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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

DANIEL J. BERNSTEIN,

Plaintiff,

vs.

UNITED STATES DEPARTMENT OF STATE  
et al.,

Defendants.

*350*

No. C-95-0582 MHP

OPINION

APR 17 1996

ENTERED IN CIVIL DOCKET \_\_\_\_\_, 19\_\_\_\_

Plaintiff Daniel Bernstein brought this action against the Department of State and the individually named defendants seeking declaratory and injunctive relief from their enforcement of the Arms Export Control Act ("AECA"), 22 U.S.C. § 2778, and the International Traffic in Arms Regulations ("ITAR"), 22 C.F.R. §§ 120-30 (1994), on the grounds that they are unconstitutional on their face and as applied to plaintiff. Now before this court is defendants' motion to dismiss for lack of justiciability.<sup>1</sup>

Having considered the parties' arguments and submissions, and for the reason set forth below, the court enters the following memorandum and order.



1 "Unsuffle.c", respectively. Once source code is converted  
2 into "object code," a binary system consisting of a series of  
3 0s and 1s read by a computer, the computer is capable of  
4 encrypting and decrypting data.<sup>4</sup>

5 B. Statutory and Regulatory Background

6 The Arms Export Control Act authorizes the President to  
7 control the import and export of defense articles and defense  
8 services by designating such items to the United States  
9 Munitions List ("USML"). 22 U.S.C. § 2778(a)(1). Once on the  
10 USML, and unless otherwise exempted, a defense article or  
11 service requires a license before it can be imported or  
12 exported. 22 U.S.C. § 2778(b)(2).

13 The International Traffic in Arms Regulations, 22 C.F.R.  
14 §§ 120-30, were promulgated by the Secretary of State, who was  
15 authorized by executive order to implement the AECA. The ITAR  
16 is administered primarily within the Department of State by the  
17 Director of the Office of Defense Trade Controls ("ODTC"),  
18 Bureau of Politico-Military Affairs. The ITAR allows for a  
19 "commodity jurisdiction procedure" by which the ODTC determines  
20 if an article or service is covered by the USML when doubt  
21 exists about an item. 22 C.F.R. § 120.4(a).

22 Categories of items covered by the USML are enumerated at  
23 section 121.1. Category XIII, Auxiliary Military Equipment,  
24 includes "Cryptographic (including key management) systems,  
25 equipment, assemblies, modules, integrated circuits, components  
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or software with the capability of maintaining secrecy or confidentiality of information or information systems . . . ." 22 C.F.R. § 121 XIII(b)(1). A number of applications of cryptography are excluded, such as those used in automated teller machines and certain mass market software products that use encryption. Id.

C. Plaintiff's Commodity Jurisdiction Determinations

On June 30, 1992 Bernstein submitted a commodity jurisdiction ("CJ") request to the State Department to determine whether three items were controlled by ITAR. Those items were Snuffle.c and Unsnuffle.c (together referred to as Snuffle 5.0), each submitted in C language source files, and his academic paper describing the Snuffle system. Complaint Exh. A. On August 20, 1992 the ODTIC informed Bernstein that after consultation with the Departments of Commerce and Defense it had determined that the commodity Snuffle 5.0 was a defense article under Category XIII of the ITAR and subject to licensing by the Department of State prior to export. The ODTIC identified the item as a "stand-alone cryptographic algorithm which is not incorporated into a finished software product." Complaint Exh. B. The ODTIC further informed plaintiff that a commercial software product incorporating Snuffle 5.0 may not be subject to State Department control and should be submitted as a new commodity jurisdiction request.

1 Plaintiff and ODTc exchanged copious and contentious  
2 correspondence regarding the licensing requirements during the  
3 spring of 1993. Still unsure if his academic paper had been  
4 included in the ODTc CJ determination of August 20, 1992,  
5 Bernstein submitted a second CJ request on July 15, 1993,  
6 asking for a separate determination for each of five items.  
7 According to plaintiff these items were 1) the paper, "The  
8 Snuffle Encryption System," 2) Snuffle.c, 3) Unsnuffle.c, 4) a  
9 description in English of how to use Snuffle, and 5)  
10 instructions in English for programming a computer to use  
11 Snuffle.<sup>5</sup> On October 5, 1993 the ODTc notified Bernstein that  
12 all of the referenced items were defense articles under  
13 Category XIII(b)(1). Complaint Exh. E; Defendant Exh. 18.  
14 After plaintiff initiated this action, the ODTc wrote to  
15 plaintiff to clarify that the CJ determinations pertained only  
16 to Snuffle.c and Unsnuffle.c and not to the three items of  
17 explanatory information, including the paper. Defendant Exh.  
18 21. Bernstein appealed the first commodity jurisdiction  
19 determination on September 22, 1993. That appeal is still  
20 pending.

21 Plaintiff seeks to publish and communicate his ideas on  
22 cryptography. Because "export" under the ITAR includes  
23 "[d]isclosing . . . technical data to a foreign person, whether  
24 in the United States or abroad", Bernstein asserts that he is  
25 not free to teach the Snuffle algorithm, to disclose it at

1 academic conferences, or to publish it in journals or online  
2 discussion groups without a license.

