Act of 2002 (Public Law 107–296) [6 U.S.C. 441 et seq.], as appropriate.

# (b) Purpose

The purpose of the program is to assist eligible grant recipients under this Act and others, as appropriate, to purchase and use the best technology and equipment available to meet the security needs of the Nation's surface transportation system.

# (c) Coordination

The Secretary shall ensure that the program established under this section makes use of and is consistent with other Department technology testing, information sharing, evaluation, and standards-setting programs, as appropriate.

(Pub. L. 110-53, title XIII, §1305, Aug. 3, 2007, 121 Stat. 394.)

### **Editorial Notes**

#### References in Text

The Support Anti-Terrorism by Fostering Effective Technologies Act of 2002, referred to in subsec. (a)(2), is subtitle G ( $\S$  861-865) of title VIII of Pub. L. 107-296, Nov. 25, 2002, 116 Stat. 2238, also known as the SAFETY Act, which is classified generally to part G ( $\S$  441 et seq.) of subchapter VIII of chapter 1 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 101 of this title and Tables.

This Act, referred to in subsec. (b), is Pub. L. 110-53, Aug. 3, 2007, 121 Stat. 266, known as the Implementing Recommendations of the 9/11 Commission Act of 2007, which enacted this chapter and enacted and amended numerous other sections and notes in the Code. For complete classification of this Act to the Code, see Short Title of 2007 Amendment note set out under section 101 of this title and Tables.

#### §1115. TSA personnel limitations

Any statutory limitation on the number of employees in the Transportation Security Administration does not apply to employees carrying out this chapter.

(Pub. L. 110-53, title XIII, §1306, Aug. 3, 2007, 121 Stat. 395.)

#### **Editorial Notes**

#### References in Text

This chapter, referred to in text, was in the original a reference to titles XII, XIII, XIV, and XV of Pub. L. 110-53, which enacted this chapter, amended section 1992 of Title 18, Crimes and Criminal Procedure, section 70105 of Title 46, Shipping, and sections 114, 5103a, 14504, 20106, 20109, 24301, 28101, 31105, and 46301 of Title 49, Transportation, enacted provisions set out as notes under section 1101 of this title and sections 114, 13908, and 14504 of Title 49, and amended provisions set out as a note under section 14504 of Title 49. For complete classification of titles XII to XV to the Code, see Tables.

# §1116. National explosives detection canine team training program

#### (a) Definitions

For purposes of this section, the term "explosives detection canine team" means a canine and a canine handler that are trained to detect explosives, radiological materials, chemical, nuclear or biological weapons, or other threats as defined by the Secretary.

# (b) In general

# (1) Increased capacity

Not later than 180 days after August 3, 2007, the Secretary of Homeland Security shall—

(A) begin to increase the number of explosives detection canine teams certified by the Transportation Security Administration for the purposes of transportation-related security by up to 200 canine teams annually by the end of 2010; and

(B) encourage State, local, and tribal governments and private owners of high-risk transportation facilities to strengthen security through the use of highly trained explosives detection canine teams.

# (2) Explosives detection canine teams

The Secretary of Homeland Security shall increase the number of explosives detection canine teams by—

(A) using the Transportation Security Administration's National Explosives Detection Canine Team Training Center, including expanding and upgrading existing facilities, procuring and breeding additional canines, and increasing staffing and oversight commensurate with the increased training and deployment capabilities;

(B) partnering with other Federal, State, or local agencies, nonprofit organizations, universities, or the private sector to increase the training capacity for canine detection teams;

(C) procuring explosives detection canines trained by nonprofit organizations, universities, or the private sector provided they are trained in a manner consistent with the standards and requirements developed pursuant to subsection (c) or other criteria developed by the Secretary; or

(D) a combination of subparagraphs (A), (B), and (C), as appropriate.

# (c) Standards for explosives detection canine teams

# (1) In general

Based on the feasibility in meeting the ongoing demand for quality explosives detection canine teams, the Secretary shall establish criteria, including canine training curricula, performance standards, and other requirements approved by the Transportation Security Administration necessary to ensure that explosives detection canine teams trained by nonprofit organizations, universities, and private sector entities are adequately trained and maintained.

