAIRMAN THOMAS: Thank you. Representative  
20 Keller.

21 REPRESENTATIVE KELLER: Thank you, Mr. Chairman.  
22 I guess I should start with an apology. I'm late and I have  
23 a question that may have been answered more in the  
24 testimony. But my only experience with this is as Mr.  
25 Chairman said, I've been involved in it before and we needed

1 some mapping, geospatial mapping to do with the port. And I  
2 found out that the State had paid for part of the mapping  
3 and the Turnpike, the State paid for it. When I went to get  
4 the information, the contractor told me that is proprietary  
5 information that belonged to him and we had to pay to get  
6 that out.

7                   What is the intent and who has proprietary  
8 ownership of that data that's being collected? Do people  
9 have to pay to get it out?

10                   DR. BACASTOW: Let me get the first shot at  
11 this. I think that will be an issue the council should  
12 address. If the data were collected with taxpayers' money,  
13 the council could make a recommendation as to policy as to  
14 the availability of that information. Right now there is no  
15 uniform policy on that. In fact, if you look at various  
16 levels of government, state government gives it away if it's  
17 collected. Some entities --

18                   REPRESENTATIVE KELLER: Not when I wanted to get  
19 it.

20                   DR. BACASTOW: Well, see, I don't know the  
21 arrangement in which they were collected. It may have been  
22 collected by a contractor for a particular purpose. I  
23 simply don't know. Maybe Ashis Pal can answer that. But  
24 let me say this, that is specifically the kind of issue a  
25 council should address and could address. Very broadly

1 based that would cut across multiple entities of government.

2           MR. STROH: In the example that you cited, and I  
3 don't know all the details of it, but we have to look at  
4 what we're paying for or what you may have been paying for.  
5 Were you paying for the data itself, the raw data itself, or  
6 are you paying for something that that company did to it to  
7 improve it, to add value to it?

8           Were you paying -- you know, if you were just  
9 paying for the raw data, that's one issue. If you were  
10 paying for some value that they added to it, then that's a  
11 different story.

12           And part of what this council that's formed has  
13 to deal with is, you know, what data is free, when is it  
14 free. If it is free and is a public good in the public  
15 domain, when can or when is it appropriate for somebody to  
16 charge for it if they've added some value to it.

17           And those are extremely gray areas, and we just  
18 have to keep that -- you know, we do it within the programs  
19 that we work with at Penn State within our demographic state  
20 data set, people will call us and say, well, why are you  
21 selling us census data? Well, the data is free. We'll  
22 give you a disk drive and you can do with it what you want.  
23 If we do something to it to make it more understandable to  
24 you, to package it in some way, then we're going to charge  
25 you for that value added.

1           You don't always get value added when you're  
2 paying for it necessarily so you can hide behind that also.

3           MR. PAL: This is an issue we always face. We  
4 work for the state government, county governments  
5 everywhere, and usually in their contracts you're working  
6 under anything you do, you have been hired to do, those are  
7 ours. So we take it this way. Whoever is producing the  
8 data, they own the data. Just because it's digital, life  
9 doesn't change.

10           And there's a new discussion going in OTC and  
11 other arenas it's called digital rights. So if you can have  
12 your digital rights and you can make -- the council can make  
13 issues like that that in the private sector or other  
14 agencies that if you use the data, you pay a share of the  
15 cost.

16           So you can have a sustainable mapping issues  
17 that we are talking about like the PAMAP. Just like suppose  
18 right now if you wanted addresses, location-based addresses  
19 for the interstate, the State doesn't have it. The State  
20 has to purchase it from the private sector entire  
21 roads -- roads for the entire Commonwealth with addresses.  
22 Like there's some private companies that expended the money  
23 to put addresses so you can type in 221 North Lane,  
24 Lancaster, Pa., it will show you that. And you cannot get  
25 that one for free.

1           But by the same token, if the State builds it  
2 and some private company uses it, adds value to it, then the  
3 State can say, well, let's have a partnership. That's the  
4 kind of public-private partnership we've been talking about.  
5 If you want to take our data, fine. But by the same token,  
6 let's share some of it so we can reinvest to maintain the  
7 data.

8           So it's a tremendously complex issue, and that's  
9 why the council will be a very good arena where this can be  
10 discussed openly.

11           REPRESENTATIVE KELLER: Well, I disagree that  
12 collected data, if we paid for it --

13           MR. PAL: Exactly, yeah.

14           REPRESENTATIVE KELLER: And, Mr. Chairman, I  
15 just want to make sure -- I mean this already happened, and  
16 I even went to a state agency and asked them to apply for  
17 the information, and they told -- and they were told they  
18 would have to pay for it. So I believe it's one of the  
19 things we have to take a look at. If the State is paying  
20 for the collection of the data, then that data should be  
21 made available for anyone who is going to use it.

22           MR. PAL: Yeah. Similarly, when you deal with  
23 the Council of County Governments, you will get a whole  
24 different story also. A lot of counties develop it for  
25 free, a lot of counties charge for making copies of the

1 data, for the time. A lot of counties try to make money  
2 selling the data. So there are a lot of different models  
3 out there.

4                   REPRESENTATIVE KELLER: It's just me, my  
5 opinion, but I don't believe we should hire a contractor to  
6 collect the data and then when you go to use that data you  
7 should have to pay for it. I would like to see that not be  
8 in this bill.

9                   DR. BACASTOW: That very type of issue is the  
10 thing this council could address, should address, and the  
11 detail of that, that's the forum to do it in.

12                   REPRESENTATIVE KELLER: Thank you, Mr. Chairman.

13                   CHAIRMAN THOMAS: Thank you, Representative  
14 Keller. Our last question will come from Representative  
15 Benninghoff before the Chairman will close out the  
16 questions.

17                   REPRESENTATIVE BENNINGHOFF: Thank you, Mr.  
18 Chairman. I will try to be quick and brief. Thank you,  
19 Gentlemen, for you testimony. Mr. Alter, it's really good  
20 to see you again.

21                   I think I shared one of my questions with  
22 Representative Perry in a little sidebar here in reference  
23 to privacy. And I'll throw it out to all three of you. You  
24 can address it as you wish.

25                   But some of things -- I think we share a lack of

1 understanding of totally what the bill is doing, but when I  
2 read your title the Coordinating Council, I hope that we're  
3 not going to be duplicating things that counties have  
4 already done, but more being a clearinghouse of gathering  
5 that data that the counties have had and coordinating its  
6 distribution.

7                   With that obviously Representative Perry and I  
8 share one kind of concern may be in there and that is  
9 whether or not we have good policy I mean protecting  
10 people's personal privacy. And last would be how do we keep  
11 particular data, and who's the gatekeeper, out of the hands  
12 of individuals we don't want to have stuff? I'm talking  
13 about mapping of bus routes and those types of things.

14                   As silly as that sounds, it is important for us  
15 to have it available for our EMS people, but I don't  
16 necessarily want to have it available to some child predator  
17 or somebody who may want to do some domestic terroristic  
18 acts.

19                   With the technology we have today, people's  
20 ability to access information is tremendous. It amazes me  
21 how well young people can access technology. They grew up  
22 with it and it's their life. Some of the younger colleagues  
23 that came in this year, they say we don't use the phones  
24 anymore, we connect and we can coordinate all our  
25 communications through text messages. I'm feeling older

1 each day, and I'm having to adjust to seeing a new  
2 generation, but they are very good at it. And I feel  
3 inadequate. But I think that stems over to our privacy.

4           Pretty hard questions I guess, but I think  
5 they're important. And I guess I have to ask, I looked  
6 through the legislation, and is the legislation going to  
7 allow this council to govern itself on these issues, or, as  
8 the government is advising this council, are we going to  
9 give it direction?

10           Otherwise, I think it can be like tentacles  
11 growing everywhere. That's a pretty powerful council if you  
12 give it kind of carte blanche ability to draft its own  
13 governing rules and be the gatekeeper and privacy police and  
14 everything else.

15           CHAIRMAN THOMAS: Well, we will accept input,  
16 but like I said, Representative Benninghoff, that you will  
17 be a part of designing that final product.

18           REPRESENTATIVE BENNINGHOFF: I appreciate that.

19           DR. BACASTOW: I can tell you that in my vision  
20 of what this council would be, it would not replicate  
21 anything in terms of storage of information, other services  
22 that other entities in Pennsylvania would provide. It would  
23 coordinate it. Which is one of the key components to  
24 setting up wise policy and removing redundancy.

