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CLASSIFICATION OF COMPILATIONS OF INFORMATION

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ABSTRACT

Classification experts disagree on whether a compilation of unclassified items of information should be classified. Some of the disagreements may occur because of ambiguities in the meaning of the term "compilation," a definition of which is provided. Accepted classification principles require that if all components of a compilation are unclassified (including contextual information) and if no substantive information has been added by the compiler, then the compilation should not be classified. A "substantial effort" exception to this rule is not justified. Classification principles also provide a basis for concluding that a compilation of many different items of information classified at one level (e.g., Confidential) should be classified at a higher level (e.g., Secret) if the total damage caused by the unauthorized release of all of these items of information would equal or exceed the damage caused by the release of one item of information classified at the higher level. However, the practical difficulties in applying this latter rule to actual situations seem to preclude its use.

CLASSIFICATION OF COMPILATIONS OF INFORMATION

INTRODUCTION

Information is given a security classification when its unauthorized disclosure could adversely affect our national security. When information is classified to protect our national security, then there are some unavoidable costs associated with that classification action. Because of those classification costs, it is important to classify only that information which truly warrants protection *and* which can be kept from an adversary.

It might seem that there would be no question about whether compilations of *unclassified* items of information should be classified. When an individual item of information is unclassified, then a decision has been made that the information does not need the special kind of protection prescribed for classified information, a decision has been made that the information does not need to be kept from an adversary for national security reasons.* If individual items of information are not protected from an adversary, then an adversary can obtain those individual items and can independently compile them. Consequently, it would seem that compilations of unclassified information should not be classified.

Despite the rationale in the preceding paragraph, there are many instances where a classifier has decided that a compilation of previously unclassified information should be classified. This has occurred, for example, when isolated items of *unclassified* information have been assembled in one document and some classified information has become apparent. That classified information was relatively obscure when the individual items of information were separated, but it became obvious when those individual items of information were compiled. The compilation is then sometimes determined to be classified (as it in fact is) by invoking the "compilation" theory of classification. The correct decision, discussed more extensively later in this document, would be to recognize that some (or all) of the individual items of information should have been classified (i.e., to classify those items which, when assembled, reveal the classified information).† Then there would be a sound basis for classifying the compilation. Classifying the individual items of information, which should ideally occur when program classification guidance was first developed, would not require a classification principle that would allow a compilation of individually unclassified items of information to be classified.

*"Information about weapons, munitions of war and intelligence which has been made public by Congress or the Department of Defense and is found in sources lawfully available to the general public does not relate to the national defense."

"Similarly, where the sources of information are lawfully available to the public, and the United States and the Department of Defense have made no effort to guard such information, the information itself does not relate to the national defense."

The above-mentioned sentences were instructions given to a jury that convicted a defendant of violating an espionage statute. A U.S. Circuit Court upheld the conviction, citing those instructions with approval. [United States v. Dedeyan, 584 F.2d 36, 39-40 (4th Cir. 1978); see also United States v. Heine, 151 F.2d 813, 816 (2nd Cir. 1945), and Gorin v. United States, 312 U.S. 19, 28 (1940)]

†For example, compilations of unclassified titles or unclassified summaries of classified Department of Defense (DoD) projects have sometimes been determined to be classified because the "trends" of classified DoD research and development are thereby revealed. If "trends" of classified research warrant classification and those trends are revealed by compiling unclassified titles or abstracts of the classified projects, then the titles or abstracts of individual projects should be classified so that the trends are not revealed. Otherwise, there is no way to ensure that an adversary could not obtain the unclassified titles or abstracts and thereby detect those trends.

It is important, for two major reasons, not to classify compilations of unclassified information. The first reason is to avoid classification costs when the "classified" information can not be protected--when an adversary can not be prevented from obtaining that information, relatively easily, by its own, independent, nonespionage efforts. The second reason is to maintain the credibility of classification, an important aspect of a successful classification program. It is difficult to establish credibility for classification, to ensure that information which truly warrants protection for national security reasons is protected, when information that obviously can not be protected is nevertheless assigned a classification category and level.

As can be inferred from the foregoing discussion, classification experts do not agree on whether there are circumstances when compilations of unclassified information should be classified. Also not resolved is whether a compilation of many items of information classified at one level (e.g., at the Confidential level) should sometimes be classified at a higher level (e.g., at the Secret level). This document proposes a resolution of these matters, so that sound and consistent classification decisions can be reached.

The classification of information because of its *association* with other information is a separate matter from the classification of compilations of information. There is little doubt that information that is usually unclassified can be classified when it is associated with certain other information (e.g., the information is classified because of the *context* in which it is used). The discussion on classification of compilations of information in this document assumes that there is no association of information within the compilations that would make the compilations classified.

DEFINITION OF THE TERM "COMPILATION"

Some of the ambiguities about the classification of compilations of unclassified information arise because of ambiguities on the meaning of the term "compilation." In this document, a "compilation" meets the following definition:

compilation - an orderly arrangement of preexisting materials (facts, statistics, etc.) gathered from many sources into one document.

