STRATEGIC MARKET PERSPECTIVE

Federal Telecommunications Market

1996–2001

Federal IT Market Analysis Program

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Federal Telecommunications Market

1996–2001

INPUT®

Abstract

INPUT expects the federal telecommunications market to grow from $5.1 billion in fiscal year 1996 to more than $6 billion in fiscal year 2001. This represents a compound annual growth rate (CAGR) of 4%.

The *Federal Telecommunications Market, 1996–2001* report provides an analysis of the developments and opportunities in the federal market for telecommunications. This report examines how telecommunications equipment and services are being implemented and what trends will affect this implementation in the future. This examination is based on extensive research of the policies and regulations governing the acquisition and use of telecommunications in the federal government.

This research is analyzed in conjunction with data collected from the current federal A-11 budget submissions to the Office of Management and Budget to develop a forecast of the federal market for telecommunications equipment and services over the next five fiscal years. The findings of the entire report have been considered in the development of strategic recommendations for vendors competing in the federal telecommunications market.

This report contains 92 pages and includes 30 exhibits.

Federal IT Market Analysis Program

Federal Telecommunications Market,
1996–2001

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Exhibits

Introduction

This report and the related research have been developed as a part of INPUT's Federal Information Technology Market Analysis (MAR) Program. This program supports leading vendors in the information technology industry in developing and executing their strategies for pursuing business with the federal government.

This report will provide vendors with insight into the trends, perceptions and market forces affecting the federal telecommunications market. This study is based on extensive research on the use of telecommunications in the federal government, and the policies and regulations affecting its implementation. Contributing to the assessment of the overall telecommunications market is information obtained from key federal information resources management officials through telephone interviews.

Based on the information compiled from this research and from an examination of the fiscal year 1997 federal A-11 budget submissions to the Office of Management and Budget (OMB), this report presents INPUT's five-year forecast of the federal telecommunications market. INPUT also offers specific recommendations to federal telecommunications vendors intended to aid in the development of their strategic business plans.

A
Scope

This report examines the telecommunications market in the federal government over a five-year forecast period from fiscal year 1996 through fiscal year 2001. The scope of this report includes:

- Regulatory changes in the federal telecommunications market and their effects.

- The development of the Post FTS 2000 program and its impact on the market as a whole

- The current market environment from the vendor's perspective and how it is changing

- INPUT's forecast of the federal telecommunications market and the factors influencing its growth

- Recommendations to federal telecommunications vendors

B
Objectives

The objectives of this report are to describe the federal telecommunications market, identify the concerns of federal telecommunications vendors and purchasers, determine the federal telecommunications market's size and growth rate, and to provide strategic recommendations to federal telecommunications vendors. The issues addressed by this report include:

- To what extent have recent regulatory changes affected the federal telecommunications market?

- How will the development of the Post FTS 2000 program affect the overall federal telecommunications market?

- How do agencies perceive the performance of federal telecommunications vendors?

- How big is the federal telecommunications market, and how will it grow over the next five years?

- What forces are affecting the growth of the federal telecommunications market?

- What factors are affecting the growth of the federal telecommunications market?

C
Methodology

This report is based on extensive research on the federal telecommunications market from sources including agency documents and interviews with key federal information resources management officials.

INPUT's five-year forecast of the federal telecommunications market was developed based on the analysis of the fiscal year 1997 A-11 information technology budget reports submitted to OMB by federal agencies. Additionally, INPUT analyzed federal information resources management (IRM) strategic plans, identified telecommunications market forces and their level of influence, compared apparent market trends to those reported in INPUT's 1994 telecommunications study, and solicited assessments from federal agency representatives. All of these factors were considered both for the forecast of the overall telecommunications market, and for the forecast of the telecommunications market segments.

Lastly, all of the results of the market forecast were examined to define general observations that would identify the central issues in the federal telecommunications market. The general observations were, in turn, used as a basis for developing strategic recommendations for vendors in the federal telecommunications market.

D

Report Structure

This report contains seven chapters and two appendixes. The contents of the chapters following this introduction include:

Chapter II - Executive Overview - offers an overview of the analysis conducted as a part of this study and summarizes the major findings of the report. It is a brief synopsis of the important issues, conclusions, and recommendations.

Chapter III - Regulatory Change - presents an overview of the recent regulatory changes in the telecommunications market due to the Telecommunications Act of 1996, procurement reform, and innovations in the GSA multiple award schedule program.

Chapter IV - Post FTS 2000 and Alternatives - details the development of the Post FTS 2000 program and examines the current procurement strategies and alternatives.

Chapter V - Vendor Environment and Tactical Perspective - examines the issues currently facing vendors in the federal telecommunications market, including competition, agency perceptions of vendor performance, and the procurement outlook.

Chapter VI - Market Forecast and Analysis - presents INPUT five-year forecast of the federal telecommunications market, its segments, and the forces affecting its growth.

Chapter VI - Conclusions and Recommendations - provides general observations of the characteristics of the federal telecom-munications market, and, based on those observations, offers strategic recommendations to federal telecommunications vendors.

Appendixes A and B provide a glossary of federal acronyms and a list of federal policies, regulations, and standards.

E

Related INPUT Reports

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INPUT publishes several related reports as part of its MAR program. Each report analyzes a unique segment of the federal information technology market. Recent reports of interest to the reader include:

Federal Information Systems and Services Market, FY1996–FY2001

Federal Wireless Technology Market, FY1995–2000

Federal Telecommunications Market, FY1994–FY1999

Other recent INPUT reports include:

Federal Imaging Market, 1996–2001

Federal Financial Management Systems, 1996

Federal Document Management Systems, FY1995–FY2000

Federal Computer Security Market, FY1995

Federal E-mail Systems Market, FY1995

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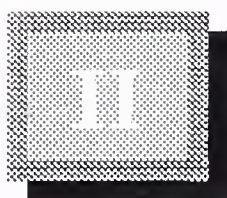
Executive Overview

This executive overview summarizes the major sections of INPUT's report, *Federal Telecommunications Market, 1996–2001.* It highlights the important elements of regulatory change, the current vendor environment, and INPUT's most recent telecommunications market five-year forecast.

A

Regulatory Change

The past year has seen some fundamental changes to the way in which telecommunications products and services are acquired by the federal government. The Telecommunications Act of 1996 radically altered the competitive structure of the market. Procurement reform has changed the way in which the federal government is acquiring all manner of information technology products and services. The General Services Administration (GSA) has also relaxed the rules regulating the multiple award schedules program, and, as a result, has greatly increased its value as a procurement method.

All of these regulatory changes will affect the nature of the federal telecommunications market by forcing agencies to rethink how they acquire, and ultimately how they use, telecommunications products and services.

1. Telecommunications Act of 1996

The Telecommunications Act of 1996 is at the center of the rapidly changing federal telecommunications market. Passed into law in February 1996, the Act is the first major examination of U.S. telecommunications policy since the Communications Act of 1934.

The main thrust of the Telecommunications Act is to break down the barriers to competition in the various segments of the telecommunications industry. Previously, regulatory barriers existed that prevented companies from competing in different markets simultaneously. The subsequent blurring of the telecommunications industry has created a great deal of uncertainty about the future of the market.

It is certain that the Telecommunications Act of 1996 will create an impact on the federal market through increased competition. Federal telecommunications purchasers will likely be facing an increasingly varied array of products and services from which to choose. This will have a much more noticeable effect than the content regulations, which have been causing such a stir in the commercial world.

Shockwaves of the Telecommunications Act are already being felt at GSA, where the Post FTS 2000 program office has released a revised program strategy allowing for a combined local and long distance service contract several years down the road (after competition has sorted itself out).

2. Procurement Reform

Both the Federal Acquisition Reform Act of 1996 (FARA) and the Information Technology Management Reform Act of 1996 (ITMRA), contained in the National Defense Authorization Act of 1996, ushered in a new era of acquiring and managing information technology (IT) by streamlining purchasing practices and eliminating cumbersome regulations. The acts, now collectively known as the Clinger-Cohen Act, are intended to solve problems related to efficiency and cost-effectiveness in the procurement process.

The reform places responsibility and accountability squarely on the agencies, while easing their regulatory burden. The Clinger-Cohen Act's repeal of the Brooks Act has removed GSA as the center of federal information technology policy and oversight. This is now the responsibility of the OMB and the agency Chief Information Officers (CIOs).

However, GSA is asserting its position as an important player in the procurement of information technology in three distinct ways. It is pursuing Post FTS 2000 and the possibility of creating a

comprehensive local and long distance service program in the post-Telecommunications Act market. GSA is aggressively expanding the functionality of the multiple award schedules, emphasizing electronic purchasing on GSA Advantage! GSA is also pursuing other innovative contracting approaches.

3. Changes at GSA

GSA's multiple award schedule (MAS) program consists of a variety of indefinite delivery, indefinite quantity (IDIQ) contracts open to all federal agencies worldwide. The contracts are awarded and administered as a centralized program. The negotiation of prices, terms and conditions is accomplished by GSA on behalf of the entire federal government. Schedule contracts allow GSA to focus the federal government's large volume buying power to establish fair and reasonable contract prices.

By October 1997 all multiple award schedules will be available electronically on GSA Advantage! In addition, blanket purchase agreements (BPAs) can now be set up with an MAS contractor to fulfill recurring needs. For large or complex requirements, MAS contractors can also now join with other schedule contract holders and submit a total solution to meet agencies' needs under a team arrangement

A blanket purchase agreement is a cooperative agreement under an MAS contract or contracts exclusively between a contractor and a specific agency. The intent of a BPA is to further reduce the administrative cost of acquiring commercial items from the General Services Administration Federal Supply Service. It is a way to fulfill recurring needs while taking advantage of quantity discounts, saving administrative time and reducing paperwork.

MAS contractors may also now use contractor team arrangements to provide solutions when responding to an agency requirement. These team arrangements can be included under a BPA. With these new features, the multiple award schedule program moves closer to providing a "total solution" for the acquisition of commercial products and services. It is not inconceivable to anticipate that an agency will contract for a large, complex solution under a BPA with a team arrangement including complementary contractors for telecommunications hardware, software, services and systems integration.

B

Post FTS 2000 and Alternatives

FTS 2000 may be the most widely recognized acronym in the federal telecommunications market. The Federal Telecommunications System 2000 (FTS 2000) provides long distance telecommunications service to the entire federal government and accounts for a significant percentage of federal telecommunications spending. The current development of the follow-on Post FTS 2000 will have a profound effect on the way the entire federal telecommunications market will evolve in the next five years.

1. Procurement Strategy

Post FTS 2000 was formally introduced in 1994 with an acquisition alternatives white paper published by the Acquisition Working Group of the Interagency Management Council (IMC). Based on analysis of factors including interoperability, cost, and transition impacts, IMC concluded that the comprehensive contracts approach yielded the best overall solution. This decision was not all that surprising because this is the same acquisition approach used for FTS 2000.

In August 1995, GSA released draft requests for proposals (DRFPs) for both telecommunications service and technical and management support. GSA also planned to award niche contracts for specific services in addition to the comprehensive contracts. In this manner, GSA hoped to address the negative aspects of limited flexibility and competition while maintaining the benefits of the comprehensive approach.

In February 1996, GSA responded to vendor complaints about the niche contract strategy by revising the Post FTS 2000 acquisition plan to include niche contracts only on an as-needed basis. However, to ensure competition, GSA decided to award three comprehensive services contracts instead of two.

2. Effect of the Telecommunications Act of 1996

The Telecommunications Act of 1996 is already having an impact on the pre-solicitation Post FTS 2000 program. By removing the regulatory barriers between different segments of the

telecommunications market, the Telecommunications Act of 1996 has radically altered the competitive structure of the telecommunications industry and with it, much of the foundation of the Post FTS 2000 acquisition strategy.

Bowing to congressional pressure to reevaluate the Post FTS 2000 acquisition strategy, GSA released yet another revised acquisition plan in September 1996. This plan calls for an interim services contract to cover the next five years, allowing time for the telecommunications market to sort itself out competitively. The acquisition strategy is depicted in Exhibit II-1.

Exhibit II-1

Alternative Approach

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007

FTS2000   "FTS2001"
- Local services not in scope (SDP-to-SDP)
- Dec 1, 1996 RFP Release
- 8 year prices (4/4)

▲ FTS2001 Award

FTS-TS
- Local services in scope (end-to-end nationwide)
- Multiple long-term contracts (4 or 5-year base plus options)
- RFP Release - Year 3 of FTS2001 (Year 2000)
- Awards - 2001

Metropolitan Area Acquisitions
- Most competitive local services markets competed in near-term (multiple, overlapping)
- ~80% of business competed by ~1999

▲ Pilot MAA Award   ▲ FTS-TS Award
(New York City)

Source: GSA Federal Telecommunications Service

To satisfy the current market for local service, GSA is testing its Metropolitan Area Acquisition program. The strategy is the same as that for FTS 2000. By using the collective bargaining power of the federal government, GSA will be able to negotiate lower rates than might be commercially available.

Currently, GSA expects to release the Post FTS 2000 DRFPs in November 1996.

3. Market Position

The significance of the FTS 2000 program in the federal telecommunications market is staggering, considering the fact that it is merely two contracts with two contractors collecting all of the

revenue. In fiscal year 1995, the government reportedly spent $761 million on FTS 2000 services. That gives the FTS 2000 contractors, AT&T and Sprint, a 15% share of the total federal telecommunications market, $5.2 billion in FY 1995.

Exhibit II-2 shows the position of the FTS 2000 program in terms of federal spending on telecommunications service in FY 1995.

Exhibit II-2

Telecommunications Service Spending, FY 1995

Contract Services
21%

FTS 2000 Services
33%

Wireless Service
1%

Local Service
29%

Non-FTS 2000
Services
16%

Total Service Spending - $2.4 Billion
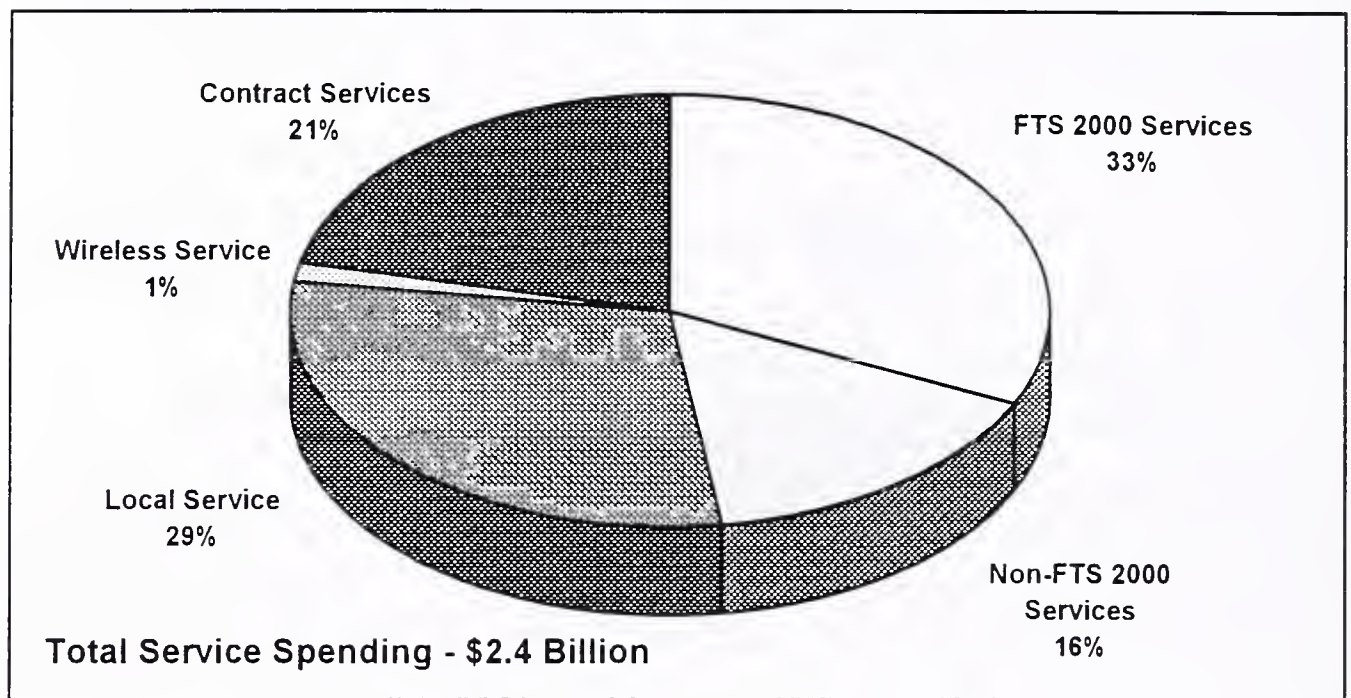
Source: GAO

Post FTS 2000 will indeed have a profound effect on the entire government market for telecommunications. As final RFPs are released and vendors begin in earnest the task of preparing proposals, they should keep in mind the scope of what they are undertaking and its significance in the federal telecommunications market.

C

Vendor Environment and Tactical Perspective

1. Vendor Environment

Telecommunications vendors are currently facing an immensely challenging marketplace in the federal government. The recent regulatory changes, both in the Telecommunications Act of 1996 and procurement reform, have eliminated much of the conventional wisdom regarding federal IT acquisitions. In addition, increased

competition will force vendors to work much harder to make sales that might have been considered easy a year ago.

To develop a picture of the major players in the federal telecommunications market, INPUT examined data compiled by the Federal Procurement Data Center (FPDC). Exhibit II-3 shows the top ten vendors in terms of total obligations reported in fiscal year 1995 under Product Service Code (PSC) 5805, the code for telephone equipment.

Exhibit II-3

Top Ten Telecommunications Hardware Vendors, FY 1995

Rank	Company	Obligations ($K)	Market Share
1	Bell Atlantic Corporation	147,257	34%
2	GTE Corporation	80,143	18%
3	Electrospace Systems Inc.	36,369	8%
4	Nortel Federal Systems Inc.	31,066	7%
5	AT&T Corporation	24,680	6%
6	Aspect Telecommunications Corporation	13,744	3%
7	General Analytics Corporation	12,770	3%
8	Pacific Electro Dynamics Inc.	6,461	1%
9	Ro Bac Inc.	4,960	1%
10	International Business Systems	3,423	1%
	Top Ten	**360,873**	**83%**
	All Others	**75,926**	**17%**
	Total	**436,799**	

Source: INPUT, FPDC PSC 5805

In addition to hardware, INPUT examined PSC R426, the code for communications services, and PSC S113, the code for communications utilities. Included with these two product service codes are all actions under the FTS 2000 contracts, so it should be no surprise that AT&T and Sprint command almost 80% of the reported obligations. It does serve, however, to highlight the importance of the Post FTS 2000 program to vendor market control.

INPUT also interviewed key federal information resources management officials about their impressions of the federal telecommunications vendors. In particular, they were asked about the strengths and weaknesses they had observed in vendors serving their agencies. Responses were positive overall, but some areas for consideration appeared.