25           The issue that Representative Benninghoff has

1 mentioned about where we get guidance, I can't answer. I  
2 would hope that the members of that council would have  
3 enough insight to be able to see areas of a policy that  
4 might need to be addressed and then formulate some statement  
5 and go to the Legislature with that statement. But this  
6 council I don't see as establishing policy. What I see it  
7 as is a broad forum in order to help develop context and  
8 ideas to then come to you that you could act upon.

9           REPRESENTATIVE BENNINGHOFF: I appreciate your  
10 insight. Thank you, Mr. Chairman.

11           CHAIRMAN THOMAS: Thank you. Let me thank each  
12 of the distinguished panelists from the academic and private  
13 sector. We don't usually do this, but we're going to give  
14 you a big round of applause.

15           Our next panelists representing county and  
16 municipal governments, are you ready? The first panel,  
17 please do not leave. Chairman Steil has some questions that  
18 he needs you to respond to.

19           Gentlemen, good afternoon. Please introduce  
20 yourselves and proceed.

21           MR. TROXELL: Good afternoon, Mr. Chairman. I'm  
22 Edward Troxell. I go by Ed. I'm with the Pennsylvania  
23 State Association of Boroughs, and I am the Director of  
24 Government Affairs.

25           MR. DOUGHERTY: Good afternoon. I'm Percy

1 Dougherty. I'm Chairman of the Lehigh County Commissioners  
2 and President of the County Commissioners Association of  
3 Pennsylvania.

4 MR. COOLIDGE: I'm Erick Coolidge, Tioga County  
5 Commissioner.

6 MR. HUTCHINS: I'm Barry Hutchins, Senior  
7 Network Engineer attached to Lycoming County Public Safety  
8 and current president of GIS Professional Association.

9 CHAIRMAN THOMAS: Is the League of Cities here?

10 MR. TROXELL: I believe they have submitted  
11 testimony, Mr. Chairman.

12 CHAIRMAN THOMAS: Okay. Proceed.

13 MR. TROXELL: Thank you, Mr. Chairman. Chairman  
14 Thomas, Chairman Steil, and Members of the Committee, thank  
15 you very much. Again, my name is Edward Troxell and I do  
16 want to thank you for having the ability to testify  
17 regarding House Bill 1304. And I believe it is a very vital  
18 and creative legislative effort that we have before us  
19 today.

20 We're here today to learn more about House Bill  
21 1304 and its goal of smoothing the introduction of  
22 innovative technologies that can assist municipalities and  
23 the Commonwealth in the years to come. In essence, House  
24 Bill 1304 seeks to accomplish this through the establishment  
25 of a geospatial coordinating council supported by enabling

1 an mapping and geospatial technologies fund. As PSAB has  
2 had the opportunity to examine the bills, our members would  
3 support the bill with slight changes that I'll mention  
4 later. With these few technical changes, PSAB is looking  
5 forward to promoting the council in the successful  
6 deployment of geospatial technology throughout our  
7 communities.

8           One of the first questions that I'd like to  
9 address is from the municipal perspective, and that's why  
10 indeed do local governments throughout the state need these  
11 type of technologies. Okay. That begs the question --  
12 you'll see in my testimony I say is this technology  
13 practical for all communities throughout the Commonwealth.  
14 I would say emphatically, yes. Moreover, I will illustrate  
15 with a proven example of a successful geospatial project  
16 that PSAB developed, PennDOT funded, and local contractors  
17 participated in with capital region borough communities.  
18 There's a summary of it attached to my testimony if you want  
19 to look at that a little bit later.

20           In 2003 PSAB conducted what we call the Digital  
21 Infrastructure Management and Securities System mapping  
22 project with five boroughs in the Capital Region. I have a  
23 copy of that summary attached later, but let me summarize  
24 from that report why geospatial and related technologies  
25 like DIMSS are needed in our communities, are practical for

1 our communities and have already been practiced and  
2 demonstrated to be successful.

3           From the conclusions of our DIMSS report, the  
4 traditional approach of contracting with an engineering or  
5 consulting firm to document and maintain current  
6 infrastructure data as an addition to their other duties  
7 exceeds the fiscal capacity of most communities. DIMSS  
8 geospatial technology can supplement existing local work  
9 flows, projects and duties by collecting data and sharing it  
10 with county, state and federal officials who may then apply  
11 the data to their efforts, more or less moving this data  
12 upstream to folks.

13           The additional benefits include applications to  
14 roadways, bridges, water supplies, sanitary and storm sewers  
15 and code enforcement. Plainly, these geospatial  
16 technologies in the DIMSS program at the local level were a  
17 success and we have proven it through the DIMSS pilot  
18 project. We would urge the Commonwealth to support  
19 legislatively these efforts to establish a council in House  
20 Bill 1304.

21           As an aside, there was some discussion about  
22 funding here. What we were able to do also was to have  
23 Liquid Fuels designated, boroughs were able or all  
24 municipalities were able to use up to a thousand dollars  
25 annually towards computers and computer-related equipment

1 for projects such as DIMSS also for electronic fuel fund  
2 reporting and things like that. We'll get to that probably  
3 later on in the testimony and your questions and answers.

4           The observations that PSAB has regarding House  
5 Bill 1304 are mostly administrative in nature. This is only  
6 sensible as the bill itself creates an administrative agent.  
7 We interpret the bill's 35-member council as capable of  
8 providing a very broad perspective of varied users and  
9 developers who will approach changing technologies with  
10 practical experience and knowledge.

11           Also, the bill organizes the council within the  
12 Pennsylvania Historical and Museum Commission. We trust  
13 that the PHMC will recognize the asset this council may  
14 become to it. And that's one area we may want to look at a  
15 little later.

16           Returning to the bill though, under the General  
17 Powers of Council section beginning on Page 6, Line 28, and  
18 continuing to Page 7, Line 5, PSAB is supportive of the  
19 cooperation term used in subsections -- the terms throughout  
20 Subsection A express our members' desire to share the  
21 quality and utility of geospatial data and to recognize it  
22 as a strategic resource that it truly is.

23           Secondly, PSAB insists that Subsection B labeled  
24 as the Forum for Policy and Technology on Page 7, Line 6,  
25 focuses on collaborating with all levels of government, as

1 well as the associations and organizations listed as  
2 members. Our experience with DIMSS at the very local level  
3 and its practical way of bringing geospatial information  
4 from the bottom up demonstrates the need to include as many  
5 levels of stakeholders and users as possible. Should the  
6 council fail to recognize this dynamic, its success is  
7 surely in doubt.

8           The additional subsections on Page 7 within the  
9 bill such as Strategic Planning, Policy Development,  
10 Technical Assistance, Fundraising, they're all necessary for  
11 an effective and productive council I understand. As a  
12 matter of note though concerning Subsections E, Technical  
13 Assistance and Fundraising, F, with the public most familiar  
14 with the P-3 concept and those projects we went through in  
15 the Legislature recently in June and July, there may be ways  
16 to explore the abilities to bring public/private  
17 partnerships to a goal and to funding a council, et cetera,  
18 something along those lines.

19           As I stated earlier in my introduction, PSAB  
20 would seek amendatory language to House Bill 1304 under  
21 Section 6407, the creation and general powers of committees,  
22 and Subsection (a) entitled Duty of Council located on Page  
23 8 beginning at Line 24, in particular Line 26 on Page 8 sub  
24 (a) that outlines the duty of the council.

25           On the Line 26 it reads, the council shall

1 oversee and may abolish the standing committees created in  
2 Subsection (b). That line there where it says may abolish,  
3 we request that the abolition of standing committees require  
4 a mechanism that would enable the committees that are under  
5 the aspect of abolishment or abolition that they would be  
6 enabled to offer their opinions on the viability of being  
7 abolished. Something as simple as a phrase reading, the  
8 council, with the majority agreement of the standing  
9 committee under review, may recommend the abolition of  
10 standing committees.

11           This is just to keep the tent as large as  
12 possible, to not have stakeholders feel as though they're  
13 going to be squeezed out somewhere along the line should the  
14 broader council see them as being unnecessary, et cetera.

15           In closing though, PSAB supports the concepts  
16 outlined in House Bill 1304. With our suggested changes, we  
17 see the measure as timely and needed. Our experience has  
18 demonstrated the need for the Commonwealth to develop  
19 innovative approaches to applications of technologies for  
20 the public good. We sense the creation of the Geospatial  
21 Coordinating Council, as well as the mapping and geospatial  
22 fund as a first step in using these technologies to benefit  
23 the entire Commonwealth.