# (2) Expansion

In developing and implementing such curriculum, performance standards, and other requirements, the Secretary shall—

(A) coordinate with key stakeholders, including international, Federal, State, and local officials, and private sector and academic entities to develop best practice guidelines for such a standardized program, as appropriate;

(B) require that explosives detection canine teams trained by nonprofit organizations, universities, or private sector entities that are used or made available by the Secretary be trained consistent with specific training criteria developed by the Secretary; and

(C) review the status of the private sector programs on at least an annual basis to ensure compliance with training curricula, performance standards, and other requirements.

# (d) Deployment

The Secretary shall—

(1) use the additional explosives detection canine teams as part of the Department's efforts to strengthen security across the Nation's transportation network, and may use the canine teams on a more limited basis to support other homeland security missions, as determined appropriate by the Secretary;

(2) make available explosives detection canine teams to all modes of transportation, for high-risk areas or to address specific threats, on an as-needed basis and as otherwise determined appropriate by the Secretary;

(3) encourage, but not require, any transportation facility or system to deploy TSA-certified explosives detection canine teams developed under this section; and

(4) consider specific needs and training requirements for explosives detection canine teams to be deployed across the Nation's transportation network, including in venues of multiple modes of transportation, as appropriate.

#### (e) Canine procurement

The Secretary, acting through the Administrator of the Transportation Security Administration, shall work to ensure that explosives detection canine teams are procured as efficiently as possible and at the best price, while maintaining the needed level of quality, including, if appropriate, through increased domestic breeding.

#### (f) Study

Not later than 1 year after August 3, 2007, the Comptroller General shall report to the appropriate congressional committees on the utilization of explosives detection canine teams to strengthen security and the capacity of the national explosive detection canine team program.

# (g) Authorization

There are authorized to be appropriated to the Secretary such sums as may be necessary to carry out this section for fiscal years 2007 through 2011.

# (h) Third party canine teams for air cargo security

#### (1) In general

In order to enhance the screening of air cargo and ensure that third party explosives detection canine assets are leveraged for such purpose, the Administrator shall, not later than 180 days after October 5, 2018—

(A) develop and issue standards for the use of such third party explosives detection canine assets for the primary screening of air cargo;

(B) develop a process to identify qualified non-Federal entities that will certify canine

assets that meet the standards established by the Administrator under subparagraph (A);

(C) ensure that entities qualified to certify canine assets shall be independent from entities that will train and provide canines to end users of such canine assets;

(D) establish a system of Transportation Security Administration audits of the process developed under subparagraph (B); and

(E) provide that canines certified for the primary screening of air cargo can be used by air carriers, foreign air carriers, freight forwarders, and shippers.

#### (2) Implementation

Beginning on the date that the development of the process under paragraph (1)(B) is complete, the Administrator shall—

(A) facilitate the deployment of such assets that meet the certification standards of the Administration, as determined by the Administrator:

(B) make such standards available to vendors seeking to train and deploy third party explosives detection canine assets; and

(C) ensure that all costs for the training and certification of canines, and for the use of supplied canines, are borne by private industry and not the Federal Government.

# (3) Definitions

In this subsection:

#### (A) Air carrier

The term "air carrier" has the meaning given the term in section 40102 of title 49.

#### (B) Foreign air carrier

The term "foreign air carrier" has the meaning given the term in section 40102 of title 49.

# (C) Third party explosives detection canine asset

The term "third party explosives detection canine asset" means any explosives detection canine or handler not owned or employed, respectively, by the Transportation Security Administration.

(Pub. L. 110-53, title XIII, §1307, Aug. 3, 2007, 121 Stat. 395; Pub. L. 115-254, div. K, title I, §1941, Oct. 5, 2018, 132 Stat. 3582.)

### **Editorial Notes**

#### AMENDMENTS

2018-Subsec. (h). Pub. L. 115-254 added subsec. (h).

#### Statutory Notes and Related Subsidiaries

#### Public Area Security

Pub. L. 115-254, div. K, title I, §§ 1926-1929, Oct. 5, 2018, 132 Stat. 3564-3568, provided that:

"SEC. 1926. DEFINITIONS.

