
I. Michael Greenberger

Michael S. Kane

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RIGHTS-IN-DATA POLICIES AFFECTING
DEPARTMENT OF DEFENSE
ACQUISITION OF COMPUTER
SOFTWARE AND RELATED
PRODUCTS

By I. MICHAEL GREENBERGER*
MICHAEL S. KANE**

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I. PROTECTIONS FOR SOFTWARE IN THE COMMERCIAL WORLD COMPARED TO DEPARTMENT OF DEFENSE DATA RIGHTS REGULATIONS

Even outside the governmental sphere, private software companies have had difficulty preventing their competitors from stealing valuable intellectual property. Because of great uncertainty within the law, patents and copyrights have not been viewed as reliable protections for proprietary software and related documentation. Instead, software developers have tended to protect proprietary information by resorting to the common law of trade secrets.¹

The problem with relying solely on the common law is that the benefits of trade secrecy endure only so long as the trade secret owner takes all reasonable steps to maintain confidentiality.² Accordingly, dissemination of computer-related trade secrets is governed by contractual agreements—usually in the form of licenses or leases of specific intellectual property. These licenses and leases typically require the licensee to keep proprietary materials confidential, thereby prohibiting the licensee from disclosing these materials to third parties. These contractual protections can be molded to the needs of the specific commercial context, imparting a flexibility that gives developers increased control over the use of their software. Further, licensing permits developers to retain the software's commercial value because they may continue to market the software themselves. As a result, developers demand less compensation from the licensees.³

This system of protecting software through context-specific contractual arrangements has been thwarted by so-called "rights-in-data" clauses in defense contracts. These clauses generally allow the Department of Defense ("DoD") to take ownership freely in a private com-

pany's proprietary materials and to disseminate these materials broadly. Accordingly, private companies doing business with DoD place their trade secrets in jeopardy and risk losing valuable commercial information to their competitors. As a result, these rights-in-data provisions have often been perceived as onerous and unfair. 4

Criticisms of this nature were echoed by the President's Blue Ribbon Commission on Defense Management ("the Packard Commission") in its June 30, 1986 report. The Packard Commission asserted that DoD policy governing data rights acquisitions did not establish the proper balance between the government's need for technical data and the benefits to the nation that accrue from protecting the private sector's proprietary rights: "That balance must be struck so as to foster technological innovation and private investment which is so important in developing products vital to our defense." 5

In order to appreciate more fully the basis of the Packard Commission's criticisms and the source of industry discontent, it is necessary to undertake a more detailed analysis of the DoD regulatory scheme that governed the acquisition of software rights in the middle of 1986. While the overall rights-in-data regulatory framework addresses DoD's intellectual property rights in both "computer software" and "technical data," the regulations define "computer software" as an entity distinct from "technical data." 6 Accordingly, the acquisition of computer software is addressed in a separate section of the regulations. 7 However, in mid-1986, both sets of rules were based on the same general regulatory model, e.g., "computer software" developed with government funds and other "technical data" generated with public monies were extended virtually identical treatment. As discussed below, the computer software rules that were in effect in 1986 essentially remain in effect today, whereas the rules governing technical data have been subject to two important revisions.

4. Id. at 1-5.

5. PRESIDENT'S BLUE RIBBON COMM'N ON DEFENSE MGMT., A QUEST FOR EXCELLENCE 64 (1986) [hereinafter PACKARD COMM'N REPORT].

6. "Computer Software" is defined by the regulations to include (1) data bases: "a collection of data in a form capable of being processed and operated on by a computer;" and (2) computer programs: "a series of instructions or statements in a form acceptable to a computer, designed to cause the computer to execute an operation or operations." 53 Fed. Reg. 43,699 (1988) (to be codified at 48 C.F.R. § 227.471); see also 48 C.F.R. § 227.401 (1986). "Technical data" has been defined as "recorded information (regardless of the form or method of the recording) of a scientific or technical nature (including computer software documentation)." 10 U.S.C.A. § 2302(4) (West Supp. 1989); accord 53 Fed. Reg. 43,700 (1988) (to be codified at 48 C.F.R. § 227.471); see also 48 C.F.R. § 227.401 (1986); see generally infra note 32 and accompanying text.