3 LEGAL STANDARD

4 A motion to dismiss will be denied unless it appears that  
5 the plaintiff can prove no set of facts which would entitle him  
6 or her to relief. Conley v. Gibson, 355 U.S. 41, 45-46 (1957);  
7 Fidelity Financial Corp. v. Federal Home Loan Bank of San  
8 Francisco, 792 F.2d 1432, 1435 (9th Cir. 1986), cert. denied,  
9 479 U.S. 1064 (1987). All material allegations in the  
10 complaint will be taken as true and construed in the light most  
11 favorable to the plaintiff. NL Industries, Inc. v. Kaplan, 792  
12 F.2d 896, 898 (9th Cir. 1986). Although the court is generally  
13 confined to consideration of the allegations in the pleadings,  
14 when the complaint is accompanied by attached documents, such  
15 documents are deemed part of the complaint and may be  
16 considered in evaluating the merits of a Rule 12(b)(6) motion.  
17 Durning v. First Boston Corp., 815 F.2d 1265, 1267 (9th Cir.),  
18 cert. denied sub. nom. Wyoming Community Dev. Auth. v. Durning,  
19 484 U.S. 944 (1987).

20  
21 DISCUSSION

22 Plaintiff makes a number of allegations of  
23 unconstitutionality with respect to the AECA and ITAR.  
24 Specifically, plaintiff alleges that the act and accompanying  
25 regulations, both facially and as applied, are a content-based  
26

1 infringement on speech, act as an unconstitutional prior  
2 restraint on speech, are vague and overbroad, and infringe the  
3 rights of association and equal protection. Bernstein also  
4 alleges that the CJ request and registration processes as well  
5 as the licensing procedures are unconstitutional, although he  
6 does not state the basis of their unconstitutionality.  
7 Finally, plaintiff alleges that the actions of defendants are  
8 arbitrary and capricious and constitute an abuse of discretion  
9 under the Administrative Procedure Act, 5 U.S.C. §§ 701 et seq.  
10 Defendants move to dismiss on the grounds that these issues are  
11 nonjusticiable.

12 I. Justiciability

13 The AECA plainly states:

14 The designation by the President (or by an official to  
15 whom the President's functions under subsection (a) of  
16 this section have been duly delegated), in regulations  
17 issued under this section, of items as defense articles or  
defense services for purposes of this section shall not be  
subject to judicial review.

18 22 U.S.C. § 2778(h). Defendants conclude that this language,  
19 as well as the Constitution, precludes review of commodity  
20 jurisdiction determinations by this court. Plaintiff does not  
21 dispute this assessment.

22 Defendants characterize this action as an attempt to  
23 obtain judicial review of their CJ determinations to place  
24 plaintiff's cryptographic items on the USML; as such, they  
25 maintain the action is precluded. However, this  
26 characterization does not comport with either the complaint

1 itself or plaintiff's repeated assertions that he is not  
2 seeking judicial review of defendants' CJ decision, but of the  
3 constitutionality of the statute and its regulations.

4 It is well established under the political question  
5 doctrine that courts do not have the expertise to examine  
6 sensitive political questions reserved for the other branches  
7 of government. See Baker v. Carr, 369 U.S. 186 (1962). More  
8 to the point, as defendants note, the determination of whether  
9 an item should be on the USML "possesses nearly every trait  
10 that the Supreme Court has enumerated traditionally renders a  
11 question 'political.'" United States v. Martinez, 904 F.2d  
12 601, 602 (11th Cir. 1990) (finding the CJ determination  
13 nonjusticiable without deciding if the then recent amendment to  
14 the AECA precluding judicial review applied to that case).  
15 However, a review of a particular CJ decision is a distinctly  
16 different question from a constitutional challenge to a  
17 statute. In Martinez, the Eleventh Circuit noted that  
18 defendants had not alleged a constitutional violation.<sup>6</sup> 904  
19 F.2d at 603.

20 With respect to constitutional questions, the judicial  
21 branch not only possesses the requisite expertise to adjudicate  
22 these issues, it is also the best and final interpreter of  
23 them. Furthermore, as plaintiff points out, federal courts  
24 have consistently addressed constitutional issues in the  
25 context of national security concerns. See, e.g., New York  
26 Times Co. v. United States, 403 U.S. 713 (1971); Haig v. Aias.

1 453 U.S. 280 (1981). Because the issues before this court do  
2 not necessitate a factual inquiry into the CJ determination,  
3 but a legal one into broader constitutional claims, the  
4 question is whether the statutory preclusion of judicial review  
5 of CJ decisions also embraces this court's review of the  
6 statute's constitutionality.<sup>7</sup>

7 Defendants cite a number of Ninth Circuit cases that  
8 reject the reviewability of commodity designations under the  
9 analogous Export Administration Act, 50 U.S.C. App. §§ 2401 et  
10 seq., administered by the Commerce Department. Because this  
11 court is not reviewing the CJ determination itself, those cases  
12 miss the mark. Of those cases, however, United States v.  
13 Bozarov, 974 F.2d 1037 (9th Cir. 1992), cert. denied, 507 U.S.  
14 917 (1993), is instructive.

15 In Bozarov the defendant was charged with exporting items  
16 on the Commerce Control List ("CCL")--which is akin to the  
17 USML--without a license in violation of the statute. The  
18 items, which were computer disk manufacturing equipment, had  
19 been listed on the CCL for national security reasons. Bozarov  
20 challenged the constitutionality of the Act's preclusion of  
21 judicial review. In upholding the preclusion of review,  
22 however, the court noted its decision was "bolstered by the  
23 fact that certain limited types of judicial review are  
24 available under the EAA despite the Act's seemingly absolute  
25 preclusion of review. First, colorable constitutional claims  
26 may be reviewed by the courts even when a statute otherwise

1 precludes judicial review." Id. at 1044 (citing Webster v.  
2 Doe, 486 U.S. 592, 602-05 (1988)). In fact, in order to reach  
3 the question of whether it was constitutional to preclude  
4 judicial review, the Ninth Circuit had to first find the issue  
5 justiciable. There, even the government conceded that  
6 Bozarov's nondelegation challenge amounted to a colorable  
7 constitutional claim. 974 F.2d at 1044 n.7.