"In this subtitle [subtitle C (§§ 1926-1936) of title I of div. K of Pub. L. 115-254, amending section 1112 of this title and enacting provisions set out as notes under section 1112 of this title and sections 114 and 44903 of Title 49, Transportation]:

"(1) BEHAVIORAL STANDARDS.—The term 'behavioral standards' means standards for the evaluation of explosives detection working canines for certain factors, including canine temperament, work drive, suitability for training, environmental factors used in evaluations, and canine familiarity with natural or man-made surfaces or working conditions relevant to the canine's expected work area.

(2) MEDICAL STANDARDS.—The term 'medical standards' means standards for the evaluation of explosives detection working canines for certain factors, including canine health, management of heredity health conditions, breeding practices, genetics, pedigree, and long-term health tracking.

"(3) TECHNICAL STANDARDS.—The term 'technical standards' means standards for the evaluation of explosives detection working canines for certain factors, including canine search techniques, handler-canine communication, detection testing conditions and logistics, and learned explosive odor libraries.

"SEC. 1927. EXPLOSIVES DETECTION CANINE CA-PACITY BUILDING.

"(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act [Oct. 5, 2018], the Administrator [of the Transportation Security Administration] shall establish a working group to determine ways to support decentralized, non-Federal domestic canine breeding capacity to produce high quality explosives detection canines and modernize canine training standards.

"(b) WORKING GROUP COMPOSITION .- The working group established under subsection (a) shall be comprised of representatives from the following:

"(1) The TSA [Transportation Security Administration].

"(2) The Science and Technology Directorate of the Department [of Homeland Security].

'(3) National domestic canine associations with expertise in breeding and pedigree.

"(4) Universities with expertise related to explosives detection canines and canine breeding.

(5) Domestic canine breeders and vendors.

(c) CHAIRPERSONS.—The Administrator shall approve of 2 individuals from among the representatives of the working group specified in subsection (b) to serve as the Chairpersons of the working group as follows:

(1) One Chairperson shall be from an entity specified in paragraph (1) or (2) of that subsection.

(2) One Chairperson shall be from an entity specified in paragraph (3), (4), or (5) of that subsection.

"(d) PROPOSED STANDARDS AND RECOMMENDATIONS.-Not later than 180 days after the date the working group is established under subsection (a), the working group shall submit to the Administrator-

"(1) proposed behavioral standards, medical standards, and technical standards for domestic canine breeding and canine training described in that subsection; and

"(2) recommendations on how the TSA can engage stakeholders to further the development of such domestic non-Federal canine breeding capacity and training.

"(e) STRATEGY.-Not later than 180 days after the date the recommendations are submitted under subsection (d), the Administrator shall develop and submit to the appropriate committees of Congress [Committees on Commerce, Science and Transportation and Homeland Security and Governmental Affairs of the Senate and Committee on Homeland Security of the House of Representatives] a strategy for working with non-Federal stakeholders to facilitate expanded [sic] the domestic canine breeding capacity described in subsection (a), based on such recommendations.

(f) CONSULTATION.—In developing the strategy under subsection (e), the Administrator shall consult with the Under Secretary for Science and Technology of the Department [of Homeland Security], the Commissioner for U.S. Customs and Border Protection, the Director of the United States Secret Service, and the heads of such other Federal departments or agencies as the Administrator considers appropriate to incorporate, to the extent practicable, mission needs across the Department for an expanded non-Federal domestic explosives detection canine breeding capacity that can be leveraged to help meet the Department's operational needs.

"(g) TERMINATION.-The working group established under subsection (a) shall terminate on the date that the strategy is submitted under subsection (e), unless the Administrator extends the termination date for the purposes of section 1928.

"(h) NONAPPLICABILITY OF FEDERAL ADVISORY COM-MITTEE ACT.—The Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the working group established under this Act [see Short Title of 2018 Amendment note set out under section 40101 of Title 49].

SEC. 1928. THIRD PARTY DOMESTIC CANINES.

"(a) IN GENERAL.-Not later than 1 year after the date of enactment of this Act [Oct. 5, 2018], to enhance the efficiency and efficacy of transportation security by increasing the supply of canine teams for use by the TSA [Transportation Security Administration] and transportation stakeholders, the Administrator [of the Transportation Security Administration] shall develop and issue behavioral standards, medical standards, and technical standards, based on the recommendations of the working group under section 1927, that a third party explosives detection canine must satisfy to be certified for the screening of individuals and property, including detection of explosive vapors among individuals and articles of property, in public areas of an airport under section 44901 of title 49, United States Code. (b) AUGMENTING PUBLIC AREA SECURITY.-

(1) IN GENERAL.—The Administrator shall develop

guidance on the coordination of development and deployment of explosives detection canine teams for use by transportation stakeholders to enhance public area security at transportation hubs, including airports.