With respect to classification of compilations, there are really two major types of compilations: (1) compilations of information that have had no "substantive" value (information) added by the compiler and (2) compilations of information to which the compiler has added substantive value. Compilations of the first type contain no information that was not present in the individual items of information that constitute the compilation. Compilations of the second type contain information added by the compiler [e.g., the compiler used expert judgment to select certain information for the compilation, or the compiler added new information (e.g., "critical" comments) to available information]. The next two sections of this document consider both types

*"Substantive" value is to be contrasted to the value added because of the form in which the information is presented. For example, producing a list of names and addresses of residents of a city in alphabetical order by name, from an unordered file containing those names and addresses, would be a useful and therefore valuable compilation, but that value arises from the form in which the information is presented, not because the compiler added any new information to the information contained in the unordered file.

of compilations and provide a comprehensive treatment of the classification of compilations of unclassified information.

COMPILATIONS OF UNCLASSIFIED INFORMATION WITH NO SUBSTANTIVE VALUE ADDED

Description of Compilations with No Substantive Value Added

Compilations of information to which no *substantive* value (information) was added by the compiler are merely compilations of existing information arranged in an orderly fashion. The compiler has not used judgment to select or discard items of information and has not otherwise added information based on subject-matter expertise--*the compiler has not added any "substantive" value to the information selected for the compilation.* No information was added by the compiler that was not present in the individual items of information that constitute the compilation. The total store of knowledge concerning the subject matter of the compilation has not been increased by the compiler.

Compilations of this type may be prepared by someone not having expertise in the subject matter of the compilation. One example of such a compilation would be a township map that shows the location, size, and ownership of parcels of land as obtained from public records. Another example would be data on the highway mileage between all the cities in a state, prepared from city, county, or state highway maps available to the public. A third example would be a list of all the titles of reports prepared for a specific Governmental agency during a fiscal year and sent to the National Technical Information Service (NTIS), where the individual report titles were obtained from NTIS publications or the NTIS data base. Those above-mentioned types of compilations could be prepared by clerical personnel, as contrasted to surveyors, tax assessors, or technical experts. Those compilations are useful, but their value arises because the compiler has gathered together all the pertinent information on a subject and arranged it in a *form* that enables convenient use of that information.

Classification of Compilations with No Substantive Value Added

Proposed Classification Rule and Its Rationale. Compilations of unclassified information that have had no substantive value (information) added by the compiler should not be classified. This conclusion is based on a fundamental principle of classification--that classified information cannot be completely subdivided into separate, unclassified components. The Department of Energy (DOE) has stated this principle as follows:

Information that is classified under the Atomic Energy Act must not be so subdivided that all its components (including contextual information) are unclassified.*

*This rule is stated in several DOE classification guides, all of which are either classified or marked for Official Use Only. Therefore, a specific reference is not given for this rule.

This is sometimes called the "keystone" principle of classification. This keystone principle may be visualized by considering a classified photograph or drawing that has been subdivided into many components (e.g., pieces of a puzzle), each of which reveals an item of information. According to the aforementioned classification principle, not all of those "pieces" can be unclassified if the entire entity is classified. One or more key pieces must be classified so that the entire "picture" cannot be obtained when all the unclassified pieces are assembled. Thus, if individual items of information are truly unclassified (i.e., if no classification error has been made), then assemblies (compilations) of those items cannot (according to the previously stated basic classification principle) reveal classified information. Therefore, a proposed rule for the classification of compilations of unclassified information where no substantive value has been added by the compiler, and which is a corollary to the aforementioned basic classification principle, is as follows:

If all components of a compilation are unclassified (including contextual information), and no substantive information (value) has been added by the compiler, then the compilation should not be classified.

The essence of this rule, as well as the keystone principle, was set forth over thirty years ago by the Atomic Energy Commission (AEC). A 1958 AEC *Monthly Classification Bulletin* stated the following:

A compilation of unclassified information is unclassified. Therefore, if an area of information has an overall classification some, if not all, of the data which makes up this area must be classified.^{1*}

* A 1959 AEC "Monthly Classification Bulletin" contained the following statements that are of interest with respect to classification of compilations and are consistent with the proposed rule:

Attention is called to the fact that a collection of apparently individually unclassified data may reveal classified information, for example, (1) through association or (2) by revealing a significant quantity or rate. In the first case, certain technical data might be quite properly unclassified but would reveal classified information concerning a particular program if related to it. Any data indicating this association should be classified to avoid this. In the second case, certain production, processing, or shipping records reveal, individually, such a minor quantity of work or material or cover such a minor period of time that they are handled as unclassified or of relatively low classification. A sufficient number of such records taken together, however, can reveal totals which are significant enough to the program to carry a higher classification. Therefore, enough of the individual records must carry the higher classification so that the sufficient number referred to cannot be assembled at the lower classification. Note that these particular records will not be overclassified, because the basic rule is that classification should not be by content alone but by what is revealed in conjunction with other classified information. [The AEC "Monthly Classification Bulletin" from which this quotation is taken is (or was) classified. Therefore a specific reference will not be given.]

A 1950 letter from the AEC to one of its contractors contained the following statements, which are not consistent with the proposed rule but which provide examples of what the author considers to be improper classification of information:

Files, depositories, etc. containing separate documents classified as Secret, or lower, should be given Top Secret protection if combinations of the information contained therein can result in an accurate calculation or estimation of Top Secret information. . . . We recognize that information from two or more Secret documents may give Top Secret information. [This quotation was taken from a classified document so a specific reference will not be given.]