8 More definitive still is the Supreme Court's decision in  
9 Webster, where it addressed whether employment decisions by the  
10 Director of the CIA were subject to judicial review. In  
11 Webster, plaintiff Doe was discharged from the CIA after  
12 informing the agency that he was a homosexual. He contested  
13 his termination partly on constitutional grounds. The Court  
14 held that the applicable statute bestowed so much discretion on  
15 the CIA Director in terminating employees that judicial review  
16 of those decisions was precluded under section 701(a)(2) of the  
17 APA. However, the Court made clear that such a holding did not  
18 preclude review of constitutional claims, noting that

19 where Congress intends to preclude judicial review of  
20 constitutional claims its intent to do so must be clear. .  
21 . . We require this heightened showing in part to avoid  
22 the "serious constitutional question" that would arise if  
23 a federal statute were construed to deny any judicial  
24 forum for a colorable constitutional claim.

25 486 U.S. at 603 (citations omitted).<sup>8</sup>

26 In the instant case, Congress has clearly precluded review  
27 of CJ determinations under the AECA, 22 U.S.C. § 2778(h). But  
28 it has just as clearly tailored the preclusion of review to the  
designation by the President or his delegate "of items as

1 defense articles or defense services for the purposes of this  
2 section." Id. Moreover, the language of section (h) indicates  
3 that it pertains only to delegations of the President's  
4 "functions under subsection (a) of this section." Those  
5 functions do not include constitutional determinations.

6 As this court finds that the AECA does not preclude  
7 judicial review of colorable constitutional claims, it must  
8 determine if plaintiff's claims are colorable in order to  
9 decide the issue of justiciability.

10 II. Colorability of Plaintiff's Constitutional Claims

11 Defendants maintain that plaintiff has raised no colorable  
12 constitutional claim because this case does not concern  
13 "speech" protected by the First Amendment, and even if it does,  
14 the minimal infringement is excusable under O'Brien v. United  
15 States, 391 U.S. 367 (1968). Defendant's further argue that  
16 plaintiff has not made a colorable claim that the CJ  
17 determinations constitute a prior restraint or that the AECA  
18 and ITAR are overbroad or vague.<sup>9</sup> Plaintiff responds that the  
19 items that were subject to CJ determinations are speech of the  
20 most protected kind.

21  
22 A. Analytical Framework

23 To determine if Bernstein states a "colorable  
24 constitutional claim," it is helpful to know what standard  
25 obtains. Colorability, a concept often employed by courts, is  
26

1 rarely defined. Not surprisingly, discussions of colorability  
2 appear to be highly specific to both the claim and context in  
3 which they arise.

4 The Ninth Circuit has adopted the proposition that a  
5 constitutional claim is not colorable if it is clearly  
6 immaterial and made only for the purposes of jurisdiction, or  
7 "is wholly insubstantial or frivolous." Hoye v. Sullivan, 985  
8 F.2d 990, 991-92 (9th Cir. 1993) (citing Boettcher v. Secretary  
9 of HHS, 759 F.2d 719, 722 (9th Cir. 1985)).

10 On a number of occasions the Ninth Circuit has addressed  
11 whether constitutional claims were colorable in the context of  
12 national security decisions. These have been largely due  
13 process and equal protection challenges to revocations of a  
14 security clearance. Dorfmont v. Brown, 913 F.2d 1399 (9th Cir.  
15 1990), cert. denied, 499 U.S. 905 (1991); High Tech Gays v.  
16 Defense Ind. Sec. Clearance Off., 895 F.2d 563 (9th Cir.),  
17 reh'g denied, en banc, 909 F.2d 375 (1990); Dubbs v. CIA, 866  
18 F.2d 1114 (9th Cir. 1989).

19 In Dorfmont the court held that there was no cognizable  
20 liberty or property interest in a security clearance that could  
21 give rise to a due process claim and therefore the claim was  
22 not colorable. The Dorfmont court noted, however, that it had  
23 found equal protection challenges to security clearance denials  
24 colorable in High Tech Gays. 913 F.2d at 1403. In fact, in  
25 High Tech Gays the court bypassed the issue of colorability  
26 altogether and concluded on the merits that homosexuals were

1 not a suspect or quasi-suspect class for purposes of heightened  
2 equal protection scrutiny.<sup>10</sup> Plaintiffs in High Tech Gays had  
3 also brought a First Amendment claim based on freedom of  
4 association. The court found that plaintiffs had failed to  
5 allege or show a security clearance had been denied solely by  
6 reason of their membership in a gay organization and,  
7 therefore, there was no case or controversy with respect to  
8 that claim. In Dorfmont the court described its disposition of  
9 the First Amendment claim in High Tech Gays as failure "to  
10 allege sufficient facts to raise a justiciable First Amendment  
11 claim." 913 F.2d at 1403 n.2. It is unclear whether the  
12 court's discussion of justiciability in Dorfmont applies to  
13 lack of colorability, and if so, what standard it implies. As  
14 Hoye is the most recently and clearly articulated of the Ninth  
15 Circuit's attempts to define colorability, its standard will  
16 govern the court's analysis in this case.<sup>11</sup>