"(2) CONSULTATION.-In developing the guidance under paragraph (1), the Administrator shall consult with

"(A) the working group established under section 1927;

"(B) the officials responsible for carrying out section 1941 [amending this section]; and

``(C) such transportation stakeholders, canine providers, law enforcement, privacy groups, and transportation security providers as the Administrator considers relevant.

"(c) AGREEMENT.-Subject to subsections (d), (e), and (f), not later than 270 days after the issuance of standards under subsection (a), the Administrator shall, to the extent possible, enter into an agreement with at least 1 third party to test and certify the capabilities of canines in accordance with the standards under subsection (a).

"(d) EXPEDITED DEPLOYMENT.-In entering into an agreement under subsection (c), the Administrator shall use

"(1) the other transaction authority under section 114(m) of title 49, United States Code; or

(2) such other authority of the Administrator as the Administrator considers appropriate to expedite the deployment of additional canine teams.

"(e) PROCESS .- Before entering into an agreement under subsection (c), the Administrator shall-

"(1) evaluate and verify the third party's ability to effectively evaluate the capabilities of canines;

"(2) designate key elements required for appropriate evaluation venues where third parties may conduct testing: and

(3) periodically assess the program at evaluation centers to ensure the proficiency of the canines beyond the initial testing and certification by the third party.

(f) CONSULTATION.—To determine best practices for the use of third parties to test and certify the capabilities of canines, the Administrator shall consult with the following persons before entering into an agreement under subsection (c):

"(1) The Secretary of State.

"(2) The Secretary of Defense.

"(3) Non-profit organizations that train, certify, and provide the services of canines for various purposes.

"(4) Institutions of higher education with research programs related to use of canines for the screening of individuals and property, including detection of explosive vapors among individuals and articles of property. "(g) Third Party Explosives Detection Canine Pro-

VIDER LIST.

"(1) IN GENERAL.—Not later than 90 days after the date the Administrator enters into an agreement under subsection (c), the Administrator shall develop and maintain a list of the names of each third party from which the TSA procures explosive detection canines, including for each such third party the relevant contractual period of performance.

"(2) DISTRIBUTION.-The Administrator shall make the list under paragraph (1) available to appropriate transportation stakeholders in such form and manner as the Administrator prescribes.

"(h) OVERSIGHT.—The Administrator shall establish a process to ensure appropriate oversight of the certification program and compliance with the standards under subsection (a), including periodic audits of participating third parties.

"(i) AUTHORIZATION.

"(1) TSA.—The Administrator shall develop and implement a process for the TSA to procure third party explosives detection canines certified under this section.

"(2) AVIATION STAKEHOLDERS.—

"(A) IN GENERAL.-The Administrator shall authorize an aviation stakeholder, under the oversight of and in coordination with the Federal Security Director at an applicable airport, to contract with, procure or purchase, and deploy one or more third party explosives detection canines certified under this section to augment public area security at that airport.

"(B) APPLICABLE LARGE HUB AIRPORTS.-

"(i) IN GENERAL.-Except as provided under subparagraph [clause] (ii), notwithstanding any law to the contrary, and subject to the other provisions of this paragraph, an applicable large hub airport may provide a certified canine described in subparagraph (A) on an in-kind basis to the TSA to be deployed as a passenger screening canine at that airport unless the applicable large hub airport consents to the use of that certified canine elsewhere.

(ii) EXCEPTION.—The Administrator may, on a case-by-case basis, deploy a certified canine described in subparagraph (A) to a transportation facility other than the applicable large hub airport described in clause (i) for not more than 90 days per year if the Administrator-

(I) determines that such deployment is necessary to meet operational or security needs; and

"(II) notifies the applicable large hub airport described in clause (i).

"(iii) NONDEPLOYABLE CANINES.-Any certified canine provided to the TSA under clause (i) that does not complete training for deployment under that clause shall be the responsibility of the large hub airport unless the TSA agrees to a different outcome.