II. DATA ACQUISITION POLICIES GOVERNING COMPUTER SOFTWARE

Government rights in software typically are set at one of two levels, "unlimited" or "restricted." "Unlimited rights," as that term suggests, permit DoD to "use, duplicate, release, or disclose... software in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so." Accordingly, a contractor's proprietary interest in its software may be compromised whenever a DoD contract contains a clause providing that its product is subject to DoD's unlimited rights. This risk is of special concern to businesses in the computer industry because their survival may depend upon preventing trade secrets from being disclosed to their competitors and potential competitors.9

Much of the harshness of the DoD's data rights and software acquisition policies flows from the fact that the government routinely jeopardizes the fruits of private investment by inappropriately demanding unlimited rights. DoD has generally taken the position that the government receives unlimited rights in software and other technological data if any government funds are used in their development.10 Thus, DoD's rights-in-data provisions grant DoD unlimited rights in software that results "directly" from research and development work specified by a defense contract, even if the software itself was not a specified or necessary element of performance of that contract.11 The government also takes unlimited rights in all software "generated as a necessary part of performing a [government] contract."12 In a cost sharing project, the government takes unlimited rights to all data, software, and software documentation, regardless of whether the contractor provides most of the development funds. Similarly, a contractor who completes a privately funded project with public funds may lose all its proprietary rights except under limited circumstances.13 If DoD is unable to specify

10. See generally Taylor & Burgett, Government Rights in Data & Software, Briefing Papers, Feb. 1988, at 5-16; see also Dowty De Coto, Inc. v. Department of Navy, 883 F.2d 774 (9th Cir. 1989) (realities reflected in record, rather than contract recitals, determine whether item is developed at government or private expense).
13. See supra note 11.
which software it wants delivered with unlimited rights at the time of contracting, it may insert into the contract a deferred ordering clause, which allows it to demand the delivery of software even after the contract has been fully performed.14

On the other hand, when software is developed exclusively with private funds, a contractor will generally be able to negotiate a provision granting “restricted rights.” The protections afforded by such a provision ostensibly approach the norms of the commercial world because the contractor is able—at least in theory—to incorporate its standard licensing agreement into the contract.15 Nevertheless, these protections are often lost when contractors fail to comply with the regulations’ bewildering procedural requirements. For example, the government may demand unlimited rights if the software is not delivered with the proper restrictive legend or if the license agreement is not specifically referenced by (and attached to) the contract.16

Other features of the DoD regulations tend to further undermine proprietary rights in privately-developed software. First, although negotiating with the government may allow the flexibility characteristic of the ordinary commercial setting, the regulations do not offer contracting officers the guidance necessary to limit their demands for government rights. As a result, contracting officers may seek the maximum rights possible because they fear the criticism that will result from negotiating too few rights.17 Second, developers of privately-developed “off-the-shelf” or “commercial” software may completely avoid negotiations by electing a definition of restricted rights prescribed by the regulations.18 This alternative, however, is not entirely satisfactory because the prescribed bundle of rights gives contractors, subcontractors and agents of DoD the right to use the software at a government facility so long as they agree to be bound by the applicable restric-

15. 53 Fed. Reg. 43,708 (1988) (to be codified at 48 C.F.R. § 227.481-1(c)); see also 48 C.F.R. § 227.402-1(c) (1986). The Government always receives certain “minimum” rights in the software, such as the right to modify the software and the right to prepare backup copies. Id.; see also 48 C.F.R. 227.401 (1986).
17. See Taylor & Burgett, supra note 11, at 10.
The use of software by such a varied group of private parties creates the risk of widespread dissemination of proprietary software to competitors and potential competitors.

Unlike their civilian counterparts, the DoD regulations treat documentation for noncommercial software differently than documentation for commercial software, which can be made subject to the same restrictions as the software itself. Specifically, instruction manuals explaining noncommercial software—even software that would otherwise be subject to restricted rights—are governed by unlimited rights and can be freely disseminated by DoD. To the extent that these manuals reveal proprietary information, the benefits derived from the application of restricted rights to the noncommercial software are lost, because the government can transfer the manuals to whomever it chooses, for any purpose whatsoever, including non-governmental purposes. As a response to these onerous regulations, it is likely that the contractors who do business with DoD include only the bare minimum of information in their manuals necessary to meet contract requirements.