The Nuclear Regulatory Commission has published similar guidance for the classification of compilations:

Compilations of unclassified information are generally considered to be unclassified unless some additional factor is added in the process of compilation. For example: (a) The fact that the information is complete for its intended purposes may be classified; or (b) the fact that compiled information represents an official evaluation may be classified.²

This proposed rule for the classification of compilations of unclassified information is consistent with a requirement of Executive Order (EO) 12356 for the classification of information. EO 12356 states that only when information is "owned by, produced by or for, or is under the control of the U.S. Government" can it be classified as National Security Information.^{3*} If the individual items of information that constitute a compilation are unclassified, then they are not under the control of the Government to the extent required by security procedures for protecting classified information (e.g., the documents containing the items of information are not kept in secure repositories while they are unattended, they are not marked so as to be kept from unauthorized persons, etc.). If none of the items of information in a compilation is controlled by the Government *to the extent required for classified information*, then, according to EO 12356, the compilation should not be classified as National Security Information.

The conclusion that compilations of unclassified information that have had no substantive value added by the compiler should not be classified is also supported by another requirement of EO 12356. This EO states that information may be classified only if its unauthorized disclosure reasonably could be expected to cause "damage" to the national security.⁴ That order defines three levels of classification--Confidential (C), Secret (S), and Top Secret (TS)--that correspond to three levels of damage: "damage," "serious damage," and "extremely grave damage."⁵ The assignment of three different damage levels indicates damage quantification. If the unauthorized release of an item of information reasonably could be expected to cause damage, then the information is considered Confidential information.⁶ Let us assume that the damage caused by the release of an item of Confidential information would be "1" on an arbitrary scale of damage. (For Secret and Top Secret information, the damage value would be greater.) The release of an unclassified item of information would cause no (zero) damage to our national security (by definition of what constitutes classified information). Therefore, no matter how many items of unclassified information are compiled (added together), the sum of the damages caused by their release would still be zero and the compilation should not be classified.[†]

* Restricted Data or Formerly Restricted Data do not have this explicit requirement. However, it would generally be futile to classify such information if the dissemination of the information could not be controlled by the Government.

† Note that this rationale might not always lead to this conclusion if classification's risks and benefits are required to be balanced before a classification decision is made. This is because when considering a number of items of information, the risks might be independent and completely additive whereas some of the benefits might be identical and therefore should not be counted more than once. Therefore, when balancing the risks and benefits of classification of certain individual items of information, a result might be that the benefits would always exceed the risks, but when considered as a whole, the sum of the risks might exceed the sum of the benefits.

The other reasons for not classifying compilations of unclassified information, given above, are not affected by balancing risks and benefits in making classification decisions.

EO 12065 on security classification of information, which was the immediate predecessor to EO 12356, included a statement that "references to classified documents that do not disclose classified information may not be classified or used as a basis for classification."⁷ This would seem to indicate that a compilation of unclassified titles of classified documents would not have been considered classified under EO 12065.*

Trade Secret Law and the Proposed Classification Rule. There are many similarities between the classification and protection of national defense and foreign relations information ("state secrets") and the identification and protection of trade secrets. Therefore, it is useful to examine the extent to which compilations of information important to businesses are protected under trade secret law to help determine whether similar compilations of Government information should be classified.

A compilation of unclassified technical information is analogous to a combination of a series of widely known industrial processes (e.g., common shop practices). A combination of common shop practices will not be considered a trade secret unless the combination is unique (i.e., unless something "substantive," some special "insight," was added when that combination was developed).⁸ "A trade secret can exist in a combination of characteristics and components, each of which, by itself, is in the public domain, but the unified process, design and operation of which is in *unique combination*, affords a competitive advantage, and is a protectable secret (emphasis added)."⁹ The rule that a compilation of unclassified information, which has had no substantive value added by the compiler,[†] should not be classified is therefore consistent with trade secret law which requires that a combination of publicly available information have substantive value added before that combination (compilation) is a trade secret.

Copyright Law and the Proposed Classification Rule. Classification and copyright protection are somewhat analogous, since classification protects information from unauthorized disclosure to adversaries and copyright protects materials from unauthorized use by a competitor. The proposed rule that compilations of unclassified information with no substantive value added should not be classified is consistent with existing copyright law.

Copyright protection is provided by a U.S. statute to "original works of authorship,"¹⁰ including compilations.¹¹ A compilation is defined as "a work formed by the collection and assembling of preexisting materials or data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."¹² An important question concerning copyrightability of compilations of publicly available (i.e., "unclassified") information is what constitutes an "original work of authorship." Originality, with respect to compilations and copyright law, may be achieved by arranging facts in a systematic fashion^{13,14} or by adding material to facts^{15,*} (e.g., by adding "substantive value"). It is the *selection* (e.g., names in a social register, stocks in the Dow Jones listings¹⁶) or *arrangement* of

*There have been instances where compilations of unclassified titles to classified documents were assigned a classification. See a following section of this chapter for such an example.

†See a following major section of this document for a discussion of classification of compilations of unclassified information with substantive value added by the compiler.

