

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

*A NEW APPROACH TO PROPERTY DISPOSAL WITHIN
THE FEDERAL GOVERNMENT*

by

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December 2001

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Report Documentation Page		
Report Date 19Dec2001	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle A New Approach to Property Disposal within the Federal Government	Contract Number	
	Grant Number	
	Program Element Number	
Author(s) Harrigan, Sean	Project Number	
	Task Number	
	Work Unit Number	
Performing Organization Name(s) and Address(es) Naval Postgraduate School Monterey, California	Performing Organization Report Number	
Sponsoring/Monitoring Agency Name(s) and Address(es)	Sponsor/Monitor's Acronym(s)	
	Sponsor/Monitor's Report Number(s)	
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes		
Abstract		
Subject Terms		
Report Classification unclassified	Classification of this page unclassified	
Classification of Abstract unclassified	Limitation of Abstract UU	
Number of Pages 79		

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REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE December 2001		3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE <i>A New Approach to Property Disposal within the Federal Government</i>			5. FUNDING NUMBERS	
6. AUTHOR (S) Sean P. Harrigan			8. PERFORMING ORGANIZATION REPORT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the U.S. Department of Defense or the U.S. Government.	
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release, distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) This research will evaluate the issues associated with a new property management concept for the use of DoD/Federal agencies to exchange serviceable, non-excess, used equipment for new equipment through a commercial exchange program that would utilize internet auctioning to assess fair market value for such property and provide credit at internet stores for future agency needs. This research is correlates directly with an ongoing research contract that is being managed by Professor Ron Tudor at the Naval Postgraduate School. The concept will enable agencies and Program Offices to recycle past appropriated funds back into their programs where Congress has already determined the critical need for such resources, and lessen the burden to Defense Reutilization and Marketing Office (DRMO), where such equipment generally returns pennies on the dollar as scrap to the Treasury Department.				
14. SUBJECT TERMS procurement, property disposal, e-commerce			15. NUMBER OF PAGES 81	
17. SECURITY CLASSIFICATION OF REPORT Unclassified			16. PRICE CODE	
18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified		19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified		20. LIMITATION OF ABSTRACT UL

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**A NEW APPROACH TO PROPERTY DISPOSAL WITHIN THE FEDERAL
GOVERNMENT**

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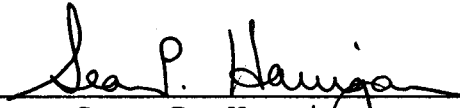
Submitted in partial fulfillment of the
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MASTER OF SCIENCE IN MANAGEMENT

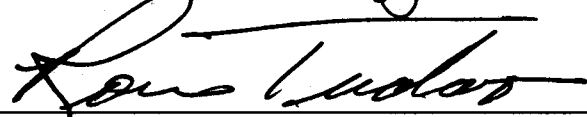
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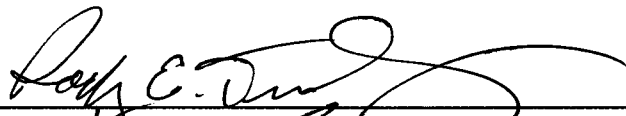
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December 2001**

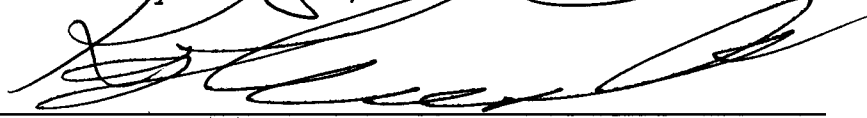
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ABSTRACT

This research evaluates the issues associated with a new property management concept for the use of DoD/Federal agencies to exchange serviceable, non-excess, used equipment for new equipment through a commercial exchange program that utilizes internet auctioning to assess fair market value for such property and provide credit at internet stores for future agency needs. The concept will enable agencies and Program Offices to recycle past appropriated funds back into their programs where Congress has already determined the critical need for such resources, and lessen the burden to Defense Reutilization and Marketing Office (DRMO), where such equipment generally returns pennies on the dollar at scrap value, to the Treasury Department.

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I. INTRODUCTION

A. PREFACE

The Department of Defense (DoD) and the Federal Government, as a whole, are in a state of continual downsizing and need innovative business practices to offset the loss of skilled personnel. A recent article in Government Executive magazine claims that the DoD will slash 13,000 acquisition jobs under the Defense Authorization bill approved by the House Armed Services Committee in May 2001. Considering this planned loss of personnel, the government needs to divest itself of activities that are currently provided by commercial enterprises, and leverage existing commercial technologies rather than compete against them. The advent of the Internet and its tremendous growth in the commercial sector has created commercial tools that the government should use for procurement and disposal of government property. This research will evaluate the issues associated with a new property management concept for the use by DoD/Federal agencies to exchange serviceable used equipment for new equipment through a commercial Internet exchange program.

B. RESEARCH OBJECTIVE

This research evaluates the issues associated with a new property management concept for the use of DoD/Federal agencies to exchange serviceable, non-excess, used equipment for new equipment through a commercial exchange program that would utilize internet auctioning to assess fair market value for such property and provide credit at

internet stores for future agency needs. This research correlates directly with an ongoing research contract that is being managed by Professor Ron Tudor at the Naval Postgraduate School. The concept will enable agencies and Program Offices to recycle past appropriated funds back into their programs where congress has already determined the critical need for such resources, and lessen the burden to Defense Reutilization and Marketing Office (DRMO), where such equipment generally returns pennies on the dollar at scrap value, to the Treasury Department.

C. RESEARCH QUESTIONS

1. Primary Research Question

Can government property be exchanged/recycled in a more efficient manner using commercial, Internet practices?

2. Secondary Research Questions

- a. What systems are currently available to Federal Managers for property disposal?
- b. What are the precedents for the property exchange program?
- c. What Laws and Regulations govern an exchange of property in the Federal Government?
- d. To what extent does private industry have the capacity to provide property exchange services?
- e. What type(s) of DOD/Federal activities would most benefit from a property exchange program?

D. SCOPE AND ORGANIZATION

The scope includes: (1) a review of systems currently available to Federal Managers for property disposal; (2) an examination of the precedents for the property exchange program; (3) an examination of the Laws and Regulations which govern an exchange of property in the Federal Government; (4) analysis of what type(s) of DOD/Federal activities would most benefit from a property exchange program; and (5) a review of private industry's capacity to provide property exchange services

E. METHODOLOGY

The methodology used in this thesis research consists of the following steps:

Conduct a comprehensive literature search of books, magazine articles, CD-ROM systems, government reports, Internet based materials and other library information resources.

Conduct interviews either in person, or by telephone, with procurement specialists, property management specialists and senior contracting officials at DOD commands.

Conduct interviews either in person, or by telephone, with commercial Business Solutions firms.

F. BENEFITS OF RESEARCH

This thesis is intended to primarily benefit the DOD and other Federal Agencies and Program Offices by providing an electronic, Internet based vehicle to recycle

appropriated funds into programs that Congress has already deemed vital to national interests. This critical review will provide DOD decision makers with an alternative to current property disposal and procurement systems.

II. BACKGROUND

A. DEFINITIONS

1. Property Disposal

Property no longer needed by one agency may fill a need in another, thereby avoiding new procurements. Government regulations require that Federal agencies use excess personal property – which is no longer required by the holding agency – as their first source of supply whenever practicable. Property with no further Federal use is offered at no cost to State and local governments and eligible nonprofit groups. According to the Government Services Administration (GSA) website there are approximately 70,000 tax-supported organizations which receive donations of Federal surplus property, including schools, day care centers, hospitals, homeless shelters, senior citizen organizations and programs, vocational training facilities, fire and police departments, drug treatment and rehabilitation programs. Property whose value cannot be extended by reuse or donation is sold to the public.

2. Procurement

“Procure” is defined in Webster’s Dictionary as, “to obtain: acquire”. Acquisition, as defined by Part 2 of the Federal Acquisition Regulation (FAR) means;

The acquisition by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.

B. ELEMENTS OF PROPERTY DISPOSAL AND PROCUREMENT

1. Property Disposal

Real property: includes land, improvements, structures, and permanent fixtures.

Personal property: includes all other property except for real property and includes such things as government-owned equipment, computers, and motor vehicles.

Excess property: Excess/surplus personal property is any personal property that is no longer required by the holding agency for the discharge of its responsibilities.

Surplus property: means any property which has been declared excess by a particular Federal agency and which, after a survey of the needs of other Federal agencies, is determined by the Administrator to be no longer required by the Federal Government as a whole.

Exchange: The Federal Property Management Regulations Part 101-46 defines exchange as, "To replace personal property by trade or trade-in with the supplier of the replacement property."

Exchange/Sale (non-excess): The Federal Property Management Regulations Part 101-46 defines exchange as, "To exchange or sell non-excess, non-surplus personal property and apply the exchange allowance or proceeds of sale in whole or in part payment for the acquisition of similar property."

Replacement: The Federal Property Management Regulations Part 101-46 defines replacement as, "The process of acquiring property to be used in place of property which is still needed but will no longer adequately perform all the tasks for which it is used."

Similar: The Federal Property Management Regulations Part 101-46 defines similar as, "Where the acquired item and replaced item:

- Are identical; or
- Are designed and constructed for the same purpose; or
- Both constitute parts or containers for identical or similar end items; or
- Both fall within a single Federal Supply Classification (FSC) group of property that is eligible for handling under the exchange/sale authority.

2. Procurement

Commercial Item: FAR Part 2 defines a commercial item as, "any item, other than real property, that is of a

type customarily used for nongovernmental purposes and that has been sold, leased, or licensed to the general public, or has been offered for sale, lease, or license to the general public."