Agency officials more often than not found vendors lacking in customer service areas such as maintenance. In addition, while agencies favor the flexibility of a wide variety of products and services, that same variety will logically lead to interoperability problems. The government does not currently have the resources to make new acquisitions that will not integrate with existing systems.

2. Tactical Perspective

The tactical perspective of the federal telecommunications market is influenced by the same uncertainty that is affecting the rest of the market. Competition and new procurement regulations will undoubtedly have a profound affect on the federal information technology market, but it remains to be seen what the effect will be and how it will play out in the telecommunications market.

Despite market growth in terms of spending, the number of distinct opportunities will probably decrease. Exhibit II-4 shows the number of major telecommunications opportunities INPUT is currently tracking. Professional services is by far the most in demand of the telecommunications market segments in terms of number of procurements, but all four categories are lower than they were as reported in INPUT's 1994 telecommunications report.

Exhibit II-4

Civilian and Defense Opportunities by Segment

	Leased Circuits	Hardware	Network Services	Professional Services
Civilian	25	32	7	53
Defense	15	25	1	40
Total	40	57	8	93
Change from 1994	-30	-20	-36	-11

Source: INPUT

What Exhibit II-4 doesn't show is the increasing use of GSA sponsored procurements such as the GSA multiple award schedules or the purchase of telecommunications and services (POTS) contracts. GSA's schedule program is particularly popular among federal purchasers since the maximum order limit has been lifted. The introduction of open market pricing is also having a significant effect on the use of the GSA schedules.

In talking with federal IRM officials, INPUT also asked what methods of procurement they preferred for acquiring telecommunications products and services. Their responses are summarized graphically in Exhibit II-5.

Exhibit II-5

Preferred Telecommunications Acquisition Methods
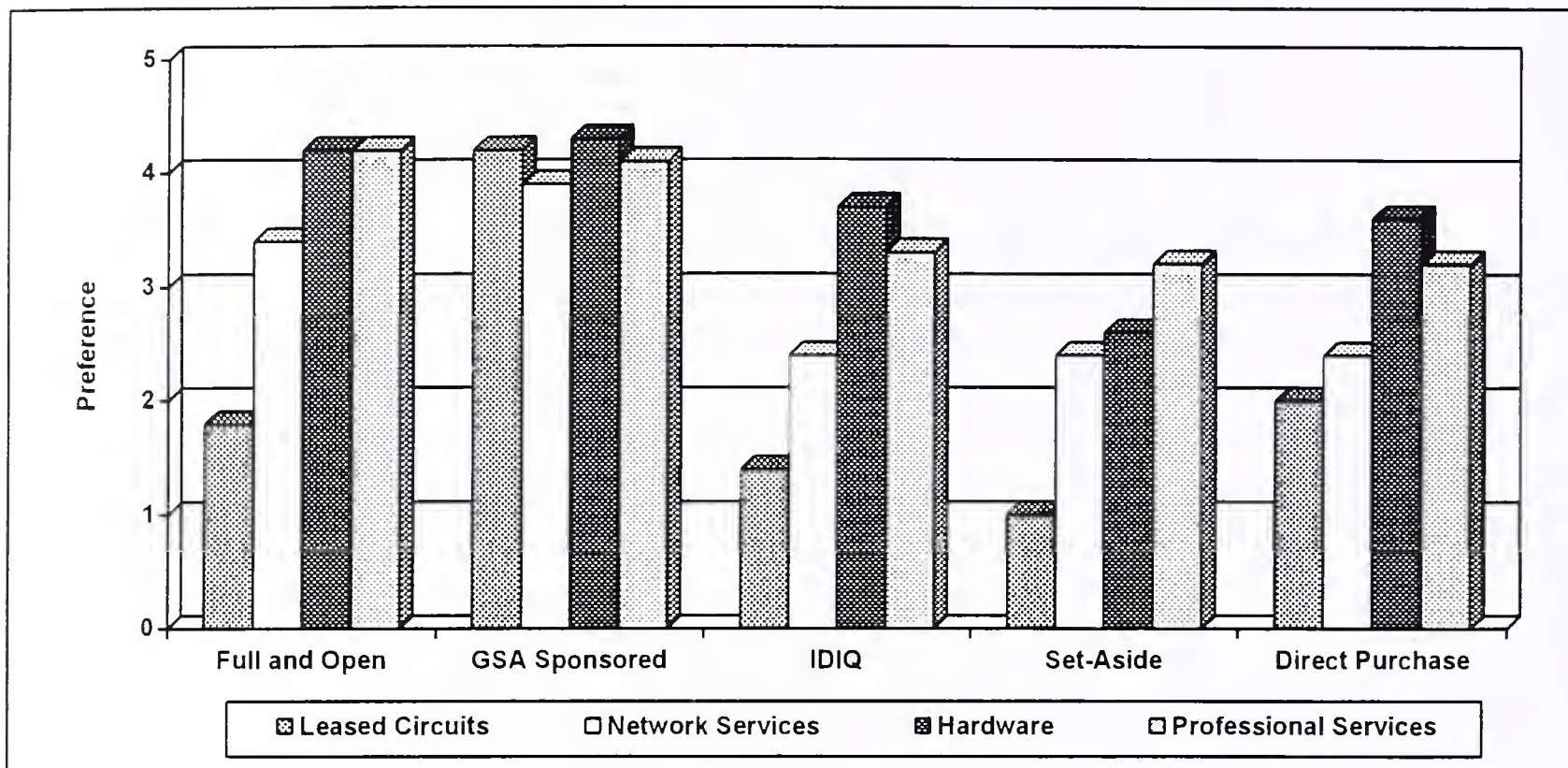
GSA sponsored procurement vehicles (including multiple award schedules, POTS contracts, FTS 2000, etc.) are now the most preferred method of acquisition for leased circuits and network services. Direct purchase and IDIQ contracts also scored highly for hardware acquisition, demonstrating the increasing importance of ease of procurement. Vendors must be aware that in the new procurement environment, ease of procurement is becoming almost as much of a selling point as price.

D

Market Forecast and Analysis

Despite the dynamic regulatory environment, INPUT anticipates only slight growth in the federal telecommunications market over the next five years. In fact, it will be growing slower than the overall information technology market. Many forces are affecting the growth of the telecommunications market, but the most influential factor, both as a positive and a negative, is the trend of federal downsizing and budget reductions.

1. Market Forecast

INPUT projects that the federal telecommunications market will grow from its current $5.1 billion to $6.0 billion by fiscal year 2001,

as shown in Exhibit II-6. This represents a compound annual growth rate (CAGR) of 4%, slightly lower than the overall federal information technology CAGR of 4.5%. The difference in their CAGRs means that telecommunications will actually be shrinking as a segment of the overall federal IT market. The telecommunications CAGR of 4% is approximately the level that was forecast in early 1990, but is down significantly from levels that were forecast in more recent years.

Exhibit II-6

Federal Telecommunications Market, FY 1996–FY 2001

CAGR 4%
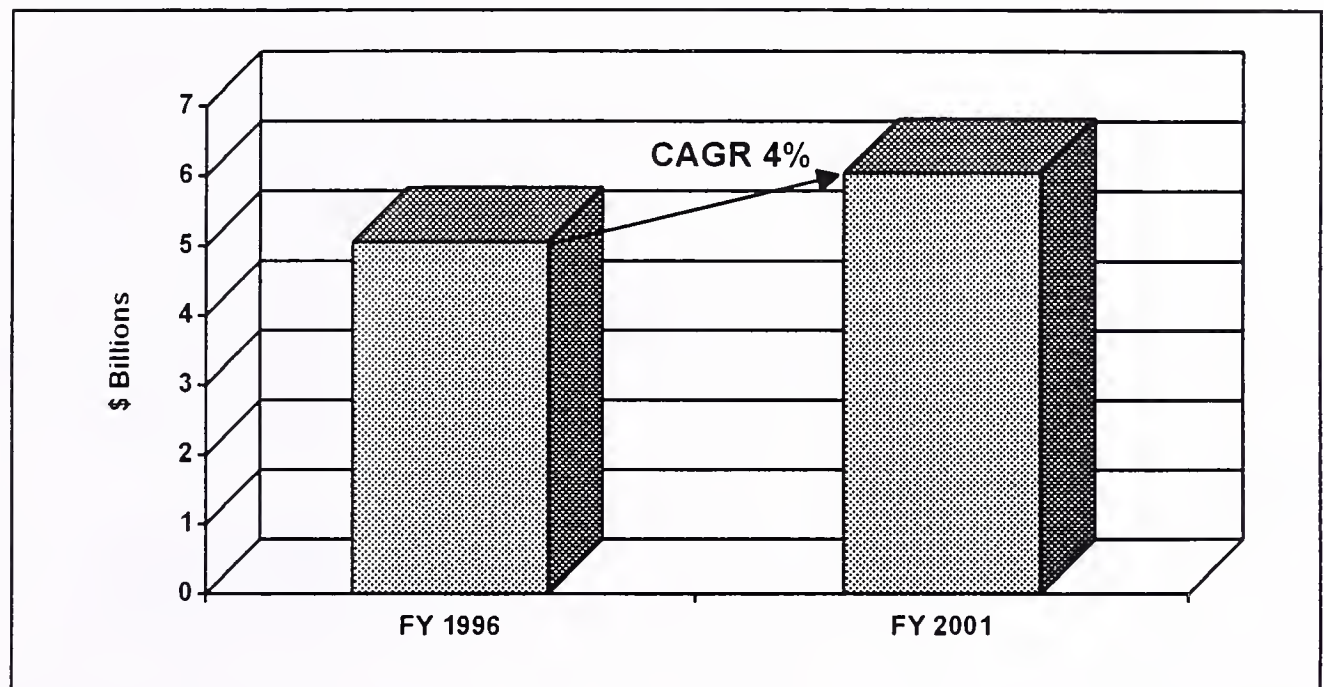
Source: INPUT

INPUT breaks the telecommunications market into four segments: leased circuits, network services, hardware, and professional services. Leased circuit expenditures are expected to grow from $2.7 billion in FY 1996 to $3.1 billion in FY 2001, at a CAGR of 3%. The network services market should grow from its FY 1996 level of $1.4 billion to $1.7 billion in FY 2001, also at a CAGR of 3%. Equipment outlays, largely CPE (Customer Premises Equipment) and ASP (Aggregated Switch Procurements), are nearly $478 million in FY 1996. Spending is expected to increase to $580 million in FY 2001, at 4% CAGR.

The relatively strong growth of the professional services segment is eclipsed by the magnitude of the market for leased circuits and network services. Professional services is likely to increase from $492 million in FY 1996 to about $664 million in FY 2001 at a CAGR of 6%. The growth in the professional services segment of the telecommunications market is reflective of the overall

movement in the federal government toward outsourcing in response to budget cuts and workforce reductions.

The general disparity between the Defense IT growth rate and the Civilian IT growth rate is especially evident in the telecommunications market. The civilian telecommunications market is expected to grow at a moderate 5% CAGR, 0.5% faster than the overall IT market. The defense telecommunications market, on the other hand, is expected to actually decline in the next fiscal year before a very slight growth trend takes over for a 2% CAGR over the period shown.

Exhibit II-7 shows the hardware and professional services segments to be the primary areas of lost ground within the defense budget. However, INPUT regards the defense telecommunications forecast as a conservative estimate of the defense market for commercial systems and services. Base or facility communications, which are not acquired through agency-wide programs, are usually not identified in agency information technology budget documents.

Exhibit II-7

Civilian vs. Defense Telecommunications Market Segments
FY 1996–FY 2001
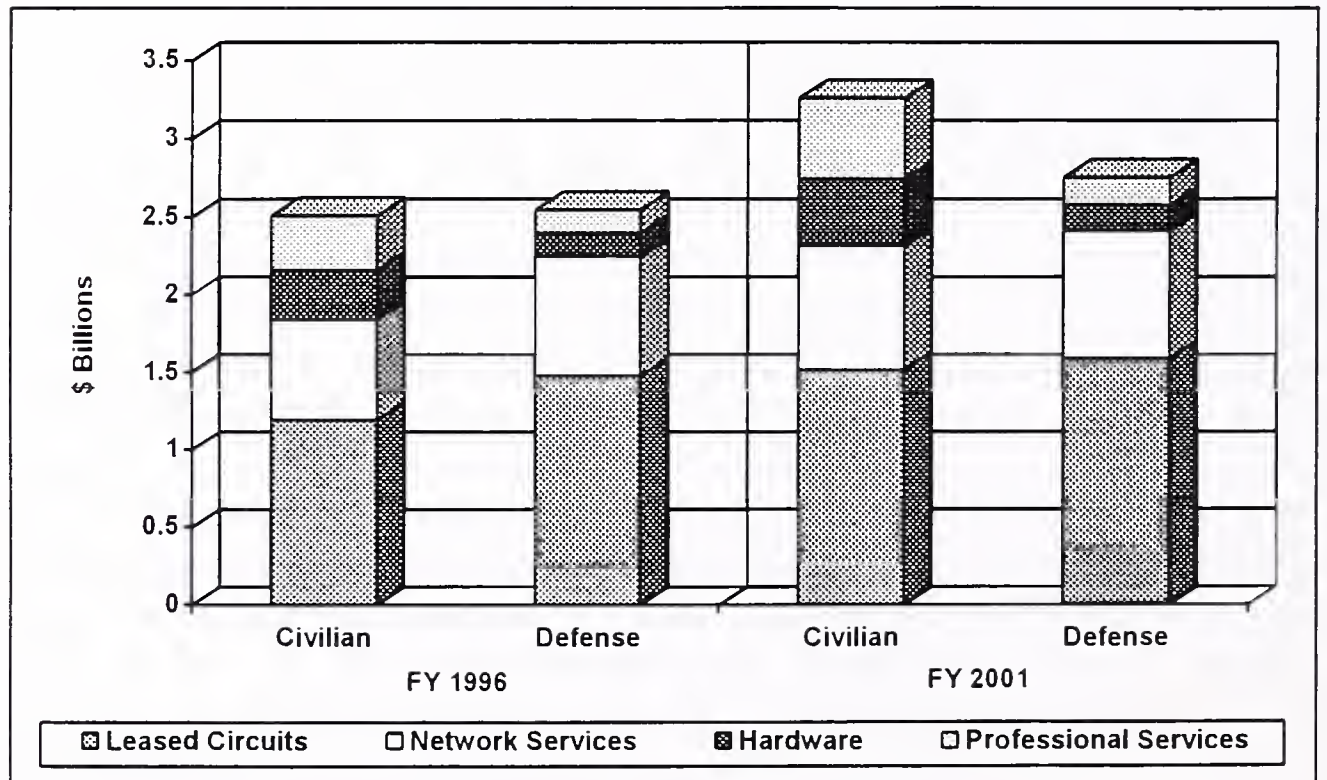
Source: INPUT

2. Market Analysis

As the primary force in the current federal information technology market, proposed deficit reduction measures are having a twofold effect on the federal demand for telecommunications. The declining federal budget and workforce are reducing both the money available and the requirement for some telecommunications services. On the other hand, the same factors are increasing the requirement for other telecommunications services to help agencies meet mission goals with limited resources.

Other factors are playing an influential role in driving the federal telecommunications market. As shown in Exhibit II-8, these factors center around competition, changing technology and new agency missions.

Exhibit II-8
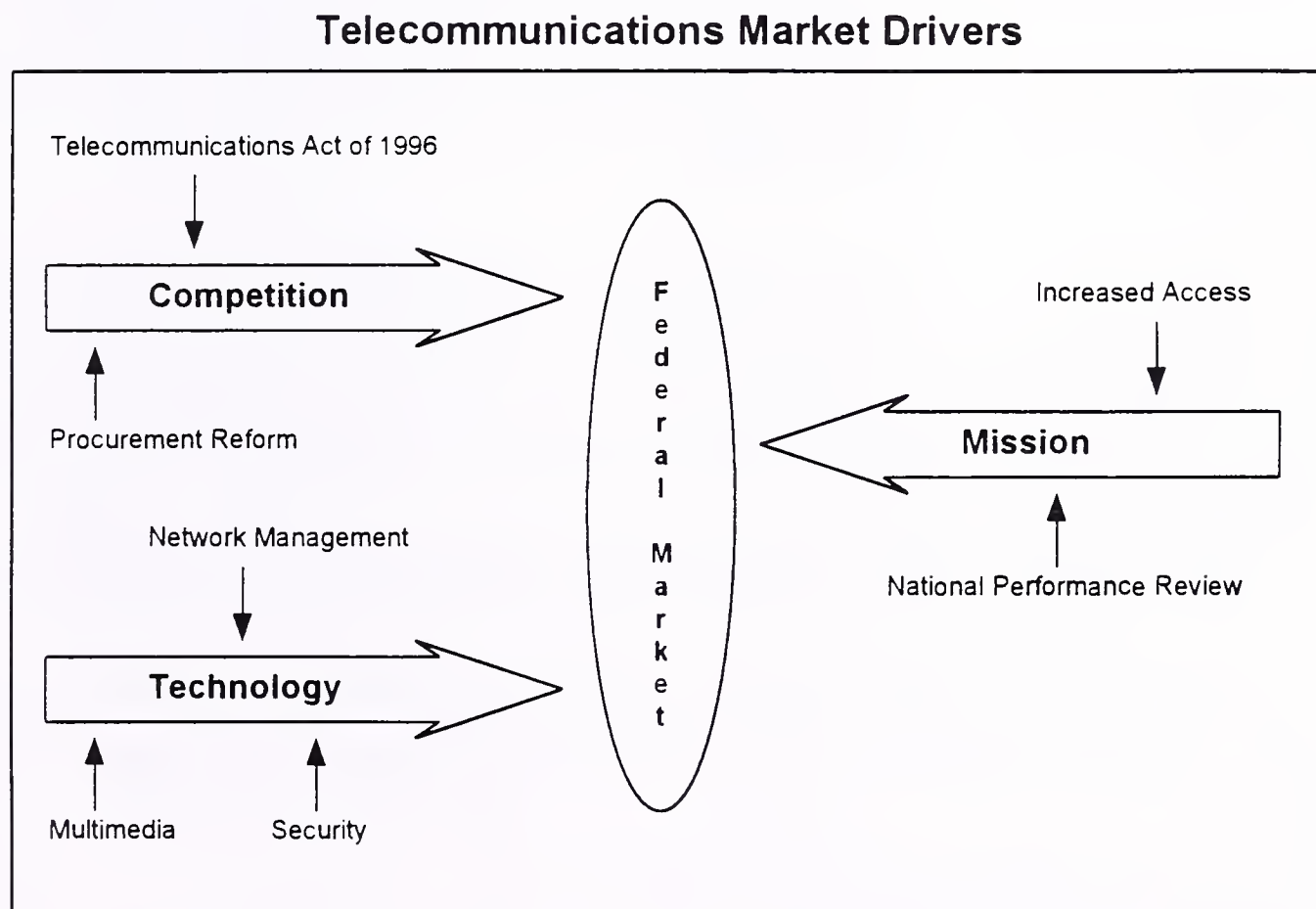
Telecommunications Market Drivers

All of these factors will impact the federal telecommunications market. Generally, these factors seem to be driving the market in the direction of positive growth. It remains to be seen, however, exactly what the impact of deficit reduction measures will be, and whether the impact will favor or inhibit the market's growth.

