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Holding  
Honda  
Hoyer  
Hudson  
Huelskamp  
Huffman  
Huizenga (MI)  
Hultgren  
Hunter  
Hurd (TX)  
Issa  
Jenkins (KS)  
Jenkins (WV)  
Johnson (GA)  
Johnson (OH)  
Johnson, E. B.  
Johnson, Sam  
Jolly  
Jordan  
Joyce  
Kaptur  
Katko  
Keating  
Kelly (IL)  
Kelly (MS)  
Kennedy  
Kildee  
Kilmer  
Kind  
King (IA)  
Kinzinger (IL)  
Kline  
Knight  
Kuster  
Labrador  
LaHood  
LaMalfa  
Lamborn  
Lance  
Langevin  
Larsen (WA)  
Larson (CT)  
Latta  
Lawrence  
Lee  
Levin  
Lewis  
LoBiondo  
Loebsock  
Lofgren  
Long  
Loudermilk  
Love  
Lowenthal  
Lowey  
Lucas  
Luetkemeyer  
Lujan Grisham (NM)  
Luján, Ben Ray (NM)  
Lummis  
Lynch  
MacArthur  
Marino  
Massie  
McCarthy  
McClintock  
McCollum  
McDermott  
McHenry  
McKinley

McMorris Rodgers  
McNerney  
McSally  
Meadows  
Meehan  
Messer  
Mica  
Miller (FL)  
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Mooney (WV)  
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Rouzer  
Roybal-Allard  
Royce  
Ruiz  
Ruppersberger  
Russell  
Salmon  
Sánchez, Linda T.  
Sanford  
Sarbanes  
Scalise

Schakowsky  
Schweikert  
Scott (VA)  
Scott, Austin  
Scott, David  
Sensenbrenner  
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Sessions  
Sewell (AL)  
Sherman  
Shuster  
Sinema  
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Veasey  
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Visclosky  
Wagner  
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Schultz  
Waters, Maxine  
Watson Coleman  
Weber (TX)  
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Williams  
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Wilson (SC)  
Wittman  
Womack  
Woodall  
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Yoder  
Yoho  
Young (AK)  
Young (IA)  
Young (IN)  
Zeldin  
Zinke

Speier  
Tonko  
Velázquez  
Walters, Mimi  
Webster (FL)  
Westmoreland

□ 1900

So (two-thirds being in the affirmative) the rules were suspended and the bill was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

## PERSONAL EXPLANATION

Mr. MCCAUL. Mr. Speaker, on September 26, 2016, I missed the voting session. If present, I would have voted as follows: "Yes"—H.R. 3537—Dangerous Synthetic Drug Control Act of 2016. "Yes"—H.R. 5392—No Veterans Crisis Line Call Should Go Unanswered Act. I intended to vote "yes" on both of these bills.

## PERSONAL EXPLANATION

Ms. MATSUI. Mr. Speaker, I was not present during votes on September 26, 2016. Had I been present, I would have voted "yes" on H.R. 5392 and "yes" on H.R. 3537.

## ANNOUNCEMENT BY THE SPEAKER PRO TEMPORE

The SPEAKER pro tempore (Mr. JENKINS of West Virginia). Pursuant to clause 8 of rule XX, the Chair will postpone further proceedings today on additional motions to suspend the rules on which a recorded vote or the yeas and nays are ordered, or on which the vote incurs objection under clause 6 of rule XX.

Any record votes on postponed questions will be taken later.

## COAST GUARD AND MARITIME TRANSPORTATION AMENDMENTS ACT OF 2016

Mr. HUNTER. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 5978) to amend title 14, United States Code, to clarify the functions of the Chief Acquisition Officer of the Coast Guard, and for other purposes, as amended.

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 5978

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

## SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Coast Guard and Maritime Transportation Amendments Act of 2016".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.

## TITLE I—COAST GUARD, NAVIGATION, AND SHIPPING

Sec. 101. Coast Guard major acquisition programs.

Sec. 102. Prospective payment of funds necessary to provide medical care for the Coast Guard.

Sec. 103. Oil spill disbursements auditing and report.

Sec. 104. Deadline for compliance with alternate safety compliance program.

Sec. 105. Coast Guard pier in Wilmington, North Carolina.

Sec. 106. Backup global positioning system.  
Sec. 107. Arctic alternative planning criteria.

## TITLE II—OTHER MATTERS

Sec. 201. Vessel "Apollonia".

Sec. 202. Reimbursement for non-Federal construction costs of certain aids to navigation.

Sec. 203. Corrections to provisions enacted by Coast Guard Authorization Acts.

## TITLE I—COAST GUARD, NAVIGATION, AND SHIPPING

## SEC. 101. COAST GUARD MAJOR ACQUISITION PROGRAMS.

(a) FUNCTIONS OF CHIEF ACQUISITION OFFICER.—Section 56(c) of title 14, United States Code, is amended by striking "and" after the semicolon at the end of paragraph (8), striking the period at the end of paragraph (9) and inserting ";; and", and adding at the end the following:

"(10)(A) keeping the Commandant informed of the progress of major acquisition programs (as that term is defined in section 581);

"(B) informing the Commandant on a continuing basis of any developments on such programs that may require new or revisited trade-offs among cost, schedule, technical feasibility, and performance, including—

"(i) significant cost growth or schedule slippage; and

"(ii) requirements creep (as that term is defined in section 2547(c)(1) of title 10); and

"(C) ensuring that the views of the Commandant regarding such programs on cost, schedule, technical feasibility, and performance trade-offs are strongly considered by program managers and program executive officers in all phases of the acquisition process."

(b) CUSTOMER SERVICE MISSION OF DIRECTORATE.—

(1) IN GENERAL.—Chapter 15 of title 14, United States Code, is amended—

(A) in section 561(b)—

(i) in paragraph (1), by striking ";; and" and inserting a semicolon;

(ii) in paragraph (2), by striking the period and inserting ";; and"; and

(iii) by adding at the end the following:

"(3) to meet the needs of customers of major acquisition programs in the most cost-effective manner practicable.";

(B) in section 562, by repealing subsection (b) and redesignating subsections (c) through (g) as subsections (b) through (e), respectively;

(C) in section 563, by striking "Not later than 180 days after the date of enactment of the Coast Guard Authorization Act of 2010, the Commandant shall commence implementation of" and inserting "The Commandant shall maintain";

(D) by adding at the end of section 564 the following:

"(c) ACQUISITION OF UNMANNED AERIAL SYSTEMS.—

"(1) IN GENERAL.—During any fiscal year for which funds are appropriated for the design or construction of the Offshore Patrol Cutter, the Commandant—

"(A) may not award a contract for design of an unmanned aerial system for use by the Coast Guard; and

"(B) may acquire an unmanned aerial system only—

"(i) if such a system has been acquired by, or has been used by, the Department of Defense or the department in which the Coast Guard is operating, or a component thereof, before the date on which the Commandant acquires the system; and

"(ii) through an agreement with such a department or component, unless the unmanned aerial system can be obtained at less cost through independent contract action.

## NOT VOTING—74

Beatty  
Becerra  
Blackburn  
Buchanan  
Butterfield  
Carney  
Carter (GA)  
Carter (TX)  
Clarke (NY)  
Cohen  
Collins (NY)  
Costello (PA)  
Crenshaw  
Crowley  
DeSantis  
Duckworth  
Ellison  
Ellmers (NC)  
Engel  
Farr  
Fincher  
Fleming  
Forbes  
Fudge  
Gowdy  
Grayson  
Gutiérrez  
Heck (NV)  
Hinojosa  
Hurt (VA)  
Israel  
Jackson Lee  
Jeffries  
Jones  
Kelly (PA)  
King (NY)  
Kirkpatrick  
Lieu, Ted  
Lipinski  
Maloney  
Carolyn  
Maloney, Sean  
Marchant  
Matsui  
McCauley  
McGovern  
Meeks  
Meng  
Miller (MI)  
Mullin  
Nadler  
Newhouse  
Pittenger  
Poe (TX)  
Price (NC)  
Price, Tom  
Rangel  
Jones  
Rice (NY)  
Richmond  
Roe (TN)  
Rohrabacher  
Roskam  
Rush  
Ryan (OH)  
Sanchez, Loretta  
Schiff  
Schrader  
Shimkus  
Simpson

## “(2) LIMITATIONS ON APPLICATION.—

“(A) SMALL UNMANNED AERIAL SYSTEMS.—The limitations in paragraph (1)(B) do not apply to any small unmanned aerial system that consists of—

“(i) an unmanned aircraft weighing less than 55 pounds on takeoff, including all components and equipment on board or otherwise attached to the aircraft; and

“(ii) associated elements (including communication links and the components that control such aircraft) that are required for the safe and efficient operation of such aircraft.

“(B) PREVIOUSLY FUNDED SYSTEMS.—The limitations in paragraph (1) do not apply to the design or acquisition of an unmanned aerial system for which funds for research, development, test, and evaluation have been received from the Department of Defense or the department in which the Coast Guard is operating.”;

(E) in subchapter II, by adding at the end the following:

**“§ 578. Role of Vice Commandant in major acquisition programs**

“(The Vice Commandant—

“(1) shall represent the customer of a major acquisition program with regard to trade-offs made among cost, schedule, technical feasibility, and performance with respect to such program; and

“(2) shall advise the Commandant in decisions regarding the balancing of resources against priorities, and associated trade-offs referred to in paragraph (1), on behalf of the customer of a major acquisition program.

**“§ 579. Extension of major acquisition program contracts**

“(a) IN GENERAL.—Notwithstanding section 564(a)(2) of this title and section 2304 of title 10, and subject to subsections (b) and (c) of this section, the Secretary may acquire additional units procured under a Coast Guard major acquisition program contract, by extension of such contract without competition, if the Director of the Cost Analysis Division of the Department of Homeland Security determines that the costs that would be saved through award of a new contract in accordance with such sections would not exceed the costs of such an award.

“(b) LIMITATION ON NUMBER OF ADDITIONAL UNITS.—The number of additional units acquired under a contract extension under this section may not exceed the number of additional units for which such determination is made.

“(c) DETERMINATION OF COSTS UPON REQUEST.—The Director of the Cost Analysis Division of the Department of Homeland Security shall, at the request of the Secretary, determine for purposes of this section—

“(1) the costs that would be saved through award of a new major acquisition program contract in accordance with section 564(a)(2) for the acquisition of a number of additional units specified by the Secretary; and

“(2) the costs of such award, including the costs that would be incurred due to acquisition schedule delays and asset design changes associated with such award.

“(d) NUMBER OF EXTENSIONS.—A contract may be extended under this section more than once.”; and

(F) in section 581—

(i) by redesignating paragraphs (7) through (10) as paragraphs (9) through (12), respectively, and by redesignating paragraphs (3) through (6) as paragraphs (4) through (7), respectively;

(ii) by inserting after paragraph (2) the following:

“(3) CUSTOMER OF A MAJOR ACQUISITION PROGRAM.—The term ‘customer of a major acquisition program’ means the operating field unit of the Coast Guard that will field the

system or systems acquired under a major acquisition program.”; and

(iii) by inserting after paragraph (7), as so redesignated, the following:

“(8) MAJOR ACQUISITION PROGRAM.—The term ‘major acquisition program’ means an ongoing acquisition undertaken by the Coast Guard with a life-cycle cost estimate greater than or equal to \$300,000,000.”.

(2) CLERICAL AMENDMENT.—The analysis at the beginning of such chapter is amended by adding at the end of the items relating to subchapter II the following:

“578. Role of Vice Commandant in major acquisition programs.