III. THE PACKARD COMMISSION REPORT

Software and software rights are conveyed daily in the private sector in situations reflecting needs and circumstances often no less varied—or conflicting—than those facing DoD. Yet the commercial world knows nothing of mechanisms like DoD's rights-in-data system. In its official report, the Packard Commission expressed concern over the detrimental effects of this system on the development of all new technology: "[W]e find in general that a policy of invariably acquiring unlimited rights whenever development has occurred at public expense removes incentive to commercialize. More importantly, we find that a policy of permitting contractors no rights in data developed with mixed funding creates even greater disincentives."24

Thus, the Packard Commission proposed a shift away from governmental assertion of unlimited rights toward greater reliance on contract negotiations for the assignment of technical data rights. The report

23. See Greenberger, supra note 9, at 7.
24. PACKARD COMM’N REPORT, supra note 5, app. I, § III, at 120 (emphasis in original).
concluded that DoD should conform its acquisition policies and practices more closely to the commercial model:

The inescapable conclusion is that it is time to adopt a new policy that is (1) clear and coherent, (2) no more divergent from commercial practices than is necessary for DoD to achieve its mission, (3) appropriate in terms of DoD's needs to use the technology, and (4) appropriate in terms of the intellectual property rights associated with software.25

The Packard Commission Report spurred efforts at reform in both the Congress and the Executive Branch.

IV. DoD RESPONSES TO CONGRESSIONAL AND EXECUTIVE BRANCH INITIATIVES

A. THE DEFENSE ACQUISITION ACT OF 1986

Four months after the Packard Commission Report, Congress enacted the Defense Acquisition Improvement Act of 1986.26 The accompanying Conference report specifically rejected the philosophy that formed the basis for DoD rights-in-data policies:

The Department of Defense should generally seek to acquire the same rights in data that a commercial customer would in acquiring the same product. For example, if a contractor were to purchase an item in the commercial sector, it would not receive unlimited rights to use, release or disclose technical data necessary to manufacture the item.27

While retaining the concept of unlimited government rights in data developed exclusively with federal funds, Congress directed that rights in data developed with mixed funding should be negotiated.28 Congress also prohibited DoD from requiring contractors to relinquish their data rights as a condition of obtaining a defense contract.29 This provision responded directly to contractors' complaints that they had insufficient bargaining power to refuse DoD negotiators' demands.30 Finally, the Act required the publication of proposed regulations governing the acquisition of "technical data" within three months, and final regulations within six months.31

A crucial point bears noting here. Perhaps adopting the premise that software merits distinctive treatment, Congress had defined "tech-

29. Id. at § 2320(a)(2)(F).
30. Taylor & Burgett, supra note 11, at 9.
technical data" in a previous statute to exclude computer software. As a result, when Congress called for new "technical data" rules in 1986, it required changes only in the technical data rules, but not in the existing software rights-in-data provisions. Why congressional efforts at reform should address rights in technical data while bypassing rights in computer software is unexplained. Nevertheless, by requiring new data rights regulations without corresponding revisions in the software rules, Congress began to drive these two regulatory schemes apart.

B. President Reagan's 1987 Executive Order

On April 10, 1987, President Reagan issued an Executive Order implementing the Federal Technology Transfer Act of 1986 by requiring, \textit{inter alia}, that heads of federal agencies and executive departments cooperate . . . in the development of a uniform policy permitting Federal contractors to retain rights to software, engineering drawings, and other technical data generated by Federal Grants and contracts, in exchange for royalty-free use by or in behalf of the government.

Thus, both the Executive Order and the Defense Acquisition Act of 1986 accepted the Packard Commission's view that both the government and the private sector would benefit from allowing private ownership rights in technological advancements developed with mixed funding. The presidential directive went further by endorsing a licensing scheme that would allow developers to retain a proprietary interest in software funded entirely at government expense. Against this backdrop, DoD software acquisition policies began to appear decidedly out of step with congressional and executive branch initiatives. Indeed, the 1987 revisions in DoD's general data rights provisions offered little more than the appearance of compliance with the congressional directive and executive branch policy.