*If material is added to existing facts, then the result would not seem to be a mere compilation but would include added information, added "value," and would be copyrightable for that reason.

facts that is copyrightable, not the facts themselves.^{17,18,19} The copyrighting of a compilation does not affect the status of the materials from which the compilation was made and which are in the public domain.^{20,21}

Copyright law requires subjective judgment to be used by a compiler of publicly available information before that compilation can be copyrighted. Therefore, the rule that compilations of unclassified information, without "substantive" value added by the compiler, cannot be classified is consistent with copyright law, which protects only compilations that derive their value from the expert judgment or originality used by the compiler in preparing the compilation.

Judicial Decisions Supporting the Proposed Classification Rule. A 1976 Federal District Court case involved a compilation of *unclassified* titles of technical reports on research projects under way for the Department of Defense (DoD). Some of the technical *reports* were classified but their titles were unclassified. Compilations of those unclassified report titles (*Technical Abstract Bulletin Indexes*) had been issued as unclassified for several years until DoD began classifying them because the compilations were believed to reveal research directions and trends of national defense importance. A Freedom of Information Act (FOIA) request was made for the classified document (the compilation of unclassified titles), the request was refused by DoD, and the matter was litigated. A Federal District Court ordered DoD to release all the unclassified entries in the document.²² Since that meant that all the report titles in the compilation would have to be released, DoD released the entire document as an unclassified document.²³ Although the court did not address the question of whether the compilation was improperly classified, the practical effect of its decision was that the compilation itself was an unclassified document. This result is consistent with the proposed classification rule.

Views Not Supporting the Proposed Classification Rule. The proposed rule that compilations of unclassified information with no substantive value added by the compiler should not be classified is not unanimously accepted. An opposing view believes that compiled items of unclassified information should sometimes be classified. Sometimes a compilation is said to provide information not present in the absence of the compilation--to make evident some classified information not revealed by the individual items of information in the compilation. This would be "new" information that is perceptible because of the compilation.^{23,24,25} Under that situation, the opposing view believes that the compilation should be classified, as a compilation. This view receives some support from the DoD.* The DoD has stated that normally a compilation of unclassified items should not be classified, but that "in unusual circumstances,

* However, DoD's Coolidge Committee cited DoD's classification of compilations of unclassified data as an example of DoD's "attempt to do the impossible--to keep as classified [that] information which can no longer be withheld." ["Report to the Secretary of Defense by the Committee on Classified Information," C. A. Coolidge, Chairman, Department of Defense, Washington, D.C., November 8, 1956, p. 8] The Coolidge Committee was a special committee established by the Secretary of Defense to investigate the classification of information within the DoD. The Committee Chairman was C. A. Coolidge, a former Assistant Secretary of Defense. The other members of the Committee were four senior retired officers from the Air Force, Army, Marine Corps, and Navy. The report's conclusion on the inappropriateness of classifying compilations of unclassified information is especially notable because of the high quality of the members of the Coolidge Committee and their considerable experience in dealing with classified information. Others have also remarked on a DoD tendency to inappropriately classify compilations of unclassified information. [W. G. Florence in "Executive Classification of Information - Security Classification Problems Involving Exemption (b)(1) of the Freedom of Information Act (5 U.S.C. 552," HR 93-221, Third Report by the Committee on Government Operations, U.S. House of Representatives, 93d Cong., 1st Sess., Supt. of Documents, Wash., D.C., 1973, p. 46ff.)]

classification may be required if the combination of unclassified items of information provides an added factor that warrants classification"26,* Individually unclassified items that become classified when associated with one another have been cited as an example of this "added factor."^{27,†}

In situations where classified information is alleged to have been obtained via "compilations" of unclassified information, it is likely that, in fact, a classification "error" was made. That is, the classification guidance applicable to the situation was not comprehensive. The guidance did not include all the inferences that an expert could draw from the information under consideration for classification. Those inferences should include those associations which could be made when combining the information under consideration for classification with all existing unclassified information. A classification determination must always be based on the assumption that any person who receives the information under consideration for classification is (1) highly qualified in that particular field of technology and (2) thoroughly familiar with all related information that has already been issued as unclassified.*^{**} Thus, when a compilation of unclassified information is said to reveal new, classified information, it is probable that the existing classification guidance should be revised to classify one or more of the individual items of information that lead to the revelation of this "new" information.

EO 12356 is said by some to provide a basis for classification of a compilation of unclassified bits of information. Section 1.3(b) of that EO states that before information can be

