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ELECTRONIC COMMERCE

Removing Regulatory Impediments

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Executive Summary

ELECTRONIC COMMERCE: REMOVING REGULATORY IMPEDIMENTS

Electronic Commerce techniques, such as electronic mail and electronic data interchange (EDI), enable Government agencies to conduct business without the use of cumbersome paper documents. The benefits include reduced paper-handling costs, lower clerical costs, fewer data errors, faster communications, easier access to information, and better customer service. Regulatory impediments, however, are restricting the ability of Government agencies to actually obtain those benefits.

The primary impediment is the Federal Acquisition Regulation's requirement that Government agencies use paper forms and manual signatures when conducting procurement and contract administration actions. Other impediments are similarly limiting the application of Electronic Commerce techniques in the areas of accounting, transportation, and supply.

Some Government administrators have resisted Electronic Commerce because they believe electronic records provide insufficient documentary proof of an event or transaction. According to recent guidance from the General Accounting Office and the National Archives and Records Administration, however, paperless, electronic documents and transactions are admissible as judicial evidence and can be used in contract formation, award, and payment, provided that appropriate controls are in place. That guidance now needs to be incorporated into Military Service and Defense agency regulations; it also needs to be communicated to the operating activities that actually conduct Department of Defense (DoD) business.

To assist in making the needed changes, we recommend a number of specific changes to the Federal Acquisition Regulation and identify a variety of other regulations and documents that are impeding the application of Electronic Commerce techniques within DoD. We also recommend that the DoD Executive Agent for Electronic Commerce and Electronic Data Interchange require all participants in

DoD's Electronic Commerce Program to include regulatory and procedural reviews in their program plans.

These changes should remove many of the administrative impediments to Electronic Commerce, paving the way for DoD to substantially improve how it conducts business.

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CHAPTER 1

INTRODUCTION

The Federal Government, like much of the private sector, uses a variety of automated systems to carry out its business functions, such as acquisition, logistics, and finance. Recent advances in information technologies have dramatically increased the capability of those systems. One such advance is Electronic Commerce, through which the Government electronically exchanges business information among its various departments and agencies and with its numerous contractors and suppliers. Government regulations, however, do not readily accommodate the full application of Electronic Commerce techniques; some even act as impediments.

ELECTRONIC COMMERCE

Electronic Commerce is the digital exchange of all information needed to conduct business. Through the application of its associated technologies (e.g., facsimile, electronic mail, and electronic data interchange or EDI), Electronic Commerce permits organizations to exchange business information faster, make information more accessible, and send information directly to those who need it.

EDI is the computer-to-computer exchange of routine business information in standard transaction formats. Commercial businesses and Government organizations can use EDI techniques to eliminate the flow and handling of paper documents and the repetitive entering of data into their computer systems. Although those benefits are substantial, they are relatively small when compared with the savings made possible by more timely and accurate information, better service, and improved business operations.

The concept of linking business computers with electronic transactions is not new. Department of Defense (DoD) activities have been exchanging business information electronically with large private-sector companies in nonstandard, proprietary formats since the 1960s. What is new is the emergence of nationally and internationally recognized data format standards, commonly referred to as

transaction sets. Coupled with the dramatic improvements in information processing and telecommunications, transaction sets have accelerated business's use of EDI.

REGULATORY IMPEDIMENTS

Few Government regulations explicitly authorize the use of paperless transactions, documents, or files when conducting business with commercial firms. Nonetheless, several Government organizations have successfully applied such techniques as EDI to their order, acceptance, invoice, receipt, and payment processes.

Those organizations are either relying on the more liberal strictures of Federal Acquisition Regulation (FAR) Part 13, *Small Purchase and Other Simplified Purchase Procedures*, or establishing agreements with the involved parties to accept paperless documents and electronic signatures when exchanging routine information.¹ Many, however, are still being forced to prepare and retain paper copies of purchase orders, receiving reports, and invoices to satisfy local accounting or legal documentation requirements. Others keep their paperless delivery orders under the \$25,000 limit of FAR Part 13, to avoid such requirements.

We believe that the lack of regulatory recognition for Electronic Commerce impedes its application by Government organizations. Regulations that call for specific forms, paper records and files, and manual or original signatures clearly restrict Government organizations from improving their business operations. Also restrictive are lower level regulations that require paper documentation or original signatures when higher level policy accommodates alternative means of storing information, transmitting information, and authorizing transactions.

SCOPE AND ORGANIZATION OF REPORT

Although many of the needed regulatory changes are relatively straightforward (such as redefining "writing," "signature," and "document"), others may require statutory changes. We do not address the need for statutory changes in this report. Instead, we focus on the regulatory impediments to Electronic Commerce and propose, drawing extensively upon earlier studies, specific changes to eliminate them. Chapter 2 addresses how DoD and other Government regulations and

¹These agreements, commonly called trading partner agreements, are discussed in *Electronic Contracting, Publishing, and EDI Law*, Michael S. Baum and Henry H. Perritt, Jr., John Wiley & Sons, Inc., 1991, and LMI Report MT901TR1, *EDI Trading Partner Agreement for Defense Transportation*, Ben W. Milbrandt and John A. Ciucci, January 1990.

procedures currently treat Electronic Commerce. Chapter 3 discusses the purpose of forms, signatures, and records, while Chapter 4 assesses a variety of evidentiary issues associated with Electronic Commerce.

Chapter 5 presents some of the acquisition-related information flows between the Government and its contractors and among Government organizations. Those flows identify many of the regulatory and procedural changes needed to accommodate expanded use of Electronic Commerce techniques by DoD. Appendix A provides an analysis of the required regulatory changes for each information flow, while Appendix B presents our recommended changes to the FAR and to the Defense FAR Supplement (DFARS).



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CHAPTER 2

FEDERAL REGULATIONS AND ELECTRONIC COMMERCE

INTRODUCTION

In two previous studies, we examined the impact of selected Federal regulations on DoD's efforts to implement Electronic Commerce.¹ This chapter presents the combined findings and conclusions of those studies and details specific recommendations to remove the impediments to Electronic Commerce that are embedded in various Federal regulations.

THE FEDERAL ACQUISITION REGULATORY SYSTEM

The Federal Government prescribes uniform acquisition policies and procedures through the FAR and its supplements. The FAR guides most procurement actions; however, several specialized procurement areas have their own regulations that are included by reference in the FAR or its supplements. For example, the Federal Information Resources Management Regulation (FIRMR) prescribes the procedures for acquiring information systems and services; the Federal Property Management Regulations and the Defense Transportation Management Regulations (DTMR) apply when acquiring transportation services; and the DoD Personal Property Management Regulations apply when acquiring services related to the movement of personal property.

The FAR does not provide guidance to the procuring activity on either internal work flows or reporting requirements. These areas of responsibility are left to departmental and agency regulations and operating instructions, as are numerous procedural details.

Although the Federal Government has several Electronic Commerce initiatives under way, it has done little to formally recognize electronic business methods within the FAR, FIRMR, and DTMR. Acceptance of Electronic Commerce will require not

¹See *Electronic Data Interchange in Procurement*, LMI Report PL904R1, April 1990, Daniel J. Drake, John A. Ciucci, and Ben Milbrandt, and *Electronic Commerce and Competitive Procurement*, LMI Report PL006R1, June 1991, Daniel J. Drake and John A. Ciucci.

only regulatory changes to, for example, the FAR, FIRMR, and DTMR, but also changes to operating instructions and procedures at many organizational levels.

In previous tasks, we proposed a number of broad regulatory changes to accommodate Electronic Commerce initiatives. We based those changes upon the following findings and conclusions.

Regulations Restrict Paperless Applications

Government activities attempting to implement Electronic Commerce are constrained by regulations that either require paper documentation or else require it when a procurement action exceeds the current small purchase limit of \$25,000. One contracting activity that currently issues electronic delivery orders has restricted those orders to less than \$25,000 because it believes that the FAR requires written orders at higher dollar values. Some contracting activities planning to issue electronic purchase orders to their suppliers were forced by internal accounting regulations to use paper purchase orders for recording obligations.

Regulatory Recognition for Electronic Commerce Is Limited

Some Government regulations selectively recognize Electronic Commerce technologies. Although the FAR authorizes use of facsimile transmissions for submitting bids or proposals,² the contracting officer nevertheless may request the complete original signed bid/proposal.³ The FAR also permits electronic funds transfer when paying Government contractors⁴ but makes no mention of electronic invoices.⁵

Regulatory Impediments Are Not Confined to the FAR

Not all regulatory impediments to Electronic Commerce are in the FAR and its supplements. Other regulations, particularly Military Service and Defense agency accounting and finance regulations, specify the use of paper documents to prove the obligation of funds or the receipt of supplies. Similar requirements exist in the

²See the clause prescriptions at FAR 14.201-6(w) and 15.407(j) and the clauses at FAR 52.214-31 and 52.215-18.

³See FAR 14.202-7 and 15.402(j).

⁴See the clause at FAR 52.232-28, Electronic Funds Transfer Payment Method.

⁵See the clause at FAR 52.232-25, Prompt Payment, which states, "An invoice is the Contractor's bill or written request for payment. . . ."

operating instructions followed by various functional specialists supporting the acquisition process. Those instructions presume the need for paper documents and manual signatures. The examination of vouchers is a good example; it specifies the use of paper invoices.

Electronic Methods Are Recognized by Accounting and Legal Policy

The Comptroller General, who establishes Federal accounting principles, standards, and requirements, has formally recognized the capabilities of information technologies to accurately transmit information from remote sources.⁶ Recent General Accounting Office (GAO) guidance to Government agencies clearly supports the use of electronic records and transactions for funds certification and voucher examination when those agencies make reasonable provisions for security and authentication.⁷ In a legal opinion on electronic contracting, the GAO states that Federal Government contract formation does not require a written document and that contracts may use electronic signatures to signify the contracting parties' intent to contract.⁸

Although the accounting guidance accepts electronic records, some Government agencies have been overly cautious in their interpretation of the Federal Rules of Evidence. As a result, they believe that hard-copy documents are required to support any legal actions. This caution is unwarranted, because the Federal Rules of Evidence are no different for electronic records than for paper records, provided that adequate security and control are maintained.

RECOMMENDATIONS

In Appendix A, we list many of the documents that DoD currently uses to conduct business. We also show a proposed electronic method for each document and some of the regulatory changes needed to accommodate the replacement of paper with electronic transmissions. Appendix B presents our recommended changes to the FAR and DFARS. In it, we propose redefining terms (e.g., signatures, contracts, and invoices); recognizing electronic media; and authorizing electronic equivalents of

⁶See 31 U.S.C. 3511, Prescribing Accounting Requirements and Developing Accounting Systems, for the Comptroller General's authority over executive agencies' accounting practices.

⁷GAO *Policy and Procedures Manual for Guidance of Federal Agencies, Title 7 - Fiscal Guidance*, 12 February 1990, Section 7.4, "Application of Available Technology and Concepts."