17 B. Analysis

18 Neither party agrees on exactly which items are at issue  
19 in this case, which confounds the analysis of whether  
20 subjecting them to a licensing requirement raises a colorable  
21 First Amendment claim. Defendants claim that only Snuffle.c  
22 and Unsnuffle.c are controlled by the USML and subject to the  
23 licensing requirement. This is based on the 1995 letter the  
24 ODTIC sent to plaintiff after he had filed suit in which it  
25 clarified that the CJ determinations did not include any  
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1 explanatory information, including the paper. This  
2 clarification would have been more appropriate in response to  
3 plaintiff's letter of July 15, 1993. Bernstein claims that his  
4 paper, "The Snuffle Encryption System," remains on the USML and  
5 that he has not been able to publish it without a license. It  
6 seems evident from the correspondence between Bernstein and the  
7 ODTIC that the paper was indeed determined to be on the USML at  
8 the latest by October 5, 1993, but that as of June 29, 1995,  
9 the ODTIC disavowed that decision. It is disquieting that an  
10 item defendants now contend could not be subject to regulation  
11 was apparently categorized as a defense article and subject to  
12 licensing for nearly two years, and was only reclassified after  
13 plaintiff initiated this action. Nonetheless, given  
14 defendants' reevaluation, the claims pertaining to the paper  
15 now appear moot.<sup>12</sup>

16  
17 1. Speech

18 The paper, an academic writing explaining plaintiff's  
19 scientific work in the field of cryptography, is speech of the  
20 most protected kind. See Sweezy v. New Hampshire, 354 U.S.  
21 234, 249-50 (1957) (noting the importance of protecting  
22 scholarship and academic inquiry). Nor do defendants contest  
23 this. Rather, defendants contend that Snuffle.c and  
24 Unsnuffle.c--the source code for the encryption program--are  
25 not speech but conduct. Plaintiff argues that computer code  
26 inscribed on paper, like any non-English language, is speech

1 protected by the First Amendment.<sup>13</sup> Plaintiff further argues  
2 that even functional software is treated as protectable  
3 expression under copyright law.<sup>14</sup>

4 Defendants urge this court to find the source code for  
5 Snuffle unprotected conduct rather than speech. They cite  
6 Texas v. Johnson, 491 U.S. 397 (1989), for the proposition that  
7 conduct must be "'sufficiently imbued with the elements of  
8 communication'" to fall within the protections of the First  
9 Amendment. Id. at 404 (quoting Spence v. Washington, 418 U.S.  
10 405, 409 (1974)). In evaluating the communicative aspects of  
11 burning a flag in Texas v. Johnson, the Court framed the  
12 inquiry as whether the conduct entails an intent to convey a  
13 particular message and the likelihood of that message being  
14 understood. Id. According to defendants, the source code, as  
15 a functioning cryptographic product, is not intended to convey  
16 a particular message. It cannot be speech, they say, because  
17 its purpose is functional rather than communicative.

18 However, the Court in both Johnson and Spence, the flag  
19 desecration case upon which Johnson relies, inquired into the  
20 communicative nature of conduct only after concluding that the  
21 act at issue was indeed conduct and not speech. Both cases  
22 strongly imply that a court need only assess the expressiveness  
23 of conduct in the absence of "the spoken or written word."  
24 Johnson, 491 U.S. at 404; see Spence, 418 U.S. at 409 ("To be  
25 sure, appellant did not choose to articulate his views through  
26 printed or spoken words. It is therefore necessary to

1 determine whether his activity was sufficiently imbued with  
2 elements of communication to fall within the scope of the First  
3 and Fourteenth Amendments . . . ."). In the instant case,  
4 Bernstein's encryption system is written, albeit in computer  
5 language rather than in English. Furthermore, there is little  
6 about this functional writing to suggest it is more like  
7 conduct than speech. A computer program is so unlike flag  
8 burning and nude dancing that defendants' reliance on conduct  
9 cases is misplaced. It would be convoluted indeed to  
10 characterize Snuffle as conduct in order to determine how  
11 expressive it is when, at least formally, it appears to be  
12 speech.

13 Recently the Ninth Circuit addressed the difference  
14 between speech and expressive conduct in assessing the  
15 constitutionality of the English-only provision amended to  
16 Arizona's constitution. Yniquez v. Arizonans for Official  
17 English, 69 F.3d 920, 934-36 (9th Cir. 1995) (en banc), cert.  
18 granted, 64 U.S.L.W. 3639 (U.S. Mar. 25, 1996) (No. 95-974).  
19 Defendants in Yniquez, like defendants here, sought to  
20 characterize one's choice of language as expressive conduct.  
21 The court was similarly "unpersuaded by the comparison between  
22 speaking languages other than English and burning flags." Id.  
23 at 934. The court further concluded that language was speech  
24 by definition:

25 Of course, speech in any language consists of the  
26 'expressive conduct' of vibrating one's vocal chords,  
27 moving one's mouth and thereby making sounds, or of  
28 putting pen to paper, or hand to keyboard. Yet the fact

1 that such 'conduct' is shaped by language--that is, a  
2 sophisticated and complex system of understood meanings--  
3 is what makes it speech. Language is by definition  
4 speech, and the regulation of any language is the  
5 regulation of speech.

6 Id. at 934-35. Nor does the particular language one chooses  
7 change the nature of language for First Amendment purposes.  
8 This court can find no meaningful difference between computer  
9 language, particularly high-level languages as defined above,  
10 and German or French. All participate in a complex system of  
11 understood meanings within specific communities. Even object  
12 code, which directly instructs the computer, operates as a  
13 "language." When the source code is converted into the object  
14 code "language," the object program still contains the text of  
15 the source program. The expression of ideas, commands,  
16 objectives and other contents of the source program are merely  
17 translated into machine-readable code.<sup>15</sup>

18 Whether source code and object code are functional is  
19 immaterial to the analysis at this stage. Contrary to  
20 defendants' suggestion, the functionality of a language does  
21 not make it any less like speech. The Yniquez court noted that  
22 "the choice to use a given language may often simply be based  
23 on a pragmatic desire to convey information to someone so that  
24 they may understand it." Id. at 935. Thus, even if Snuffle  
25 source code, which is easily compiled into object code for the  
26 computer to read and easily used for encryption, is essentially  
27 functional, that does not remove it from the realm of speech.  
28 Instructions, do-it-yourself manuals, recipes, even technical

1 information about hydrogen bomb construction, see United States  
2 v. The Progressive, Inc., 467 F. Supp. 990 (W.D. Wisc. 1979),  
3 are often purely functional; they are also speech.