*The author wonders whether DoD's views on classification of compilations might not be strongly influenced by, or a consequence of, DoD's policy on classification paragraph marking (i.e., specifically designating the classification of each paragraph in a document). Paragraph marking has long been practiced in DoD for National Security Information. [See, for example, G. MacLain, "Panel--Government Classification Management Policies and Programs," J. Natl. Class. Mgmt. Soc., 2, 69-75, 74 (1966)] Portion marking, essentially the same as paragraph marking, is now required by Executive order. [Executive Order No. 12356, 47 Fed. Reg. 14874 (Apr. 6, 1982), §1.5(b); Information Security Oversight Office, "Directive No. 1," 32 CFR 2001.5(a)(3)] The DOE does not paragraph mark Restricted Data or Formerly Restricted Data. One of the reasons for not paragraph marking is that within a document, the classification of a paragraph has to be evaluated in the context of the information contained in the other paragraphs of the document. [R. R. Fredlund and D. E. Whitman, "The Great Debate . . . Continues," J. Natl. Class. Mgmt. Soc., 22, 152-192, 156-157, 163 (1986)] Therefore, when following DoD rules for paragraph marking, the importance of connections or associations of information in the paragraph with other information in the document may be overlooked. [See, for example, K. Wilson, comments at a National Classification Management Society meeting as reported in J. Natl. Class. Mgmt. Soc., 3(No. 2), p. 91 (1967)] It is only when the isolated paragraphs are closely connected (e.g., as part of a compilation) that the correct classification, which includes the effects of associations, becomes more apparent. Therefore, if the document has been paragraph marked, then one has to invoke the "compilation theory" to correct the classification errors caused by portion marking.

This is, admittedly, an oversimplification of the situation, but it does help to explain why DoD readily accepts the compilation theory (or finds it necessary to invoke that theory).

†As stated earlier in this chapter, such an example should be classified because of associations, not because it is a compilation.

*"The significance of one item of information may frequently depend upon knowledge of many other items of information. What may seem trivial to the uninformed, may appear of great moment to one who has a broad view of the scene and may put the questioned item of information in its proper context." [United States v. Marchetti, 466 F.2d 1309, 1318 (4th Cir.), cert. denied, 409 U.S. 1063 (1972)]

**"[T]he business of foreign intelligence gathering in this age of computer technology is more akin to the construction of a mosaic than it is to the management of a cloak and dagger affair. Thousands of bits and pieces of seemingly innocuous information can be analyzed and fitted into place to reveal with startling clarity how the unseen whole must operate." [Malkin v. Helms, 598 F.2d 1, 8 (U.S. App. D.C., 1978)]

classified, an original classifier must determine "that its unauthorized disclosure, *either by itself or in the context of other information*, reasonably could cause damage to the national security"²⁸ (emphasis added). The phrase "either by itself or in the context of other information," which was not present in the immediately preceding EO, is said to be recognition of the "compilation theory" of classification.²⁹ A better interpretation of Sect. 1.3(b) would be that "in the context of other information" refers to *associations* of information, rather than *compilations*. As stated previously, it is a long-standing classification principle that associations of information may be classified when the association reveals classified information.

Judicial Decisions Not Supporting the Proposed Classification Rule. In a 1982 case [*Taylor v. Department of The Army*, 684 F.2d 99 (D.C. Cir., 1982)], a newspaper reporter had requested, under the FOIA, the Army's numerical ratings for the four measured resource area ratings (MRARs) for all 168 major combat units of the Army. At the time of the request, an Army regulation unequivocally stated that the MRARs for single units were unclassified. However, the Army interpreted its regulation to mean that the raw data were unclassified, not the MRARs, and refused to provide the MRARs because they were considered by the Army to be classified. Subsequently, a Federal District Court directed the Army to release the information.

The District Court held that the requested MRARs should be released because an Army regulation concerning the MRARs specifically stated that the MRARs for a single unit were unclassified. Although the Army argued that the information should be denied because it was a compilation of unclassified information with an "added factor" and was therefore classified under another Army regulation, the District Court rejected this argument. The District Court said that requesters could avoid the compilation problem by having different individuals submit FOIA requests, one-by-one, for the ratings of the different units. The District Court was not convinced otherwise by an Army affidavit that stated that an attempt to get the MRARs one-by-one "would have been uncovered at a very early stage" and that those individual MRARs would not have been provided by the Army.³⁰

The Army appealed that decision to a Circuit Court, which reversed the District Court decision. The Circuit Court accepted the Army's argument that the information was classified, relying on affidavits from three Army generals which stated that this information had always been considered as classified by the Army (the applicable Army regulation had been promulgated about 18 years earlier). The Court stated that the Army should be accorded great deference in construing its own regulation.^{31,*} The Circuit Court also may have been influenced by the Army's action, taken immediately after the Army first denied the request for the MRARs, to change its regulation to specifically classify the MRARs for a single unit as Confidential.[†] The Court also accepted the Army's argument (supported by the affidavits of two generals) that the

*It is the general rule that Courts extend "great deference" to an agency's interpretation of its own regulations, especially when those regulations concern information of national security significance (i.e., classified information).

†It is also of interest to note that one of the reasons why "vulnerabilities or capabilities" was included in the list of classifiable areas of National Security Information in Executive Order 12356 was the DoD's request to add this area so that there would be an additional, specific basis for classifying information on the readiness of Army units. [S. Garfinkel, "An Information Security Oversight Office Overview of Executive Order 12356 and Its Implementing Directive," *J. Natl. Class. Mgmt. Soc.*, 18, 17-23, 2021 (1982)].

requested information was a compilation of unclassified information with an "added factor" of sensitivity and was classifiable under another Army regulation.*

Although the Court in *Taylor v. Department of the Army* accepted the argument that compilations of unclassified information could be classified, the Court's decision appears to rely mostly on the Army's affidavits that the Army had always considered the requested information to be classified *and* on the fact that the Army had immediately revised its regulations to explicitly declare that information to be classified. Also, the Court stated that the requested compilation had an "added factor."³² An "added factor" such as substantive information provides a basis other than the compilation theory by which a compilation can be classified (see the following section). Therefore, *Taylor v. Department of the Army* is not inconsistent with the proposed rule which forbids the classification of compilations of unclassified information with no substantive information (value) added.