“579. Extension of major acquisition program contracts.”.

(c) REVIEW REQUIRED.—

(1) REQUIREMENT.—The Commandant of the Coast Guard shall conduct a review of—

(A) the authorities provided to the Commandant in chapter 15 of title 14, United States Code, and other relevant statutes and regulations related to Coast Guard acquisitions, including developing recommendations to ensure that the Commandant plays an appropriate role in the development of requirements, acquisition processes, and the associated budget practices;

(B) implementation of the strategy prepared in accordance with section 562(b)(2) of title 14, United States Code, as in effect before the enactment of this Act; and

(C) acquisition policies, directives, and regulations of the Coast Guard to ensure such policies, directives, and regulations establish a customer-oriented acquisition system.

(2) REPORT.—Not later than March 1, 2017, the Commandant shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report containing, at a minimum, the following:

(A) The recommendations developed by the Commandant under paragraph (1) and other results of the review conducted under such paragraph.

(B) The actions the Commandant is taking, if any, within the Commandant’s existing authority to implement such recommendations.

(3) MODIFICATION OF POLICIES, DIRECTIVES, AND REGULATIONS.—Not later than one year after the date of the enactment of this Act, the Commandant of the Coast Guard shall modify the acquisition policies, directives, and regulations of the Coast Guard as necessary to ensure the development and implementation of a customer-oriented acquisition system, pursuant to the review under paragraph (1)(C).

(d) ANALYSIS OF USING MULTIYEAR CONTRACTING.—

(1) IN GENERAL.—No later than one year after the date of the enactment of this Act, the Secretary of the department in which the Coast Guard is operating shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate an analysis of the use of multiyear contracting, including procurement authority provided under section 2306b of title 10, United States Code, authority similar to that granted to the Navy under section 121(b) of the National Defense Authorization Act for Fiscal Year 1998 (Public Law 105-85; 111 Stat. 1648) and section 150 of the Continuing Appropriations Act, 2011 (Public Law 111-242; 124 Stat. 3519), and block buy authority to acquire Fast Response Cutters, Offshore Patrol Cutters, heavy polar icebreakers, and medium polar icebreakers.

(2) VESSELS TO BE ANALYZED.—Under paragraph (1) the Secretary shall analyze—

(A) the acquisition of at least 5 Fast Response Cutters, beginning with Hull 43;

(B) the acquisition of at least 5 Offshore Patrol Cutters, beginning with Hull 5;

(C) the acquisition of at least 3 heavy polar icebreakers; and

(D) the acquisition of at least 3 medium polar icebreakers.

(3) CONTENTS.—The analysis under paragraph (1) shall include the costs and benefits of using multiyear contracting, the impact of multiyear contracting on delivery timelines, and whether the acquisitions examined would meet the tests for the use of multiyear procurement authorities.

**SEC. 102. PROSPECTIVE PAYMENT OF FUNDS NECESSARY TO PROVIDE MEDICAL CARE FOR THE COAST GUARD.**

(a) IN GENERAL.—Chapter 13 of title 14, United States Code, is amended by adding at the end the following:

**“§ 520. Prospective payment of funds necessary to provide medical care**

“(a) PROSPECTIVE PAYMENT REQUIRED.—In lieu of the reimbursement required under section 1085 of title 10, for periods when the Coast Guard is not operating as a service in the Navy the Secretary of the department in which the Coast Guard is operating shall make a prospective payment to the Secretary of Defense of an amount that represents the actuarial valuation of treatment or care—

“(1) that the Department of Defense provides to members of the Coast Guard, former members of the Coast Guard, and dependents of such members and former members (other than former members and dependents of former members who are a Medicare-eligible beneficiary or for whom the payment for treatment or care is made from the Medicare-Eligible Retiree Health Care Fund) at facilities under the jurisdiction of the Department of Defense or a military department; and

“(2) for which a reimbursement would otherwise be made under such section 1085.

“(b) AMOUNT.—The amount of the prospective payment under subsection (a) shall be—

“(1) in the case of treatment or care to be provided to members of the Coast Guard and their dependents, derived from amounts appropriated for the operating expenses of the Coast Guard;

“(2) in the case of treatment or care to be provided former members of the Coast Guard and their dependents, derived from amounts appropriated for retired pay;

“(3) determined under procedures established by the Secretary of Defense;

“(4) paid during the fiscal year in which treatment or care is provided; and

“(5) subject to adjustment or reconciliation as the Secretary of the department in which the Coast Guard is operating when it is not operating as a service in the Navy and the Secretary of Defense determine appropriate during or promptly after such fiscal year in cases in which the prospective payment is determined excessive or insufficient based on the services actually provided.

“(c) NO PROSPECTIVE PAYMENT WHEN SERVICE IN NAVY.—No prospective payment shall be made under this section for any period during which the Coast Guard operates as a service in the Navy.

“(d) RELATIONSHIP TO TRICARE.—This section shall not be construed to require a payment for, or the prospective payment of an amount that represents the value of, treatment or care provided under any TRICARE program.”.

(b) CLERICAL AMENDMENT.—The analysis for chapter 13 of title 14, United States Code, is amended by adding at the end the following:

“520. Prospective payment of funds necessary to provide medical care.”.

(c) REPEAL.—Section 217 of the Coast Guard Authorization Act of 2015 (Public Law 114-120), and the item relating to that section in the table of contents in section 2 of such Act, are repealed.

SEC. 103. OIL SPILL DISBURSEMENTS AUDITING AND REPORT.

Section 1012 of the Oil Pollution Act of 1990 (33 U.S.C. 2712) is amended—

- (1) by repealing subsection (g);
(2) in subsection (1)(1), by striking "Within one year after the date of enactment of the Coast Guard Authorization Act of 2010, and annually thereafter," and inserting "Each year, on the date on which the President submits to Congress a budget under section 1105 of title 31, United States Code,"; and

(3) by amending subsection (1)(2) to read as follows:

"(2) CONTENTS.—The report shall include—
(A) a list of each disbursement of \$500,000 or more from the Fund in the preceding fiscal year, including disbursements to Federal agencies;

(B) a list of each disbursement of \$500,000 or more from the Fund in the fiscal year preceding the preceding fiscal year that has not been reimbursed by a responsible party; and

(C) a description of how each use of the Fund described in subparagraph (A) or (B) meets the requirements of subsection (a)."

SEC. 104. DEADLINE FOR COMPLIANCE WITH ALTERNATE SAFETY COMPLIANCE PROGRAM.

Section 4503(d)(1) of title 46, United States Code, is amended by striking "After January 1, 2020," and all that follows through "the Secretary," and inserting "For each of fishing vessels, fish processing vessels, and fish tender vessels, after the later of January 1, 2020, or the end of the 3-year period beginning on the date on which the Secretary prescribes an alternate safety compliance program developed in cooperation with the commercial fishing industry for such a vessel, such a vessel shall comply with the applicable alternate safety compliance program".

SEC. 105. COAST GUARD PIER IN WILMINGTON, NORTH CAROLINA.

(a) IN GENERAL.—The Secretary of the department in which the Coast Guard is operating shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate by not later than 90 days after the date of the enactment of this Act a report on—

- (1) short-term plans for berthing the USCGC Diligence in Wilmington, North Carolina, while the Coast Guard pier in Wilmington is being repaired; and
(2) long-term plans for repairing and maintaining such pier so that it can be used to berth such vessel and any future Coast Guard cutter stationed in Wilmington.

(b) COST ESTIMATES.—The report shall include cost estimates and timeframes for such short- and long-term plans.

SEC. 106. BACKUP GLOBAL POSITIONING SYSTEM.

(a) SHORT TITLE.—This section may be cited as the "National Positioning, Navigation, and Timing Resilience and Security Act of 2016".

(b) IN GENERAL.—Subtitle VIII of title 46, United States Code, is amended by adding at the end the following:

"CHAPTER 807—POSITION, NAVIGATION, AND TIMING

"Sec.
"80701. Land-based complementary and backup system.

"§ 80701. Land-based complementary and backup system

"(a) IN GENERAL.—Subject to the availability of appropriations, the Commandant

of the Coast Guard, in consultation with the Secretary of Transportation, shall provide for the establishment, sustainment, and operation of a reliable land-based enhanced LORAN, or eLORAN, positioning, navigation, and timing system to provide a complement to and backup for the Global Positioning System (in this section referred to as 'GPS') to ensure the availability of uncorrupted and nondegraded positioning, navigation, and timing signals for military and civilian users in the event that GPS signals are corrupted, degraded, unreliable, or otherwise unavailable.

"(b) REQUIREMENTS.—The system established under subsection (a) shall—

- (1) be wireless;
(2) be terrestrial;
(3) provide wide-area coverage;
(4) deliver a precise, high-power 100 kilohertz signal;
(5) be synchronized with coordinated universal time;
(6) be resilient and extremely difficult to disrupt or degrade;

(7) be able to penetrate underground and inside buildings;

(8) be capable of ready deployment to remote locations;

(9) take full advantage of the infrastructure of the existing, unused Government long-range navigation system (commonly known as 'LORAN');

(10) incorporate the expertise of the private sector with respect to development, building, and operation;

(11) work in concert with and complement any other similar positioning, navigation, and timing systems;

(12) be available for use by Federal and non-Federal government agencies for public purposes at no cost; and

(13) incorporate such other requirements determined necessary by the Commandant.

"(c) REQUEST FOR PROPOSALS.—

(1) IN GENERAL.—Not later than three months after the date of enactment of this section, the Commandant, in consultation with the Secretary of Transportation, shall publish a request for proposals to solicit options for—

- (A) eLORAN system architecture; and
(B) business models for the design, installation, operation, and maintenance of an eLORAN system in accordance with this section for a period of no less than 20 years.

(2) CONTRACTING OPTIONS.—The request for proposals shall request options that—

(A) incorporate the expertise of the private sector; and

(B) allow for the expeditious installation, daily operation, and routine maintenance of an eLORAN system architecture.

(d) IMPLEMENTATION DATE.—Not later than 180 days after the date of enactment of this section, the Commandant of the Coast Guard, in consultation with the Secretary of Transportation, shall provide to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan to ensure that the system required under this section is fully operational not later than 3 years after such date of enactment."

(c) CLERICAL AMENDMENT.—The analysis for subtitle VIII of title 46, United States Code, is amended by adding after the item relating to chapter 805 the following:

"807. Position, Navigation, and Timing ..... 80701".

SEC. 107. ARCTIC ALTERNATE PLANNING CRITERIA.

(a) GENERAL.—The Commandant of the Coast Guard may approve alternative planning criteria for an area of lesser geographic extent than the area covered by the Captain

of the Port Zone that includes the Arctic for purposes of complying with sections 155.1035(i) and 155.5035(i) of title 33, Code of Federal Regulations, only if the Commandant—

- (1) publishes the proposed alternative planning criteria in the Federal Register for notice and comment in accordance with section 553 of title 5, United States Code;

(2) completes a study of the economic impacts on the Arctic of such criteria; and

(3) submits a report on such study to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(b) DEFINITION.—For the purposes of this section "Arctic" has the meaning that term has under section 112 of the Arctic Research and Policy Act of 1984 (15 U.S.C. 4111).

TITLE II—OTHER MATTERS

SEC. 201. VESSEL "APOLLONIA".

Notwithstanding any other provision of law, the Secretary of the department in which the Coast Guard is operating shall issue a certificate of documentation with a coastwise endorsement for the vessel Apollonia (United States official number 1266527).