E
Conclusions and Recommendations

The federal telecommunications market is entering a period of dynamic evolution. The telecommunications market is subject not only to all of the forces affecting the overall information technology market, but also to the radically new industry structure being created by the Telecommunications Act of 1996. Vigilant awareness of regulatory and commercial developments will be the key to success in federal telecommunications market during the next five years.

1. Competition

Competition will probably be the most important element of the federal telecommunications market over the next five years. The regulatory changes of the Telecommunications Act of 1996, the Clinger-Cohen Act, and the changes in GSA's multiple award schedule program have greatly increased the level of competition in the market.

Federal agencies are seeking easier ways of acquiring products and services in an attempt to save time and money by avoiding a long procurement cycle. They are showing increasing favor for GSA sponsored programs such as the multiple award schedules for their low-risk, high-speed, cost effective approach to procurement.

- Vendors should increase marketing activities to develop strong agency relations, particularly with GSA.

- Vendors must be alert for "blink and miss" opportunities.

- Vendors must understand agency requirements and acquisition reforms.

2. Deficit Reduction

Deficit reduction is the primary driving force of the federal telecommunications market. Unfortunately, it is driving the market in opposite directions at the same time. Budget cuts are reducing the amount of money available for telecommunications projects. On the other hand, workforce downsizing is causing agencies to look to telecommunications as a way to maintain productivity with limited resources.

- Vendors should emphasize cost-effective solutions.

3. Post FTS 2000

The Post FTS 2000 program is the single greatest prize in the federal telecommunications market. With current spending on the FTS 2000 program at 15% of the total federal telecommunications market, the Post FTS 2000 program, expected to be similar in scope, is too big to ignore.

☎ Vendors should examine all of the opportunities presented by the Post FTS 2000 program.

4. Agency Perceptions

The perceptions that agency information resources management officials have of vendor performance in the federal telecommunications market are somewhat contradictory. These contradictions reveal much of the uncertainty currently present in the telecommunications market.

☎ Vendors need to clarify agency expectations in terms of cost and deliverables.

5. Civilian vs. Defense

While the defense agencies currently control the majority of the federal dollars available for telecommunications spending, the civilian market is growing more rapidly and will surpass the defense market as early as next year. By fiscal year 2001, INPUT forecasts the civilian telecommunications market to be nearly $1 billion larger than the defense telecommunications market.

☎ Vendors should examine the deployment of marketing and business development resources to take advantage of the growing civilian market.

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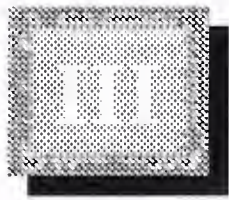
Regulatory Change

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A
Telecommunications Act of 1996

The Telecommunications Act of 1996 is at the center of the rapidly changing federal telecommunications market. Passed into law in February 1996, the Act is the first major examination of U.S. telecommunications policy since the Communications Act of 1934.

The main thrust of the Telecommunications Act is to break down the barriers to competition in the various segments of the telecommunications industry. Previously, regulatory barriers existed that prevented companies from competing in different markets simultaneously.

In the wake of the act, local service providers are free to enter the long distance markets and vice versa. Cable Television providers are free to enter the telephone market and telephone companies are

free to enter the cable television market. The subsequent blurring of the telecommunications industry has created a great deal of uncertainty about the future of the market.

Exhibit III-1 shows the schedule for implementation of the Telecommunications Act of 1996. The Federal Communications Commission (FCC) is currently in the process of developing rules for various elements of the Act. All rules should be in place by July 1997 in order for implementation of the Act to proceed as scheduled.

Exhibit III-1

Telecommunications Act of 1996 Implementation Timeline

FCC establishes rules for interconnection (8/96)

FCC establishes rules for RBOC interLATA competition (12/96–6/97)

FCC establishes rules for Access Charges, Universal Services (5/97)

| 2H1996 | 1H1997 | 2H1997 | 1H1998 | 2H1998 | 1H1999 |

PSCs implement FCC rules

FCC rules in place to support PSCs' implementation of Telecommunications Act of 1996

2000/01 ?
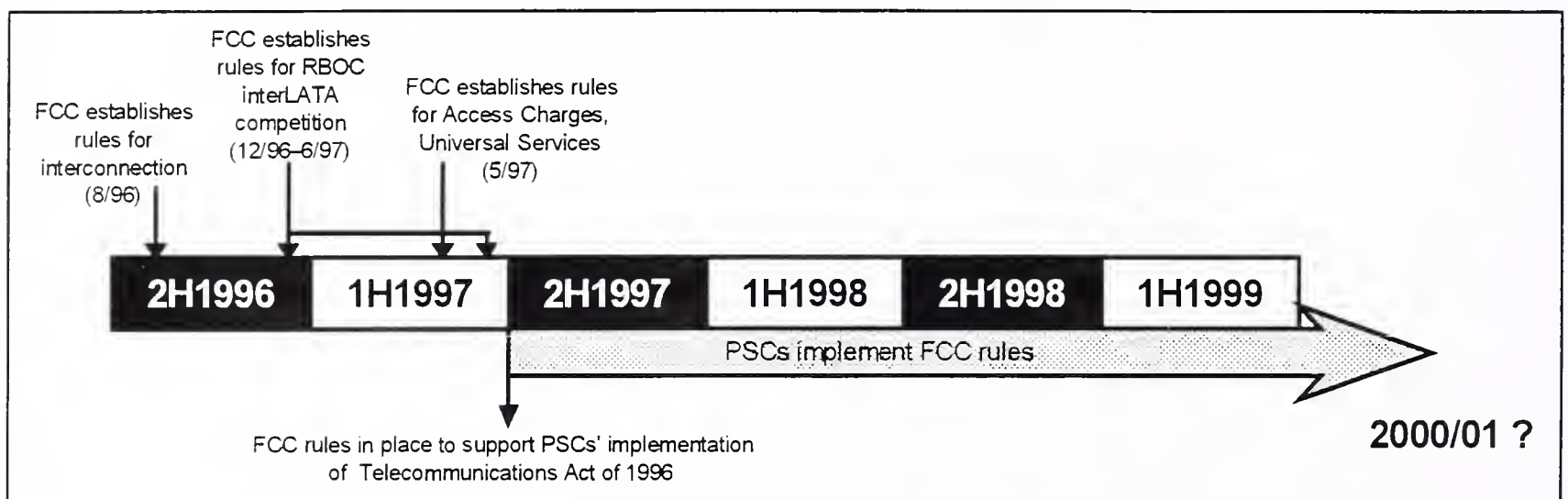
Source: GSA Federal Telecommunications Service

Exhibit III-2 shows the major telecommunications services players as they currently exist. As the Act is implemented, the previously clear lines between long distance (interexchange) carriers and local exchange carriers will be eliminated. A number of different scenarios are possible for the future telecommunications industry.

One potential scenario is that either AT&T or AT&T and one or more of the other interexchange carriers will consume local exchange carriers and dominate the market. The opposite is equally possible. The regional Bell operating companies (RBOCs) may divide and conquer the larger interexchange carriers with the speedy integration of new technologies to enhance traditional services. Yet another possible scenario is that telecommunications service of all forms will become so universal that consumers will know longer care who the actual service provider is.

Exhibit III-2

Major Telecommunications Services Players

Interexchange Carriers	• AT&T Corporation
	• MCI
	• MFS WorldCom
	• Sprint Corporation
Local Exchange Carriers	• Ameritech Corporation
	• Bell Atlantic Corporation
	• Bell South Corporation
	• GTE Corporation
	• NYNEX Corporation
	• Pacific Telesis Group
	• SBC Communications
	• U.S. West Corporation

Source: INPUT

It is certain that the Telecommunications Act of 1996 will create an impact on the federal market through increased competition. Federal telecommunications purchasers will likely be facing an increasingly varied array of products and services from which to choose. This will have a much more noticeable effect than the content regulations, which have been causing such a stir in the commercial world.

Shockwaves of the Telecommunications Act are already being felt at GSA, where the Post FTS 2000 program office has released a revised program strategy allowing for a combined local and long distance service contract several years down the road (after competition has sorted itself out).

B
Procurement Reform

1. Intent

Both the Federal Acquisition Reform Act of 1996 (FARA) and the Information Technology Management Reform Act of 1996 (ITMRA), contained in the National Defense Authorization Act of 1996, ushered in a new era of acquiring and managing information technology (IT) by streamlining purchasing practices and eliminating cumbersome regulations. The acts, now collectively known as the Clinger-Cohen Act, are intended to solve problems related to efficiency and cost-effectiveness in the procurement process.

The reform places responsibility and accountability squarely on the agencies, while easing their regulatory burden. The Clinger-Cohen Act's repeal of the Brooks Act has removed GSA as the center of federal information technology policy and oversight. This is now the responsibility of the OMB and the agency CIOs.

2. Pre-, Post-Brooks Act Comparison

A comparison of the old acquisition rules versus the new reformed methods is shown in Exhibit III-3. Even with the demise of GSA's authority per the Brooks Act, expect GSA to be involved in developing regulations implementing the IT management reforms. Although GSA's Federal Information Resources Management Regulation (FIRMR) will be dismantled pursuant to the new legislation, some of its content has been incorporated into the Federal Acquisition Regulation (FAR).

GSA is asserting its position as an important player in the procurement of information technology in three distinct ways. It is pursuing Post FTS 2000 and the possibility of creating a comprehensive local and long distance service program in the post-Telecommunications Act market. GSA is aggressively expanding the functionality of the multiple award schedules, emphasizing electronic purchasing on GSA Advantage! GSA is also pursuing other innovative contracting approaches.

Exhibit III-3

Brooks Act - IT Management Reform Act (ITMRA) Comparison

Aspect	Brooks Act Era ('65-'95)	ITMRA Era ('96 →)
Focus	Technology and Process	Mission, Cost-effectiveness and Performance
Emphasis	Single Agency Solutions	Interagency Coordination Sharing of Expertise
Procurement Authority	Split	Agencies
Accountability	Diffuse	Agencies
Enforcers	GSA	OMB Director and CIOs
Accountability Tactics	GSA Exclusive IT Procurement Authority	Agency Budget-linked Capital Planning and Investment Control Agency Performance and Results-based Management
Protest Jurisdiction	GSBCA	GAO
Implementation Tactics	Massive, Multi-year Systems Development	Modular 12-18 month IT Infusions
Regulation Tactics	DPA FIRMR	no-DPA FIRMR on way out
Acquisition Tactics	Agency investment	Multi-agency investment
Acquisition Process	Prove acquisition integrity	Prove mission/business processes Plan before purchasing
Negotiation Tactics	All bidders through process	Bidders excluded after initial proposals
COTS	Option	Preferred approach
Industry Communications	Cautious	Encouraged

Source: INPUT

3. Impact Analysis

Many of the impacts of procurement reform are already visible. The Federal Aviation Administration (FAA) has implemented acquisition reform changes that reduce the number of agency documents and pages governing acquisition by 50%. They expect to achieve a total reduction of 80%–90%. Other agencies will follow requiring that vendors, particularly those providing equipment and professional services, be ready for short-cycle procurements, increased capture costs due to smaller contracts with more competition, and the increased importance of relationship buys.

C

Changes at GSA

1. Multiple Award Schedules

GSA's MAS program consists of a variety of IDIQ contracts open to all federal agencies worldwide. The contracts are awarded and administered as a centralized program. The negotiation of prices, terms and conditions is accomplished by GSA on behalf of the entire federal government. Schedule contracts allow GSA to focus the federal government's large volume buying power to establish fair and reasonable contract prices.

The MAS program provides federal agencies with more than four million products, including telecommunications equipment and services, from more than 6,000 vendors. Agencies place orders directly with the contractor without ordering restrictions, around the world. The schedules benefit agencies by providing products and services at reasonable prices without the time and expense of an independently negotiated contract.

By October 1997 all multiple award schedules will be available electronically on GSA Advantage! In addition, BPAs can now be set up with an MAS contractor to fulfill recurring needs. For large or complex requirements, MAS contractors can also now join with other schedule contract holders and submit a total solution to meet agencies' needs under a team arrangement

2. Blanket Purchase Agreements

A BPA is a cooperative agreement under an MAS contract or contracts exclusively between a contractor and a specific agency. The intent of a BPA is to further reduce the administrative cost of acquiring commercial items from the General Services Administration Federal Supply Service. It is a way to fulfill recurring needs while taking advantage of quantity discounts, saving administrative time and reducing paperwork.

Under the new acquisition rules BPAs are not restricted by maximum order limitations (MOL). With the removal of the MOL, agencies are no longer bound by any dollar limitations when placing orders under a BPA. BPAs benefit federal agencies by eliminating contracting and open market costs such as market research, development of solicitations, and the evaluation of bids and offers.

With a multiple award schedule BPA, agencies can order as much or as little as they want, as often as they want. Agencies can use a BPA as an ordering device open to their field offices across the nation, allowing each office to place orders directly. In doing so, the entire agency benefits from additional discounts negotiated into the agreement.

3. Contractor Team Arrangements

The Federal Acquisition Streamlining Act has encouraged all federal agencies to pursue innovative approaches to the acquisition of products and services. In light of this, agencies may refer to FAR 9.6—Contractor Team Arrangements. The policy and procedures outlined in this section provide flexibility and allow innovative acquisition methods when using GSA's multiple award schedules.

MAS contractors may use contractor team arrangements to provide solutions when responding to an agency requirement. These team arrangements can also be included under a BPA. However, orders under a team arrangement are subject to terms and conditions of the contract, and participation in a team arrangement is limited to those vendors who already hold MAS contracts.

With these new features, the multiple award schedule program moves closer to providing a "total solution" for the acquisition of commercial products and services. It is not inconceivable to

anticipate that an agency will contract for a large, complex solution under a BPA with a team arrangement including complementary contractors for telecommunications hardware, software, services and systems integration.

The changes in the GSA multiple award schedule program combined with the procurement reform of the Clinger-Cohen Act and the effects on competition of the Telecommunications Act of 1996 are working together to create one of the most challenging and competitive environments federal telecommunications vendors have ever seen. A comprehensive understanding of the opportunities presented by these changes and a well thought out strategy could be a vendor's most important assets through the next five years.
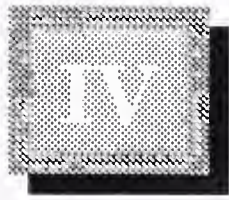
IV

Post FTS 2000 and Alternatives

FTS 2000 may be the most widely recognized acronym in the federal telecommunications market. FTS 2000 provides long distance telecommunications service to the entire federal government and accounts for a significant percentage of federal telecommunications spending.

The current development of the follow-on Post FTS 2000 will have a profound effect on the way the entire federal telecommunications market will evolve in the next five years. This chapter examines the history of the Post FTS 2000 program and the alternatives being considered for its implementation.

A

Background

The FTS 2000 program replaced the original Federal Telecommunications System as the government's primary means of purchasing long distance communications service.
FTS 2000 offers long distance voice, video, and data transmission with features including teleconferencing, E-mail, and videoconferencing to almost 1.7 million federal users nationwide. The FTS 2000 program was, and continues to be, an effort to use the leverage of the entire federal government as a tool to achieve lower overall prices for long distance communications service.

FTS 2000 was awarded to AT&T Corporation and Sprint Corporation in December 1988. The program was split, with AT&T providing 60% of FTS 2000 service and the remaining 40% being provided by Sprint. The multiple award strategy was designed to foster a competitive environment that would help keep costs low. GSA extended the competitive value of the multiple award arrangement by recompeting 40% of the network in the fourth and

seventh years of the program. The recompetition has allowed AT&T to increase its allocation to 76% of the total network and associated revenues.

GSA also enhanced the government's bargaining position by mandating the use of the FTS 2000 network for most federal agencies. Mandatory use guaranteed AT&T and Sprint a certain level of traffic, which allowed them to reduce overall fees for service. Mandatory use exemplifies the core of GSA's FTS 2000 acquisition strategy: leveraging the size of the federal market to achieve lower telecommunications rates.

Mandatory use has also been one of the major points of contention for critics of the FTS 2000 program. They have argued that mandatory contracts eliminate flexibility and inhibit competition. Non-mandatory contracts are expected to create a more competitive environment which, in turn, will drive rates even lower. However, vendors (most notably AT&T and Sprint), have argued against non-mandatory contracts, saying that without a guaranteed level of network usage, they cannot depend on the economies of scale that will allow them to lower rates.

Under the current program, GSA reports telecommunications service costing approximately 17% lower than open market rates. The General Accounting Office (GAO) reported in June 1996 that the government spent a total of $761 million on FTS 2000 services in fiscal year 1995. Exhibit IV-1 shows FTS 2000 spending by agency for that period. FTS 2000 was originally estimated to have a combined value of $25 billion over its ten-year life span. However, the ultimate value will depend largely on the development of the follow-on program, Post FTS 2000, and any extensions that may result from its slow implementation.