A 1987 U.S. Circuit Court decision also appears not to support the proposed rule. This decision, *American Friends Service Committee v. Department of Defense*,³³ concerned DoD's Technical Abstract Bulletins (TABs).³⁴ The DoD used the "compilation" theory to classify those TABs. A U.S. District Court decided, via summary judgment, that the TABs were properly classified. The Circuit Court accepted the compilation theory. However, the Court's discussion of the compilation theory described it as classification in context,³⁵ which, as mentioned earlier, has long been accepted as a legitimate reason for classification. Although the DoD's compilation theory was accepted, the Circuit Court vacated the District Court decision and remanded the case for several findings of fact. One question to be answered on remand was whether a significant number of the TAB entries were also published in the NTIS catalog, which is available at public libraries.³⁶ By the time the case was considered again by the District Court, the DoD was no longer publishing the TABs but was publishing another document which omitted certain information contained in the TABs. Therefore, future information of the type requested by plaintiff American Friends Service Committee was available. Since this action by DoD appeared to demonstrate that the information contained in the previous TABs was segregable, the plaintiff asked that DoD provide the requested information from those TABs. However, the District Court denied that request.†

*The portions of the affidavits cited in the Court's opinion are not convincing with respect to the "added factor" argument. The affidavits seem to state that one could determine the Army's combat potential from the compilation and that the compilation was therefore "clearly classifiable information." [*Taylor v. Department of The Army*, 684 F.2d 99, 103 (D.C. Cir., 1982)] The Army's combat potential is not an "added factor" to the compilation but is an accurate indication of the information that can be deduced from the individual items of information contained in the compilation.

†The information concerning the action of the District Court on remand was provided to the author by Ms. Julie Shapiro, Philadelphia, Pa., attorney for American Friends Service Committee. A written opinion has not been filed by the District Court.

COMPILATIONS OF UNCLASSIFIED INFORMATION WITH SUBSTANTIVE VALUE ADDED

Description of Compilations with Substantive Value Added

A compilation of information with "substantive" value (information) added by the compiler is a compilation prepared by a compiler whose expertise in the subject matter of the compilation was necessary to prepare that compilation. The compiler's expert judgment may have been used to select certain information (e.g., the "reliable" information) for the compilation from a broader array of available information. Technical handbooks (e.g., the *Handbook of Chemistry and Physics*³⁷) are examples of such compilations. Substantive value is also added when a compiler includes all relevant information and then provides critical comments (expert evaluations) on the accuracy or reliability of that information. Scientific and technical review articles are examples of this type of evaluation. This latter "substantive value added" compilation is frequently designated a "review," a "critique," an "analysis," an "evaluation," or some other similar term.

Classification of Compilations with Substantive Value Added

If a compiler has added some information of substantive value to a compilation of unclassified information, then the resulting compilation should be classified (1) if the added information is considered to be classified *per se*, (2) if the added information is classified because of association with the preexisting information, or (3) if the preexisting information is classified when associated with the added information. This rule is not a new rule proposed for the classification of compilations of unclassified information with substantive value added. Rather, it is a principle by which all documents are evaluated for security classification of information.

Judicial Decisions on Classification of Compilations with Value Added

A 1978 Federal District Court case involved a request for the release of a compilation of the number and exact titles of National Security Study Memoranda and National Security Divisional Memoranda issued between January 20, 1969, and the date of the request.³⁸ The National Security Council (NSC) compiled that information but then refused to release this compilation because it contained classified information (i.e., the compilation included classified and unclassified titles and also gave the chronological sequence in which the individual reports were produced). The requester then asked for a compilation of the unclassified titles, and the NSC again refused to release the requested information. The Staff Secretary of the NSC submitted an affidavit stating that "Access to the unclassified titles in their totality would . . . enable a foreign intelligence analyst to identify the kinds of issues of grave concern to the United States and the way in which this government reacts to world events, and also to gain unique insights into the method by which issues of this kind are identified, studied and resolved by the President."³⁹ Government affidavits also stated that the compilation would provide other nations "with valuable information and insight pertaining to the focus and timing of key U.S. foreign policy concerns."⁴⁰ The Court determined that the list was "reasonably classified in full, unclassified titles included,"⁴¹ and exempted the list from release. The sequential nature of the titles on the lists may have been a major factor in the decision, since the Court said that "this decision is, however, without prejudice to any future claim by plaintiff for access to any unclassified documents now in existence, or any unclassified documents that may come into existence, which list the unclassified titles . . . in 'scrambled' sequence and in edited form . . ."⁴²

Although the titles to the reports in the compilation were unclassified, the compiler had listed those titles in chronological order and had included the dates when the reports were prepared. The Court was of the opinion that those dates added substantive information (value) to the compilation, particularly with respect to intelligence considerations. The Court therefore upheld the agency's determination that the compilation should be a classified document. This outcome is consistent with the proposed rule for the classification of compilations of unclassified information with no substantive value added by the compiler.*

COMPILATIONS OF UNCLASSIFIED INFORMATION REQUIRING SUBSTANTIAL EFFORT

One reason for classifying information is to make an adversary expend its own resources to get that information. A typical example of this situation is the classification of scientific or technical data that would be useful to an adversary and that the adversary could obtain by the straightforward application of its available scientific or technical resources and by well-known methods. If the data are classified, then the adversary must expend its resources to get that data, resources that might otherwise be used to harm our nation. However, because of the inherent costs associated with classifying information, normally such scientific or technical data are not classified unless *substantial* resources would be required to obtain that data. That is, the information is not classified unless publishing it would save an adversary a substantial amount of effort in acquiring that information by the adversary's own efforts.