24           Thank you for your time, and I will be happy to  
25 answer any questions you may have after we're through.

1 Thank you.

2 DR. DOUGHERTY: Chairman Thomas, Chairman Steil,  
3 and other members of this distinguished panel, it is indeed  
4 an honor to be here before you today to testify on something  
5 that's very dear to my heart. I'm sort of wearing two hats  
6 today.

7 As I mentioned, I'm Percy Dougherty, Chairman of  
8 the Lehigh County Commissioners and also President of the  
9 County Commissioners Association of Pennsylvania. But in a  
10 previous life I started out as a geographer. I have a Ph.D.  
11 in geography and one in geology. And I got my start at good  
12 old West Chester University, so Representative Milne should  
13 be happy about that. I got my bachelor's and master's  
14 degree from there. Then I went astray and went to Boston  
15 University for my Ph.D.s, but I made up for it by coming  
16 back to Kutztown University. So Representative Mantz and  
17 his district took advantage of that. So it's good to see  
18 both of you on this panel.

19 CHAIRMAN THOMAS: That's two votes.

20 DR. DOUGHERTY: And most of you are familiar  
21 with CCAP, the County Commissioners Association, we're a  
22 nonprofit, nonpartisan association looking out for the good  
23 of our 67 counties. And when we look at the 67 counties,  
24 there's a great deal of diversity from Philadelphia all the  
25 way down to some of the smaller counties where there are

1 more elk than people. So we represent a great constituency.  
2 And, as such, we represent all of the population of the  
3 State of Pennsylvania.

4           So as you can see from the introductions here  
5 already with Commissioner Coolidge and Barry Hutchins, we  
6 have a diverse background and we're from different parts of  
7 the state, but we're working together on this very important  
8 topic of geospatial analysis.

9           We appreciate the opportunity to address the  
10 House Intergovernmental Affairs Committee with our comments  
11 and support House Bill 1304. This is an important step  
12 forward for all users of GIS technology through the creation  
13 of the Pennsylvania Geospatial Coordinating Council.

14           If you look at our written testimony, in the  
15 next section there we touch on many of the things that were  
16 asked in questions previously, you know, where is GIS being  
17 used today. And we are right there on the forefront at the  
18 county level. Our tax maps are the basis on which many of  
19 the other GIS studies are done. We have many levels in the  
20 GIS, many of the layers that are developed at the county  
21 level, and then we are sharing these with other agencies.

22           And if you look down the list here, you know,  
23 everything from economic development, GPS to keep track of  
24 our people who are out on probation by using the bracelets,  
25 watching where they are on a map, used by your DA's office,

1 our human services department has a great ability to get  
2 into GIS. So this isn't something that's just used by let's  
3 say a couple mappers out there. This could be used by human  
4 services too.

5           Our planning department, we are in the midst of  
6 starting a health department in Lehigh County along with  
7 Northampton County. GIS will be one of the great tools for  
8 that department. Emergency preparedness, we don't have to  
9 say much more about that. Whether we're looking at a  
10 pandemic, we're looking at floods, we're looking at  
11 landslides or whatever, GIS is one of the major tools.

12           And in New York City during the disaster of  
13 9/11, without GIS that city would have been paralyzed. It  
14 managed to get out there and dig out from the rubble with  
15 the help of the people using GIS.

16           Also, our farmland preservation, with which  
17 you're very familiar, requires a GIS on the county level to  
18 do the initial studies. The Clean and Green legislation  
19 requires it. And, of course, we are watching very eagerly  
20 what happens in good old Allegheny County where their tax  
21 assessment system was just ruled illegal by a Court of  
22 Common Pleas. This will mean that the system in all 67  
23 counties is unconstitutional under the Pennsylvania  
24 Constitution and we will all have to go out and do an  
25 immediate reassessment.

1                   We're lucky in Lehigh County because we have a  
2 good GIS department and we feel that that department will  
3 save us in excess of \$2 million if we have to have that  
4 reassessment. We will be able to do much of it in-house  
5 without going outside. So that is a big use of the  
6 geospatial technology.

7                   Getting back to the script here -- excuse me for  
8 going off on some of these, but this is something that's  
9 very dear to my heart. And when I ran for commissioner 16  
10 years ago, one of my election platform planks was we were  
11 going to get a GIS system for Lehigh County. It took eight  
12 years to get it, but we got it, and people couldn't get  
13 along without it now.

14                   But as collectors and users of the GIS data,  
15 counties fully recognize the need for coordination of data  
16 sharing. That is very important. Counties often receive  
17 duplicative requests for the same type of data from  
18 different private sector groups. And I know it's the same  
19 with state agencies.

20                   It's a shame Representative Keller had to leave  
21 because we have really empathized with him because of some  
22 contracts one county agency may not even be able to share  
23 data with another county agency under some of the proposals  
24 that we have from the private sector. So sharing data, the  
25 coordination of this data sharing is something that can be

1 much better done at the state level with this council.

2           We can also utilize the state and the council to  
3 create policy regarding the data standards. It seems like  
4 it wasn't too long ago where we were talking with adjacent  
5 counties trying to see if we could share similar type of  
6 information, make sure if we could collect data in the same  
7 format. And even after we did our initial maps, we still  
8 found that our county boundaries still didn't correlate. So  
9 there's a lot of work there. So we need standards out  
10 there. So this will get us one step closer to  
11 interoperability if we can get the geospatial data on a  
12 level playing field.

13           The GIS Council created by House Bill 1304 will  
14 serve to move our state out of the dark ages. I hate to say  
15 how primitive that we are in Pennsylvania. We're like a  
16 bunch of Indians or at least a bunch of tribes running  
17 around out there without any coordination. We have to get  
18 some sort of federation here. And that's where the  
19 Geospatial Council can provide consistent statewide  
20 leadership on geospatial issues.

21           The leadership will enable the Commonwealth to  
22 promote geospatial information as a strategic resource to  
23 encourage cooperation and cost sharing on all levels of  
24 government, the private sector and academe. We're all  
25 represented here today. But believe it or not, there is not

1 the sharing out there that we need. Some information is  
2 proprietary. It's in one little silo. Some is in another  
3 silo, and we cannot cross-pollinate and really cause this to  
4 be a blossoming for economic development and even for other  
5 types of activities in the state.

6           Additionally, the with council's leadership we  
7 can move forward there and get recommendations that can be  
8 offered to officials on all levels regarding priorities,  
9 responsibilities and funding of geospatial technologies for  
10 the whole state.

11           While there's general support amongst all of our  
12 counties for the Pennsylvania Geospatial Council, we have  
13 some concerns with the language in House Bill 1304. It's  
14 clear from the composition of the council that the bill's  
15 sponsors wish the members to have diverse backgrounds.  
16 That's good. And being inclusive of all constituencies who  
17 have an interest in GIS data. Very good also. But we do  
18 note that there is currently no express requirement that  
19 members or designees of the council either have extensive  
20 knowledge in GIS or have completed a course of study  
21 relating geospatial technology.

22           We suggest that the bill be amended with general  
23 language expressing a desire to have individuals with  
24 relevant background experience selected as appointees to the  
25 GIS Council in many of the suggestions that are there under

1 the membership. This could be just something, some guidance  
2 language there under the background just before the list of  
3 the personnel where it is highly recommended that appointees  
4 from organizations have a background in GIS.

5                   I can remember years ago back in a past  
6 reincarnation of the State Planning Board a person I knew  
7 was placed on that board and he had his background in  
8 classical Greek literature which didn't have too much to do  
9 with planning.

10                   So I notice the universities are represented  
11 here. I hope they have the foresight to put a GIS professor  
12 on that committee, if that's so done, rather than a  
13 professor of classical literature or, heaven forbid, a  
14 political scientist.

15                   Also, realizing the extremely important  
16 investment in geospatial technologies that the council  
17 represents, we believe that the council should be  
18 independent of existing state agencies with its own staff  
19 and its own budget and a dedicated funding stream.

20                   We feel that it would be folly to place it in  
21 one of the major State departments, whether it be DCNR, DEP  
22 or so forth, and we don't know even if the Historic and  
23 Museum Commission is the proper place. We feel that maybe a  
24 separate line there, maybe being responsible right to the  
25 Governor's Office or to the Lieutenant Governor's Office

1 might be a better option where this agency can have its own  
2 staffing, its own funding, not be responsible to another  
3 agency which may preempt some of the personnel or some of  
4 the budget.