Exhibit IV-1

FTS 2000 Agency Spending, FY 1995
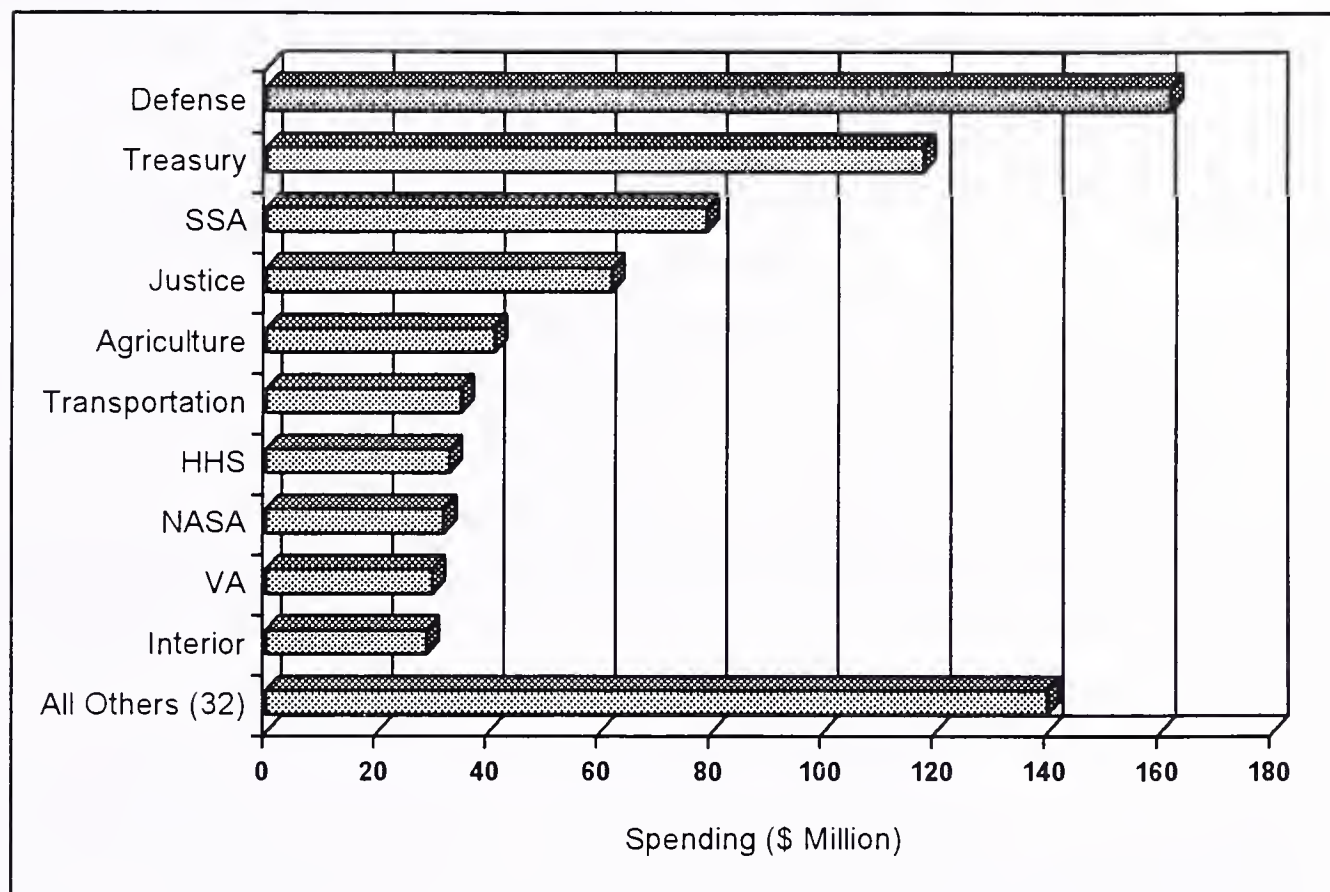
Source: GAO

B
Procurement Strategy

1. Alternatives

Post FTS 2000 was formally introduced in 1994 with an acquisition alternatives white paper published by the Acquisition Working Group of the Interagency Management Council (IMC). IMC is a group of federal information resources management officials who assist GSA in the oversight of the FTS 2000 program. The white paper outlined eight alternative procurement strategies for the Post FTS 2000 program, as shown in Exhibit IV-2.

Exhibit IV-2

Post FTS 2000 Acquisition Alternatives

1. **Comprehensive Contracts**

2. **Integration Contractor**

3. Span-Specific Contracts—Partitioning based on span

4. Regional Comprehensive Contracts—Partitioning based on geographic region

5. Integrated Business Process Solutions Using Commodity Contracts

6. **Service-Specific Contracts—Partitioning based on service type**

7. **Service/Span-Specific Contracts**

8. Individual Agency Acquisitions

Source: IMC Acquisition Working Group

2. The Comprehensive Approach

The eight alternatives were then narrowed to four: comprehensive contracts, integration contractor, service-specific contracts, and service/span specific contracts. Based on an analysis of factors including interoperability, cost, and transition impacts, IMC concluded that the comprehensive contracts approach yielded the best overall solution. This decision was not all that surprising because this is the same acquisition approach used for FTS 2000. Exhibit IV-3 identifies the characteristics of the comprehensive contracts approach.

Exhibit IV-3

Comprehensive Contracts Characteristics

Positive Characteristics	Negative Characteristics
High interoperability	Low flexibility
Low transition impacts	Low ongoing competition
Low complexity	Limited industry participation
Highly integrated solution	
One-stop shopping for agencies	

Source: IMC Acquisition Working Group

In August 1995, GSA released DRFPs for both telecommunications service and technical and management support. The scope of the telecommunications service (TS) DRFP included at least two

comprehensive services contracts, an additional contract for switched data and valued added services, and a wireless service contract. GSA also planned to award niche contracts for specific services in addition to the comprehensive contracts. In this manner, GSA hoped to address the negative aspects of limited flexibility and competition while maintaining the benefits of the comprehensive approach.

Shortly after the release of the DRFPs, GSA and the Defense Information Systems Agency (DISA) agreed to pursue a joint wireless service contract. The resulting solicitation for Federal Wireless Telecommunications Services (FWTS) replaced the wireless portion of GSA's telecommunications service RFP and DISA's wireless services RFP for the Defense Information Systems Network.

3. The Comprehensive Approach—Part II

In February 1996, GSA responded to vendor complaints about the niche contract strategy by revising the Post FTS 2000 acquisition plan to include niche contracts only on an as-needed basis. However, to ensure competition, GSA decided to award three comprehensive services contracts instead of two. Similar to FTS 2000 program's 60%–40% forced revenue split, Post FTS 2000 will be split 40%–30%–30% among the three successful contractors.

On the subject of mandatory versus non-mandatory purchase, GSA compromised by setting a minimum revenue guarantee of $1 billion. The guarantee will be met by making Post FTS 2000 use mandatory until the minimum is reached, a milestone GSA expects within the first two years of the program. GSA hopes to use this strategy to obtain the flexibility and competition of non-mandatory purchasing, while still offering the vendors at least a partial revenue guarantee.

C

Effect of the Telecommunications Act of 1996

The Telecommunications Act of 1996 is already having an impact on the pre-solicitation Post FTS 2000 program. By removing the regulatory barriers between different segments of the telecommunications market, the Telecommunications Act of 1996 has radically altered the competitive structure of the telecommunications industry and with it, much of the foundation of

the Post FTS 2000 acquisition strategy. Rather than creating a new playing field, the Act has created a great deal of uncertainty about the direction the market will take in the next few years.

Bowing to congressional pressure to reevaluate the Post FTS 2000 acquisition strategy, GSA released yet another revised acquisition plan in September 1996. This plan calls for an interim services contract to cover the next five years, allowing time for the telecommunications market to sort itself out competitively. The interim contract would be followed by a comprehensive services contract encompassing both local and long distance services. The acquisition strategy is depicted in Exhibit IV-4.

Exhibit IV-4

Alternative Approach

| 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |

FTS2000   **"FTS2001"**
- Local services not in scope (SDP-to-SDP)
- Dec 1, 1996 RFP Release
- 8 year prices (4/4)

FTS-TS
- Local services in scope (end-to-end nationwide)
- Multiple long-term contracts (4 or 5-year base plus options)
- RFP Release - Year 3 of FTS2001 (Year 2000)
- Awards - 2001

▲ **FTS2001 Award**

Metropolitan Area Acquisitions
- Most competitive local services markets competed in near-term (multiple, overlapping)
- ~80% of business competed by ~1999

▲ **Pilot MAA Award (New York City)**   ▲ **FTS-TS Award**

Source: GSA Federal Telecommunications Service

The interim contract, dubbed "FTS 2001" by GSA would provide long distance services in the same manner as the current FTS 2000 program. Local services would not be within the scope of FTS 2001. The later comprehensive telecommunications service contracts would be awarded in fiscal year 2001 and would include local services for end-to-end coverage nationwide. Exhibit IV-5 shows the timeline for the alternate Post FTS 2000 approach as compared to the implementation schedule for the Telecommunication Act of 1996.

To satisfy the current market for local service, GSA is testing its Metropolitan Area Acquisition program. The pilot program is being pursued in New York, NY. These contracts will provide local

telecommunications service in highly competitive markets with a large federal presence. The strategy is the same as that for FTS 2000. By using the collective bargaining power of the federal government, GSA will be able to negotiate lower rates than might be commercially available.

Exhibit IV-5

Alternate FTS Program—
Acquisition Schedule vs. FCC Rule Making Schedule
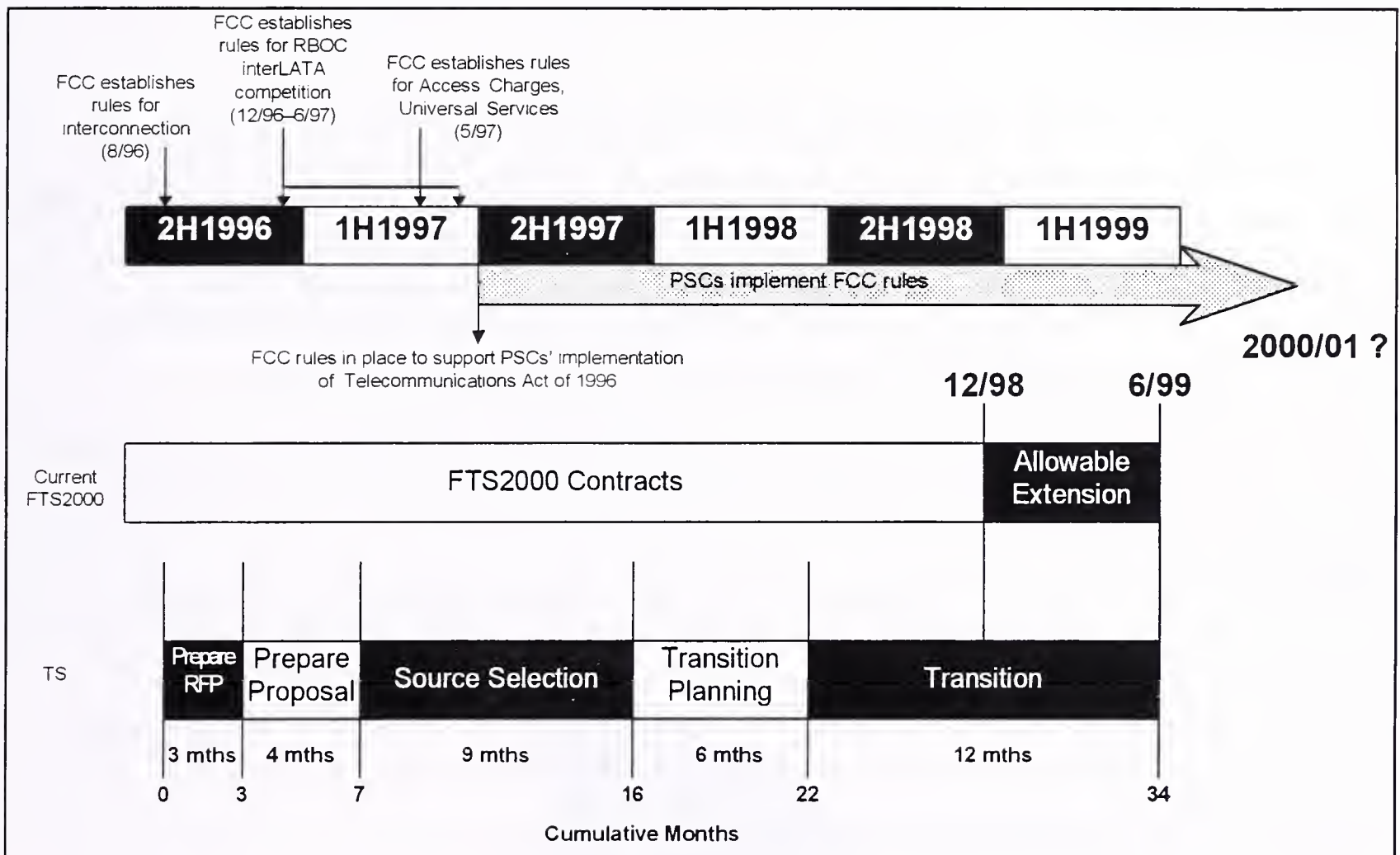
Source: GSA Federal Telecommunications Service

Currently, GSA expects to release the Post FTS 2000 DRFPs in November 1996.

D
Overlap with DISN

During the development of the DISN and Post FTS 2000 solicitations, a significant amount of attention was devoted to the apparent overlap in services to be provided by both programs. The option of combining both procurements into one was examined, but ultimately rejected by the Department of Defense (DoD). The Defense Department continued the DISN procurement, saying that

it would utilize Post FTS 2000 services to the maximum extent possible, but that only DISN would satisfy the requirement for secure military communications.

GSA and DISA did agree to jointly pursue a wireless services procurement. The product of that endeavor, the FWTS contract, is due for award by December 1996.

E

Market Position

The significance of the FTS 2000 program in the federal telecommunications market is staggering, considering the fact that it is merely two contracts with two contractors collecting all of the revenue. In fiscal year 1995, the government reportedly spent $761 million on FTS 2000 services. That gives the FTS 2000 contractors, AT&T and Sprint, a 15% share of the total federal telecommunications market, $5.2 billion in FY 1995.

Exhibit IV-6 shows the position of the FTS 2000 program in terms of federal spending on telecommunications service in FY 1995.

Exhibit IV-6

Telecommunications Service Spending, FY 1995

Contract Services
21%

FTS 2000 Services
33%

Wireless Service
1%

Local Service
29%

Non-FTS 2000 Services
16%

Total Service Spending - $2.4 Billion
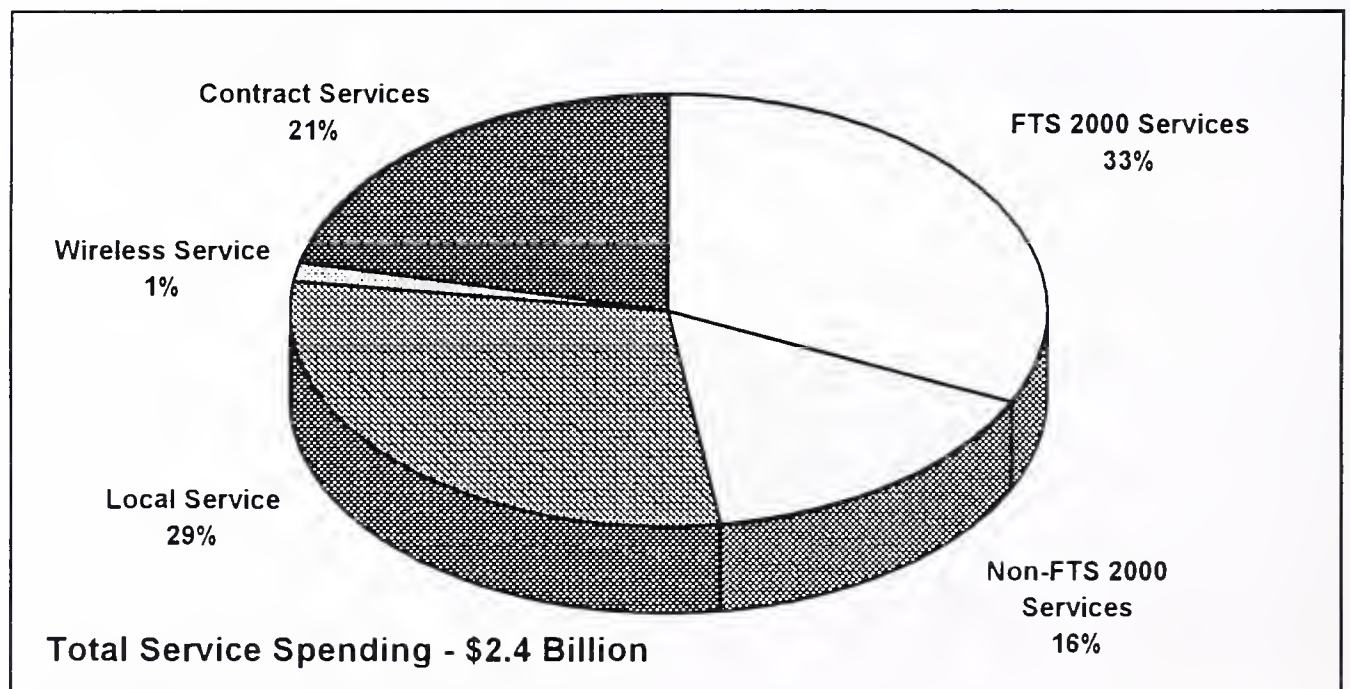
Source: GAO

The FTS 2000 program accounted for a third of all federal spending for telecommunications service in FY 1995. The Post FTS 2000 program is expected to be similar in scope and, although Post FTS 2000 will also be split among more vendors than its predecessor,

the spending patterns of FTS 2000 demonstrate the importance of the Post FTS 2000 program for the vendors who capture it.

Post FTS 2000 will indeed have a profound effect on the entire government market for telecommunications. As final RFPs are released and vendors begin in earnest the task of preparing proposals, they should keep in mind the scope of what they are undertaking and its significance in the federal telecommunications market.

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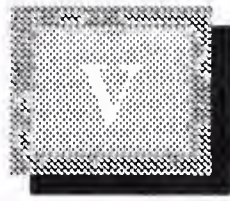
Vendor Environment and Tactical Perspective

This section discusses the rapidly changing environment federal telecommunications vendors are finding themselves in today, both in terms of competition and agency perceptions of vendor performance. Also in this section is a brief discussion of the federal telecommunications market from a tactical perspective. INPUT examines some of the near-term telecommunications procurements, as well as the emerging acquisition methods.

A

Vendor Environment

Telecommunications vendors are currently facing an immensely challenging marketplace in the federal government. The recent regulatory changes, both in the Telecommunications Act of 1996 and procurement reform, have eliminated much of the conventional wisdom regarding federal IT acquisitions. In addition, increased competition will force vendors to work much harder to make sales that might have been considered easy a year ago.

1. Players in the Federal Telecommunications Market

To develop a picture of the major players in the federal telecommunications market, INPUT examined data compiled by the Federal Procurement Data Center. FPDC collects information on all federal contract actions filed with obligations greater than $25,000. Obligations are agreements to purchase a specified amount of goods or services and are not accurate for determining specific revenue or spending figures. However, INPUT has found them to be useful for determining market share, and vendor and agency rankings for certain market segments.

INPUT examined the contract actions filed under three product service codes. PSCs describe the work being performed for a specific contract action. Exhibit V-1 shows the top ten vendors in terms of total obligations reported in fiscal year 1995 under PSC 5805, the code for telephone equipment.

While there are several other PSCs for telecommunications hardware, those codes often include technology embedded in weapons systems, which are outside of INPUT's scope of analysis. INPUT believes that examining only PSC 5805 will provide a much clearer picture of the major telecommunications hardware vendors for the purposes of this report.