4 Music, for example, is speech protected under the First  
5 Amendment. See Ward v. Rock Against Racism, 491 U.S. 781, 790  
6 (1989). The music inscribed in code on the roll of a player  
7 piano is no less protected for being wholly functional. Like  
8 source code converted to object code, it "communicates" to and  
9 directs the instrument itself, rather than the musician, to  
10 produce the music. That does not mean it is not speech. Like  
11 music and mathematical equations, computer language is just  
12 that, language, and it communicates information either to a  
13 computer or to those who can read it.<sup>16</sup>

14 Defendants argue in their reply that a description of  
15 software in English informs the intellect but source code  
16 actually allows someone to encrypt data. Defendants appear to  
17 insist that the higher the utility value of speech the less  
18 like speech it is. An extension of that argument assumes that  
19 once language allows one to actually do something, like play  
20 music or make lasagne, the language is no longer speech. The  
21 logic of this proposition is dubious at best. Its support in  
22 First Amendment law is nonexistent.

23 By analogy, copyright law also supports the  
24 "expressiveness" of computer programs. Computer software is  
25 subject to copyright protection as a "literary work." <sup>17</sup>  
26 U.S.C. §§ 101, 102(a)(1); accord Johnson Controls v. Phoenix

1 Control Systems, 886 F.2d 1173, 1175 (9th Cir. 1989). For the  
2 purposes of copyright, literary works "are works, other than  
3 audiovisual works, expressed in words, numbers, or other verbal  
4 or numerical symbols or indicia, regardless of the nature of  
5 the material objects, such as books, periodicals, manuscripts,  
6 phonorecords, film, tapes, disks, or cards, in which they are  
7 embodied." 17 U.S.C. § 101.

8 A computer program is further defined under the copyright  
9 statute as "a set of statements or instructions to be used  
10 directly or indirectly in a computer in order to bring about a  
11 certain result." Id. (emphasis added). Source code is  
12 essentially a set of instructions that is used indirectly in a  
13 computer since it must first be translated into object code to  
14 achieve the desired result. The statutory language, along with  
15 the caselaw of numerous circuits, supports the conclusion that  
16 copyright protection extends to both source code and object  
17 code. See NLFC, Inc. v. Devcom Mid-America, Inc., 45 F.3d 231,  
18 234-35 (7th Cir.), cert. denied, 115 S.Ct. 2249 (1995) ("Both  
19 the source and object codes to computer software are also  
20 individually subject to copyright protection.") (citations  
21 omitted); Johnson Controls, 886 F.2d at 1175 ("Source code and  
22 object code, the literal components of a program, are  
23 consistently held protected by a copyright on the program.")  
24 (citations omitted); Apple Computer, Inc. v. Franklin Computer  
25 Corp., 714 F.2d 1240, 1249 (3d Cir. 1983), cert. dismissed, 464  
26 U.S. 1033 (1984).

1 Copyright protection, designed to protect original  
2 expression, 17 U.S.C. § 102(a), supports the likeness of a  
3 computer program to speech as defined by First Amendment law.  
4 The expression of an idea, as opposed to the idea itself, which  
5 is not afforded copyright protection under 17 U.S.C. § 102(b),  
6 connotes the "speaking" of an idea. An encryption program  
7 expressed in source code communicates to other programmers and  
8 ultimately to the computer itself how to make the encryption  
9 algorithm (the idea) functional. Nor, under copyright law,  
10 does sheer functionality diminish the expressive quality of a  
11 copyrightable work. Apple Computer, Inc., 714 F.2d at 1252  
12 (citing Mazer v. Stein, 347 U.S. 201, 218 (1954)); cf. Lotus  
13 Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807, 815 (1st Cir.  
14 1995), judgment aff'd, 116 S.Ct. 804 (1996) (holding that a  
15 text describing how to operate something is subject to  
16 copyright protection while the method of operation itself is  
17 not). While copyright and First Amendment law are by no means  
18 coextensive, and the analogy between the two should not be  
19 stretched too far, copyright law does lend support to the  
20 conclusion that source code is a means of original expression.

21 For the purposes of First Amendment analysis, this court  
22 finds that source code is speech. Having concluded that all  
23 the items at issue, including Snuffle.c and Unsnuffle.c are  
24 speech, this court must now briefly review the claims  
25 defendants contest for colorability.

2. O'Brien

1 Defendants, relying on a characterization of Snuffle as  
2 conduct, argue that even if that conduct is expressive, the  
3 relatively mild O'Brien test should be employed. United States  
4 v. O'Brien, 391 U.S. 367 (1968), establishes the standard for  
5 assessing when a governmental regulation of conduct may  
6 nonetheless run afoul of the First Amendment's speech  
7 protections. Under O'Brien a regulation of conduct that  
8 incidentally restricts speech will be valid if 1) it is within  
9 the power of the government, 2) it furthers an important or  
10 substantial government interest, 3) the government interest is  
11 unrelated to the suppression of free expression and 4) the  
12 incidental restriction on speech is no greater than is  
13 essential to further that interest. Id. at 377.