A possible rule for the classification of compilations of information that would require substantial effort to produce,[†] and which would be an exception to the previously proposed rule, is as follows:

If a substantial effort was required to produce a compilation of unclassified information and if an adversary would expend about the same effort to independently get that information, then that compilation should be classified.

There is even reasonable quantitative guidance available as to what constitutes "substantial effort."[#]

However, the "substantial effort" principle with respect to classifying scientific or technical data concerns the results from using *scientific or technical expertise*. Even though the effort to obtain scientific or technical data is a straightforward application of known principles, *scientific or technical expertise is necessary* to apply those principles. The compilations to which the possible

*This outcome is also very consistent with the general rule that courts should extend the utmost deference to opinions of an agency's experts concerning the classification of documents generated by that agency.

†It is assumed that if substantial effort was required to produce the compilation, then an adversary would be required to expend about the same effort to produce that compilation.

#See Chapter 7 in A. S. Quist, "Security Classification of Information, Volume 2. Principles of Classification, Declassification, and Downgrading of Information," K/CG-1077/V2, Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee, in preparation, which mentions a 15 person-year effort established as a guideline during the Manhattan Project.

above-mentioned rule would apply are those compilations that require *no expertise* to produce.* The two situations are not comparable. The accepted classification principle that readily obtainable scientific or technical information can be classified if substantial effort was required to obtain that information is analogous to the classification of compilations to which substantive value has been added (expertise is required to produce those compilations). Therefore, there appears to be no significant basis, from other classification principles, to classify a compilation just because substantial effort was required to produce that compilation.

The conclusion that compilations of unclassified information that would require only substantial effort for an adversary to independently produce (no expertise required) should not be classified is consistent with copyright and trade secret law. The majority view in copyright law holds that the *effort* required to obtain information for a compilation is not a factor in determining whether the result is copyrightable.† Although some courts have extended copyright protection to certain types of compilations to protect "the product of the compiler's industry,"‡ or "the compiler's effort in collecting the data,"§ theirs is a minority view. The policy of that minority line of decisions seems to be to prevent unfair use of an author's efforts, to require others to do independent research to get the benefits therefrom.¶ Trade secret law is consistent with copyright law on this matter. The effort required to develop a new arrangement of preexisting, publicly available information is not a factor in deciding whether that arrangement is a trade secret.** Therefore, a "substantial effort exception" to the proposed rule on classification of compilations of unclassified information is not supported by the majority views in copyright or trade secret law.

* If expertise in the subject matter of the compilation was required for production of the compilation, then the compilation could be classified because of the substantive value added by the expert(s) (see previous discussion).

† Most U.S. Circuit Courts hold that the labor required to produce a compilation is not a factor in determining whether the product can be copyrighted. [See D. E. Shipley and J. S. Hay, "Protecting Research: Copyright, Common-Law Alternatives, and Federal Preemption," 63 N. Car. L. Rev., 125-181 (1984)]

* Those cases seem to hold that when significant labor is expended to produce a compilation, even though the compiler has not created a "unique" arrangement of preexisting data, then someone else should not be able to use those fruits of the compiler's labor without the authorization of the compiler. However, the majority view seems to be that "protection of original research of information in the public domain [e.g., compilations of publicly available information] is better afforded under an unfair competition [legal] theory." [Southern Bell Telephone and Telegraph Company v. Associated Telephone Directory Publishers, 756 F.2d 801, 809-810 (11th Cir., 1985), footnote 9]

** It has been implied that if substantial effort is required to develop a series of common shop practices into a process, that the combination will be considered a trade secret. [D. C. Maizel, "Trade Secrets and Technical Data Rights in Government Contracts," 114 Military L. Rev., 227-298 (1986), p. 233, citing Comp. Gen. Dec. B-187051 (15 Apr. 1977), 71-1 CPD para. 262] However, there is little case authority to support this result. [R. M. Milgrim, "Milgrim on Trade Secrets," Matthew Bender & Co., Inc., New York, 1987, §2.02[2], p. 2-33]

†† However, the extent of effort (e.g., research and development effort) required to develop information is a factor in determining whether information is a trade secret. The distinction is between "creative" efforts and efforts dealing with preexisting public domain information.

CLASSIFICATION LEVEL OF COMPILATIONS OF CLASSIFIED INFORMATION

The accepted rule concerning the classification of compilations of classified information is that the compilation is classified at the same level as the highest classification level of any item of information contained therein. However, there are some reasons for believing that under certain conditions a compilation of many items of information, all of which are classified at one level (e.g., Confidential), can be classified at a higher level (e.g., Secret) consistent with sound classification principles. A rationale for this belief can be obtained by examining the classification of information requirements contained in EO 12356. Some of that rationale was discussed in a previous section on the classification of compilations of unclassified information.