⁸GAO Memorandum, Subject: *Electronic Contracting* (B-238449), 19 June 1991.

standard procurement forms.⁹ These changes need to be followed by other changes to internal procedures, which should be made primarily by the Military Services and the Defense agencies. To ensure that those internal procedures are modified in a timely manner, we recommend that the Director of Defense Information conduct a formal review of all Military Service and Defense agency regulations and procedures to identify language that restricts Electronic Commerce.

⁹The pending Defense Acquisition Regulatory (DAR) Case 91-040, "Electronic Contracting," is the appropriate means for making many of these changes.

CHAPTER 3

FORM, SIGNATURE, AND WRITING REQUIREMENTS

Since its inception, the Federal Government has used paper documents and handwritten signatures to conduct business. Although 19th century communications technologies such as the telegraph and telephone permitted more rapid communication of quotations, for example, they provided little documentation and no authentication.

Today's information technologies both speed communications and provide trustworthy documentation and authentication. We believe that these technologies offer capabilities that warrant the Federal Government's revising its emphasis on forms, signatures, and writings in the conduct of business. This chapter examines several issues associated with replacing paper documents with electronically exchanged information.

FORMS

The Federal Government uses numerous preprinted paper forms when dealing with its contractors and suppliers. Many of those forms are designed to minimize the number of forms that the Government uses and the amount of information that the contractors must provide. Standard forms are both a means of organizing routine information conveyed between contracting parties and creating written documentation for legal purposes.¹ They also ensure that essential information is provided in specific locations on the form. Such organization facilitates the repetitive processing of information, which the Government frequently performs.²

Within the past several years, the American National Standards Institute (ANSI), in cooperation with both industry and Government representatives, has developed electronic standards for many Federal procurement, contract

¹John Cibinic, Jr. and Ralph C. Nash, Jr., *Formation of Government Contracts*, George Washington University, 1982.

²Federal procurement regulations nevertheless specifically authorize the use of means other than standard forms. For instance, see FAR 13.506, Purchase orders via written telecommunications, and DFARS 239.7407-2, Communication service authorizations (CSAs).

administration, and transportation forms. Those standards, like their paper counterparts, specify what information is conveyed between the contracting parties and how, except that the electronic information is only machine readable. In addition, Federal Information Processing Standards (FIPS) 161, "Electronic Data Interchange," establishes the rules and formats for conveying information normally found on paper documents.

The Federal Government clearly has the means to conduct business electronically, since both the technology and the standards exist. Nonetheless, FAR Part 53 - *Forms* - needs to be revised to authorize substitution of electronically transmitted information for standard procurement documents, in accordance with FIPS 161. In addition, DFARS Part 253 needs to recognize the current *DoD Implementation Guidelines for Electronic Data Interchange (EDI)* in treating the preparation of EDI transactions.

SIGNATURES

The requirement for signature authentication in Government contract formation stems from the so-called Federal statute of frauds, 31 U.S.C. 1501, which establishes the criteria for recording financial obligations against the U.S. Government. That U.S.C. section specifies certain requirements that must be met before public money becomes an obligation of the United States. It states:

An amount shall be recorded as an obligation of the United States Government only when supported by documentary evidence of:

- (1) *A binding agreement* between agencies and other parties that is:
 - (a) in writing, in a way and form, and for a purpose authorized by law
 - (b) executed before the end of the period of availability for the obligation of the appropriation. . . .

Thus, the statutory requirements are twofold: (1) a *binding* agreement and (2) a *written* agreement. Therefore, signature authentication is crucial in meeting the first requirement. The prevailing legal view is that at least two significant conditions must be satisfied before the signature can be legally binding: the electronic signature must be adopted as a person's "unique code signature," and appropriate security measures must exist to ensure that the unique code signature cannot be used by unauthorized individuals.

U.S. courts have repeatedly held that a signature consists of writing one's name with the intention to authenticate the instrument and that therefore any symbol adopted as one's signature – when affixed with his or her knowledge and consent – is a “*binding and legal signature*” [emphasis supplied].

Furthermore, the GAO has long recognized facsimile signatures and machine-made signatures as legally binding. It concluded in opinion B-216035, 20 September 1984, that “. . . an appropriate symbol may be adopted by a certifying officer as his signature for the purpose of voucher certification.”

The line of GAO opinions respecting signature is totally supported by the authoritative *Black's Law Dictionary*, which defines signature as follows:

. . . A “signature” may be written by hand, printed, stamped, typewritten, engraved, photographed, or cut from one instrument and attached to another, and a signature lithographed on an instrument by a party is sufficient for the purpose of signing it; it being immaterial with what kind of instrument a signature is made. . . . And whatever mark, symbol, or device one may choose to employ as representative of himself is sufficient. . . .

Once a person uses his or her unique code signature, it should be easy to establish the “intention” to be legally bound. However, for an electronic signature to gain enforceable stature, it must be afforded a measure of security sufficient to ensure that unauthorized individuals do not have access to the “code” itself. This security begins with physical security and ends with a myriad of control features built into the software. The measure of security afforded should be driven by and in proportion to the value or importance of the particular transaction. In other words, each activity needs to use *commercially reasonable security*. To illustrate, a base purchase order for lumber does not require the same kind of signature control that a purchase order for an F-15 fuel control device requires. Furthermore, many small purchases are made now without a signature. In revising Government regulations to accommodate Electronic Commerce, we believe it would be counterproductive to impose an onerous signature requirement.

Today some of the software commercially available provides all the controls necessary to give electronic signatures legal efficacy, as certified by the National Institute of Standards and Technology. Very simply, electronic signatures must

- Be unique to the signer
- Be capable of verification

- Be under the signer's control
- Be linked to the data being sent.

If more control is needed beyond the traditional identification and password security, a variety of digital signature devices are available on the open market. The most commonly used device is the "smart card," which resembles a credit card with an embedded computer chip. The sender simply inserts the smart card into the system and inputs the data to be transmitted; when the transmission is completed, the sender engages the proper key to generate an electronic signature. The unique code signature is then generated and executed. The recipient, by using a secret key, verifies the identity of the sender, thus preventing the sender from repudiating the transmission.

The best security is provided by public key encryption (PKE), which uses a series of algorithms in association with public and private keys. (Some of the PKE protocols have not been broken in over 10 years, despite concerted efforts to do so.) Although PKE is relatively expensive, its cost is declining, so that an agency with many users, such as DoD, could negotiate a very reasonable price if it chose to acquire a license on the open market. PKE includes the following features:

- It requires no ongoing business relationship between sender and receiver.
- It allows signatures and authorizations to be proven at a future time.
- It secures cosignatures and countersignatures.
- It eliminates the burden of administering a secret key system.

WRITINGS

In the preceding section, we noted that sufficient security can be built into an electronic contractual arrangement that provides reasonable evidentiary documentation to compel a court or board to accept it. Now we turn our attention to whether courts or boards will accept electronic storage media.

One of the reasons why Congress enacted 31 U.S.C. 1501 was to instill discipline into a recording system that agencies were abusing by recording questionable obligations, particularly oral agreements. Congress was looking for a binding agreement that provided more certainty than an oral agreement but not necessarily only "paper and ink." Federal courts have accepted tape recordings as the

foundation of a contract because they are reducible to tangible form. We believe that data transmitted by electronic means can be retrieved from reliable, trustworthy storage media with such certitude that the "in writing" requirement is easily met. Furthermore, data transmitted by EDI transaction sets can readily be retrieved and reviewed in human readable form and are at least as trustworthy as paper and ink. Courts routinely enforce contracts with less trustworthiness.

Finally, a recent legal memorandum opinion from the GAO, endorsing the principle that EDI documents *do* meet the statutory requirement of 31 U.S.C. 1501 for a writing, states:

Although the terms of contracts formed using EDI are stored in a different manner than those of paper and ink contracts, they ultimately take the form of visual symbols. We believe that it is sensible to interpret federal law in a manner to accommodate technological advancements unless the law by its own terms expressly precludes such an interpretation, or sound policy reasons exist to do otherwise. *It is evident that EDI technology had not been conceived nor, probably, was even anticipated at the times section 1501 and the statutory definition of "writing" were enacted. Nevertheless, we believe that, given the legislative history of section 1501 and the expansive definition of writing, section 1501 and 1 U.S.C. §1 encompass EDI technology*³ [emphasis added].

SUMMARY

The Federal Government's emphasis on using standard forms, written signatures, and paper storage of documents to conduct business was well founded. In an electronic business environment, however, such requirements are no longer practical. Recent developments in information systems technology provide the same degree of control and security as did standard forms, written signatures, and paper storage.

³GAO Memorandum, Subject: *Electronic Contracting* (B-238449), 19 June 1991.

CHAPTER 4

EVIDENTIARY ISSUES

Documentation of business agreements and transactions is important to prepare for possible litigation. Paper documents and manual signatures are well accepted as adequate business documentation and as evidence in litigation. The advent of electronic business processes gives rise to electronic records that are also acceptable documentation of what has transpired.

ELECTRONIC RECORDS

The law of evidence consists of the rules and principles that regulate the admissibility, relevancy, and sufficiency of evidence in legal proceedings. Evidence is any proof or probative matter, legally presented at the trial of an issue, that induces belief in the minds of the court or board members. Which rules apply depends on whether the legal proceedings are in Federal court, state court, or a regulatory or administrative agency. While the rules are similar in the various jurisdictions, each jurisdiction has its own peculiar rules for determining the admissibility of documents and records.

All litigation involving Government agencies and their contractors occurs in a Federal forum. The FAR requires all Government agencies to use the standard Disputes clause at FAR 52.233-1, which makes the parties subject to the Contract Disputes Act of 1978 (41 U.S.C. 601 – 613). As a result, disputes in Government contracting are settled in one of two forums: the Armed Services Board of Contract Appeals (ASBCA) (or another agency board) or a U.S. Federal court. In either forum, evidentiary questions are resolved by applying the Federal Rules of Evidence, the Uniform Photographic Copies of Business and Public Records as Evidence Act (28 U.S.C. 1732), and similar special statutes. Some Government agencies have relaxed the rules and follow the Administrative Procedures Act (5 U.S.C. 566), which states that "... any oral or documentary evidence may be received, but the agency as a matter of policy shall provide for the exclusion of irrelevant, immaterial, or unduly repetitious evidence." Regardless of the forum, Federal courts and boards have been

accommodating new technologies, such as replacing paper documents with electronically transmitted data in evidentiary matters.

Other examples of similar accommodation are noteworthy. In May 1990, the National Archives and Records Administration (NARA) published final regulations in the Code of Federal Regulations (CFR) on electronic records management that provided a legitimacy to electronic recordkeeping that did not previously exist. Previously, agencies had developed their own policy on electronic records, often in the form of "pocket regulations." Such regulations are not formal documents but agency letters or memorandums; some may not even be written. Pocket regulations are not uncommon in areas of new technology, because they provide an excellent opportunity to test or refine a policy before issuance for public comment. Nonetheless, the NARA pronouncement is now the standard for Government agencies. An extract from it (36 CFR 1234.24) follows:

Judicial use of electronic records

Electronic records may be admitted in evidence to Federal courts for use in court proceedings [Federal Rules of Evidence 803(9)] if trustworthiness is established by thoroughly documenting the recordkeeping system's operation and the controls imposed upon it. Agencies should implement the following procedures to enhance the legal admissibility of electronic records.