14 Given that Snuffle source code is speech and not conduct,  
15 O'Brien does not appear to provide the appropriate standard  
16 under which to evaluate plaintiff's claims.<sup>17</sup> However, as the  
17 parties have not had an opportunity to brief the issue of what  
18 First Amendment standard obtains, the court will apply O'Brien  
19 for the limited purpose of determining colorability.  
20 Defendants make a strong case that the AECA and ITAR satisfy  
21 the first and second prongs of O'Brien--that they are within  
22 the government's power and further the important interest of  
23 national security. With respect to prongs three and four,  
24 however, this court cannot say that plaintiff's contentions are  
25 frivolous. Both the technical data provision of the ITAR, 22  
26

1 C.F.R. § 120.10, and Category XIII of the USML, 22 C.F.R. §  
2 121.1, regulating cryptographic software appear to relate to  
3 the "suppression of free expression" and may reach farther than  
4 is justifiable.

5 Defendants also argue that the Ninth Circuit's decision in  
6 United States v. Edler Industries, Inc., 579 F.2d 516 (9th Cir.  
7 1978), precludes a First Amendment attack under O'Brien on the  
8 AECA and its accompanying regulations. In Edler the court  
9 reviewed a conviction under the predecessor of the AECA for  
10 unlicensed exportation of technical data relating to a defense  
11 article on the USML. The technical data at issue in Edler  
12 related to a technique of tape wrapping with applications for  
13 missile components. After finding that "an expansive  
14 interpretation of technical data relating to items on the  
15 Munitions List could seriously impede scientific research and  
16 publishing and international scientific exchange," id. at 519,  
17 the court went on to adopt a narrowing construction to save the  
18 statute.<sup>18</sup> Defendants urge that if Edler allows the  
19 government to legitimately restrict the export of technical  
20 data relating to a defense article, it can certainly restrict  
21 the defense article itself. Such an argument is an extension  
22 of Edler this court is unwilling to adopt. The validity of the  
23 scope of the munitions list was simply not at issue in that  
24 case. While Edler will be instructive to an analysis of the  
25 AECA under the First Amendment, it is sufficiently  
26  
27  
28

1 distinguishable on its facts that it cannot preclude  
2 plaintiff's challenge at this stage.

3 While the court makes no judgment on the merits, it finds  
4 plaintiff alleges facts sufficient to state a nonfrivolous  
5 First Amendment claim and hence that claim is colorable.

6 3. Prior Restraint

7 Plaintiff alleges that the AECA and ITAR act as an  
8 administrative licensing scheme for the publication of  
9 scientific papers, algorithms and computer programs related to  
10 cryptography, since publishing could release that information  
11 to foreign persons and would constitute exportation under the  
12 ITAR. 22 C.F.R. § 120.17.<sup>19</sup>

13 Governmental licensing schemes, such as the AECA and ITAR,  
14 come with a heavy presumption against their validity when they  
15 act as a prior restraint on speech. See Nebraska Press Assoc.  
16 v. Stuart, 427 U.S. 539 (1976); New York Times Co. v. United  
17 States, 403 U.S. 713 (1971) (per curiam); Near v. Minnesota,  
18 283 U.S. 697 (1931). Prior restraints have even been struck  
19 down in the face of national security concerns. See e.g. New  
20 York Times, 403 U.S. at 714 (dissolving retraining order  
21 against newspaper publication of Pentagon Papers that included  
22 classified information). In New York Times the national  
23 security asserted was too vague a justification for prior  
24 restraints. Id. at 719 (Black, J., concurring), 725-26  
25 (Brennan, J., concurring). In his concurrence to the per  
26

1 curiam decision, Justice Stewart suggested a stringent test for  
2 permissible prior restraints, allowing them only when  
3 "disclosure . . . will surely result in direct, immediate, and  
4 irreparable damage to our Nation or its people." Id. at 730  
5 (Stewart J., concurring). In response to the prior restraint  
6 claim, defendants rely on the argument rejected above, that  
7 Snuffle is not speech and does not implicate the First  
8 Amendment.

9 Since Snuffle is speech that is potentially subject to the  
10 prior restraint of licensing, and under the AECA that restraint  
11 is unreviewable, plaintiff's prior restraint claim is  
12 colorable.<sup>20</sup>

#### 13 4. Overbreadth

14 Plaintiff alleges that the AECA and ITAR are overbroad  
15 with respect to their regulation of items with predominately  
16 civil applications, the definition of export, the sweep of  
17 Category XIII of the USML, and the definition of software.

18 Defendants rely extensively on Edler to argue that any  
19 overbreadth challenge is foreclosed to plaintiff because the  
20 Ninth Circuit has provided a limiting construction to the  
21 technical data provision. They also cite the 1984 revisions to  
22 ITAR which they contend are even more solicitous of speech  
23 because they provide for certain exemptions from technical data  
24 for academic research and information in the "public domain."  
25 Defendant Exh. 1A. However, plaintiff's overbreadth claim goes  
26

1 beyond the technical data provision and beyond those items  
2 classified as technical data. The complaint makes clear that  
3 the challenge is significantly broader than the scope of Edler  
4 and pertains to the defense articles themselves.