EO 12356 states that information may be classified only if its unauthorized disclosure reasonably could be expected to cause "damage" to the national security.⁴⁶ This EO also defines three levels of classification--Confidential, Secret, and Top Secret--which correspond to three levels of damage--"damage," "serious damage," and "extremely grave damage."⁴ The assignment of levels of damage indicates quantification of that damage. If the unauthorized release of an item of information reasonably could be expected to cause damage, then it is considered Confidential information.⁵ Let us assume that the damage caused by the release of an item of Confidential information is "1" on an arbitrary damage scale. If the release of an item of information could cause serious damage (i.e., the information has been classified Secret), assume that a damage of "100" results from each information item released. If the release of an item of information could cause extremely grave damage (i.e., the information has been classified Top Secret), assume that the damage caused is "10,000" for each item released. On that basis, the release of a compilation of 100 *different** items of Confidential information, with each item causing a damage of 1 if released, could cause an aggregate damage of 100. Therefore, a compilation of 100 or more different items of Confidential information should be classified Secret since its release could cause damage of 100 or more. The same rationale would apply to classifying as Top Secret a compilation of 100 or more different Secret items of information.

On the basis of the foregoing discussion, a possible rule for the classification level of compilations of classified information is as follows:

A compilation of many *different* items of information classified at one level (e.g., Confidential) should be classified at a higher level (e.g., Secret) if the total damage caused by the unauthorized release of all of these items of information would equal or exceed the damage caused by the release of one item of information classified at that higher level.

This is, in theory, a potentially useful principle to help reach sound classification decisions. However, there are practical difficulties in applying this rule. Those difficulties include: (1) the difficulty in quantifying damages for each item of information to the extent required to apply the rule, and (2) the "arbitrariness" in establishing the different damage levels required for

*The requirement that the items of information be different is meant to preclude classifying at a higher level a compilation of items of information, each at a lower classification level, where each item reveals essentially the same information. Thus, a list of 100 different codes, each classified as Confidential, where each code provides access to the same classified computer system, would not be classified Secret because release of all codes would probably not cause much more damage than release of one code.

information to be classified at the Confidential, Secret, and Top Secret levels. Damage quantification is certainly difficult but not different in kind from the problems frequently encountered by Authorized Classifiers when determining whether information, documents, or materials should be classified and, if so, at what level. Establishing whether the unauthorized release of Secret information should result in 100 times the damage expected by the unauthorized release of Confidential information, or 10 times the damage, or some other number, is a policy matter, and flexibility is inherent in the power to establish policy. Therefore, even though there would be difficulties and approximations associated with the proposed rule, the rule is, in theory, a potentially useful one for helping make sound classification decisions.

Unfortunately, there appear to be even more difficult practical obstacles to implementing such a rule. Consider Confidential Restricted Data (CRD), which is available (within the DOE on a need-to-know basis) to "L"-cleared personnel, and Secret Restricted Data (SRD), which is available to "Q"-cleared personnel but not to L-cleared personnel. Consider also the above-mentioned value for individual different items of Confidential information ("1") and Secret information ("100"). Presumably, an L-cleared person could acquire, on a need-to-know basis, over 100 different CRD items of information. By the above-mentioned rule, that L-cleared person then would have knowledge of SRD information, which would not be in accord with DOE's security regulations. What would the Security Department do in such a situation? Request a Q-clearance for that employee? Give someone a security infraction for providing SRD to an L-cleared person? Consider also two reports containing only CRD information. One contains 60 CRD items and the other contains 50 CRD items, for a total of 110 *different* CRD items of information. An L-cleared person would need only acquire those two reports to obtain SRD information by the above-mentioned rule. Situations such as those mentioned in this paragraph would be a continual problem if the above-mentioned rule was implemented.⁴⁷ It is recommended that the aforementioned rule on classification of compilations of classified information not be adopted.

CONCLUSIONS

A rule was proposed concerning the classification of compilations of unclassified information. That rule is as follows:

If all components of a compilation are unclassified (including contextual information) and no substantive information (value) has been added by the compiler, then the compilation should not be classified.

A "substantial effort" exception to this rule was considered but was rejected as inconsistent with other classification principles and with trade secret and copyright law.

The following rule was considered for use in establishing the classification level of compilations of classified information:

A compilation of many *different* items of information classified at one level (e.g., Confidential) should be classified at a higher level (e.g., Secret) if the total damage caused by the unauthorized release of all of these items of information would

equal or exceed the damage caused by the release of one item of information classified at that higher level.

This latter rule seems sound, in theory, but the practical difficulties associated with applying that rule to actual situations seem to preclude its use.

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47. See also, for example, E. Smith, "Applying Derivative Classification," *J. Natl. Class. Mgmt. Soc.*, 18, 106-115, 114 (1982), which discussed a hypothetical situation where information giving the location of one U.S. missile silo was unclassified but the locations of all (e.g., 500) silos was classified. Some unanswered questions were: What was the classification of the location of 23 missile silos? Of 499 missile silos? Of 498 missile silos?

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