5                   And as was stated earlier in one of the  
6 questions about how to fund this agency, we'll state right  
7 up front, we have no idea right now, but we would be willing  
8 to make some recommendations on that later on. We also find  
9 that we believe this council is similar to a configuration  
10 we have in our comments, the nucleus of an atom, but I could  
11 also say in addition to that, a state planning board or many  
12 other agencies. The big difference here is we think that  
13 this agency has to have its own staff and funding and its  
14 own place in the sun.

15                   And our next comment gets a little bit to one of  
16 the previous questions, a quick review of GIS Council web  
17 sites across the country for such states as California,  
18 Louisiana, Wyoming, West Virginia, Minnesota, and I can add  
19 from some of my personal experiences for Wisconsin because I  
20 have many friends working in their department, most of these  
21 councils are independent of an existing state agency. Some  
22 started out as strictly voluntary organizations but found  
23 over time that the scope to achieve their activities  
24 necessitated a higher degree of professional involvement.

25                   And that's where we are in Pennsylvania right

1 now. We have had fantastic volunteers in the state. Many  
2 different organizations have stepped forward and have  
3 carried the ball. It's time that the State pick up the ball  
4 now and carry this through to its conclusion by giving the  
5 proper coordination with a full-time staff.

6                   You're just not going to get there with  
7 volunteers. One year you may have a president of an  
8 organization who's all fired up and the organization moves  
9 forward. Another year the organization stops. So we can't  
10 do it with volunteers.

11                   Also, having the council external to all  
12 involved stakeholder agencies with appropriate staff, budget  
13 resources will strengthen the role of the council as  
14 coordinator among government agencies and the private sector  
15 and it will improve access for all agencies and  
16 stakeholders.

17                   I make a personal comment is it's embarrassing  
18 right now that the State agencies do not talk to each other  
19 better. We have mapping agencies across the board, and it's  
20 unbelievable from one agency to another that there's not the  
21 sharing of information. And also between the counties and  
22 the states, we're getting better. We're sharing more  
23 information now. PAMAP has been a godsend that way. But  
24 more is needed.

25                   Access to geospatial data is necessary for many

1 reasons, and the State will benefit from the coordination  
2 that the GIS Council will provide. For example, when a  
3 disaster strikes in Pennsylvania, it is crucial for hazard  
4 mitigation teams to have access to multi-county data to  
5 create an effective plan. Floods, earthquakes and other  
6 disasters don't recognize county borders or municipal  
7 borders. We need a larger coordinating entity, and in this  
8 case the State would be the place.

9           So in an effort to break the repetitive cycle of  
10 damage, rebuilding, damage, FEMA, as many of you know, has  
11 established the Hazard Mitigation Grant Program to pay for  
12 projects such as the acquisition and relocation or removal  
13 of structures from flood plain areas, for flood-proofing or  
14 elevating existing structures to prevent them from damage.

15           In fact, last night I was at our own planning  
16 commission meeting where we were looking at the proposed  
17 county ordinance to cover this in terms of what we are doing  
18 in Lehigh County and adjacent Northampton County to live up  
19 to the PEMA standards. And much of that work is being done  
20 on our planning commission's GIS system. We couldn't do it  
21 in the time frame without that system.

22           Also, we see that the creation of the Geospatial  
23 Coordinating Committee will all but eliminate all of these  
24 separate data silos that I was talking about earlier making  
25 it less problematic to access Pennsylvania's great reserve

1 of geospatial data that's out there. Only with increased  
2 access will the Commonwealth stakeholders in county and  
3 municipal government, federal and state agencies, academia  
4 and the private sector begin to realize and unleash the  
5 analytical potential of geospatial information technology.

6           And I should have underlined analytical there  
7 because in many cases the uninitiated person thinks about  
8 GIS as producing pretty maps. Well, I can give you some  
9 Crayola crayons from the Lehigh Valley and a piece of paper  
10 and you can make pretty maps. But if you don't get in there  
11 and do the analysis, solve a problem, you are not reaching  
12 the full potential that GIS can provide us. It is such a  
13 powerful tool, and we are just scratching the surface of its  
14 capabilities today.

15           So continued future developments expected in GIS  
16 data will also benefit from the oversight of a GIS Council.  
17 We have only begun to scratch the surface with service  
18 locators that combine driving directions -- we have  
19 mentioned MapQuest and Google Earth previously in the  
20 testimony here today. But we will find that we can take  
21 this technology and start to meld it together, and we are  
22 going to be doing things in five or ten years that you won't  
23 believe today that are possible to do. And it is with the  
24 proper guidance that we will be able to move forward and  
25 utilize this information.

1           And as I said before, we're like a anarchy out  
2 there now. We're all running around doing our own thing.  
3 This council will get us all on the same wavelength so we  
4 can start to move together -- to get all together.

5           So what we were mentioning in the written part  
6 of the testimony, let me just fill out a few more words  
7 here. We're talking about coordination, bring people  
8 together. Whether it be the State, counties,  
9 municipalities, academic, the private, we need that  
10 coordination from the State. Sharing data, you've already  
11 heard nightmares about we can't share the data. We will be  
12 able to share data better, reduce redundancy. Why should we  
13 in Lehigh County have to go out and do the same thing that  
14 somebody in an adjacent county is doing? So we have to be  
15 able to spread this throughout the whole state so that DCNR,  
16 DEP and all the agencies also have the same data available  
17 to them.

18           Develop policy, we need to develop policy out  
19 there so that we're all on a level playing field. That's  
20 what the council can do too. Statewide leadership is  
21 definitely needed here since we're all headed in different  
22 directions today. We need somebody to bring us together.

23           We have the concern about GIS training in terms  
24 of the people who are going to serve on the council. So we  
25 hope that we can ensure those people are better trained. We

1 express our desire to make sure this is an independent  
2 agency with staffing and also with a dedicated budget. It's  
3 not going to go anywhere without that.

4           Also, we're all in favor of the data sharing,  
5 whether it be in health planning, pandemic planning or so  
6 forth. There are big statewide issues at risk here. It's  
7 not just the counties. If the pandemic hits, the Avian flu  
8 is not just going to hit let's say Montgomery County or  
9 Chester County or Lehigh County. It's going to be  
10 statewide. So our GIS system should be out there  
11 recognizing this.

12           And I noticed Representative Samuelson has  
13 joined us, and he had to listen to this barrage for years  
14 when he was our chief clerk so he knows how far back my  
15 interest in GIS goes. So what's the count now,  
16 Representative Thomas? Do I have you? I hope I have you.

17           CHAIRMAN THOMAS: I'm listening.

18           MR. DOUGHERTY: Okay. Good. And last, but not  
19 least, not to draw this out too much longer, we need this  
20 council to lead us forward to develop these new ideas in  
21 technology because in many cases many of the people you're  
22 looking at out here are people who are practicing what has  
23 already been developed. But we need leadership here. It's  
24 not just going to come out of the universities, but we need  
25 the universities, the State, the counties and all the other

1 people coming together to figure out where technology is  
2 going so we can be on board and move this forward.

3           And, also, as I mentioned earlier, we have to  
4 make sure this becomes an analytical tool, not making just  
5 pretty maps, but becoming a tool where we can solve  
6 problems. Not just environmental problems where we're doing  
7 a good job of using GIS today, but in terms of the human  
8 services problems and all the other problems facing us in  
9 this society today.

10           So rather than dragging this out further I'd  
11 like to turn it over to my two compatriots here, Erick  
12 first. Erick.

13           MR. COOLIDGE: Briefly, the theme of my  
14 presentation -- and I have that benefit because everyone has  
15 been so capable to present aspects of GIS to this point.  
16 And I welcome the privilege to be able to speak a little more  
17 freely about as a consumer of GIS.

18           It was mentioned earlier agriculture is the  
19 benefactor of the GIS application. I happen to be a  
20 consumer, a fourth-generation dairy producer. As a matter  
21 of fact, my day started at a quarter of four this morning.  
22 But I come here with enthusiasm about approaching the aspect  
23 of incorporating GIS into our daily lives.

24           I actually believe -- and I'm going to go back  
25 to the opening statements, I'm encouraged, and I mean that

1 sincerely, to hear the opening statements suggest we're here  
2 with the last visit, we're here with the assumption we're  
3 going to bring forward information and a basis from which we  
4 can develop a council. That's what I heard, and I'm really  
5 encouraged by that.