5 Facial overbreadth is concededly "strong medicine"  
6 employed as a last resort when a limiting construction cannot  
7 be applied to a statute. Broadrick v. Oklahoma, 413 U.S. 601,  
8 613 (1973). Defendants employ Broadrick to propose that when  
9 conduct as well as speech is regulated, the overbreadth must be  
10 substantial in relation to the statute's legitimate sweep. Id.  
11 at 615. However, in a subsequent Supreme Court decision relied  
12 upon by defendants, Members of the City Council of Los Angeles  
13 v. Taxpayers for Vincent, 466 U.S. 789 (1984), the Court noted  
14 that "where the statute unquestionably attaches sanctions to  
15 protected conduct, the likelihood that the statute will deter  
16 that conduct is ordinarily sufficiently great to justify an  
17 overbreadth attack." Id. at 801 n.19 (citing Erznoznik v. City  
18 of Jacksonville, 422 U.S. 205 (1975)). In Taxpayers for  
19 Vincent the Court clarified the application of substantial  
20 facial overbreadth, saying there must be a "realistic danger  
21 that the statute itself will significantly compromise  
22 recognized First Amendment protections of parties not before  
23 the Court . . . ." Id. at 801. Merely being able to conceive  
24 of "some impermissible applications of a statute" is  
25 insufficient. Id. at 800.

1 As this court has noted above, cryptographic source code  
2 is speech. Even if the statute aims at conduct as well as  
3 speech so as to invoke the "substantial overbreadth" doctrine,  
4 the court at this stage of the proceedings need only determine  
5 whether the claim is colorable. On the record before it at  
6 this time, the court cannot say that plaintiff's claim that  
7 enforcement of some provisions of the statute or regulations  
8 could significantly compromise the protected speech of third  
9 parties is frivolous.

10 5. Vagueness

11 Plaintiff alleges that a number of terms and provisions  
12 within the AECA and ITAR are impermissibly vague in that they  
13 fail to give notice of the conduct they regulate and have a  
14 chilling effect on speech. These provisions include inter alia  
15 the meaning of software capable of maintaining secrecy under  
16 Category XIII of the USML, the exemptions for information  
17 taught in universities, the definition of public domain, and  
18 the "willful" requirement for criminal penalties.

19 For a claim of facial vagueness to survive, the deterrent  
20 effect of the statute on protected expression must be "real and  
21 substantial" and not easily narrowed by a court. Young v.  
22 American Mini Theaters, Inc., 427 U.S. 50, 60 (1976).

23 Defendants again rely heavily on Edler to argue that the Ninth  
24 Circuit has already resolved the problems plaintiff challenges.  
25 While this may be true of the technical data provision, it  
26

1 leaves unaddressed numerous other areas of concern. Defendants  
2 also conclude summarily that both the definition of  
3 cryptographic software and the exemptions from this definition  
4 are clear to a person of ordinary intelligence. This seems to  
5 be a bit of dissimulation, unless it is a confession, since the  
6 ODTC itself mistakenly classified Bernstein's academic paper as  
7 a defense article under Category XIII. Finally, defendants  
8 contest plaintiff's vagueness challenge to the "willful"  
9 requirement for criminal penalties, citing the Ninth Circuit's  
10 clarification that under the AECA willfulness requires a  
11 "voluntary, intentional violation of known legal duty . . . ."  
12 United States v. Lizarraga-Lizarraga, 541 F.2d 826, 828 (1976)  
13 (construing the predecessor to the AECA). According to Posters  
14 'N' Things, Ltd. v. United States, \_\_ U.S. \_\_, 114 S. Ct. 1747,  
15 1754 (1994), such a scienter requirement helps to avoid the  
16 problem of vagueness a criminal statute might otherwise allow.

17 With the exception of the claim against the willful  
18 standard for criminal violations of the AECA, this court does  
19 not find plaintiff's claims of vagueness frivolous.

20 It should be emphasized that with the exception of its  
21 conclusions that source code is speech for the purposes of the  
22 First Amendment and that this case is justiciable, the court  
23 makes no other substantive holdings.

24 //

25 //

CONCLUSION

1 For the reasons set forth above, IT IS HEREBY ORDERED that  
2 defendants' motion to dismiss is DENIED.

3  
4 IT IS SO ORDERED.

5  
6 Dated:

April 15, 1996

  
\_\_\_\_\_  
MARILYN HALL PAPEL  
United States District Judge

## ENDNOTES

1 1. Defendants pose the justiciability issue as one of subject  
2 matter jurisdiction. As those questions are distinct and  
3 defendants arguments go to justiciability, this court addresses  
4 the motion as one pertaining to justiciability alone. See Baker  
5 v. Carr, 369 U.S. 186, 198 (1962).

6 2. Except where noted, these facts come from undisputed  
7 portions of the record.

8 3. Source code is the text of a source program and is generally  
9 written in a high-level language that is two or more steps  
10 removed from machine language which is a low-level language.  
11 High-level languages are closer to natural language than low-  
12 level languages which direct the functioning of the computer.  
13 Source code must be translated by way of a translating program  
14 into machine language before it can be read by a computer. The  
15 object code is the output of that translation. It is possible  
16 to write a source program in high-level language without knowing  
17 about the actual functions of the computer that carry out the  
18 program. Encyclopedia of Computer Science 962, 1263-64 (Anthony  
19 Ralston & Edwin D. Reilly eds., 3d ed. 1995)

20 4. The parties disagree about whether the computer code  
21 submitted by plaintiff to the State Department is technically  
22 "software." Defendants refer to the computer code as software  
23 even though it is not in object code on a disk. Plaintiff  
24 contests this characterization. In any event, in order to be  
25 software, which are instructions to the computer, the  
26 instructions must be in a form that can be easily altered as  
27 distinguished from firmware or hardware which cannot be readily  
28 altered, if it can be altered at all.

The court notes that 22 CFR § 121.8(f) defines "software"  
for the purposes of the AECA. That definition is descriptive of  
content, however, and does not define the actual format or  
physical form of the software. At this stage the court need not  
resolve this issue since whatever the program's form, the ODTIC  
has subjected it to the licensing requirements.

