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PROJECT 28, THE FUTURE OF SBINET

HEARING

BEFORE THE

SUBCOMMITTEE ON BORDER, MARITIME, AND GLOBAL COUNTERTERRORISM

OF THE

COMMITTEE ON HOMELAND SECURITY HOUSE OF REPRESENTATIVES

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PROJECT 28, THE FUTURE OF SBINET

Thursday, June 7, 2007

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOMELAND SECURITY,
SUBCOMMITTEE ON BORDER, MARITIME,
AND GLOBAL COUNTERTERRORISM,
Washington, DC.

The subcommittee met, pursuant to call, at 2:17 p.m., in Room 311, Cannon House Office Building, Hon. Loretta Sanchez [chairwoman of the subcommittee] presiding.

Present: Representatives Sanchez, Jackson Lee, Langevin, Cuellar, Green, Thompson (ex officio) and Souder.

Ms. SANCHEZ. The subcommittee will come to order. And the subcommittee today is meeting to receive testimony on Project 28, the future of SBI*net*. Good afternoon. Thank you gentlemen for being before us today on this hearing, Project 28, the future of the Security Border Initiative Net or SBI*net*. As we all know, securing our nation's borders is an urgent issue that has been long overlooked. This subcommittee has been concerned about the state of American security and American border security and what needs to be done to improve it. In fact, this hearing is our sixth subcommittee hearing that has specifically focused on border security issues, and I am sure that we will continue to examine these issues closely, especially in the coming months as we see what is happening over on the other side at the Senate. Today's hearing is meant to be an update on the status of SBI*net* and on the plans of the next phases of implementation.

The SBI*net* portion of the Secure Border Initiative is tasked with establishing a system of systems that utilizes surveillance detection, command and control intelligence, tactical infrastructure, communications and information technology. There is no doubt that SBI*net* is a challenging initiative. And for that reason, we will be watching it closely to ensure that it improves our Nation's border security and that it is a sound investment of our tax dollars.

I am looking forward to hearing about the progress on construction of Project 28, the first infrastructure phase of SBI*net* which I believe will be completed in the coming weeks. In addition, I would like to know the plans and the timeline from the Border Patrol staff on Project 28, ensuring that Project 28 is fully integrated into the other systems and technologies that we have working for us on the border. It would be also useful to have a timeline and procedures by the Border Patrol and Customs border protection and Boeing to compile lessons learned on Project 28 and integrate any of those into the next phases of SBI*net*.

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I am looking forward to the dialogue today. And I look forward to your testimony.

And I would like to thank our ranking member for continuing to be interested in this subject. And I look forward to continuing to work with you, and I will now yield for your opening statement.

Mr. SOUDER. I thank you, Madam Chairwoman of our subcommittee, for your continuing oversight of this important issue, and I appreciate working together. It has been enjoyable, and hopefully we will continue to do so.

Controlling our country's borders is an issue of sovereignty, and it is critical to our national security. In the United States, we have 2,000 miles of land border and thousands of miles along our coast, where illegal aliens, criminal organizations and others with illicit purposes seek to exploit the borders through illegally crossing or by coming through our ports of entry using fraudulent documents. There is no argument that hardening our borders is essential and achievable.

While we do have disagreements within Congress on the best way to go about doing that, including how to implement the appropriate mix of physical infrastructure, technology and people. I think we can all agree that security must move forward. A promise was made to the American people in 1986 with the passage of the last amnesty bill that our borders would be secured. The glaring failure to fulfill that promise leaves the Nation with a much larger problem today at a time when we are also fighting a war against terrorist extremists. Even those of us who are favorable to resolving the status of those who currently are within the United States and increasing legal migration think that there is a growing number in Congress who agree that moving forward with a mass amnesty bill would divert resources away from securing the border, just as it did in 1986, and could actually put the Nation at greater risk with unreliable background checks and rampant use of fraudulent documents. The media markets of foreign countries, especially those in Mexico and Latin and South America, are advertising that Congress is working at another amnesty. And I predict that we will see an increase of illegal entry for those trying to get into the U.S. before action is taken and the borders are hardened.

I raise this issue to express my concern that the SBI*net* runs a risk of becoming a program that starts full of promise but fizzles out because the political winds change and resources are diverted. I am afraid that this is what is happening with the US-VISIT program, another critical border security initiative that still doesn't have an exit in place.

Madam Chair, I hope that the subcommittee will hold a hearing in the future on this program as well. Specifically regarding SBI*net* and Project 28, I understand from previous DHS testimony that the schedule for completing SBI*net* in gaining operational control over the borders is 2013, almost 6μyears from now, for a price tag of about $8 billion. I hope to get additional insight today of this timeline, the milestones, what physical roll infrastructure and fencing will play in how all of the systems will work together. I am concerned about the lifecycle cost for SBI*net* and how technology will hold up to the elements and operational requirements in future years. According to DHS budget information, the $8 billion planned

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expenditure covers the program through 2011 but not through 2013 when the program is to be completed. I also want to know if models and testing have been done to estimate how the equipment will work 10 to 20 years from now. We cannot have another acquisition program that delivers unreliable equipment and assets like we saw in the deep water 110-foot cutter conversion and the design flaws in the National Security Cutter that may limit the life span of the vessel. For the committee to conduct proper oversight over SBI*net*, we have to understand how DHS and Boeing intend to measure success for Project 28 and the larger SBI*net* program. Conventional wisdom in the past tends to presume that as security measures are added to the 28 miles in Sasabe, Arizona, illegal traffic will move to other areas along the border. That being the case, it will be difficult to measure howµsuccessful the different aspects of Project 28 are in patrolling the border. It is unclear to me what other performance measures are in place to gage the costs and benefits of Project 28, and I hope the witnesses can provide greater clarity to the testimony. The stakes are high in the mission to secure our borders. This is not just an economic migrant issue. Communities across the United States are dealing with the ramifications of our porous borders, ranging from illegal drugs, growing violence and illegal gang activity. This doesn't include the danger that terrorists are continually seeking ways to enter the United States.

While statistics provided by the Border Patrol show that, last year, apprehensions of illegal aliens were down, our communities are seeing an influx of drugs. The retail price of cocaine fell by 11µpercent from 2005 to 2006 to about $135 a gram of pure cocaine according to U.S. drug czar John Walters. If the price of drugs is falling, it is generally because there is a surplus, and that means more coming across our borders. Our borders are in fact not secure.

This subcommittee has also received testimony about growing violence in border communities and against border agents. Yesterday an article appeared in the Christian Science Monitor saying that, quote, attacks on agents since October rose 3 percent over the same period a year earlier. But in the Yuma sector in western Arizona, a hotbed of smuggling activity, they've jumped 56 percent. This increase in violence is one piece of evidence that our security efforts are having an impact, and the response, smugglers and illegal crossers are becoming more brazen and desperate. In the accompanying testimony on the technical and physical security improvements under SBI*net*, I will also ask the witnesses to speak about what is being done to prepare border agents for the increasing violence.

Thank you, Madam Chair, for holding this hearing and for letting me give a long opening statement. I would like to thank our witnesses for being here. Look forward to your testimony. I yield back.

Ms. SANCHEZ. I thank my colleague from Indiana. And I think it is incredibly important what you were talking about with respect to the possible harm to our border agents and law enforcement personnel there. So good opening statement. I now recognize the Chairman of the full committee, the gentleman from Mississippi, Mr. Thompson, for an opening statement.

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Mr. THOMPSON. Thank you very much, Madam Chairman. And I might say, welcome, again to our witnesses. It looks like you were together just yesterday.

Madam Chairman, June 13, 2007, marks an important date for the SBI*net* program and for the Department of Homeland Security as a whole. On that date, Project 28 is scheduled to be fully operational, and we will begin to learn whether this $20 million initial investment is going to be a success. But more than that, we should start to better understand whether SBI*net* is a technology solution that will give us the results we have been looking and seeking all along, a more secure border.

Unfortunately, SBI*net* is the third border technology program that the department has launched. We are told, however, that this time around the outcome will be very different, partially because the department has learned valuable lessons from previous mistakes. We hope that this is the case because American taxpayers have spent more than $650 million and have waited more than 10 years for a successful border security initiative technology program. If it is successful, Project 28 will finally give our Border Patrol agents the realtime situational awareness they need to take control of this 28-mile stretch of Arizona border while also helping ensure the agents' safety. Like many of my colleagues, I will be closely monitoring the rollout of Project 28 in the coming days and weeks. I look forward to visiting the site in the near future. Of course Project 28 is only the beginning of the SBI*net* program, and much more work remains to replicate similar technology across our borders. Therefore, the committee will continue to conduct vigorous oversight over Project 28 and the SBI*net* program in the coming months and beyond. Project 28 may well be the future of America's border security. Hopefully we got it right this time. And I yield back.

PREPARED STATEMENT OF THE HONORABLE BENNIE G. THOMPSON, CHAIRMAN, COMMITTEE ON HOMELAND SECURITY

- June 13, 2007, marks an important date for the SBI*net* program and for the Department of Homeland Security as a whole.
- On that date, Project 28 is scheduled to be fully operational, and we will begin to learn whether this $20 million initial investment is going to be a success.
- But more than that, we should start to better understand whether SBInet is the technology solution that will give us the result we have been seeking all along: a more secure border.
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- If it is successful, Project 28 will finally give our Border Patrol agents the realtime situational awareness they need to take control of this 28 mile stretch of Arizona border, while also helping ensure the agents' safety.
- Like many of my colleagues, I will be closely monitoring the rollout of Project 28 in the coming days and weeks, and look forward to visiting the site in the near future.
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• Project 28 may well be the future of America's border security... hopefully we got it right this time.

Ms. SANCHEZ. Thank you, Mr. Chairman. And I welcome our panel of witnesses. And I believe I am told that there may be votes being called up in another 15 or 20 minutes, so what I would like to try to do is get through our witnesses, each of you having 5 minutes to testify, and hopefully they are wrong on the votes, and we can get into asking some of the questions. And if not, we will break for those votes and then come back.

Our first witness is Chief Aguilar of the U.S. Border Patrol. We know all about you. I will put it into the record, all your background and everything. Our second witness is Mr. Gregory Giddens, director of the Secure Border Initiative at the Department of Homeland Security. And our third and final witness, Mr. Jerry McElwee, is vice president and SBI*net* program manager for Boeing.

Ms. SANCHEZ. So, welcome, gentlemen, and we will start with the chief for 5 minutes.

STATEMENT OF DAVID V. AGUILAR, CHIEF, BORDER PATROL, U.S. CUSTOMS AND BORDER PROTECTION, U.S. DEPARTMENT OF HOMELAND SECURITY

Mr. AGUILAR. Thank you. Good afternoon, Madam Chairwoman Sanchez, Ranking Member Souder and Chairman Thompson and other members of the committee that may walk in here in a little bit. It is a pleasure and opportunity to be here with you this afternoon to share information with you and testify on one of the most—what I believe to be one of the most impacting initiatives that this country has ever undertaken towards getting operational control of our borders. I would like to begin very quickly with talking to what I had talked about in the past, and that is a tremendous amount of forces that are impacting our borders, both north and south, and that equates to the following: 1.1 million illegal aliens last year; 1.3 million pounds of narcotics that we apprehended last year. This is all Border Patrol specific. Approximately 108,000 OTMs; over 80,000 criminal aliens, and very importantly, the criminal organizations that are exploiting our borders, both north and south, in order to make use of our communities into—and smuggling into the United States. In addition to that, of course, is something that we are all very interested in, is anybody having an affiliation or a nexus to a country that exports terrorism or directly affiliated with terrorism.

