



Department of Defense INSTRUCTION

NUMBER 5535.8

May 14, 1999

DDR&E

SUBJECT: DoD Technology Transfer (T2) Program

- References: (a) [DoD Directive 5535.3](#), "Department of Defense Technology Transfer (T2) Program," May 21, 1999
- (b) [DoD 5025.1-M](#), "DoD Directives System Procedures," August 1994, authorized by [DoD Directive 5025.1](#), June 24, 1994
- (c) Sections 2501, 2506, 2514, 2516, 2358, 2371, 2194, 2195 of title 10, United States Code
- (d) Sections 3702, 3703, 3705, 3706, 3710, 3712, 3715 of title 15, United States Code
- (e) through (o), see enclosure 1

1. PURPOSE

This Instruction:

1.1. Implements policy, assigns responsibilities, and prescribes procedures under reference (a) for implementation of T2 programs.

1.2. Authorizes issuance of DoD 5535.8-H, in accordance with reference (b).

2. APPLICABILITY

This Instruction applies to the Office of the Secretary of Defense (OSD), the Military Departments, the Defense Agencies, and the DoD Field Activities (hereafter referred to collectively as "the DoD Components").

3. DEFINITIONS

Terms used in this Instruction are defined in enclosure 2.

4. POLICY

It is DoD policy under DoD Directive 5535.3 (reference (a)) that, consistent with U.S. security objectives set out at 10 U.S.C. 2501 (reference (c)), T2 activities shall be an integral element of the DoD national security mission, a high-priority role in all DoD acquisition programs, and recognized as a key activity of the DoD laboratories and/or technical activities and all other DoD activities that may make use of or contribute to T2.

5. RESPONSIBILITIES

5.1. The Director, Defense Research and Engineering, under the Under Secretary of Defense for Acquisition and Technology, shall monitor compliance with this Instruction and DoD Directive 5535.3 (reference (a)).

5.2. The Deputy Director, Defense Research and Engineering, Technology Transition, shall:

5.2.1. Fulfill requirements in 10 U.S.C. 2515 (reference (c)), to:

5.2.1.1. Monitor all DoD research and development (R&D) activities.

5.2.1.2. Identify R&D activities using technologies and technology advancements that have potential non-DoD commercial application.

5.2.1.3. Serve as a clearinghouse for, coordinate, and otherwise facilitate T2 to the private sector.

5.2.1.4. Assist private firms to resolve problems involved with the transfer of technology from the Department of Defense.

5.2.1.5. Consult and coordinate with the other Federal Departments on matters involving T2.

5.2.2. Circumscribe core T2 science and technology (S&T) mechanisms for DoD Component investment. That procedure is prescribed in section 6., below.

5.2.3. Ensure effective and consistent application of U.S. and DoD guidance impacting the participation of foreign individuals and organizations in DoD T2 transactions.

5.2.4. Issue DoD 5535.8-H to provide common practices, procedures, and processes necessary to promote a uniform DoD approach to T2 between the Department of Defense and its partners.

5.3. The Secretaries of the Military Departments and the Heads of the Other DoD Components, including the Directors of the Defense Agencies, under the OSD Principal Staff Assistants, shall be responsible for:

5.3.1. Accomplishing T2 in their organizations, as defined in DoD Directive 5535.3, subsection 5.2. (reference (a)).

5.3.2. Ensuring that all DoD laboratories and/or technical activities, as defined in 15 U.S.C. 3710a(d)(2) (reference (d)), and all other organizations capable of supporting or making use of T2, shall make T2 a high priority in accomplishing their programs.

6. PROCEDURES

6.1. The DoD Components may participate in, and shall support, Federal S&T T2 programs. That includes, but is not limited to, the following:

6.1.1. Each DoD Component shall transfer funds to the National Institute of Standards and Technology to support the Federal Laboratory Consortium (FLC), as required in 15 U.S.C. 3710e(7)(A)-3710e(7)(C) (reference (d)).

6.1.2. Federal resources such as the National Technology Transfer Center and the Regional Technology Transfer Centers managed through the National Aeronautics and Space Administration and the National Technical Information Service may be used, when applicable.

6.1.3. Ongoing programs or projects supporting U.S. initiatives such as the Partnership for a New Generation Vehicle are encouraged.

6.1.4. Laboratory personnel are encouraged to participate in conferences, seminars, workshops, and other mission-related technical activities of interest due to the mission of the particular laboratory.

6.1.5. Collaborative efforts between the DoD laboratories and/or technical activities or between DoD laboratories and other Federal Agency activities are encouraged.