"(C) HANDLERS.—Not later than 30 days before a canine begins training to become a certified canine under subparagraph (B), the airport shall notify the TSA of such training and the Administrator shall assign a TSA canine handler to participate in the training with that canine, as appropriate.

(D) LIMITATION.—The Administrator may not reduce the staffing allocation model for an applicable large hub airport based on that airport's provision of a certified canine under this paragraph.

"(j) DEFINITIONS.—In this section:

(1) APPLICABLE LARGE HUB AIRPORT.—The term 'applicable large hub airport' means a large hub airport (as defined in section 40102 of title 49, United States Code) that has less than 100 percent of the allocated passenger screening canine teams staffed by the TSA.

"(2) AVIATION STAKEHOLDER.—The term 'aviation stakeholder' includes an airport, airport operator, and air carrier.

"SEC. 1929. TRACKING AND MONITORING OF CA-NINE TRAINING AND TESTING.

'Not later than 180 days after the date of enactment of this Act [Oct. 5, 2018], the Administrator [of the Transportation Security Administration] shall use, to the extent practicable, a digital monitoring system for all training, testing, and validation or certification of public and private canine assets utilized or funded by the TSA [Transportation Security Administration] to facilitate improved review, data analysis, and record keeping of canine testing performance and program administration.'

#### EXPANSION OF NATIONAL EXPLOSIVES DETECTION CANINE TEAM PROGRAM

Pub. L. 115-254, div. K, title I, §1971, Oct. 5, 2018, 132 Stat. 3613, provided that:

"(a) IN GENERAL.-The Secretary [of Homeland Security], where appropriate, shall encourage State, local, and tribal governments and private owners of high-risk transportation facilities to strengthen security through the use of explosives detection canine teams.

(b) INCREASED CAPACITY.-

"(1) IN GENERAL.-Before the date the Inspector General of the Department [of Homeland Security] submits the report under section 1970 [132 Stat. 3612], the Administrator [of the Transportation Security Administration] may increase the number of State and local surface and maritime transportation canines by not more than 70 explosives detection canine teams.

"(2) ADDITIONAL TEAMS.—Beginning on the date the Inspector General of the Department submits the report under section 1970, the Secretary may increase the State and local surface and maritime transportation canines up to 200 explosives detection canine teams unless more are identified in the risk-based surface transportation security strategy under section 1964 [enacting provisions set out as a note under section 114 of Title 49, Transportation], consistent with section 1965 [enacting provisions set out as a note under section 114 of Title 49] or with the President's most recent budget submitted under section 1105 of title 31, United States Code.

"(3) RECOMMENDATIONS.—Before initiating any increase in the number of explosives detection teams under paragraph (2), the Secretary shall consider any recommendations in the report under section 1970 on the efficacy and management of the explosives detection canine program.

"(c) DEPLOYMENT.-The Secretary shall-

(1) use the additional explosives detection canine teams, as described in subsection (b)(1), as part of the Department's efforts to strengthen security across the Nation's surface and maritime transportation networks:

"(2) make available explosives detection canine teams to all modes of transportation, subject to the requirements under section 1968 [amending section 1112 of this title and enacting provisions set out as a note under section 114 of Title 49], to address specific vulnerabilities or risks, on an as-needed basis and as otherwise determined appropriate by the Secretary; and

"(3) consider specific needs and training requirements for explosives detection canine teams to be deployed across the Nation's surface and maritime transportation networks, including in venues of multiple modes of transportation, as the Secretary considers appropriate.

"(d) AUTHORIZATION.—There are authorized to be appropriated to the Secretary to the extent of appropriations to carry out this section for each of fiscal years 2019 through 2021."

[For definition of "explosives detection canine teams" as used in section 1971 of Pub. L. 115-254, set out above, see section 1902 of Pub. L. 115-254, set out as a note under section 101 of Title 49, Transportation.]

# §1117. Roles of the Department of Homeland Security and the Department of Transportation

The Secretary of Homeland Security is the principal Federal official responsible for transportation security. The roles and responsibilities of the Department of Homeland Security and the Department of Transportation in carrying out this chapter are the roles and responsibilities of such Departments pursuant to the Aviation and Transportation Security Act (Public Law 107-71); the Intelligence Reform and Terrorism Prevention Act of 2004 (Public Law 108-458); the National Infrastructure Protection Plan required by Homeland Security Presidential Directive-7; The<sup>1</sup> Homeland Security Act of 2002 [6 U.S.C. 101 et seq.]; The<sup>1</sup> National Response Plan; Executive Order No. 13416: Strengthening Surface Transportation Security, dated December 5, 2006; the Memorandum of Understanding between the Department and the Department of Transportation on Roles and Responsibilities, dated September 28, 2004, and any and all subsequent annexes to this Memorandum of Understanding; and any other relevant agreements between the two Departments.