Exhibit V-1

Top Ten Telecommunications Hardware Vendors, FY 1995

Rank	Company	Obligations ($K)	Market Share
1	Bell Atlantic Corporation	147,257	34%
2	GTE Corporation	80,143	18%
3	Electrospace Systems Inc.	36,369	8%
4	Nortel Federal Systems Inc.	31,066	7%
5	AT&T Corporation	24,680	6%
6	Aspect Telecommunications Corporation	13,744	3%
7	General Analytics Corporation	12,770	3%
8	Pacific Electro Dynamics Inc.	6,461	1%
9	Ro Bac Inc.	4,960	1%
10	International Business Systems	3,423	1%
	Top Ten	**360,873**	**83%**
	All Others	**75,926**	**17%**
	Total	**436,799**	

Source: INPUT, FPDC PSC 5805

In addition to hardware, INPUT examined PSC R426, the code for communications services, and PSC S113, the code for communications utilities. These codes taken together should provide a clear picture of the major telecommunications services vendors. Exhibit V-2 shows the top ten vendors in terms of total obligations reported in fiscal year 1995 under PSC R426 and PSC S113.

Included with these two product service codes are all actions under the FTS 2000 contracts, so it should be no surprise that AT&T and Sprint command almost 80% of the reported obligations. It does serve, however, to highlight the importance of the Post FTS 2000 program to vendor market control.

Exhibit V-2

Top Ten Communications Services/Utilities Vendors, FY 1995

Rank	Company	Obligations ($K)	Market Share
1	AT&T Corporation	529,563	54%
2	Sprint Communications	243,175	25%
3	SAIC	22,903	2%
4	BBN Communications Corporation	15,923	2%
5	Southwestern Bell	14,958	2%
6	GTE Corporation	13,391	1%
7	US West Communications	12,555	1%
8	US Electrodynamics Inc.	9,366	1%
9	Continental Telephone Company Of VA	7,701	1%
10	Bell Atlantic Corporation	7,616	1%
	Top Ten	**877,151**	**89%**
	All Others	**84,741**	**9%**
	Total	**984,253**	

Source: INPUT, FPDC

2. Agency Perceptions of Vendor Performance

INPUT also interviewed key federal information resources management officials about their impressions of the federal telecommunications vendors. In particular, they were asked about the strengths and weaknesses they had observed in vendors serving their agencies. Responses were positive overall, but some areas for consideration appeared.

The most often cited strengths among federal telecommunications vendors were the high quality of products and services, and vendor responsiveness to agency inquiries. These and the other strengths mentioned by federal officials are shown in Exhibit V-3.

Exhibit V-3

Vendor Strengths

- High Quality Products and Services
- Responsiveness
- Variety of Products and Services
- Fair Prices Tendered
- Reliability
- Marketing

Unfortunately, it is very difficult to draw any conclusions from the listed vendor strengths because, with the single exception of marketing, they are all also cited as weaknesses. A list of all weaknesses identified by agency officials is presented in Exhibit V-4.

Exhibit V-4

Vendor Weaknesses

- Customer Service
- Cost
- Quality and Reliability
- Delivering on requirements and promises
- Integration with existing equipment
- High turnover of personnel

The most often mentioned weaknesses were customer service and cost. These seem to fly in the face of the responsiveness and fair prices listed in Exhibit V-3 as strengths. However, vendor responsiveness seemed to be strongest in answering agency inquiries, particularly when regarding a potential sale. Agency officials more often than not found vendors lacking in customer service areas such as maintenance. As for cost, fair market prices do not necessarily equal low market prices.

A glaring contradiction exists on the subject of quality and reliability. This inconsistency is not so easily interpreted. The most probable explanation is that some deficiency exists on the part of some vendors' deliverables, but not on others'. Another explanation could be differing expectations on the part of federal agencies.

Another interesting relationship highlighted in Exhibits V-3 and V-4 is that between the strength of the variety of products and services offered and the weakness of integration with existing equipment. While agencies favor the flexibility of a wide variety of products and services, that same variety will logically lead to interoperability problems. The government does not currently have the resources to make new acquisition that will not integrate with existing systems.

B

Tactical Perspective

The tactical perspective of the federal telecommunications market is influenced by the same uncertainty that is affecting the rest of the market. Competition and new procurement regulations will undoubtedly have a profound affect on the federal information technology market, but it remains to be seen what the effect will be and how it will play out in the telecommunications market.

Despite market growth in terms of spending, the number of distinct opportunities will probably decrease. The FTS 2000 contract recompete may prove a major exception as GSA appears ready to embrace a collection of acquisitions with different scopes rather than one contract, multiply awarded for all services.

Exhibit V-5 shows the number of major telecommunications opportunities INPUT is currently tracking. Professional services is by far the most in demand of the telecommunications market segments in terms of number of procurements, but all four categories are lower than they were as reported in INPUT's 1994 telecommunications report.

Exhibit V-5

Civilian and Defense Opportunities by Segment

	Leased Circuits	Hardware	Network Services	Professional Services
Civilian	25	32	7	53
Defense	15	25	1	40
Total	40	57	8	93
Change from 1994	-30	-20	-36	-11

Source: INPUT

Exhibit V-6 shows some of the larger telecommunications procurements currently tracked by INPUT in addition to the $20 billion Post FTS 2000 program and its related niche procurements. As the opportunities listed in the exhibit below demonstrate, even outside of the Post FTS 2000 program, a very large amount of potential revenue is tied up in a relatively small number of individual procurements.

All of the programs listed in Exhibit V-6 will be competed through full and open competition. However, only the Navy ViViD program will be open to purchasing by agencies other than the Navy, and even then, it is open only to defense agencies. The recent procurement reforms have created a trend in the federal information technology market away from traditional procurements of the sort listed in Exhibit V-6. The trend is toward contract vehicles that allow for open purchasing of commercial off-the-shelf (COTS) products and services with a much shorter procurement cycle than the traditional methods.

Exhibit V-6

Major Telecommunications Programs

Department	Program	Services	Value
Defense	Defense Information Systems Network (DISN)	Leased Circuits, Professional Services	$12 B
Army	Warfighter Information Network (WIN)	Leased Circuits, Hardware, Network Services, Professional Services	$4.5 B
Navy	Voice, Video and Data Communications (ViViD)	Hardware, Professional Services	$1.6 B
USPS	Managed Network Services (MNS)	Network Services, Professional Services	$1 B
Defense	Renovation of Pentagon Information Technology	Hardware, Professional Services	$350 M
Treasury	Telecommunications Services	Network Services, Professional Services	$300 M
US Courts	Digital Courts Network (DCN)	Hardware, Professional Services, Network Services	$205 M
Justice	Justice Consolidated Network (JCN)	Hardware, Professional Services	$200 M

Source: INPUT

What neither Exhibits V-5 nor V-6 show is the increasing use of GSA sponsored procurements such as the GSA multiple award schedules or the POTS contracts. GSA's schedule program is particularly popular among federal purchasers since the maximum order limit has been lifted. The introduction of open market pricing is also having a significant effect on the use of the GSA schedules.

GSA sponsored programs are a large part of the overall movement toward short-cycle, COTS acquisitions to meet agency requirements. COTS products eliminate many of the interoperability problems agencies have had with custom systems. In addition, short-cycle procurement allows for easier, faster technology refresh than the traditional methods of acquisition.

In talking with federal IRM officials, INPUT asked what methods of procurement they preferred for acquiring telecommunications products and services. Their responses are summarized graphically in Exhibit V-7.

Exhibit V-7

Preferred Telecommunications Acquisition Methods
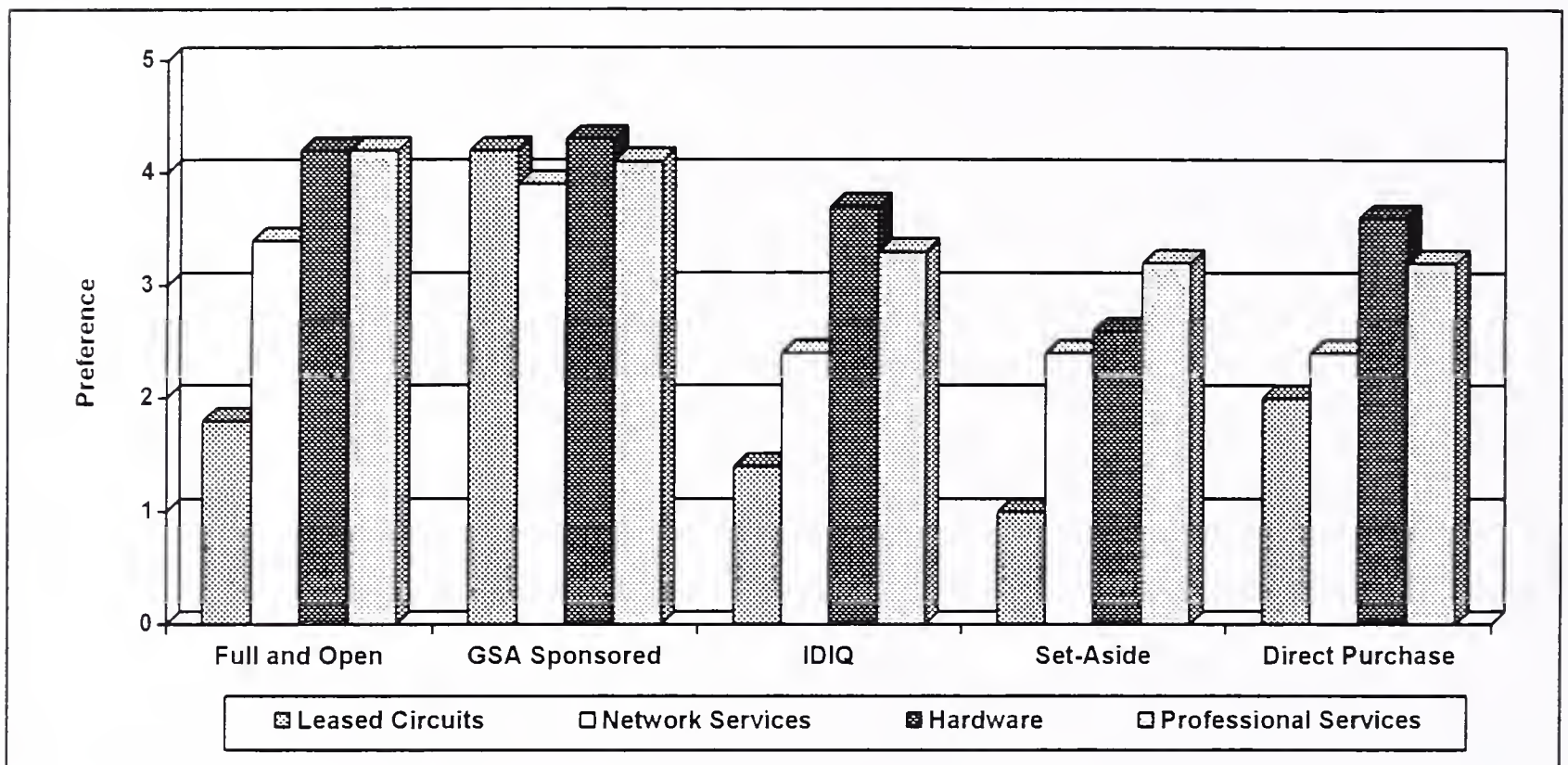
Source: INPUT

GSA sponsored procurement vehicles (including multiple award schedules, POTS contracts, FTS 2000, etc.) are now the most preferred method of acquisition for leased circuits and network services. GSA sponsored procurement vehicles are tied for first with full and open as the most preferred method of acquisition for hardware and professional services.

Direct purchase and IDIQ contracts also scored highly for hardware acquisition, demonstrating the increasing importance of ease of procurement. For the same reason, set-aside procurements are the least favored methods of acquisition. Vendors must be aware that in the new procurement environment, ease of procurement is becoming almost as much of a selling point as price.
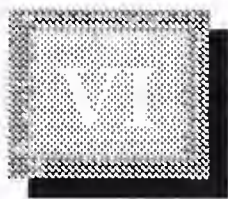
Market Forecast and Analysis

INPUT's market forecast is based primarily on analysis of the A-11 budget reports and supporting documents submitted annually to the Office of Management and Budget by all federal agencies with IT budgets estimated to be greater than $50 million. Additional information is obtained from agency IRM strategic plans and interviews with key federal IRM officials.

Despite the dynamic regulatory environment, INPUT anticipates only slight growth in the federal telecommunications market over the next five years. In fact, it will be growing slower than the overall information technology market. Many forces are affecting the growth of the telecommunications market, but the most influential factor, both as a positive and a negative, is the trend of federal downsizing and budget reductions.

A

Market Forecast

1. Overview

INPUT projects that the federal telecommunications market will grow from its current $5.1 billion to $6.0 billion by fiscal year 2001, as shown in Exhibit VI-1. This represents a compound annual growth rate (CAGR) of 4%, slightly lower than the overall federal information technology CAGR of 4.5%. The difference in their CAGRs means that telecommunications will actually be shrinking as a segment of the overall federal IT market. The telecommunications CAGR of 4% is approximately the level that was forecast in early 1990, but is down significantly from levels that were forecast in more recent years.

Federal Telecommunications Market, FY 1996–FY 2001
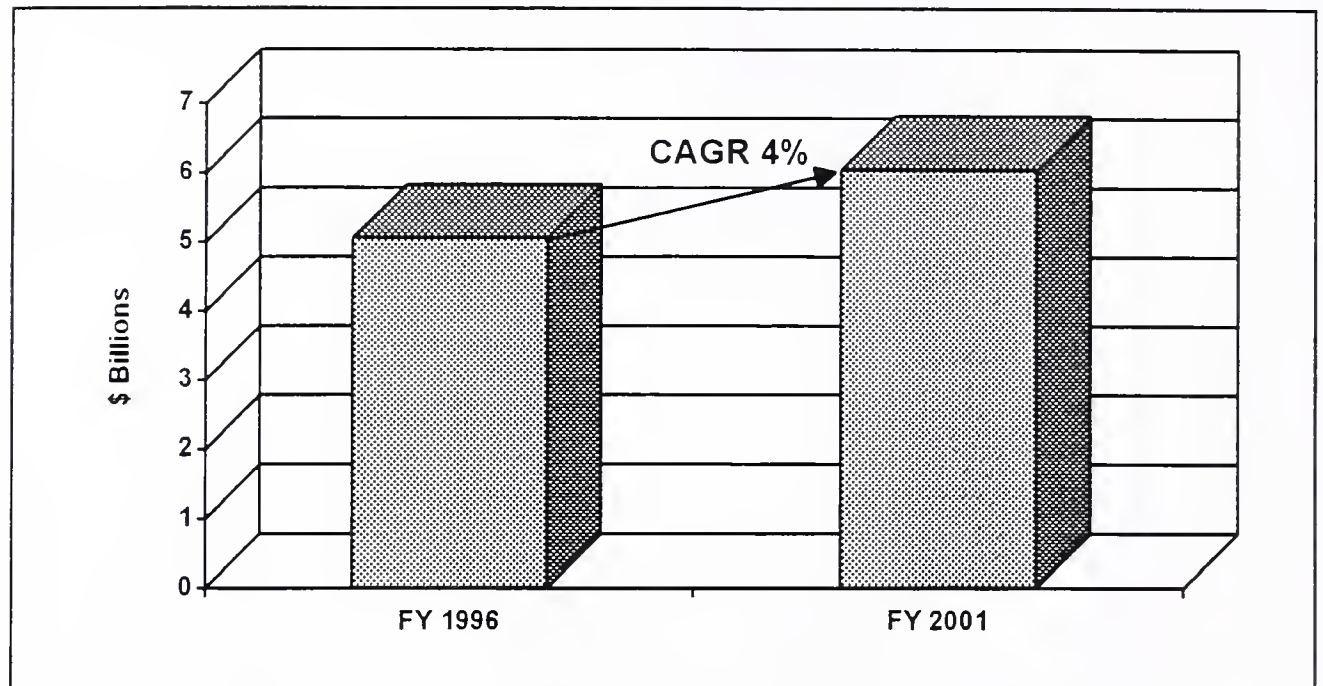
Source: INPUT

2. Telecommunications Market Segments

INPUT breaks the telecommunications market into four segments: leased circuits, network services, hardware, and professional services. Leased circuits includes both leased networks and transmission facilities. Network services includes value-added network services such as electronic information services (EIS), network applications, E-mail, and electronic commerce (EC). Network services also includes the use of on-line data base services. The hardware category includes both communications devices and computer systems that support telecommunications services. The professional services category includes four elements:

- Consulting

- Education and training

- Programming and analysis

- Network management

INPUT's forecast for the telecommunications market segments is shown in Exhibit VI-2

Exhibit VI-2

Federal Telecommunications Market Segments, FY 1996–FY2001
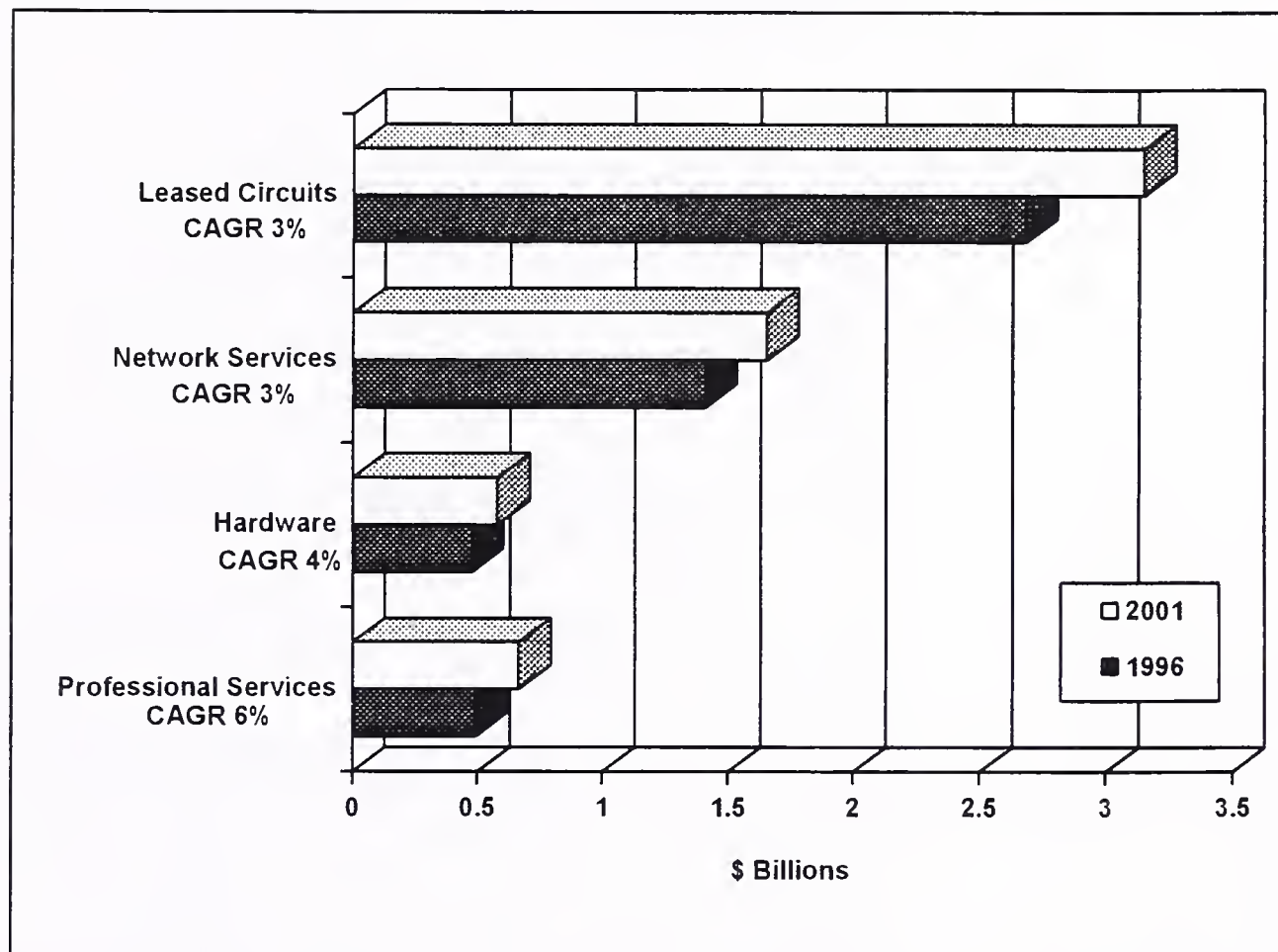
Source: INPUT

Leased circuit expenditures are expected to grow from $2.7 billion in FY 1996 to $3.1 billion in FY 2001, at a CAGR of 3%. These values should be at least twice the values noted in Congress, but the budget requests do not justify more. INPUT assumes that many of intraLATA (local) leases are buried in administrative funds. Separate new and replacement acquisitions may be deferred or canceled if an enhanced FTS 2000 can meet their needs. Leased telecommunications circuits, principally obtained through the two FTS 2000 contractors, include services also leased from the RBOCs and the independent suppliers.