6.2. The DoD Components are encouraged to use any combinations of spin-off, dual-use, and spin-on mechanisms that are most effective for accomplishment of T2 objectives.

6.2.1. T2 ensures DoD programs make the best possible use of national scientific and technical capabilities to enhance the effectiveness of DoD forces and systems. Commercial availability of DoD-developed technologies can be expected to lower the costs of acquiring military equipment by providing the opportunity to take advantage of economies of scale and buy from a larger commercial industrial base. The following mechanisms are core DoD T2 mechanisms and as such should be part of DoD Components' investment strategies. The list, while extensive, is not meant to be exclusive of other mechanisms.

6.2.1.1. Cooperative Research and Development Agreements - CRADAs should be used whenever possible to expand capabilities for R&D and to transfer technology developed jointly or independently to enhance both defense capabilities and the civilian economy. The cost and expense of development, negotiation, and implementation of CRADAs should be funded from laboratory resources.

6.2.1.2. Other core T2 mechanisms include, alphabetically: contracts, cooperative agreements, education partnerships, exchange of personnel, exchange of technical data, grants, other transactions, partnerships with universities, patenting, patent license agreements and other intellectual property licensing agreements, presentations of technical papers, technical assistance, and technology assessments.

6.2.2. That recommendation aligns DoD T2 with other elements in the DoD new acquisition strategy, which gives greater emphasis to dual-use technology development and spin-on from the private sector. Several considerations, which are also relevant for T2, have prompted that new strategy. Affordability is a key consideration in weapon system acquisition and sustainment, where the commercial acquisition of products provides economies of scale and resulting cost savings. The

Department of Defense frequently will benefit from making DoD-developed technologies available to the commercial sector so that subsequent DoD acquisitions may benefit from such economies of scale.

6.2.3. Dual-use and spin-on also take advantage of the strategic advantages inherent in the U.S. civilian economy and technology base. A DoD-unique acquisition strategy may result in the fielding of obsolescent systems.

6.2.4. The increased attention being given to dual-use and spin-on does not mean that there is no longer an important role for in-house research, development, test, and evaluation (RDT&E) in the DoD Components. Some technologies are unique to the DoD missions. Some technological capabilities may be adapted to make them fully suitable for DoD applications. Despite those considerations, there has been a change in emphasis. The DoD Components are encouraged to experiment with new dual-use and spin-on mechanisms in T2.

6.3. The Heads of the DoD laboratories and/or technical activities, as defined in enclosure 2, shall prepare, with the business planning processes of their organizations, a T2 business plan that describes how the responsibilities prescribed in the DoD Directive 5535.3, paragraphs 5.2.1. through 5.2.14. (reference (a)), have been addressed for the current year. Those plans shall identify the activities for the year ahead and describe efforts to make improvements in that program.

6.4. To accomplish its role, the Director, Defense Research and Engineering (DDR&E), as the central authority and clearinghouse for DoD T2, requires various reports from the DoD Components. Those reports include, but are not limited to, the OMB Circular A-11 (reference (e)) report, the Defense T2 Information System (DTTIS) reports, and the DoD Component business plans. Those reports also help the DDR&E highlight DoD T2 successes as part of the reporting requirements to the Congress. Details on the DTTIS and other reporting requirements are in section 7., below, and in separate DDR&E issuances.

6.5. DoD Directive 5535.3 (reference (a)) requires that the Heads of the DoD Components shall develop personnel policies for R&D executives, managers, laboratory directors, scientists, and engineers that make T2 a critical element for position descriptions, job performance appraisals, and promotions. They are also required to ensure that members of the Office of Research and Technology Applications (ORTA) staff are included in the overall laboratory and/or Agency and/or DoD Field Activity management development programs. Procedures to accomplish that include, but are not limited to, the following:

6.5.1. Including statements in personnel position descriptions similar to those found in enclosure 3.

6.5.2. Including identification of critical factors for consideration in promotions for T2 personnel in the T2 business plans of the DoD Components.

6.5.3. Providing incentives for ORTA personnel such as training or future job assignments, as an incentive to attract the best people to those positions.

6.5.4. Making knowledge of T2 a required knowledge, skill, and ability for all laboratory scientific or engineering job announcements.

6.6. The implementation and execution of a viable T2 program requires education and training of personnel, including all scientists and engineers, and other personnel who may be involved in T2. All the DoD Components are encouraged to institute applicable organization-wide T2 training programs that provide personnel with the requisite knowledge base and skills. Some sources of training include the FLC, the NTTC, the Technology Transfer Society, the Association of University Technology Managers, colleges and universities, and other professional organizations.