SEC. 202. REIMBURSEMENT FOR NON-FEDERAL CONSTRUCTION COSTS OF CERTAIN AIDS TO NAVIGATION.

(a) IN GENERAL.—Subject to the availability of amounts specifically provided in advance in subsequent appropriations Acts and in accordance with this section, the Commandant of the Coast Guard may reimburse a non-Federal entity for costs incurred by the entity for a covered project.

(b) CONDITIONS.—The Commandant may not provide reimbursement under subsection (a) with respect to a covered project unless—

- (1) the need for the project is a result of the completion of construction with respect to a federally authorized navigation channel;

(2) the Commandant determines, through an appropriate navigation safety analysis, that the project is necessary to ensure safe marine transportation;

(3) the Commandant approves the design of the project to ensure that it meets all applicable Coast Guard aid to navigation standards and requirements;

(4) the non-Federal entity agrees to transfer the project upon completion to the Coast Guard to be operated and maintained by the Coast Guard as a Federal aid to navigation;

(5) the non-Federal entity carries out the project in accordance with the same laws and regulations that would apply to the Coast Guard if the Coast Guard carried out the project, including obtaining all permits required for the project under Federal and State law; and

(6) the Commandant determines that the project satisfies such additional requirements as may be established by the Commandant.

(c) LIMITATIONS.—Reimbursements under subsection (a) may not exceed the following:

- (1) For a single covered project, \$5,000,000.
(2) For all covered projects in a single fiscal year, \$5,000,000.

(d) EXPIRATION.—The authority granted under this section shall expire on the date that is 4 years after the date of enactment of this section.

(e) COVERED PROJECT DEFINED.—In this section, the term "covered project" means a project carried out by a non-Federal entity to construct and establish an aid to navigation that facilitates safe and efficient marine transportation on a federally authorized navigation channel.

SEC. 203. CORRECTIONS TO PROVISIONS ENACTED BY COAST GUARD AUTHORIZATION ACTS.

(a) SHORT TITLE CORRECTION.—The Coast Guard Authorization Act of 2015 (Public Law

114-120) is amended by striking “Coast Guard Authorization Act of 2015” each place it appears (including in quoted material) and inserting “Coast Guard Authorization Act of 2016”.

(b) TITLE 46, UNITED STATES CODE.—

(1) Section 7510 of title 46, United States Code, is amended—

(A) in subsection (c)(1)(D), by striking “engine” and inserting “engineer”; and

(B) in subsection (c)(9), by inserting a period after “App”.

(2) Section 4503(f)(2) of title 46, United States Code, is amended by striking “, that” and inserting “, then”.

(c) PROVISIONS RELATING TO THE PRIBILOF ISLANDS.—

(1) SHORT TITLE CORRECTION.—Section 521 of the Coast Guard Authorization Act of 2016 (Public Law 114-120), as amended by subsection (a), is further amended by striking “2015” and inserting “2016”.

(2) CONFORMING AMENDMENT.—Section 105(e)(1) of the Pribilof Islands Transition Act (16 U.S.C. 1161 note; Public Law 106-562) is amended by striking “2015” and inserting “2016”.

(3) TECHNICAL CORRECTION.—Section 522(b)(2) of the Coast Guard Authorization Act of 2016 (Public Law 114-120), as amended by subsection (a), is further amended by striking “subsection (a)” and inserting “paragraph (1)”.

(d) TITLE 14, UNITED STATES CODE.—

(1) REDISTRIBUTION OF AUTHORIZATIONS OF APPROPRIATIONS.—Section 2702 of title 14, United States Code, is amended—

(A) in paragraph (1)(B), by striking “\$6,981,036,000” and inserting “\$6,986,815,000”; and

(B) in paragraph (3)(B), by striking “\$140,016,000” and inserting “\$134,237,000”.

(2) CLERICAL AMENDMENT.—The analysis at the beginning of part III of title 14, United States Code, is amended by striking the period at the end of the item relating to chapter 29.

(e) NATIONAL ACADEMY OF SCIENCES COST ASSESSMENT.—Section 604(a) of the Coast Guard Authorization Act of 2015 (Public Law 114-120) is amended in the first sentence by striking “365 days after the date of the enactment of this Act,” and inserting “July 15, 2017.”.

(f) CONTINUATION ON ACTIVE DUTY: BOARD.—Section 290(a) of title 14, United States Code, is amended by striking “five officers serving in the grade of vice admiral” and inserting “5 officers (other than the Commandant) serving in the grade of admiral or vice admiral”.

(g) CERTIFICATE OF DOCUMENTATION.—Section 604(b) of the Howard Coble Coast Guard and Maritime Authorization Act of 2014 (Public Law 113-281) is amended by inserting “and fisheries endorsement” after “endorsement”.

(h) EFFECTIVE DATE.—The amendments made by this section shall take effect as if included in the enactment of Public Law 114-120.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from California (Mr. HUNTER) and the gentleman from California (Mr. GARAMENDI) each will control 20 minutes.

The Chair recognizes the gentleman from California (Mr. HUNTER).

GENERAL LEAVE

Mr. HUNTER. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and include extraneous material on H.R. 5978.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from California?

There was no objection.

Mr. HUNTER. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, before we talk about H.R. 5978, I would like to talk about what is not in this bill, which is probably one of the most important things that is my duty, Mr. GARAMENDI's duty, and the Coast Guard's duty to get done—and that is build a polar icebreaker.

Let me tell you why there is no polar icebreaker in this bill: the CBO couldn't get their act together in time to score this one way or another. So, again, this body is held ransom by the Congressional Budget Office not scoring something one way or another, whether it is good to go or not.

The reason it is so important that we have more polar icebreakers and that we included the language that passed the Transportation and Infrastructure Committee last week is this: we do not have 24/7, 365-day polar icebreaking ability for the Arctic. The Russians have over 40 polar icebreakers. That is over 40, some of which are even nuclear. China has got more than 20 now. The United States only has one that is capable of crushing heavy ice, and even that is not available 24/7, 365.

The High Latitude Region Mission Analysis revealed the following Coast Guard missions—defense readiness; ice operations; marine environmental protection; and ports, waterways, and coastal security in the Arctic—were significantly impacted by the gap in this mission performance. It is these gaps and the knowledge that, when the Polar Star reaches the end of its extended service life, we will have a period where the Coast Guard doesn't have a heavy icebreaker at all, let alone what it has now, which is limited capability in the Arctic.

Progress is being made on the acquisition front. Mr. GARAMENDI and I and the Transportation and Infrastructure Committee granted the Coast Guard the capability to do block buys, which is what the Navy has, where you can purchase more than one vessel at a time, which saves billions of dollars.

We also gave them the ability to have lead-time materials, which means they could buy the materials way in advance, which would save tens of millions of dollars. The Coast Guard now has this ability for the FRC and the OPC. We want them to have it for the icebreaker as well, but because of the CBO not scoring this, we weren't able to get the language in.

Here is the specific language that is missing from H.R. 5978:

“The Commandant of the Coast Guard, subject to the availability of amounts specifically provided in advance in subsequent appropriations acts may enter into a contract for the acquisition of no less than three heavy polar icebreakers; and may enter into a contract for acquisition of additional

polar icebreakers, except that the total number of icebreakers acquired under this subsection may not exceed six.”

We are talking about three. Right now we have one.

“Such acquisitions may be made through block buy contracts; may be incrementally funded; may include combined purchases, also known as economic order quantity purchases, of materials and components; and long lead time materials; and may include advance construction funding.”

This is what the Navy has for every ship that they make. This is one reason we created a joint program office between the Coast Guard and the Navy, so that the Navy can push the Coast Guard to do the right thing.

The Coast Guard, let it be said, at the best, has been dragging their feet on acquiring these icebreakers. In fact, they have been pushing back against Congress every inch of the way on this.

In my point of view, this is just like UAVs, or the unmanned aerial vehicles that we have now, Predators and the like. Congress earmarked those because the Air Force did not want pilotless airplanes. Then you would have to get rid of pilots. So the Air Force pushed back day and night in the late nineties and this Congress earmarked Predator drones. That is why we have Predator drones.

The military pushed back against Mine-Resistant Ambush Protected vehicles, also known as MRAP vehicles, which have saved thousands of lives in Iraq and Afghanistan, also pushed by Congress, not the U.S. military. In things like this, Congress is able to see things outside the box, which the Coast Guard cannot in this case.

Mr. Speaker, I reserve the balance of my time.

Mr. GARAMENDI. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, the gentleman from California (Mr. HUNTER) has been an extraordinary leader on trying to address a critical need that the United States has.

The Arctic Ocean is opening. There is not only a Northwest Passage, but there is a Northeast Passage. And this year, just a couple of weeks ago—less than 2 weeks ago—a cruise ship passed through the Northwest Passage without the aid of an icebreaker.

We absolutely have to have a polar icebreaker. As the chairman said, we have one icebreaker today, and it is going to go in for overhaul. When it does, we have no heavy icebreaker either for the North Pole or the South Pole.

We are in trouble. We have to have this. The U.S. Navy has to have it. U.S. security has to have it. And certainly for the commerce in the Arctic, we have to have it. It is a reality. The Arctic Ocean is opening. Commerce will take place. And it will also need military availability in that area.

The legislation that is before us today does not have the proper language in it because of CBO sitting on

their duff and doodling numbers when we know we need this language.

The Senate appropriations bill has a billion dollars for icebreakers, but there is no authorization. Unfortunately, because of our rules here, we had to strip the language out. Later, we hope to put the language back in, but it is not available today.

We have to have this. We go back meeting after meeting, hearing after hearing, year after year, 4 or 5 years that we have been working on this, and then, at the very last moment, CBO can't get its act together. Well, I am sorry, CBO. We ought to waive the rules and get on with what we need to do here, which is to provide the authorization.

The language that the chairman has worked out with me and others would not only provide the authorization, but would do it in such a way as to give us the very best possible financial deal on the construction of icebreakers—that is a block buy—and also authorizing, should the money be available in the future, an additional three lighter icebreakers beyond the three heavy icebreakers.

Not to say we are going to build it all at once, but the authorization is in the law. That then allows the Coast Guard to properly line it up for the very best deal that we can get, maybe one at a time, maybe two or three over a 5- or 10-year period of time. Unfortunately, that language had to be stripped out.

So when the chairman started his explanation of this bill, he did so to call all of our attention to what is not in the bill that should have been in the bill, but for CBO and the rules that we have that require us to have CBO's accounting before we move an authorization.

That is where we are today. Unfortunately, it is where we are. So we are going to move this bill along. We will probably—hopefully—come back before this session is over in the lameduck session and write this thing properly. Unfortunately, today we are not there. There is more to be said about the rest of the bill.

Mr. Speaker, I reserve the balance of my time.

Mr. HUNTER. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, now we are going to get back to H.R. 5978, which is a very good bill in and of itself that, once again, doesn't have the language that we tried to get in.

H.R. 5978, the Coast Guard and Maritime Transportation Amendments Act of 2016, is a catch-all bill that addresses a number of different Coast Guard and maritime transportation issues.

The bill involves improvements to the Coast Guard acquisition authorities to ensure the acquisition program keeps in mind the needs of Coast Guard operating units when acquiring assets. This provision also requires an analysis on the use of multiyear procurement and block buy authorities related to the purchase of Fast Response Cutters,

Offshore Patrol Cutters, and polar icebreakers, but just a report.