Now, all of this is happening across our 6,000 miles of border. Vast rural, remote areas of operation where we have operated historically. Past efforts that the Border Patrol has instituted against this border have in the best way that I can capture it been in a fragmented manner, and by that, I mean the following: Not that it was bad, but it was just fragmented. Too often in the past, we looked, organizationally and I think as a government, at applying a magic bullet, one piece of equipment, one solution to take care of the problem of our border.

The difference today that we are going to talk about is going to be an integrated system that brings several pieces of technology, rudimentary and 21st Century, something as simple as a fence that

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will integrate with the technology that the integrator and the SBI*net* will be bringing to the table that will give us very simply the following things in order to bring operational control to the border, and that is the ability to: detect an entry; deter an entry; classify and identify what that illegal incursion is, that is from all-threats perspective; respond to it; and then bring it to the appropriate resolution as it relates to law enforcement. Is it an arrest? Is it a prosecution? Is it a deportation, a removal? Anything of that nature, all of those will be combined in this integrated systems approach that we are taking under SBI*net*.

Now, very importantly is the right mix of resources. I have been asked this question several times, is, under this SBI*net* program, the right mix of resources? We will start with the operators. We will basically identify what the requirements are, and between SBI*net* and the integrator, we will identify the solutions set to apply to that focused portion of the border that we are working on in order to get us the operational control capability that I spoke to just a second ago.

Now, today, as we speak, I don't want to ignore what I think is very important. We have already received unprecedented levels of resources as we continue to grow. We are on track to recruit, train and hire a net 2,500 Border Patrol agents by the end of this fiscal year. Today we sit at about 13,600 agents that are onboard. Operation Jump Start, up to 6,000 National Guard personnel currently deployed. We have ended catch-and-release, 70 miles of fence to be built this year, commitment to build 225 miles next year. Partnerships have been established. Operations, such as stone garden, the creation of the best teams in Phoenix and San Diego and Laredo. Operation streamline, that has been absolutely effective in the Del Rio sector. That has mitigated that flow down there to a level of about 68µpercent less than what it was compared to last year. Oasis and border violence protocols with Mexico, now a good partner working with us in order to instill even more security along our country's borders.

The results of that that I can give you are: Illegal alien apprehensions today are down by 25µpercent for the time period compared to last year. Narcotics apprehensions are actually up by 32µpercent. That inverse relationship is a good one. The less time that we speak on any one of those—that we spend on any one of those horses coming at us, the more we can dedicate to the additional threats, vulnerabilities to risks that are there. We have been able to dedicate more time to narcotics. Therefore, we have a 32µpercent increase in the apprehensions. OTM apprehensions are down by 47µpercent. Last year, we had 108,000 OTMs. We are down by 47µpercent this year.

Probably the most important thing that I want to touch on right now is the following, and that is transformation. We started out as an organization in 1924 literally riding a horseback, bringing our own binoculars, our own saddle. That is what we were. Today, as we speak, we have been equipped. The future of Border Patrol is going to be SBI*net*. That integration system of systems that will give us the capabilities that are required to bring operational control to the border. It is integrated. It is a system that is going to

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be deployed incrementally by risk management as to where we need to be focussing on vulnerabilities, threats and risks.

I think, between the three of us, we will be able to give you a very good picture of where we are going, and I thank the committee and look forward to any questions that you might have of us.

[The statement of Mr. Aguilar and Mr. Gregory Giddens follows:]

PREPARED STATEMENT OF DAVID AGUILAR AND GREGORY GIDDENS

CHAIRWOMAN SANCHEZ, RANKING MEMBER SOUDER, AND DISTINGUISHED SUBCOMMITTEE MEMBERS, it is our honor to have the opportunity to appear before you today to discuss the current environment of border security and how SBI*net*, a key component of the Department of Homeland Security's (DHS) Secure Border Initiative (SBI), will provide U.S. Customs and Border Protection (CBP) with the tools necessary to gain effective control of the borders. My name is David Aguilar, and I am the Chief of the U.S. Border Patrol, and with me is Greg Giddens, the Executive Director of SBI. I would like to begin by giving you a brief overview of our agency and mission.

In November 2005, Secretary Chertoff created the Secure Border Initiative to galvanize DHS actions across agencies in support of the President's three core objectives for comprehensive border security and immigration reform:

- Gain effective control of the borders,
- Strengthen interior enforcement and compliance with immigration and customs laws, and
- Support passage of a temporary worker program.

Within this comprehensive DHS effort, CBP is charged with executing the first pillar of SBI—achieving control at and between the Nation's ports of entry.

CBP, as the guardian of the Nation's borders, safeguards the homeland—by protecting the American public against terrorists and the instruments of terror, while at the same time enforcing the laws of the United States and fostering the Nation's economic security through lawful travel and trade. In addition, the Border Patrol continues to perform its traditional and vitally important duties of detecting, apprehending, and deterring illegal aliens, smugglers, drugs, and other contraband between the ports of entry. This is done simultaneously and in conjunction with uniformed CBP officers, who carry out similar interdiction and deterrence missions at our Nation's ports of entry while facilitating legitimate trade and legal immigration.

The priority and traditional missions of CBP are complementary in nature, and we are achieving good results on both fronts. As of May 29, 2007, total overall apprehensions are down 25 percent from fiscal year 2006, with total Other than Mexican (OTMs) apprehensions down 47 percent. The decrease in apprehensions is partly attributable to efforts to end the practice of "catch and release" and aggressive enforcement programs, such as Operation Streamline, the Arizona Border Control Initiative, Expedited Removal, the Interior Repatriation Program, and Operation Jumpstart. At the same time, narcotics seizures have significantly increased. To date, the Border Patrol has seized over 1.3 million pounds of marijuana, an increase of 30 percent as compared to the same time period last year, and 10,730 pounds of cocaine, an increase of 85 percent as compared to the same time period last year. Our success is based on deploying the right mix of personnel, technology, and infrastructure. Thanks to the strong support of Congress, we now have more agents to patrol more areas of the border, continue to add fencing and infrastructure along our borders, have increased our enforcement capabilities through Operation Jump Start, while building up our own internal resources, and continue our work to implement the SBI*net* program. These resource and operational efforts are having the desired effect on the criminal organizations that have historically operated along our Nation's borders as we have engaged our partners at DEA, FBI, and ATF, as well as other DHS components such as Coast Guard, ICE, and TSA, significantly improving our information and intelligence sharing efforts with these and other state local, tribal and law enforcement partners.

The Border Patrol carries out its mission along our Nation's borders by applying the "right mix of resources" in a layered enforcement mode. This mix of resources includes personnel, technology, and infrastructure, which are deployed and implemented in a manner that is tailored to maximize enforcement efforts in a targeted area of operation. Included in these enforcement efforts is a critically important second layer of defense that denies major routes of egress from the borders to smugglers intent on delivering people, drugs, and other contraband into the interior of

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the United States. This is done through the use of tactical and permanent checkpoints on highways leading away from the border, the checking of transportation hubs that may be used to smuggle people or contraband, working with law enforcement task forces, and partnering with other law enforcement agencies.

The Border Patrol has a clear strategic goal: to establish and maintain effective control of the borders of the United States. Effective control is defined in the Border Patrol's strategy as the ability to:

- Detect an illegal entry;
- Identify and classify the entry and determine the level of threat involved;
- Respond to the entry; and
- Bring the event to a satisfactory law enforcement resolution.

Critical to effectively accomplishing our mission is the ability to continually assess, develop, and deploy the appropriate mix of technology, personnel, and infrastructure in order to gain, maintain, and expand coverage of the border and use our resources in the most efficient fashion. SBI*net* is charged with designing, developing, and implementing a "system of systems" solution that incorporates surveillance and detection, command and control, intelligence, tactical infrastructure, communications and information technology. This integrated solution will support Border Patrol agents between the ports of entry and CBP officers at the ports of entry as a tool to gain effective control of our Nation's borders. SBI*net* will utilize the latest innovative technology—cameras, biometrics, sensors, air assets, improved communications systems—to provide the force multiplier that the CBP agents and officers need to execute the agency's mission in the safest and most effective manner.

Securing our Nation's diverse border terrain is an important and complex task that cannot be resolved by a single solution, such as installing fence alone. To secure each unique mile of the border requires a balance of technology, infrastructure, and personnel that maximizes our Nation's return on investment and is tailored to each specific environment. Some of the components included by the Border Patrol and SBI*net* in evaluating tactical infrastructure needs are border access, border barriers (both vehicle and pedestrian), and the integration of existing and new technologies, such as cameras, sensors, and software. The proper mix of resources will vary with differing border environments and enforcement challenges. Generally, the Border Patrol operates in three basic geographical environments: urban, rural, and remote. Each element has its own unique challenges.

In an urban environment, enforcement personnel have only minutes, or sometimes seconds, to identify an illegal entry and to bring the situation to a successful resolution. Urban environments have significant infrastructure that does not exist in rural or remote areas. Urban areas facilitate an illegal entrant's crossing of the border and assimilation into the population in such a way that the violator easily blends in with legitimate traffic in the community within moments. Typically, smugglers and potential illegal entrants prefer urban areas due to the available infrastructure.

In urban areas, the deployment mix will lean heavily on SBI*net*-provided tactical infrastructure, such as lights and fences, and technology supported by sufficient personnel to quickly respond to intrusions. The physical infrastructure serves as a tactical tool to impede, channel, slow down, and manage the entrant. The deployment tends to be of high visibility in that a potential intruder actually sees the barriers, lights, detection capability, and patrols occurring on or near the immediate border. The goal of deployment in an urban area is to deter or divert potential illegal traffic into areas where the routes of egress are not immediately accessible and enforcement personnel have a greater tactical advantage.

In a rural environment, response time to an incursion can be greater, as the time from the point of entry to assimilation into the local infrastructure may be minutes or hours, exposing the violator for a longer period of time and allowing for a more calculated enforcement response. Deployment in a rural area will be more dependent upon an SBI*net* solution that involves detection technology, which can track the illegal entrant as he progresses into the country; provides rapid access to the border; and establishes barriers designed to limit the speed and carrying capability of violators.

In remote areas, it may take a violator hours or even days to transit from the point of entry to a location where the entry may be considered successful. This allows for a significantly more deliberate response capability geared toward fully exploiting the terrain and environmental advantages. Deployments in remote areas will lean very heavily on detection technology and will include infrastructure geared toward gaining access to permit enforcement personnel to confront and resolve the event at a time and location that are most tactically and strategically advantageous. Other infrastructure and/or facilities that may be employed in a remote area include

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remote operating bases to provide for full enforcement coverage in locations that are difficult to access on a shift-to-shift basis.

Over the years, the Border Patrol has used various forms of technology and infrastructure to help complete its mission. As technologies develop and operational needs change, the systems used have evolved. For example, the Border Patrol screens individuals against the combined ENFORCE, IDENT, and IAFIS database systems, which were integrated by US-VISIT. Additionally, Border Patrol installed high-tech infrared cameras and sensors, provided agents with computers and intelligence databases, built command centers, and tested radar technology, all in an effort to bring greater control to the U.S. borders. Through SBI*net,* and with help from DHS Science and Technology, CBP will leverage the most effective proven technology (radars, communication devices, cameras, sensors, and other equipment), infrastructure, staffing, and response platforms, as well as integrate existing resources, in a single comprehensive and integrated border security solution. SBI*net* will help enable the CBP Border Patrol agent, the CBP officer, and the Air and Marine interdiction agent to more efficiently deter, detect, and resolve illegal entries into the United States. DHS Science and Technology will help reduce SBI*net*'s programmatic risk by providing cutting edge technologies that have been thoroughly researched, developed, tested and evaluated for the system of systems border solution. Though the technological enhancements are meant to improve and standardize our way of doing business, they will also be tailored to meet an individual sector's needs.