6.7. Under the authorities of 15 U.S.C. 3710b and DoD 1400.25-M (references (d) and (f)), the Deputy DDR&E, recognizes S&T T2 achievements through a variety of mechanisms, including monetary rewards to DoD winners of FLC awards.

6.7.1. DoD recipients of FLC awards may receive a cash award. The amount may be provided to one Federal employee or appropriately divided if there is more than one Federal employee for each organization. When notified, the DoD Components shall provide the names of their FLC award recipient(s) to the ODDR&E. If cash awards are available, they shall be provided through personnel pay system disbursements.

6.7.2. Letters of appreciation and other forms of recognition may be issued for specific T2 accomplishments. Such honorary awards may be presented to individuals and teams, which may include Federal employees as well as non-Federal employees, who shall have made exceptional achievements in T2.

6.8. Patents are one of the original instruments of T2 and represent one of the clearest means to characterize an innovation and to describe how it may be of benefit to the user. Procedures for protecting intellectual property shall include the following:

6.8.1. Evaluation of inventions arising from R&D efforts.

6.8.2. Filing and prosecuting patent applications for those inventions selected as having sufficient benefit to justify obtaining patent protection.

6.8.3. Determination of which patents shall remain enforceable through payment of required maintenance fees.

6.8.4. Providing for payment of costs and expenses to acquire and maintain patents and other intellectual property from the program elements funds, overhead accounts, royalties or other payments, or other sources, as applicable, of the DoD Components. That does not preclude collaborating parties from paying costs and expenses associated with intellectual property rights.

6.9. Distribution of royalties and other payments received by the DoD Components.

6.9.1. Royalties or other payments received on account of any invention licensed by a DoD Component shall be payable to the inventor or each co-inventor, as prescribed in the remainder of this paragraph. The DoD Component shall pay to the inventor or each co-inventor each year, at least \$2,000 plus equal shares of at least 20 percent of the remainder of the royalties or other payments. In the absence of extrinsic evidence that co-inventors made unequal contributions to the invention, subject to review and approval by the concerned legal counsel for the DoD Component, it shall be presumed that the co-inventors made equal contributions to the invention and are entitled to equal shares of the 20 percent remainder of the royalties or other payments. If the royalties or other payments received in any given year are less than or equal to \$2,000, or for co-inventors, less than or equal to \$2,000 times the number of inventors, the entire amount is paid to the inventor, or for co-inventors, the entire amount is divided equally among the co-inventors. The inventor or co-inventors shall receive their prescribed share of any royalties or other payments, as received by the Government on an annualized basis.

6.9.2. Royalties or other payments from inventions to any one person shall not exceed \$150,000 for each year without Presidential approval, as in 5 U.S.C. 4504 (reference (g)).

6.9.3. A DoD Component or subordinate laboratory, when authority is delegated, may provide applicable incentives from royalties or other payments, to laboratory employees who are not inventors or co-inventors of such inventions, but

who substantially increase the technical value of such inventions. When the incentive is in the form of a monetary payment, such payments may be at any level subject to the authority of the DoD Component or activity that approved the payment, but such payments shall not exceed the limits established in paragraphs 6.9.1. and 6.9.2., above. Payments may be on a one-time or annual basis, and they shall cease when the employee is no longer employed by that DoD Component.

6.9.4. Inventors shall be entitled to royalties or other payments income, as discussed in subsection 6.1. through paragraph 6.9.3., above, and paragraph 6.9.4. through subparagraph 6.9.5.3., below, regardless of the date of the invention.

6.9.5. Assignment and use of royalties or other payments income shall be applied, in accordance with the following schedule:

6.9.5.1. Royalties or other payments shall be used by the end of the second fiscal year (FY) succeeding the FY in which the royalties and other payments were received.

6.9.5.2. After assignment of royalties and other payments to inventors under paragraph 6.9.1., above, any remainder may be used for the following:

6.9.5.2.1. Payment of expenses incidental to administration and licensing of inventions and other intellectual property.

6.9.5.2.2. Other activities of the DoD Component that increase the licensing potential for transfer of DoD technology.

6.9.5.2.3. Scientific R&D consistent with the R&D mission and objectives of activities of the DoD Component.

6.9.5.2.4. Reward of scientific, engineering, and technical employees of activities of the DoD Component.

6.9.5.2.5. Promotion of scientific exchange among other activities in the DoD Component.

6.9.5.2.6. Education and training of employees consistent with the R&D mission and objectives of the Department of Defense.

6.9.5.3. Each DoD Component shall prescribe its own regulations as to whether inventors or co-inventors, whose whereabouts are unknown for 1 year, or more, are entitled to further royalty payments.