Contract: FAR Part 2 defines a contract as, "a mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them."

Electronic Commerce: FAR Part 2 defines electronic commerce as, "electronic techniques for accomplishing business transactions including electronic mail or messaging, World Wide Web technology, electronic bulletin boards, purchase cards, electronic funds transfer, and electronic data interchange."

Service Contract: FAR Part 37 defines a service contract as, "a contract that engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply."

Supplies: FAR Part 2 defines supplies as, "all property except land or interest in land."

C. PROPERTY DISPOSAL AND PROCUREMENT: CURRENT METHODS

1. Property Disposal Process

The Federal Property and Administrative Services Act of 1949 (Property Act), as amended, placed responsibility for the disposition of government real and personal property

with the General Services Administration (GSA). The act was designed, in part, to increase the efficiency and economy of Federal government operations with regard to the procurement, utilization and disposal of property. The act imposes upon each executive agency the responsibility: (1) to maintain adequate inventory controls and accountability systems for its property; (2) to survey its property continuously to determine which is excess to its needs and promptly report excess property to the Administrator, (3) to care for such excess property, and (4) transfer or dispose of such property in accordance with authority delegated and regulations prescribed by the Administrator. Similarly, the act imposes upon each executive agency the responsibility to reassign property among activities within such agency, to transfer its excess property to other agencies, and to obtain for its use property that is excess to the needs of other agencies. GSA delegated disposal of DOD property to the Secretary of Defense, who in turn delegated it to the Defense Logistics Agency (DLA). The Office of the Deputy Under Secretary of Defense (Logistics) provided overall guidance for disposing of property, and DLA's Defense Logistics Support Command is responsible for disposal policy. The military services are responsible for determining if certain property they hold exceeds their needs. Once they do so, the Defense Reutilization and Marketing Service carries out disposal functions through Defense Reutilization and Marketing Offices (DRMOs). Excess property is generally sent to DRMOs for redistribution within DOD, government contractors or is transferred to other Federal agencies. Federal agencies are encouraged to fill internal requirements for personal property to the

maximum extent possible by obtaining excess property from other Federal agencies in lieu of new procurements. Property for which there are no Federal requirements is determined surplus and becomes available for donation to state and local public agencies and eligible nonprofit, tax-exempt activities. The Property Act requires that surplus property be distributed to eligible recipients by an agency established in each state for that purpose. The property that remains after the distribution process may be sold to the public and any monies received are returned to the Department of Treasury, in accordance with the Miscellaneous Receipts Act.

2. Procurement Process

The generic contracting process starts with a customer inputting data into an automated purchase request system (APRS). This request is automatically/electronically sent to the fund's administrator in the comptroller's office, who approves the request and assigns a line of accounting (LOA) to the request. APRS obligates the necessary funds for the acquisition and automatically updates the Defense Financing Accounting System (DFAS). Once it is determined that the purchase request requires a contracting action, the contracting officer (KO) ensures there is enough information in the requirement to properly compete the acquisition among potential offerors in the open market. If the request requires clarification, the KO provides feedback to the customer on the information that is required to complete the acquisition. The KO must also determine if the acquisition should be set aside for purchase from certain sources such as small, disadvantaged,

minority, or women owned businesses. The KO generally determines the method of procurement for the purchase request and assigns the request to a contract specialist for contract formation. The contract specialist inputs the purchase request into the Standard Procurement System (SPS). SPS is an automated computer system that assists contract specialists in contract preparation. The contract specialist determines the extent of competition for the acquisition and develops a potential source list.

The contract specialist then prepares a synopsis and solicitation for the acquisition. The synopsis and solicitation are sent via SPS to the KO for approval. Once the KO has approved the synopsis/solicitation, the contract specialist publicizes it by mailing, faxing, or e-mailing it to companies on the potential sources list, and by posting it to the Federal Business Opportunities (FBO) web site. Potential offerors receive the solicitation and provide feedback in the form of pre-award inquiries to the contract specialist for clarification. The contract specialist then receives proposals from potential suppliers and builds proposal abstracts in SPS. The contract specialist evaluates all proposals and selects the best value proposal. The contract specialist enters the pertinent information (e.g. clauses, terms and conditions, amounts, etc.) directly into SPS. SPS automatically produces Form 1149 and supporting contracting documents. SPS also automatically updates DFAS with all pertinent contract information. The KO awards the contract in SPS and the contract specialist distributes the contract award by e-mail, fax, or mail to the comptroller, customer, and the contract awardee. Once the contractor receives the

contract award document, he signs the contract and mails it back to the KO, where it is received by the contract specialist and the document is filed in the contract file, thus completing contract award.

If the acquisition is for a supply item, the contractor produces the item and sends it and the payment invoice to location(s) specified in the contract. If the acquisition can be paid for by a government credit card, the contract specialist phones the contractor and provides the credit card number for payment. If the acquisition requires payment using a check, the contract specialist mails the certified payment invoice to DFAS. DFAS then verifies the payment invoice by comparing it with the original contract information it received through SPS. DFAS in turn mails a check to the contractor and posts the payment voucher number to the DFAS website. The contract specialist checks the website to confirm that the voucher number is posted and then closes out the contract.

D. APPLICABLE REGULATORY FACTORS

1. The Federal Property and Administrative Services Act of 1949, 40 United States Code 481(c)

United States Code, Title 40 - Public Buildings, Properties and Works, Chapter 10 - Management and Disposal Of Government Property, Subchapter II, Section 481(c) - Exchange or sale of similar items, states:

In acquiring personal property, any executive agency, under regulations to be prescribed by the Administrator, subject to regulations prescribed by the Administrator for Federal Procurement Policy pursuant to the Office of Federal Procurement Policy Act (41 U.S.C. 401 et seq.), may exchange or sell similar items and

may apply the exchange allowance or proceeds of sale in such cases in whole or in part payment for the property acquired: Provided, that any transaction carried out under the authority of this subsection shall be evidenced in writing. Sales of property pursuant to this subsection shall be governed by section 5 of title 41, except that fixed price sales may be conducted in the same manner and subject to the same conditions as are applicable to the sale of property pursuant to section 484(e)(5) of this title.

2. The Federal Property Management Regulations Part 101-46

The Federal Property Management Regulations Part 101-46 encourages the use of the sale/exchange authority to reduce the agencies' need for additional funding for the acquisition of replacement personal property. If an agency has personal property that needs to be replaced, it can exchange or sell that property and apply the exchange allowance or sales proceeds to the acquisition of similar replacement property. Using the exchange/sale authority also enables agencies to avoid the costs (e.g., administrative and storage) associated with holding the property and processing it through the normal disposal cycle, i.e., reutilization by other Federal agencies, donation to eligible non-Federal public or non-profit organizations, sale to the public, or abandonment or destruction. By contrast, if the holding agency does not use the exchange/sale authority but instead reports the property to be replaced as excess, any sales proceeds are forwarded to the miscellaneous receipts account at the United States Treasury and are not available to the agency disposing of the property.

3. Department of Defense Management Regulation - DoD 4140-R

Chapter 6.2--Exchange or Sale of Nonexcess Personal Property provides DoD personnel instructions for implementing a sales/exchange procurement:

C6.2.1. Policy. In acquiring personal property, the DoD Components may exchange or sell eligible nonexcess items. The exchange allowance or process may be applied in whole or partial payment for the item acquired. This authority shall be used to the maximum extent consistent with the economical and efficient accomplishment of an approved program.

C6.2.2. Procedures

C6.2.2.1. Under 40 U.S.C. 481(c) any equipment, including repair parts, may be exchanged or sold subject to part 101-46 of the Federal Property Management Regulation and these limitations:

C6.2.2.1.1. The application of exchange or sale allowances as whole or partial payment in the acquisition of personal property is authorized only when these conditions apply:

C6.2.2.1.1.1. The item or items to be exchanged or sold are similar to the item or items to be acquired.

C6.2.2.1.1.2. The item or items to be exchanged or sold are not excess and the item or items to be acquired are required for approved programs.

C6.2.2.1.1.3. The item or items to be acquired replace and perform substantially all functions of the item or items being exchanged or sold. A written administrative

determination of economic advantage has been prepared by the acquiring activity. That determination shall show the following:

C6.2.2.1.1.3.1. The anticipated economic advantage to the Government resulting from the use of the exchange or sale authority.

C6.2.2.1.1.3.2. That exchange or sale allowances shall be applied in payment for the items to be acquired.

C6.2.2.1.1.3.3. That if required, the property has been made safe or innocuous, or has been demilitarized.

C6.2.2.1.2. In documenting exchange or sale transactions, detailed cross-reference between old and new items is not required, but records shall be maintained that are adequate to substantiate that the items acquired were similar to the items exchanged or sold and that any exchange or sale allowances applied as whole or part payment for property acquired were, in fact, available for such application.

C6.2.2.1.3. Exchange or sale transactions may not be executed when items are in Federal Supply Classification Groups (FSCGs) 10-12, 14, 15 (except 1560), 42, 44, 51, 54, 68, 71, and 84 except with the approval of GSA. Waiver requests should be sent to: Office of Transportation and Person Property (MT), General Services Administration, Washington, DC 20405.

C6.2.2.1.4. The limitations in subparagraphs C6.2.2.1.1 through C6.2.2.1.3, above, may not be construed to authorize:

C6.2.2.1.4.1. The acquisition of personal property that is not authorized by law.

C6.2.2.1.4.2. The acquisition of personal property in contravention of any other restrictions on procurement of commodities or any established replacement policies or standards issued by the President; the Congress; the Administrator, GSA; or the Secretary of Defense, or designee.