- (a) Document that similar kinds of records generated and stored electronically are created by the same processes each time and have a standardized retrieval approach.
- (b) Substantiate that security procedures prevent unauthorized addition, modification or deletion of a record and ensure system protection against such problems as power interruptions.
- (c) Identify the electronic media on which records are stored through out their life cycle, the maximum time span that records remain on each storage medium, and the NARA-approved disposition of all records.
- (d) Coordinate all of the above with legal counsel and senior IRM [information resource management] and records management staff.

In view of the above guidance, Government agencies and other parties would have difficulty challenging the admissibility of an electronic record in a judicial or administrative forum, particularly if appropriate precautions are taken.

The three primary methods of storing records are paper, microfilm, and computer-based magnetic storage (tape or disk). A fourth method, which is becoming

increasingly popular – optical storage – is also a viable option both from a practical and a legal standpoint. These storage methods are described below:

- *Paper.* Paper-based storage is the most common method. Its value is well proven; custodians and courts alike are very comfortable with paper documents. Paper documents are also the easiest to enter into evidence.
- *Microfilm.* Microfilm, which has been used for more than 60 years, continues to grow in use. It is widely accepted as evidence, primarily because the information is effected by a photographic process and is unalterable.
- *Magnetic storage.* Magnetic storage has become a very efficient medium for records storage. Its use is also growing rapidly. Using magnetic storage is faster than using micrographics, both for recording and for retrieving information. It can be easily erased, which is a favored characteristic when updating electronic files but a detriment when material stored is to be offered into evidence.
- *Optical storage.* Optical storage has many of the strengths of magnetic storage and none of its weaknesses. It is a relatively new digital technology, particularly the WORM – write once, read many – storage capability. The optical disk has a write/read surface between two sealed, airtight, transparent outer layers. With WORM, the laser etching on this surface produces an irreversible change that cannot be overwritten or modified. Given the newness of this storage medium, however, little legal precedent exists regarding the admissibility into evidence of material stored in this fashion. But given the propensity of Federal courts and boards to accommodate new technologies, optical storage, especially of the WORM variety, should be readily accepted.

Electronic storage is actually the storing of computer processed information in magnetic files. Such files are considered “writings or recordings” before Federal courts and boards. Federal Rule of Evidence 1001(1) states in part: “Writings and recordings’ consists of letters, words, or numbers, or their equivalent, set down by . . . magnetic impulse, mechanical, or electronic recordings, or other form of data compilation.”

In the Federal sector, litigants are likely to argue points of evidence before court judges, administrative law judges, or hearing examiners, who will demand the “best evidence” available under the Federal Rules of Evidence, which generally implies original documents. Rule 1002 states that “to prove the content of a writing, recording, or photograph, the original writing, recording, or photograph is required except as otherwise provided by these rules or by Act of Congress.” However,

Rule 1001(3) further states that "An 'original' of a writing or recording is the writing or recording itself. . . . If data are stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an 'original.'" Other exceptions appear to provide for the use of duplicates, which are admissible generally to the same extent as an original (Rule 1003), and for admission of public or official records (Rule 1005). Thus, the Federal Rules of Evidence apparently allow for additional printouts of the same information contained in a magnetic file.

Congress has also allowed for other exceptions to the "best evidence rule." The most common of those exceptions is the Business Records Act (28 U.S.C. 1732), which provides for the admissibility of copies or reproductions of original records produced in the regular course of business. It states

If any . . . department or agency of government, in the regular course of business or activity has kept or recorded any memorandum, writing, entry, print, representation or combination thereof, of any act, transaction, occurrence, or event, and in the regular course of business has caused any or all of the same to be recorded, copied, or reproduced by any . . . process which accurately reproduces or forms a durable medium for so reproducing the original, the original may be destroyed in the regular course of business unless its preservation is required by law. Such reproduction, when satisfactorily identified, is as admissible in evidence as the original itself in any judicial or administrative proceeding whether the original is in existence or not. . . . The introduction of a reproduced record . . . does not preclude admission of the original. . . .

This language closely parallels that in Rule 803(6).

The hearsay rule is another hurdle in placing electronic records into evidence. A computer printout, which qualifies as an original record (as discussed above), is considered hearsay if it is offered to prove the truth of its contents. Rule 801(c) defines hearsay as ". . . a statement, other than one made by the declarant while testifying at the trial or hearing, offered in evidence to prove the truth of the matter asserted." A "statement" is defined to include a written assertion. Hearsay is not admissible in Federal court except as provided by the Federal Rules of Evidence "or by other rules prescribed by the Supreme Court pursuant to statutory authority or by Act of Congress" (Federal Rule of Evidence 802).

Courts have further observed that the Business Records Act was adopted to facilitate the admission of records into evidence and should not be interpreted so strictly that it deprives the courts of the realities of business and professional

practice. This exception is based upon the notion that records created and relied upon in the ordinary course of business do have a certain trustworthiness because they were "created for motives that tend to assure accuracy" and should be admissible. Computer business records prepared for litigation usually are not so readily admissible. They require a careful foundation before they can be admitted as evidence. Other recognized exceptions to the hearsay rule include absence of entry in records kept in the ordinary course of business, public records and reports, records of vital statistics, and statements in ancient documents. Legal counsel should be consulted in designing any electronic filing system of records to ensure a trustworthy system.

When it becomes necessary to lay a foundation for admitting documents into evidence before a Federal court or board, the testimony of a qualified witness familiar with the computer record and with the procedures used to create it may be required. The witness should establish that the record was created in the ordinary course of business and that it was made within a reasonable time after the transaction occurred. With Electronic Commerce, and particularly EDI, the record inevitably is made simultaneously with the transaction, thus meeting this requirement.

LITIGATION

What can a Government agency expect if it enters into an EDI contractual relationship with a trading partner and ends up in litigation because of a dispute? Under the standard Disputes clause, a dispute involving DoD likely will be heard by the ASBCA. Occasionally, at the contractor's option, the case will come before the U.S. Claims Court. In either forum, the evidentiary rules will be the Federal Rules of Evidence, which readily accommodate Electronic Commerce. Neither forum hesitates to raise up a contract even if there is no "neat and tidy" written contract. Prior to passage of the Contract Disputes Act of 1978, the ASBCA was referred to as "triers of fact" and generally decided only questions of fact arising under a contract. With passage of the Contract Disputes Act, the ASBCA was quick to exercise its new authority to decide questions of law as well as questions of fact. As a result, any legal issues involving electronically submitted information would be within the jurisdiction of the ASBCA.

Since 1978, the ASBCA has enforced contracts on many grounds when there was no written contract. For instance, it has upheld contracts implied in law and has

enforced contracts implied in fact. The latter usually involves an oral contract or one implied by the conduct of the parties.

We believe that using an electronic contracting arrangement is vastly superior to using an oral arrangement, to having judges decide the intent of the parties on the basis of a course of conduct, or to implying a contract by operation of law. If the data conveyed by "transaction sets" are stored electronically under secure conditions and can be retrieved and introduced into evidence, there should be little doubt regarding the intent of the parties to enter into a binding contract.

SUMMARY

The acceptance of electronic records as evidence in Federal judicial proceedings is no longer a major issue. As well-designed Electronic Commerce processes create paperless business records, and as Government and business increasingly rely on these electronic records, their acceptance will become even less of an issue.

CHAPTER 5

INFORMATION FLOWS AND FUNCTIONS

Electronic Commerce is not just the exchange of information between contracting parties. It also entails the passing of information among Government agencies and offices. If electronic methods are going to reduce paper-handling costs and enable fundamental changes in Government business practices, they must be used for both internal and external information exchanges. This chapter, in concert with Appendix A which provides most of the details, describes a number of external and internal information flows that are excellent candidates for Electronic Commerce techniques, particularly EDI. Many of these candidates, however, require a variety of regulatory and procedural changes before they can be implemented.

CONTRACTING AND PAYMENT INFORMATION FLOWS

Figure 5-1 illustrates the external information flows that are required to conduct Government contracting. Through EDI, the Government can exchange paperless solicitation and quotation/bid/offer information with prospective contractors. It also can issue purchase orders and award contracts electronically. As contract performance progresses, the contractor can submit, electronically, unapproved inspection and receiving reports, progress payment requests, cost vouchers, and invoices to the Government. Finally, the contracts can be paid by electronic funds transfer.

We describe each of these external information flows in Appendix A. That appendix also identifies the regulatory changes that need to occur before each of the information flows can be accomplished electronically.

Figure 5-2 shows the information flows that occur among Government activities in support of the procurement function. These flows include contract/order information from the buying office to (1) the requiring activity (normally the supply office) to update due-in assets records, (2) the accounting office for recording the obligation on the Government's books, (3) the contract administration office to permit tracking of delivery schedules and contract costs, and (4) the paying office to recognize a prospective payment requirement. As contract performance progresses,

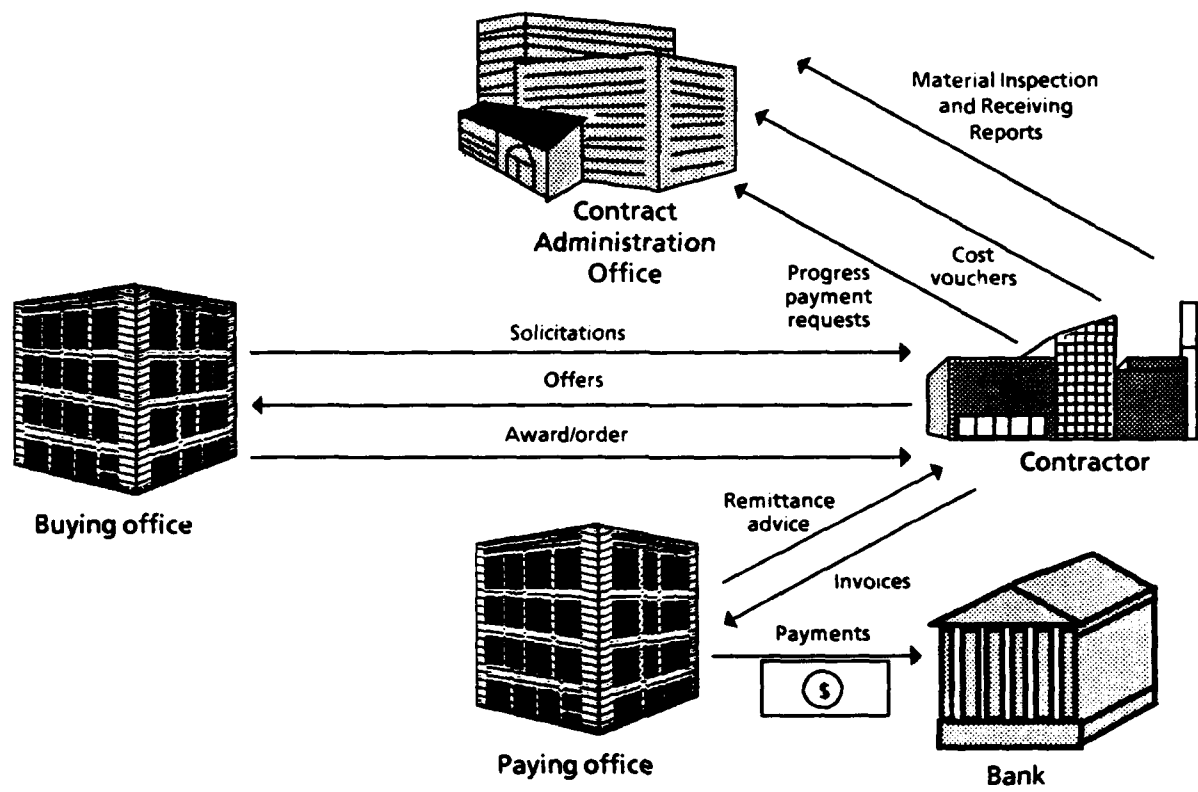


FIG. 5-1. CONTRACTING AND PAYMENT INFORMATION – EXTERNAL FLOWS

these offices exchange information on the costs accrued, deliveries, and disbursements. Appendix A describes each of these internal information flows in more detail and the specific regulatory or procedural changes needed before they can be accomplished electronically.