Although specific packages will vary, the vision under SBI*net* is to move towards a system that makes use of mobile data and communications systems and Common Operating Picture (COP) technologies that provide real-time situational awareness. A COP allows agents, dispatchers, and supervisors to know what is happening throughout their work environment and gives them broad situational awareness of their areas of responsibility. For example, agents with a mobile data terminal (MDT) in their vehicle will be able to receive an alert when sensors are triggered. The device will then download a live picture of the area from a camera mounted on towers. This will improve upon current procedures under which a dispatcher must relay information to the field agent, increasing overall effectiveness and efficiency. Command and Control Centers will have a global view of the sector, and they will be able to zoom in on specific locations via cameras to inform agents of an illegal entry, the number of persons involved in the incursion, their location, and the number and locations of agents within the area that can respond. SBI*net* plans to install radar, unmanned aircraft systems, ground surveillance radar, sensors, and camera towers to track the movement of people, vehicles, or boats. This type of system decreases the need for physical barriers, although it will not eliminate the need for fences or barriers in all locations. This is ideal in many desert, remote, and marine environments, such as the Great Lakes. These interconnected systems will send real-time, tactical information to Command and Control Centers and to agents via portable communications devices. The COP technology will also enhance integration intelligence for interdiction operations with the Coast Guard in the Great Lakes region.

The SBI*net* solution will first be fielded along a 28-mile stretch of border in Sasabe, Arizona, in an effort known as Project 28. Project 28 is the first segment of the SBI*net* integrated system that will supply CBP agents and officers with the ability to detect illegal entries when they occur, effectively and efficiently respond to each entry, and bring the situation to the appropriate law enforcement resolution. Project 28 will provide Border Patrol agents with real-time information of both CBP assets and intruder locations. This is the basis for integrated communications among Border Patrol agents, Border Patrol stations, Border Patrol sectors, and other law enforcement personnel. The primary components of the Project 28 system are the mobile integrated sensor towers, the Project 28 COP, enhanced communications, upgraded patrol vehicles, and Rapid Response Transport vehicles.

The nine re-deployable sensor towers include integrated cameras and sensors to improve detection, identification, and classification. The cameras provide long-range surveillance, while the radar locates moving targets and classifies them. Both the cameras and radar operate day and night. The 98-foot high towers elevate the surveillance technologies above uneven terrain and vegetation. The towers include broadband wireless transmission capability and can be operated remotely. Once initial operating capability has been achieved, each tower will operate independently, incorporating data to the COP.

COP data will be transmitted via the towers to the Tucson Headquarters facility, a Forward Operating Base, modified Border Patrol vehicles, and three Rapid Response Transports, increasing situational awareness, mission efficiency, and agent safety. Project 28 will provide Command, Control and Communications capability for the COP at Border Patrol Tucson Sector Headquarters; a Forward Operating

Base Command, Control and Communications Unit outfitted with a COP and communications equipment; 50 patrol vehicles that have been upgraded to provide rugged, secure, mounted laptop computers to enable displays of COP data; and three Rapid Response Transports. Project 28 will also provide 70 satellite phones to improve communications with the patrol vehicles.

Project 28 includes three Rapid Response Transports to increase the speed of transporting illegal immigrants from the point of apprehension to processing and detention facilities. The Rapid Response Transport vehicles, which are outfitted with laptops for COP display and satellite communications equipment, can transport up to 12 people.

CBP has made great strides toward securing America's borders while facilitating legitimate trade and travel and ensuring the vitality of our economy. We recognize the challenges that lie ahead. By utilizing the latest technology and infrastructure as part of a comprehensive solution that also includes additional well-trained personnel, and by maintaining a vigilant interior enforcement of our Nation's immigration laws, we will fulfill our mission of protecting our country and its citizens. I would like to thank Chairwoman Sanchez, and the members of the Subcommittee, for the opportunity to present this testimony today and for your continued support of DHS and CBP. We would be pleased to respond to any questions that you may have at this time.

Ms. SANCHEZ. Thank you, chief, and we will listen to Mr. Giddens now for 5 minutes or less. Thank you.

STATEMENT OF GREGORY GIDDENS, EXECUTIVE DIRECTOR, SECURE BORDER INITIATIVE, U.S. DEPARTMENT OF HOMELAND SECURITY

Mr. GIDDENS. Yes, ma'am. I caught the 5 or less. Good afternoon, Madam Chairwoman Sanchez, Ranking Member Souder, Chairman Thompson.

It is an honor to be here in front of you and an honor, frankly, to be at the table, flanked on my left and right by both the chief and Jerry. Given your familiarity with SBI*net* and Project 28, I will keep my remarks brief, but there are a couple of issues I would like to highlight. As you know, SBI*net* is intended to secure our physical borders by giving our agents and officers the tools, capabilities, capacities they need in order to detect illegal entries, be able to effectively and efficiently respond to those and bring them to a resolution. Now, while SBI*net* is an important part of that system, we recognize it is only one part in a comprehensive solution to solving border security, one that begins outside our borders and extends into the interior of the heartland. As outlined in the Department's border security strategy, it is really one piece of that integrated strategy; the first being gaining effective control of our border.

SBI*net* is a long overdue tool. Certainly the opening remarks hit home to us, and we have to get this right. It has been a long time coming, and now's the time we need to deliver on border security. We believe SBI*net* will do that. It will make the agents and officers more effective and efficient. And it will also improve their safety and also it will be able to reduce deaths in the desert because of the situational awareness that we will be able to provide to the agents and officers in the field.

Both their acquisition approach and the system we deliver does represent a departure from previous attempts. The chief mentioned that. This is not a standalone by different components. It is by a system that is integrated from the beginning. We are beginning with the end in mind and providing a system that will provide operational utility. It is not just buying cameras or buying radars. It is buying a system that will function for the user. The contract

that Boeing has encountered would ensure that those components work together to provide just such a system that enables the Border Patrol agents and the CBP officers to do their job.

Defending Project 28 is really our first deployment and our first step toward improved security on the Nation's borders through the SBI*net* technology solution. In the coming weeks, Madam Chairman, as you mentioned, SBI*net*, through Project 28, will become operational around the Sasabe port of entry, and it will serve as a model. We appreciate your comments on lessons learned, and we have a rigorous test program that Boeing is executing now. And when we go live operationally, we will have a test program that we will—that we will put the system through to ensure it meets the needs but also to ensure we recognize what improvements we need to make as we go forward past Project 28.

The project will provide the Border Patrol agents realtime situational awareness of both their assets and also provide the basis for integrated communications among CBP agents and officers. The primary components are the mobile integrated sensor towers, the common operational picture, enhanced communications, upgraded patrol vehicles as well as the rapid response transport vehicles. Each 100 miles represents unique terrain and operational conditions. However, along the 6,000 miles of the northern and southwest border, the same philosophy must be employed. We must look for that right balance, as the chief mentioned between, staffing, the personnel, the technology and the tactical infrastructure.

Given these realities, Project 28 will provide us lessons learned, and we will apply those to the different terrain and operational realities that we face as we move out from Project 28. And as mentioned, as with any new technology, we will find areas that we need to improve on from Project 28. Unique challenges, particularly on the northern border, in terms of foliage penetration and along the Great Lakes, will present unique challenges that we will not face on the southwest border, and we are already looking to the northern border to explore some technology solutions that will be appropriate for that environment.

As we speak, CBP and Boeing officials are preparing for design work to really finish the design in the southwest and also on northern border locations. And we will have a detailed analysis of those geographic and operational environments so that we will get the solution right. Also, as we speak to Boeing and CBP agents and officers in the field doing final testing of the deployed nine towers as a part of Project 28, the equipment is deployed and we are in the last stages of integration testing at the field. And we would welcome a visit for you to be able to see firsthand the difference that that will make to agents and officers in the field. I look forward to your questions. I appreciate your leadership and your insight as we move forward. And I look forward to hosting you along with the chief and CBP to a visit down to Project 28. Thank you.

Ms. SANCHEZ. Thank you.

And now Mr. McElwee for 5 minutes or less.

STATEMENT OF JERRY W. McELWEE, VICE PRESIDENT AND PROGRAM MANAGER SBInet, BOEING ADVANCED SYSTEMS.

Mr. MCELWEE. Thank you, Madam Chairwoman, Ranking Member Souder, Chairman Thompson, distinguished members of the subcommittee. I am Jerry McElwee, and I am the Boeing program manager for SBI*net*. With your permission, madam chair, I would like to submit my written comments for the record and go directly to charts. I have concluded that charts are in this distinguished group perhaps my best bet to catch up with all the good information that has been provided by the chief and by Greg.

We have talked about Sasabe. This is a Google map taken from about 13 miles in the air of the terrain in and around Sasabe. We show the nine towers spread left to right just inside the border. The two on your left are on the Tohono Oodham Indian nation. The remaining seven are in the national forest or in the public territory, public lands. You will notice that they are not all directly on the border. Our objective is to make sure that we see everyone that crosses the border before they are able to reach a control point or that location where they can disappear into the infrastructure without likelihood of apprehension.

This next chart shows you the specifics of the tower. There is a radar on the very top with a long-range camera just beneath that. The camera is effective both day and night. And then you see the compound in which that camera is located. Notice that the tower is on wheels, and is in fact relocatable. It is a few-hours job to take it down, pull up stakes, load it on trucks or the tank and the generator and the satellite antenna and redeploy it to another location. We chose this approach because we thought it was important that we have some flexibility as opposed to anchoring permanent towers in the terrain at this point. This next chart shows you the initial deployment of tower three. Tower three was in the middle of the chart—or the Google map of two charts earlier. It is a relatively straightforward process, and not a lot of training required but the men who do it, just experience in having done it a few times.

We have had concerns, questions about what is the volume of noise associated with the generator, and it is actually much less than a lawnmower that you might hear on a Saturday morning. It is a propane generator as opposed to MOGAS or diesel, and as a consequence, it operates much more quietly than some of the others. You may notice there is a band around the base of the tower. That is to preclude people from climbing the tower. There is a ring around the tower above that brown band that is local security cameras, lighting for its infrared lighting as opposed to the bright lights of daytime, plus a loud hailer. So if someone approaches the camera or the tower, you can see them at some distance and warn them away or get their identification for subsequent apprehension so you will not be able to—

This shows the control room at the Tucson station. It is a new facility that was there before we arrived, and we have moved the equipment for the SBI*net* control center there. And what you see here are people working and doing the installation process. But that is up, installed, operational now. And is, as Greg said, we are going through the test process to ensure that it all works as a system, the system is, as we said it would.

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This chart or photograph shows you what we have done to the vehicle modification so that operators—and I am sure, you know, the Border Patrol agents are typically one officer per vehicle, and so we have set it up so that the driver is able to be either mobile or at a halt—preferably, for safety reasons, at a halt—look at the situational awareness around him. From this laptop, when he is within line of sight of a tower, he can take control of the camera on the tower and scan left, right, zoom, pan, tilt, whatever direction he or she chooses to get personal assessment of the potential undocumented aliens that he or she may be apprehending. That is a significant reduction in risk, we think, for an agent to be able to see with his or her eyes what it is they are going to be encountering when they attempt to make an apprehension.

The radio equipment that you see there was already installed. That is part of the original. The hand set, telephone light that you see to the right of the screen, is an iridium satellite phone that ensures that you have continuous communications wherever the agent happens to be. It was our experience in doing an examination of the southwest desert that there are many locations that the existing communications that the agent has do not work. Shortage of relays, shortage of—the distances are just so vast that it is difficult to cover all of that. The satellite phone will provide that backup capability.

This next chart shows the build-up of communications that is central to the entire system. This shows the mobile towers linked by satellite back to the station. The next flip shows the operator tying into the towers for communications and relaying back to the station as well as the vehicles. The third flip shows the overlay of the iridium satellite system to ensure that they do in fact have continuous communications, and the final or the next to final shows the broadband control system between the vehicle and the tower when the agent wishes to take control of the tower to—or control of the camera on the tower to make sure that they are able to see what they are about to encounter.