(Pub. L. 110-53, title XIII, §1310, Aug. 3, 2007, 121 Stat. 400.)

# **Editorial Notes**

#### References in Text

This chapter, referred to in text, was in the original a reference to titles XII, XIII, XIV, and XV of Pub. L. 110-53, which enacted this chapter, amended section 1992 of Title 18, Crimes and Criminal Procedure, section 70105 of Title 46, Shipping, and sections 114, 5103a, 14504, 20106, 20109, 24301, 28101, 31105, and 46301 of Title 49, Transportation, enacted provisions set out as notes under section 1101 of this title and sections 114, 13908, and 14504 of Title 49, and amended provisions set out as a note under section 14504 of Title 49. For complete classification of titles XII to XV to the Code, see Tables.

The Aviation and Transportation Security Act, referred to in text, is Pub. L. 107-71, Nov. 19, 2001, 115 Stat. 597. For complete classification of this Act to the Code, see Short Title of 2001 Amendment note set out under section 40101 of Title 49, Transportation, and Tables.

The Intelligence Reform and Terrorism Prevention Act of 2004, referred to in text, is Pub. L. 108-458, Dec. 17, 2004, 118 Stat. 3638. For complete classification of this Act to the Code, see Tables.

The Homeland Security Act of 2002, referred to in text, is Pub. L. 107–296, Nov. 25, 2002, 116 Stat. 2135, which is classified principally to chapter 1 (§ 101 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 101 of this title and Tables.

Executive Order No. 13416, referred to in text, is set out as a note under section 1101 of this title.

### §1118. Biometrics expansion

# (a) In general

The Administrator and the Commissioner of U.S. Customs and Border Protection shall consult with each other on the deployment of biometric technologies.

# (b) Rule of construction

Nothing in this section shall be construed to permit the Commissioner of U.S. Customs and Border Protection to facilitate or expand the deployment of biometric technologies, or otherwise collect, use, or retain biometrics, not authorized by any provision of or amendment made by the Intelligence Reform and Terrorism Prevention Act of 2004 (Public Law 108-458; 118 Stat. 3638) or the Implementing Recommendations of the 9/11 Commission Act of 2007 (Public Law 110-53; 121 Stat. 266).

#### (c) Report required

Not later than 270 days after October 5, 2018, the Secretary shall submit to the appropriate committees of Congress, and to any Member of Congress upon the request of that Member, a report that includes specific assessments from the Administrator and the Commissioner of U.S. Customs and Border Protection with respect to the following:

(1) The operational and security impact of using biometric technology to identify travelers.

(2) The potential effects on privacy of the expansion of the use of biometric technology under paragraph (1), including methods proposed or implemented to mitigate any risks to privacy identified by the Administrator or the Commissioner related to the active or passive collection of biometric data.

(3) Methods to analyze and address any matching performance errors related to race, gender, or age identified by the Administrator with respect to the use of biometric technology, including the deployment of facial recognition technology;<sup>1</sup>

(4) With respect to the biometric entry-exit program, the following:

(A) Assessments of-

(i) the error rates, including the rates of false positives and false negatives, and accuracy of biometric technologies;

(ii) the effects of biometric technologies, to ensure that such technologies do not unduly burden categories of travelers, such as a certain race, gender, or nationality;

(iii) the extent to which and how biometric technologies could address instances of travelers to the United States overstaying their visas, including—

(I) an estimate of how often biometric matches are contained in an existing database:

(II) an estimate of the rate at which travelers using fraudulent credentials identifications are accurately rejected; and

(III) an assessment of what percentage of the detection of fraudulent identifications could have been accomplished using conventional methods;

<sup>&</sup>lt;sup>1</sup>So in original. Probably should not be capitalized.

<sup>&</sup>lt;sup>1</sup>So in original. The semicolon probably should be a period.