TRANSPORTATION INFORMATION FLOWS

Figure 5-3 provides an overview of the information flows required to support the Government’s use of motor freight to move its material. The transportation office prepares the Government bill of lading (GBL), which it then provides to the carrier, consignee, and Military Traffic Management Command (MTMC). Upon completion of the required movement, the carrier submits the GBL (now considered an invoice) to a payment center for payment. All transportation movements are initiated by the carrier submitting a tender of services and MTMC accepting it. Appendix A provides a more complete description of these information flows and relationships.

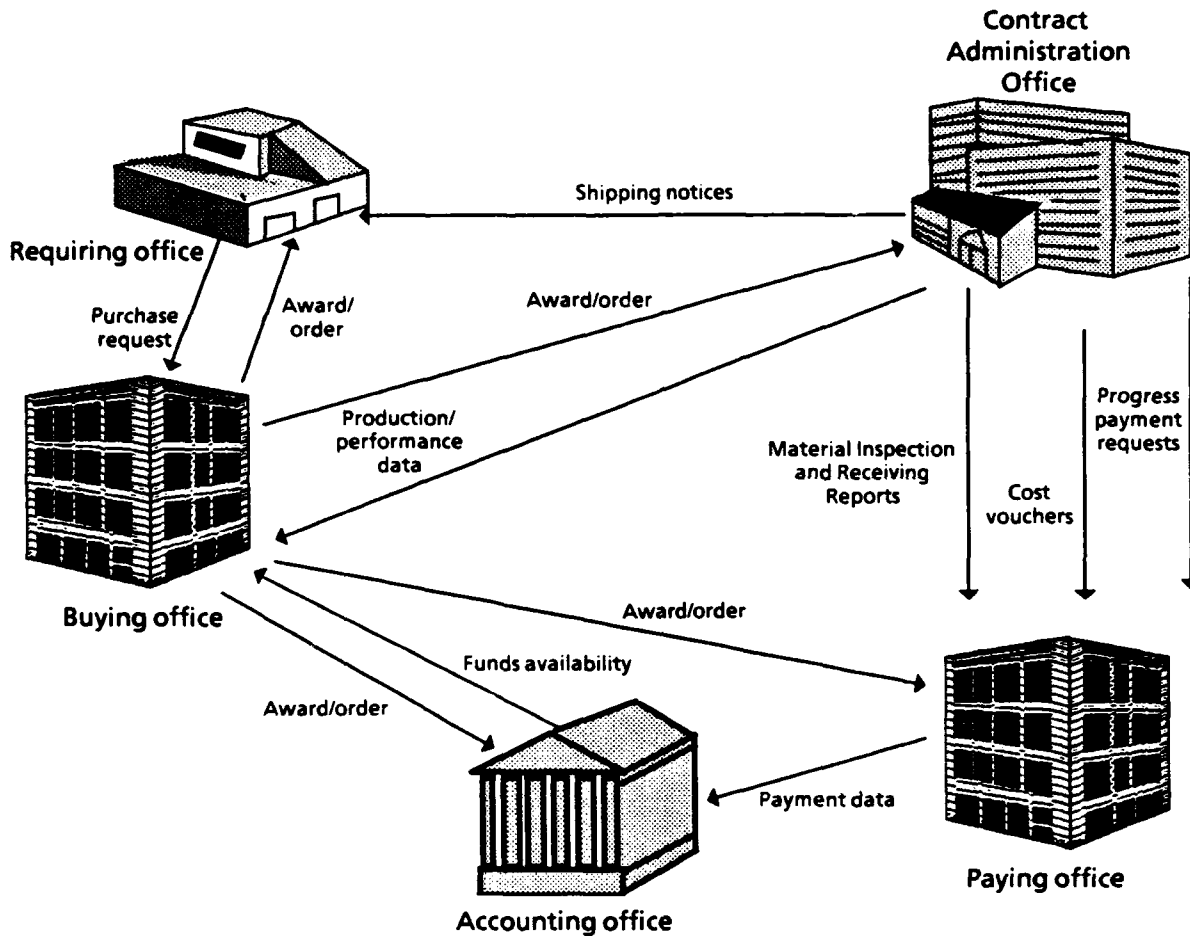


FIG. 5-2. CONTRACTING AND PAYMENT INFORMATION - INTERNAL FLOWS

REGULATORY CHANGES

The numerous regulatory changes identified in Appendix A that need to occur before the information flows depicted in Figures 5-1, 5-2, and 5-3 can be accomplished electronically are not confined to the FAR and its supplements. Regulations and procedures pertaining to accounting and finance, contract administration, quality assurance and inspection, personal property management, and transportation also need to be changed to accommodate Electronic Commerce techniques. Furthermore,

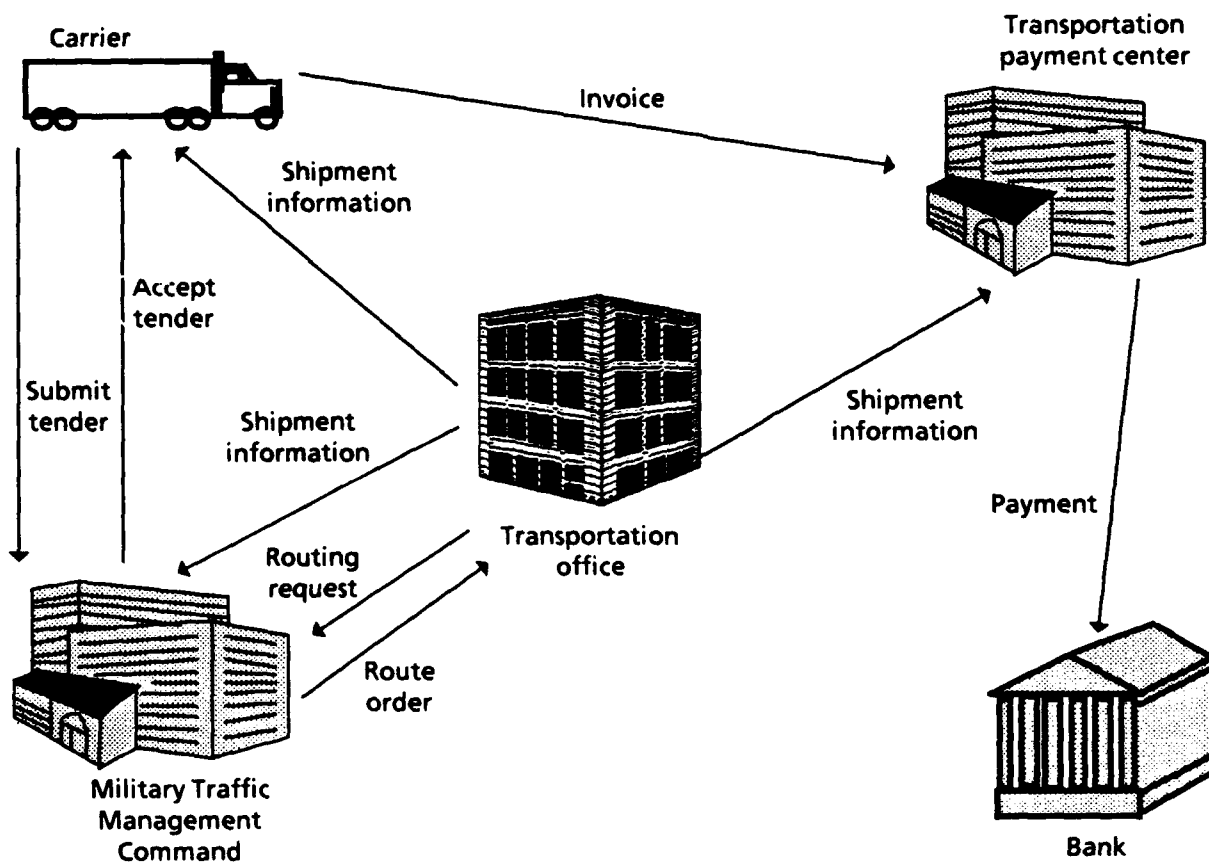


FIG. 5-3. TRANSPORTATION INFORMATION FLOWS

many of the internal information flows are closely tied to paperless Military Standard Contract Administration Procedures (MILSCAP) transactions.¹

Other functional areas also require regulatory or procedural changes. For example, Government-furnished property (GFP) administrators on major weapon system contracts require contractors to provide the status of extensive GFP inventories on computer printouts or electronic media. Contractors could easily transmit that information through EDI. Another example, although very general, occurs where regulations or procedures authorize communications via telephone, teletype, or telex but make no provision for newer information technologies such as facsimile transmission, electronic-mail message, or EDI transaction. Several data

¹DoD Manual 4105.63-M, *Military Standard Contract Administration Procedures*, and LMI Report DL902R1, *Modernization of Defense Logistics Standard Systems (MODELS)*, Volume I: *Establishing the Functional Baseline*, Donald F. Egan, et al., September 1991.

item descriptions specified on Department of Defense (DD) Form 1423, Contract Data Requirements List, authorize data submission via magnetic tape or computer cards but do not recognize EDI.²

One method of recognizing Electronic Commerce would substitute technology-neutral language where paper forms or manual signatures are required. We support such an approach in many cases; however, neutral language may act to impede acceptance of some Electronic Commerce techniques. For example, an individual wanting to issue or receive electronic invoices needs explicit language in the FAR stating that EDI invoice transactions are acceptable. To do otherwise would leave doubt as to the acceptability of EDI invoices.