C. The 1987 Revisions to the DFAR Supplement

As noted above, the 1987 data rights revisions were a response to the Defense Acquisition Act of 1986. These 1987 revisions dealt with the rights-in-technical-data regulations—but not their software counterpart—because Congress had excluded software from its directive

through its limited definition of “technical data.” Thus, in 1987, DoD simply republished the old software rules. Adopting the Packard Commission’s recommendation that software be treated as a “special case,” the Defense Acquisition Regulatory Council (DARC) formed an ad hoc committee to revise the software rules—a committee that would never accomplish its mission, as will be shown below.

Nevertheless, it is worthwhile to examine the 1987 revisions of DoD’s general data acquisition regulations because they illustrate DoD’s resourcefulness in evading meaningful reform. In addition, the 1987 revisions introduced an innovation, the “Government Purpose License,” which may eventually assume an important role in DoD’s software acquisition policies.

Under its 1987 rights-in-data provisions, DoD adopted the strategy of asserting its traditional broad claims to “unlimited rights” data, while at the same time granting the contracting officer sweeping authority to waive these rights in return for a “Government Purpose License.” The contracting officer could negotiate a Government Purpose License whenever: 1) the contractor made a “substantial contribution” to the item’s development; 2) the government did not need “unlimited rights;” and 3) the contractor agreed to commercialize the technology.

The regulations specifically noted that the intent of the Government Purpose License was to establish the contractors’ proprietary interests and therefore promote wider application and development of the relevant technology. In fact, the Government Purpose License represents a highly artificial effort towards achieving this goal; despite its name, this so-called “license” has very little in common with the licensing agreements that govern the transfer of data and software in commercial settings.

A principal drawback to the Government Purpose License is that, unlike commercial licenses, it cannot be molded to accommodate varying circumstances. The regulations require that the contractual provision containing the Government Purpose License be in exact accord

36. See supra text accompanying note 32.
37. See Taylor & Burgett, supra note 11, at 4.
39. The revisions established Government Purpose License Rights as the norm when the contractor contributed more than half of an item’s development costs. 48 C.F.R. § 227.472-5(b) (1987). However, even when the contractor made “substantial contributions” that did not exceed fifty percent of an item’s development cost, the contracting officer was instructed to “give consideration to obtaining less than unlimited rights.” Id. § 227.472-5(b), -7.
40. Id. § 227.472-7.
41. Id. § 227.472-5(b).
with the regulations' definition of a "Government Purpose License." That definition essentially ensures that the government will always have unlimited rights for government purposes:

"Government purposes license rights" means rights to use, duplicate, or disclose technical data in whole or in part and in any manner, for Government purposes only, and to have or permit others to do so for Government purposes only. Government license rights include purposes of competitive procurement but do not grant the Government the right to have or permit others to use technical data for commercial purposes. The use of a boilerplate provision, especially such an ambiguous one, hardly seems sufficient to protect a contractor's proprietary interest or to effectuate the regulations' stated policy of providing the government with no more data rights than are actually needed. Though the government may not release data for commercial purposes, competitors may still gain insights into valuable trade secrets by participating in the relevant DoD program. The regulations, moreover, specifically contemplate that DoD will disseminate data subject to Government Purpose License Rights so that other contractors may prepare bids for purposes of competitive reprocurement and support services. In sum, the Government Purpose License seems little more than a cosmetic response to congressional and presidential concerns that contractors be permitted to retain ownership rights-in-data generated from mixed-funding and that DoD reconcile its rights-in-data policies with commercial practices. It is unlikely that this innovation will vindicate the rights of software developers even if it should become a feature of DoD's software acquisition regulations.

D. THE 1988 DIXON AMENDMENTS

Congress reacted to the 1987 data rights revisions in the so-called "Dixon Amendments" to the National Defense Authorization Act of 1988 with an attempt to nudge DoD towards conforming its concept of licensing more closely to the commercial model. The statute specifically endorsed the idea of direct licensing, and prohibited the government from interfering with third-party royalties for the use of data.