6           More importantly, all of us, those of us who  
7 have had the privilege to be in elected office, we have an  
8 obligation to return to the people a service and a benefit  
9 due to the compensation we receive but utilizing those funds  
10 appropriately. And we have an absolute singular, singular  
11 opportunity in terms of what's going to provide outstanding  
12 opportunity to give back.

13           GIS I believe is just now starting to emerge as  
14 a tool across all aspects. In our county we're one of the  
15 first communities in the Commonwealth to develop the GIS  
16 program. We're extremely rural, but we don't apologize for  
17 that. We accept it and then we access what is presented to  
18 us as far as information and technology, and then we seek  
19 those bright and capable individuals who can develop and  
20 produce a product because of that.

21           And we are as a Commonwealth standing at the  
22 door ready for that to take place. This council will  
23 provide that. This panel holds the key to open that door.  
24 Yeah, I'm excited about it and enthused about it because I  
25 see it in the eyes of those who are working across the many

1 counties in this Commonwealth.

2 I've had the privilege to be adopted as an  
3 honorary member of the pros if you will. They don't realize  
4 I hardly understand the terminology. Furthermore, I'm  
5 trying to gain a better appreciation for its application.  
6 But I don't miss one beat of how they see it in terms of  
7 what it can provide.

8 And that's where we stand here today. I believe  
9 we have a unique opportunity to give that tool an open door,  
10 turn these bright, capable people loose. We'll work out the  
11 logistics of it. That's what that council is for.

12 The questions that were asked beg us to put a  
13 council together so we can work out all the aspects of what  
14 fine-tuning is all about. I really believe that we're  
15 positioned right now to make some real serious decisions on  
16 behalf of the citizenry of the Commonwealth of Pennsylvania,  
17 and we won't have to look back because we're doing it the  
18 right way.

19 I'm a little late in arriving. I've been here  
20 twelve years, and you folks have dealt with this for quite  
21 some time. But most importantly, you are dealing with it.  
22 So on my behalf, thank you for listening.

23 MR. HUTCHINS: Thank you, Chairman Thomas,  
24 Chairman Steil, Members. I thank you for the opportunity to  
25 give testimony here. I'm primarily here representing the

1 concerns of just the professional association which is made  
2 up of people within the counties who are doing the daily GIS  
3 maintenance, data acquisition, data building, et cetera.  
4 For too many of us, we've seen missed opportunities because  
5 of a lack of overall coordination over the years to partner  
6 with private sector, to partner with academia, to partner  
7 with each other because many times there is no one that  
8 really knows what the big picture is or things occur and if  
9 you would have known about it you could have taken an  
10 opportunity to partner with them to save money.

11           And too often we watch the taxpayers pay two and  
12 three times for what is essentially the same data. And many  
13 of us feel that a council of sorts will help alleviate those  
14 type of missed opportunities to make a better picture. And  
15 many of us feel that due to the diversity within the  
16 Commonwealth that within the language of the bill there  
17 needs to be a way to facilitate and gather the input of  
18 regional concerns and perspectives from both the public,  
19 private and the academic sectors, very regional sectors that  
20 many people have said, the rural areas have certain needs  
21 and the very urban areas have certain needs, and sometimes  
22 those are very divergent in regards to the GIS.

23           You do have an example within the State of a  
24 council that already exists that meets those needs of the  
25 regional areas and that is the EMS Act 45 if you want to

1 look at a model of the setup. Obviously, it's a quite  
2 different subject matter, but that actually is existing  
3 legislation that sets up a fairly decent communication of  
4 regional councils that is feeding information up to the  
5 state council.

6           The other major concern of the people that make  
7 up GIS professional associates has already been expressed  
8 and is a concern that as the current language in the bill  
9 states that the membership of the council, although it does  
10 not preclude it from having a GIS background, the language  
11 does not assure that council members actually have a GIS  
12 background if they're going to make these important  
13 decisions.

14           And from the county perspective, we feel it's  
15 very important to craft it in such a way that we get the  
16 people with the expertise sitting on the council who have a  
17 background or are actually working in some sort or at some  
18 point in time in their life in GIS. We fell that is very  
19 critical.

20           In addition, there are many counties who are  
21 already working together and sharing data and partnering  
22 with all aspects of government, and we'd like to insure that  
23 we do not lose the funding source that allows us to do these  
24 partnerships, that the money continue to flow down to the  
25 local level and is not interrupted.

1           Lycoming County and Tioga County are part of a  
2 recent federal GIS pilot project with -- partnered with the  
3 private sector, with some state offices and, of course,  
4 within the counties themselves to share GIS data. And just  
5 recently that shared data was live at the Little League  
6 World Series as a test to provide them with real time  
7 information. So it was not old data; it was live data. And  
8 that type of initiative only happens if the funds from the  
9 federal and the state and the local continue to flow into  
10 the local economies into the local governments to allow us  
11 to share our data back up.

12           That particular data, in fact it's still live  
13 today, could have been consumed by anybody in the capital,  
14 it was consumed by agencies in D.C.

15           And as an example of that, there are entities  
16 out there who are currently sharing data in real time and  
17 working from very divergent data sets, and we put it all  
18 together so that when you use the data sets there's a  
19 considerable amount of experience that needs to be capped.  
20 And many of us feel that we need to insure that we get this  
21 experience out to the council level both on a regional basis  
22 and up to the state level. Thank you.

23           CHAIRMAN THOMAS: Thank you. We're going to  
24 start questions with Chairman David Steil.

25           CHAIRMAN STEIL: Thank you, Mr. Chairman. I

1 guess I find myself in a relatively unique position here  
2 today. It's the first time I can recall in all of my  
3 experience that we've had a group of local governing bodies,  
4 county in particular, asking us to create a state agency to  
5 manage what you want to do. So my question really goes to  
6 the issue of why we really need to create this agency, why  
7 is it that the private sector isn't going to do it?

8           You've given me a lot of reasons why you believe  
9 it needs to be necessary. But let me ask it from another  
10 aspect. What happens if we don't do this? Why is it that  
11 the private sector, if there is already a national  
12 association MAPPS that is obviously providing a lot of  
13 direction and guidance and ultimately why hasn't that  
14 involved into a FEMA or an ICC to do the same things that  
15 you're asking us to do? Why is it that we have to do it and  
16 the private sector cannot create that association?

17           MR. DOUGHERTY: With the private sector we keep  
18 reinventing the wheel, so with every county that they go  
19 into they're going to charge for the service over and over  
20 and over again.

21           This is like in the early days of comprehensive  
22 plans, you know in many cases you'd get a comprehensive plan  
23 that had another county's name in it, that the same plan the  
24 names were changed and it was virtually marketed as the same  
25 thing over and over and over again. So we feel that we

1 don't want to reinvent the wheel, we need some coordination  
2 here to make sure that we're not reinventing the wheel.

3           And you know as well as the rest of us here  
4 where the buck stops. It stops at the county. We've  
5 already had a number of unfunded mandates which means that  
6 we've had to get into GIS because of this. But because of  
7 what someone mentioned earlier, the great diversity of the  
8 state, that's an asset, but also on the county level it can  
9 be somewhat holding us back in that we are not working  
10 together as much as we can.

11           And we feel that if we had some sort of state  
12 coordinating council that we are going to be able to get  
13 behind it and work much more efficiently and get to a good  
14 platform much sooner.

15           It's going to cost a lot of money. We are  
16 putting a lot of money into this already. It's the  
17 coordination that is lacking. And that's what we need. And  
18 we've had plenty of chance for some other group to step  
19 forward over the years, and we do not see that happening.  
20 We feel that this is something that has to be legislated.

21           Now, good intentions are good intentions, but  
22 nothing is implemented. We need -- I'm going to be a little  
23 bit more forceful than some of the other people who were on  
24 the first panel. I think we need not only a carrot out  
25 there, but we need a big stick also to get this done. And I

1 think the coordination can only come from the State.

2                   CHAIRMAN STEIL: Just briefly for me sketch the  
3 future if we refuse to do this.

4                   MR. DOUGHERTY: Well, if you refuse to do this,  
5 you're going to find other states will continue to pull  
6 further ahead of us. For example, way back when I first  
7 became a commissioner, we had the possibility of having the  
8 GM Saturn plant in the Lehigh Valley. We had our planning  
9 department work on that for three days. But of course  
10 Tennessee had a GIS system in place. Their economic  
11 development group was able to get this out, and we had no  
12 chance of being in the market for that GM Saturn plant.