To authorize EDI as part of general policy and not in specific applications risks unresolved disagreements at buying activities and with procurement staffs. Field practitioners do not always read general policy, but they do read the policy applying to their specific job function. We recommend that the FAR be revised to specifically authorize Electronic Commerce techniques such as EDI transactions for procurement documents, invoices, receiving reports, etc.

GENERAL ACCOUNTING OFFICE GUIDANCE

In 1990, the GAO issued guidance to all Government agencies on the use of electronic technologies in support of voucher examination and payment processes.³ More recently, the GAO counsel issued a legal opinion on the acceptability of electronic contractual documents and signatures.⁴ These GAO positions have removed many of the legal and regulatory issues associated with using electronic documents and signatures. However, many Military Service and Defense agency policy analysts are not aware of these actions or at least of their significance. More importantly, the GAO's acceptance of electronic business methods has not been incorporated into the numerous procurement, contract administration, accounting

²See Acquisition Management System and Data Requirements Control List, DoD 5010.12-2, April 1991, Data Item Description DI-F-6004, *Contract Funds Status Report*, where Section 7.2.3, "Mechanized Data Submission," permits computer products to be substituted for DD Form 1586, Contract Funds Status Report.

³GAO *Policy and Procedures Manual for Guidance of Federal Agencies, Title 7 - Fiscal Guidance*, 12 February 1990, Section 7.4, "Application of Available Technology and Concepts."

⁴GAO Memorandum, Subject: *Electronic Contracting* (B-238449), 19 June 1991.

and finance, and transportation and supply regulations and procedures that guide day-to-day business activities within DoD.

Some exceptions do exist, however. The Navy Comptroller (NAVCOMPT) authorizes the use of electronic receipt and acceptance certification, provided that the responsible activity meets certain internal controls and access and security requirements.⁵ Also, the Federal Property Management Regulations, as of 20 April 1989, allow procurement of transportation services via EDI transactions, provided that sufficient procedures to safeguard the integrity of the billing and payment process exist.⁶

NEXT STEPS

Recent GAO and NARA guidance suggests that more detailed analyses of potential Electronic Commerce opportunities and their associated regulatory provisions need to be made. In addition, numerous requirements for paper documents and signatures exist in procedures and operating instructions at the local-activity level. Those procedures and instructions also need to be updated if Electronic Commerce is to become the standard way of conducting business within DoD.

To ensure that such action occurs, we recommend that the DoD Executive Agent for Electronic Commerce and Electronic Data Interchange require all participants in DoD's Electronic Commerce Program to include regulatory and procedural accommodation of electronic methods in their program plans. We further recommend that the Executive Agent should request the Director of Defense Information to make recognition of paperless procedures part of all Corporate Information Management initiatives.

The paper culture is so embedded in Government business practices that it cannot be expunged by merely changing high-level policies and regulations. The Military Services and Defense agencies need to review their detailed operating instructions to ensure that they accommodate electronic formats and methods. However, paper will never be completely replaced by electronic transactions; it will

⁵NAVCOMPT Instruction 7270.1, *Electronic Receipt and Acceptance Certification*, 18 May 1989.

⁶See 41 CFR 101-41-007.

continue to supplement those transactions when the volume does not warrant an investment in electronic systems.

APPENDIX A

REPLACING PAPER WITH ELECTRONICALLY EXCHANGED INFORMATION

Table A-1 details the flow of selected business information between the Department of Defense (DoD) and its contractors and among DoD activities. It also states the purpose of each information flow, the changes required to replace paper documents with electronic transmissions, and the regulations that need to be modified to accommodate that replacement.

TABLE A-1

REPLACING PAPER WITH ELECTRONICALLY EXCHANGED INFORMATION

| Type of information | From | Function | Electronic method | Required change | Regulation |
|---------------------|------------------------------------|--|--|---|---|
| | To | | | | |
| Solicitation | Buying office Contractor | Solicit bid or quotation | EDI ANSI transaction set 840 | Authorize EDI RFQs and IFBs and amendments | FAR Parts 13, 14, and 52 ^a |
| Offer | Contractor Buying office | Provide bid or quotation | EDI ANSI transaction sets 842 and 805 | Authorize EDI bids, quotations, and cost proposals | FAR Parts 13, 14, and 52 ^a |
| Award/order | Buying office Contractor | Provide item, price, quantity, delivery information, and contract conditions | EDI ANSI transaction set 850 | Authorize EDI contract awards, purchase orders, and delivery orders and modifications | FAR Parts 13, 14, 16, and 52 ^{a,b} |
| Award/order | Buying office Accounting office | Provide obligation amount | Internal transaction | Recognize paperless contract/orders and modifications | Internal regulations and procedures |
| Award/order | Buying office CAO | Provide contract details for updating contract administration workload | Delegated administration: MILSCAP/MODELS transaction; nondelegated: internal transaction | Recognize paperless contracts/orders and modifications | MILSCAP manual, internal regulations and procedures |
| Award/order | Buying office Paying office | Provide contract details for future voucher examination | Delegated administration: MILSCAP/MODELS transaction; nondelegated: internal transaction | Recognize paperless contracts/orders and modifications | MILSCAP manual, internal regulations and procedures |

Note: EDI=electronic data interchange; ANSI=American National Standards Institute; RFQ=request for quotations; IFB=invitation for bids; FAR=Federal Acquisition Regulation; CAO=contract administration office; MILSCAP=Military Standard Contract Administration Procedures; MODELS=Modernization of Defense Logistics Standard Systems; DCAM=Defense Contract Audit Manual; MIRR=Material Inspection and Receiving Report; DFARS=Defense FAR Supplement; EFT=electronic funds transfer; SPN=Shipping Performance Notice; CPN=Contract Payment Notice; GBL=Government bill of lading; DTMR=Defense Transportation Management Regulations; PPTMR=Personal Property Transportation Management Regulations; CFR=Code of Federal Regulations; MTMC=Military Traffic Management Command.

^a See Appendix B for specific recommendations.

^b The clause at General Services Administration Acquisition Regulation 552.216-73, Placement of Orders, authorizes electronic delivery orders.

^c See General Accounting Office, *Policy and Procedures Manual for Guidance of Federal Agencies, Title 7 – Fiscal Guidance*, 12 February 1990.

^d See LMI Report AF005R1, *Paperless Material Inspection and Receiving Report – A Strategy to Streamline Acquisition and Reduce Paperwork*, Stephen Luster, March 1991.

TABLE A-1

REPLACING PAPER WITH ELECTRONICALLY EXCHANGED INFORMATION (Continued)

| Type of information | From | Function | Electronic method | Required change | Regulation |
|-----------------------------|--|--|--|--|---|
| | To | | | | |
| Award/order | Buying office Requiring office | Provide contract details to update purchase request status and due-in assets files | Internal transaction or MILSCAP transaction | Recognize paperless contracts/orders and modifications | MILSCAP manual, internal regulations and procedures |
| Purchase request | Requiring office Buying office | Define buying requirements | Internal transaction | Recognize paperless documents | Internal regulations and procedures |
| Funds availability | Accounting office Buying office | Certify funds availability | Internal transaction | Recognize electronic signature certifications | Internal regulations and procedures ^c |
| Cost vouchers | Contractor CAO/Auditor | Request payment | EDI ANSI transaction set 810 | Authorize paperless vouchers | FAR Part 32, DCAM |
| Invoices | Contractor Paying office | Request payment | EDI ANSI transaction set 810 | Authorize paperless invoices | FAR Part 32 ^a |
| MIRRs | Contractor CAO | Request acceptance of supplies | EDI ANSI transaction set 861 | Authorize paperless MIRRs | FAR Part 32, DFARS Part 246, and Appendix 1 ^d |
| Progress payment requests | Contractor CAO | Request payment | EDI ANSI transaction set 810 | Authorize paperless progress payment requests | FAR |
| Remittance advice | Paying office Contractor | Describe what was paid | EDI ANSI transaction set 820 | None required | Local procedure |
| Payments | Paying office Bank | Transfer funds | EFT | None required | FAR Part 32 recognizes EFT techniques |
| Production/performance data | CAO Buying office | Report deliveries, cost performance, schedule date | EDI ANSI transaction sets 806, 839, and 870 | Recognize paperless production surveillance reports | DFARS Part 242 |
| Shipping notices | CAO Requiring office or inventory control point | Notify receiving and due-in assets of shipment | MILSCAP/MODELS SPN; EDI ANSI transaction set 856 | Recognize paperless MIRRs | MILSCAP manual, DFARS, Appendix 1 ^d |
| MIRRs | CAO Paying office | Provide proof of acceptance for voucher examination | MILSCAP/MODELS or EDI ANSI transaction set 856 | Authorize paperless receiving and acceptance documents | Internal regulations and procedures ^c |
| Progress payment requests | CAO Paying office | Request payment | EDI ANSI transaction set 810 | Recognize paperless progress payment requests | FAR Part 32 |
| Payment data | Paying office Accounting office | Provide disbursement details for updating expenditure records | EDI ANSI transaction set 820 | None required | MILSCAP CPNs are currently accepted without paper documentation |
| Shipment information | Transportation office Carrier | Notify carrier of pending shipments | EDI ANSI transaction set 858 | Authorize paperless GBL | DTMR, PPTMR, 41 CFR 101.41 |

Note: EDI=electronic data interchange; ANSI=American National Standards Institute; RFQ=request for quotations; IFB=invitation for bids; FAR=Federal Acquisition Regulation; CAO=contract administration office; MILSCAP=Military Standard Contract Administration Procedures; MODELS=Modernization of Defense Logistics Standard Systems; DCAM=Defense Contract Audit Manual; MIRR=Material Inspection and Receiving Report; DFARS=Defense FAR Supplement; EFT=electronic funds transfer; SPN=Shipping Performance Notice; CPN=Contract Payment Notice; GBL=Government bill of lading; DTMR=Defense Transportation Management Regulations; PPTMR=Personal Property Transportation Management Regulations; CFR=Code of Federal Regulations; MTMC=Military Traffic Management Command.

^a See Appendix B for specific recommendations.

^b The clause at General Services Administration Acquisition Regulation 552.216-73, Placement of Orders, authorizes electronic delivery orders.

^c See General Accounting Office, *Policy and Procedures Manual for Guidance of Federal Agencies, Title 7 - Fiscal Guidance*, 12 February 1990.

^d See LMI Report AF005R1, *Paperless Material Inspection and Receiving Report - A Strategy to Streamline Acquisition and Reduce Paperwork*, Stephen Luster, March 1991.