C6.2.2.1.4.3. The exchange or sale of excess or surplus property even though otherwise eligible in the acquisition of personal property.

C6.2.2.1.4.4. The use of exchange or sale authority for the exchange or sale of strategic or critical materiel, except as authorized by the DUSD(L).

C6.2.2.1.4.5. The use of exchange or sale authority for the exchange or sale of Nuclear Regulatory Commission-controlled materiel.

C6.2.2.1.4.6. The exchange or sale of controlled substances, except in accordance with DoD 4160.21-M-1.

C6.2.2.1.4.7. The exchange or sale of scrap materiel, except in the case of scrap gold for fine gold.

C6.2.2.1.4.8. The exchange or sale of property otherwise eligible that was acquired from another Agency or a DoD Component as "nonexcess," "excess," or "surplus," unless that property was in use for 1 year after acquisition.

C6.2.2.2. Property acquired by exchange shall be recorded at acquisition cost. The credit received from the exchange is considered to be the selling price of exchanged property and is to be accounted for as a gain or loss on the sale of property.

4. Department of Defense Waiver (1997)

The Office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology requested legislation to allow the Army to conduct a test program to sell non-excess equipment. DoD subsequently granted the Army a waiver to DoD policy to allow the sale (as well as exchange) of old or obsolete nonexcess property.

DoD granted the Army a waiver to DoD policy until August 1, 1999, to allow the sale (as well as exchange) of old or obsolete nonexcess property.

In acquiring personal property, an agency could exchange or sell similar items and apply the allowance or proceeds as payments, in whole or in part, for the property acquired. (40 USC 481(c), FPMR 101-46, DoD 4140.1-R, DFARS 217.70). Prior to this time DoD was authorized only exchange authority.

Recent examples of the use of the exchange authority include: exchanging old diesel engines for credit during remanufacture of bulldozers, exchanging old helicopter engines for new helicopter engines during systems upgrades, and exchanging old and obsolete turret trainers for new ones. DoD hoped that the addition of sale authority would expand their opportunities to obtain value for old, obsolete equipment.

If the sale or exchange authority is not used, old or obsolete equipment is generally declared excess and then is screened for possible use by other Government agencies before it is disposed of by either donation or sale. In any event, the Army received no value for the equipment. Sale or exchange permitted the Army to receive value by applying the sale proceeds or exchange credits towards the acquisition of similar items.

There were some conditions attached to the use of the authority. Generally, there had to be a written administrative determination indicating the anticipated magnitude of the economic advantage to the government, that proceeds for the sale or exchange credits would be applied in whole or in part payment for the items acquired, and if required, the property had been rendered safe or has been demilitarized. In addition, items sold or exchanged and those acquired must be similar. Items sold or exchanged may not be excess to agency requirements. Items acquired are required for approved programs. Items acquired replace and perform substantially all of the functions of the items being exchanged. The positive results of this waiver directly effected a permanent change to 40 United States Code 481(c) (As Amended Through P.L. 106-580, Dec. 29, 2000) to include both exchange and sale authority.

5. OMB Circular A-76

The purpose of OMB Circular A-76 is to establish Federal policy regarding the performance of commercial activities and implements the statutory requirements of the Federal Activities Inventory Reform Act of 1998, Public Law 105-270. The Supplement to this Circular sets forth the procedures for determining whether commercial activities should be performed under contract with commercial sources or in-house using Government facilities and personnel.

The authority for A-76 is The Budget and Accounting Act of 1921 (31 U.S.C. 1 *et seq.*), The Office of Federal Procurement Policy Act Amendments of 1979. (41 U.S.C. 401 *et seq.*), and The Federal Activities Inventory Reform Act of 1998. (P. L. 105-270).

The basics of A-76 state that in the process of governing, the Government should not compete with its citizens. The competitive enterprise system, characterized by individual freedom and initiative, is the primary source of national economic strength. In recognition of this principle, it is the general policy of the Government to rely on commercial sources to supply the products and services the Government needs.

The stated purposes of A-76 are:

- Achieve Economy and Enhance Productivity. Competition enhances quality, economy, and productivity. Whenever commercial sector performance of a Government operated commercial activity is permissible, in accordance with this Circular and its Supplement, comparison of the cost of contracting and the cost of in-house performance shall be performed to determine who will do the work. When conducting cost comparisons, agencies must ensure that all costs are considered and that these costs are realistic and fair.

- Retain Governmental Functions In-House. Certain functions are inherently Governmental in nature, being so intimately related to the public interest as to mandate performance only by Federal employees. These functions are not in competition with the commercial sector. Therefore, Government employees shall perform these functions.

- Rely on the Commercial Sector. The Federal Government shall rely on commercially available sources to provide commercial products and services. In accordance with the provisions of this Circular and its Supplement,

the Government shall not start or carry on any activity to provide a commercial product or service if the product or service can be procured more economically from a commercial source.

E. CHAPTER SUMMARY

This chapter provides definitions of property disposal and procurement. It next provides definitions of key elements of both processes. Property disposal key elements include: real property, personal property, excess/surplus property, exchange, exchange/sale, replacement property, and similar property. Procurement key elements include: commercial items, contracts, electronic commerce, service contracts, and supplies. The chapter further provides basic descriptions of both the property disposal and procurement processes within the Department of Defense (DOD). The chapter concludes with a summary of applicable laws, regulations and directives, which authorize exchange/sale programs and provide guidance for implementation. After careful review of the applicable laws, regulations and directives, it seems apparent that senior government leadership encourages and promotes the use of exchange/sale authority to recycle resources directly into the programs for which they were originally appropriated. The problem is how to effectively implement the exchange/sale authority to make its use a standard management tool for Federal managers.

Chapter III provides precedents for property exchange programs, current disposal methods available to the

Government in both the public and private sectors, and current Internet procurement systems that are available to Federal buyers.

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III. ANALYSIS OF CURRENT PROCESSES

A. INTRODUCTION

In acquiring personal property, an agency may exchange or sell similar items and apply the allowance or proceeds as payments, in whole or in part, for the property acquired. (40 United States Code 481(c), Federal Property Management Regulation 101-46, DoD 4140.1-R, and DFARS 217.70). Until recent years, DoD was authorized only exchange authority. Past examples of the use of the exchange authority include: exchanging old diesel engines for credit during remanufacture of bulldozers, exchanging old helicopter engines for new helicopter engines during systems upgrades, and exchanging old and obsolete turret trainers for new ones.

The addition of sale authority expands DoD's opportunities to obtain value for old, obsolete equipment. If the sale or exchange authority is not used, old or obsolete equipment is generally declared excess and then is screened for possible use by other Government agencies before it is disposed of by either donation or sale. Any proceeds are deposited in the Treasury and the Agency receives no value for the equipment.

Sale or exchange permits the Agency to receive value by applying the sale proceeds or exchange credits toward the acquisition of similar items. Some conditions are attached to the use of the authority (see Federal Property Management Regulation 101-46, and DoD 4140.1-R, Chapter II). Generally, there must be a written administrative determination indicating the anticipated magnitude of the

economic advantage to the government, that proceeds for the sale or exchange credits shall be applied in whole or in part payment for the items acquired, and if required, the property has been rendered safe or has been demilitarized. In addition, items sold or exchanged must be: similar to those acquired; required for approved programs; and not excess to agency requirements.

B. PRECEDENTS FOR PROPERTY EXCHANGE PROGRAMS

1. AGM-65 Maverick

On July 7, 1999, Dr. Jacques S. Gansler, then Under Secretary of Defense (Acquisition & Technology), presented Vice President Gore's Hammer Award to the AGM-65K Maverick Team. The Hammer Award was the Vice President's special recognition of teams of federal employees and their partners who have made significant contributions in support of the President's National Partnership for Reinventing Government (NPR) principles, putting customers first, cutting red tape, empowering employees, and getting back to basics, resulting in a government that works better and costs less.

The AGM-65 Maverick is a tactical, air-to-surface guided missile designed for close air support, interdiction, and defense suppression. The Maverick Team negotiated a unique arrangement whereby AGM-65A missile airframes and AGM-65G Guidance Control Sections were provided to Raytheon for credit toward the purchase of new electro-optical (TV) seekers in support of the AGM-65K upgrade program. Key to their efforts was approval from the General Services Administration to exchange outdated

AGM-65A airframes for new improved missiles; and U.S. Air Force approval to exchange AGM-65G Guidance Control Sections for credit. These actions allowed the U.S. Air Force to move forward with their AGM-65K program to buy up to 1950 missiles at a cost of approximately \$18 million versus the \$119 million normally expected, a savings of \$101 million.

Essentially, Raytheon bought back 1200 Guidance and Control Sections (GCS) from the Air Force inventory of 5300 IR-guided AGM-65G's, exchanging hardware from the older AGM-65G's to fund production of the newer AGM-65K's. In the process, they reused about 1200 AGM-65G Maverick missiles built since Desert Storm and replaced each missile's Imaging Infrared (IR) GCS with an upgraded Charged Coupling Device (CCD) GCS. In addition, Raytheon was able to use parts of the IR seeker it did not need for the upgraded GCS for Foreign Military Sales (FMS) customers.