6.10. U.S. and DoD initiatives to stimulate economic competitiveness, reform the acquisition process, and integrate the civilian and defense industrial bases, all stress the need for improved interaction between the laboratories and/or technical activities and the industrial and academic sectors. Laboratories and/or technical activities shall have formal programs to stimulate "spin-off" and "spin-on" to eliminate the perception that the laboratories and/or technical activities compete with the private sector, and to develop new partnerships with broad segments of industry and academia. The implementation and execution of a viable T2 program also shall require applicable forms of marketing and outreach. The intent of marketing and outreach activities is to communicate, inform, or collaborate with stakeholders, in the T2 community.

6.10.1. The cost and expenses associated with establishing and operating a T2 Office or an ORTA shall come from the program element funds, overhead accounts, royalties or other payments, or other sources, as applicable, of the DoD Components. Subsection 3710(b) of 15 U.S.C. (reference (d)), requires that the DoD Components shall make available sufficient funding to support the T2 functions. An office (ORTA), that provides coordination, administration, and management of DoD T2, shall function at all DoD laboratories and/or technical activities with 200 or more scientific, engineering, or related technical positions regardless of individual laboratory and/or technical activity funding issues.

6.10.2. The Heads of DoD laboratories and/or technical activities shall develop procedures to provide support to mission-related T2 activities and shall ensure that T2 programs are adequately staffed and resourced. For example, program element funds may be used to pay the costs and expenses of initiation and negotiation of CRADAs and other agreements. Those procedures shall give particular attention to payment of salaries and travel expenses of scientific, engineering, and legal personnel and ORTA personnel involved in T2.

6.10.3. Marketing and outreach activities are part of the functions of the ORTA. The DoD Components are encouraged to utilize multiple means to conduct marketing and outreach programs, such as the following:

6.10.3.1. Advanced information technologies (including websites, search and/or retrieval tools, webcasting, and collaboration applications).

6.10.3.2. Personal and professional contacts.

6.10.3.3. Advertising.

6.10.3.4. Joint technical publications.

6.10.3.5. Requests for collaborations in the Commerce Business Daily.

6.10.3.6. Use of Advanced Planning Briefing for Industry.

6.10.3.7. Press releases for relevant industrial publications.

6.10.3.8. Use of the North American Industrial Classification System for targeted mailings to industry.

6.10.3.9. Education partnerships.

6.10.3.10. Symposia and conferences.

6.10.3.11. Alliances with local, regional, and U.S. T2 networks and organizations (i.e., State and local business development organizations).

6.10.4. Some DoD laboratories and/or technical activities have unique technical and other capabilities that may be of benefit to non-Federal organizations. It is applicable for laboratories and/or technical activities to advertise and demonstrate such capabilities to promote fee-for-service use. The Heads of the DoD Components and laboratory managers shall develop and implement policies to ensure that such advertising and use of laboratory facilities is consistent with U.S. and DoD policy for such matters. Particular attention shall be given to the objective of avoiding situations in which a DoD laboratory is competing with or providing services available from other domestic sources. Special emphasis shall be given to development and implementation of policies to ensure that fee-for-service use of DoD facilities does not degrade performance of primary mission activities in the laboratories and/or technical activities.

6.11. Intermediaries affiliated with State or local governments may ease communication and understanding between defense laboratories and/or technical activities and non-Federal entities. Intermediaries normally conduct a number of functions for the laboratory that a laboratory cannot perform due to lack of skills or expertise. The goal of the intermediaries is to assist the laboratory in forming and

maintaining productive technology partnerships. The DoD Components are encouraged to delegate authority, to the maximum extent possible, for entering into partnerships with intermediaries.

6.11.1. The intermediaries shall provide a number of services, including consulting services, strategic planning, military and commercial technology assessments, integration with Federal core research and/or focus and/or outreach areas, and technology marketing. They also may provide coordinated media and legislative interface and assistance with DoD conversion activities. One of their attributes is their ability to interface with small business and regional economies interested in commercializing Federal technology.

6.11.2. Intermediaries normally shall provide services to the affiliated defense lab and/or center typically under a contract, CRADA, educational partnership agreement, or memorandum of understanding and/or memorandum of agreement. Intermediaries may be professional societies; industry and trade associations; economic development associations; DoD conversion and/or technology development Agencies; academic institutions; State, regional, or local governments; and for-profit consultants and/or firms under competed procurement contracts. A specific type of intermediary, a "Federal Partnership Intermediary," is described in 15 U.S.C. 3715(c) (reference (d)). The DoD Components are encouraged to delegate authority for such decisions to the maximum extent possible.