13                   I see the same thing happening with other groups  
14 looking for location of other offices of industrial plants.  
15 If we don't have a statewide GIS where the DCEP and other  
16 departments can get in there and show a good case for  
17 Pennsylvania, we're going to continue to lose out to the  
18 South Carolinas, North Carolina, and places like that.

19                   This is as much for the state and economic  
20 development and moving the state forward as it is for  
21 working with the counties to make sure that we share data  
22 and play well with each other.

23                   CHAIRMAN STEIL: Last question. In terms of the  
24 data that the counties are collecting, using or expecting  
25 this coordinating council to pull together, what is the data

1 or how much of that data needs to be secured from your  
2 aspects?

3 MR. DOUGHERTY: Anybody else want -- I don't  
4 want to monopolize it.

5 MR. HUTCHINS: I'll take a gander at that one.  
6 What we've elected to do is to not allow names, et cetera,  
7 to go out with our parcel data. It's an anonymous thing.  
8 We required people to come in to gather that data. I'm  
9 precluded on the public safety side from divulging phone  
10 lists and addresses under the Telco Act that I gathered and  
11 have been given from the various telcos and 911. I have  
12 data that I actually can't share. The data that I collect  
13 myself, I'm free to share that.

14 And what we try to do is to eliminate owner's  
15 name, site specific things like with SERA sites we might  
16 list it as a hazmat site, but the particulars only go out to  
17 people when we have a face to face, that we just don't allow  
18 someone from outside gather that.

19 So there's certain data that probably should be  
20 secured that you just don't want published without some sort  
21 of a handshake taking place where you say, okay, this is why  
22 you want it, yes, you can have it, but I need to know who  
23 you are and verify that. So there's portions of it like  
24 that.

25 MR. DOUGHERTY: A good example is JMET

1 (phonetic) where we have all of the very sensitive  
2 information from our court systems and so forth and our  
3 policing areas. And that is very highly protected. And  
4 that will be used especially on the local level. Much of  
5 what we're talking about that will be done at the state  
6 level will be general types of layers that everybody can use  
7 and where there's not a great deal of sensitive nature. Ed.

8                   MR. TROXELL: Thanks. To return back to I guess  
9 prior why not leave this in the private sector to handle, at  
10 the local level we notice that there aren't really the deep  
11 pockets that folks can identify as being able to be accessed  
12 by private concerns. There may not be, you know, as much  
13 work there as a private entity would like to have.

14 Therefore, that keeps them out of communities like mine that  
15 are 2,000 and 2500 in nature, maybe one-square mile, but  
16 their infrastructure is just as important. I mean we could  
17 have sewer leaks, we could have explosions and things like  
18 that that are just as important. So there needs to be we  
19 say a group with a public interest supported by the public.

20                   CHAIRMAN STEIL: I guess the question though is  
21 whether or not the State could not be involved in helping  
22 those communities supplying the data to the private  
23 organization rather than creating the bureaucracy to do it  
24 ourselves. I guess that's the question.

25                   MR. TROXELL: Right. Our organization, okay,

1 under the council has a different perspective maybe when it  
2 comes to what agency this is placed within, et cetera. I  
3 may be a little bit different from where the commissioners  
4 are seeing it, but we're not exactly wedded to an  
5 independent council all together.

6                   And, secondly, when you mentioned about the  
7 security of the data and the information, when we executed  
8 our project within the boroughs in the area, all the public  
9 workers that had access, they actually had tablets that they  
10 went out and could find the sewer lines and stop signs and  
11 all the traffic lights, they actually had passwords to be  
12 able to get to this information so that information is  
13 somewhat -- if it's considered of a nature of security, it  
14 was under a password and guarded. So the pragmatic  
15 application we've demonstrated that in our DIMSS project.

16                   CHAIRMAN STEIL: Thank you, Mr. Chairman.

17                   CHAIRMAN THOMAS: Thank you. At this particular  
18 time let me ask Chairman Steil if he would also address his  
19 questions to the academic and private sectors.

20                   CHAIRMAN STEIL: If there were any others that  
21 wanted to just comment on my question as to why MAPPS isn't  
22 completely capable of taking on this task.

23                   MR. PAL: Well, let me try. No offense to the  
24 commissioner here, private sectors are not that bad. Number  
25 one, private sector can do a lot. And one thing, as we

1 mentioned, we are also scratching the surface. And we have  
2 just formed the PA-MAPPS chapter. In the main event in the  
3 PA GIS conference we announced it. So we'll try to do our  
4 best. And one of our missions is having this PAMAP  
5 organization be represented from all the private sectors and  
6 also by coming together, including council here, Council of  
7 Governments, to develop standards so that it can be used by  
8 everybody.

9                   Give you an example of how we can share data.  
10 We worked for Chester County. They paid for it, we used the  
11 same for the other counties. We requested from Chester  
12 County, we are working for another county, can we use it.  
13 Chester County shared it. So from the point of view of  
14 sharing data, it's a matter of discussing with the private  
15 sector the county who has hired them.

16                   A lot of times county governments get into  
17 trouble of the lowest bid instead of quality based. So they  
18 have to take some responsibility too instead of blaming the  
19 private sector only.

20                   So the private sector can do a lot -- to answer.  
21 But one thing that is happening in Pennsylvania that it's a  
22 tremendously big state with a tremendous amount of agencies  
23 and entities. In order to go to every one of them -- this  
24 is a big state with a tremendous amount of agencies and  
25 entities. In order to go to every one of them, this is a

1 big brother who could talk to everybody.

2                   So from that point of view, given that we can do  
3 a lot, we still think the council which has a seat in there  
4 for the private sector, academe, county government, and  
5 everybody can do with the guidance or with the power of the  
6 coordination council so that's what my answer is.

7                   MR. COOLIDGE: Mr. Chairman, if I could please,  
8 the critical part of that are the individuals who would be  
9 appointed to that council. That's what will drive -- the  
10 drive is, avoid the duplication, address the cost and give  
11 the guidance and the sharing -- and the importance of  
12 sharing the data collected to the benefit of those they  
13 represent.

14                   DR. BACASTOW: I have one concern listening to  
15 the testimony here. I think my read of the house bill and  
16 understanding of it is very different from what I just heard  
17 here. It's a council to coordinate. It does not manage  
18 data, it does not really provide any services. It's the  
19 brain, it's the leadership. So I'm a little confused about  
20 how a commercial entity can do that.

21                   We're dealing with policy that would set the  
22 structure for other things to happen; in fact, maybe policy  
23 for commercial entities to do distribution of data. So I'm  
24 a little confused about what I just heard here. But my read  
25 of House Bill 1304 is that it's coordination, it's a brain,

1 it gives guidance and leadership. It helps set the  
2 foundation for policy. Not really to do anything in terms  
3 of distribution of data.

4 MR. DOUGHERTY: Yes. Good. I'm glad you said  
5 that, Scott, because I wanted to make sure we weren't  
6 getting into an area where it looks like the privates and  
7 the government agencies are opposed to each other. We're  
8 working in the same arena. We all want that direction. So  
9 we have a coordinating agency.

10 And, you know, the larger the scale we work at,  
11 the more economy of scale we get too. If we can have the  
12 privates work on a project that is statewide, we can get  
13 that done so much cheaper for every county in the state than  
14 if we just go one county at a time.

15 So it's a team. It's -- we're working with the  
16 privates there. We rely on them for the consulting for our  
17 own county. We can't get along without them. And there's  
18 more than enough employment to go around out there.

19 CHAIRMAN STEIL: Thank you, Mr. Chairman.

20 CHAIRMAN THOMAS: Thank you. Let me thank each  
21 and every one of you for your testimony. It was excellent  
22 testimony.

23 Let me also thank Jeff Fox and Joyce Frigm and  
24 the staff that did an excellent job in pulling the groups  
25 together and pulling the information together.

1                   We have one more group that will be presenting  
2 testimony, and then we'll be moving on out. So at this  
3 particular time can we hear from the United States  
4 Geological Survey team.

5                   MR. TERRELL: Thank you. Good to see you again,  
6 Mr. Chairman Thomas, Mr. Chairman Steil, and those of us who  
7 are left. Thank you very kindly for the opportunity to say  
8 a few words.

9                   And there's been so much said that I'd like to  
10 respond -- I could go on for a long time, but you'll happy  
11 to learn I don't propose to do that. I do want to say just  
12 a word, Mr. Steil, if I may about the role the government  
13 versus that of the private sector. It's crucial I think to  
14 the nature of the council that is addressed in the  
15 legislation.