The network services market should grow from its FY 1996 level of $1.4 billion to $1.7 billion in FY 2001, also at a CAGR of 3%. This segment is divided into two major elements: electronic information services selling information to users and network applications enhanced transport of user information processing needs. Earlier INPUT budget estimates developed from OMB A-11 data were substantially undervalued because the funds were buried in the general telecommunications budget requests. Agencies have improved their reporting of telecommunications requirements in the A-11 in recent years. For FY 1996, OMB has relaxed its

reporting requirement to separate out leased circuit spending from other communications categories. This will make future analysis more difficult.

Equipment outlays, largely Customer Premises Equipment (CPE) and Aggregated Switch Procurements (ASPs), are nearly $478 million in FY 1996. Spending is expected to increase to $580 million in FY 2001, at 4% CAGR. The hardware market is more competitive than the other components because the specifications permit use of a variety of sources, many of them commercial-off-the-shelf. Nevertheless, the agencies appear to be adding new equipment to their networks to accommodate the need for faster data transfer and improved services.

The relatively strong growth of the professional services segment is eclipsed by the magnitude of the market for leased circuits and network services. Professional services is likely to increase from $492 million in FY 1996 to about $664 million in FY 2001 at a CAGR of 6%. The growth in the professional services segment of the telecommunications market is reflective of the overall movement in the federal government toward outsourcing in response to budget cuts and workforce reductions.

A more detailed examination of the professional services submode is provided in Exhibit VI-3. It shows that the faster growing submodes of professional services are software development and systems integration. The second largest submode, facilities management, is the slowest growing.

Exhibit VI-3

Telecommunications Professional Services Submodes
FY 1996–FY 2001

Systems Integration
CAGR 7%

Facilities Management
CAGR 5%

Software Development
CAGR 7%

Design and Consulting
CAGR 6%

Education and Training
CAGR 6%

□ FY 2001
■ FY 1996

0   50   100   150   200   250

$ Millions
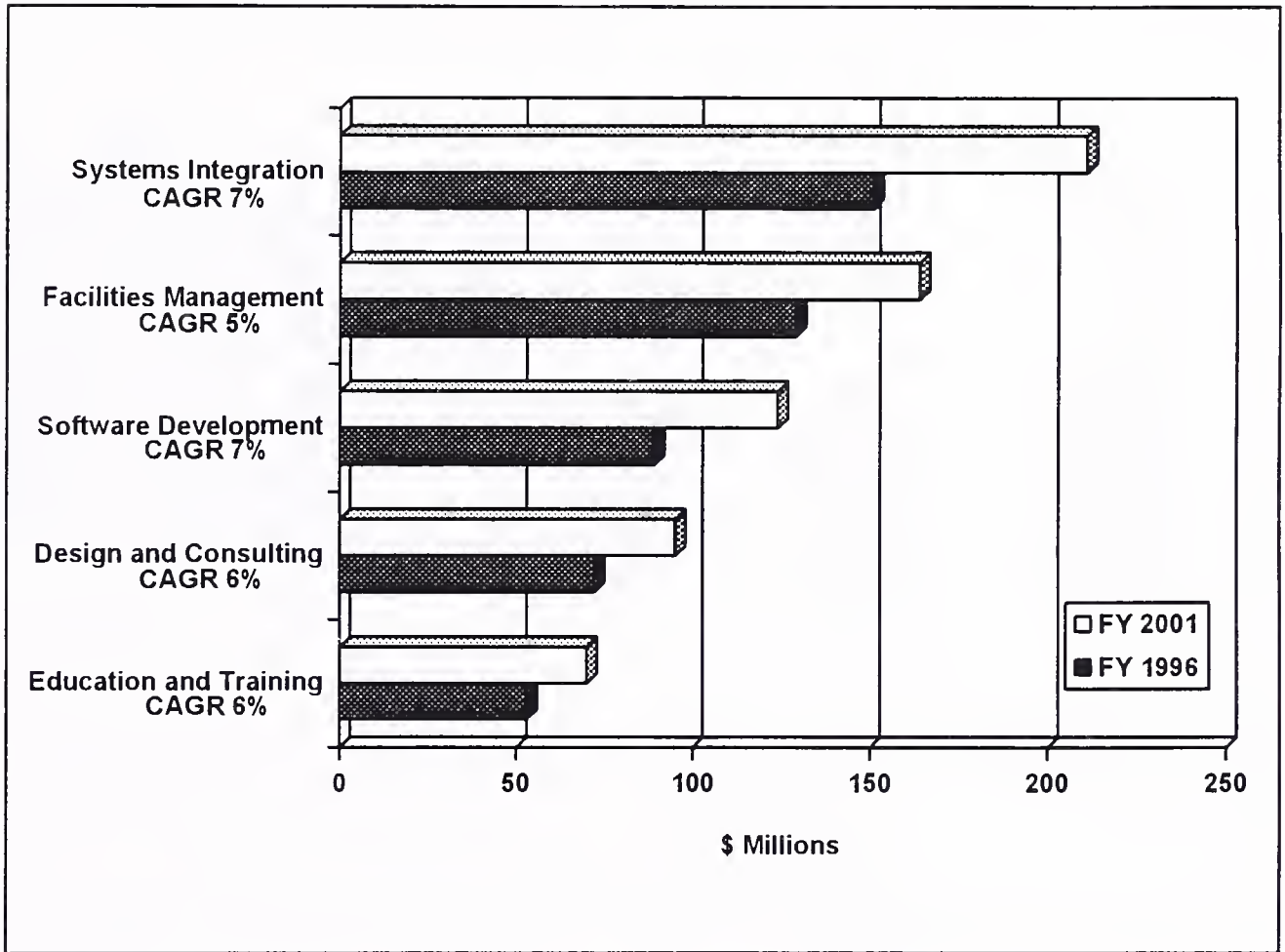
3. Civilian vs. Defense Telecommunications Market

The general disparity between the Defense IT growth rate and the Civilian IT growth rate is especially evident in the telecommunications market. As shown in Exhibit VI-3, the civilian telecommunications market is expected to grow at a moderate 5% CAGR, 0.5% faster than the overall IT market. The defense telecommunications market, on the other hand, is expected to actually decline in the next fiscal year before a very slight growth trend takes over for a 2% CAGR over the period shown.

Exhibit VI-4

Civilian vs. Defense Telecommunications Market
FY 1996–FY 2001
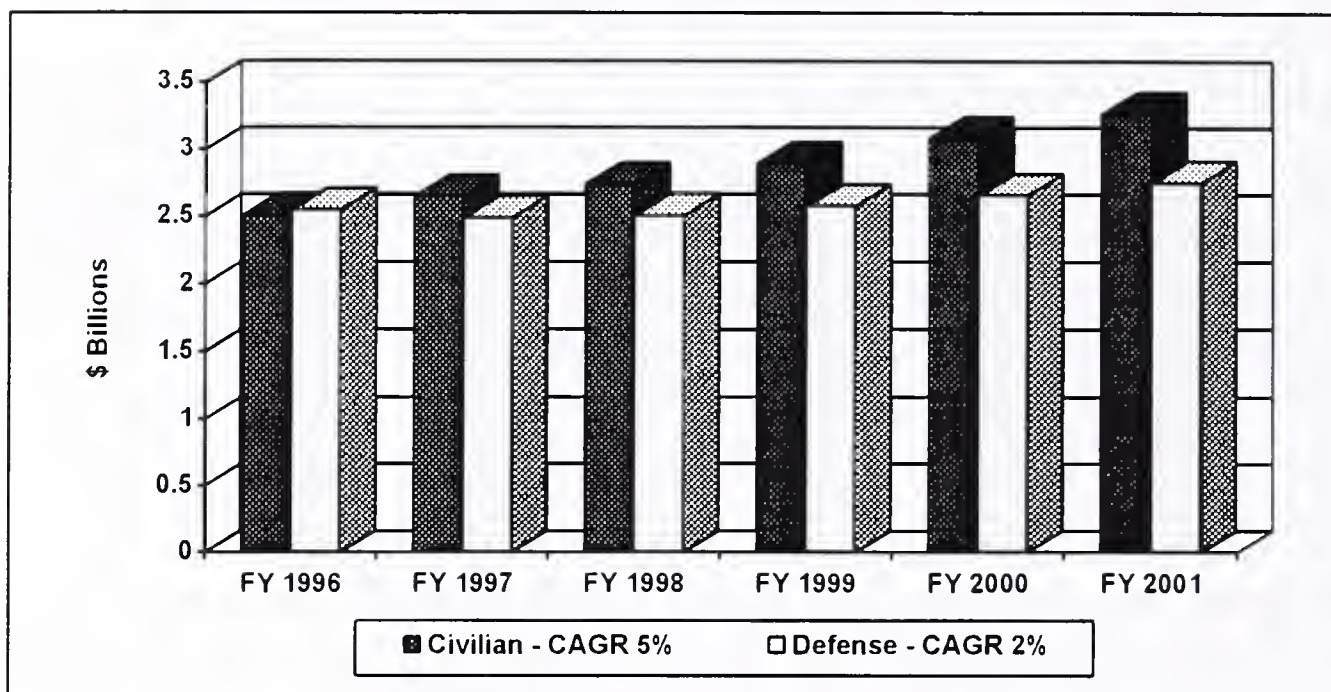
Source: INPUT

Fiscal year 1997 shows the Defense Department losing its three-year hold on the majority of the federal telecommunications market. Exhibit VI-4 shows the hardware and professional services segments to be the primary areas of lost ground within the defense budget.

However, INPUT regards the defense telecommunications forecast as a conservative estimate of the defense market for commercial systems and services. Base or facility communications, which are not acquired through agency-wide programs, are usually not identified in agency information technology budget documents.

This is particularly evident for telephone switching equipment that is not part of a command-wide acquisition. Upgrades to base communications systems and local telephone service typically fall below budget reporting thresholds and may be funded through operation and maintenance budgets.

It should also be noted that a significant amount of defense communications equipment funding is included in weapons programs and strategic systems. This funding is not regarded by DoD as part of the information technology budget.

Exhibit VI-5

Civilian vs. Defense Telecommunications Market Segments
FY 1996–FY 2001
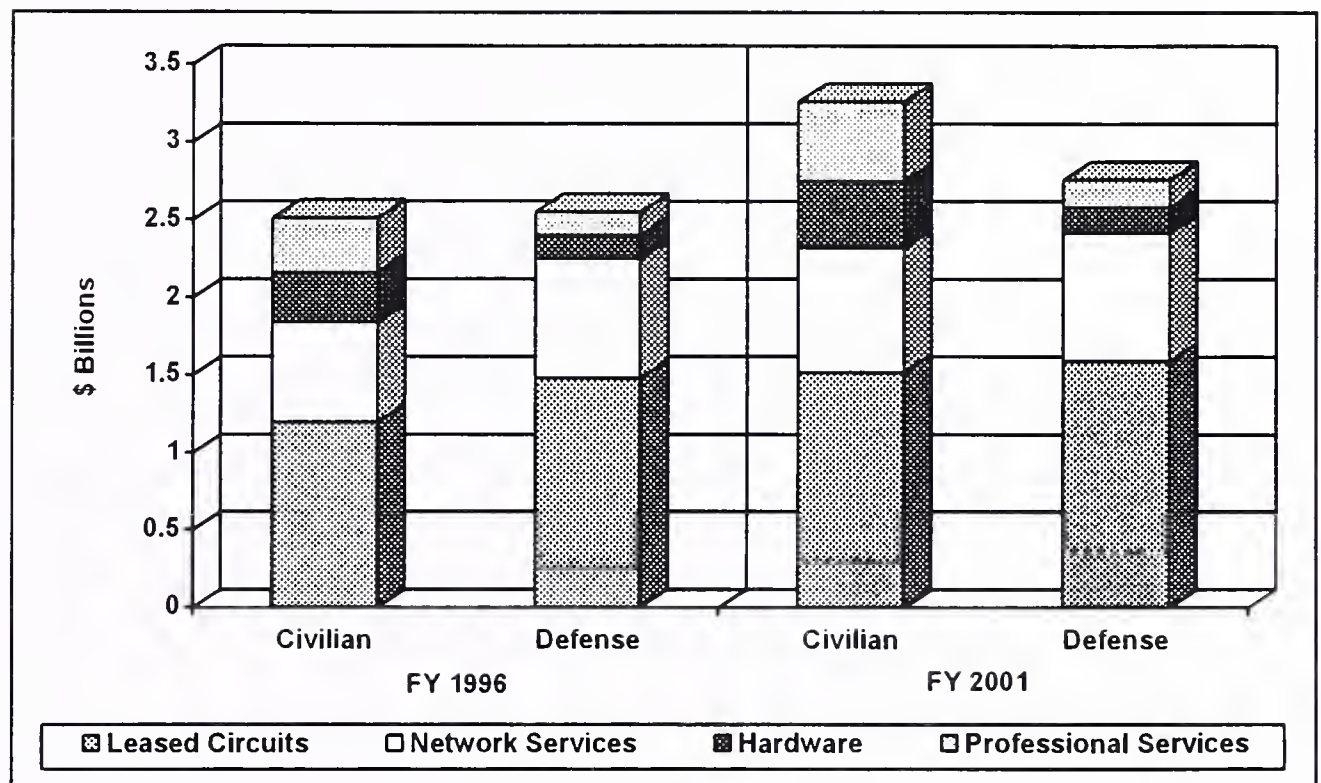
B

Market Analysis

1. Deficit Reduction Measures

As the primary force in the current federal information technology market, proposed deficit reduction measures are having a twofold effect on the federal demand for telecommunications. The declining federal budget and workforce are reducing both the money available and the requirement for some telecommunications services. On the other hand, the same factors are increasing the requirement for other telecommunications services to help agencies meet mission goals with limited resources.

Shrinking agency budgets are beginning to have an impact on the federal IT budget, which up until now has enjoyed relative immunity based on its endorsement by the National Performance Review. Decreasing budgets affect the amount of money available for new projects and force reexamination of existing projects to determine their cost-effectiveness.

In addition to decreasing the amount of money available for information technology, deficit reduction measures are also

responsible for the declining size of the federal workforce. This has a particular impact on the telecommunications market because of the size of the leased circuits segment.

A close relationship exists between agency requirements in the area of leased circuits and the amount of full-time staff the agency employs. Almost all federal employees working in an office environment have a telephone, and most also have a data line for E-mail, faxes, or internet access. A significant change in employment will have a correspondingly significant impact on an agency's leased circuit requirements.

Exhibit VI-5 shows the top ten federal agencies ranked by spending on telecommunications services (primarily leased circuits) in FY 1995 and by full time equivalent (FTE) civilian employees for the same period. Eight agencies can be found ranked in the top ten for both lists.

The anomalies for telecommunications services spending are NASA and Energy, both of which have an emphasis on high technology operations. The anomalies for the employment list were Interior and Transportation, both of which have a large portion of their personnel working outside of an office.

Exhibit VI-6

Agency Telecommunications Spending vs. Agency Employment

Top Ten Federal Agencies Ranked By:

Telecommunications Spending	Employment (FTE)
1. Defense	1. U.S. Postal Service
2. Treasury	2. Defense
3. NASA	3. Veterans Affairs
4. Energy	4. Treasury
5. HHS	5. Justice
6. Justice	6. Agriculture
7. Postal Service	7. Interior
8. Veterans Affairs	8. SSA
9. SSA	9. Transportation
10. Agriculture	10. HHS

Source: GAO and OPM

However, even with the strong tie to the level of federal employment, INPUT believes that, overall, the effects of budget constraints on the federal telecommunications market will be somewhat mitigated. Some budget reductions may actually increase federal dependence on communications services. For example, teleconferencing and electronic message distribution will be emphasized to reduce travel and other costs.

2. Other Market Drivers

Other factors are playing an influential role in driving the federal telecommunications market. As shown in Exhibit VI-6, these factors center around competition, changing technology and new agency missions.