6.12. Technology assessment is an important part of the T2 process. Technology assessments shall be conducted to determine the potential commercial value of a laboratory and/or the intellectual property of a technical activity. Technology assessment shall be a continuous process in DoD laboratories and/or technical activities to enable development of a portfolio of marketable technologies that may be used to respond to inquiries and unanticipated application opportunities defined by potential clients. Assessment includes identifying candidate products and/or processes and evaluating potential to validate feasibility, suitability, and marketability.

6.13. Besides intermediaries, use of consultants and contractors to support T2 activities by conducting assessments of marketing opportunities, applications, and technologies is among the mechanisms that the DoD Components may use to promote T2. That may involve contracts with for-profit or nonprofit organizations. It also may involve purchasing commercial products and services dealing with markets, applications, and technologies. Consideration shall be given to potential conflict-of-interest issues in making decisions on the use of consultants and contractors to perform assessments supporting T2.

6.14. Laboratories and/or technical activities may provide technical assistance services, including help by technical volunteers, to State and local governments, school systems, and nonprofit organizations. Those services may include problem analysis, assistance in the development and interpretation of technical information, hands-on technical help from laboratory volunteers, and limited projects in a laboratory where that does not compete with available services in the private sector. In making decisions on such technical assistance services, mission activities necessarily shall have first priority. It is applicable to consider U.S. and DoD policies that promote educational and technical activities. It is also applicable to give consideration to potential payoffs to the laboratory; e.g., the benefits for recruitment of technical staff that may be associated with providing technical assistance services to educational institutions.

6.15. The Heads of the DoD laboratories and/or technical activities (see enclosure 2, definition E2.1.3.) may loan, lease, or give research equipment that is excess to the needs of the laboratory to an educational institution or nonprofit organization for the conduct of technical and scientific education and research activities. Title of ownership shall transfer to the recipient when the excess research equipment is transferred as a gift. Research equipment provided to a recipient under 15 U.S.C. 3710(i) (reference (d)) is not subject to existing Federal property disposal regulations implementing separate authorities. Federal laboratories and/or technical activities that transfer their excess research equipment directly to the recipient shall report the transfer to the General Services Administration (GSA). That is clarification of 15 U.S.C. 3710(i) (reference (d)) and E.O. 12999 (reference (h)) to allow laboratories and/or technical activities, Agencies, or Departments to give, loan, or lease excess research equipment to public and private schools and nonprofit institutions without the administrative burden of existing Federal property disposal laws. That is an alternative and free-standing method of distribution of excess research equipment. Under this E.O. (reference (h)), Federal laboratories and/or technical activities may donate their excess research equipment directly to the recipient or report excess research equipment to the GSA for transfer under existing Federal property disposal laws.

6.16. One objective of DoD T2 is to improve the domestic U.S. economy and standard of living. That does not mean that T2 may be accomplished only by working with U.S.-owned and U.S.-based companies. There may be situations in which working with a foreign organization, individual, or government R&D facility is the best way to accomplish the T2 goal. The foreign individual, organization, or

government R&D facility may have the best technology for a given application, or a foreign company may provide for manufacture mostly in the United States.

6.16.1. It is DoD policy to allow foreign persons and organizations to be involved in DoD T2 transactions when it is in the judgment of the laboratory or other DoD Component personnel responsible for making such decisions, the best option for achieving their objectives, only if such foreign participation is consistent with U.S. and DoD policy. That is done without any intention of inhibiting such foreign participation; the goal, rather, is to ensure that actions are consistent with U.S. and DoD policy.

6.16.2. The Heads of the DoD Components shall consider the criteria in paragraph 6.16.3., below, when developing guidance for their laboratories and/or technical activities on U.S. and DoD policies impacting the participation of foreign individuals and organizations in T2 transactions. Such guidance shall be developed in forms that help decisionmaking in DoD laboratories and/or technical activities, which are not anticipated to have expertise in trade policy. That guidance shall encompass all of the types of T2 transactions and mechanisms addressed in this Instruction.

6.16.3. It is expected that criteria shall include special consideration such as the following:

6.16.3.1. Whether such foreign companies or governments shall permit and encourage U.S. Agencies, organizations, or persons to enter into cooperative R&D agreements and licensing arrangements on a comparable basis.

6.16.3.2. Whether those foreign governments shall have policies to protect U.S. intellectual property rights.

6.16.3.3. Where cooperative research shall involve data, technologies, or products subject to U.S. security export controls under the laws of the United States, whether those foreign governments have adopted adequate measures to prevent the transfer of strategic technology to destinations prohibited under such U.S. security export controls or by international agreements to which the United States and such foreign governments are signatories.

