

116TH CONGRESS  
2D SESSION

# S. 3712

To require the Secretary of Commerce to establish national cybersecurity grand challenges, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

MAY 13, 2020

Mr. WICKER (for himself, Ms. ROSEN, and Mr. GARDNER) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To require the Secretary of Commerce to establish national cybersecurity grand challenges, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Cybersecurity Competi-  
5 tions to Yield Better Efforts to Research the Latest Ex-  
6 ceptionally Advanced Problems Act of 2020” or the  
7 “Cyber Leap Act of 2020”.

1 **SEC. 2. NATIONAL CYBERSECURITY GRAND CHALLENGES.**

2 (a) IN GENERAL.—Title II of the Cybersecurity En-  
 3 hancement Act of 2014 (15 U.S.C. 7431 et seq.) is amend-  
 4 ed by adding at the end the following:

5 **“SEC. 205. NATIONAL CYBERSECURITY GRAND CHAL-**  
 6 **LENGES.**

7 “(a) ESTABLISHMENT OF NATIONAL CYBERSECUC-  
 8 RITY GRAND CHALLENGES.—

9 “(1) IN GENERAL.—To achieve high-priority  
 10 breakthroughs in cybersecurity by 2028, the Sec-  
 11 retary of Commerce shall establish the following na-  
 12 tional cybersecurity grand challenges:

13 “(A) ECONOMICS OF A CYBER ATTACK.—  
 14 Building more resilient systems that measur-  
 15 ably and exponentially raise adversary costs of  
 16 carrying out common cyber attacks.

17 “(B) CYBER TRAINING.—

18 “(i) Empowering the people of the  
 19 United States with an appropriate and  
 20 measurably sufficient level of digital lit-  
 21 eracy to make safe and secure decisions  
 22 online.

23 “(ii) Developing a cybersecurity work-  
 24 force with measurable skills to protect and  
 25 maintain information systems.

1           “(C) EMERGING TECHNOLOGY.—Advanc-  
2           ing cybersecurity efforts in response to emerg-  
3           ing technology, such as artificial intelligence,  
4           quantum science, and next generation commu-  
5           nications technologies.

6           “(D) REIMAGINING DIGITAL IDENTITY.—  
7           Maintaining a high sense of usability while im-  
8           proving the security and safety of online activ-  
9           ity of individuals in the United States.

10          “(E) FEDERAL AGENCY RESILIENCE.—Re-  
11          ducing cybersecurity risks to Federal networks  
12          and systems, and improving the response of  
13          Federal agencies to cybersecurity incidents on  
14          such networks and systems.

15          “(F) OTHER CHALLENGES.—Such other  
16          challenges as the Secretary of Commerce con-  
17          siders appropriate to achieve high-priority  
18          breakthroughs in cybersecurity.

19          “(2) CONSIDERATIONS.—In carrying out para-  
20          graph (1), the Secretary shall consider the rec-  
21          ommendations set forth in the report of the National  
22          Security Telecommunications Advisory Committee  
23          entitled ‘NSTAC Report to the President on a Cy-  
24          bersecurity Moonshot’ and dated November 14,  
25          2018.

1       “(b) PURSUIT OF NATIONAL CYBERSECURITY  
2 GRAND CHALLENGES.—

3               “(1) IN GENERAL.—Not later than 180 days  
4 after the date of the enactment of the Cybersecurity  
5 Competitions to Yield Better Efforts to Research the  
6 Latest Exceptionally Advanced Problems Act of  
7 2020, the Secretary, acting through the Under Sec-  
8 retary of Commerce for Standards and Technology,  
9 shall commence efforts to pursue the national cyber-  
10 security grand challenges established under sub-  
11 section (a).

12              “(2) COMPETITIONS.—The efforts required by  
13 paragraph (1) shall include carrying out programs to  
14 award prizes, including cash and noncash prizes,  
15 competitively pursuant to the authorities and proc-  
16 esses established under section 24 of the Stevenson-  
17 Wydler Technology Innovation Act of 1980 (15  
18 U.S.C. 3719) or any other applicable provision of  
19 law.

20              “(3) ADDITIONAL AUTHORITIES.—In carrying  
21 out paragraph (1), the Secretary may enter into and  
22 perform such other transactions as the Secretary  
23 considers necessary and on such terms as the Sec-  
24 retary considers appropriate.

1           “(4) COORDINATION.—In pursuing national cy-  
2       bersecurity grand challenges under paragraph (1),  
3       the Secretary shall coordinate with the following:

4           “(A) The Director of the National Science  
5       Foundation.

6           “(B) The Director of the Cybersecurity  
7       and Infrastructure Security Agency.

8           “(C) The Director of the Defense Ad-  
9       vanced Research Projects Agency.

10          “(D) The Director of the Office of Science  
11       and Technology Policy.

12          “(E) The Director of the Office of Man-  
13       agement and Budget.

14          “(F) The Administrator of the General  
15       Services Administration.

16          “(G) The Federal Trade Commission.

17          “(H) The heads of such other Federal  
18       agencies as the Secretary of Commerce con-  
19       siders appropriate for purposes of this section.

20          “(5) SOLICITATION OF ACCEPTANCE OF  
21       FUNDS.—Pursuant to section 24 of the Stevenson-  
22       Wydler Technology Innovation Act of 1980 (15  
23       U.S.C. 3719), the Secretary shall request and accept  
24       funds from other Federal agencies, State, United  
25       States territory, local, or tribal government agencies,

private sector for-profit entities, and nonprofit entities to support efforts to pursue a national cybersecurity grand challenge under this section.

“(c) RECOMMENDATIONS.—

“(1) IN GENERAL.—In carrying out this section, the Secretary of Commerce shall designate an advisory council to seek recommendations.

“(2) ELEMENTS.—The recommendations required by paragraph (1) shall include the following:

“(A) A scope for efforts carried out under subsection (b).

“(B) Metrics to assess submissions for prizes under competitions carried out under subsection (b) as the submissions pertain to the national cybersecurity grand challenges established under subsection (a).”.

(b) CONFORMING AMENDMENTS.—Section 201(a)(1) of such Act is amended—

(1) in subparagraph (J), by striking “; and” and inserting a semicolon;

(2) by redesignating subparagraph (K) as subparagraph (L); and

(3) by inserting after subparagraph (J) the following:

1                   “(K) implementation of section 205  
2                   through research and development on the topics  
3                   identified under subsection (a) of such section;  
4                   and”.

5           (c) CLERICAL AMENDMENT.—The table of contents  
6 in section 1(b) of such Act is amended by inserting after  
7 the item relating to section 204 the following:

“Sec. 205. National Cybersecurity Grand Challenges.”.

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