We already know from watching the Navy do business for the last few decades that block buys save hundreds of millions of dollars.

At the request of the GAO, the bill repeals a GAO report regarding disbursements from the Oil Spill Liability Trust Fund. The information that was collected by GAO will be incorporated into an existing Coast Guard report.

Due to certain recent weather events impacting a Coast Guard pier in Wilmington, North Carolina, the Coast Guard is required to issue a one-time report detailing short- and long-term plans to replace and maintain the pier. Certain fishing industries will be assisted by the bill, including those that would be affected by a prescribed Alternative Safety Compliance Program to be issued by the Coast Guard by January 1, 2017.

If the service does not issue the program by January 1, 2017, which is hopefully the case, the bill would provide a 3-year window for industry compliance from the date the Coast Guard issues the program.

It has been a long-term interest for many, including Ranking Member GARAMENDI, who has been instrumental—and I would say more instrumental than myself—in preparing the language included in this legislation that there be a reliable land-based positioning, navigation, and timing system to complement, supplement, and back up the Global Positioning System that we now use, the GPS.

We have all seen what the Chinese can do now in knocking down satellites. If our GPS goes out, there is no other way for us to navigate the oceans or to navigate land. The eLoran system does this to ensure the continuous availability of uncorrupted or non-degraded signals for military and civilian users. The bill directed the Coast Guard to establish and maintain such a backup system.

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Aids to navigation are important tools that allow vessels to safely navigate waterways. The bill would allow the Commandant, subject to appropriations, to reimburse a non-Federal entity for costs incurred by that entity to construct and establish an aid to navigation that would otherwise be constructed by the Coast Guard.

Aids to navigation facilitate safe and efficient maritime transportation on federally authorized navigation channels. Specific conditions for reimbursement are outlined. Reimbursements for a single project are limited to \$5 million, and the authority expires 4 years after the date of enactment of the bill.

There are concerns with the Coast Guard's Western Alaska Captain of the Port Zone approving alternate planning criteria for areas covering only a portion of the zone. This action would create two adjacent areas with different levels of prevention and response

preparedness. This bill requires public notice, an economic study, and a report to Congress on the study before approval of any criteria not covering the full Western Alaska zone.

Lastly, the bill makes a variety of technical changes to provisions in enacted Coast Guard Authorization Acts.

Mr. Speaker, I reserve the balance of my time.

Mr. GARAMENDI. Mr. Speaker, I yield myself such time as I may consume.

(Mr. GARAMENDI asked and was given permission to revise and extend his remarks.)

Mr. GARAMENDI. Mr. Speaker, I join Chairman HUNTER in strong support for the legislation and to advance this new policy initiative to improve the oversight of the Coast Guard and the major acquisition programs, and also to advance the safety and security of the U.S. maritime industry.

H.R. 5978, the Coast Guard and Maritime Transportation Amendments Act, is bipartisan legislation. We have talked about some of the provisions that are not in the bill. I will try to talk about those that are in the bill. It deserves the robust support from Members on both sides of the aisle, and I urge its quick passage, probably as early as today.

I thank the gentleman, Mr. HUNTER, for his unwavering support of the Coast Guard and the work that we are able to do together with the members of the committee.

Of great significance, this legislation will address an overlooked and underappreciated threat to our national and economic security: the fact that GPS, Global Positioning System, it has been identified for nearly 20 years as the single point of failure, with serious implications for our national security and economy.

I know we are not able to use these little machines called cell phones on the floor, but if we could, they are totally reliant on GPS. You go down to the ATM, it will not work without GPS. Our systems of navigation, including such things as positive train control, totally dependent upon GPS. In fact, Wall Street, totally dependent on GPS. It is timing, navigation, and positioning. That is GPS.

We have no backup; other countries do. You might ask, why is China, why is Russia, why are they building a GLAN-based backup to GPS? Well, they know that if there is trouble, the first thing that is going to disappear is GPS.

Right now, GPS can be knocked out by somebody driving down the freeway with their 18-wheeler and using an antiradar device. You might ask what happened at the Newark airport. That is exactly what happened. GPS was knocked out by somebody on Interstate 95 with a radar device.

It is a very weak signal, but it is an extraordinarily important signal. So this bill provides for a backup system which has been discussed for nearly 20

years, and we have gone round and round the Bush—I guess that is the right thing—and the Clinton, in between, without any action.

So this bill would actually push this forward to give us an opportunity to establish a backup system, which is actually very old but will be updated with the enhanced LORAN system, dating back to the 1940s, which was the first navigational system that we built in the United States.

Much of the system is already available; the towers, the locations, much of that is in place. This would authorize a public-private partnership to put that in place.

I won't go into it anymore, but it is high time that we get on with this. The chairman laid out how it is going to be done in his talk and, hopefully, we can finally get this underway.

There are many, many other pieces that are in this legislation. We have talked a little bit about the Coast Guard icebreakers. We do have a study—oh, my goodness, another study. It is the best we could do at the moment. The chairman and I talked about what we would like to accomplish with more than that with his actual authorization. The block buy, we have got to do it, and, hopefully, we will.

There are other things that are in the bill that the chairman has described. I won't go into them today in any more detail but to say that, in my written statement, it will be covered.

One more thing, to back up the GPS, I include in the RECORD about 15 years of studies by Federal Government agencies that all say we have got to have a backup system, and the eLORAN is the best.

Mr. Chairman, shall we continue on and beat this for a while longer or shall we say let's pass the bill and get on with it?

I am pleased to rise and join Chairman HUNTER in strong support of this legislation to advance new policy initiatives to improve the oversight of the Coast Guard's major acquisition programs and to advance the safety and security of the U.S. maritime industry.

H.R. 5978, the Coast Guard and Maritime Transportation Amendments Act of 2016, is bipartisan legislation that was developed to address issues that have arisen since the Congress passed a two-year comprehensive Coast Guard authorization bill earlier this year.

This legislation is deserving of robust support from members on both sides of the aisle and I urge its quick passage by the House today so it can be sent to the other body for its consideration and passage before the 114th Congress adjourns sine die.

I want to thank Chairman HUNTER for his unwavering leadership and for the cooperative spirit of this excellent staff in working with me and other Democratic members to address our interests and concerns in this legislation.

Of greatest significance, this legislation will address an overlooked need and under-appreciated threat to our national and economic security—the fact that the Global Positioning System, or GPS, has been identified as a single point of failure with serious implications for our national security and economy.

GPS has revolutionized how we live, work, and play. Signals provided by GPS satellites ensure that literally everything that we routinely depend on not only runs, but runs with unprecedented reliability and precision.

We have all benefitted from GPS: whether through the distribution of power from our electric grid; the coordination of timing signals for trains and traffic signals; or, to improve the efficiency of maritime search and rescue missions launched by the Coast Guard.

There is no denying that GPS has been a tremendous technological asset. But the reality is that GPS signals are relatively weak and fairly easy to degrade, disrupt or jam. This is not a hypothetical matter; this threat is real, and it is happening now.

Just last week, the Commandant of the Coast Guard, Admiral Paul Zukunft, while speaking at a National Harbor Safety Conference in Portland, Oregon, cited over 100 instances in which vessels experienced disruption to their GPS reception.

There is nothing we can do to change the underlying physics of the GPS signal. We can, however, take necessary and appropriate actions now to ensure that a reliable land-based back-up system for positioning, navigation and timing signals is available when needed.

Moreover, if the Russians, the Chinese, the EU, and other nations are developing land-based GPS back-up systems, the United States should have its own system as well.

Since 2001 the Federal Government, notably the PNT Executive Committee, has been evaluating options. The Executive Committee concluded in December, 2014 that an enhanced LORAN, or eLORAN system, would be the most cost-effective and reliable back-up for GPS signals.

What this legislation will do is force the Federal Government to finally take action on its own recommendation.

The Coast Guard, which for decades operated the LORAN-C navigation system (the predecessor of GPS), would be directed to publish a request for proposals, complete a plan for the architecture of an eLORAN system, and get a system built and fully operational within three years.

Make no mistake, this is a significant undertaking. But the stakes of doing nothing is a risky roll of the dice we would be well-advised to avoid. I strongly urge members on both sides to support this important provision.

I am also very pleased that this legislation continues to move forward in our efforts to recapitalize the Coast Guard's legacy fleet of polar class heavy icebreakers.

It is clear that we are witnessing the opening of the Arctic to maritime commerce, and with it, the creation of a whole new ocean of operational responsibility for the Coast Guard. In this most challenging of maritime environments, it is vital that the Service has the icebreaking capabilities it will need to operate safely and effectively.

I must express my disappointment that we were unable to retain the "block buy" provision that was reported out of the Transportation Committee.

Nevertheless, the analysis of multi-year procurement and block buy contracting called for in this legislation would be helpful to have on hand when the Congress ultimately does appropriate funds for the construction of these vital new national security assets.

I also want to express my support for other provisions in the bill, notably language that will

ensure commercial fishermen a full three years to comply with new alternative safety compliance program requirements from the date the Coast Guard publishes these requirements.

Additionally, I want to express my support for the provision that would grant to the Coast Guard authority to reimburse private entities for their costs to construct a Federal navigation aid. The additional sideboards that were added have clarified the scope and intent of this new authority. I want to thank Congressman BLAKE FARENTHOLD for his willingness to work to improve this provision.

Mr. Speaker, I again want to express my appreciation to Chairman HUNTER and his staff for their support for the Coast Guard and the U.S. Maritime industry, and for their collaboration in developing this legislation.

I also want to thank the Chairman of the full Transportation and Infrastructure Committee, Congressman BILL SHUSTER, and the Ranking Member on the full Committee, Congressman PETER DEFAZIO, for their leadership and support for the Committee's maritime agenda.

In closing, this legislation is bipartisan and non-controversial. It deserves the full support of the House.

NSPD-39: U.S. SPACE-BASED POSITION, NAVIGATION, AND TIMING POLICY, DECEMBER 15, 2004

#### FACT SHEET

The President authorized a new national policy on December 8, 2004 that establishes guidance and implementation actions for space-based positioning, navigation, and timing programs, augmentations, and activities for U.S. national and homeland security, civil, scientific, and commercial purposes. This policy supersedes Presidential Decision Directive/National Science and Technology Council-6, U.S. Global Positioning System Policy, dated March 28, 1996.

#### I. Scope and Definitions

This policy provides guidance for: (1) development, acquisition, operation, sustainment, and modernization of the Global Positioning System and U.S.-developed, owned and/or operated systems used to augment or otherwise improve the Global Positioning System and/or other space-based positioning, navigation, and timing signals; (2) development, deployment, sustainment, and modernization of capabilities to protect U.S. and allied access to and use of the Global Positioning System for national, homeland, and economic security, and to deny adversaries access to any space-based positioning, navigation, and timing services; and (3) foreign access to the Global Positioning System and United States Government augmentations, and international cooperation with foreign space-based positioning, navigation, and timing services, including augmentations.

For purposes of this document:

"Interoperable" refers to the ability of civil U.S. and foreign space-based positioning, navigation, and timing services to be used together to provide better capabilities at the user level than would be achieved by relying solely on one service or signal;

"Compatible" refers to the ability of U.S. and foreign space-based positioning, navigation, and timing services to be used separately or together without interfering with each individual service or signal, and without adversely affecting navigation warfare; and

"Augmentation" refers to space and/or ground-based systems that provide users of space-based positioning, navigation, and timing signals with additional information

that enables users to obtain enhanced performance when compared to the un-augmented space-based signals alone. These improvements include better accuracy, availability, integrity, and reliability, with independent integrity monitoring and alerting capabilities for critical applications.