42. See id. § 252.227-7013(b)(2).
43. Id. § 227.471. The Government use and possible disclosure of data pursuant to Government Purpose License Rights is royalty-free. Id. § 227.472-7.
44. Id. § 227.472-5.
45. Id. § 227.471.
developed exclusively at private expense.\textsuperscript{48} Furthermore, DoD was given permission to:

prescrib[e] reasonable and flexible guidelines, including negotiation objectives, for the conduct of negotiations regarding the respective rights in technical data of the United States and the contractor.\textsuperscript{49}

The Dixon Amendments required that DoD implement these policy changes in revised rights-in-data provisions to take effect by April 1, 1988.\textsuperscript{50} However, Congress, once again, excluded computer software from its directive, thereby ensuring that the software rules and the rules governing other technical data would continue to diverge.

\textbf{E. THE ADMINISTRATION'S DRAFT POLICY ON RIGHTS IN TECHNICAL DATA}

In early 1988, the Office of Federal Procurement Policy (OFPP) released the "Administration's Draft Policy on Rights in Technical Data" pursuant to the President's 1987 Executive Order.\textsuperscript{51} The draft policy, like the Dixon Amendments, required that rights in data be established through negotiations, and similarly recognized that such a policy would only be successful if contracting officers were provided with the necessary guidance. Accordingly, the rule stated that the government should not obtain rights-in-data, regardless of the source of funding, unless it first determines that there is a specific need. Even if such a need is identified, the government must first consider other alternatives to obtaining the rights.\textsuperscript{52}

\textbf{F. THE 1988 INTERIM RULE}

In response to the Dixon Amendments, DoD published an interim rights-in-data rule and request for comments on April 1, 1988,\textsuperscript{53} and then a revised interim rule on October 28, 1988.\textsuperscript{54} However, because the Dixon Amendments did not address computer software, DoD did not feel obliged to complete its long-awaited revision of the software rules;

\textsuperscript{48} Id. § 808(a), 101 Stat. at 1128-29 (amending 10 U.S.C. § 2320(a)(1) (1982)).
\textsuperscript{49} Id. § 808(b)(4), 101 Stat. at 1130 (amending 10 U.S.C. § 2320(c) (1982)).
\textsuperscript{50} Id. § 808(c), 101 Stat. at 1130.
\textsuperscript{52} Thus, the government should not acquire data if 1) the original item or substitutes are commercially available; 2) functional data or samples of the original item will adequately serve the government's purposes; or 3) the original contractor is willing to furnish the data through alternate sources of supply, using direct licenses or nondisclosure agreements. \textit{Id.} Even if obtaining the data represents the only means of assuring competitive reprocurement, the Draft Policy recognizes that acquisition of the data may nevertheless be inappropriate—for example, when the costs of acquiring the data are likely to exceed the savings resulting from competitive reprocurement. \textit{Id.} at 402-03.
\textsuperscript{54} Id. at 43,698.
it republished the existing provisions with only minor substantive changes.\(^{55}\) In fact, the \textit{ad hoc} committee formed by the DARC in 1987, to formulate new software rules, has now abandoned its efforts. The explanation offered for this development is that the DARC and the Civilian Agency Acquisition Council (CAAC) plan to unify civilian and military data acquisition regulations into a single body of uniform rules.\(^{56}\) Accordingly, DARC believes that attempts to formulate software rules for the military only would be a wasted effort, and the software project has consequently been turned over to a joint committee of the DARC and CAAC.