TABLE A-1

REPLACING PAPER WITH ELECTRONICALLY EXCHANGED INFORMATION (Continued)

| Type of information | From | Function | Electronic method | Required change | Regulation |
|----------------------|---|---|---|--------------------------------|---------------------------------------|
| | To | | | | |
| Shipment information | Transportation office ----- MTMC | Provide traffic management information | EDI ANSI transaction set 858 | Authorize paperless GBL | DTMR, PPTMR, 41 CFR 101.41 |
| Shipment information | Transportation office ----- Transportation payment center | Pre-position shipment information for audit | EDI ANSI transaction set 858 | Authorize paperless GBL | DTMR, PPTMR, 41 CFR 101.41 |
| Invoices | Carrier ----- Transportation payment center | Request payment | EDI ANSI transaction sets 210, 410, and 859 | Authorize paperless invoice | DTMR, PPTMR, 41 CFR 101.41 |
| Payment | Transportation payment center ----- Bank | Transfer funds | EFT | None required | FAR Part 32 recognizes EFT techniques |
| Tender submission | Carrier ----- MTMC | File rates | EDI ANSI transaction set 602 | Authorize paperless tender | DTMR |
| Tender acceptance | MTMC ----- Carrier | Acknowledge rates | EDI ANSI transaction set 994 | Authorize paperless acceptance | DTMR |
| Routing request | Transportation office ----- MTMC | Request carrier routing and ranking | Undecided | To be determined | DTMR |
| Route order | MTMC ----- Transportation office | Provide carrier routing and ranking | Undecided | To be determined | DTMR |

Note: EDI=electronic data interchange; ANSI=American National Standards Institute; RFQ=request for quotations; IFB=invitation for bids; FAR=Federal Acquisition Regulation; CAO=contract administration office; MILSCAP=Military Standard Contract Administration Procedures; MODELS=Modernization of Defense Logistics Standard Systems; DCAM=Defense Contract Audit Manual; MIRR=Material Inspection and Receiving Report; DFARS=Defense FAR Supplement; EFT=electronic funds transfer; SPN=Shipping Performance Notice; CPN=Contract Payment Notice; GBL=Government bill of lading; DTMR=Defense Transportation Management Regulations; PPTMR=Personal Property Transportation Management Regulations; CFR=Code of Federal Regulations; MTMC=Military Traffic Management Command.

^a See Appendix B for specific recommendations.

^b The clause at General Services Administration Acquisition Regulation 552.216-73, Placement of Orders, authorizes electronic delivery orders.

^c See General Accounting Office, *Policy and Procedures Manual for Guidance of Federal Agencies, Title 7 - Fiscal Guidance*, 12 February 1990.

^d See LMI Report AF005R1, *Paperless Material Inspection and Receiving Report - A Strategy to Streamline Acquisition and Reduce Paperwork*, Stephen Luster, March 1991.

APPENDIX B
RECOMMENDED ACQUISITION REGULATORY CHANGES
TO RECOGNIZE ELECTRONIC COMMERCE

This appendix lists the changes that we believe need to be made in the Federal Acquisition Regulation (FAR) and the Defense FAR Supplement (DFARS) to facilitate the implementation of Electronic Commerce in Government acquisition.

RECOMMENDED CHANGES TO THE FAR

1. **Revise FAR Part 2, Definitions of Words and Terms, to include the following definitions for “Electronic Commerce,” “electronic data interchange (EDI),” and “signatures”:**

“Electronic Commerce” is the digital exchange of business data between trading partners.

“Electronic data interchange” means the electronic transmission of contracting information from one computer to another computer in standard data formats.

“Signature” means an individual’s unique code or symbol that is legally binding when affixed to a document with the individual’s knowledge and consent.

2. **Revise Part 4, Administrative Matters, to recognize electronic techniques in the areas of contract signature, distribution, and files.**

- A. **Revise Subpart 4.1, Contract Execution, to authorize electronic signatures, as follows:**

4.101 Contracting officer’s signature.

- (a) **Only contracting officers shall sign contracts on behalf of the United States. Except as provided in 4.104 below, the contracting officer’s name shall be typed, stamped, or printed on the contract. . . .**

.....

4.102 Contractor's signature.

- (a) *Individuals.* A contract with an individual shall be signed by that individual. A contract with an individual doing business as a firm shall be signed by that individual, and, except as provided in 4.104 below, the signature shall be followed by. . . .
-

4.104 Electronic signatures.

Contract documents generated by automated systems may use electronic signatures to represent the contracting officer's and contractor's authorization of the contract action. No electronic signature is required for small purchases or for orders under indefinite-delivery contracts, basic ordering agreements, Federal Supply Schedule contracts, or provisioning procedures in weapon system contracts when the parties have agreed, in a trading partner agreement, to accept electronic orders, quotations, or invoices without electronic signatures. When electronic signatures are used, the following conditions shall be met:

- (1) Use of personal identification codes to control access to an authorized individual's electronic-signature-generation software.
- (2) Transmission and storage of a discrete electronic code or symbol to represent the authorized individual's signature.
- (3) Use of a discrete authentication intended to bind, as a means of verifying the authority of the individual originating the document and to validate its content.

- B. Revise Subpart 4.2, Contract Distribution, to authorize electronic storage of contract documents and files, by establishing the following new section:**

4.204 Electronic data interchange (EDI) distribution.

EDI contracting systems may be used to distribute contractual documents under this subpart if they –

- (a) Transmit all the information contained in the document to the receiving system; and**
 - (b) Provide an electronic signature in accordance with 4.101(c).**
- C. Revise Subpart 4.7, Contractor Records Retention, to recognize electronic recordkeeping techniques, by establishing the following new section:**

4.707 Electronic recordkeeping.

4.707-1 General.

- (a) Contractors may use magnetic and optical disk media to store electronic records, subject to the limitations in this subpart.**
- (b) The use of electronic data interchange techniques in contracting produces paperless transactions and files that require retention by electronic means.**

4.707-2 Audit trails.

- (a) Contractors shall establish and maintain an electronic audit trail of the creation, modification, deletion, and alteration of any electronic record, so as to be able to reconstruct transactions and decisions.**
- (b) The precise date and time of any record establishment, change, or deletion shall be recorded.**

4.707-3 Filing and retrieval.

The contractor shall –

- (a) Establish and maintain an effective indexing system to permit timely and convenient access to electronic records by the Government;
 - (b) Provide strict access controls to prevent unauthorized access to electronic records and applications software; and
 - (c) Maintain duplicate magnetic or optical disk copies, stored at a site geographically removed from the primary electronic records.
- D. Revise Subpart 4.8, Contract Files, to permit electronic storage of contractual documents and files, by establishing the following new section:

4.806 Electronic creation and storage of contract files.

Contracting activities with automated contracting systems may create and store electronic contractual documents and files when –

- (a) Access to document creation software and applications is strictly controlled;
- (b) Audit trails of every transaction and other significant events are maintained;
- (c) Electronic documents and files are authorized and executed only by persons acting within their authority; and
- (d) Dates and times of all record establishments and modifications are precisely defined and recorded.

3. Revise Part 5, Publicizing Contract Actions, Subpart 5.1, Dissemination of Information, as follows:

5.101 Methods of disseminating information.

.....

(a) As required by the Small Business Act (15 U.S.C. 637(e)) and the Office of Federal Procurement Policy Act (41 U.S.C. 416), contracting officers shall disseminate information on proposed contract actions as follows:

.....

(2) For proposed contract actions expected to exceed \$10,000 (\$5,000 for Defense activities), but not expected to exceed \$25,000, by displaying in a public place at the contracting office issuing the solicitation, an unclassified notice of the solicitation or a copy of the solicitation satisfying the requirements of 5.207(c) and (f). (Solicitation notices and solicitations displayed on electronic bulletin boards or in electronic data interchange systems meet this public display requirement if all interested parties are granted use of a computer terminal at the contracting office to access them.) Such information shall be posted not later than the date the solicitation is issued and remain posted for at least 10 days regardless of the date of award. Such information shall remain posted until after offers have been opened.

.....

(b) In addition, one or more of the following methods may be used:

.....

(5) Posting notices of contracting opportunities and future requirements on electronic bulletin boards maintained by small business development centers, local chambers of commerce, or local economic opportunity agencies.

5.102 Availability of solicitations.

.....

(c) In addition to paragraph (a) above, the contracting officer may provide electronic copies of solicitations through electronic bulletin boards, electronic mail, and electronic data interchange.

4. Modify Part 8, Required Sources of Supplies and Services, to recognize EDI as a valid means of placing orders under Federal Supply Schedule contracts, by revising Subpart 8.4, Ordering From Federal Supply Schedules, as follows:

8.405-2 Order placement.

Ordering offices may use Optional Form 347, an agency-prescribed form, or electronic data interchange (EDI) transactions to order items from schedules and shall place orders directly with the contractor within the limitations specified in each schedule. EDI transactions shall be in accordance with 16.704.

-
5. Revise Part 13, Small Purchase and Other Simplified Purchase Procedures, to recognize EDI as a valid means of placing individual purchase orders, orders under blanket purchase agreements, and delivery orders under indefinite-delivery contracts.

- A. Amend Subpart 13.1, General, as follows:

13.106 (c) *Data to support small purchases over 10 percent of the small purchase limitation.*

-
- (5) . . . Electronic data interchange (EDI) transactions and supporting data shall be recorded in an electronic file. (See Subpart 4.8, Contract Files.)

13.107 Solicitation and evaluation of quotations.

.....

(4) If Standard Form 18 is not used for written solicitations, contracting officers may request quotations using either an agency-designed form, agency-approved automated format, teletype, electronic bulletin board, or EDI request for quotations (RFQ) transaction.

.....

(7) When EDI is used for transmitting an RFQ, the provisions and clauses applicable to the solicitation shall be incorporated by reference in the EDI RFQ transaction pursuant to the EDI trading partner agreement established in accordance with 16.704.

13.108 Legal effect of quotations.

.....

(b) When appropriate, the contracting officer may request the supplier to indicate acceptance of an order by notification to the Government, preferably in writing (including an EDI purchase order acknowledgment transaction)....

(c) If the Government issues an order resulting from a quotation, the Government may (by notifying the supplier in writing – including an EDI purchase order change transaction – at any time before acceptance occurs) withdraw, amend, or cancel its offer. (See 13.504 for procedures on termination or cancellation of purchase orders.)

B. Add a new section 13.110, as follows:

13.110 Agency use of electronic data interchange (EDI) techniques.

Agencies are encouraged to apply EDI ordering, acceptance, receiving, and invoicing techniques to small purchases. EDI offers rapid order placement, minimal paper documentation, and an automated transaction

audit trail while supporting electronic links between purchasing, accounting, supply, receiving, and payment activities. Any exchange of EDI transactions between a Government contracting activity and a contractor shall be established through an agreement in accordance with 16.704.

C. Revise Subpart 13.2, Blanket Purchase Agreements, as follows:

13.203-1 General.

.....

(j) BPA's shall contain the following terms and conditions:

.....

(8) *Electronic Data Interchange Agreement.* If the contracting parties desire to exchange orders, delivery documents, or invoices electronically, an EDI trading partner agreement (see 16.704) shall be incorporated in the BPA.

13.204 Purchases under Blanket Purchase Agreements.

.....

(e) Documentation of purchases under BPA's shall be limited to essential information and forms (including electronic data interchange transaction formats), as follows:

.....

(3) If a purchase document is issued, informal correspondence, an authorized purchase form, a form developed locally for the purpose, or an agreed-upon electronic data interchange (EDI) transaction may be used.