6.17. Guidance and factors to consider when using a CRADA:

6.17.1. CRADAs are agreements that allow one or more Federal laboratories and/or technical activities and one or more non-Federal parties to conduct specified

R&D efforts that are related to and consistent with the mission of the DoD laboratory. CRADAs are instruments that may be used in all aspects of a product and/or system life cycle where RDT&E activities occur.

6.17.2. CRADAs are not subject to terms for procurement contracts and other instruments that are defined by 31 U.S.C. 6303-6305 (reference (i)), but they are contracts in the sense that are legally enforceable documents. CRADAs shall not be viewed as an alternative to normal procurement procedures.

6.17.3. Special consideration shall be given to small businesses or consortia involving small businesses.

6.17.4. Preference shall be given to businesses located in the United States or those that agree that products embodying inventions made under the CRADA or produced through the use of such inventions shall be manufactured substantially in the United States (consistent with subsection 6.16., above).

6.17.5. CRADAs shall contain provisions for a variety of intellectual property issues including data rights, property ownership, and the allocation of rights to future inventions and/or intellectual property.

6.17.6. DoD laboratories and/or technical activities may protect from public access certain commercially valuable information resulting from work under a CRADA for a period of up to 5 years. Doing so provides the collaborating entity sufficient time to capitalize on the inventions and/or intellectual property created under the CRADA.

6.17.7. DoD laboratories and/or technical activities may commit resources such as personnel, services, facilities, equipment, intellectual property or other resources with or without reimbursement, but shall not provide funds to the non-Federal partner as part of the agreement. Non-Federal parties may commit funds to the Federal partner to the agreement.

6.17.8. DoD laboratories and/or technical activities receiving funds under a CRADA shall maintain separate and distinct accounts, records, and other evidence supporting expenditures under the CRADA.

6.17.9. When licensing intellectual property under a CRADA, the DoD laboratory and/or activity shall retain a nonexclusive, nontransferable, irrevocable, and paid-up license for use by the Government.

6.17.10. The private non-Federal partner shall be given the option to choose an exclusive license for a prenegotiated field of use for any invention made in whole or part by a laboratory employee.

6.17.11. CRADAs shall be accomplished without actual or apparent personal or organizational conflicts of interest or violations of ethics standards.

7. INFORMATION REQUIREMENTS

7.1. The Defense Technical Information Center (DTIC) shall, under the direction of the DDR&E, develop, maintain, and operate databases to collect, store, and disseminate information about DoD T2 program activities. Elements or segments of those databases shall be accessible to applicable levels of DoD and external users (non-DoD activities) in a manner consistent with the constraints of the data, as specified in DoD Directive 5535.3, the Secretary of Defense Memorandum, and 15 U.S.C. (references (a), (j), and (d)). The DTIC shall develop, maintain, and operate those computer databases in support of DoD T2 policies and concepts with the coordinated and approved requirements of the DoD Components to include the following:

7.1.1. Preparation; coordination with the DoD Components; and issuance of uniform procedures, codes, data elements, and formats for submitting records to, and obtaining records from, the computer databases. The data elements and codes shall comply with DoD 8320.1-M-1 (reference (k)) or be developed, in accordance with DoD Directive 8320.1 (reference (l)).

7.1.2. Providing and operating a system for database input, output, access, and retrieval.

7.1.3. Providing to each of the DoD Components and activity focal points, a quarterly report that summarizes quantity and quality of input from the activities of that DoD Component. A complete summary of those reports shall be provided to the ODDR&E (Technology Transfer Directorate).

7.1.4. Incorporation of applicable security requirements, in accordance with DoD 5200.28-M (reference (m)).

7.2. Other scientific and technical information needs may be addressed in DoD Directive 3200.12 and DoD Instruction 5230.27 (references (n) and (o)), and other policy issuances.

8. EFFECTIVE DATE

This Instruction is effective immediately.

A handwritten signature in black ink, appearing to read "Hans Mark", with a horizontal line extending to the right.