Exhibit VI-7

Telecommunications Market Drivers
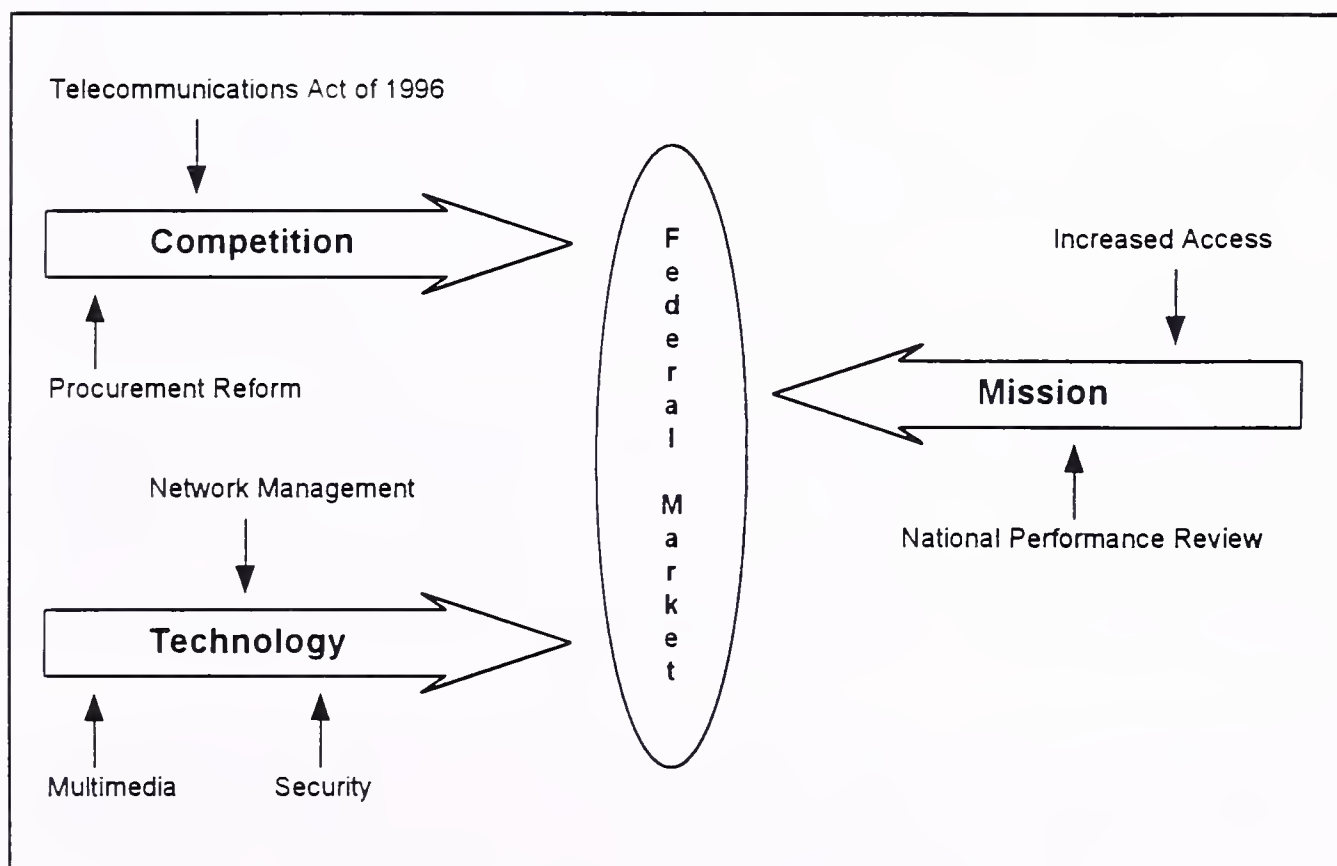
Competition is becoming more intense. It is being fueled both by the Telecommunications Act of 1996 and the various procurement reform measures of the past year. Because this market still shows some of the vestiges of monopoly, the increase in competition will be even more dramatic, especially in the earlier phases of full digital service that will enhance data communications capabilities. Agencies are more demanding and sophisticated in their telecommunications acquisitions, either riding FTS 2000 or, when appropriate, initiating their own requirements-type contracts.

Technological advances will change the market character. For example, as better network management tools become available, agencies will come to expect resulting economies and efficiencies. The increasing presence of multimedia applications is leading to an increase in the requirement for bandwidth.

INPUT also expects that telecommunications security requirements will likely increase. Most agencies consider communications to be the weakest link in information processing. Security considerations will prevent much interaction between local-area networks in DoD, at least in the near future. The marketplace has not yet voiced the level of demand for security that will drive upgraded technologies and services.

Even in the midst of deficit reduction, agency missions are growing in scope. The National Performance Review mandated the creation of a government that "works better and costs less." This translates into accomplishing as much or more work with fewer resources. The goals of the National Performance Review have been pursued primarily through business process reengineering supported by the implementation of information technology to automate previously manual processes. Telecommunications equipment and services are an important part of this automation process.

Increased access to government information is also driving the federal telecommunications market. The 1996 Electronic Freedom of Information Amendments to the Freedom of Information Act (FOIA) not only require agencies to make electronic records available under FOIA, but also mandate the electronic distribution of releasable records.

All of these factors will impact the federal telecommunications market. Generally, these factors seem to be driving the market in the direction of positive growth. It remains to be seen, however, exactly what the impact of deficit reduction measures will be, and whether the impact will favor or inhibit the market's growth.

Conclusions and Recommendations

The federal telecommunications market is entering a period of dynamic evolution. The telecommunications market is subject not only to all of the forces affecting the overall information technology market, but also to the radically new industry structure being created by the Telecommunications Act of 1996. Vigilant awareness of regulatory and commercial developments will be the key to success in federal telecommunications market during the next five years.

This chapter will discuss some of the conclusions that can be drawn from the findings of this report. These conclusions have been evaluated to develop strategic recommendations for vendors in the federal telecommunications market.

A
Competition

Competition will probably be the most important element of the federal telecommunications market over the next five years. The regulatory changes of the Telecommunications Act of 1996, the Clinger-Cohen Act, and the changes in GSA's multiple award schedule program have greatly increased the level of competition in the market.

Federal agencies are seeking easier ways of acquiring products and services in an attempt to save time and money by avoiding a long procurement cycle. They are showing increasing favor for GSA sponsored programs such as the multiple award schedules for their low-risk, high-speed, cost effective approach to procurement. This

new competitive environment calls for several courses of action by federal vendors:

Vendors should increase marketing activities to develop strong agency relations, particularly with GSA. Short-cycle procurements will increasingly be relationship buys. Agency officials will likely find themselves in purchasing situations where the only information they have is what they might remember from some marketing literature they read, or more likely, a conversation with a vendor representative. That background knowledge will greatly influence their purchasing decision.

Vendors must be alert for "blink and miss" opportunities. New, short cycle procurements will likely be competed with limited notice and awarded very quickly. An example of this is the recent National Institutes of Health ImageWorld procurement. This program went from release of RFP to award in 10 weeks, a process that could have lasted 18 months a few years ago. These short-cycle procurements will become more common in the telecommunications market as well as in other segments of the information technology market.

Vendors must understand agency requirements and acquisition reforms. The vendor who knows exactly what the agency needs and how the agency is best going to be able to acquire the solution to that need will be in a far better position to make the sale than the vendor who doesn't.

B
Deficit Reduction

Deficit reduction is the primary driving force of the federal telecommunications market. Unfortunately, it is driving the market in opposite directions at the same time. Budget cuts are reducing the amount of money available for telecommunications projects. On the other hand, workforce downsizing is causing agencies to look to telecommunications as a way to maintain productivity with limited resources.

Vendors should emphasize cost-effective solutions. Cost will be the most important factor in the new procurement environment. A vendor's ability to present a total solution to an agency requirement *and demonstrate the savings to be achieved* through

the implementation of the solution, will be a major selling point in the next five years.

C
Post FTS 2000

The Post FTS 2000 program is the single greatest prize in the federal telecommunications market. With current spending on the FTS 2000 program at 15% of the total federal telecommunications market, the Post FTS 2000 program, expected to be similar in scope, is too big to ignore.

Vendors should examine all of the opportunities presented by the Post FTS 2000 program. Although the comprehensive service contracts will likely go to the large interexchange carriers, the niche contracts will require a wide range of services and be within reach of the smaller telecommunications vendors.

D
Agency Perceptions

The perceptions that agency information resources management officials have of vendor performance in the federal telecommunications market are somewhat contradictory. Agency officials commented on both a high level of responsiveness and poor customer service. They also praised the value and variety of products and services, and criticized cost and integration with existing systems. These contradictions reveal much of the uncertainty currently present in the telecommunications market.

Vendors need to clarify agency expectations in terms of cost and deliverables. Clarification will benefit the agency-vendor relationship by preventing unreasonable agency expectations about their telecommunications products and services. In addition, clarification will reduce the level of uncertainty that agencies are experiencing in the telecommunications market, and allow them to feel more comfortable with their acquisition choices.

E
Civilian vs. Defense

While the defense agencies currently control the majority of the federal dollars available for telecommunications spending, the civilian market is growing more rapidly and will surpass the defense market as early as next year. By fiscal year 2001, INPUT forecasts the civilian telecommunications market to be nearly $1 billion larger than the defense telecommunications market.

Vendors should examine the deployment of marketing and business development resources to take advantage of the growing civilian market. Special attention should be given to business development opportunities at GSA, either through the multiple award schedules or other emerging acquisition approaches.

F
Closing Remarks

All of the above recommendations will help vendors maintain the competitive edge that will propel them into the twenty-first century. The federal telecommunications market is in a state of flux greater than other segments of the information technology market because of the Telecommunications Act of 1996. This state of flux has created an uncertainty that allows us to make only one prediction of which we can really be certain—the federal telecommunications market of 2001 will be far different than the one we know today.
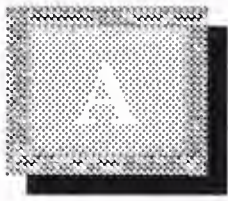
Glossary of Federal Acronyms

The federal government's procurement language uses a combination of abbreviations, acronyms, phrases and words that is complicated by different agency definitions and interpretations. The government also uses terms of accounting, business, economics, engineering and law with new applications and technology.

Abbreviations and contract terms that INPUT encountered most often in program documentation and interviews for this report are included here, but this glossary should not be considered all-inclusive. Federal procurement regulations (DAR, FPR, FAR, FIRMR, FPMR) and contract terms listed in RFIs, RFPs, and RFQs provide applicable terms and definitions.

Federal agency abbreviations have been included to the extent they are employed in this report.

A

Federal Agency Acronyms

8(a) Set-Aside	Agency awards direct to Small Business Administration for direct placement with a small, socially/economically disadvantaged company
AAS	Automatic Addressing System
AATMS	Advanced Air Traffic Management System
ACS	Advanced Communications Satellite (formerly NASA 30/20 GHz Satellite Program)
ACT-1	Advanced Computer Techniques (Air Force)
ACWP	Actual Cost of Work Performed

Ada	DoD high-order language
ADA	Airborne Data Acquisition
ADL	Authorized Data List
ADNET	Anti-Drug Network
ADS	Automatic Digital Switches (DCS)
AFA	Air Force Association
AFCEA	Armed Forces Communications Electronics Association
AGE	Aerospace Ground Equipment
AIP	Array Information Processing
AIPC	Automated Information Processing Center
AIS	Automated Information System
AMD	Acquisition Management Directorate
AMPE	Automated Message Processing Equipment
AMPS	Automated Message Processing System
AMSDL	Acquisition Management Systems Data List
AP(P)	Advance Procurement Plan
Appropriation	Congressionally approved funding for authorized programs and activities of the Executive Branch
APR	Agency Procurement Request
ARB	Acquisition Review Board
ARPA	Advanced Research Projects Agency
ARPANET	ARPA network of scientific computers
ASP	Aggregated Switch Procurement
ASR	Acquisition Strategy Report

ATLAS	Abbreviated Test Language for All Systems (for ATE Automated Test Equipment)
Authorization	In the legislative process programs, staffing and other routine activities must be approved by Oversight Committees before the Appropriations Committee will approve the money from the budget
AUSA	Association of the U.S. Army
AWG	Acquisition Working Group
BA	Basic Agreement or Budget Authority
BAFO	Best And Final Offer
Base level	Procurement, purchasing, and contracting at the military installation level
BCA	Board of Contract Appeals
BCE	Baseline Cost Estimate
Benchmark	Method of evaluating ability of a candidate computer system to meet user requirements
Bid protest	Objection (in writing, before or after contract award) to some aspect of a solicitation by a valid bidder
BML	Bidders Mailing List of qualified vendor information filed annually with federal agencies to automatically receive RFPs and RFQs in areas of claimed competence
BOA	Basic Ordering Agreement
B&P	Bid and Proposal vendor activities in response to government solicitation/specific overhead allowance
BPA	Blanket Purchase Agreement
Budget	Federal Budget, proposed by the President and subject to Congressional review
BY	Budget Year or Base Year
C2	Command and Control
C3	Command, Control and Communications

C4	Command, Control, Communications and Computers
C3I	Command, Control, Communications and Intelligence
CAB	Contract Adjustment Board or Contract Appeals Board
CADE	Computer-Aided Design and Engineering
CADS	Computer-Assisted Display Systems
CAIS	Computer-Assisted Instruction System
CALS	Continuous Acquisition and Life-cycle Support (formerly Computer-Aided Acquisition and Logistics Support)
CAPS	Command Automation Procurement Systems
CAS	Contract Administration Services or Cost Accounting Standards
CASB	Cost Accounting Standards Board
CASP	Computer-Assisted Search Planning
CBD	(Commerce Business Daily) U.S. Department of Commerce publication listing government contract opportunities and awards
CBO	Congressional Budget Office
CCEP	Commercial Comsec Endorsement Program
CCDR	Contractor Cost Data Reporting
CCN	Contract Change Notice or Configuration Change Notice
CCPDS	Command Center Processing and Display Systems
CCPO	Central Civilian Personnel Office
CDA	Central Design Activity
CDR	Critical Design Review
CDRL	Contractor Data Requirement List
CFE	Contractor-Furnished Equipment

CFM	Contractor Furnished Material
CFR	Code of Federal Regulations
CIA	Central Intelligence Agency
CICA	Competition in Contracting Act (1984)
CIG	Computerized Interactive Graphics
CIM	Corporate Information Management or Center for Information Management
CINCs	Commanders-in-Chief
CIO	Chief Information Officer
CIR	Cost Information Reports
CM	Configuration Management
CMI	Computer-Managed Instruction
CNI	Communications, Navigation and Identification
CO	Contracting Office, Contract Offices, Contracting Officer or Change Order
COC	Certificate of Competency (administered by the Small Business Administration) or Certificate of Compliance
COCO	Contractor-Owned, Contractor-Operated
CODSIA	Council of Defense and Space Industry Associations
COMSAT	Communications Satellite Corporation
CONUS	Continental United States
COP	Capability Objective Package
COSMIC	Computer Software Management Information Center (NASA)
COTR	Contracting Officer's Technical Representative
COTS	Commercial Off-The-Shelf (Commodities)

CPAF	Cost-Plus-Award-Fee Contract
CPE	Customer Premises Equipment
CPFF	Cost-Plus-Fixed-Fee Contract
CPIF	Cost-Plus-Incentive-Fee Contract
CPR	Cost Performance Reports
CPSR	Contractor Procurement System Review
CR	Cost Reimbursement (Cost-Plus Contract)
CSIF	Communications Services Industrial Fund
C/SCSC	Cost/Schedule Control System Criteria (also called "C-Spec")
CWAS	Contractor Weighted Average Share in Cost Risk
CWBS	Contract Work Breakdown Structure
DAB	Defense Acquisition Board
DABBS	Defense Acquisition Bulletin Board System
DAC	Defense Acquisition Circular
DAL	Data Accession List
DAR	Defense Acquisition Regulations
DARC	Defense Acquisition Regulatory Council
DAS	Data Acquisition System
DBHS	Data Base Handling System
DBOF	Defense Business Operating Fund
DCAA	Defense Contract Audit Agency
DCAS	Defense Contract Administration Services
DCASR	DCAS Region
DCC	Digital Control Computer
DCS	Defense Communications System

DCTN	Defense Commercial Telecommunications Network
DDA	Dynamic Demand Assessment (Delta Modulation)
DDC	Defense Documentation Center
DDL	Digital Data Link - A segment of a communications network used for data transmission in digital form
DDS	Defense Distribution System
DECCO	Defense Commercial Communications Office
DECEO	Defense Communications Engineering Office
D&F	Determination and Findings - required documentation for approval of a negotiated procurement
DFARS	DoD FAR Supplement
DFAS	Defense Finance and Accounting Service
DHHS	Department of Health and Human Services
DIA	Defense Intelligence Agency
DIDS	Defense Integrated Data Systems
DISA	Defense Information Systems Agency (Formerly DCA)
DISC	Defense Industrial Supply Center
DISN	Defense Information Systems Network
DITSO	Defense Information Technology Systems Office
DLA	Defense Logistics Agency
DMA	Defense Mapping Agency
DMR	Defense Management Review
DMRD	Defense Management Review Decision
DNA	Defense Nuclear Agency
DO	Delivery Order

DOC	Department of Commerce
DoD	Department of Defense
DoDD	Department of Defense Directive
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice
DOS	Department of State
DOT	Department of Transportation
DNA	Defense Nuclear Agency
DPA	Delegation of Procurement Authority (granted by GSA under FPRs)
DPC	Defense Procurement Circular
DPF	Defense Processing Facility
DQ	Definite Quantity Contract
DQ/PL	Definite Quantity/Price List Contract
DR	Deficiency Report
DRFP	Draft Request For Proposal
DSCS	Defense Satellite Communication System
DSN	Defense Switched Network
DSP	Defense Support Program (WWMCCS)
DSS	Defense Supply Service
DTC	Design-To-Cost
DTIC	Defense Technical Information Center
DTN	Defense Transmission Network
DVA	Department of Veterans Affairs

ECP	Engineering Change Proposal
ED	Department of Education
EEO	Equal Employment Opportunity
EMC	Electro-Magnetic Compatibility
EMCS	Energy Monitoring and Control System
EO	Executive Order issued by the President
EOQ	Economic Ordering Quantity
EPA	Economic Price Adjustment or Environmental Protection Agency
EPMR	Estimated Peak Monthly Requirement
EPS	Emergency Procurement Service (GSA) or Emergency Power System
ETR	Estimated Time to Repair
ESTSC	Energy Science and Technology Software Center (DOE)
FA	Formal Advertising
FAA	Federal Aviation Administration
FAC	Federal Acquisition Circular
FAR	Federal Acquisition Regulations
FARA	Federal Acquisition Reform Act
FCA	Functional Configuration Audit
FCC	Federal Communications Commission
FCDC	Federal Contract Data Center
FCPC	Federal Computer Products Center
FCRC	Federal Contract Research Center
FDR	Formal Design Review

FEDSIM	Federal (Computer) Simulation Center (GSA)
FEMA	Federal Emergency Management Agency
FFP	Firm Fixed-Price Contract (also Lump Sum Contract)
FFRDC	Federally Funded Research & Development Center
FIPR	Federal Information Processing Resource
FIPS	Federal Information Processing Standard
FIPS PUBS	FIPS Publications
FIRMR	Federal Information Resource Management Regulations
FMS	Foreign Military Sales
FOC	Full Operating Capability
FOIA	Freedom of Information Act
FP	Fixed-Price Contract
FPAF	Fixed-Price Award Fee
FPDC	Federal Procurement Data Center
FPIF	Fixed-Price Incentive Fee
FP-L/H	Fixed-Price Labor/Hour Contract
FP-LOE	Fixed-Price Level-Of-Effort Contract
FDPC	Federal Data Processing Center
FPMR	Federal Property Management Regulations
FPR	Federal Procurement Regulations
FSC	Federal Supply Classification
FSG	Federal Supply Group
FSN	Federal Stock Number
FSS	Federal Supply Schedule or Federal Supply Service (GSA)
FSTS	Federal Secure Telecommunications System