.....

D. Revise Subpart 13.5, Purchase Orders, as follows:

13.506 Purchase orders via written telecommunications.

- (a) A written telecommunicated purchase order is an order for supplies or services that is electronically transmitted to a supplier and is not signed by the contracting officer. Written telecommunicated purchase orders include orders transmitted via electronic data interchange (EDI) techniques in accordance with 16.704.
-

6. Revise Part 14, Sealed Bidding, Subpart 14.2, Solicitation of Bids, Subpart 14.3, Submission of Bids, and Subpart 14.4, Opening of Bids and Award of Contract, as follows:

A. Add the following new subsection:

14.202-8 Electronic data interchange bids.

Contracting officers may authorize electronic data interchange (EDI) bids in accordance with this section. EDI transactions shall be in accordance with 16.704.

B. Modify 14.203-1 as follows:

14.203-1 Mailing or delivery to prospective bidders.

Invitations for bids or presolicitation notices shall be mailed or delivered to prospective bidders as specified in 14.205, and shall be provided to others in accordance with 5.102. Delivery of solicitations through EDI transactions is authorized and shall be in accordance with 16.704. When a contracting office is located in the United States, any solicitation sent to a prospective bidder located at a foreign address shall be sent by international air mail if security classification permits.

C. Modify the first sentence of 14.208 as follows:

14.208 Amendment of invitation for bids.

(a) If it becomes necessary to make changes in quantity, specifications, delivery schedules, opening dates, etc., or to correct a defective or ambiguous invitation, such changes shall be accomplished by amendment of the invitation for bids using Standard Form 30, Amendment of Solicitation/Modification of Contract, or by EDI transaction. . . .

D. Add two sentences to 14.209 as follows:

14.209 Cancellation of invitations before opening.

.....

(b) When an invitation is canceled, bids that have been received shall be returned unopened to the bidders and a notice of cancellation shall be sent to all prospective bidders to whom invitations were issued. Upon cancellation of an EDI invitation for bids, an electronic transaction providing notification of the cancellation shall be transmitted to all prospective bidders to whom EDI invitations were issued. In this case, EDI bids received shall be purged from the electronic bidding system without being displayed, stored, or viewed.

.....

E. Add a paragraph to 14.213 as follows:

14.213 Annual submission of representations and certifications.

.....

(e) Annual representations and certifications may be used with EDI procurement methods to minimize the amount of data transmitted between the Government and offerors. Hard-copy representations and certifications may be requested and obtained in conjunction with the periodic establishment or renewal of the EDI trading partner agreement (see 16.704). EDI bid transactions submitted should cite

the current annual representations and certifications in the provision at 52.214-30, Annual Representations and Certifications – Sealed Bidding, and affirm their currency or state exceptions while using an authenticated electronic signature.

F. Modify the first sentence of 14.303 as follows:

14.303 Modification or withdrawal of bids.

(a) Bids may be modified or withdrawn by written, telegraphic, or electronic data interchange (EDI) notice received in the office designated in the invitation for bids not later than the exact time set for opening of bids. . . .

G. Add a new subparagraph and a new paragraph to 14.304-1 as follows:

14.304-1 General.

.....

(a) A late bid, modification of bid, or withdrawal of bid shall not be considered unless received before contract award, and either –

.....

(4) It was sent by EDI transaction and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation.

.....

(f) The only acceptable evidence to establish the time of receipt of an EDI transaction in the Government electronic bid box is the electronic time/date stamp programmed into the electronic bidding system's software.

- H. Add a sentence to 14.304-2 as follows:

14.304-2 Notification to late bidders.

When a bid, modification of bid, or withdrawal of bid is received late and it is clear from available information that it cannot be considered, the contracting officer shall promptly notify the bidder accordingly. For EDI bids, such notification shall be made through an EDI transaction. . . .

- I. Add a paragraph to 14.304-3 as follows:

14.304-3 Disposition of late submissions.

(a) Late bids, modification of bids, or withdrawal of bids that are not considered for award shall be held unopened, unless opened for identification, until after award and then retained with other unsuccessful bids. However, any bid bond or guarantee shall be returned.

(b) Late EDI submissions shall not be displayed, stored, or viewed. After award, the late submission shall be purged from the electronic bidding system and not retained.

- J. Add a sentence at the end of 14.304-4, after enumerated item (e), as follows:

14.304-4 Records.

.....

With respect to any EDI late bid, modification of bid, or withdrawal of bid, the electronic bid box transaction log indicating the date and hour of receipt shall be retained.

- K. Modify 14.401 by adding a new paragraph as follows:

14.401 Receipt and safeguarding of bids.

(a) All bids (including modifications) received before the time set for the opening of bids shall be kept secure. Except as provided in

paragraphs (b) and (c) below, the bids shall remain unopened in a locked bid box or safe. . . .

.....

(c) When electronic data interchange (EDI) bids are authorized, they shall be received from the external telecommunications network and stored in an electronic bid box secure from all external and internal access. A time-release software program shall open the electronic bid box at the exact time and date set for bid opening stated in the solicitation. Automated buying programs may not access or analyze bids until electronic opening of the electronic bid box.

L. Modify 14.402 as follows:

14.402 Opening of bids.

14.402-1 Unclassified bids.

(a) Except as provided in paragraph (d) below, the bid opening officer shall decide when the time set for opening bids has arrived and shall inform those present of that decision. . . .

.....

(d) EDI bids shall be automatically opened upon time release of the electronic bid box. They may be individually viewed or displayed at computer terminals or in computerized buying systems, analyzed, and arrayed in a bid abstract immediately upon bid opening.

14.402-2 Classified bids.

.....

[add as the last sentence] Classified bids may use EDI techniques only when telecommunications and automated data processing equipment security adequate for the level of security classification is maintained.

14.402-3 Postponement of openings.

- (a) A bid opening may be postponed even after the time scheduled for bid opening (but otherwise in accordance with 14.208) when –
 - (1) The contracting officer has reason to believe that the bids of an important segment of bidders have been delayed in the mails (or, in the case of EDI bids, the telecommunications system) for causes beyond their control and without their fault or negligence (e.g., flood, fire, accident, weather conditions, or strikes); or....

.....

M. Modify 14.403 by adding a new paragraph as follows:

14.403 Recording of bids.

- (a) Except as provided in paragraph (e) below, Standard Form 1409....

.....

- (e) Automated buying programs, coupled with EDI bidding systems, may automatically analyze and array bids in a bid abstract that can be displayed at a computer video display terminal or printed as a paper document. Automated bid abstracts shall maintain the same data elements and functionality as the forms described in paragraph (a) above. Bid abstract certification may be accomplished through electronic signature means.

N. Modify 14.404-1(d) as follows:

14.404 Rejection of bids.

14.404-1 Cancellation of invitations after opening.

.....

- (d) Should administrative difficulties be encountered after bid opening that may delay award beyond bidders' acceptance periods, the several lowest bidders whose bids have not expired (irrespective of

the acceptance period specified in the bid) should be requested, before expiration of their bids, to extend in writing – or, in the case of EDI bids, by means of an EDI transaction – the bid acceptance period (with consent of the sureties, if any) in order to avoid the need for resoliciting.

.....
O. **Modify 14.406-2 and add a new paragraph as follows:**

14.406-2 Apparent clerical mistakes.

.....
(b) **Correction of paper bids shall be effected by attaching the verification to the original bid and a copy of the verification to the duplicate bid. Correction shall not be made on the face of the bid, but in the award document.**

(c) **Correction of EDI bids shall be effected by including in the solicitation file an electronic copy of the original bid, an electronic copy of the verification request, and an electronic copy of the bid verification. For audit trail purposes, time and date of transmission or receipt, as appropriate, shall be recorded in the electronic bid box transaction log for each electronic copy.**

P. **Add a new paragraph to 14.406-3 as follows:**

14.406-3 Other mistakes disclosed before award.

.....
(j) **Requests to correct bid mistakes, verify bids, or withdraw bids may, at the contracting officer's discretion, be made through EDI transactions or electronic messaging techniques. Electronic records of mistake determinations may be maintained in electronic files.**

Q. Add a new sentence to 14.406-4(f) as follows:

14.406-4 Mistakes after award.

.....

(f) Each agency shall include in the contract file a record of (1) all determinations made in accordance with this 14.406-4 subsection, (2) the facts involved, and (3) the action taken in each case. Electronic records of mistake determinations may be maintained in electronic files.

R. Modify 14.407-1(c)(1) and (d)(1) as follows:

14.407 Award.

14.407-1 General.

.....

(c)(1) Award shall be made by mailing, sending by EDI transaction, or otherwise furnishing a properly executed award document to the successful bidder. . . .

.....

(d)(1) Award is generally made by using the Award portion of Standard Form (SF) 33, Solicitation, Offer, and Award; by using SF 1447, Solicitation/Contract (see 53.214); or by transmitting the appropriate EDI contract award transaction. If an offer on an SF 33 leads to further changes, the resulting contract shall be prepared as a bilateral document on SF 26, Award/Contract. . . .

.....

7. Revise Part 16, Types of Contracts, to recognize electronic ordering under indefinite-delivery contracts and to establish EDI agreements:

A. Revise Subpart 16.5, Indefinite-Delivery Contracts, as follows:

16.501 General.

.....

(d) Agencies and their contractors are encouraged to apply electronic data interchange (EDI) techniques when ordering, shipping, accepting, receiving, or invoicing under indefinite-delivery contracts. EDI offers rapid order placement, minimum paper documentation, and an automated transaction audit trail while supporting electronic links between purchasing, accounting, supply, receiving, and payment activities. Any exchange of EDI transactions between a Government contracting activity and a contractor shall be in accordance with 16.704. . . .

16.506 Ordering.

.....

(c) Orders may be placed by written telecommunications or EDI transactions, if provided for in the contract Schedule. Any use of EDI shall be in accordance with 16.704.

B. Establish in Subpart 16.7, Agreements, a new section as follows:

16.704 Electronic data interchange (EDI) agreements.

(a) *Description.* An EDI trading partner agreement is a written instrument of understanding negotiated between a contracting activity or contracting office and a contractor. Such an agreement, which is not a contract, shall specify –

(1) Acceptability of electronic documents in lieu of paper documents;

- (2) Acceptability of electronic signatures in lieu of manually written signatures;
 - (3) The EDI implementation guide that applies to the transactions communicated;
 - (4) Each party's telecommunications networks mailbox addresses and routings;
 - (5) Telecommunications timing and cost responsibilities;
 - (6) Responsibilities as to transaction and system errors;
 - (7) Responsibilities and contingencies as to system failures;
 - (8) The types of transactions (e.g., bids, quotations, awards, orders, invoices) that may be transmitted; and
 - (9) Each party's electronic recordkeeping responsibilities.
- (b) *Application.* An EDI trading partner agreement is used to define the conditions and responsibilities of contracting parties exchanging electronic transactions in lieu of paper documents. EDI concepts are most beneficial when large volumes of repetitive transactions (e.g., supply or service line items, invoices, or shipping notices) must be passed between Government and contractor automated systems.
- (c) *Limitations.* An EDI trading partner agreement shall not –
- (1) Cite appropriations or obligate funds;
 - (2) State or imply any agreement by the Government to place future contracts or orders with the contractor except when minimum order requirements are stated in indefinite-delivery contracts; or
 - (3) Be used in any manner to restrict competition.
- (d) *Contractual instruments incorporating EDI trading partner agreements.* (1) The EDI trading partner agreement shall be

incorporated in the following types of contractual instruments when electronic placement of orders is authorized:

- (i) Indefinite-delivery contracts.
- (ii) Federal Supply Schedule contracts.
- (iii) Blanket purchase agreements.
- (iv) Basic ordering agreements.