Under the funding arrangement, Raytheon bought back the IR GCSs of 1200 AGM-65G missiles and removed six electronic cards that were used in building the CCD GCS. The CCDs were then sold to the Air Force for mating with the center aft sections from the AGM-65G missiles. Raytheon used the remaining parts of the IR seekers to build new IR seekers for Foreign Military Sales (FMS) and Direct Commercial Sales (DCS) missiles. The lower CCD cost and the credit the Air Force received for the buy-back of the GCSs effectively funded the AGM-65K program. "The U.S. Air Force, in essence, became Raytheon's strategic supplier of airframes, and those airframes are then used in the manufacture of IR missiles. We would never have proposed

the GCS exchange had we not been so successful on the airframe exchange. Doing the airframe exchange was painful, but it was the first of its kind for the Air Force, and certainly laid the groundwork for the GCS exchange." (Johnson, 1999)

In essence, the Air Force pulled off the GCS and sent it back to Raytheon for renewal and sale. But before the Air Force gave them the whole GCS, they pulled six of the twelve circuit cards inside the IR version that are common to the cards used in the new seeker that were being built. The new seeker has only nine circuit cards so only three unique circuit cards required purchasing for the CCD guidance units. Raytheon then gave the Air Force credit toward the new seeker." The buy-back credit equated to well over 90 percent of funding for AGM-65K production. Although the Air Force has only \$7 million to buy 1200 seekers, the Air Force expects that number to climb to 2000 seekers by the time the program reaches full production. Once the Air Force is purchasing 65K missiles, there will likely be international sales of the CCD missiles, which will increase production quantities and further reduce unit costs for all parties.

As with the team's previous airframe exchange agreement, there were regulatory constraints and appropriate waivers to consider for the AGM-65K upgrade program. GSA covers the subject of waivers under Title 40 U.S.C. and under the Federal Property Management regulations. According to Rick Bender from the Office of Governmentwide Policy, GSA, "You need waivers when you deal with certain federal supply groups. For the 65K upgrade, the team needed a waiver because munitions are in Group

14." The key point to remember, according to Bender, is that "... the exchange must be for a similar item." (Johnson, 1999)

Determining the value of the guidance unit exchange was very straightforward. The team simply went to the FY91 contract, looked up the cost of the guidance unit CLIN [Contract Line Item Number], and then adjusted it using escalation factors (e.g., machinery and optical parts). In the end, the escalation captured an appropriate mix of inflation indices and brought it up to today's price. The team came up with a method of determining the value that made sense, but that priced the guidance units where Raytheon could also sell them to FMS customers at a lower price. Without FMS sales of the IR GCSs, Raytheon was not going to have a CCD program. This same escalation procedure will be used to determine the cost of the seeker we are buying in later years. "This is a win-win-win in that the U.S. Air Force was able to fund their TV upgrade. Obviously, it's a win for Raytheon in that they get a new Maverick variant introduced, which holds out the carrot for additional business - that of upgrading 9000 TV missiles overseas via FMS. That's where the true business is." (Johnson, 1999)

2. U.S. Army Aviation and Missile Command (AMCOM)

Every year the Army disposes of government property that is worn out, obsolete or excess and receives no value from the disposal process. The Aviation and Missile Command (AMCOM) has made use of the little known or used authority to exchange non-excess personal property for similar items. By statute, the DoD may exchange non-excess

government property for similar items. This exchange authority provides the Army an opportunity to obtain some value for old, obsolete (but not excess) items when acquiring similar items. Exchange transactions underway or already completed at AMCOM illustrate the savings potential:

- One contract awarded resulted in exchanging 124 old, obsolete, and non-pressurized U-21 U aircraft and a warehouse full of spare parts, for a brand new C-12 aircraft. The exchange was valued at \$6.2 million and avoided \$5.2 million in costs associated with storage and disposal of the U-21s and associated aircraft parts.

- Initiating exchange deal for the upgrade of AH-58D Kiowa Warrior Helicopters for the exchange of AH-1F Cobra Helicopters and aircraft parts.

- Upgraded Kiowa Warrior engine; exchanged old engines for new configuration; negotiated credit for old engines.

- Program Manager for Close Combat Anti-Armor Weapons Systems exchanging TOW production equipment with Raytheon; Raytheon assumes responsibility for plant clearance and environmental cleanup costs.

In an attempt to further expand exchange authority, Office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology requested legislation to allow the Army to conduct a test program to sell non-excess equipment. DoD subsequently granted the Army a waiver (Chapter 2, paragraph 4) to DoD policy to allow the sale, as well as exchange, of old or obsolete non-excess property.

3. U.S. Navy Naval Sea Systems Command (NAVSEA)

The Navy executed a unique Asset Exchange Agreement (AEA), leading to a 1999 award of an \$8.5 million major torpedo contract to Raytheon Naval and Maritime Systems. Under the contract, a modification to a previously awarded contract, Raytheon supplied 41 Mk 46 Mod 5A(S) torpedoes for the government of Taiwan under the FMS Program. The contract was the first award resulting from the AEA, negotiated between Raytheon and the U.S. Navy in conjunction with the Lightweight Hybrid Torpedo (LHT) program. Under the AEA, earlier configurations of the Mk 46 torpedo are provided to Raytheon from Navy inventory in exchange for new LHTs. Raytheon, in turn, upgrades the Mk 46s to the latest configuration for delivery to FMS customers. The AEA effectively delivers the funding required to complete the current phase of the LHT program that provides engineering development models to the Navy.

C. CURRENT PROPERTY DISPOSAL SYSTEMS

The Federal Property and Administrative Services Act of 1949, assigns the responsibility for ensuring maximum utilization of Federal personal property to the GSA (GSA has delegated this authority to DRMS for DOD property). Personal property no longer needed by an executive agency is determined excess and reported to GSA for possible transfer to other Federal agencies for direct use or for use by their cost-reimbursement contractors, project grantees, or cooperative agreement participants. Federal agencies are encouraged to fill internal requirements for personal property to the maximum extent possible by

obtaining excess property from other Federal agencies in lieu of new procurements. Property for which there are no Federal requirements is determined surplus and becomes available for donation to state and local public agencies and eligible nonprofit, tax-exempt activities. Surplus property not selected for donation requirements is offered for sale to the public by competitive offerings such as sealed bids, spot bids or auctions. Most proceeds from such auctions are returned to the Treasury Department per the Miscellaneous Receipts Act.

Most business-to-government Internet companies have an uphill climb because many of them are unfamiliar with the Federal market and their products are new and unproven to government buyers. However, there is one sector of Federal buying and selling that could benefit greatly from the Internet: government-to-business (G2B) and government-to-consumer (G2C) auctions. Each year, the Federal Government must fairly and cost-effectively sell to the public more than \$10 billion in assets. While many of those sales have moved out of dilapidated warehouses and onto the Internet, the sales systems, methods of naming items and technology used by different agencies make it difficult to locate and purchase items.

"There is an enormous market for used government equipment in the Third World," says Steven Kelman, former administrator of the Office of Procurement Policy and Weatherhead professor of public management at Harvard University's John F. Kennedy School of Government. "For example, for Veterans Affairs hospitals, CAT scans of a certain age there is no U.S. market, but there is in the Third World." Kelman sits on the board of a G2B auction

firm that will focus on sales to countries such as Argentina, Thailand, South Africa and Nigeria. (Harris 2001)

Vice President Al Gore charged FinanceNet, an Internet communications tool for intergovernmental organizations, with becoming a one-stop shop for information and sale of surplus government property. FinanceNet recently formed a 120-member interagency government-asset sales team (IGAST) to develop an Internet-based clearinghouse of assets based on a universal dictionary to house all agencies' surplus inventories. IGAST has received presentations from private firms and is working with CommerceNet, an e-commerce industry group, on developing the clearinghouse, tentatively named Auctions@YourDisposal.

Meanwhile, private sector firms already are moving into the market. Bid4Assets.com is focusing on the 17 agencies that sell seized, distressed and surplus assets each year. "For distressed, discounted, as-is, where-is assets, there is traditionally only a certain type of buyer that will roll the dice," says Dave Marchick, Bid4Assets vice president for strategic development. "We're broadening the exposure and bringing in new buyers." In January, Bid4Assets conducted the U.S. Marshals Service's first online auction; selling five seized promissory notes with a face value of over \$500,000. Other agencies are planning pilot sales, as well. Bid4Assets was the first G2B auction dot.com on the GSA schedule. (Laurent 2000)

In 2000, the General Services Administration sold surplus property worth more than \$260 million by placing newspaper ads and renting auction space. In May 2001, the agency struck a deal with American Management Systems and

auction software-maker Ariba to conduct those sales online. The new site, GSAAuctions.gov, will allow buyers to participate no matter where they, or the surplus goods, are located. The Internet maximizes GSA's selling advantage by broadening the community of potential buyers, streamlining the business processes and lowering costs. GSA's Property Management's operating expenses for FY 2000 were \$25.5 million, of which \$10.7 million was a Congressional appropriation for the Utilization and Donation programs and \$14.8 million, associated with their sales program. GSAAuctions is the latest development from GSA to dispose of Federal property. To entice agencies to sell their property on its site, GSA charges lower commission costs than private competitors. As the digital middleman in the auction, GSA takes a cut of every transaction on the site (See Figure 4). For example, if the U.S. Mint unloads a coin press on GSAAuctions for \$6,000, GSA takes a \$750 service fee plus 12 percent of the proceeds. While the bulk of the revenues are returned to the Treasury, in some cases the money goes back to the agency that offered up the property. Selling these goods online provides a cost-effective way of reaching a wide audience of buyers, says Bob Hamilton, GSA's fleet and personal property division director (Dean 2000).

Item Value	Rate Per Item
< \$1,001	\$200 or award amount if less than \$200
\$1,001 - \$5,000	\$200 plus 15% of proceeds

\$5,001 - \$25,000	\$750 plus 12% of proceeds
\$25,001 - \$50,000	\$3,000 plus 8% of proceeds
\$50,001 - \$100,000	\$4,000 plus 6% of proceeds
\$100,001 - \$150,000	\$5,000 plus 5% of proceeds
> \$150,001	\$8,000 plus 3% of proceeds (Can be reduced based on negotiated single agency sale.)