Final step of the unattended ground sensors that provide coverage for depressions or low points in the ground that you cannot get line of sight coverage.

This last chart shows the analysis that we did. It is the same terrain, 28 miles there that we are covering. The circles that you see represent the coverage of the radar systems. The lines, wiggly lines going from south to north represent most likely trails that undocumented aliens would attempt to use to penetrate. Notice the ones on the right are very—if you will—different directions, lots of changes in the route of march. That is because it is very difficult terrain. You will see the green is where we have—with just the towers, not using the unattended ground sensors—the green is where we have coverage and would detect someone moving through there at a very high probability.

You will notice that, as you get towards the back in some case, you lose them. What we attempted to do in our initial deployment was provide coverage with both the radars and the cameras that would preclude anyone moving through that area without detection.

Madam Chairwoman, that is my set of presentations.

[The statement of Mr. McElwee follows:]

PREPARED STATEMENT OF JERRY W. MCELWEE

Good afternoon, Chairwoman Sanchez, Ranking Member Souder, and Members of the Subcommittee.

My name is Jerry McElwee. I am the Boeing Program Manager for the SBI*net* Program. I am pleased to have the opportunity to talk about our progress on Project 28, the first comprehensive deployment task order of the SBI*net* Program.

SBI*net* is a program of significant national interest, with a challenge to deliver a system to the Department of Homeland Security that will:

- Support the U.S. Customs and Border Protection (CBP) in detecting, apprehending, and processing people who cross our borders illegally,
- Facilitate legitimate cross-border travel and commerce, and most importantly,
- Provide the taxpayers with the best-value solution over the life of the program.

We have an excellent team that proposed a comprehensive, open system solution utilizing proven technology and a systems architecture that will allow for continuous improvement as new technology comes on the market throughout the deployment. It is based on the systems engineering and design approach that Boeing has developed over time and used successfully on many other large, complex projects. An aspect of this approach is to continuously look for "lessons learned," to incorporate into our process.

We will deploy equipment on the border by drawing from a common set of proven technology which we call our "tool box," but each sector solution will be uniquely designed for the needs of that sector.

Boeing is very mindful that everything we do is under the direction and guidance of the CBP SBI*net* Program Management Office—and we have established a very good working partnership with them. Under our contract, Boeing cannot undertake any work that is not authorized by CBP through a task order issued under the SBI ID/IQ contract. Each task order is a FAR-compliant contract which means it has firm requirements and metrics to measure contractor performance. Project 28 is the first task order for deployment of our system.

PROJECT 28 SPECIFICS

Project 28 is a Firm Fixed Price task order for the deployment of equipment across twenty eight miles of the Arizona Border covering the area on either side of the Sasabe, Arizona Port of Entry (POE). We chose this area because it is a high-traffic area and will provide a rigorous test of the system we proposed and are now building.

We have deployed nine towers, each with radar, day/night (EO/IR) cameras and other sensors. Each tower is also equipped with data processing and communications equipment to effectively distribute information to the Control Centers, Mobile Units, Agent Vehicles and other law enforcement personnel. This information is processed into a Common Operating Picture (COP) which provides Border Patrol Agents with an accurate depiction and location of intruders as well as CBP assets. This capability dramatically improves the situational awareness of agents in the field, the command centers and sector headquarters.

The first tower was deployed in April and testing began at that time. Today, all nine towers have been deployed and we began system level testing earlier this week to ensure that, upon completion, these towers and associated equipment will work as a system, providing a highly reliable, available, maintainable, and cost effective solution to strengthen the management, control and security of the border.

I have some photos of the equipment and charts explaining the deployment which are attached.

THE WAY FORWARD

CBP has given us authority to start planning for several other task orders and that work is underway. To support this effort which will run for the rest of this fiscal year and FY 2008, we have conducted a comprehensive re-competition of the technology and equipment we will need for these task orders, *i.e.* the first refreshment of the "tool box." We conducted an Industry Day on May 3 which was attended by almost 900 individuals representing over 400 companies. Approximately three weeks later, we released 55 Requests for Proposal (RFPs) and are in the process of receiving and evaluating the resulting submissions. The winning companies will form the supplier base that will provide the technology and equipment for the next year or two.

Project 28 gives us a demonstration of our approach and a test bed for incorporating improvements. The expanded team refreshes out technology, ensures low

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prices, and gives us the capacity to execute on the much larger task orders that lie ahead.

In summary, we think we have made a good start on this program. We are on track to meet the milestones in the P–28 Demonstration Task Order, and we have initiated the planning, systems engineering, analysis, and team expansion necessary to meet the challenges ahead.

Ms. SANCHEZ. Could you put that last one up for me? Thank you. Now there will be time to ask some questions, and each of the members will have 5 minutes, and I will begin the questioning.

So according to this, the pink along the border that is just outside of what looks like Project 28, it says undetected. Is that because it is very rough terrain, and we are sort of not—

Mr. MCELWEE. Two reasons: It is outside of the coverage area, so if we were to cover that, we would move a tower further to the east. Second, it is rough terrain, and we would anticipate perhaps using unattended ground sensors. There are a large number of those deployed in the P28 already, and that will be tied into the tower to cover the gaps we have.

Ms. SANCHEZ. So when you finish up Project 28 you will take the lessons learned from that and you are going to go—I am assuming along the border or in sections and try to apply the same—different mix but the same type of technology mix, if you will. So those pink lines might be sensors or something of the sort depending on what type of terrain it is.

Mr. MCELWEE. I wanted to show this to highlight the analysis that we do of the terrain in which we are operating. The Border Patrol will assure you every mile of the border from every other mile. So we have to do the analysis to determine where the sensors go and how many layers we need for a particular piece of terrain.

Ms. SANCHEZ. So you have sort of taken a look at it, you are putting it in the mix, you are going to finish up Project 28. And then what type of training are the patrols who are going to be there going to have with respect to this? And have you started that training, or is it on-the-job training? You know, what is the program for that?

Mr. MCELWEE. Yes. We started this morning. It is classroom training followed with training on the equipment and then continued training on the job. The agents in the vehicles, I think the requirements going—we think it will take about 4 hours of training to familiarize them with that. We incorporate our agents in the test plan that is underway now. The agents in the control center will require—we believe—a couple of days of training, and that will also continue with OJT afterwards.

Ms. SANCHEZ. So once you finish the training and you think you have got the spots right, when would you say this would really be up and going, operationally 100 percent, we are going to be looking after the bad guys?

Mr. MCELWEE. Two phases, we are going to declare initial operational capability IOC when we have completed all the testing and satisfied ourselves that we have collected all of the faults or bugs that we find.

Ms. SANCHEZ. And when do you think about approximately what date that might be?

Mr. MCELWEE. We are targeting the end of next week.

Ms. SANCHEZ. Okay. And the second phase?

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Mr. MCELWEE. That is followed after IOC. That is turned over then to the Border Patrol. They operate the equipment. And approximately a month later, there will be another test done by an independent agency, communications and electronics command out of Fort Monmouth. They will come in and conduct another extended test with just the agents and the equipment to ensure that they are performing as expected.

Ms. SANCHEZ. Thank you.

Mr. Souder for 5 minutes.

Mr. SOUDER. I thank you. I am going to actually—sometimes we say we are going to send questions and we don't get answers necessarily. I want to read into the record a couple of the questions I would like back, and we can either do them—I would like them in the formal hearing record, but maybe if I could have some follow up. A couple of them relate to more the narcotics, but that is directly related to the border question. The tar system, are you still considering in SBI*net* using the five balloons? And do you have a recommendation of whether to use the other nine balloons? Because this isn't just land. What happens is these little things pop over the top. That system sometimes works; sometimes doesn't. We all know that, but it is a layered border. And how are we handling the possible little air jumps that we have historically had?

Secondly, and Mr. Aguilar, this would be more in your area. How do we explain that we are getting record seizures, and the price of cocaine in the country is dropping, and use in the emergency rooms aren't dropping? In other words, it is not clear demand has dropped. We are seizing more, and the price is low. This is a really interesting challenge. All this comes across the border. We are not growing cocaine. There may be in meth other questions; heroin, other questions. Madam Chairlady, I would like to suggest at some point we do a narcotics focus because whether it is ports, whether it is open areas, that clearly this is ours. It isn't just DHS direct. I mean, we have DEA there. We have NORTHCOM there. El Paso has seven different intelligence centers alone tracking things along the border. We have the southwest HIDA to see how they are interrelating because they are all going after people who are coming across. Those are a few of the questions. Now I want to make sure we get a couple of fundamental questions here.

Do you still believe this is going to be completed around 2013? And that it will cost $8 billion? Or are those cost estimates now rising, sliding?

Mr. GIDDENS. Yes, sir. That is still the plan that we have laid out, is 2013 and a $8 billion price tag. We will look each year to update that based on what we find and any lessons learned. But that is still what our estimation is. I am still a little concerned. We have a plan for 2013, but certain appropriations will be a dry run on how fast that gets accomplished.

Mr. SOUDER. Understood. That has been a problem in the past, you know, but when we are debating an immigration bill, supposedly it is even moving faster than that, and yet there is no plan how to actually execute 2013, no exit strategy for the borders that US-VISIT even have been asked to look at. And yet we are charging ahead with bills here, pretending like these things are funded. Like you say, any change in funding, as we have learned, or any

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change in modificationsμlike we learned with the Capitol Visitor Center, every time we change the specks, every time we delay it a year or two, the costs go up. That is why, every time, I am going to ask you, is it still looking at 2013? Is it still looking at $8 billion?

Next question, the 28 miles you are doing, and you are nearly activating that, that is what you are telling me. So when I was in Sasabe, since the time I was there, you put that much in?

Mr. GIDDENS. Yes, sir.

Mr. SOUDER. When is the next 28?

Mr. GIDDENS. The next production deployment will be later this fall. We are doing a design activity for Tucson and Yuma sectors, and we split the design activity out so when we go to production contract, we already have hard firm contracts so we know what we are buying to minimize the risks on those production contracts. And we will have those awarded in the September-October time frame.

Mr. SOUDER. Are you looking at, in effect, then, 56 miles a year on a regular basis?

Mr. GIDDENS. No, sir. Our goal on the technology is to have—in fact, as you look, we have nine towers out now. We look to have 70 towers deployed and operational by the end of calendar year 2008.

Mr. SOUDER. I want to ask a couple questions on measurement. When we are looking at the chart up there and when you look at the 28 miles, one of my constant questions has been, okay, if the Indianapolis Colts are having problems with people running left tackle, off tackle, and they take Dwight Feeney and seven other defensive people and say, we are going to block up that zone, probably the number of yards gained off tackle would be zero. But they will be running all over the field and passing all over the rest of the field. How do you plan to measure a successful program when just putting nine towers up means that we are—

Mr. GIDDENS. Sir, you have asked a great question. And I hope I will give you a satisfactory answer. We do not believe that just by putting these nine towers up from these 28 miles that we can ignore the fact that somebody will say, hey, well, I will just go half a mile to the west or a half a mile to the east. That is why, when we are working with Boeing, we have very particular tests and requirements that they have to validate and verify to us. And then we join into a partnership with the Army where they are working for us as our independent test agent.

Mr. SOUDER. Let me ask—and you can—anything you can write additional, we will go through and continue to talk. One of my questions here is that you are talking about whether the functional—and you know, you can run sample people through, which is very important functional aid. But one of the measures, how many things are actually getting through? In reality, not that much is likely to come through here. And one of our challenges, as opposed to a layered system, by concentrating your 28 miles, you look to 2013, we will be there. But between now and 2013, it is not that much we can adapt. In the model—and you don't have to answer this statement. I would also like to hear an answer to the question, are you modelling in success beyond just functional aid,

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the technology works, but in how the border's moving, do you put unemployment statistics in? Do you put how an immigration bill and people think they are going to get amnesty in, do you measure other variables? What is happening in Mexico, shifts inside their country? Because to know whether something's actually working beyond the technological side working, which would be nice to have the stuff work technologically, we have had that problem as well—

Mr. GIDDENS. Yes, sir.