In any event, DoD's 1988 approach to technical data acquisitions may reveal the military's thinking with regard to future software rules; the interim rule could very well anticipate revisions in DoD's software acquisition policies—if only to confirm the Department's efforts to pursue traditional objectives under the guise of reform. Thus, the April 1, 1988 and October 28, 1988, revisions give the appearance of bringing DoD rights-in-data policies into line with congressional initiatives and the OFPP draft proposals, by encouraging the negotiation of data rights, while hand-cuffing the negotiators with detailed guidelines and objectives. In fact, the only question typically on the negotiating table is whether the government should take unlimited rights or Government Purpose License Rights, with all the inadequacies discussed above.\(^{57}\)

The new regulations adopt the same strategy as the 1987 version, asserting broad claims to "unlimited rights" data\(^{58}\) while further expanding the negotiating authority of the contracting officer to surrender these rights in favor of Government Purpose License Rights. The 1988 revisions thus follow the OFPP draft policy and the 1987 Executive Order in allowing Government Purpose License Rights in data developed exclusively with government funding.\(^{59}\) Nevertheless, the Government

\(^{55}\) Id. at 43,707-09 (to be codified at 48 C.F.R. § 227.481-1).
\(^{56}\) This was supposed to have been accomplished by September 30, 1988. See 52 Fed. Reg. 18, 140 (1987).
\(^{57}\) See supra text accompanying notes 42-45. See generally 53 Fed. Reg. 43,702-04 (1988) (to be codified at 48 C.F.R. § 227.473-1). Where technical data pertains to items or processes developed "exclusively at private expense," the contractor may negotiate to grant the government "limited rights," which are similar to the rights the government receives in "restricted rights software." See id. at 43,700 (to be codified at 48 C.F.R. § 227.471); id. at 43,702 (to be codified at 48 C.F.R. § 227.472-3(b)).
\(^{58}\) Id. at 43,701 (to be codified at 48 C.F.R. § 227.472-3(a)).
\(^{59}\) Id. at 43,701-02 (to be codified at 48 C.F.R. § 227.472-3(a)(2)). The mix of government and private funding, nevertheless, remains a factor in determining whether Government Purpose License Rights are appropriate. Id. at 43,703 (to be codified at 48 C.F.R. § 227-473-1(c)(v)). Other factors include: whether the technology can be commercialized; the strategy for further acquisitions; and the development of alternative sources of supply. Id. at 43,703 (to be codified at 48 C.F.R. § 227.473-1(c)). In addition, the contracting officer may not agree to Government Purpose License Rights where reprocurement will involve
Purpose License is the same limited boilerplate provision found in the 1987 regulations, and is therefore completely unsuitable as a vehicle for imparting the desired flexibility into negotiations over data rights. Far from recognizing this problem, the regulations specifically reject the use of "non-standard" license rights "unless approved by the head of the chief of the contracting office."

The 1988 revisions further undermine the utility of the Government Purpose License by requiring that the so-called "license" expire and be replaced by unlimited government rights. Indeed, the regulations state that the government's negotiating objective in most situations will be to obtain unlimited rights within a one to five year period. This result runs counter to the OFPP draft proposal, as well as DoD's stated policy of obtaining "only the minimum essential technical data and data rights." We suspect, consequently, that the interim rule will be subject to much criticism from the private sector and will probably stimulate renewed reform efforts within Congress and the Executive Branch.

V. CRITICISM OF DoD's RIGHTS-IN-DATA POLICIES

Why DoD adheres so recalcitrantly to its present policies remains a mystery. Traditionally, DoD has maintained that competitive procurement policies require extensive government rights in data in order to evaluate future acquisitions and to solicit competitive bids. This attitude blends into the more general notion that government needs for proprietary technical data and software exceed those of private commercial customers. DoD has articulated its special needs as follows:

Millions of separate items must be acquired, operated, and maintained for defense purposes, often at points remote from the source supply. Technical data are required for training of personnel, overhaul, and repair, cataloging, standardization, inspection and quality control, packaging and logistics operations. Technical data resulting from research and development and production contracts must be disseminated to many different users. The government must make technical data widely available to increase competition, lower costs and provide for mobilization.

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a large number of potential competitors. Id. at 43,701-02 (to be codified at 48 C.F.R. § 227.472-3(a)(2)(ii)(A)). Finally, the contracting officer must consider whether Government Purpose License Rights will be a "burden" on the government. Id. at 43,703 (to be codified at 48 C.F.R. § 227.473-1(c)(vii)).

