EXECUTIVE OVERVIEW

Federal Communications Market
1986-1990

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To Our Clients:

This summary is an excerpt from a full research report, Federal Communications Market, 1986-1990, issued as part of INPUT's Federal Information Systems and Services Program (FISSP). A complete description of the program is provided at the end of this Executive Overview.

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REPORT ABSTRACT

INPUT estimates that the federal government telecommunications market will increase from $2.6 billion in 1985 to $3.9 billion by 1990, at an average annual growth rate of 8%. This forecast reflects both higher than expected expenditures in 1985 and slower growth through the rest of the 1980s.

Many federal agencies responded quickly to the effects of the AT&T divestiture by acquiring networks and telephone systems in anticipation of future cost increases and mission requirements. These recent acquisitions, coupled with federal budget constraints, have created an increasingly competitive environment for the federal telecommunications dollar.

The report highlights major defense and civilian telecommunications initiatives scheduled for implementation in the late 1980s, with special emphasis on systems such as GSA's FTS 2000 and DCA's Defense Switched Network. The report also examines the impacts of regulation, policy, and standards on future federal telecommunications acquisitions.

Other major issues covered in the report include: OSI standards, technological impacts, competitive trends, industry reactions to GSA telecommunications initiatives.

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A. FEDERAL TELECOMMUNICATIONS MARKET SEGMENTS

- This market forecast focuses on several specific types of telecommunications systems and services commercially acquired by the federal government.
    - Networks, such as common carrier, value-added, local-area, and wide-area, representing approximately 87% of telecommunications procurement.
    - Transmission facilities, such as cabling, switching equipment, and satellite ground stations, representing approximately 8%.
    - Professional services, such as network design, installation, and equipment maintenance, representing approximately 5%.
- The forecast also includes some telecommunications hardware and services acquired as part of other information technology programs, such as:
    - Office automation or information systems.
    - Distributed data processing.
    - C^2 and C^3.
- Local telephone service and the communications components of many intelligence and defense systems are funded by the government outside of agency information technology budgets and consequently fall outside the scope of this market forecast.

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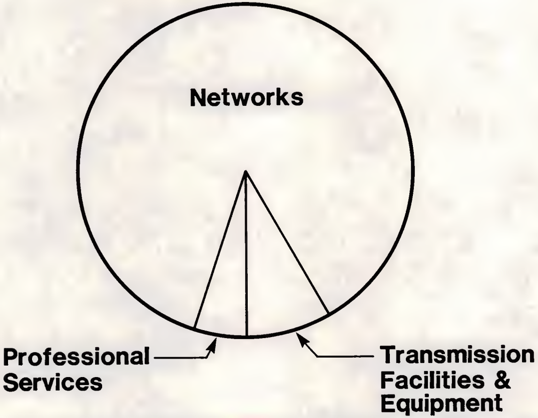
FEDERAL TELECOMMUNICATIONS MARKET SEGMENTS



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B. MARKET ENVIRONMENT

- The federal telecommunications market is shaped both by the procurement activities of the agencies and by a variety of regulatory, policy, and standards influences.

- Most federal agencies are both direct buyers and users of telecommunications systems and services. Several agencies, however, function primarily as buyers or resuppliers of telecommunications resources for other agencies.

  - GSA, through the FTS, WITS, ASP, and POTS programs.

  - DCA.

  - U.S. Air Force as DoD executive agent for AUTOVON.

  - Defense Commercial Communications Office.

- Other federal agencies influence the market primarily through regulation, policy, and standards activities. These agencies include the FCC, NCS, NTIA, NBS, OMB, and NSA.

- Since federal telecommunications access extends outside the government and across international boundaries, the market also is subject to external pressures from:

  - International organizations such as CCITT, CCIR, ISO, and the ITU.

  - National industry organizations such as NATA and ANSI.

  - PTT authorities in foreign countries.

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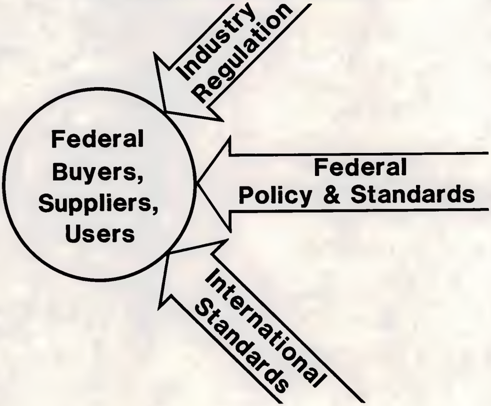
FEDERAL TELECOMMUNICATIONS MARKET ENVIRONMENT



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C. MARKET FORECAST, 1986-1990

- INPUT estimates that the federal government telecommunications market will increase from \$2.6 billion in FY85 to \$3.9 billion in FY90 with an average annual growth rate of 8.0%.