Figure 1: GSA Rates for Miscellaneous Exchange/Sale and Other Reimbursable Property

GSA faces competition from commercial auction sites such as eBay and private online exchanges, which auction government property over the Internet. The agency plans to aggressively squeeze out private competitors doing business with the Federal Government, Hamilton says. "We want to show (agencies) how quickly it can be done," he says, touting the site's ability to rapidly connect buyers and sellers anywhere in the country. "The government might just end up eating the private sector's lunch." GSA can auction an asset with lower commission costs to sellers than private companies. With that attractive incentive in hand, the agency plans to promote the service to the public and to other Federal agencies in the coming months.

The problem with GSA's approach is that the new online auction service is taking business away from the private sector, according to four members of Congress. In a May 8, 2001 letter to Thurman Davis, acting administrator of the General Services Administration, the lawmakers said that the Government's foray into the online auction business

violates the spirit of the 1998 Federal Activities and Inventory Reform (FAIR) Act, which aimed to keep government from competing with private business.

"During the debate on the FAIR Act in both the Senate and House of Representatives, members expressed concern over the auction operations of Federal agencies," said the letter, which was signed by Reps. Connie Morella, R-Md., Tom Davis, R-Va., Dan Burton, R-Ind., and Albert Wynn, D-Md. (Harris, 2001)

While GSA has auctioned seized items and surplus government property for years, the agency took its auction business online in January with the launch of GSAAuctions.gov. At the time, private online exchanges such as E-bay and Bid4assets.com were already hawking government property over the Internet. GSA should have tapped private companies to run its auction system, according to the representatives. GSA's Federal Technology Service used private firms to create an online system for reverse auctions, where companies bid against each other for government business, the lawmakers noted.

"We believe the FTS demonstrated the effectiveness of using the private sector to foster online auctioning and that GSA's move into this new commercial activity was misguided and runs counter to congressional intent," wrote the lawmakers. Such competition by the government seems unfair by definition, since the government shares little or none of the regulatory and tax burdens that it imposes on these businesses. No legislation is needed to ban these activities because, to a great extent, such a ban already exists, according to Philip Eskeland, the committee's deputy staff director. (Laurent 2000) Office of Management

and Budget Circular A-76 states that the government should not compete with private businesses, Eskeland said. What the committee can do is encourage agencies to abide by that rule and, where the rule does not reach, draft legislation. Witnesses from small businesses told the committee their businesses have been harmed, some even bankrupted, by Federal enterprises.

D. CURRENT INTERNET PROCUREMENT SYSTEMS

Although this thesis is not investigating a new procurement system for the Federal Government, the essence of the new disposal system rests with the end user being able to easily exchange old equipment with replacement equipment, so a cursory review of Internet procurement is necessary.

To acquire goods and services within the Federal Government, the buyer must operate within a framework of laws and regulations. The framework includes the United States Code, Federal Acquisition Regulations, associated regulatory supplements and local business processes. In addition to the regulatory framework, a number of enterprise initiatives are underway within the government to provide e-business tools to support streamlined purchasing processes. The end result is an inefficient system that is burdened with required approvals, tools and sources that are not coordinated and prevent the Federal Government from leveraging its immense purchasing power to its fullest extent. Government buying is quite different from private sector purchasing, which makes for a difficult

transition from B2B to B2G. While businesses buy to bolster the bottom line, the government buys to provide goods and services to citizens and to achieve a host of social and economic goals. With the multitude of rules and regulations associated with government contracting, most Internet companies pursue only the least regulated portion of government buying - goods and services bought with agency purchase cards below the micro-purchase (\$2,500.00) threshold.

Purchase card use has exploded since 1989, rocketing from 2200 transactions worth \$460,000 to twenty-one million, worth more than \$10 billion in fiscal 1999. The number of cardholders has grown from 10,000 to 500,000 (Dean 2000). Under acquisition reform, micro-purchases can be made without considering most socioeconomic policies or soliciting competitive bids.

The lure of even a small transaction fee on just a portion of the Government's purchase card transactions has drawn a plethora of Internet companies. Some offer Web-based malls where, at no charge, Federal cardholders can compare prices, primarily for information technology hardware and office supplies. FedCenter.com is among the best known virtual malls. Other firms, such as NIC (National Information Consortium) Commerce, build Internet malls behind Agency firewalls offering online shopping to vendors on contract with the Agency, as well as on other contracts it is qualified to use. This model offers agency procurement officials more control of where cardholders buy and allows better tracking of purchasing data that can be used as a pricing leverage. Resellers, companies that sell mostly technology products from a variety of manufacturers,

also are "mallng" their Web sites in the hope of moving purchasers off the phone and onto the Internet to reduce sales costs.

A tug-of-war between the advantages of centralized buying, such as that done by most agencies, and individualized buying via purchase cards is becoming the battle among Internet companies for government business. Defense Logistics Agency (DLA) is trying to strike a balance with its electronic mall, according to Scottie Knott, director of DLA's Joint Electronic Commerce Program Office, which runs the mall. "We're trying to get the best of both worlds," she says. "We want people to come to the e-mall to do cross-store comparison and use the purchase card as a payment vehicle so there is an audit trail back to the home agency and with the bank that does the reconciliation. It is a happy medium between willy-nilly buying and using the e-mall where there is some control and visibility." (Laurent 2000)

Control and visibility are so important to the National Institutes of Health that the agency also is building its own e-mall. "We were looking for line item detail, Level 3 data, including item descriptions, quantity purchased, etc., on purchase card purchases," says Donald Kemp, procurement analyst with the research contracts branch of NIH's National Cancer Institute. "We built the IntraMall behind NIH's firewall so we wouldn't have to depend on the vendors to provide the data. NIH spent \$131 million using cards last year and all we know is the companies we spent it with, not the products. If we know what we're buying from them, the companies are more willing to give us a better price," Kemp adds. The IntraMall

provides product information, online ordering, accounting and budgeting. The system will build a detailed purchase log organized by vendor, product description, order date, or purchase amount. It will tie transactions with electronic billing information provided by VISA/US Bank. Currently, the mall contains only products and prices from NIH contracts. NIH is building the mall using a cooperative research and development agreement under which a private firm pays all development costs in exchange for the right to commercialize the mall software. (Laurent, 2000)

The largest of Federal Internet malls is the General Services Administration's Advantage!, which went live in 1995. There, 2221 of the 7875 vendors on GSA schedules sell nearly a million products and services online. Advantage! allows agencies to search for products and services and place orders from GSA's Federal supply schedule contractors, and through fiscal year 1999, sales were \$86 million. In response to Internet company competition, Advantage! is retooling its search engine and adding features, though the GSA site already has a valuable built-in advantage in that it is government-run and is guaranteed to adhere to Federal procurement rules. Internet companies resent GSA's edge, but know they must work with the agency to get a foot in the market. "GSA should let the schedule (contracts) and leave the private sector to create the tools to buy from them," says Tony Bansal, President and CEO of Digital Commerce Corp. (Laurent 2000)

Since 1998, the GSA has been working with several other agencies to provide businesses, large and small, with convenient, single point-of-entry Internet access to

synopses of government contracting opportunities, solicitations, awards, and other acquisition-related documentation. The Electronic Posting System (EPS) initiative, currently in a pilot stage, allows vendors to search for contracting opportunities over \$25,000, receive automatic e-mail notification about agencies' requirements for specific supplies or services, receive automatic e-mail notification about changes and amendments to solicitations, download documents related to a specific procurement; and view summaries of contract awards.

Small businesses complain that e-commerce already is knocking them out of competition. Many lack the technology to handle electronic transactions, let alone to make product and service catalogs electronically available. Jere Glover, chief counsel for advocacy at the Small Business Administration, told the House Small Business Committee in April 2000 that only 1.4 percent of Internet use among small businesses is directed to e-commerce sales (Harris 2001). So far, small businesses say the cost of establishing e-commerce capability is not justified by the return. To help solve this problem, GSA has created SmallBizMall.gov, a B2G site offering IT products and services exclusively from small and disadvantaged businesses.

Small business issues are not the only obstacles for Internet firms. Issues such as catalog content, regulatory framework, differing technology infrastructures, and data rights and requirements are all barriers that continue to prevent government-wide use of Internet procurement.

E. CHAPTER SUMMARY

This chapter begins by providing a synopsis of the property exchange/sale concept as it applies to Government agencies. Next, it provides narrative detail of precedent programs successfully completed by each of the armed services. It then provides examples of current disposal systems that are available to the Federal manager and concludes with an overview of current Internet based procurement systems that are employed by Federal buyers.

This chapter's intent is to provide the reader an understanding of the exchange/sale concept as outlined in The Federal Property and Administrative Services Act of 1949, 40 United States Code 481(c). It also provides the reader an overview of what is currently available, and under development, to provide exchange/sale tools to the Federal manager. Senior Federal leadership is encouraging the use of Internet services and the key to success is providing a flexible, useful tool that can be used by all Federal agencies to more effectively recycle appropriated resources back into their original programs.

Chapter IV introduces the use of the Internet for property disposal, the purpose for a new property disposal system, a detailed description of the proposed system and an analysis of industry capacity to provide the exchange/disposal service.

