

F. INDEPENDENT RESEARCH AND DEVELOPMENT (IR&D)



In FY 99, the DoD continued to make progress in improving the management of Independent Research and Development (IR&D) and improving communications with industry. Section 2372(c)(3) of Title 10 USC provides for reasonable and timely communications of (1) DoD's planned or expected future needs to contractors, and (2) contractor's progress on IR&D programs to the DoD.

Policy and Management

The Military Departments continue to vigorously promote their respective IR&D programs. To provide coordinated leadership for IR&D activities, in 1996, DoD established a senior executive Technical Coordination Group (TCG) consisting of representatives from OSD and the Military Departments. In 1999, the TCG continued to provide the leadership and coordination necessary to maintain an effective IR&D program. For example, industry uses Defense technology planning and requirements information provided by DoD to plan industry's IR&D support of Defense needs. The leadership provided by the senior management team continues to enhance DoD's responsiveness in meeting industry's information needs. The TCG and industry representatives meet periodically to foster improvements in communications both within DoD and between DoD and industry. The meetings in 1999 addressed the issue of the trend that industry is increasingly focussing on short-term research over long-term research and what can be done to promote the long-term technology needs of DoD.

In addition to the TCG meetings that serve to coordinate the DoD and Defense contractors, a meeting of the DoD IR&D focal points was held on May 6, 1999, to improve the effectiveness of the Independent Research & Development process within the various DoD establishments. The meeting was the first of its kind and consisted of mid-level managers from the various DoD IR&D programs which until recently have been operating independently of one another. They met to discuss what united efforts can be made to implement the decisions and policy of the TCG, and they addressed specific ways the DoD can operate to more effectively receive feedback on new initiatives and communicate internally the status of efforts and events.

DoD IR&D policy is promulgated in DoD Instruction 3204.1, "Independent Research and Development (IR&D) and Bid and Proposal (B&P) Program." In May 1999, DoD issued this DoD Instruction as a revised DoD Directive to bring policy guidance in line with current law and program administration. The new document updates DoD policy and practices regarding management of IR&D, providing guidance to the Military Departments. In addition, the DoD Directive formally charters the TCG.

The Directive served as a basis for a strategic plan created by the DoD IR&D Program that listed long and short-term goals for the program addressing each aspect of the Directive in systematic fashion. This serves as a working document for implementing the Directive, and it was written so that it meshes with the goals of the Deputy Under Secretary of Defense for Science and Technology (DUSD(S&T)). The strategic plan's sponsors seek to have the IR&D programs of each Military Department likewise develop strategic plans of their own that would tie into the DoD plan.

Technical Communications from Industry

Until FY 93, IR&D project descriptions from contractors were available only in hard copy with summary descriptions in an on-line database maintained on a mainframe computer at the DTIC. In FY 93, DTIC began to distribute a streamlined electronic version of the

IR&D project descriptions on CD-ROM media for the Microsoft Windows platform. Each year, DoD and industry contributors further streamline the process. Contributing industry contractors now prepare the project descriptions on personal computers and submit them electronically. As a result, data preparation and submission costs for contractors have decreased significantly.

The CD-ROM contained over 3,500 technical project summaries valued at approximately \$2.4 billion in FY 99. These submitted projects represent about 90% of the cost-recoverable IR&D efforts by Defense contractors. Company submissions to the DTIC database are voluntary. DoD continues its efforts to get as many DoD contractors as possible to submit IR&D data. Letters to non-submitting contractors explaining the potential value of these reports often results in more data submissions. Over 200 copies of the IR&D CD-ROM, containing proprietary data, are distributed each year within DoD. Users of the data can be found in Defense laboratories, systems commands, and program offices. To foster communications between DoD and industry engineers, DTIC provides the IR&D CD-ROM distribution list to industry. DTIC is now developing a restricted access World Wide Web site to distribute the IR&D data to authorized users. Resolving these information security issues will improve the cost effective distribution and access to IR&D data.

Defense Planning Documentation for Industry

The DoD makes many technology planning documents available to Defense contractors. The Defense contractors find this information valuable in making business decisions and planning contractor IR&D programs. The IR&D web pages provide access to many Defense planning documents. These sites provide access to unclassified documents for searching, viewing, and downloading by Government activities and DoD contractors only. DTIC maintains the main IR&D web site, and includes links to Military Service information. For example, the web site contains a link to unclassified documents available through the Navy Acquisition Research Information Center (NARDIC).

The DoD IR&D program has revised its web site (www.dtic.mil/ird) to make it more accessible and easy to navigate for Defense contractors. The web site developers have also sought to better integrate this program's site with those of the DUSD(S&T) (www.dtic.mil/dusdst/), the Office of Technology Transition (www.dtic.mil/ott), and other DoD sites so that planning data are more easily accessible across the board.

Matching Defense Requirements to IR&D Technologies

Technologies developed through industry's IR&D efforts represent a valuable asset for U.S. industry. In addition, emerging IR&D technologies may satisfy current and near term Defense requirements. To that end, various DoD organizations use the IR&D data from industry contributors to seek a match of DoD needs and industry's IR&D efforts. This matching of a DoD need with industry's IR&D efforts maximizes benefit to DoD and return on industry's IR&D investment.

As an example, the Air Force develops information on their infrastructure requirements. Then Air Force Materiel Command staff actively search the IR&D CD-ROM database to match industry research efforts against those infrastructure requirements. Where these searches identify an industry research effort addressing the Air Force requirement, points of contact at the requiring Air Force activity and the industry contributor are matched up.

The Army's strategy for matching its requirements to emerging IR&D technologies includes extensive use of executive conferences and technical interchange meetings with

industry. In addition, the Army widely distributes the CD-ROM database to its scientists and engineers, and Army Research Laboratory managers who support acquisition systematically compare their technology needs to the CD-ROM.

The Navy seeks to leverage IR&D investments by a process in which acquisition program managers are directly involved in searches of the IR&D CD-ROM to match industry research efforts against their S&T requirements. The Navy believes these program managers are in the best position to determine relevance of the reported IR&D to their needs.