FTE	Full Time Equivalent
FT Fund	A revolving fund, designated as the Federal Telecommunications Fund, used by GSA to pay for GSA-provided common-user services, specifically including the current FTS and proposed FTS2000 services
FTS	Federal Telecommunications Service
FTS 2000	Federal Telecommunications System 2000
FTSP	Federal Telecommunications Standards Program administered by NCS; Standards are published by GSA
FWTS	Federal Wireless Telecommunications Services
FY	Fiscal Year
FYDP	Five-Year Defense Plan
G&A	General and Administrative (Expense)
GAO	General Accounting Office
GFE	Government-Furnished Equipment
GFM	Government-Furnished Material
GFY	Government Fiscal Year (October to September)
GIDEP	Government-Industry Data Exchange Program
GOCO	Government Owned, Contractor Operated
GOGO	Government Owned, Government Operated
GOSIP	Government Open Systems Interconnection Profile
GPO	Government Printing Office
GPS	Global Positioning System
GRH	Gramm-Rudman-Hollings Act (1985), also called Gramm-Rudman Deficit Control
GSA	General Services Administration
GSBCA	General Services Administration Board of Contract Appeals

HAC	House Appropriations Committee
HASC	House Armed Services Committee
HCFA	Health Care Financing Administration
HHS	(Department of) Health and Human Services
HOL	Higher Order Language
HSDP	High-Speed Data Processors
HUD	(Department of) Housing and Urban Development
I-CASE	Integrated Computer-Aided Software Engineering
ICA	Independent Cost Analysis
ICAM	Integrated Computer-Aided Manufacturing
ICE	Independent Cost Estimate
ICP	Inventory Control Point
ICST	Institute for Computer Sciences and Technology, National Institute of Standards and Technology, Department of Commerce
IMC	Interagency Management Council
IDA	Institute for Defense Analysis
IDAMS	Image Display And Manipulation System
IDEP	Interservice Data Exchange Program
IDIQ	Indefinite Delivery, Indefinite Quantity
IDN	Integrated Data Network
IFB	Invitation For Bids
IOC	Initial Operating Capability
IOI	Internal Operating Instructions
IPS	Integrated Procurement System

IQ	Indefinite Quantity Contract
IR&D	Independent Research & Development
IRM	Information Resources Management
IT	Information Technology
ITMRA	Information Technology Management Reform Act
IXS	Information Exchange System
IV&V	Independent Verification & Validation
JCS	Joint Chiefs of Staff
JCALS	Joint Computer-Aided Acquisition and Logistics Support
JFMIP	Joint Financial Management Improvement Program
JPO	Joint Program Office
JSIPS	Joint Systems Integration Planning Staff
JSOP	Joint Strategic Objectives Plan
JSOR	Joint Service Operational Requirement
JUMPS	Joint Uniform Military Pay System
JWAM	Joint WWMCCS ADP Modernization (Program)
LC	Letter Contract
LCC	Life Cycle Cost
LCMP	Life Cycle Management Procedures (DD7920.1)
LCMS	Life Cycle Management System
L-H	Labor-Hour Contract
LOI	Letter of Intent; Letter of Instruction
LRPE	Long-Range Procurement Estimate
LRIRP	Long-Range Information Resource Plan
LTD	Live Test Demonstration

LSI	Large-Scale Integration
MAISRC	Major Automated Information Systems Review Council (DoD)
MANTECH	Manufacturing Technology
MAPS	Multiple Address Processing System
MAP/TOP	Manufacturing Automation Protocol/Technical and Office Protocol
MAS	Multiple Award Schedule
MASC	Multiple Award Schedule Contract
MDA	Multiplexed Data Accumulator
MENS	Mission Element Need Statement or Mission Essential Need Statement (see DD-5000.1 Major Systems Acquisition)
MILSCAP	Military Standard Contract Administration Procedures
MIL SPEC	Military Specification
MIL STD	Military Standard
MIPR	Military Interdepartmental Purchase Request
MLS	Multilevel Security
MNF	Multi-National Force
MOD	Modification
MOL	Maximum Ordering Limit (Federal Supply Service)
MPC	Military Procurement Code
MTBF	Mean-Time-Between-Failures
MTTR	Mean-Time-To-Repair
MYP	Multi-Year Procurement
NARDIC	Navy Research and Development Information Center
NASA	National Aeronautics and Space Administration

NCA	National Command Authorities
NCMA	National Contract Management Association
NCS	National Communications System (evolving to DISN)
NDI	Non-Development Item
NICRAD	Navy-Industry Cooperative Research and Development
NIP	Notice of Intent to Purchase
NIST	National Institute of Science and Technology (was NBS)
NMCS	National Military Command System
NSA	National Security Agency
NSEP	National Security and Emergency Preparedness
NSF	National Science Foundation
NSIA	National Security Industrial Association
NTIA	National Telecommunications and Information Administration, Department of Commerce
NTIS	National Technical Information Service
Obligation	"Earmarking" of specific funding for a contract from committed agency funds
OA	Obligational Authority
OCS	Office of Contract Settlement
OFCC	Office of Federal Contract Compliance
Off-Site	Services to be provided near but not in government facilities
FMP	Office of Federal Management Policy (GSA)
OFPP	Office of Federal Procurement Policy
OIRM	Office of Information Resources Management
O&M	Operations & Maintenance

OMB	Office of Management and Budget
O,M&R	Operations, Maintenance and Readiness
On-Site	Services to be performed on a government installation or in a specified building
OPM	Office of Procurement Management (GSA) or Office of Personnel Management
Options	Sole-source additions to the base contract for services or goods to be exercised at the government's discretion
OSADBU	Office of Small and Disadvantaged Businesses
OSHA	Occupational Safety and Health Act
OSI	Open System Interconnect
OSP	Offshore Procurement
OTA	Office of Technology Assessment (Congress)
Outyear	Proposed funding for fiscal years beyond the budget year (next fiscal year)
P-1	FY Defense Production Budget
P3I	Pre-Planned Product Improvement (program in DoD)
PAR	Procurement Authorization Request or Procurement Action Report
PAS	Pre-Award Survey
PASS	Procurement Automated Source System
PCO	Procurement Contracting Officer
PDA	Principal Development Agency
PDM	Program Decision Memorandum
PDR	Preliminary Design Review
PIR	Procurement Information Reporting
PME	Performance Monitoring Equipment

PMP	Purchase Management Plan
PO	Purchase Order or Program Office
POE	Panel Of Experts
POM	Program Objective Memorandum
POSIX	Portable Open System Interconnection Exchange
Post FTS 2000	Federal Telecommunications System 2000 Follow-on
POTS	Purchase of Telecommunications and Services
PPBS	Planning, Programming, Budgeting System
PR	Purchase Request or Procurement Requisition
PRA	Paperwork Reduction Act
PS	Performance Specification alternative to a Statement of Work, when work to be performed can be clearly specified
PSC	Product Service Code
QA	Quality Assurance
QAO	Quality Assurance Office
QBL	Qualified Bidders List
QMCS	Quality Monitoring and Control System (DoD software)
QMR	Qualitative Material Requirement (Army)
QPL	Qualified Products List
QRC	Quick Reaction Capability
QRI	Quick Reaction Inquiry
R-1	FY Defense RDT&E Budget
RAM	Reliability, Availability and Maintainability or Random Access Memory
RC	Requirements Contract

R&D	Research and Development
RDA	Research, Development and Acquisition
RDD	Required Delivery Date
RD&E	Research, Development and Engineering
RDF	Rapid Deployment Force
RDT&E	Research, Development, Test and Engineering
RFB	Request For Bid
RFI	Request For Information
RFP	Request For Proposal
RFQ	Request For Quotation
RFTP	Request For Technical Proposals (Two-Step)
ROC	Required Operational Capability
ROI	Return On Investment
RSI	Rationalization, Standardization and Interoperability
RTAS	Real-Time Analysis System
RTDS	Real-Time Display System
SA	Supplemental Agreement
SAC	Senate Appropriations Committee
SADBU	Small and Disadvantaged Business Utilization
SAR	Selected Acquisition Report
SASC	Senate Armed Services Committee
SBA	Small Business Administration
SB Set-Aside	Small Business Set-Aside contract opportunities with bidders limited to certified small businesses
SCA	Service Contract Act (1964 as amended)

SCN	Specification Change Notice
SDB	Small/Disadvantaged Business
SDI	Strategic Defense Initiative
SDIO	Strategic Defense Initiative Office
SDN	Secure Data Network
SDR	System Design Review
SEC	Securities and Exchange Commission
SE&I	Systems Engineering and Integration
SETA	Systems Engineering/Technical Assistance
SETS	Systems Engineering/Technical Support
SIBAC	Simplified Intragovernmental Billing and Collection System
SIC	Standard Industrial Classification
SIMP	Systems Integration Master Plan
SIOP	Single Integrated Operations Plan
Sole Source	Contract award without competition
Solicitation	Invitation to submit a bid
SOR	Specific Operational Requirement
SOW	Statement of Work
SSA	Source Selection Authority (DoD) or Social Security Administration
SSAC	Source Selection Advisory Council
SSEB	Source Selection Evaluation Board
SSO	Source Selection Official (NASA)
STINFO	Scientific and Technical Information Program Air Force/NASA

STU	Secure Telephone Unit
SWO	Stop-Work Order
Synopsis	Brief description of contract opportunity in CBD after D&F and before release of solicitation
TA/AS	Technical Assistance/Analysis Services
TCP/IP	Transmission Control Protocol/Internet Protocol
TEMPEST	Studies, inspections and tests of unintentional electromagnetic radiation from computer, communication, command and control equipment that may cause unauthorized disclosure of information; usually applied to DoD and security agency testing programs
TILO	Technical and Industrial Liason Office, Qualified Requirement Information Program, Army
TM	Time and Materials contract
TMS	Technical and Management Support
TOA	Total Obligational Authority (Defense)
TOD	Technical Objective Document
TQM	Total Quality Management
TR	Temporary Regulation (added to FPR, FAR)
TRACE	Total Risk Assessing Cost Estimate
TRCO	Technical Representative of the Contracting Offices
TREAS	Department of Treasury
TRM	Technical Reference Model
TRP	Technical Resources Plan
TS	Telecommunications Service
TVA	Tennessee Valley Authority
UCAS	Uniform Cost Accounting System

UPS	Uniform Procurement System
USA	U.S. Army
USAF	U.S. Air Force
USC	United States Code
USCG	U.S. Coast Guard
USMC	U.S. Marine Corps
USN	U.S. Navy
USPS	United States Postal Service
USRRB	United States Railroad Retirement Board
VA	Veterans Affairs Department
VE	Value Engineering
VHSIC	Very High-Speed Integrated Circuits
VIABLE	Vertical Installation Automation Baseline (Army)
VICI	Voice Input Code Identifier
VTC	Video Teleconferencing
WAM	WWMCCS ADP Modernization Program
WBS	Work Breakdown Structure
WGM	Weighted Guidelines Method
WIN	WWMCCS Intercomputer Network
WITS	Washington Interagency Telecommunications System
WIS	WWMCCS Information Systems
WPI	Wholesale Price Index
WS	Work Statement Offerer's description of the work to be done (proposal or contract)
WWMCCS	WorldWide Military Command and Control System

B

General and Industry Acronyms

ADP	Automatic Data Processing
ADPE	Automatic Data Processing Equipment
ANSI	American National Standards Institute
BOC	Bell Operating Company
CAD	Computer-Aided Design
CAM	Computer-Aided Manufacturing
CASE	Computer-Aided Software Engineering
CBEMA	Computer and Business Equipment Manufacturers Association
CCIA	Computers and Communications Industry Association
CCITT	Comite Consultatif Internationale de Télégraphique et Téléphonique; Committee of the International Telecommunication Union
COBOL	Common Business-Oriented Language
COS	Corporation for Open Systems
CPU	Central Processor Unit
DMBS	Data Base Management System
DRAM	Dynamic Random Access Memory
EIA	Electronic Industries Association
EC	Electronic Commerce
EDI	Electronic Data Interchange
EPROM	Erasable Programmable Read-Only Memory
EIS	Electronic Information Service
IEEE	Institute of Electrical and Electronics Engineers

InterLATA	Long Distance
IntraLATA	Local Service
ISDN	Integrated Services Digital Networks
ISO	International Organization for Standardization; voluntary international standards organization and member of CCITT
ISP	Internet Service Provider
ITAA	Information Technology Association of America (Formerly ADAPSO)
ITU	International Telecommunication Unio
IXC	Interexchange Carrier
LATA	Local Access and Transport Area
LEC	Local Exchange Carrier
LSI	Large-Scale Integration
MFJ	Modified Final Judgment
POP	Point of Presence
RBOC	Regional Bell Operating Company
SDP	Service Delivery Point
UNIX	Proprietary Operating System developed by AT&T; and now owned by UNIX Systems Laboratory, Novell, Inc.
UPS	Uninterruptable Power Source
VAR	Value-Added Reseller
VLSI	Very Large-Scale Integration
WORM	Write-Once-Read-Many times

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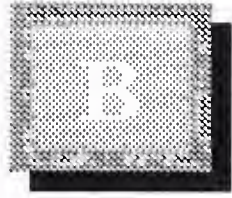
Policies, Regulations and Standards

A

OMB Circulars

A-11	Preparation and Submission of Budget Estimates	
A-49	Use of Management and Operating Contracts	
A-71	Responsibilities for the Administration and Management of Automatic Data Processing Activities	
A-109	Major Systems Acquisitions	
A-120	Guidelines for the Use of Consulting Services	
A-121	Cost Accounting, Cost Recovery and Integrated Sharing of Data Processing Facilities	
A-123	Internal Control Systems	
A-127	Financial Management Systems	
A-130	Management of Federal Information Resources	
A-131	Value Engineering	

B
GSA Publications

The FIRMR as published by GSA is the primary regulation for use by federal agencies in the management, acquisition and use of both ADP and telecommunications information resources.

C
DoD Directives

DD-5000.1	Major System Acquisitions
DD-5000.2	Major System Acquisition Process
DD-5000.11	DoD Data Administration (C3I)
DD-5000.31	Interim List of DoD-Approved, High-Order Languages
DD-5000.35	Defense Acquisition Regulatory Systems
DD-5200.1	DoD Information Security Program
DD-5200.28	Security Requirements for Automatic Data Processing (ADP) Systems
DD-5200.28-M	Manual of Techniques and Procedures for Implementing, Deactivating, Testing and Evaluating Secure Resource Sharing ADP Systems
DD-7920.2	Major Automated Information Systems Approval Process
DD-7935	Automated Data Systems (ADS) Documentation
DoDD 3405.1	Computer Programming Language Policy
DoDD 5000.11	DoD Data Administration (C3I)
DoDI 5000.12	Data Elements and Data Codes Standardization Procedure
DoDI 5000.18	Implementation of Standard Data Elements and Related Features

DoDD 5105.19	Defense Information Systems Agency
DoDD 5110.4	Washington Headquarters Services
DoDD 5118.3	Comptroller of the Department of Defense
DoDD 5137.1	Assistant Secretary of Defense (Command, Control, Communications and Intelligence)
DoDD 7740.1	DoD Information Resources Management Program
DoD 7740.1-G	DoD ADP Internal Control Guideline
DoDD 7740.2	Automated Information System (AIS) Strategic Planning
DoDI 7740.3	Information Resources Management (IRM) Review Program
DoDD 7750.5	Management and Control of Information Requirements
DoDI 7750.7	DoD Forms Management Program
DoDI 7920.2-M	Automated Information Systems (AIS) Life-Cycle Manual
DoDI 7920.4	Baselining of Automated Information Systems (AISs)
DoDI 7920.5	Management of End-User Computing (EUC)
DoDI 7930.1	Information Technology Users Group Program
DoDI 7930.2	ADP Software Exchange and Release
DoDD 7950.1	Automated Data Processing Resources Management
DoD 7950.1-M	Defense Automated Resources Management Manual of Information Requirements

D

Standards

ADCCP	Advanced Data Communications Control Procedures; ANSI Standard X3.66 of 1979; also NIST FIPS 71
CCITT G.711	International PCM standard
CCITT T.0	International standard for classification of facsimile apparatus for document transmission over telephone-type circuits
DEA-1	Proposed ISO standard for data encryption based on the NIST DES
EIA RS-170	Monochrome video standard
EIA RS-170A	Color video standard
EIA RS-464	EIA PBX standards
EIA RS-465	Standard for Group III facsimile
EIA RS-466	Facsimile standard; procedures for document transmission in the General Switched Telephone Network
EIA RS-232-C	EIA DCE to DTE interface standard using a 25-Pin connector; similar to CCITT V-24
EIA RS-449	New EIA standard DTE to DCE interface that replaces RS-232-C
FED-STD 1000	Proposed federal standard for adoption of the full OSI reference model
FED-STD 1026	Federal Data Encryption Standard (DES) adopted in 1983; also FIPS 46
FED-STD 1041	Equivalent to FIPS 100
FED-STD 1061	Group II facsimile standard (1981)
FED-STD 1062	Federal standard for Group III facsimile; equivalent to EIA RS-465

FED-STD 1063	Federal facsimile standard; equivalent to EIA RS-466
FED-STDs 1005	Federal standards for DCE coding and 1005A-1008 modulation
FIPS 46	NIST Data Encryption Standard (DES)
FIPS 81	DES Modes of Operation
FIPS 100	NIST standard for packet-switched networks; subset of 1980 CCITT X.25
FIPS 107	NIST standard for local-area networks, similar to IEEE 802.2 and 802.3
FIPS 146	Government Open Systems Interconnection (OSI) Profile (GOSIP)
FIPS 151	NIST POSIX (Portable Operating System Interface for UNIX) standard
IEEE 802.2	OSI-Compatible IEEE standard for data-link control in local-area networks
IEEE 802.3	Local-area network standard similar to Ethernet
IEEE 802.4	OSI-compatible standard for token bus local-area networks
IEEE 802.5	Local-area networks standard for token ring networks
IEEE P1003.1	POSIX standard, similar to FIPS 151 MIL-STD-Physical interface protocol similar to RS-232 and 188-114CRS-449
MIL-STD-1777	IP-Internet protocol
MIL-STD-1778	TCP - Transmission Control Protocol
MIL-STD-1780	File transfer protocol
MIL-STD-1781	Simple mail transfer protocol (electronic mail)
MIL-STD-1782	TELNET - virtual terminal protocol

MIL-STD-1815A	Ada programming language standard
SVID	UNIX System Interface Definition
X.12	ANSI standard for electronic data interchange
X.21	CCITT standard for interface between DTE and DCE for synchronous operation on public data networks
X.25	CCITT standard for interface between DTE and DCE for terminals operating in the packet mode on public data networks
X.75	CCITT standard for links that interface different packet networks
X.400	ISO application-level standard for the electronic transfer of messages (electronic mail)