IV. USING THE INTERNET FOR GOVERNMENT PROPERTY DISPOSAL AND PROCUREMENT

A. INTRODUCTION

Following the success of business-to-consumer (B2C) Internet e-commerce sites such as eBay and Amazon.com, Internet companies moved swiftly into the business-to-business (B2B) market. Some are helping companies streamline and automate purchasing. Others are building marketplaces where buyers and sellers come together online to strike deals, conduct auctions and swap information. These new marketplaces move well beyond the electronic data interchange networks that once were the only e-links between big buyers and their suppliers. B2B firms are now very excited about the business-to-government (B2G) possibilities.

Figure 2: Overview of the Domestic B2B Market, 1999-2003

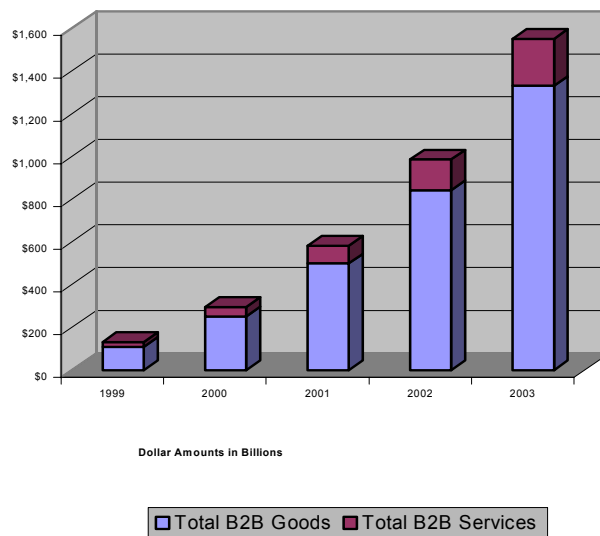


Figure 2: Overview of the Domestic B2B Market, 1999-2003

Figure 3: Public Sector Procurement in Real Dollars, Federal vs. State & Local Government, 1993-1999

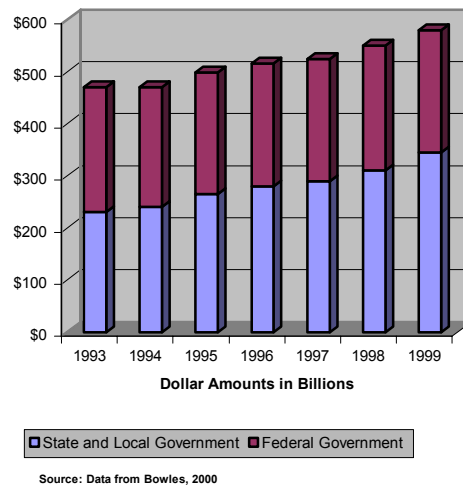


Figure 3: Public Sector Procurement in Real Dollars, Federal vs. State and Local Government, 1993-1999

Internet companies that have built malls on the World Wide Web, make it fast and easy for suppliers and buyers in an industry to connect. Web-based transactions are linked with companies' internal accounting and finance systems, driving paper forms and repetitive data entry out of purchasing. Data is stockpiled and presented on thousands of purchases, enabling organizations to better understand what their people are buying and to use that knowledge to negotiate better deals with suppliers. Venture capitalists and the stock market recognized that dollars saved in the purchasing process show up directly on companies' bottom lines and initially promoted B2B Internet companies with strong cash investments. Some of that growth tapered off

during the e-commerce stock market correction in March, 2000 but B2Bs still are considered promising investments.

The B2B market exploded because companies can save so much money by moving purchasing of manufacturing supplies and operating resources onto the Internet, reducing redundant paper forms, speeding payment and accounting, and improving buyers' ability to compare prices and sellers' ability to present products. In addition, the Internet permits real-time bidding wars in which sellers compete on price to win buyers' orders. Boston-based Aberdeen Group, a consulting firm, found that most businesses realize a 300 percent first-year return on investment in Internet procurement. (Wyld, 2000)

B2Gs are quickly being drawn to the Federal Government's \$200 billion+ annual expenditure for goods and services. Most Internet companies collect a percentage of transactions conducted using their websites, software or services. With approximately 31 million procurement transactions in fiscal 1999 alone, Internet companies consider the Federal Government as an enormous prospect. Industry analysts predict that Federal, State and local government spending on e-government hardware, software and services will grow from \$1.5 billion this year to \$6.5 billion in 2005. Nearly \$4 billion of that will be spent to enable interactions with businesses.

One of the greatest areas of potential growth in using the Internet to create new e-marketplaces is actually in the area of capital asset disposition (Wyld 2000). Formerly, when used capital equipment was sold, the buyers and the equipment had to be physically brought together. Often this was handled at the site of a closed factory for

manufacturing equipment or a failed farm for usable machinery and implements. This meant both a limited audience and reach for the auction, and the auctions had to be large enough in scale to make them cost-efficient affairs for the facilitating auction company. As such, the events drew an uncertain number of participants and produced unknown returns on the items put up for sale. In the long term, Internet auctions in the B2B realm may work best for used items, either items sitting idly and unused by a business, or assets that must be sold by a certain date on a "use-them-or-lose-them" basis (Moschella 1999). Initial returns from such auctions estimate that the average organization can realize approximately a twenty-five percent gain on liquidated assets by using online exchange mechanisms (Queree, 2000). Further, the fees paid to the auction facilitators by the companies selling the equipment have dropped by approximately 50 percent.

B. PURPOSE OF NEW PROPERTY DISPOSAL SYSTEM

The purpose of creating an alternative property disposal system is to streamline the asset disposal process for Federal Government agencies by utilizing the best current and emerging technologies in the commercial marketplace. Secondly, the new system should incentivize Federal Government agencies to dispose of assets that are no longer needed by providing a tool to recycle appropriated resources. Currently, Federal managers have little recourse when it comes to disposing of property. They must declare the property excess or surplus to GSA or DRMS, whether or not they intend to replace the property. The only other alternative is indefinite storage of the

property and loss of any time related value. By developing property disposal procedures that streamline the asset disposal process, the Federal Government will utilize more efficient and cost-effective systems than already exist internally and be able to leverage the best technologies in the commercial marketplace rather than trying to build competing, proprietary technologies and systems.

Commercial market accepted technologies and systems open up the disposal process to a broad audience that already knows how to use the technology. Currently, citizens interested in purchasing used government equipment must visit multiple Web sites with no possibility of an integrated view for comparing prices. Each of these stand-alone markets requires the same amount of IT design, staffing and support, thereby destroying any scales of economy that using one very large and diverse system could provide. Digitizing the process via the Internet caused vast reductions in resources (human, capital, etc.) required to manage the disposal process. Additionally, use of existing Internet technologies can provide a consistent process and audit trail for all asset disposal transactions, which reduces the need for oversight by the General Accounting Office (GAO).

Currently, Federal Government agencies have little incentive to dispose of assets that are no longer needed. Allowing the agencies to use all or part of the net proceeds from the asset sales will incentivize them to dispose of under or unutilized assets, in turn maximizing office space and minimizing storage requirements. Additionally, agencies maximize the recovery value of

underutilized equipment as technology assets lose value quickly.

C. THE PROPOSED NEW PROPERTY DISPOSAL SYSTEM

The new approach to property disposal begins with the owning agency or program office (end user) realizing a need for new equipment to replace its used or obsolete equipment. Rather than declaring the property excess to DRMO for disposal, the agency takes digital pictures of the property and provides a written description of the equipment. This information is transferred electronically to a third party contractor to market and auction/sell using various Internet marketplaces. The resultant auction/sale of the equipment assesses the fair market value of the equipment. The contractor then provides store credit through chosen Internet marketplaces or provides money to the selling agency to purchase similar equipment. The contractor is paid a percentage of the sales proceeds (a transaction fee) for its involvement.

1. Requirements Generation

As with the current system, when an agency or program office needs replacement equipment it evaluates the cost of the new procurement. However, with the new system, the agency is able to exchange or sell the existing equipment to recycle this resource into the new procurement. This allows the agency to obtain more equipment or frees resources for other requirements.

2. Digital Data Description

This process begins the audit and accountability trail that follows the item through the disposal process. The selling/exchanging agency documents the transaction within its property log, preferably an electronic log, which enables the agency to track the purchase price, the sales price, and either the money received or exchange allowance for the item. The agency identifies itself, with their Contractor and Government Entity (CAGE), Department of Defense Activity Address Code (DODAAC), or some other commercially acceptable identification that is used by the contractor. The new system requires the agency to have at its disposal cameras capable of electronically capturing, storing and transferring digital data to the contractor's website. These are either purchased by the agency or given to the agency by the contractor to expedite the data exchange. Digital photos have proved to be invaluable descriptors (items auctioned for sale with accompanying descriptive photographs tend to sell at a price that is 11.3 percent higher than similar items without pictures) (Viegas 2001). Finally, the agency provides some level of written description of the item that generally outlines its condition, associated hardware/software or other optional and included equipment.

3. Electronic Transfer of Data

This process could be in the form of e-mailing the data, directly uploading to a website specifically designed for this data exchange or some other electronic method. The end user maintains a record of the data transfer for future reconciliation upon notification of sales and resultant payments or credits. There are a number of technological factors to consider, such as:

- Adequate network capacity, or bandwidth. The contractor needs to consider the amount of electronic traffic that will be generated by an electronic offering and must provide adequate connectivity to support that load. Some web sites have been completely overwhelmed and disabled when far greater numbers of users visited the sites than their developers had anticipated.

- Platform and software application reliability. The web servers and other computer platforms that support these services, including their operating systems and the software that connects them, must also be capable of supporting potentially heavy user demands and must run reliably. The system must reliably confirm that a transaction is complete and abort a transaction completely and consistently in the event that some problem intervenes. The technology in use today does not always respond consistently and unambiguously. Users may fill out lengthy on-line forms and submit them without getting any clear response from the system at all, leaving them unsure whether their submission was received and accepted.