60. Id. at 43,710 (to be codified at 48 C.F.R. § 252.227-7013(b)(2)).
61. Id. at 43,703 (to be codified at 48 C.F.R. § 227.473-1(c)(4)).
62. Id. at 43,701-02 (to be codified at 48 C.F.R. § 227.472-3(a)(2)(i)).
63. Id. at 43,703 (to be codified at 48 C.F.R. § 227.473-1(c)(3)).
64. Id. at 43,701 (to be codified at 48 C.F.R. § 227.472-2).
65. Id. at 43,700-01 (to be codified at 48 C.F.R. § 227.472-1(a)).
Nevertheless, it is difficult to believe that the exigencies of the government's mission routinely demand unlimited rights in software and data. A better explanation for DoD's policy is that the government relies upon the expenditure of public funds as an excuse to avoid the effort that would be required by a more carefully considered assessment of DoD's needs.

Even before the Packard Commission's widely publicized criticism of DoD's rights-in-data regulations, DoD's policy of requiring extensive rights in data and software had been challenged for undercutting governmental objectives. To be sure, acquisitions using "unlimited rights" software may decrease the cost of maintenance and reprocurement. However, the cost of the original contract may well increase because "if contractors know they must lose [their proprietary interests in] data when dealing with the government, they will almost certainly seek to recoup those losses when negotiating contract prices." Thus, a broad assertion of rights in commercially valuable information and the resulting high risk of disclosure to competitors will "drive up the cost of technology the Government buys from industry, especially computer software that is in great demand in the commercial marketplace."

This threat to commercial proprietary interests may deprive the government of the most desirable software. The industry representatives who composed the Rights in Data Technical Working Group of the Institute for Defense Analysis (RDTWG) observed:

Industry is reluctant to invest in new technology for the government because [of] sweeping data rights demands by the government, and apprehensiveness about the loss of proprietary information... This creates a climate unfavorable to the transfer of such technology [to the government].

The result of this hostile environment, RDTWG concluded, is that:

the government is failing to obtain the most innovative and creative

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66. Also instrumental in bringing about a reassessment of DoD's policies were the considerable efforts of the Software Engineering Institute of Carnegie-Mellon University, which was funded by DoD in 1985 and given the responsibility of investigating the results of DoD's approach to software acquisition. See, e.g., A. Martin & K. Deasy, The Basis for Reconciling Department of Defense and Industry Needs for Rights in Software (Software Engineering Institute Report, Seeking the Balance Between Government and Industry Interests in Software Acquisitions, Vol. I, SEI-87-TR-13, June 1987); P. Samuelson, Toward a Reform of the Defense Department Software Acquisition Policy (Software Engineering Institute, CMU/SEI-86-TRI, Apr. 1986); Commercial Models, supra note 3.


68. Arthurs, Contractors Fume as Air Force Takes Off After Rights to Data, Legal Times of Wash., Feb. 27, 1984, at 8, col. 4.

computer software technology from its software suppliers. Thus, the government has been unable to take full advantage of the significant American lead in software technology for the upgrading of its mission-critical computer resources.\textsuperscript{70}

DoD's rights-in-data provisions must also be judged against civilian procurement policies. Each civilian agency promulgated its own data acquisition provisions until the Small Business & Federal Procurement Competition Enhancement Act of 1984 mandated a revision of the FAR to establish uniform rules governing data rights.\textsuperscript{71} These rules became effective on June 1, 1987, and, in contrast to the DoD regulations, adopt a strategy of limiting data delivery requirements.\textsuperscript{72} For example, a contractor may withhold "restricted computer software" from the government by substituting "form, fit and function data" in its place.\textsuperscript{73} Restricting government acquisitions to such functional data allows continued operation and maintenance of government systems while, at the same time, reducing the risk that a competitor will obtain the additional information necessary to reproduce protected intellectual property.\textsuperscript{74} Though the FAR only allows functional data to be substituted for privately-developed software and data, it is easy to see how this strategy might be extended to better effectuate administration policies of limiting data acquisitions to the necessary minimum.

Indeed, because of OFPP's directive that the CAAC and DARC promulgate uniform data acquisition rules for the civilian and military agencies, DoD may come under considerable pressure to adopt a similar approach. In the absence of a direct congressional mandate, however, disagreement over such a fundamental point will probably stand in the way of unified regulations.