(2) An EDI trading partner agreement may be established as a separate agreement that permits electronic exchanges of EDI transactions.

(e) *Contract clause.* The contracting officer shall insert the clause at 52.216-__, EDI Trading Partner Agreement, in solicitations and contracts when use of electronic data interchange is contemplated.

8. Revise Part 32, Contract Financing, Subpart 32.9, Prompt Payment, by redefining *proper invoice* and *receiving report* in section 32.902, Definitions, as follows:

Proper invoice means a bill or written request for payment, including an electronic data interchange (EDI) invoice transaction, that meets the minimum standards specified in the clauses at 52.232-25, Prompt Payment; 52.232-26, Prompt Payment for Fixed-Price Architect-Engineer Contracts; and 52.232-27, Prompt Payment for Construction Contracts (also see 32.905(e)); and other terms and conditions contained in the contract for invoice submission.

Receiving report means written evidence, including an electronic data interchange (EDI) receiving advice or shipping notice, meeting the requirements of 32.905(f), indicating Government acceptance of supplies delivered or services performed by the contractor (see Subpart 46.6).

9. **Modify Part 44, Subcontracting Policies and Procedures, to recognize electronic records and EDI as acceptable procedures in subcontracting, by revising Subpart 44.2, Consent to Subcontracts, as follows:**

A. Add to subsection 44.202-2, Considerations, the following:

(a)(14) **If the subcontract is in the form of an electronic record or is transmitted through electronic data interchange (EDI) means, the contracting officer shall determine whether the use of electronic signatures, records, and transmissions complies with Part 4.**

B. Add the following new paragraph to section 44.203, Consent limitations:

(d) **Contracting officers should not refuse consent to a subcontract merely because it is transmitted through electronic data interchange (EDI) means and stored in the form of an electronic record.**

10. **Revise Part 52, Solicitation Provisions and Contract Clauses, to recognize EDI solicitations, bids, and orders and to establish an EDI trading partner agreement.**

A. Revise paragraph (b) of the provision at 52.214-3, Amendments to Invitations for Bids, as follows:

.....

(b) **Bidders shall acknowledge receipt of any amendments to this solicitation (1) by signing and returning the amendment; (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid; (3) by letter or telegram; (4) by facsimile, if facsimile bids are authorized in the solicitation; or (5) by electronic data interchange (EDI) transaction, if EDI transactions are authorized in the solicitation. The Government must receive the acknowledgment by the time and at the place (including an electronic mailbox address) specified for receipt of bids.**

(End of provision)

B. Add a paragraph to the provision at 52.214-5, **Submission of Bids**, as follows:

.....

(d) **Electronic data interchange (EDI) bids, modifications, or withdrawals will not be considered unless authorized by the solicitation.**

(End of provision)

C. Revise the provision at 52.214-7, **Late Submissions, Modifications, and Withdrawals of Bids**, as follows:

.....

(a)(2) **Was sent by mail or, if authorized by the solicitation, by telegram, facsimile, or electronic data interchange (EDI), and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation (or in the case of EDI, the Government's electronic mailbox that might reside on a third-party value added network (VAN) telecommunications service); or....**

.....

(g) **Bids may be withdrawn by written notice or telegram (including mailgram) received at any time before the exact time set for receipt of bids. If the solicitation authorizes facsimile bids, bids may be withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision entitled "Facsimile Bids." If the solicitation authorizes EDI bids, bids may be withdrawn via EDI transaction received at any time before the exact time set for receipt of bids. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person**

requesting withdrawal is established and the person signs receipt for the bid.

(End of provision)

D. Revise the provision at 52.214-9, Failure to Submit Bid, as follows:

Recipients of this solicitation not responding with a bid should not return this solicitation, unless it specifies otherwise. Instead, they should advise the issuing office by letter, postcard, or electronic data interchange (EDI) transaction (if the solicitation was issued via EDI), whether they want to receive future solicitations for similar requirements. . . .

E. Revise paragraph (b) of the provision at 52.214-12, Preparation of Bids, as follows:

.....

(b) Each bidder shall furnish the information required by the solicitation.

(1) In the case of paper bid documents, the bidder shall sign the bid and print or type its name on the Schedule and each continuation sheet on which it makes an entry. Erasures or other changes must be initialed by the person signing the bid. Bids signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(2) In the case of electronic data interchange (EDI) bid transactions, the bidder shall electronically sign the bid and provide electronic authentication of the signature through public key encryption (PKE) techniques.

.....

F. Add the following new provision to 52.214:

52.214-___ Electronic Data Interchange (EDI) Bids.

ELECTRONIC DATA INTERCHANGE (EDI) BIDS (MMM 199X)

- (a) "EDI bid," as used in this solicitation, means a bid, a modification of a bid, or a withdrawal of a bid that is transmitted to and received by the Government using electronic data interchange (EDI) transactions via electronic telecommunications.
- (b) Bidders may submit EDI bids as responses to this solicitation. These responses must arrive at the place, and by the time, specified in the solicitation.
- (c) EDI bids shall include a transaction that affirms acceptance of annual representations and certifications and provides information for individual representations and certifications required by this solicitation.
- (d) Any individual EDI representations and certifications transaction and the affirmation of the annual representation and certification shall be electronically signed and authenticated.
- (e) The bid document is a predefined electronic format in accordance with FAR 16.704, Electronic data interchange (EDI) agreements.

(End of provision)

- G. Replace the clause at 52.216-18, Ordering, with the following revised clause:

52.216-18 Ordering.

As prescribed in 16.505(a), insert the following clause in solicitations and contracts when a definite-quantity contract, a requirements contract, or an indefinite-quantity contract is contemplated:

ORDERING (MMM 199X)

- (a) Any supplies or services to be furnished under this contract shall be ordered by issuance of delivery orders by the individuals or activities designated in the Schedule. Such orders may be issued from _____ through _____ [*insert dates*].
- (b) All delivery orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order and this contract, the contract shall control.
- (c) If mailed, a delivery order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by written telecommunications, or by electronic data interchange only if authorized in the Schedule. If an EDI trading partner agreement is incorporated in this contract, EDI transactions shall be in accordance with that agreement.

(End of clause)

- H. Establish a new clause at 52.216-____ as follows:

52.216-____ EDI Trading Partner Agreement.

As prescribed in 16.704(e), insert the following clause in solicitations and contracts when use of electronic data interchange is contemplated:

EDI TRADING PARTNER AGREEMENT (MMM 199X)

If the Contractor executes the EDI trading partner agreement furnished in connection with this contract, the Contractor agrees to be bound by that agreement's terms and conditions governing any transactions with the

Government through electronic data interchange (EDI), in addition to the terms and conditions of this contract.

(End of clause)

I. Revise subparagraphs (a)(4) and (a)(5) of the clause at 52.232-25, Prompt Payment, as follows:

.....
(a) *Invoice Payments*
.....

(4) An invoice is the Contractor's bill or written request - which may be an electronic data interchange (EDI) invoice transaction - for payment under the contract for supplies delivered or services performed. . . .

(5) An interest penalty shall be paid automatically by the Government, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (i) through (iii) below are met, if applicable. No interest penalty shall be paid on contracts awarded to foreign vendors outside of the United States for work performed outside of the United States.

(i) A proper invoice - which may be an electronic data interchange (EDI) transaction - was received by the designated billing office.

(ii) A receiving report or other Government documentation - which may be an electronic data interchange (EDI) transaction - authorizing payment was processed and there was no disagreement over quantity, quality, or contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract

settlement actions between the Government and the Contractor.

-
11. Add the following new section to revise FAR Part 53, Forms, Subpart 53.1, General:

53.111 Electronic data interchange (EDI) transactions.

Agencies may use electronic data interchange (EDI) equivalents of the paper forms described herein as long as the EDI transaction sets used comply with FIPS 161, Electronic Data Interchange.

RECOMMENDED CHANGES TO THE DFARS

1. Establish the following new DFARS section 216.704:

216.704 Electronic data interchange (EDI) agreements.

DoD use of EDI in Government-to-contractor business communications shall comply with *DoD Implementation Guidelines for Electronic Data Interchange (EDI)*. See 217.7604 regarding use of the clause at FAR 52.216-____, EDI Trading Partner Agreement, in weapon system contracts that authorize provisioned items orders.

2. Revise Subpart 217.76, Contracts with Provisioning Requirements, as follows to accommodate use of EDI in weapon system contracts that authorize provisioned items orders.

A. Modify 217.7602-2(a) as follows:

- (a) Use Standard Form 30, Amendment of Solicitation/Modification of Contract – or an electronic data interchange (EDI) transaction (see 217.7604) – to –
-

B. Establish the following new section 217.7604:

217.7604 Electronic data interchange (EDI).

Provisioning and contracting activities are encouraged to use EDI transactions to issue provisioned items orders and definitizing supplemental agreements. EDI offers rapid order placement, minimal paper documentation, and an automated transaction audit trail while supporting electronic links with supply, provisioning, accounting, receiving, and payment activities. Any EDI transaction between a Government contracting activity and a contractor shall be in accordance with the EDI trading partner agreement provisions of FAR 16.704. The contracting officer shall insert the clause at FAR 52.216-__, EDI Trading Partner Agreement, in solicitations and contracts when use of EDI transactions is contemplated under a weapon system contract that authorizes provisioned items orders.

3. Revise paragraph 246.472(d) as follows:

.....

(d) Stamping material does not mean that it has been accepted by the Government. Evidence of acceptance is ordinarily a signed acceptance certificate on the DD Form 250, Material Inspection and Receiving Report. Acceptance may also be accomplished through electronic means whereby an electronic inspection and receiving report is updated with acceptance data and an electronic data interchange (EDI) transaction is generated.

.....

4. Revise Part 253, Forms, to add the following new subsection:

253.204-72 Electronic data interchange (EDI) formats and guidelines.

When EDI transactions are used in lieu of the forms prescribed by this part and FAR Part 53, transaction set formats shall comply with FIPS 161, "Electronic Data Interchange." *DoD Implementation Guidelines for Electronic Data Interchange (EDI)* and its supplements provide guidance on implementing of American National Standards Institute (ANSI) Accredited Standards

**Committee (ASC) X12 standards within automated information systems.
Detailed data conventions must be developed for individual forms.**

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