- Interoperability. Even a smoothly operating electronic delivery service will fail if it is isolated from, or unable to work with, other related applications. Instead, applications must be able to communicate and exchange relevant data with each other. To ensure interoperability, the contractor must recognize its importance and design it in from the start. The emergence of key technical standards for electronic business will help.

- Technical roadmaps. The application developers must agree upon an overall systems roadmap to guide the

development and evolution of these systems. Architecture development is a primary means of integrating systems and business processes across an organization in a cost-effective manner. Architectures align information system requirements with the business areas and processes that they support, and promote systems that readily exchange and share information. They also help avoid inconsistent design and development decisions and their associated increased costs and performance shortfalls, reducing systems development risk and minimizing investment costs.

- Alternative media (such as wireless devices). It is important to note that technology is continuing to evolve at a rapid pace, and today's web-based applications are not necessarily the final incarnation that these systems will take. As the public moves to compact wireless devices, these systems will need to adapt.

4. Contractor Responsibilities

The contractor serves as the auctioneer for the recyclable assets, attending to the details of creating the auctions and marketing them on the most popular online auction marketplaces. Utilizing widely visited marketplaces that employ competitive bid formats allows the end user to obtain the highest selling prices for obsolete assets. The essential details are provided without overwhelming the end user with irrelevant details about specific auctions, and without requiring the user to make aesthetic choices about look and feel issues or how the auction will be designed or laid out in HTML. The contractor takes the provided digital pictures and unstructured content files and turns them into polished

auction listings and then attends to all the completion details of the auction, such as customer service and payment. Additionally, the end user has visibility of the contractor's activities at a level that makes it possible to manage.

In preparing the asset for sale, the contractor develops all technical materials (digital pictures, digital data descriptions, etc.), develops promotional materials, describes payment, shipment, return and other relevant terms, and then converts this data into the commonly used electronic formats for marketing on the applicable auction marketplaces. The contractor then selects the most lucrative marketplace to offer the assets for auction by analyzing the current market situation for each possible marketplace (prices, demand, competition). They also determine the best sale mechanism (instant sale, auction or both) and in the case of the auction, chooses the appropriate start price, reserved price, bid increment and auction duration.

The contractor initiates and watches the asset offering as the sales procedures begin. They perform necessary promotions, schedule the auction, and perform all feedback during the sales process. They maintain a number of concurrent conversations with prospective bidders concerning technical questions, current condition of assets, payment options, shipment options and escrow services. They also watch the offering progress and protect it from fraudulent bidding schemes or unwanted bidders. (Fraudulent bidding schemes or collusion occur when two or more bidders work in tandem to manipulate the

price of an auction, and alternatively, when a seller uses "shills" to enter fake bids to drive up the asking price.) If there is a no bid situation, the contractor considers repeating the offer at the same site or in another marketplace.

The contractor completes the deals by sending proper notifications and instructions to the winning bidders. They handle all details concerning payment, shipment and escrow services, and in the event that a bidder does not respond in a timely fashion, they provide follow up reminders. The contractor arranges shipping and tracking services to avoid problems, and in the case of escrow services, the contractor finalizes payments upon successful shipment. The contractor handles all return actions by negotiating with dissatisfied buyers for resolution.

Once all shipment and payment proceedings are finalized, the contractor provides money to the end user (to organizations with sales authority, minus the transaction fee) or credit, essentially an exchange credit, for future procurements of similar items on predetermined B2C, B2B or B2G marketplace websites. The contractor may also try to incentivize the end user to leave the proceeds as exchange credits by offering more exchange credit than actual money, thereby directing business to the predetermined marketplaces, which in turn allows the contractor to receive more advertising/marketing revenues.

5. Government Responsibilities

The government end users are responsible for requirements generation, digital data descriptions and accountability. Additionally, there must be a written

administrative determination indicating the anticipated magnitude of the economic advantage to the government, that proceeds for the sale or exchange credits shall be applied in whole or in part payment for the items acquired, and if required, the property has been rendered safe or has been demilitarized. In addition, items sold or exchanged must be: similar to those acquired; required for approved programs; and not excess to agency requirements. Data rights are an issue, as the contractor owns the data that is captured by the system. The Government must reserve usage rights to the data, but cannot claim ownership of the data, as it has not paid for the data.

D. PRIVATE INDUSTRY CAPACITY TO PROVIDE PROPERTY EXCHANGE SERVICES

Presently, many traditional firms are focusing their efforts at employing software solutions to set up auction marketplaces where they can auction off their excess inventory and obsolete equipment. This means that many companies are not yet participating in true B2B e-marketplaces, working instead in a business model that is based on one reaching out to the many (a company uses a single auction site instead of employing multiple sites) (Henig, 2000). Such ongoing auctions mean that companies sell off items on an "as needed" basis. This is because these new software technologies allow for small lots of used and surplus equipment to be moved through these emerging online marketplaces, rather than in the large lots required for "physical" auctions.

Rather than the "one-to-many model," entrepreneurial and technological developments are making possible the

development of truly new marketplaces, which can be either industry-specific or category-specific exchanges, for used and surplus items in the B2B arena. Examples of these new marketplaces are: (Henig, 2000)

- Automobile Industry, Covisint. Partners include: DaimlerChrysler, Ford, General Motors, Renault/Nissan, and Toyota.

- Aerospace Industry, Aerospace and Defense Global Trading Exchange. Partners include: BAE Systems, Boeing, Lockheed Martin, and Raytheon.

- Computer and Communications Products Industry, Hightechmatrix. Partners include: Advanced Micro Devices, Compaq, Gateway, Hewlett-Packard, Hitachi, Infineon Technologies, NEC, Quantum, Samsung, SCI Systems, Solectron, and Western Digital.

- Electric Power Industry, Pantellos. Partners include: American Electric Power, Cinergy, Consolodated Edison, Duke Energy, Edison International, Entergy, FirstEnergy, FPL Group, Pacific Gas and Electric, Public Service Enterprise Group, Reliant Energy, Sempra Energy, Southern Company, TXU, and Unicom.

- Energy Industry, Energy and Petrochemical Exchange. Partners include: BP Amoco, Dow Chemical, Equilon Enterprises, Mitsubishi Electric, Motiva Enterprises, Occidental Petroleum, Phillips Petroleum, Repsol YPF, Royal Dutch/Shell Group, Statoil, Tosco, TotalFina Elf, and Unocal

- Food and Beverage Industry, Transora.com. Partners include: Coca-Cola, Diaego, Earth grains, Kraft Foods, Procter & Gamble, Sara Lee, and Unilever.

- Retail Industry, Worldwide Retail Exchange. Partners include: Albertsons, Auchan, Best Buy, Casino, CVS, J.C. Penney, Jusco, Kingfisher, Kmart, Marks & Spencer, Royal Ahold, Safeway, Target, and Tesco.

- Trucking Industry, Transplace.com. Partners include: Covenant Transport, J.B. Hunt, M.S. Carriers, Swift Transportation, U.S. Express, and Werner Enterprises.

Across the B2B, B2C, and C2C sectors, auctions can and have served to set current market prices for all kinds of items for which it is unclear what a "fair" price would be, exactly what eBay pioneered in the consumer market by essentially creating new markets for many types of used goods. In the future, there will likely be the development of "virtual eBays," which will serve as exchange marketplaces for surplus equipment and products, bringing together auction sellers and buyers as shown in Figure 3. By bringing these auctions online through general exchanges such as DoveBid.com, a worldwide audience can be reached. Already, such exchanges have been developed both in computer-equipment-related areas, and used scientific and laboratory equipment by ITParade.com and the United Computer Exchange. (Methvin, 1999).

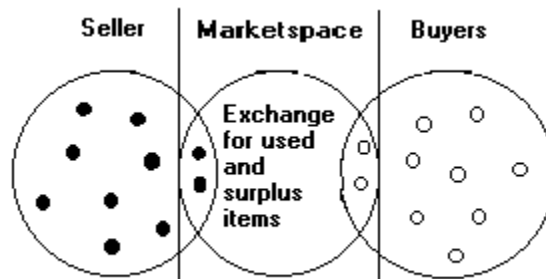


Figure 4: B2B Marketplace From Wyld 2000

Once the equipment is sold and exchange credit or monies are supplied to the end user, exchange or purchases for new items are made via B2B or B2G marketplaces. FedBid.com, a private B2G venture, debuted a similar system to this in 2000. Not only does it allow Federal buyers to fill virtual shopping carts with desired items, it also provides a form of reverse auctioning, in which vendors compete to offer the lowest prices on a given set of products. The system also lets buyers aggregate purchases to get volume price discounts. "One person wants to buy a carton of paper, another wants two, we aggregate them and allow them to pool their requirements or to become an opportunity for others to pool to," says FedBid.com chief executive officer Phillip Fuster. (Harris 2001)

FedBid's aggregation of purchases is likely to quickly elevate a total buy above the micro-purchase threshold of \$2,500 into the \$2,500 to \$100,000 range, in which all purchases are reserved for small businesses. However, Fuster says this is not a problem for agencies. "We are aggregating the buys, not the agencies. If 90 opportunities are aggregated, the vendor responds one time against 90 RFPs. When you join a pool, it is not becoming one buy. If four agencies join, we send one quantity to the high bidder, but four different orders."

