

111TH CONGRESS
2^D SESSION

H. R. 5132

To require the Director of the National Institute of Standards and Technology to establish a research initiative to support the development of technical standards and conformance architecture to improve emergency communication and tracking technologies for use in locating trapped individuals in confined spaces and other shielded environments where conventional radio communication is limited, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 22, 2010

Mr. MATHESON introduced the following bill; which was referred to the Committee on Science and Technology

A BILL

To require the Director of the National Institute of Standards and Technology to establish a research initiative to support the development of technical standards and conformance architecture to improve emergency communication and tracking technologies for use in locating trapped individuals in confined spaces and other shielded environments where conventional radio communication is limited, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Mine Communications
3 Technology Innovation Act of 2010”.

4 **SEC. 2. FINDINGS.**

5 The Congress finds the following:

6 (1) The properties of confined spaces, such as
7 underground mines, and shielded environments, such
8 as high-rise buildings or collapsed structures, limit
9 conventional radio communication capabilities. For
10 instance, in coal mines, very low power radio waves
11 must propagate through dense, absorptive materials.
12 Radio waves also often cannot reach through dense
13 rubble or penetrate multiple stories of concrete and
14 steel.

15 (2) The April 2010 coal mine disaster in West
16 Virginia illustrated how available emergency commu-
17 nication and tracking technologies did not function
18 when they were needed most to locate victims of the
19 disaster.

20 (3) Developing measurement protocols, tech-
21 nical standards, testing, and verification capabilities
22 can bring greater assurance that emergency commu-
23 nication and tracking technologies used in confined
24 spaces and shielded environments will function as in-
25 tended in all situations.

1 operation and reliability of such emergency commu-
2 nication and tracking technologies.

3 (c) REPORT.—Not later than 18 months after the
4 date of enactment of this Act, the Director shall submit
5 to Congress and make publicly available a report describ-
6 ing the assessment performed under subsection (b)(1) and
7 making recommendations about research priorities to ad-
8 dress gaps in the measurement, technical standards, and
9 conformity assessment needs identified by such assess-
10 ment.

11 (d) DEFINITIONS.—In this section:

12 (1) DIRECTOR.—The term “Director” means
13 the Director of the National Institute of Standards
14 and Technology.

15 (2) FEDERAL AGENCY.—The term “Federal
16 agency” has the meaning given such term in section
17 4 of the Stevenson-Wydler Technology Innovation
18 Act of 1980 (15 U.S.C. 3703).

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