Director, Defense Research and Engineering

Enclosures - 3

- E1. References, continued
- E2. Definitions
- E3. Starting Point for Position Descriptions, Work Plans, and Performance Standards

E1. ENCLOSURE 1

REFERENCES, continued

- (e) Office of Management and Budget, Circular No. A-11, "Preparation and Submission of Budget Estimates," June 23, 1997
- (f) DoD 1400.25-M, "DoD Civilian Personnel Manual System," December 1996, authorized by [DoD Directive 1400.25](#), "DoD Civilian Personnel Management System," November 25, 1996
- (g) Sections 2105 and 4504 of title 5, United States Code
- (h) Executive Order 12999, "Educational Technology: Ensuring Opportunity for All Children in the Next Century," April 17, 1996
- (i) Sections 6303-6305 of title 31, United States Code
- (j) Secretary of Defense Memorandum, "DoD Domestic Technology Transfer/Dual Use Technology Development," June 2, 1995
- (k) DoD 8320.1-M-1, "Data Element Standardization Procedures," January 1993, authorized by DoD Directive 8320.1, September 26, 1991
- (l) [DoD Directive 8320.1](#), "DoD Data Administration," September 26, 1991
- (m) DoD 5200.28-M, "ADP Security Manual," January 1973, authorized by [DoD Directive 5200.28](#), March 21, 1988
- (n) [DoD Directive 3200.12](#), "DoD Scientific and Technical Information Program," February 15, 1983
- (o) [DoD Instruction 5230.27](#), "Presentation of DoD-Related Scientific and Technical Papers at Meetings," October 6, 1987

E2. ENCLOSURE 2

DEFINITIONS

E2.1.1. Cooperative Research and Development Agreement (CRADA). An agreement between one or more Federal laboratories and/or technical activities and one or more non-Federal parties. Under a CRADA, the Government laboratories and/or technical activities shall provide personnel, services, facilities, equipment or other resources with or without reimbursement (but not funds to the non-Federal parties). CRADAs are instruments that may be used in all aspects of a product and/or system life cycle where RDT&E activities occur. The non-Federal parties shall provide funds, personnel, services, facilities, equipment or other resources toward the conduct of specified R&D efforts that are consistent with the missions of the laboratory. The CRADA partners shall share in the intellectual property developed under the effort. The terms of a CRADA may not conform to a procurement contract or cooperative agreement as those terms are used in Sections 6303-6305 of 31 U.S.C. (reference (i)). Besides that definition, two types of CRADAs are, as follows:

E2.1.1.1. Technical Assistance CRADA. That allows a Federal laboratory and a non-Federal partner to work jointly to assist local businesses by providing limited (4-day maximum) free technical consulting. Preference is given to non-Federal partners that are State organizations, universities, non-profit entities, or business incubators that shall publicize availability of Federal assistance, receive and assess requests for cooperative research, ensure that the laboratory and/or technical activity shall not compete with private organizations, and coordinate work of the laboratory and/or technical activity with the requester companies. The laboratory and/or technical activity shall provide the required assistance and reports to the CRADA partner and the requester company. The requester company only shall provide a problem statement and sign a short 2-page "mini-CRADA" agreement, "subagreement," or "CRADA amendment."

E2.1.1.2. Military-Use CRADA. A CRADA between a DoD laboratory and/or technical activity and an industrial partner to utilize existing unique capabilities and facilities at the DoD laboratory in a product or process intended primarily for DoD or other military use. Each participant recognizes that it cannot support the research alone nor duplicate existing research or facilities. The technology is incorporated in new DoD systems or products as well as in other commercial opportunities. Specific concerns to be addressed in each military-use CRADA include the following:

E2.1.1.2.1. A CRADA may be the proper vehicle (work is not a contract).

E2.1.1.2.2. Government rights are maintained (not establishing a sole source).

E2.1.1.2.3. Equal opportunity shall be provided to other qualified companies

E2.1.1.2.4. The laboratory shall not compete with private sector.

E2.1.1.2.5. Preferably, the funds for the laboratory shall not go through industry.

E2.1.2. Federal Employee. That is defined in U.S.C. 2105 (reference (g)).

E2.1.3. Laboratory and/or Technical Activity. For the Instruction, that term is, as broadly defined, in 15 U.S.C. 3710a(d)(2)(A) (reference (d)), and shall include the following:

E2.1.3.1. "A facility or group of facilities owned, leased, or otherwise used by a Federal Agency, a substantial purpose of which is the performance of research, development, or engineering by employees of the Federal Government."

E2.1.3.2. Use of this broad definition, in subdefinition E2.1.3.1., above, is deliberate. That definition is not confined to those DoD Components that are formally titled "laboratories." The intent of that definition is to encompass the wide range of organizations and arrangements that function as laboratories and/or technical activities in DoD research, development, and engineering programs. It shall include laboratories and/or technical activities and reference more diverse arrangements that shall provide a virtual laboratory capability. For example, a DoD Component may have a virtual lab involving a management function accomplished in a Defense Agency activity, plus a dispersed set of research activities to be accomplished by a variety of organizations outside of the sponsoring and/or managing activity. Those capabilities are included in test, logistics, and product centers; depots; arsenals; program offices; and all DoD offices providing for RDT&E. That is consistent with 15 U.S.C. 3710a(d)(2)(A) (reference (d)), which uses such encompassing terms as "facility." That broad definition is in accordance with new DoD practices.