Mr. SOUDER. I am not arguing it. I would like to know if that works. It is just, in a broader question, before we invest $8 billion, you know, are we having an impact and potential impact? I wanted to see not only for this one 28-mile stretch but how you are analyzing the border as a whole. Yield back.

Ms. SANCHEZ. I recognize now the Chairman of the full Committee, Mr. Thompson.

Mr. THOMPSON. Thank you very much, Madam Chairman, and I thank the witnesses for their testimony.

Mr. Giddens, maybe you can provide this for the committee. As you know, all of this work requires a subcontracting plan. And if you would, would you get the subcontracting plan for Project 28 for us and see exactly how we came out? I am interested in small business participation and minority business participation on it.

Mr. GIDDENS. Yes, sir.

Mr. THOMPSON. The other thing I am interested in is, given the terrain differential, the climate differential, Mr. McElwee, can you tell me how you plan to make the adjustments in technology so that exactly what we need will be available to us as we go forward?

Mr. MCELWEE. Yes, sir. We take something called the toolbox approach, and we have let a number of RFPs for the full range of cameras, radars, generators, towers, command and control systems, everything that we need to come up with a solution that will fit every segment of the border. That toolbox provides us low-price volume discounts, if you will, so that we can in fact be prepared to deploy a solution as rapidly as we complete the designs and receive the funding to proceed. The toolbox items have a range of requirements. Frankly, many of the cameras and the radars come out of the Department of Defense or the military community. And they meet cold weather, hot weather, wind, sand, all of the specifications that you would anticipate.

Mr. THOMPSON. I appreciate that.

Mr. Giddens, have we resolved the issue of whether or not we have the internal staffing capacity to manage a project this size? Are we still going to have to rely more on outside contractors to manage it?

Mr. GIDDENS. Sir, we are still tracking on the plan that I had given to you last fall, and in fact, I think we are four ahead on the—four or six government FTEs ahead of what our plan was. So we are right—we believe—where we need to be at this point. We are still building to that end state of 270 and then looking in 2008 to create a better balance of having more government employees and support contractors.

Mr. THOMPSON. But, at this point, this day, we still have more outside contractors providing oversight on this project than we have full-time government employees.

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Mr. GIDDENS. Sir, I would phrase that a little differently. None of our support contractors have an oversight role with any of the contractors. That oversight is a government responsibility. We do have at this time nine more support contractors than we do government employees working in the program office. But the oversight is a government function, and the support contractors are doing support work.

Mr. THOMPSON. But do you understand what I mean?

Mr. GIDDENS. Yes, sir.

Mr. THOMPSON. At what point do you think we will have more government employees who do this full time in this capacity than we have contractors?

Mr. GIDDENS. I think it would be the January 2008/February 2008 time frame. Our 2008 budget has some FTE increases, and we will start the recruitment actions for those, and you gave us some good ideas last time that you allowed us to come by and chat with you on recruitment. We have been using opportunities. So we will start those recruitments and try to bring those folks as early as we can to 2008. That is when we will reach that tipping point of having more government employees, and it is an end state, sir, that we share.

Mr. THOMPSON. Thank you. I yield back, Madam Chair.

Ms. SANCHEZ. Thank you, Mr. Chair. And I now recognize Mr. Green from Texas for 5 minutes.

Mr. GREEN. Thank you, Madam Chair, and I also thank the ranking member and, of course, the Chairman of the full Committee.

Madam Chair, because I know that time is of the essence, I will move rather quickly. Let me start by asking about the Border Patrol agents themselves, the rank-and-file agents. Have they been consulted? My understanding is that there has been at least some consternation expressed by some agents with reference to some of the prior plans that had been developed? And who can answer quickly?

Mr. AGUILAR. I can tell you that, just last week, some of my representatives met with the president of the union to bring him up to speed on where we are, where we are going, how this is going to work, the integration and things of that nature. So, yes, we have been in contact with them and briefing them on it.

Mr. GREEN. And equipment. We will probably not utilize all of the equipment that we have had for the previous projects as we move into Project 28. How much, if you know, underutilized equipment will we have?

Mr. GIDDENS. Sir, our plan is to take those cameras that are out there operating today that will procure before SBI*net* and integrate those into the solution set, and then they become part of our responsibility as technologyµrefreshed to replace that in the future.

Mr. GREEN. So would your answer be that you will utilize 100µpercent of the equipment?

Mr. GIDDENS. Yes, sir.

Mr. GREEN. With reference to the system itself, once the system is 100µpercent in place, how effective will it be? Because I understand that a system doesn't capture everything that you desire to have it do. But assuming that you get 100µpercent of your para-

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digm in place, how effective will that be in terms of being able to monitor and prevent crossings in that area that we are talking about? What is your prognostication.

Mr. GIDDENS. 90 to 95 percent.

Mr. GREEN. And finally, my understanding is that you will be bringing on a good number of agents. Just for that area, you will bring on some additional Border Patrol agents. Is this true?

Mr. AGUILAR. The mix of agents that will be placed for where SBI*net* goes will actually meet the requirements of that 95µpercent capability. Our goal is that, once it goes to 95µpercent capability, we will see a spike in arrests, and then if you will we will teach the criminal element they can no longer use that part of the border. So arrests should go down. We then adjust number of agents assigned to that and adjust to where they are going to be moving to.

Mr. GREEN. Let me broaden my vision for the purposes of talking about agents coming onboard. You will be bringing on more agents at some point for the southern border?

Mr. AGUILAR. Oh, yes, sir. We are doing that now.

Mr. GREEN. If you would, explain to me what process you are utilizing so as to have a cross-section of representation within the neophytes that you will have.

Mr. AGUILAR. Very good question. That is one of the things that we are looking at right now, the experience base that is out there and the experience base that needs to be teaching this transformation that we are going through. We are being very diligent in how we resource the sectors of work sectors of stations that are slated to receive the SBI*net* solution. On top of that, we are now hiring annuitants, retired Border Patrol agents that will bring in the high experience base that we are losing on a consistent basis. So those are the things that we are doing to ensure that there is a proper balance with the incoming—very accelerated new hires that we are getting.

Mr. GREEN. Do you recruit at colleges and universities, chief?

Mr. AGUILAR. Yes, sir. Yes, very much so.

Mr. GREEN. And how far inland do you come with your recruitment process? For example, do you come all the way to Houston, Texas, where we happen to have a university that I have a deep affinity and relationship with? Do you get thatµfar into the—

Mr. AGUILAR. Yes, sir. We are throughout the United States. In fact, one of the most recent efforts we do is on NASCAR. We are basically running a car right next to the National Guard, to the Marines, to the Army, that type of recruitment also.

Mr. GREEN. I would like you to give me statistical information on every university. How many recruits have you actually brought in from Prairie View? How many from Texas Southern?

Mr. AGUILAR. I don't have those numbers, but we can probably get them for you.

Mr. GREEN. Would you kindly do this?

Mr. AGUILAR. Yes, sir.

Mr. GREEN. Thank you very much.

I yield back. Madam Chair, you have been generous with the time. Thank you.

Ms. SANCHEZ. Five minutes to Ms. Jackson Lee from Texas.

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Ms. JACKSON LEE. I think we have bells ringing. So let me thank all the witnesses and thank the Chairwoman and the ranking member and try to go directly to some of the questions that are impacting immigration reform that is being discussed and debated while we are here.

Chief, one of the features in the bill is 18,000 Border Patrol agents. I think that is one of the numbers that I am seeing. But I really want to focus on your thoughts as to why it is difficult to recruit and retain Border Patrol agents and what improvements have been made in the professional development salary increase and promotion opportunities for Border Patrol agents?

Mr. AGUILAR. On the issue of recruitment and retaining, Congresswoman, the recruitment is a challenge. But we are on track this year for the 2,500 that we are—2,500 net that we are slated to hire this year. And for the 3,000 and the 500 to bring those up to that 18,000 number. We are on target to do that. And we feel confident we will be able to do that. It is a challenge but we are taking initiatives to meet those challenges.

Ms. JACKSON LEE. Can you just briefly—what is the challenge?

Mr. AGUILAR. The number. The numbers.

Ms. JACKSON LEE. That you need so many?

Mr. AGUILAR. Yes, ma'am.

Ms. JACKSON LEE. Not the attractiveness of the position?

Mr. AGUILAR. That is correct. In other words, getting them into the pipeline and recruiting them and then getting them through all the background checks and everything else that is required, the medicals and the physicals, before we even get them to the Border Patrol Academy. That is one of the challenges that we are facing. But we feel very confident that we are on track to meet those benchmarks that we have set for ourselves.

Ms. JACKSON LEE. Retention?

Mr. AGUILAR. We don't really have that much of a problem with retention. The attrition that is spoken of right now, there are three levels of attrition that I need to address. One is the attrition rate that happens from the date of hire to—or through the academy. And that is a high attrition rate, as it has always been.

Ms. JACKSON LEE. And if you can go quickly, I want to get a question—

Mr. AGUILAR. So there is that attrition rate, and then there is the attrition rate between the graduation of the academy and literally the 18th month of service, where people get onboard, they get on the ground and things of that nature. That right now is about 20µpercent at each one of those. Once we get past the 18 months, the actual attrition rate for journeymen Border Patrol agents is only about 4 to 6µpercent. That is a very good attrition rate.

Ms. JACKSON LEE. Are you happy with that professional development structure?

Mr. AGUILAR. Yes, and we are continuing to evolve it also.

Ms. JACKSON LEE. Thank you very much, chief. It is good to see you.

Mr. AGUILAR. Thank you.

Ms. JACKSON LEE. Mr.Giddens, Homeland Security has always been challenged over the years with this overweight of contracts.

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What are your benchmarks for moving away from the outside contracts? And out of this SBI*net*, are you seeing the lack of apprehensions because people are continuing to enter illegally, or because this program is working and it is deterring people from coming in?

Mr. GIDDENS. Yes, ma'am. One of the benchmarks that we use for SBI*net* is to really look at, what are some of the core activities that we need to do within the government? For example, engineering. So we really need to establish a very robust technical engineering group to make sure that we have a cognizant technical authority working the programs. That is one of the first benchmarks I think that we really took a different approach on with SBI*net* to really go out and recruit government technical lead engineers and systems engineers. And in response to your question about apprehensions, we believe that is as a result of increased efficiency from the Border Patrol, Operation Jump Start, the ending of catch-and-release, so that OTMs are no longer just released into society, but they are actually returned to their home country. Because while we see apprehensions down, the other enforcement indicators—and the chief may want to chime in—the other enforcement indicators, such as counter narcotics and others, are on the increase. So we have increased enforcement activity.

Ms. JACKSON LEE. Do you see Project 28 going on and on and on and on? Or do you see that being incorporated into the services of the Department of Homeland Security?

Mr. GIDDENS. I see it going on within CBP and becoming one of the lynch pins along with the staffing.

Ms. JACKSON LEE. And using an outside contractor or doing it inside?

Mr. GIDDENS. I think using an outside contractor to perform some of the technical procurement, looking at the cameras, integrating that, is something that we would continue to do. But internally we want to have a robust engineering staff to make sure that we are technically competent customers at the table.

Ms. JACKSON LEE. I thank you.

I yield back.

Ms. SANCHEZ. Thank you to the gentlewoman from Texas.

And now I will recognize another Texan, Mr. Cuellar. We are about 5 or 6 minutes away from the vote on the floor. So please ask your questions and what we will try to do is wrap it up at that point.