## II. Background

Over the past decade, the Global Positioning System has grown into a global utility whose multiuse services are integral to U.S. national security, economic growth, transportation safety, and homeland security, and are an essential element of the worldwide economic infrastructure. In the year 2000, the United States recognized the increasing importance of the Global Positioning System to civil and commercial users by discontinuing the deliberate degradation of accuracy for non-military signals, known as Selective Availability. Since that time, commercial and civil applications of the Global Positioning System have continued to multiply and their importance has increased significantly. Services dependent on Global Positioning System information are now an engine for economic growth, enhancing economic development, and improving safety of life, and the system is a key component of multiple sectors of U.S. critical infrastructure.

While the growth in civil and commercial applications continues, the positioning, navigation, and timing information provided by the Global Positioning System remains critical to U.S. national security, and its applications are integrated into virtually every facet of U.S. military operations. United States and allied military forces will continue to rely on the Global Positioning System military services for positioning, navigation, and timing services.

The continuing growth of services based on the Global Positioning System presents opportunities, risks, and threats to U.S. national, homeland, and economic security. The widespread and growing dependence on the Global Positioning System of military, civil, and commercial systems and infrastructures has made many of these systems inherently vulnerable to an unexpected interruption in positioning, navigation, and/or timing services. In addition, whether designed for military capabilities or not, all positioning, navigation, and timing signals from space and their augmentations provide inherent capabilities that can be used by adversaries, including enemy military forces and terrorist groups. Finally, emerging foreign space-based positioning, navigation, and timing services could enhance or undermine the future utility of the Global Positioning System.

The United States must continue to improve and maintain the Global Positioning System, augmentations, and backup capabilities to meet growing national, homeland, and economic security requirements, for civil requirements, and to meet commercial and scientific demands. In parallel, we must continue to improve capabilities to deny adversary access to all space-based positioning, navigation, and timing services, particularly including services that are openly available and can be readily used by adversaries and/or terrorists to threaten the security of the United States. In addition, the diverse requirements for and multiple applications of space-based positioning, navigation, and timing services require stable yet adaptable policies and management mechanisms. The existing management mechanisms for the Global Positioning System and its augmentations must be modified to accommodate a multi-use approach to program planning, resource allocation, system development, and operations. Therefore, the United

States Government must improve the policy and management framework governing the Global Positioning System and its augmentations to support their continued ability to meet increasing and varied domestic and global requirements.

## III. Goals and Objectives

The fundamental goal of this policy is to ensure that the United States maintains space-based positioning, navigation, and timing services, augmentation, back-up, and service denial capabilities that: (1) provide uninterrupted availability of positioning, navigation, and timing services; (2) meet growing national, homeland, economic security, and civil requirements, and scientific and commercial demands; (3) remain the pre-eminent military space-based positioning, navigation, and timing service; (4) continue to provide civil services that exceed or are competitive with foreign civil space-based positioning, navigation, and timing services and augmentation systems; (5) remain essential components of internationally accepted positioning, navigation, and timing services; and (6) promote U.S. technological leadership in applications involving space-based positioning, navigation, and timing services. To achieve this goal, the United States Government shall:

Provide uninterrupted access to U.S. space-based global, precise positioning, navigation, and timing services for U.S. and allied national security systems and capabilities through the Global Positioning System, without being dependent on foreign positioning, navigation, and timing services;

Provide on a continuous, worldwide basis civil space-based, positioning, navigation, and timing services free of direct user fees for civil, commercial, and scientific uses, and for homeland security through the Global Positioning System and its augmentations, and provide open, free access to information necessary to develop and build equipment to use these services;

Improve capabilities to deny hostile use of any space-based positioning, navigation, and timing services, without unduly disrupting civil and commercial access to civil positioning, navigation, and timing services outside an area of military operations, or for homeland security purposes;

Improve the performance of space-based positioning, navigation, and timing services, including more robust resistance to interference for, and consistent with, U.S. and allied national security purposes, homeland security, and civil, commercial, and scientific users worldwide;

Maintain the Global Positioning System as a component of multiple sectors of the U.S. Critical Infrastructure, consistent with Homeland Security Presidential Directive-7, Critical Infrastructure Identification, Prioritization, and Protection, dated December 17, 2003;

Encourage foreign development of positioning, navigation, and timing services and systems based on the Global Positioning System. Seek to ensure that foreign space-based positioning, navigation, and timing systems are interoperable with the civil services of the Global Positioning System and its augmentations in order to benefit civil, commercial, and scientific users worldwide. At a minimum, seek to ensure that foreign systems are compatible with the Global Positioning System and its augmentations and address mutual security concerns with foreign providers to prevent hostile use of space-based positioning, navigation, and timing services; and

Promote the use of U.S. space-based positioning, navigation, and timing services and capabilities for applications at the Federal, State, and local level, to the maximum practical extent.

## IV. Management of Space-Based Positioning, Navigation, and Timing Services

This policy establishes a permanent National Space-Based Positioning, Navigation, and Timing Executive Committee. The Executive Committee will be co-chaired by the Deputy Secretaries of the Department of Defense and the Department of Transportation or by their designated representatives. Its members will include representatives at the equivalent level from the Departments of State, Commerce, and Homeland Security, the Joint Chiefs of Staff, the National Aeronautics and Space Administration, and from other Departments and Agencies as required. Components of the Executive Office of the President, including the Office of Management and Budget, the National Security Council staff, the Homeland Security Council staff, the Office of Science and Technology Policy, and the National Economic Council staff, shall participate as observers to the Executive Committee. The Chairman of the Federal Communications Commission shall be invited to participate on the Executive Committee as a Liaison. The Executive Committee shall meet at least twice each year. The Secretaries of Defense and Transportation shall develop the procedures by which the Committee shall operate.

The Executive Committee shall make recommendations to its member Departments and Agencies, and to the President through the representatives of the Executive Office of the President. In addition, the Executive Committee will advise and coordinate with and among the Departments and Agencies responsible for the strategic decisions regarding policies, architectures, requirements, and resource allocation for maintaining and improving U.S. space-based positioning, navigation, and timing infrastructures, including the Global Positioning System, its augmentations, security for these services, and relationships with foreign positioning, navigation, and timing services. Specifically, the Executive Committee shall:

Ensure that national security, homeland security, and civil requirements receive full and appropriate consideration in the decision-making process and facilitate the integration and de-confliction of these requirements for space-based positioning, navigation, and timing capabilities, as required;

Coordinate individual Departments' and Agencies' positioning, navigation, and timing program plans, requirements, budgets, and policies, and assess the adequacy of funding and schedules to meet validated requirements in a timely manner;

Ensure that the utility of civil services exceeds, or is at least equivalent to, those routinely provided by foreign space-based positioning, navigation, and timing services;

Promote plans to modernize the U.S. space-based positioning, navigation, and timing infrastructure, including: (1) development, deployment, and operation of new and/or improved national security and public safety services when required and to the maximum practical extent; and (2) determining the apportionment of requirements between the Global Positioning System and its augmentations, including consideration of user equipment;

Review proposals and provide recommendations to the Departments and Agencies for international cooperation, as well as spectrum management and protection issues; and

Establish a space-based Positioning, Navigation, and Timing Advisory Board. The board shall be comprised of experts from outside the United States Government, and shall be chartered as a Federal Advisory Committee.

The Executive Committee shall establish the National Space-Based Positioning, Navigation, and Timing Coordination Office. This

office shall provide the staff functions for the Executive Committee. It shall be led by a full-time Director chosen by, and reporting to the Executive Committee, and shall include a cadre of full-time staff provided by Departments and Agencies represented on the Executive Committee. The Executive Committee shall determine the resources for the National Space-Based Positioning, Navigation, and Timing Coordination Office, including funding, location, staffing, and composition, consistent with the direction of this policy.

The National Space-Based Positioning, Navigation, and Timing Coordination Office shall serve as the Secretariat for the Executive Committee and shall perform those functions delegated by the Executive Committee. Departments and Agencies shall provide appropriate information to the National Space-Based Positioning, Navigation, and Timing Coordination Office to ensure inter-agency transparency about positioning, navigation, and timing programs, policies, budgets, and activities that might affect mutual interests or interagency dependencies. The Interagency Global Positioning System Executive Board is hereby disestablished, and the Executive Committee or the National Space-Based Positioning, Navigation, and Timing Coordination Office, as appropriate, shall assume its functions as defined in the Positioning, Navigation, and Timing Executive Committee Charter, consistent with the direction provided in this policy.

The Executive Committee shall advise and coordinate the interdepartmental resource allocation for the Global Positioning System and its augmentations on an annual basis. The Secretary of Defense shall have primary responsibility for providing resources for development, acquisition, operation, sustainment, and modernization of the Global Positioning System. The Secretary of Transportation shall provide resources to the Secretary of Defense for assessment, development, acquisition, implementation, operation, and sustainment of additional designated Global Positioning System civil capabilities beyond the second and third civil signals already contained in the current Global Positioning System program Global Positioning System civil signal performance monitoring, augmentations, and other unique positioning, navigation, and timing capabilities will be funded by the agency or agencies requiring those services or capabilities, including out-year procurement and operations costs. Any new technical features proposed and funded by the civil agencies shall not degrade or displace existing or planned national security functions of the system. If the Executive Committee recommends that the availability of Global Positioning System capabilities should be accelerated, the Executive Committee will make recommendations regarding the resources required to accelerate those capabilities. Resource issues will be resolved during the regular budget process.

The details of the cost sharing between: (1) the Department of Defense and the Department of Transportation, for the Global Positioning System; and (2) Departments and Agencies sponsoring augmentations, and/or unique or accelerated capabilities, shall be outlined in a Five-Year National Space-Based Positioning, Navigation, and Timing Plan, consistent with the guidance provided in this policy.

#### V. Foreign Access to U.S. Space-based Positioning, Navigation, and Timing Capabilities

Any exports of U.S. positioning, navigation, and timing capabilities covered by the United States Munitions List or the Commerce Control List will continue to be li-

censed pursuant to the International Traffic in Arms Regulations or the Export Administration Regulations, as appropriate, and in accordance with all existing laws and regulations.

As a general guideline, export of civil or other non-United States Munitions List space-based positioning, navigation and timing capabilities that are currently available or are planned to be available in the global marketplace will continue to be considered favorably. Exports of sensitive or advanced positioning, navigation, and timing information, systems, technologies, and components will be considered on a case-by-case basis in accordance with existing laws and regulations, as well as relevant national security and foreign policy goals and considerations. In support of such reviews, the Secretary of State, in consultation with the Secretaries of Defense, Commerce, and Energy, the Administrator of the National Aeronautics and Space Administration, and the Director of Central Intelligence, shall modify and maintain the Sensitive Technology List directed in U.S. Commercial Remote Sensing Space Policy, dated April 25, 2003, including those technology items or areas deemed sensitive for positioning, navigation and timing applications. The Secretaries of State and Commerce shall use the list in the evaluation of requests for exports.

#### VI. Agency Roles and Responsibilities

Departments and Agencies shall allocate the resources required to fulfill the objectives of this policy. Nothing in this policy shall diminish the operational and budgetary authorities of the Departments and Agencies.