\section*{VI. ANTICIPATED REFORMS}

DoD's reluctance to heed congressional and executive calls for reform will undoubtedly lead to further initiatives to push DoD in the di-

\textsuperscript{70} Id. at § 1-1.


\textsuperscript{72} The proposed FAR rights-in-data provisions were first issued for comment on August 5, 1985 (see 50 Fed. Reg. 32,870 (1985)), but were not published in final form until May 13, 1987 (see 52 Fed. Reg. 18,140 (1987)).

\textsuperscript{73} 48 C.F.R. § 27.404(b) (1986). "Form, fit, and function data" for computer software are defined as "data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements," but do not include "the source code, algorithm, process, formulae, and flow charts of the software." Id. § 27.401. The Government may request the actual software when necessary. Id. § 27.404(b).

\textsuperscript{74} Under the FAR, a contractor may generally qualify privately-developed software for "restricted rights" status simply by adopting the procedures that would be necessary to preserve its intellectual property rights in an ordinary commercial setting. Id. § 27.401.
rection of a licensing scheme that more closely corresponds to commercial practices. Ideally, renewed calls for case-by-case negotiation will result in software acquisition licenses that are carefully tailored to an individualized analysis of DoD's needs with respect to particular software and the developer's particular interest in retaining proprietary rights in that software. These arrangements are the norm in private industry and would permit DoD to obtain what it needs, but to pay for no more than it needs—while at the same time allowing industry to protect its most innovative and proprietary data.\(^{75}\)

Given existing resources, however, the wholesale adoption of such a scheme may initially be administratively unworkable.\(^{76}\) DoD has expressly disapproved of nonstandard licensing arrangements and has warned of the "serious administrative burdens for contract support personnel and persons in industry who may be required to handle this data many years after the contract [is complete]."\(^{77}\) As a first step, DoD might adopt a series of generic licenses, which respond to specific government needs—such as standardization, maintenance, or reprocurement—but which are drafted far more tightly than the dubious "Government Purpose License."\(^{78}\) Royalties would reflect the scope of the rights obtained under the license and the extent to which the software was generated by public financing. As contracting officers gain the necessary experience, they could gradually be afforded the latitude to deviate from this framework in favor of the more individualized approach discussed above.

Finally, Congress will no doubt make further attempts to reconcile DoD to the use of "direct licensing," a practice which will help transform the Government Purpose License into a more useful concept. Under this scheme, the government could direct the licensor to enter into a licensing agreement with a designated third party if the government deemed it necessary to disclose the software or data. As one commentary has noted, the use of direct licensing would allow "a contractor to make a business decision regarding the licensee and [give] the contractor direct control over enforcement through privity of contract."\(^{79}\) DoD has been traditionally fearful that contractors would demand unreasonable conditions if allowed to negotiate directly with third-parties.\(^{80}\) However, the government contract could protect the interests of

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75. See COMMERCIAL MODELS, supra note 3, at 7.
76. See 2 NASH & CIBINIC REP. ¶19, at 48 (Mar. 1988).
78. See COMMERCIAL MODELS, supra note 3, at 7. Flexibility still should be permitted for unusual situations not addressed by the standard clauses. Id.
79. OSD Data Rights Study Group, supra note 67, at 21-22.
80. Taylor & Burgett, supra note 11, at 8.
the government by specifying the royalty and other terms of any private license that the government might require.81

VII. CONCLUSION

DoD has labored unsuccessfully to accommodate its software rules to the framework of its current acquisition policy for other technical data. In fact, such an accommodation is impossible. The economics of the software industry simply do not comport with a procurement strategy that places vital proprietary interest at risk by a constant demand for unlimited rights.

Software differs from other data in the quality and quantity of the information it embodies; a competitor who gains access to this information not only usurps the value of the software itself, but also appropriates trade secrets that may represent a significant portion of the developing firm's market value. Indeed, even in the context of more enlightened policies, software should receive more extensive protections than other technical data. Those companies engaged in developing first-rate software should give strong support to congressional and executive branch efforts to have DoD adopt a licensing scheme that is more closely attuned to a software developer's concerns.

81. Greenberger, supra note 9, at 35.