Mr. CUELLAR. Again, just for the sake of time, thank you for being here. Thank you, Madam Chair.

I want to ask just three quick questions and a comparison between 1 mile of what I call SBI technology, 1 mile of fencing and then a comparison on cost, time and effectiveness. In other words, what is the cost of putting 1 mile of SBI technology and compare it to what is the cost of putting 1 mile of fencing? That is the first part of the question. Whoever wants to answer that.

Mr. GIDDENS. Sir, our estimate for a mile of fence is approximately $3 million a mile, and for technology, it is, a million a mile is the round for that.

Mr. CUELLAR. Okay. What is a time to put up 1 mile of SBI technology compared time to put 1 mile of fencing?

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Mr. GIDDENS. It is less, sir. I don't have it with me, the particular answer.

Mr. CUELLAR. What is less?

Mr. GIDDENS. The technology is less.

Mr. CUELLAR. A little bit more difficult is my last question. What is the effectiveness of having 1 mile of SBI technology compared to 1 mile of fencing? And I see your charts where you have that coverage before or after. Which would you say would be more effective? And I know there is a mixture of personnel, and I have heard that, but if you just made a quick comparison.

Mr. GIDDENS. That is a tough comparison because they serve two different functions. The surveillance allows the Border Patrol agents and officers to know what is happening, to understand and have awareness of the situation, whereas the infrastructure is there to provide delay and not do a response mechanism.

Mr. AGUILAR. Congressman, I would put it this way, if we are talking about just solely a fence to the solution to the incursion problems versus a full solution to SBI*net*, I would prefer as an operator to have a full solution of SBI*net* applied to the border. I would prefer an SBI*net* solution of which fence is a piece of the SBI solution in some cases.

Mr. CUELLAR. Okay. Thank you.

Madam Chairman, I know we have to go. Thank you gentlemen. Appreciate your work.

Ms. SANCHEZ. Thank you to the gentleman from Texas. And gentlemen I am sure we could ask a lot more questions. I doubt I could keep my members from coming back at the next vote however. I am sure they have got other things to do this afternoon. Unfortunately, we ran into the vote. We did get a good amount of information from you. I am sure that the membership will want to submit some questions in writing. And I hope you will turn those around quickly, knowing in particular, as we discussed earlier in the week, that we have this immigration bill foremost in our thoughts, what we should do about the borders. So I thank the witnesses for their valuable testimony. The members of the subcommittee, if they have additional questions, will ask for them in writing. Hearing no further business, the subcommittee stands adjourned.

[Whereupon, at 3:14 p.m., the subcommittee was adjourned.]

QUESTIONS AND RESPONSES

QUESTIONS SUBMITTED BY HON. MARK E. SOUDER FOR GREG GIDDENS RESPONSES

Question 1: What is the projected timeline for implementation of SBI*net* and when should the American people expect to see results?

Response: The goal of SBI*net* is gain effective control of the Southwest Border by 2013. SBI*net* is an integrated system of technology, expanded staff, and tactical infrastructure designed to achieve effective control of the border.

Timeline

As of September 1, 2007

- CBP had deployed over 130 miles of primary fence, approximately 112 miles of vehicle barriers, and hundreds of miles of repaired or new patrol roads

By the end of 2008:

- CBP plans to have a total of 370 miles of primary fence along the Southwest border, a total of 300 miles of vehicle barriers, and a total of 105 communications, camera and radar towers

By 2013

- CBP will have gained effective control of the border. Effective control is defined by CBP as the ability to: (1) detect illegal entries in the United States;

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(2) identify and classify these entries to determine the level of threat involved; (3) efficiently and effectively respond to these entries; and, (4) bring each event to a satisfactory law enforcement resolution. To have effective control, all four elements must be present.

Question 2.: It is likely that there will be a huge reduction in the amount of illegal traffic in the 28 miles of the initial pilot. **How with DHS determine if this solution is successful?**

Response: Project 28 is the initial implementation of SBI*net*. The Project's goal is to achieve effective control of 28 miles of border in the Tucson Sector, where there is an area of high illegal entry. Project 28 includes 9 relocatable surveillance towers with sensors, one mobile Forward Operating Base (FOB), C3 capability at Tuscon HQ, upgrades to 50 agent vehicles, 70 satellite phones, 3 Rapid Response Transport Vehicles, 4 Unattended Ground Sensor Systems, and connecting satellite and wireless terrestrial communications.

CBP has been collecting illegal entrant metrics based on the number of apprehensions in the Project 28 area of responsibility since last Fall. Operational metrics will be used as baseline data to compare the trend pattern before and after the deployment of Project 28, so as to demonstrate the effectiveness of the system. CBP has established a contract with the Communication and Electronic Research Development and Engineering Center (CERDEC) under the Army's Special Projects Office to provide independent, third party testing and evaluation for CBP on Project 28. The immediate impact of increased communications and coordination capability will enhance CBP's ability to secure the border with the current manpower.

Question 3.: Illegal alien traffic is likely to move to the outlaying areas, ports of entry, and coastal areas. **What is DHS doing to step up enforcement in these areas?**

Response: DHS anticipates an impact on operations at the ports of entry (POEs) as CBP gains greater control of segments of the border between the POEs. The impact on the POEs will be monitored and operations will be adjusted as appropriate to address any changes in alien traffic resulting from the deployment of the SBI*net* solution. CBP has established baseline measures for inadmissible alien and narcotics interceptions at the POEs to track these changes in alien traffic, and POE requirements are currently being collected and analyzed as part of the overall SBI*net* requirements collection process. Future deployment of technology and infrastructure at the POEs will support overall SBI efforts to gain effective control of the border by providing enhanced situational awareness and flexible response capabilities into POE operations.

Currently DHS has a number of enforcement operations in place along the Southwest border. These include:

- Operation Jump Start: United States National Guard members deployed along the United States-Mexico border. Deployment entails assistance in the enforcement of border security and construction of a fence along the border. They support the Border Patrol with administrative and civil engineering projects. By taking over these areas for the Border Patrol, they are freeing up sworn agents to field units.
- Operation Streamline: A multi-agency initiative targeted at aliens who enter illegally through high-traffic areas within the Del Rio and Yuma Border Patrol Sectors. Those illegal aliens who are not released due to humanitarian reasons will face prosecution for illegal entry. The maximum penalty for violation of this law is 180 days incarceration. While the illegal alien is undergoing criminal proceedings, the individual will also be processed for removal from the United States.

In addition, U.S. Customs and Border Protection (CBP) will be implementing the Western Hemisphere Travel Initiative (WHTI) at land and sea ports to strengthen border security and facilitate entry into the United States for U.S. citizens and legitimate international travelers at the POEs. Through the deployment of detection capabilities that will read technology embedded in the new travel documents required for travel under WHTI, CBP will be able to identify persons attempting to enter the country using fraudulent documents more efficiently. This detection capability will also allow CBP to compare all persons crossing the border against various terrorist and law enforcement databases. Through WHTI, CBP will enhance the ability to identify and detect illegal border activity. CBP has also increased training efforts for CBP personnel at the POEs regarding the detection of fraudulent documents.

The Department also has assets that support maritime drug interdiction operations, including those in coastal waters. Specifically, CBP's Office of Air and Marine (A&M) has assets that support drug interdiction operations along the west

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coast. CBP's maritime assets include highly capable Midnight Express boats that are ideally configured for small boat drug interdiction. In addition, the Coast Guard operates a variety of small and large maritime assets that support maritime assets that support counterdrug efforts along the U.S. coastal areas.

Question 4.: What is the sustainability of Project 28? What will this technology look like in 20 years? What is the projected lifecycle of the major components of Project 28, including the redeployable sensor towers?

What are the expected maintenance costs of the redeployable sensor towers and the lifecycle requirements?

Response: It is expected that the service life of sensors associated with Project 28 ranges from years, as is the case with all commercial off-the-shelf technology. As these assets approach the end of their service life, the SBI*net* program will insert a technology refresh program to replace obsolete technology with more up-to-date technology. The SBI*net* engineering and logistics support programs are postured to support this approach. SBI*net* technology will evolve as technology capabilities expand and become readily available.

The estimated annual cost for the maintenance and support of Project 28 equipment is $5.7 million.

Question 5.: Please describe the process that was used to test the long-term viability of the equipment being deployed to the southwest border under SBI*net*.

a. Can it withstand the desert climate and other inclement weather?

b. Who will be responsible for the performance of each tower?

c. Who will respond a sensor fails? How quickly will this occur?

Response: The SBI*net* specification contains requirements for this technology to endure both Southern border desert and Northern border environmental conditions. Both acceptance and operational test procedures will verify system performance under these conditions.

The specification also contains the requirements for systems monitoring, which includes systems failures and performance degradation. Monitoring will be conducted remotely and displayed at the Tucson Sector Headquarters. Once a failure or system degradation occurs, maintenance personnel will be dispatched to restore the system on a priority basis depending on the classification of the failure (e.g., critical, non-critical). The response time by the maintenance personnel will also depend on the classification of system failure.

Question 6.: What have the initial testing results of Project 28 shown? What modifications will have to be made?

Response: Boeing recently conducted a preliminary test readiness review of the Project 28 system. As an outcome, a list of items has been compiled which needs to be addressed prior to conducting a system acceptance test. These items include areas related to system integration and software complications. Boeing is currently working to address these issues.

Question 7.: The DHS testimony states that the Science and Technology Directorate will help reduce SBI***net*'s programmatic risk by providing cutting edge technologies. Will DHS Science and Technology coordinate directly with Boeing in its efforts? If not, who at the Department will be responsible for looking at the technology recommendations first and then refer them to Boeing?**

Response: No, the S&T Directorate will not coordinate directly with Boeing. Instead, the Directorate will work directly with the U.S. Customs and Border Protection (CBP) SBI*net* Program Office, which will review technology recommendations provided by the S&T Directorate and then refer them, as appropriate, to Boeing. The S&T Directorate's goal is to reduce SBI*net* programmatic risk by providing cutting-edge technologies that have been thoroughly researched, developed, tested, and evaluated for the system-of-systems border solution.

Question 8.: How many agents are participating in Project 28? Is this an increase or a decrease from the normal agent allocation for this area?

Response: There are approximately 750 Border Patrol Agents and CBP Officers assigned to the area Project 28 covers. Project 28 will not impact the number of CBP personnel assigned to this geographic location.

Question 9.: How has the Department of Homeland Security used its waiver authority to expedite placement of infrastructure along the border? What steps has DHS taken to mitigate the potential negative impact of fencing on the environment and migrating animals?

Response: The Secretary's has used his waiver authority twice to date—once, with respect to the San Diego Border Infrastructure System and secondly, with respect to construction within the Barry M. Goldwater Range. Each waiver was published in the Federal Register. CBP employs a number of best management practices to minimize potential environmental impacts, such as soil erosion control, solid and hazardous waste prevention, water resources, and biological resources, to include the protection of local wildlife. The goal of DHS is to make investments that effectively balance border security with the diverse needs of the community and environment in a selected area.

Question 10.: The Department plans to build 7 miles of fencing in Sasabe by the end of 2007 but this does not appear to be part of Project 28 and it is not clear if there is overlap in the location of the two projects.

How much fencing and vehicle barriers are included in Project 28? How much in all of SBI*net*? How did the Department determine what amount was appropriate?

Response: DHS plans to build a total of 370 miles of primary fence along the Southwest border by the end of calendar year (CY) 2008, including a total of 145 miles of primary fence by the end of 2007. In addition, DHS will deploy at least 200 miles of vehicle barriers and 70 communications, camera and radar towers by the end of CY 2008. As of June 2007, CBP has deployed over 130 miles of primary fence, over 112 miles of vehicle barriers, new patrol roads and a variety of technology along the Southwest border.