The Secretary of Defense shall:

Have responsibility for development, acquisition, operation, security, and continued modernization of the Global Positioning System, while facilitating appropriate civil and homeland security Department and Agency representation and participation in these activities, and any decisions that affect civil and homeland security equities;

Develop, acquire, operate, realistically test, evaluate, and maintain navigation warfare capabilities and other capabilities required to:

Effectively utilize the Global Positioning System services in the event of adversary jamming or other interference;

Deny to adversaries position, navigation, and timing services from the Global Positioning System, its augmentations, and/or any other space-based position, navigation, and timing systems without unduly disrupting civil, commercial, and scientific uses of these services outside an area of military operations, or for homeland security purposes; and

Identify, locate and mitigate, in coordination with Departments and Agencies, as appropriate, any interference on a global basis that adversely affects use of the Global Positioning System for military operations;

Ensure the earliest operational availability for modernized military and navigation warfare capabilities;

Train, equip, test, and exercise U.S. military forces and national security capabilities in operationally realistic conditions that include denial of the Global Positioning System. In cooperation with the Secretaries of Transportation and Homeland Security, and as appropriate, with the Secretary of State, develop guidelines that facilitate these activities and Navigation Warfare training, testing, demonstrations, and exercises without unduly disrupting or degrading homeland security and civil services and operations, either internationally or domestically;

Promote use of Global Positioning System national security services to allied military

forces to facilitate interoperability between U.S. and allied forces and capabilities, and to maintain their use as the pre-eminent military space-based positioning, navigation, and timing capability;

Consistent with the guidance in Section V of this policy, make Global Positioning System national security services, user equipment, information, and technology available for use by allied military forces; and

Work with allies to monitor access to national security services and user equipment, in order to limit the potential for adversaries to use these capabilities against U.S. and allied military forces;

Maintain the commitment to discontinue the use of the feature known as Selective Availability designed to degrade globally the Standard Positioning Service of the Global Positioning System;

Facilitate access to appropriate levels of national security services and user equipment at the Federal level to meet critical requirements for emergency response and other homeland security purposes, and, on an exceptional basis, for civil purposes, including state or local emergency response;

Develop improved, dedicated national security positioning, navigation, and timing capabilities, including but not limited to more diverse, flexible, and capable signals and services;

Maintain lead responsibility for negotiating with foreign defense organizations any cooperation regarding access to or information about Global Positioning System military services; and

In cooperation with other Departments and Agencies, assess the utility and feasibility of hosting secondary payloads on Global Positioning System satellites, including, but not limited to those intended to enhance global search and rescue capabilities for all users. No secondary payload may adversely affect the performance, schedule, or cost of the Global Positioning System, its signals or services. Resources required for the assessment, development, acquisition, integration, and operation of secondary payloads shall be the responsibility of the sponsoring agency or agencies.

The Secretary of Transportation shall:

Have lead responsibility for the development of requirements for civil applications from all United States Government civil Departments and Agencies;

Ensure, in cooperation with the Secretary of Defense and the Secretary of Homeland Security, the performance monitoring of U.S. civil space-based positioning, navigation, and timing services;

Consistent with the guidance in Section V of this policy, and in coordination with the Secretary of Commerce and the Secretary of State, facilitate: (1) foreign development of civil positioning, navigation, and timing services and systems based on the Global Positioning System; and (2) international participation in the development of civil applications for U.S. space-based positioning, navigation, and timing services;

Ensure, in coordination with the Secretary of Defense, that space-based positioning, navigation, and timing public safety services meet or exceed international performance standards, including but not limited to those used for these services in aviation and/or maritime applications;

In cooperation with other Departments and Agencies, promote the use of U.S. civil space-based positioning, navigation, and timing services and capabilities for transportation safety;

Represent the civil Departments and Agencies in the development, acquisition, management, and operations of the Global Positioning System;

Develop, acquire, operate, and maintain Global Positioning System space or terrestrial augmentations for civil transportation applications;

Ensure the earliest operational availability for modernized civil signals and services on the Global Positioning System and its augmentations, in coordination with the Secretary of Defense;

In coordination with the Secretary of Homeland Security, develop, acquire, operate, and maintain backup position, navigation, and timing capabilities that can support critical transportation, homeland security, and other critical civil and commercial infrastructure applications within the United States, in the event of a disruption of the Global Positioning System or other space-based positioning, navigation, and timing services, consistent with Homeland Security Presidential Directive-7, Critical Infrastructure Identification, Prioritization, and Protection, dated December 17, 2003; and

In cooperation with the Secretary of Defense, assess and assist, as appropriate, in the international acceptance for using the military positioning, navigation, and timing services of the Global Positioning System for operations in civil airspace.

The Secretary of Commerce shall:

Represent U.S. commercial interests with other Departments and Agencies in the requirements review of the Global Positioning System and related space-based augmentations;

In coordination with the Secretaries of State, Defense, and Transportation and the National Aeronautics and Space Administration, seek to protect the radio frequency spectrum used by the Global Positioning System and its augmentations through appropriate domestic and international spectrum management and regulatory practices;

In coordination with the Secretaries of Defense and Transportation, and the Administrator of the National Aeronautics and Space Administration, facilitate cooperation between the United States Government and U.S. industry as appropriate to identify mutually acceptable solutions that will preserve existing and evolving uses of space-based positioning, navigation, and timing services, while allowing for the development of other technologies and services that depend on use of the radio frequency spectrum;

In cooperation with the Administrator of the National Aeronautics and Space Administration, develop and provide to the Secretary of Transportation requirements for use of the Global Positioning System and its augmentations to support civil space systems; and

In cooperation with other Departments and Agencies, promote the use of U.S. civil space-based positioning, navigation, and timing services and capabilities for applications at the Federal, State, and local level, to the maximum practical extent.

The Secretary of State shall:

In cooperation with the Secretary of Defense, the Secretary of Transportation, and other Departments and Agencies promote the use of civil aspects of the Global Positioning System and its augmentation services and standards with foreign governments and other international organizations;

Take the lead for negotiating with foreign governments and international organizations regarding civil and, as appropriate and in coordination with the Secretary of Defense, military positioning, navigation, and timing matters, including but not limited to coordinating interagency review of:

Instructions to U.S. delegations for bilateral and multilateral consultations relating to the planning, management, and use of the Global Positioning System and related augmentation systems; and

International agreements with foreign governments and international organizations regarding the planning, operation, management, and/or use of the Global Positioning System and its augmentations; and

Modify and maintain, in coordination with the Secretaries of Defense, Commerce, and Energy, and the Director of Central Intelligence, and the Administrator of the National Aeronautics and Space Administration, the Sensitive Technology List created by U.S. Commercial Remote Sensing Space Policy, dated April 25, 2003. In particular, include sensitive technology items and/or information related to positioning, navigation, and timing applications.

The Secretary of Homeland Security shall: Identify space-based positioning, navigation, and timing requirements for homeland security purposes to the Secretary of Transportation, and coordinate the use of positioning, navigation, and timing capabilities and backup systems for homeland security purposes by Federal, State, and local governments and authorities;

In coordination with the Secretary of Transportation, and with other Departments and Agencies, promote the use of the Global Positioning System positioning and timing standards for use by Federal agencies, and by State and local authorities responsible for public safety and emergency response;

In coordination with the Secretary of Defense, and in cooperation with the Secretaries of Transportation and Commerce, ensure:

Mechanisms are in place to identify, understand, and disseminate timely information regarding threats associated with the potential hostile use of space-based positioning, navigation, and timing services within the United States; and

Procedures are developed, implemented, and routinely exercised to request assistance from the Secretary of Defense should it become necessary to deny hostile use of space-based position, navigation and timing services within the United States;

In coordination with the Secretaries of Defense, Transportation, and Commerce, develop and maintain capabilities, procedures, and techniques, and routinely exercise civil contingency responses to ensure continuity of operations in the event that access to the Global Positioning System is disrupted or denied;

In coordination with the Secretaries of Transportation and Defense, and in cooperation with other Departments and Agencies, coordinate the use of existing and planned Federal capabilities to identify, locate, and attribute any interference within the United States that adversely affects use of the Global Positioning System and its augmentations for homeland security, civil, commercial, and scientific purposes; and

In coordination with the Secretaries of Transportation and Defense, and the Director of Central Intelligence, and in cooperation with other Departments and Agencies:

(1) develop a central repository and database for reports of domestic and international interference to the civil services of the Global Positioning System and its augmentations for homeland security, civil, commercial, and scientific purposes; and (2) notify promptly the Administrator, National Telecommunications and Information Administration, the Chairman of the Federal Communications Commission, the Secretary of Defense, the Director of Central Intelligence, and other Departments and Agencies in cases of domestic or international interference with space-based positioning, navigation, and timing services to enable appropriate investigation, notification, and/or enforcement action.

The Administrator of the National Aeronautics and Space Administration, in co-

operation with the Secretary of Commerce, shall develop and provide to the Secretary of Transportation requirements for the use of the Global Positioning System and its augmentations to support civil space systems.

The Director of Central Intelligence shall identify, monitor, and assess the development of foreign threats to the use of the Global Positioning System positioning, navigation, and timing architectures and related services; provide information to assist the Secretary of Defense in development of countermeasures;

Departments and Agencies detecting interference, or receiving reports of domestic or international interference adversely affecting the performance of U.S. space-based positioning, navigation, and timing services shall provide timely reports to the Secretary of Homeland Security, the Secretary of Defense, and the Director of Central Intelligence. Upon notification by the Secretary of Homeland Security:

The Secretary of Commerce, in cooperation with other Departments and Agencies, and with the Chairman of the Federal Communications Commission shall take appropriate and legally permissible actions required to mitigate interference to U.S. space-based positioning, navigation, and timing services within the United States; and

The Secretary of State shall, as appropriate, notify and/or coordinate the notification of foreign governments and international organizations in cases of interference with U.S. space-based positioning, navigation, and timing services caused by foreign government or commercial activities.

Mr. GARAMENDI. Mr. Speaker, I yield back the balance of my time.

Mr. HUNTER. Mr. Speaker, I yield 3 minutes to the gentleman from Texas (Mr. FARENTHOLD).

Mr. FARENTHOLD. Mr. Speaker, I rise in support of this bill. There are a lot of good things in it for the Nation.

As a former computer technician, I know there is nothing worse than a single point of failure in the network. GPS is a single point of failure for a lot of things; eLORAN is absolutely must-have.

We can talk about what is not in the bill as well, but I do want to talk about a section that is specifically important to the district I represent.

Section 202 grants the authority for the Coast Guard to reimburse non-Federal entities for the cost of construction to certain aids to navigation. This authority ensures these types of safety-related navigation projects can move forward in a timely fashion.

We are all too aware of how slow the government can be, especially when it comes to funding projects, so we have come up with a way here where we can work with non-Federal partners to improve the safety of our navigation system. It doesn't cost the government anything. The non-Federal partners go ahead and put in the equipment up to Coast Guard standards with Coast Guard approval and get it done now; and then, when the Coast Guard gets the money, when the red tape and government machine moves through its procedure, they can get reimbursed, while our mariners can enjoy the enhanced safety and our ports can enjoy

the enhanced economic activity as a result of being able to, for instance, traverse channels in low-light conditions.

It is safety. It is good for the economy. In fact, one of the problems that brought this to my attention was that there was a project in Corpus Christi, the La Quinta Channel. Somehow, the aids to navigation never got built, even though this channel has been dredged and is in use. The pilots say it is unsafe to use in low-light conditions, and it looks like it could be years before the Coast Guard gets around to funding it.