16                   Throughout the world, including in all of the  
17 most committedly capitalist countries, there's a role, a  
18 huge role, in base map data collection for the government.  
19 It's not something that the private sector is prepared to do  
20 and so it is a -- it is a function of government. It's one  
21 of those things that on the one hand is not profitable in  
22 some places, and on the other hand it's simply too important  
23 to leave up to the vagaries of the market.

24                   That said, most of the work in this country,  
25 practically all of it is done by the private sector through

1 contracts. But because of that fact there's a huge role for  
2 the government. And what the government's job is, it's very  
3 important to what the private sector is then able to do.  
4 What the private sector wants to do in in turn should be  
5 very important to the government agencies that are involved  
6 in this enterprise. We find, of course, that private  
7 business is very prominent among the constituencies we  
8 attempt to serve.

9           I don't want to -- I've, of course, submitted  
10 prepared testimony in advance, and I want to give you a  
11 little bit of that, but first, if I may, I'd like to pass  
12 out a couple of compliments. I want to say that you have a  
13 splendid staff. Miss Frigm and Miss Custis have done  
14 marvelous work over a long period of time in developing a  
15 very well constructed, in my judgment, piece of legislation.

16           And I've got some background. I worked on  
17 Capitol Hill in D.C. for some years and I know how it's  
18 supposed to be done and I want to observe that they've been  
19 very professional about it. They have consulted everybody  
20 that needed consulting repeatedly and they have -- none of  
21 us I'm sure is entirely satisfied with the product, but you  
22 heard a long parade of witnesses that endorse it very  
23 heartedly and they're to be congratulated I think for their  
24 work on that, along with you.

25           I want to reiterate the testimony of a number of

1 other people here that we've had some marvelous work in  
2 Pennsylvania on the part of many people for a long time who  
3 have shown excellent leadership in this area. Particularly  
4 personally I'd like to commend Jay Parrish (phonetic) for  
5 his exercise of will over a long period of time and  
6 leadership of the PAMAP effort. Todd Bacastow, who  
7 testified, has been extremely important in this whole area.  
8 Brady has. Eric Jefferson (phonetic) over here has devoted  
9 much of his personal time and has been very, very effective  
10 over a long period of time.

11           I would submit to you, however, that in order  
12 for the leadership to take us from where we are to where we  
13 want to be within say five years, we're going to have to  
14 address the structural problem, and that's what H.B. 1304 is  
15 all about.

16           I am sorry that Miss Miller is not here in  
17 person today because for one thing I should like to respond  
18 a little bit to some of what I read in the prepared  
19 testimony from OA. In reading it I could only conclude that  
20 at times it must indeed feel lonely at the top. I can't  
21 find anybody other than a person or two in OA and perhaps a  
22 person or two contracting with them who oppose this  
23 legislation. There's a long -- there's a long list of  
24 people who support it enthusiastically. And I think that  
25 ought to carry a great deal of weight.

1           It strikes me also that there's nobody else from  
2 the executive branch here, while I'm aware that there are  
3 many within the executive branch in the agencies that deal  
4 with GIS issues, data collection, management, distribution  
5 and applications who are emphatically in support of the  
6 formation of the council as it's outlined here.

7           I did want to -- I don't necessarily expect  
8 everybody to study my prepared testimony, so I did want to  
9 refer to just a few paragraphs that I think represent the  
10 nut of what I wanted to say to you.

11           I want to point out and heavily emphasize that  
12 the PAMAP, which is the base map data layer collection and  
13 one of the most advanced, best thought out and best managed  
14 of the state programs with which we in the USGS deal in our  
15 efforts to create the national map, we admire that work and  
16 we're grateful for it, and we recognize the difficulties  
17 that have faced that project from the start and it still in  
18 some measure threatens its future.

19           I'm persuaded that the continued success of that  
20 and related efforts depends on the formation of a stable,  
21 inclusive, effective statewide GIS council.

22           Other witnesses here have said that the USGS, as  
23 well as the Federal Geographical Data Committee, National  
24 States Geographical Information Council prefer to work with  
25 statewide councils. We'd like to see one. But while that

1 may be important, I think it's the least of the reasons that  
2 we need one in Pennsylvania. What this Commonwealth needs  
3 is to fill the void in leadership that's existing for a  
4 number of years with respect to data product and service  
5 development.

6                   Now, I've contradicted myself. I've said  
7 there's a void in leadership, and I'm commending people for  
8 their leadership. The crucial point is that there  
9 is -- we've got leaders, but we've got a structural problem.  
10 We've had a number of efforts in state coordination, but  
11 none that's been vested with all of the three  
12 characteristics that I believe are necessary for success.

13                   And one of these is inclusiveness, is authority,  
14 give it at least some haft in its decision making. And the  
15 third is permanence or stability. The council described in  
16 the legislation here contains adequate representation from  
17 state agencies. I think this is critically important, but  
18 it also includes membership from the other important  
19 stakeholders and participants in the GIS community, the  
20 local governments, the federal, academia, private sector.

21                   None of these can be left out of a council that  
22 you expect to operate successfully. Each has important  
23 contributions to make. And I think just as importantly any  
24 one of them alone can sabotage and short-circuit policies  
25 with which it's unsatisfied. So it's very important that we

1 are collaborative, cooperative, inclusive, and that the  
2 people involved in it are given to feel that they have a  
3 seat at the table. We can reach compromise and we can reach  
4 consensus if we do it in that way.

5           I want to stress that this is our best chance to  
6 build on what's been developed so far. I also want to say  
7 that if we fail to take the steps -- and this, Mr. Steil,  
8 goes to one of your questions -- if we fail to take the  
9 steps represented by this legislation, all that we develop  
10 can simply collapse and likely will.

11           Continuing to have state policy implemented  
12 without the participation and the sound of locals,  
13 academics, and particularly the private sector, will result  
14 in policies that don't work. For example, policy generated  
15 without sufficient private sector input and diverse private  
16 sector input can be geared intentionally or not toward  
17 particular vendors. Continuing to fund data acquisition  
18 through the two- or three-party grant process will play out  
19 probably sooner than later. Only a council which can accept  
20 and manage funds will in my judgment result in stable and  
21 predictable funding acceptable to all the relevant parties.

22           Finally, I want to say that it's important that  
23 we no longer try to run along with executive orders and  
24 grants and schemes. A council established in law within a  
25 legally constituted and permanent part of the state

1 government is our best and I think only hope for long-term  
2 success.

3           Again, there's a lot more I'd like to say, but  
4 we've been here a long time. I do thank you. If you have  
5 questions.

6           CHAIRMAN THOMAS: Thank you. Chairman Steil.

7           CHAIRMAN STEIL: Thank you, Mr. Chairman. Going  
8 back to my earlier point about the need for this and if the  
9 need is great for the State and the states to adopt these  
10 types of coordinating efforts, what is the role of the  
11 federal government in bringing all this together? Because  
12 certainly there's got to be a huge dynamic interest on the  
13 part of the government in doing this. What is their  
14 interest and where are they headed in this?

15           MR. TERRELL: We have a number of interests.  
16 And I'll talk chiefly about one because, although it's not  
17 the only one, it's the one in which I spend most of my time  
18 and it will serve as I think an example for you.

19           We cooperated with the states for rather more  
20 than a century in producing topographic maps. We can't do  
21 that anymore. We cannot -- those maps are woefully out of  
22 date. And even if we fund them to keep them up date, which  
23 we're not, they are not -- they're by no means useless, but  
24 they're not the form in which most professional users can  
25 accept and best apply geographic data.

1           The national map, which is a term I've used, is  
2 an effort to insure that in the 21st Century we have a  
3 replacement for the topo maps, but it will be the best  
4 available data at every location. And by that I mean the  
5 timeliest, most current that we can have, and the highest  
6 resolution and largest scale that we can have and every  
7 location put together seamlessly and in digital databases  
8 collected with as little duplication of effort as possible  
9 but distributed with an advisable degree of redundancy and  
10 storage and distribution systems. That's a mouthful but  
11 that's essentially what we're trying to achieve.

12           Now, we recognize that the best data usually are  
13 local data. PAMAP has been a tremendous effort at providing  
14 the two layers that are the most important in this framework  
15 or base map data layer development. We've got statewide  
16 coverage in orthophotos. Those are available digitally and  
17 they're pretty timely. Better than USGS was ever able to do  
18 with any previous program.