To determine the appropriate amount of fencing, SBI's methodology considered the cost and effectiveness of technology and tactical infrastructure. In regards to situational awareness, a comprehensive analysis is conducted that looks at all possible solutions and determines the best solutions to implement. There are currently plans for 7 miles of fence and 20 miles of vehicle barriers in Project 28.

Question 11.: Statistics show, and you reinforce this in your testimony, that while illegal alien apprehensions are down this year, narcotics seizures are up. The street price of cocaine is falling, which means that there is more on the street. Briefings from JIATF South and the Coast Guard show that smugglers are moving drugs in small boats up the West Coast. Is SBI*net* planning to address this gap? What are the current capabilities?

Response: The Department has assets that support maritime drug interdiction operations, including those in coastal waters. Specifically, CBP's Office of Air and Marine (A&M) has assets that support drug interdiction operations along the west coast. CBP's maritime assets include highly capable Midnight Express boats that are ideally configured for small boat drug interdiction. In addition, the Coast Guard operates a variety of small and large maritime assets that support maritime assets that support counterdrug efforts in US littoral waters. Besides CPB and Coast Guard maritime assets, CBP and the Coast Guard have air assets that support counterdrug operations, including those along the west coast. DHS air assets include a variety of fixed and rotary wing aircraft including highly capable P–3's that operate out of Corpus Christi, TX, and are ideally configured to address maritime smuggling.

In addition to the assets mentioned above, the Department also supports Joint Interagency Task Force South maritime drug interdiction operations in the Eastern Pacific area. DHS drug intelligence, personnel and maritime and air platforms support interagency drug interdiction operations along the west coast of the United States. While not part of SBI*net*, these operations complement efforts to secure the entry of illegal drugs into the United States.

Question 12.: What role does the Tethered Aerostat Radar System (TARS) place in securing the border and especially in the counter mission? Is SBI*net* considering these existing 5 balloons and do you have a recommendation on whether the 9 or so balloons that used to cover the transit zone but are now in cold storage should be restarted? Is there another capability that can take the place of TARs and provide this radar coverage along the border and coasts?

Response: Yes, TARS is an effective method that contributes to border security efforts. The existing TARS capability provides the AMOC (Air and Marine Operations Center) the ability to detect aircraft, including small aircraft that enter the radar coverage area of the aerostats. The TARS array of aerostats provides a unique look-down detection capability for aircraft that would probably fly undetected by other radar systems due to "terrain masking." The scope of SBI*net* is focused on land crossings. CBP continues to look for alternative ways to address the issue of low-flying aircraft.

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ceedings, the individual will also be processed for removal from the United States.

In addition, U.S. Customs and Border Protection (CBP) will be implementing the Western Hemisphere Travel Initiative (WHTI) at land and sea ports to strengthen border security and facilitate entry into the United States for U.S. citizens and legitimate international travelers at the POEs. Through the deployment of detection capabilities that will read technology embedded in the new travel documents required for travel under WHTI, CBP will be able to identify persons attempting to enter the country using fraudulent documents more efficiently. This detection capability will also allow CBP to compare all persons crossing the border against various terrorist and law enforcement databases. Through WHTI, CBP will enhance the ability to identify and detect illegal border activity. CBP has also increased training efforts for CBP personnel at the POEs regarding the detection of fraudulent documents.

The Department also has assets that support maritime drug interdiction operations, including those in coastal waters. Specifically, CBP's Office of Air and Marine (A&M) has assets that support drug interdiction operations along the west coast. CBP's maritime assets include highly capable Midnight Express boats that are ideally configured for small boat drug interdiction. In addition, the Coast Guard operates a variety of small and large maritime assets that support maritime assets that support counterdrug efforts along the U.S. coastal areas.

Question 4.: What is the sustainability of Project 28? What will this technology look like in 20 years? What is the projected lifecycle of the major components of Project 28, including the redeployable sensor towers?

What are the expected maintenance costs of the redeployable sensor towers and the lifecycle requirements?

Response: It is expected that the service life of sensors associated with Project 28 ranges from years, as is the case with all commercial off-the-shelf technology. As these assets approach the end of their service life, the SBI*net* program will insert a technology refresh program to replace obsolete technology with more up-to-date technology. The SBI*net* engineering and logistics support programs are postured to support this approach. SBI*net* technology will evolve as technology capabilities expand and become readily available.

The estimated annual cost for the maintenance and support of Project 28 equipment is $5.7 million.

Question 5.: Please describe the process that was used to test the long-term viability of the equipment being deployed to the southwest border under SBI*net*.

a. Can it withstand the desert climate and other inclement weather?

b. Who will be responsible for the performance of each tower?

c. Who will respond a sensor fails? How quickly will this occur?

Response: The SBI*net* specification contains requirements for this technology to endure both Southern border desert and Northern border environmental conditions. Both acceptance and operational test procedures will verify system performance under these conditions.

The specification also contains the requirements for systems monitoring, which includes systems failures and performance degradation. Monitoring will be conducted remotely and displayed at the Tucson Sector Headquarters. Once a failure or system degradation occurs, maintenance personnel will be dispatched to restore the system on a priority basis depending on the classification of the failure (e.g., critical, non-critical). The response time by the maintenance personnel will also depend on the classification of system failure.

Question 6.: What have the initial testing results of Project 28 shown? What modifications will have to be made?

Response: Boeing recently conducted a preliminary test readiness review of the Project 28 system. As an outcome, a list of items has been compiled which needs to be addressed prior to conducting a system acceptance test. These items include areas related to system integration and software complications. Boeing is currently working to address these issues.

Question 7.: The DHS testimony states that the Science and Technology Directorate will help reduce SBI*net*'s programmatic risk by providing cutting edge technologies. Will DHS Science and Technology coordinate directly with Boeing in its efforts? If not, who at the Department will be responsible for looking at the technology recommendations first and then refer them to Boeing?

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Response: No, the S&T Directorate will not coordinate directly with Boeing. Instead, the Directorate will work directly with the U.S. Customs and Border Protection (CBP) SBI*net* Program Office, which will review technology recommendations provided by the S&T Directorate and then refer them, as appropriate, to Boeing. The S&T Directorate's goal is to reduce SBI*net* programmatic risk by providing cutting-edge technologies that have been thoroughly researched, developed, tested, and evaluated for the system-of-systems border solution.

Question 8.: How many agents are participating in Project 28? Is this an increase or a decrease from the normal agent allocation for this area?

Response: There are approximately 750 Border Patrol Agents and CBP Officers assigned to the area Project 28 covers. Project 28 will not impact the number of CBP personnel assigned to this geographic location.

Question 9.: How has the Department of Homeland Security used its waiver authority to expedite placement of infrastructure along the border? What steps has DHS taken to mitigate the potential negative impact of fencing on the environment and migrating animals?

Response: The Secretary's has used his waiver authority twice to date—once, with respect to the San Diego Border Infrastructure System and secondly, with respect to construction within the Barry M. Goldwater Range. Each waiver was published in the Federal Register. CBP employs a number of best management practices to minimize potential environmental impacts, such as soil erosion control, solid and hazardous waste prevention, water resources, and biological resources, to include the protection of local wildlife. The goal of DHS is to make investments that effectively balance border security with the diverse needs of the community and environment in a selected area.

Question 10.: The Department plans to build 7 miles of fencing in Sasabe by the end of 2007 but this does not appear to be part of Project 28 and it is not clear if there is overlap in the location of the two projects.

How much fencing and vehicle barriers are included in Project 28? How much in all of SBI*net*? How did the Department determine what amount was appropriate?

Response: DHS plans to build a total of 370 miles of primary fence along the Southwest border by the end of calendar year (CY) 2008, including a total of 145 miles of primary fence by the end of 2007. In addition, DHS will deploy at least 200 miles of vehicle barriers and 70 communications, camera and radar towers by the end of CY 2008. As of June 2007, CBP has deployed over 130 miles of primary fence, over 112 miles of vehicle barriers, new patrol roads and a variety of technology along the Southwest border.

To determine the appropriate amount of fencing, SBI's methodology considered the cost and effectiveness of technology and tactical infrastructure. In regards to situational awareness, a comprehensive analysis is conducted that looks at all possible solutions and determines the best solutions to implement. There are currently plans for 7 miles of fence and 20 miles of vehicle barriers in Project 28.

Question 11.: Statistics show, and you reinforce this in your testimony, that while illegal alien apprehensions are down this year, narcotics seizures are up. The street price of cocaine is falling, which means that there is more on the street. Briefings from JIATF South and the Coast Guard show that smugglers are moving drugs in small boats up the West Coast. Is SBI*net* planning to address this gap? What are the current capabilities?

Response: The Department has assets that support maritime drug interdiction operations, including those in coastal waters. Specifically, CBP's Office of Air and Marine (A&M) has assets that support drug interdiction operations along the west coast. CBP's maritime assets include highly capable Midnight Express boats that are ideally configured for small boat drug interdiction. In addition, the Coast Guard operates a variety of small and large maritime assets that support maritime assets that support counterdrug efforts in US littoral waters. Besides CPB and Coast Guard maritime assets, CBP and the Coast Guard have air assets that support counterdrug operations, including those along the west coast. DHS air assets include a variety of fixed and rotary wing aircraft including highly capable P–3's that operate out of Corpus Christi, TX, and are ideally configured to address maritime smuggling.

In addition to the assets mentioned above, the Department also supports Joint Interagency Task Force South maritime drug interdiction operations in the Eastern Pacific area. DHS drug intelligence, personnel and maritime and air platforms support interagency drug interdiction operations along the west coast of the United

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States. While not part of SBI*net*, these operations complement efforts to secure the entry of illegal drugs into the United States.

Question 12.: What role does the Tethered Aerostat Radar System (TARS) place in securing the border and especially in the counter mission? Is SBI*net* considering these existing 5 balloons and do you have a recommendation on whether the 9 or so balloons that used to cover the transit zone but are now in cold storage should be restarted? Is there another capability that can take the place of TARs and provide this radar coverage along the border and coasts?

Response: Yes, TARS is an effective method that contributes to border security efforts. The existing TARS capability provides the AMOC (Air and Marine Operations Center) the ability to detect aircraft, including small aircraft that enter the radar coverage area of the aerostats. The TARS array of aerostats provides a unique look-down detection capability for aircraft that would probably fly undetected by other radar systems due to "terrain masking." The scope of SBI*net* is focused on land crossings. CBP continues to look for alternative ways to address the issue of low-flying aircraft.

QUESTIONS SUBMITTED BY HON. MARK E. SOUDER FOR JERRY W. MCELWEE
RESPONSES

Question 1.: What is the projected timeline for implementation of SBI*net*?

Response: Current DHS plans call for completion of the Southern Border by 2013.

Question 2.: How will Boeing measure the success of SBI*net*?

Response: Success will be indicated by (1) increased ability to detect illegal entries when they occur; (2) increased ability to identify what is detected by the sensors; (3) increased ability to classify the threat posed by the detected crossers; and (4) increased ability of the Border Patrol to apprehend and resolve illegal crossers identified by the system. Metrics will be kept on all the activities.

Question 3.: What is the sustainability of Project 28? What will this technology look like in 20 years? What is the projected life cycle of the major components of Project 28, including the redeployable sensor towers?

Response: P–28 is readily sustained. The SBI*net* team selected components for the redeployable towers that are among the most reliable and effective technology available. The propane-fueled electrical power source minimizes potential pollution issues and allows extended operation without frequent re-supply or services.