Well, the Port of Corpus Christi is willing to pony up the money today. The Coast Guard says: All right; when we get it, we will give it back. This piece of legislation allows that to happen. It is good government, along with lots of other pieces of this legislation, something we need to pass, and I urge my colleagues to git-r-done.

Mr. HUNTER. Mr. Speaker, I yield myself such time as I may consume.

We need polar icebreakers. This body is going to push; Mr. GARAMENDI and I are going to push and push until we have polar icebreakers and we have at least  $\frac{1}{40}$  the capability of Russia. That is a pretty low bar that we are setting for ourselves, but we are going to set it right here, right now, in this body. Let's at least have  $\frac{1}{40}$  of the capability or Russia, build those polar icebreakers.

Mr. Speaker, I urge all Members to support H.R. 5978.

I yield back the balance of my time.

Mr. GARAMENDI. Mr. Speaker, I include in the RECORD the following materials:

EXELIS, URSA NAV, THE DEPARTMENT OF HOMELAND SECURITY AND THE U.S. COAST GUARD ENTER AGREEMENT TO TRIAL GROUND-BASED POSITION, NAVIGATION AND TIMING SIGNAL

HERNDON, VA, May 22, 2015.—Exelis (NYSE: XLS), UrsaNav, Inc., the Department of Homeland Security's Science and Technology Directorate (DHS S&T), and the U.S. Coast Guard have entered into a cooperative research and development agreement (CRADA) for testing and demonstration at former LORAN-C sites. These sites are the legacy ground-based radio navigation infrastructure of the decommissioned LORAN-C service that could be retained and upgraded to provide eLORAN low frequency service.

The team will evaluate eLORAN as a potential complementary system to the current Global Positioning System (GPS) currently in wide use throughout the United States. The capabilities and potential utilization methods of eLORAN will be explored in depth to identify all strengths, capacities, and potential vulnerabilities of the technology.

Under the CRADA, Exelis will use the former LORAN-C assets to put eLORAN signals in space for research, test and demonstration of the ability of eLORAN to meet precise positioning, navigation and timing (PNT) requirements of government and privately-owned critical infrastructure. The first station Exelis will broadcast from is located in Wildwood, NJ. The broadcast will provide a usable signal at a range up to 1000 miles.

"eLORAN is an ideal technology to complement GPS for critical, resilient and assured PNT," said Ed Sayadian, vice presi-

dent of Civil & Aerospace Systems for Exelis. "eLORAN is a difficult to disrupt technology that offers PNT and wide area broadcast data capabilities indoors, in underground locations and other GPS-denied environments."

"A preponderance of government, academic, and industry reports have concluded that eLORAN is the best independent, multimodal solution to provide assured PNT as a complement to GPS," said Chuck Schue, president and CEO of UrsaNav.

Exelis and UrsaNav have entered into this CRADA because they believe that low frequency signals, such as eLORAN, operate independently of GPS signals and can provide alternative timing, either standalone, or as a component of a PNT service. Exelis also believes that as a result of its wealth of experience in its PNT portfolio, that there are many civil and defense applications that require precise time and/or position in GPS-denied environments. Examples include radio frequency interference, both intentional and unintentional; signal attenuation from heavy forest canopy, terrain or buildings; and indoor and underground locations.

About UrsaNav: UrsaNav, Inc. is a Veteran-Owned and Service-Disabled Veteran-Owned Small Business focused on delivering innovative engineering and information solutions, and associated professional services to government and commercial clients worldwide. UrsaNav is the World's leading supplier of eLORAN technology, equipment, and services with deep experience in the design, development, and deployment of PNT systems. For more information, visit our website at [www.ursanav.com](http://www.ursanav.com).

About Exelis: Exelis is a diversified, top-tier global aerospace, defense, information and services company that leverages a greater than 50-year legacy of deep customer knowledge and technical expertise to deliver affordable, mission-critical solutions for global customers. Exelis is a leader in positioning and navigation, sensors, air traffic management solutions, image processing and distribution, communications and information systems; and focused on strategic growth in the areas of critical networks, ISR and analytics, electronic warfare and composite aerostructures. Headquartered in McLean, Virginia, Exelis employs approximately 10,000 people and generated 2014 sales of approximately \$3.3 billion. For more information, visit our website at [www.exelisinc.com](http://www.exelisinc.com).

DECEMBER 8, 2015.

Hon. PETER A. DEFAZIO,  
*House of Representatives,*  
*Washington, DC.*

DEAR CONGRESSMAN DEFAZIO: Thank you for your August 31, 2015, letter regarding the importance of the Global Positioning System (GPS) and the need for a complementary positioning, navigation, and timing (PNT) capability for the nation.

We share your concerns regarding the importance of GPS to our critical infrastructure and security requirements. Seeking to implement the guidance from National Security Presidential Directive 39, the Department of Defense, the Department of Homeland Security, and the Department of Transportation established an interagency process in 2014 to assess those information sources that are complementary to GPS and that could be used to ensure the continuity of PNT services to critical infrastructure. Through this interagency process, the National Space-Based PNT Executive Committee (EXCOM) reviewed several potential solutions and assessed that an enhanced Loran (eLoran) network could be a viable nationwide complementary capability for GPS applications in U.S. critical infrastructure.

The EXCOM also assessed that a timing-focused network could be implemented in the near term with properly scoped specifications, costs, and cost sharing arrangements. As you stated, there may be opportunities to work with private and commercial entities to initiate these complementary capabilities.

The EXCOM met on September 3, 2015, and agreed to a two-fold strategy for activities to explore a national complementary capability to GPS: pursue potential near-term opportunities to leverage public and private sector capabilities and resources to support a timing-focused eLoran network, while also documenting the requirements for a more comprehensive complementary PNT capability for the nation's critical infrastructure.

The EXCOM acknowledges the challenges associated with this undertaking, especially given the fact that no government-wide set of requirements has been established for such a complementary capability. However, sufficient data exists from previous studies to produce initial cost estimates and basic system specifications to determine the appropriate scope of the effort. We are building on these data and estimates to develop a more detailed approach for an initial timing-focused eLoran capability. This initial timing network could provide a near-term solution while we continue our efforts to prescribe a complete set of requirements necessary to support a full complementary PNT capability for the nation.

We look forward to working with you as we continue our efforts to provide a complementary PNT capability for U.S. critical infrastructure.

We have sent a similar response to each co-signer of your letter.

Sincerely,

VICTOR M. MENDEZ,  
*Deputy Secretary of*  
*Transportation, Co-*  
*Chair, National Ex-*  
*ecutive Committee*  
*for Space-Based Po-*  
*sitioning, Naviga-*  
*tion, and Timing.*

ROBERT O. WORK,  
*Deputy Secretary of*  
*Defense, Co-Chair,*  
*National Executive*  
*Committee for Space-*  
*Based Positioning,*  
*Navigation, and*  
*Timing.*

[From the DHS Science & Technology Press Office, Apr. 20, 2016]

DHS S&T DEMONSTRATES PRECISION TIMING TECHNOLOGY AT THE NEW YORK STOCK EXCHANGE

WASHINGTON.—The Department of Homeland Security, Science and Technology Directorate (S&T) announced today the successful demonstration of the Enhanced Loran (eLoran), a precision-timing technology for financial transactions at the New York Stock Exchange (NYSE).

eLoran is a low-frequency, high-power radio navigation signal that is broadcasted by ground-based transmission stations, allowing the signal to penetrate through buildings and provide precision timing indoors and throughout urban environments.

"Accurate position, navigation, and timing is necessary for the function and integrity of many critical infrastructure sectors, such as the electric grid, communication networks, and financial institutions," said DHS Under Secretary for Science and Technology Dr. Reginald Brothers. "Ensuring the continuous and uninterrupted availability of critical information ensures our national security."

DHS S&T, U.S. Coast Guard, UrsaNav, Inc., and Harris Corporation study eLoran through a Cooperative Research and Development Agreement for applicability to provide timing information for critical infrastructure applications. The demonstration at the NYSE was hosted by Juniper Networks on April 19 and presented to technical representatives from the financial services, energy, and communication sectors.

We are constantly working with critical infrastructure partners like the financial sector to help build their capabilities and resilience to a variety of hazards, including space weather and other cyber or physical threats to the system's continuity," stated DHS Assistant Secretary for Infrastructure Protection Caitlin Durkovich.

Precise and synchronized timing of financial transactions is critical to markets worldwide and is mandated by regulation in the European Union and is increasingly required in the United States. Today, precision timing capabilities are provided primarily by satellite-based Global Positioning System (GPS). However, GPS's space-based signals are low-power and susceptible to possible disruptions. GPS signals are also difficult to receive indoors and in urban canyons.

"During the technology demonstration inside the NYSE building, we were able to not only provide signals indoors but also provide timing information to within 30 nanoseconds of our UTC reference," said Sarah Mahmood, S&T program manager for the eLoran cooperation agreement.

Recognizing the challenges of space-based signals and the importance of having multiple timing-sources, eLoran is one technology being considered to provide a complementary timing solution to existing GPS technology.

[From the Atlantic, June 13, 2016]

WHAT HAPPENS IF GPS FAILS?

(By Dan Glass)

It only took thirteen millionths of a second to cause a whole lot of problems.

Last January, as the U.S. Air Force was taking one satellite in the country's constellation of GPS satellites offline, an incorrect time was accidentally uploaded to several others, making them out of sync by less time than it takes for the sound of a gunshot to leave the chamber.

The minute error disrupted GPS-dependent timing equipment around the world for more than 12 hours. While the problem went unnoticed by many people thanks to short-term backup systems, panicked engineers in Europe called equipment makers to help resolve things before global telecommunications networks began to fail. In parts of the U.S. and Canada, police, fire, and EMS radio equipment stopped functioning. BBC digital radio was out for two days in many areas, and the anomaly was even detected in electrical power grids.

Despite its name, the Global Positioning System is not about maps; it's about time. Each satellite in the constellation (24 are needed, plus the U.S. has several spares) has multiple atomic clocks on board, synchronized with each other and to Coordinated Universal Time (UTC)—the time standard used across the world—down to the nanosecond. The satellites continually broadcast their time and position information down to Earth, where GPS receivers in equipment from iPhones to automated tractors acquire signals and use the minuscule differences in their arrival time to determine an exact position.

While GPS was initially conceived to aid navigation, globally synchronized time is now a much more critical function of the system. Telecom networks rely on GPS

clocks to keep cell towers synchronized so calls can be passed between them. Many electrical power grids use the clocks in equipment that fine-tunes current flow in overloaded networks. The finance sector uses GPS-derived timing systems to timestamp ATM, credit card, and high-speed market transactions. Computer network synchronization, digital television and radio, Doppler radar weather reporting, seismic monitoring, even multi-camera sequencing for film production—GPS clocks have a hand in all.

But last January's system failure brings up an often-ignored question: What if all these flying clock radios were wiped out, and everything on the ground started blinking 12:00? According to Mike Lombardi, a metrologist at the National Institute for Standards and Technology, "Nobody knows exactly what would happen." Since so many of these technologies were designed specifically with GPS in mind, the unsettling truth, he says, is "there's no backup."

This isn't a secret. Concern for the consequences of the country's reliance on this invisible utility has been growing among industry and government workers for more than 15 years, after the Department of Transportation issued a report on the need for a backup navigation system, in 2001. But while the means to create one has existed since, a winding bureaucratic path has kept it from actually being implemented. And that leaves many of the everyday tools society depends on vulnerable until one is.