FreeMarkets, located in Pittsburgh, is one of the best known of the reverse auction Internet companies. Its move into government contracting has found enthusiastic boosters among the Pennsylvania congressional delegation. In response to a letter from Sen. Rick Santorum, R-Pa., urging the Defense Department to try online auctioning, David Oliver, then Defense undersecretary for acquisition and

technology, wrote: "The Office of the General Counsel has advised that, if properly structured, auctioning is permissible within the framework of existing law and regulation." (Dean, 2000) FreeMarkets, which describes itself as a "market maker," assigns teams of project managers, purchasers, engineers and technical and commodity experts to assist buyers in crafting online auctions among qualified suppliers submitting real-time price bids against buyers' requirements. Buyers pay FreeMarkets a percentage of the auction award.

Unlike online Request For Quotation (RFQ) systems, Web-based auctioning allows live bidding viewed by the buyer and all the competing suppliers. Dynamic pricing requires firms to make instantaneous decisions about how low they can go to beat competitor's bids. Buyers and bidders both can watch online as the bid prices fall, but they cannot see which firms are offering what amounts.

The process reportedly has delivered savings of between 5 percent and 50 percent on purchases ranging from office furniture to electricity by companies and state governments. "Our first bidding event was in November 1995. We've done more than 500 events in 80 different categories of products and services," says Alan Thomas, FreeMarkets account executive. "We align with the buyer vs. their having to go to a different vertical market for each product or service" (Dean, 2000).

In April 2000, FreeMarkets brokered a deal to conduct online auctions for the U.S. Postal Service. In May, FreeMarkets signed an agreement with the Naval Supply Systems Command (NAVSUP) to provide access to the FreeMarkets virtual market of suppliers. NAVSUP's Naval

Inventory Control Point (NAVICP), held its first FreeMarkets auction on May 5 to purchase 756 received sequencers, the "brains" of aviation ejection seats.

"FreeMarkets is not like eBay where it's come one, come all," according to NAVICP commander Rear Adm. Michael Finley. "It is a controlled event and only includes suppliers that have been qualified." (Dean, 2000) In this case, three vendors pre-qualified by the Navy participated. The historic cost of 756 sequencers was \$3.3 million. After a 30-minute auction, plus 22 minutes of overtime, the lowest bid came in at just below \$2.4 million, a 28.9 percent savings. The contract was awarded to Hi-Shear Technology Corp., of Torrance, Ca., within an hour after the auction.

NAVICP plans an auction for shipboard aluminum berthing sometime in 2001. The command hopes to use FreeMarkets' expertise in the metals industry to expand the number of berthing bidders beyond the five suppliers it now has, something NAVICP lacks the staffing to do.

E. SUMMARY

This chapter began by introducing the reader to the concepts of business-to-consumer (B2C), business-to-business (B2B), and business-to-government (B2G) marketplaces and the benefits that they provide to both public and private sector organizations. Next, the chapter discusses the purpose of the new property disposal system by outlining limitations of current processes in comparison to the benefits a new system could offer. Following this is a detailed description of the proposed new process,

beginning with requirements generation, digital data description, electronic data transfer, contractor responsibilities and government responsibilities. The chapter ends with a review of private industry capacity to provide the disposal service.

The intent of this chapter is to familiarize the reader with the need for this type of system and the benefits that the Government will derive from the use of the system. It provides a rough outline of how the system will operate and gives an assessment of the current capabilities of industry to provide this service. What should be taken away from this chapter is that the current disposal process is inefficient and cumbersome and provides no benefit at all to the agencies that use it. Senior Federal leadership encourages the use of property exchange/sale and the Internet and the myriad of firms that work with the Internet are already providing the types of services that the government needs to recycle obsolete equipment for replacement equipment.

Chapter V provides a summary conclusion for the thesis as well as recommendations for the future use of the disposal system. It also provides a summary of the research questions as outlined in chapter I, a review of DoD agencies most likely to benefit from this system, and suggested areas for further research.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The previous chapters give a broad view of the government property disposal process, the regulations which govern management, and current industry and government capabilities. As can be seen, the advent of online auction marketplaces poses enticing yet risky propositions for public sector officials and leaders. The potential savings in purchasing activities that can be gained through entering online e-marketplaces is potentially quite large. Recall that the projected savings that can be achieved by private sector firms has been forecast to range between 18 to 45 percent (Menduno, 1999). If the public sector could reach simply half of the forecast savings potential on the low end of Menduno's estimate, this would mean that Government as a whole, could shave over \$50 billion off total procurement costs for Federal, State, and local Government shown in Figure 3. Likewise, through applying the online auction model to the sale of governmental assets, governmental agencies could recoup greatly increased revenue from these sales. The challenge for those in the public sector over the next few years will be to explore the opportunities and weigh the benefits and risks that will be available to them by employing e-commerce concepts. From information provided in the previous chapters the following conclusions can be drawn:

Senior Government leadership encourages the use of property exchange/sales. Leadership realizes the need to recycle appropriated resources to necessary programs due to

diminishing budgets and encourages innovative solutions to property management.

The current government systems are not intended to exchange/sell property for the Government managers, rather they are designed to rid the government of unnecessary property by treating it as scrap and, in most cases, in direct competition with private industry. The agencies that benefit from this system are GSA, DRMS, the Department of Treasury, State and local government, but not the programs where the resource benefits were originally intended.

There is a significant need to develop an easy to use Internet based system for Government managers to replace equipment through sale or exchange of older, obsolete equipment. This system will recycle appropriated resources to their original destination, increase significantly the Government's return on investment, and reduce the burden to GSA and DRMS.

Finally, private industry has tremendous capability to provide these services as evidenced in the many examples provided in chapters IV and V. Not only do these private Internet companies provide these services at reduced rates than Government enterprises, they also continually improve their processes due to the pressures of market competition.

B. RECOMMENDATIONS

This author recommends that a research contract be awarded to multiple contractors to explore the feasibility of such a system. Industry has enormous capacity to provide this service and a multiply awarded Indefinite

Delivery, Indefinite Quantity (IDIQ) research contract would provide contractors the exposure to Government agencies and program offices to leverage and adapt their existing systems for Government use. The IDIQ format lends itself well for a research program such as this by providing the Government flexibility for requirements without tying up resources. Multiple awards will foster a competitive environment, and allow multiple innovative solutions to evolve. The Federal marketplace will then be allowed to determine which system(s) are favorable by "voting" with their sales and purchases.

C. SUMMARY AND REVIEW OF RESEARCH QUESTIONS

Primary Research Question

- Can government property be exchanged/recycled in a more efficient manner using commercial, Internet practices?

The body of this thesis suggests that there are far superior disposal systems being employed by the private sector. The Government should leverage these existing systems to streamline the disposal process, rather than developing proprietary systems like the GSA efforts with GSAAUCTIONS. The Government needs to become adaptive to the information revolution that began in the 1990s, rather than assume its traditional role of impediment.

Secondary Research Questions

- What systems are currently available to Federal Managers for property disposal?

Chapter III, Sections C and D, analyze current systems available to Federal Managers. There are many systems available to Federal Managers for property disposal and procurement of replacement property, however, there is no system for both. The current systems demand that property managers declare all personal property "excess or surplus" with no means of recouping any value, thus initiating the property devaluation to scrap status. The Government senior leadership encourages the use of exchange/sale authority, however, without an efficient system available to managers to replace property, managers become burdened to create systems on a one-time basis.

- What are the precedents for the property exchange program?

Chapter III, Section B, provides examples of successful exchange programs initiated by various DoD organizations. To date, all branches of DoD services have implemented successful exchange programs with industry and have universally achieved efficiencies and cost savings unimagined prior to the introduction of the sale/exchange authority.

- What Laws and Regulations govern an exchange of property in the Federal Government?

Chapter II, Section D, provides a listing and summation of applicable laws and regulations that govern the exchange of property in the Federal Government. The Federal Property and Administrative Services Act of 1949,

40 United States Code 481(c), The Federal Property Management Regulations Part 101-46, Department of Defense Management Regulation - DoD 4140-R, and OMB Circular A-76 all provide guidance to Government managers for the use of sale/exchange authority, and also encourage its use as a preferred method of property replacement.

- To what extent does private industry have the capacity to provide property exchange services?

Chapter, IV, D provides an overview of private industries capacity to provide property exchange services. Across the B2B, B2C, and C2C sectors, auctions can and have served to set current market prices for all kinds of items for which it is unclear what a "fair" price would be. This is exactly what eBay pioneered in the consumer market by essentially creating new markets for many types of used goods. In the future, there will likely be the development of "virtual eBays," which will serve as exchange marketplaces for surplus equipment and products, bringing together auction sellers and buyers.

- What type(s) of DOD/Federal activities would most benefit from a property exchange program?

Chapter, V, D outlines the agencies most likely to benefit from a property exchange program. Essentially, all Federal, State and local Government agencies that own personal property have the potential to benefit from this disposal system.

D. DOD ACTIVITIES MOST LIKELY TO BENEFIT FROM PROPERTY EXCHANGE PROGRAMS

All DoD activities that own personal property have the potential to benefit from this disposal system. Furthermore, all Federal, State and local Government agencies that own personal property have the potential to benefit from this disposal system. Agencies and program offices that are forced to declare personal property excess or surplus to DRMS, as their only mechanism for property removal and disposal, will be given the opportunity to recycle those resources and recapture a portion of their original investment for the procurement of new equipment, reducing their strict reliance on appropriated resources.

E. SUGGESTED AREAS FOR FURTHER RESEARCH

This exploratory study has only begun to uncover the growing body of knowledge on E-commerce and the potential of the Internet to facilitate governance. Important areas for further research are:

- Internet procurement for the Government
- Security for E-Government
- Accountability and Reporting Issues concerning property disposal
- Effects on GSA and DRMS
- Analysis of the effectiveness concerning the NPS research contract

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