Predicting the future of surveillance and command and control technology that is based primarily on the progression of computer processors is extremely difficult, even for the next five years. That said, Moore's Law for advances in computer processor performance predicts 10 to 12 new generations of computers within the next 20-year span. Each generation will significantly increase the ability to extract increasing amounts of information from traditional sensor systems. For example, cameras will collect more detailed information about the items or subjects upon which they focus. That data in turn can be compared and contrasted with increasingly greater amounts of data to first detect, then identify and classify those attempting to enter the country illegally. Additionally, small seemingly unrelated events or activities will be more readily correlated with other fragments of data to build a composite view of reality based on millions of pieces of data collected over time from a variety of sources.

The projected life cycle of each component is different and some have not been predicted. The expected Mean Time between Failure (MTBF) and expected lifespan of several major components are listed below:

Component	MTBF	Predicted Cost-Effective Lifespan
Power Generator	1,000 hrs	5 Years
LORROS Camera	4,000 hrs	5 Years
MSTAR Radar	14,000 hrs	10 Years
Redeployable Tower	5,000 hrs	20 Years

P–28 redeployable towers are going to be replaced with long-term, fixed towers in the Tucson Sector. The redeployable assets that constitute P–28 will be used to

increase operational availability of other sectors, in the event that fixed assets are inoperable for a period of time due to vandalism, etc.

Question 4.: What are the expected maintenance costs of the redeployable sensor towers, and the life cycle requirements?

Response: The annual sustainment costs (fuel, repair parts, routine services, etc.) for the redeployable sensor towers (assuming they operate 24/7/365) are expected to be approximately 13 to 18% of the total acquisition cost per year. Obviously, as they are replaced with fixed surveillance assets, the sustainment costs will decline.

At the system level, SBI*net* sustainment costs are expected to decline over time as the power efficiency of major components increases, when more reliable technology becomes available; and, as advancements in surveillance technology reduce the overall quantities of equipment necessary to provide continuous coverage of large areas.

Question 5.: Please describe the process that was used to test the long-term viability of the equipment being deployed to the Southwest Border under SBI*net*.

Response: The primary sensors, LORROS camera and MSTAR radar were selected on the basis of their proven field record in demanding environments. The LORROS camera system has been widely used in arid desert, marine, cold, humid, and tropical environments. The MSTAR ground surveillance radar is a proven man-portable design with recent applications in Iraq, Afghanistan, Canada and other challenging environments. Both items are among the most reliable and certainly most capable systems available on the market today.

a. Can it withstand the desert climate and other inclement weather?

Response: The sensor hardware selected (cameras and radars) that is located in exposed environments has a demonstrated capability to operate in the desert environment. Support equipment (computers, routers, etc,) that is not capable of surviving in an uncontrolled environment has been placed in environmental enclosures that have redundant cooling. The environmental enclosures also provide protection from sand/dust and rain exposure.

b. Who will be responsible for checking the performance of each tower?

Response: The Boeing SBI Test and Evaluation organization is performing a P–28 System Acceptance Test (SAT) prior to the declaration of the Initial Operational Capability (IOC). The SAT test plan requires that all subsystem functionality be fully tested in accordance with the P–28 System Verification Test Procedure (D333–100006–1). The subsystems include nine (9) towers, a Common Operating Picture (COP), a mobile COP, a Forward Operating Base (FOB), and a communications systems.

The tower functionality that is being tested is as follows:

- Tower pedestal control—elevation and azimuth.
- LORROS camera modes—black-and-white, color, infrared. Camera range and focus.
- Security camera range and focus.
- Loud-hailer/annunciator.
- Laser range finder range testing.
- MSTAR radar detection and range testing.
- MSTAR to LORROS camera automated slew-to-click testing.µ
- All subsystem functionality is demonstrated by using the network communications systems and COP system.

c. Who will respond if/when a sensor fails? How quickly will this occur?

Response: Following delivery of this equipment to the government, maintenance, response and equipment restoration/repair will be performed by a combination of Boeing and third-party vendors. The selection of specific vendors will be based on a variety of factors, including geographic area, small business considerations, warranty status, and other factors. Boeing and CBP have established an Integrated Logistics Support Management Team as a government-industry partnership, which includes a 24/7/365 Call Center. All failures and calls for assistance will be managed through the Call Center. The target response time for all calls for maintenance or repair by the maintenance provider is 30 minutes with an on-site response goal of 2 hours.

Question 6.: What is the methodology being used to determine which technologies and infrastructure will be placed in which locations?

Response: The locations for sensing technology have been determined through detailed analytical assessment of the candidate lines-of sight and fields of regard. Promising sites were inspected by field teams for physical suitability. The site as-

sessments have been coordinated with CBP personnel to confirm the tactical value of the sites chosen relative to the expected incursions.

Question 7.: How much fencing and vehicle barrier are included in Project 28?

Response: None.

Question 8.: Through previous trips to the border, the Committee has learned that technology and geography have limited the Border Patrol's ability to encrypt transmissions, which means they generally talk on open radio channels, allowing anyone with a scanner, including smugglers, to listen in. What is being done as part of SBI*net* to address this serious security and agent safety issue?

Response: SBI*net* enhances Border Patrol communications through two means. The first provides improved situational awareness to Border Patrol agents via a Common Operating Picture (COP). The COP, which provides operational, situational, intelligence and investigative information and alerts agents to illegal entries into the United States, is transmitted to laptops in agent vehicles using secure wireless networks. Towers within Project 28 are equipped with wireless data access points. These provide non-line-of-sight Worldwide Interoperability for Microwave Access (WiMax) transmission of COP data. SBI*net* communications employ encryption algorithms that are compliant with the Federal Information Processing Standards (FIPS 140–2, FIPS 197). Additionally, some parts of the SBI*net* system employ encrypted channels and data streams which are, in turn, carried inside of encrypted transmissions systems.

The second communications enhancement for agents within the Project 28 area is satellite phones. These phones do not require line-of-site or cell phone towers to ensure connectivity, and therefore provide more consistent coverage of voice communications. Additionally, they do not leverage standard Radio Frequencies which can be intercepted by scanners.

Voice-over-satellite communications and encrypted COP communications enable information sharing and coordination between CBP's three primary operational elements: the Office of Border Patrol, the Office of Field Operations and the Office of Air and Marine Operations, while mitigating security and agent safety risks.

Question 9.: In your testimony, you describe the systems engineering and design approach that your company has developed over time and used successfully on other large, complex projects. Please discuss another project that Boeing has managed, and compare it to the operational challenges of SBI*net*, given the complexity of the situation on the Southwest Border.

Response: Ground-Based Midcourse Defense (GMD) is an example of Boeing using its systems engineering and design approach to execute a very technically complex and demanding program. For GMD, which is a large-scale, anti-ballistic missile system for defending the country against nuclear ICBM missiles, Boeing first established a robust set of requirements for the system, decomposed them to lower-level components, and conducted design reviews to assess the correct design response to those requirements. As in the SBI*net* case, those components that were "off the shelf" and could be adapted to the new application were integrated into the design. For other components, such as the interceptor booster and "kill vehicle," Boeing tasked major suppliers to develop and test those components under Boeing's technical management oversight and direction. Each element, such as the command and control system, interceptor, radars, EO/IR sensors, and communications elements, which in many cases are systems in their own right, was integrated together into a "System of Systems" engineering solution. Verification and validation of the system is done through live flight tests where the system has demonstrated success by "hitting a bullet with a bullet" many miles out in space. This level of success with a system as complex as GMD could only be achieved by applying a proven systems engineering process. This same process is being used to design, build and field a complex SBI*net* system. Requirements have been established, design solutions are being completed, and test plans being formulated.

Question 10.: In your testimony, you describe the redeployable sensor towers and associated equipment as "highly reliable." What assurances can you give this committee, and the American people, that we will not see another case of poorly operated, poorly maintained technology being deployed at the border? How well will this equipment perform after 5 years in 110-degree desert climate?

Response: The P–28 COTS equipment selected was designed to operate within the environment where it will be deployed. The CBP/Boeing's Integrated Logistics Support Management Team approach defines a process that normalizes mainte-

nance, repair, and technology insertion and obsolescence management to sustain improved reliability, maintainability and availability on all systems. By combining CBP and Boeing ILS capabilities, SBI*net* will have 24/7/365 monitoring of system performance along with a maintenance infrastructure to sustain the CBP mission

Question 11.: On November 15, 2006, in your testimony before the Subcommittee on Management, Integration, and Oversight in the 109th Congress, you assured Members that Boeing had the following items in its SBI "toolkit": sensors, communications systems, information technology, tactical infrastructure, including roads, barriers, and fencing, and command and control capabilities. What has changed since November 2006? What reason can you offer for removing "roads, barriers, and fencing" from the toolkit used in Project 28?

Response: Roads, barriers, and fencing are all components in the SBI*net* design toolkit and are essential elements of the total SBI*net* solution. P–28 is a fixed-price, limited proof-of-concept pilot project. We were allotted a maximum of $20M to produce a project designed to demonstrate our capabilities. We selected a "Virtual Fence" approach, coupled with the situational awareness of a Common Operational Picture as having the best overall value within the given cost parameters. In designing the P-28 solution, we emphasized the use of elements with high potential to help ourselves and CBP gain valuable insights and information related to our approach. We did not view the costs and construction periods associated with roads, fences and barriers to be compatible with the objectives of this pilot project in even a limited implementation.

As we move forward, we will employ roads, fences and barriers wherever they are needed to ensure either deterrence or successful law enforcement resolution of an illegal crossing. Our technical solutions will include surveillance of these infrastructure components in order to both secure them and to ensure appropriate and timely response to attempts to breach them.

Question 12.: If other equipment is needed to improve the SBI mission, Boeing has assured this committee it has other tools in mind and can modify the plan. To your knowledge, what other equipment is readily available and potentially valuable that is not a component of Project 28?

Response: Products used in securing the border are under constant improvement through the vendor's internal research and development programs. Among the new developments that will be available this year are WiMax 802.16-compatible components for wireless data transfers that were not readily available at the time Boeing put together the original proposal. We anticipate other technologies will be matured sufficiently for use in SBI*net*, such as non-intrusive lie detection, image enhancements for long-range cameras, license plate readers, portable biometric readers, false document identification, and precision imaging digital signal processing for radars, just to name a few.

Boeing and CBP are instituting a technology-integrated product team that will continue to assess the product developments in industry, in our national labs and through the Science and Technology Directorate at DHS. Those improvements that dramatically increase performance and reliability at reduced cost will become candidates for updates and improvements to the SBI*net* Toolbox.

Question 13: I understand that the sensor towers in Project 28 are using satellite imagery to track movement of illegal aliens. I am also aware that for future SBI missions, Boeing plans to use existing ISIS towers, which use microwave-transmission technologies instead. Please describe the difference between satellite and microwave-transmission, and the benefits and risks associated with both technologies on the border.

Response: Satellite imagery is not used to track movement of illegal aliens in the P–28 solution. Satellite imagery is used to provide the appropriate scenario background for the screens that display and track indications of illegal aliens that are detected by a variety of sensors, including radar, seismic, acoustic, infrared, and others. The P–28 solution employs mobile/relocatable sensor towers that can be repositioned to alternative locations on the border as required. The mobility aspect of these towers requires an equally mobile communications means. Satellite communications is the media of choice for this requirement.

Once the locations are proven to be effective vantage points from which to detect illegal activities, the intent is to replace them with permanent, fixed towers. These permanent towers, as in the case of ISIS towers, will employ microwave communications to carry the sensor, video, and other signals back to the Station and Sector Headquarters for processing and monitoring. The microwave systems are less costly.

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Question 14.: One aspect of Project 28 is using contractors to provide transportation services to move apprehended aliens from the field to the detention center. How much do you estimate that this will cost?

Response: The use of contractors to provide transportation services is not part of the P–28 Task Order. It will be part of the follow-on operational and maintenance contract.

We did include three Rapid Response Transports (RRTs) to be used on a case-by-case basis, where access may be more difficult. However, the operators for these vehicles will be government personnel.

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