E2.1.3.3. While the definition cited in Subsection 3710a(d)(2)(A) of

reference (d) occurs in a Section of the U.S.C. dealing with CRADAs, the use of that broad definition in the Instruction (and DoD Directive 5535.3, reference (a)) shall not be limited to matters involving CRADAs. The broad definition applies to all citations of laboratories and/or technical activities in the Instruction and reference (a).

E2.1.4. Nonprofit Institution. That is an organization owned and operated exclusively for scientific or educational purposes, the net earnings of which shall not benefit any private shareholder or individual.

E2.1.5. Technical Assistance. Allows a Federal laboratory and a non-Federal partner to work jointly to assist local businesses by providing limited (up to 4-day maximum) free technical consulting. Preference shall be given to non-Federal partners that are State organizations, universities, or non-profit entities, including the FLC, which shall publicize availability of Federal assistance, ensure that the laboratory and/or technical activity shall not compete with private organizations, and coordinate the work of the laboratory and/or technical activity with the requester companies. The laboratory and/or technical activity shall provide the required assistance in the form of technical information, lessons, learned, problem solving, or further advice. At no time are technical assistance activities or technical assistance CRADAs to be used to accomplish R&D.

E2.1.6. Technology Transfer (T2). The intentional communication (sharing) of knowledge, expertise, facilities, equipment, and other resources for application to military and nonmilitary systems. Domestic T2 activities shall include the following:

E2.1.6.1. Spin-off activities that shall demonstrate DoD technology; e.g., commercial viability of technologies already developed or presently being developed for U.S. security purposes. The primary purpose of those activities, which encompass T2, shall be to promote and make available existing DoD-owned or -developed technologies and technical infrastructure to a broad spectrum of non-DoD applications.

E2.1.6.2. Dual-use science and technology and other activities that develop technologies that have both DoD and non-DoD applications.

E2.6.3 Spin-on promotion activities that shall demonstrate the U.S. security utility of technologies developed outside of the Department of Defense. That goal shall be to incorporate the innovative technology into military systems to meet mission needs at a lower acquisition cost by taking advantage of the economies of scale by purchasing from a larger industrial base.

E3. ENCLOSURE 3

STARTING POINTS FOR DEVELOPMENT OF POSITION DESCRIPTIONS, WORK PLANS, AND PERFORMANCE STANDARDS

E3.1. POSITION DESCRIPTION

E3.1.1 Duties and Responsibilities. Transfers, where applicable, Federally owned or originated technology and technical capabilities to State and local governments and to the private sector. Develops technologies having both DoD and non-DoD applications. Promotes the use of technologies developed outside the Department of Defense.

E3.2. WORK PLAN

E3.2.1. Performance Element (Critical) T2. Assesses the availability and applicability of technologies and technical capabilities of their projects and programs. Transfers those technologies and technical capabilities to State and local government and the private sector in compliance with public laws and applicable DoD Directives, Instructions, and Regulations, and Component directives, instructions, and regulations. Obtains assistance from the local ORTA. Works with the T2 partner after formal agreements are in effect (CRADAs, cooperative agreements, other transactions, and patent license agreements, etc.).

E3.2.2. Dual-Use Technology. That technology shall identify industrial technology requirements and shall take those requirements into consideration when developing in-house technology.

E3.2.3. Spin-on Technology. When seeking solutions to DoD requirements, shall consider technologies developed outside Department of Defense on an equal basis with those developed inside the Department of Defense.

E3.3. PERFORMANCE STANDARD

E3.3.1. T2. Performance is satisfactory when the incumbent shall demonstrate an active knowledge of the program requirements, take positive action to assess technologies and technical capabilities, and start actions to formally transfer those technologies and technical capabilities to State and local government and the private

sector. The incumbent shall maintain an active working relationship with the local ORTA in developing, negotiating, and getting approval for T2 instruments (CRADAs, cooperative agreements and other transactions, patent license agreements, etc.). It actively shall work with the T2 partners to satisfy effectively the Component obligations in the T2 instruments.

E3.3.2. Dual-Use Technology and Spin-on. Performance is satisfactory when the incumbent shall consider industrial requirements when developing in-house technologies and non-DoD technologies when seeking solutions to DoD requirements.