5. The CJ request of July 15, 1993, refers to the items as  
DJBCJF-2, DJBCJF-3, DJBCJF-4, DJBCJF-5, and DJBCJF-6 without  
distinguishing information. Complaint Exh. D.

6. This statement appears to be contradicted by that court's  
own reference to defendants' overbreadth claim on the preceding  
page of its opinion. Martinez, 904 F.2d at 601. It is not  
clear whether the overbreadth argument went to constitutionality  
or merely to statutory interpretation.

1 7. Plaintiff argues that this court has power to review his  
2 cause of action under a political question analysis. Even if  
3 that were so, he fails to consider the effect of a clear  
4 statement by Congress precluding judicial review in the context  
5 of the AECA. Furthermore, plaintiff dedicates nearly ten pages  
6 of his brief in opposition to this motion to arguing that review  
7 is proper under the Administrative Procedure Act ("APA").  
8 However, as defendants note, to the extent judicial review is  
9 precluded by statute, it is also precluded by the APA. 5 U.S.C.  
10 § 701(a)(1) ("This chapter applies . . . except to the extent  
11 that--(1) statutes preclude judicial review . . ."). That  
12 does not necessarily mean plaintiff's allegation that defendants  
13 exceeded their lawful authority under the APA is unreviewable.  
14 Plaintiff is correct that U.S. v. Bozarov allows courts to  
15 exercise review, in the face of statutory preclusion, of "claims  
16 that the Secretary acted in excess of his delegated authority  
17 under the EAA." 974 F.2d at 1045. Nonetheless, defendants only  
18 argue nonjusticiability based on the First Amendment claim.  
19 This court declines to rule on the colorability of every one of  
20 plaintiff's claims without briefing on those issues. Currently  
21 before the court is simply the issue of the justiciability of  
22 plaintiff's First Amendment challenge.

23 8. The Court did not consider whether Doe presented a  
24 colorable constitutional claim because that question was not  
25 properly before the Court.

26 9. Defendants only argue in passing that plaintiff's claim  
27 that the CJ determinations were made in excess of statutory  
28 authority is not justiciable.

10 10. The discussion of High Tech Gays in Dorfmont betrays the  
11 unusual procedural posture the Ninth Circuit adopted in order to  
12 reach the merits: "Without addressing whether the federal  
13 courts have jurisdiction to hear these claims, we ruled in favor  
14 of defendants on the merits of the equal protection attack."  
15 913 F.2d at 1403 (emphasis added) (citation omitted).

16 11. Reading "colorable" to mean sufficient to state a claim, or  
17 even nonfrivolous, is supported by the Sixth Circuit's decision  
18 in Brooks v. Seiter, 779 F.2d 1177, 1181 (6th Cir. 1985), in  
19 which the court, using a frivolousness standard, held that  
20 plaintiff prisoners had alleged a First Amendment violation when  
21 they complained that prison officials withheld mail order  
22 publications. In the context of that holding, the court said  
23 that the state interest in deferring to prison officials did not  
24 bar courts from hearing a "colorable constitutional claim." Id.

12. If there is any uncertainty about this, defendants should state their determination without equivocation so that the mootness issue can be completely resolved as soon as possible.

13. Bernstein also contends that encryption software is important not only as speech, but as a tool to protect private speech. Plaintiff argues that cases protecting anonymous speech and prohibiting compelled speech support this novel proposition. However, certainly at this stage, the court need not reach the issue.

14. Plaintiff briefly argues that his encryption program, written in source code on paper, is not functional at all. Given the ease with which one can convert source code into object code, however, this argument is specious. More to the point is plaintiff's contention that source code and functioning software are both fully protected under the First Amendment.

15. The court does not employ the word "translate" as a term of art thereby excluding the applicability of "compile", "interpret" or related terms.

16. Whether such "languages" as assembly language or low-level languages constitute speech, or may sometimes constitute speech, need not be addressed at this time in view of the court's ruling that the source code provides the basis for a colorable claim.

17. Plaintiff cites Justice Department memoranda that question the constitutionality of some of the ITAR provisions as well as the propriety of an O'Brien analysis. Plaintiff Exh. A at 60007, 60090. A 1978 memo from the DOJ Office of Legal Counsel addressing the constitutionality of the ITAR restrictions on public cryptography noted that "even a cursory reading of the technical data provisions reveals that those portions of the ITAR are directed at communication. A more stringent constitutional analysis than the O'Brien test is therefore mandated." Plaintiff Exh. A at 60084 n.16. While Snuffle was classified as a munition rather than as technical data, Category XIII of the USML also directly regulates public cryptography.

18. The court's narrowing construction mandates that the statute and regulations only prohibit the export of technical data "significantly and directly related to specific articles on the Munitions List." 579 F.2d at 521.

19. Defendants continue to argue that plaintiff was mistaken about the inclusion of the academic paper in the CJ determinations made by the ODC. As the court has noted, plaintiff had every reason to believe his paper had been determined to be a defense article until defendants' clarifying letter of June 29, 1995. Whether or not the prior restraint that may have been applied to the paper is still relevant or

1 whether this confusion could happen again given the apparent  
2 applicability of the public domain exception to work of this  
3 kind, 22 C.F.R. § 120.11(a)(8), is a matter the court declines  
4 to address at this time.

5 20. Defendants are correct that with respect to the two  
6 instructional items included in the second CJ determination and  
7 which ODTG subsequently identified as technical data, a prior  
8 restraint claim seems foreclosed by Edler, 579 F.2d at 521 ("So  
9 confined, the statute and regulations are not overbroad. For  
10 the same reasons the licensing provisions of the Act are not an  
11 unconstitutional prior restraint on speech.").