19           We're two-thirds of the way through the  
20 collection of a high resolution of our elevation data set.  
21 The vector layers is what we call them, roads and structures  
22 and all the other pieces you find on a topo map need to come  
23 from county and local governments chiefly. The collection  
24 of those we cannot -- we cannot do for the national map  
25 directly with all the local governments. We've got to work

1 with the states which then work for the locals. If we  
2 cannot do it, we'll go to default layers, which in some  
3 instances will be as old and as course as the old topo maps  
4 we have now.

5                   Now, I don't want to dwell too much on PAMAP  
6 because that's one aspect of the kinds of issues that the  
7 council can and should deal with, but it's an excellent  
8 example I think of the issues addressed in your question.

9                   CHAIRMAN STEIL: A follow-up question then  
10 is -- if everything that you say about the need for local  
11 governments as part of the process, what is the role of the  
12 federal government or is there a role that they should play  
13 in insuring that states, the individual states who are  
14 drafting the same types of coordinating councils, are using  
15 standards that are common among the states and when the data  
16 is finally amalgamated that it is useful because it follows  
17 some standard?

18                   MR. TERRELL: The answer to that is complicated  
19 both in its political and in its technical aspects. But the  
20 bottom answer, yeah, we have a very significant role to  
21 play.

22                   Some years ago we promulgated national spatial  
23 data sharing standards. It was an effort to encourage  
24 people and to assist people in putting data into formats  
25 that could be shared and could be used in most prevalent GIS

1 software at the time.

2                   That kind of effort continued largely in the  
3 FEDC, Federal Environment Data Committee. We also work very  
4 closely not just with the states but also through the  
5 National States Geographic Information Council and the  
6 National Association of Counties and other groups  
7 representing -- other groups representing a lot of the  
8 collectors and users of data to try to encourage those  
9 capabilities.

10                   Now, all that said, it's largely a  
11 state-by-state kind of effort right now. What we'll find,  
12 and I think we are finding, is that because of the kinds of  
13 software that are dominant in the market, there's an awful  
14 lot of commonality from one state to the next but it's a  
15 state-by-state proposition. Is that helpful to you?

16                   CHAIRMAN STEIL: Yeah. But the last follow-up  
17 question on that is, is it going to take federal legislation  
18 of one kind or another to insure that those standards among  
19 the states are common, and is there any effort on the  
20 federal level already to introduce that kind of legislation?

21                   MR. TERRELL: I'm not aware of any. And  
22 my -- I'm probably not equipped to hazard a guess there, but  
23 I will anyway. I don't think so.

24                   CHAIRMAN STEIL: Thank you, Mr. Chairman.

25                   CHAIRMAN THOMAS: Thank you, Mr. Chairman. Let

1 me thank all -- Representative Samuelson.

2                   REPRESENTATIVE SAMUELSON: Thank you for your  
3 testimony. I do have a question. It sounds like what  
4 you're describing is a shift in responsibilities. If a  
5 century ago the federal government had responsibility for  
6 mapping and now you're relying on the best available data  
7 from the many states, how is the funding for your agency?  
8 Has it been increasing or declining over the last few years?

9                   MR. TERRELL: We're in sad shape.

10                   REPRESENTATIVE SAMUELSON: And I guess that  
11 tells me that the federal government is just expecting the  
12 states to pick up this responsibility where the federal  
13 government had played a much larger role in the past years.

14                   MR. TERRELL: I hope I don't hear a subtext  
15 there, something like unfunded mandate, but what we are  
16 looking for really is a bit of an experiment in federalism I  
17 think and unprecedented in all of my experience and  
18 observation. I do not know whether in the end it's going to  
19 work.

20                   I can say that it would -- we've made a great  
21 deal of progress. It was never -- well, not since the 19th  
22 Century I think has it been a truly federal obligation to do  
23 this. We partnered with states over all these decades.

24                   Pennsylvania's been a wonderful partner. The  
25 generation of data and digital layers is something new. And

1 the generation of those data in a very accurate, digital  
2 sharable form by locals is very new indeed. The fact that  
3 they're doing it says to us we really shouldn't have to do  
4 this two and three and four times.

5           When an engineering company needs something at 1  
6 to 2400 scale, that should be available from the government  
7 and it should be -- usually is and shouldn't be lost on the  
8 engineering firm what level of government that is. We  
9 should be able to share all that stuff. If the taxpayers  
10 have underwritten costs in data collection, it's our view  
11 that the data should be publicly accessible and should be as  
12 near as possible free of charge.

13           Now, there are lots of issues, some of which you  
14 heard alluded to here and discussed a little bit concerning  
15 security and licensing arrangements and sometimes the  
16 difference between data collection costs and storage and  
17 distribution costs and cost of covering needs, that's  
18 something the council can deal with.

19           REPRESENTATIVE SAMUELSON: Another question on  
20 the sharing of data at the federal level, USGS and other  
21 federal agencies or Homeland Security, Department of  
22 Agriculture, is there data shared among federal agencies?

23           MR. TERRELL: Generally. And I would say -- I  
24 would say the answer to that is to the extent possible, and  
25 we have made a lot of efforts over the last few years to

1 make sure that that is the case.

2           And we've got very good relationships with  
3 Census, for example, and with DOT. With respect to the  
4 Department of Homeland Security, I have to give them credit  
5 for making a lot of the data available that two and three  
6 years ago they regarded as secret.

7           Now there are differences between us that serve  
8 civil needs and then those people who are military and  
9 intelligence oriented. We look at a map as a piece of  
10 information, people will pay for it and ought to get. They  
11 tend to look at a map as a piece of intelligence that maybe  
12 needs to be protected. So we've had a lot of back and forth  
13 on that. And there are some things obviously within the DHS  
14 that still remain pretty closely held.

15           We continue to have some difficulties with  
16 format and software problems because we don't all use the  
17 same stuff, and it's hard to write enough software to make  
18 everything sharable, but we work on it.

19           REPRESENTATIVE SAMUELSON: And last question on  
20 the funding of this Pennsylvania legislation funding  
21 mechanism of the funds to receive private funds, grants,  
22 donations, how does that stack up against the approaches  
23 they use in other states? What's your opinion of this  
24 funding mechanism as an ongoing --

25           MR. TERRELL: Well, I would say that no actual

1 funding mechanism is described here and it simply makes the  
2 council eligible to receive funds from these various  
3 sources. I have no idea how much money will be required.  
4 But as with most things in the government, the more you  
5 have, the more you can do. There are many, many  
6 possibilities only beginning with an appropriation that  
7 could fund a council adequately. You could have licensing  
8 of some data layers, you could have fees for access to some.

9           There's huge objections to those schemes on the  
10 part of some people. You could certify GIS professionals,  
11 charge them a fee for the certification and apply that to  
12 the council. There are lots of ways you could get some  
13 money into the process. And to the point that you raised,  
14 the USGS would have no objection to any of them.

15           REPRESENTATIVE SAMUELSON: Thank you.

16           CHAIRMAN THOMAS: Thank you. Again, let me  
17 thank each and every one of the presenters. I didn't have a  
18 whole lot of questions because it's clear to me that across  
19 the board there's a desire to have an advisory council.  
20 There seems to be a difference of opinion in the role of  
21 that advisory council, whether it should be a policy-making  
22 body or whether it should be an advisory -- an advisor to  
23 some other entity on how to improve geospatial technology in  
24 Pennsylvania.

25           And the third thing, there seems to be a

1 consensus that we need some form of dedicated revenue if we  
2 hope to have long-term sustainability and whether we hope to  
3 have real growth and be able to reach our best as it relates  
4 to this area.

5                   And so to that end, let me say that as I started  
6 out, we will not have another hearing. We will move forward  
7 on making this a reality. And Chairman Steil and myself  
8 will put ideas together on how we bring the stakeholders to  
9 the table to come up with something that works and we will  
10 find a way to move forward.

11                   So, again, thank you. Let me thank my staff and  
12 let me thank all the members who showed up, and even those  
13 who didn't show up. It was a good day. Thank you.

14                   (Whereupon, the hearing was concluded at 3:04  
15 p.m.)

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1                   I hereby certify that the proceedings and  
2 evidence are contained fully and accurately in the notes  
3 taken by me on the within proceedings, and that this copy is  
4 a correct transcript of the same.

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Pamela L. Packer

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Court Reporter-Notary Public

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