There are plenty of reasons GPS could fail. Intentional attack is one, as emphasized by a declassified 2012 risk estimate by the Department of Homeland Security. One of the system's most basic problems is its signals are weak enough to be easily obstructed. Truckers with cheap jamming devices designed to elude employer tracking have unintentionally interfered with airport systems; criminals thwarting GPS tags on stolen goods in shipping containers have accidentally shut down port operations. On a grander scale, North Korea has tormented South Korea with waves of jamming attacks. (Jamming devices are now illegal in the U.S., but not difficult to obtain illicitly.)

A few steps up from jamming devices in both complexity and damage are spoofers: systems that get GPS receivers to lock on to mimicked signal. Spoofers don't trigger equipment alarms, and deliver altered time and position information to unaware users. It's been suggested that Iran used this tactic to lead astray two U.S. Navy patrol boats captured in the Gulf last January.

A plausible worst-case attack scenario would look something like this: Spoofers feed erroneous data to electrical substation equipment in a metro area, which could overheat power lines and transformers, causing widespread outages. Meanwhile, multiple hidden jammers could cripple cellphone service, and also force fire, police, and emergency medicine departments to revert to old, single-frequency channels. Supplies in this scenario could only be bought in many places with cash, which would be limited without ATM service. According to the DHS report, it could take 30 days or more before the malicious devices are located and disabled. The longer it took, the more systems that would be compromised.

As for unintentional threats to GPS, the DHS risk estimate lists space debris, space weather, defective software, and good old-fashioned human mistakes, among other things. Of these threats, space weather is the most potentially catastrophic, according to Norwegian geophysicist Pal Brekke, whose country was hardest hit by the January outage. Eruptions of high energy radiation from the sun (known as solar flares) and ejections of electrically charged gases have disabled satellites in the past.

With satellites and the chips inside them getting smaller as technology progresses, "one particle from the sun that penetrates a satellite can ruin things," Brekke says. "It wouldn't take that large of an event to take out all GPS."

So far, mitigating the loss of GPS signals has involved two approaches. One is interoperability with other global navigation satellite systems like Russia's GLONASS (which also failed due to a ground control error in 2014) or the European and Chinese systems, both of which are expected to be up by 2020. The other is better clocks, says Lombardi, the NIST metrologist, who's published numerous articles on the topic. "The typical cell tower clock has an oscillator similar to that of a wristwatch," he says, "and can drift out of tolerance in minutes without a signal." How long a clock can maintain time on its own, called "holdover," also affects electrical grids, many of which rely on GPS-dependent devices called synchrophasors used to precisely regulate current flow, as well as help locate faults in the network. A lack of such timing technology was the reason it took some Canadian technicians three months to locate failures after the infamous blackout of 2003.

Chip-scale atomic clocks the size of a penny are a promising new technology that can hold time for about a day, but are currently too expensive to deploy widely. Moreover, hedging and holdover still aren't backups for when space-based signals are simply unavailable.

The bulk of a more promising, comprehensive backup system already exists, right here on the ground. After the sextant but before GPS, navigators around the world used Long Range Aids to Navigation, or "LORAN," a terrestrial system of transmitters and receiving equipment first developed during WWII. By the mid-1990s, Loran "tower chains" provided coverage for North America, Europe, and other regions in the Northern Hemisphere. Its use declined in favor of the much finer accuracy of GPS after it became available for civil use in 1995, but the U.S. Coast Guard continued working on an improved system using the existing infrastructure. If adopted, "Enhanced" LORAN, or eLoran, could provide positioning accuracy comparable to GPS. Broadcast at hundreds of thousands of watts, the signal is virtually un-jammable, and unlike GPS, can even be received indoors, underwater, and in urban or natural canyons. It also turns out that eLoran can provide a UTC time signal with sub-microsecond time resolution across a large geographical area.

The technology is available—the Coast Guard demonstrated a working prototype last year—so why isn't America using it? John Garamendi, a California congressman, asked this question at a July 2015 congressional hearing on the Federal Radio-navigation Plan, the nation's primary planning document for position, navigation, and timing (PNT). "There are two kinds of time," he opened, "real time . . . and then federal time, which seems to be the forever time. The eLoran system was identified as a backup 15 years ago, and here we are, federal time, not yet done."

Cost doesn't seem to be a problem. A complete alternate PNT system is estimated at \$350 million to \$400 million; it costs \$1 billion yearly to maintain GPS. And science and industry appears to share a consensus that eLoran is the solution. Even the Air Force Colonel and engineer who created GPS, Brad Parkinson, had been on record for years saying "eLoran is the only cost-effective backup for national needs."

In a 2004, a presidential directive tasked DHS and DOT with creating a backup to the GPS system. In 2008, the DHS issued a press

release that it was committing to the system and transferred control from the Coast Guard to its National Protection and Programs Directorate. But push and pull between DHS and the Coast Guard appears to have slowed progress.

After this year's satellite error, many European officials who had previously followed America's reluctance to adopt eLoran stepped up development. Meanwhile, pressure from Garamendi, who argued in his address that "without an eLoran system in place ASAP, this country is in serious, serious jeopardy," prompted a letter to him from the Deputy Secretaries of Defense and Transportation informing that the PNT Executive Committee has agreed that an eLoran-based timing network "could provide a near term solution" (if private entities bore some of the cost) while they "continue [their] efforts to prescribe a complete set of requirements necessary to support a full complementary PNT capability for the nation." In other words, it seems: federal time.

Why is the sense of urgency among decision-makers so out of sync? Could some of it be similar to why people delay backing up our computers even though they've been telling themselves to for weeks? How do we decide, when presented a risk with unknown odds, when it's time to sacrifice time and resources to prevent it?

Now is a critically important time to answer that question, as the world actually been given odds on another, even more catastrophic risk than GPS failure: destruction of the electrical power infrastructure itself. On July 23, 2012, a billion-ton cloud of electrified gases blasted off the far side of the sun at over six million miles per hour. According to professor Daniel Baker at University of Colorado, this coronal mass ejection (CME) "was in all respects at least as strong as the 1859 Carrington Event," referring to the strongest solar storm ever recorded, which set fire to telegraph stations and caused auroras down to Cuba. As was widely reported two years ago, if the 2012 CME had occurred one week later, it would have hit Earth.

Space Katrina would be biblically catastrophic. Power could be out for years while electrical transformers were repaired, if the resources are even available to do so. "Collateral effects of a longer-term outage would likely include disruption of the transportation, communication, banking, and finance systems, and government services; the breakdown of the distribution of potable water owing to pump failure; and the loss of perishable foods and medications because of lack of refrigeration," reads a 2008 National Academy of Sciences report.

In 2014, physicist from San Diego calculated the likelihood of a Carrington-level event in the next decade. The odds he came up with were 12 percent.

The predicament of events like this is not that they're occurring more frequently, but that the rapid development of technology is opening the tools on which humanity depends to an increasingly wide variety of rare but potentially destructive cosmic threats. In the span of a century, we've transferred much of the weight of modern society to global infrastructures with wobbly legs. If they collapse, time will very quickly appear to move backward.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from California (Mr. HUNTER) that the House suspend the rules and pass the bill, H.R. 5978, as amended.

The question was taken; and (two-thirds being in the affirmative) the

rules were suspended and the bill, as amended, was passed.

A motion to reconsider was laid on the table.

#### DR. OTIS BOWEN VETERAN HOUSE

Mrs. BROOKS of Indiana. Mr. Speaker, I move to suspend the rules and pass the bill (H.R. 5509) to name the Department of Veterans Affairs temporary lodging facility in Indianapolis, Indiana, as the "Dr. Otis Bowen Veteran House".

The Clerk read the title of the bill.

The text of the bill is as follows:

H.R. 5509

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

#### SECTION 1. NAME OF DEPARTMENT OF VETERANS AFFAIRS TEMPORARY LODGING FACILITY, INDIANAPOLIS, INDIANA.

The Department of Veterans Affairs temporary lodging facility in Indianapolis, Indiana, shall after the date of the enactment of this Act be known and designated as the "Dr. Otis Bowen Veteran House". Any reference to such temporary lodging facility in any law, regulation, map, document, record, or other paper of the United States shall be considered to be a reference to the Dr. Otis Bowen Veteran House.

The SPEAKER pro tempore. Pursuant to the rule, the gentlewoman from Indiana (Mrs. BROOKS) and the gentleman from California (Mr. TAKANO) each will control 20 minutes.

The Chair recognizes the gentlewoman from Indiana.

#### GENERAL LEAVE

Mrs. BROOKS of Indiana. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and insert extraneous materials in the RECORD on the bill.

The SPEAKER pro tempore. Is there objection to the request of the gentlewoman from Indiana?

There was no objection.

Mrs. BROOKS of Indiana. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, I rise today in support of H.R. 5509, which will formally rename the home for families of veterans undergoing medical treatment in Indianapolis as the Dr. Otis Bowen Veteran House. Passing this bill today is the least we can do to repay an individual who gave so much of himself to serving our Nation, to providing care to his neighbors as a family physician, and to supporting our veterans.

As a lifelong Hoosier, Dr. Bowen was born and raised in Indiana and later went on to receive his bachelor's and his medical degree from Indiana University. As a newly minted doctor, "Doc," as he became known, courageously served in the U.S. Army from 1943 to 1946. During his service in World War II, he bravely tended wounded servicemen during the first wave of Allied troops in the invasion of Okinawa in 1945.

After serving his country, Doc Bowen came home to Indiana and set up a

family medical practice in his hometown of Bremen, Indiana. During his 26 years of private practice, he delivered over 3,000 babies in a town with a population of just over 4,500 people.

It was during this time that he also became involved with Indiana politics. Rising all the way from local coroner to speaker of the Indiana House of Representatives and, eventually, one of our State's most popular Governors, Doc Bowen consistently won the trust and respect of Hoosiers with his patented bedside manner.

As Governor, Doc Bowen drew upon his war experiences as a combat physician to improve healthcare services in Indiana by pioneering a statewide emergency medical services system.

Upon leaving office in 1981, Doc Bowen served as a professor of medicine and director of undergraduate medical practice education at the IU Medical Center in Indianapolis.

Doc Bowen returned to public service in 1985, when he answered the call of President Ronald Reagan to become the first doctor to serve as Secretary of the Department of Health and Human Services. There he spearheaded the Federal Government's response to the spread of AIDS, promoted public awareness of the dangers of the disease, and worked toward its eradication.

Throughout his career, Doc Bowen was active in our community as a force for good and advocate for others. Most notably, Doc Bowen was an active member of the American Legion post in Bremen for 59 years. He was also a member of the VFW, the American Medical Association, and he sat on the board of the Lilly Endowment, a philanthropic organization based in Indianapolis.

Through Doc Bowen's leadership on the Board of the Lilly Endowment, the Richard L. Roudebush Department of Veterans Affairs Medical Center secured a \$9.9 million charitable grant to construct a home for the families of veterans undergoing surgery at the center.

As a doctor, Doc Bowen knew that love is a vital component of the healing process and that a family can't dedicate their time and energy to the recovery process when they have to worry about where their next meal might be coming from or where they might lay their heads at night while visiting their family members at the hospital.

Unfortunately, in 2013, Doc Bowen passed away at the age of 95. Throughout his career, he touched so many Hoosiers and always worked to enrich the lives of others through selfless sacrifice, hard work, and dedication. The eulogy of Pastor Rhode at his funeral summed up Doc's life most eloquently when he said: "He only sought to work for others. He took the talents and gifts God gave him and used them to his fullest."

□ 1930

This is a lesson we all can learn from and is the reason I am proud to support