- This estimate reflects both a higher base (1985) market value and a lower growth rate than previously forecasted.

    - Many federal agencies reacted quickly in FY85 to the effects of the AT&T divestiture by acquiring networks and telephone systems in anticipation of future cost increases and mission requirements.

    - Budget pressures, including those mandated through the Gramm-Rudman-Hollings Act, will constrain future procurements.

- Although most federal telecommunications procurement remains concentrated in network services, other market segments show significant growth trends.

    - Replacement and lease-to-purchase conversion of existing communications hardware will spur capital investment through FY88.

    - Professional services, although representing a small part of the market, will exhibit the most consistent growth with an AAGR of 11%, primarily to cover maintenance requirements for communications systems purchased in FY85, FY86, and FY87.

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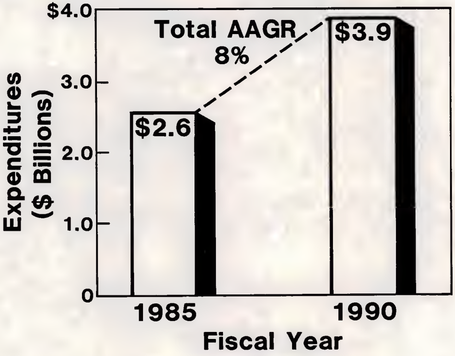
FEDERAL TELECOMMUNICATIONS MARKET FORECAST, GFY 1985-1990



Note: Dollars are rounded to the nearest $100 million.

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D. TECHNICAL TRENDS

- With the variety of emerging telecommunications technologies, most federal agencies have adopted a "wait and see" attitude, preferring to see network service vendors assume the risks associated with new technology. Defense and other agencies with geographically-dispersed or campus-type facilities are moving more rapidly to implement satellite, digital microwave, fiber optic, and teleconferencing facilities.

- Although voice/data integration appears to be the catch-phrase for new federal telecommunications initiatives, integration will be limited to circuit and switching hardware capabilities. Integrated workstations will come into general use only in the late 1980s or early 1990s.

- Providing interconnection and, more importantly, interoperability for the diverse existing federal hardware inventory will be a continuing technical challenge.

- The federal government will continue its migration toward full adoption and enforcement of international standards, centered around the OSI reference model, to resolve interconnection problems.

- Federal agencies are growing more concerned with telecommunications security and requiring end-to-end encryption even for systems that handle nonsensitive information.

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TECHNICAL TRENDS

- **Limited Acceptance of New Technology**
- **Integration of Voice and Data Transmission**
- **Interconnection and Interoperability Problems**
- **Migration to International Standards**
- **Emphasis on End-to-End Security**

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E. ISSUES AND PROBLEMS

- Federal agencies and the private sector experienced similar types of problems entering the post-divestiture environment. The government encountered more and greater problems since it is the world's single largest customer for commercial telephone service.

- Agencies expressed growing concern over budget impacts of the Gramm-Rudman-Hollings Act. The impact on telecommunications programs may be mitigated, however, by cost tradeoffs between actual travel and "travel by telecommunications."

- Agencies were unprepared for the staffing impacts of divestiture and FIRMR-mandated integration of voice and data communications organizations. Agencies believe they cannot compete with the private sector to recruit scarce, highly-qualified telecommunications specialists.

- Telecommunications standards, except those inherited from the Bell system, vary from agency to agency. Although NBS and NCS have promulgated some joint standards, many agencies are waiting for more comprehensive industry consensus.

- Agency telecommunications planners, almost without exception, expressed reservations about GSA's understanding of their requirements and ability to acquire and implement the new telecommunications services planned for FTS 2000.

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AGENCY PROBLEMS AND ISSUES

- Post-Divestiture Service Problems
- Budget Constraints (Gramm-Rudman-Hollings)
- Reorganization and Shortage of Staff
- Few Generally Established Standards
- Lack of Confidence in GSA Programs (FTS 2000)

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F. LEADING AGENCIES

- Although all federal agencies buy some commercial telecommunications systems and services directly, annual procurement by DoD and GSA exceeds that of the other agencies combined.
    - The Defense Commercial Communications Office FY86 budget for commercial services stands at $1.18 billion and has been growing between 12-15% a year.
    - The GSA information technology budget for FY86 includes over $728 million for leased telecommunications.
- The major new telecommunications initiatives from FY86 through FY90 also come from DoD and GSA.
    - Defense communications will evolve from existing facilities such as AUTOVON and AUTODIN to the new Defense Switched Network (DSN).
    - GSA is pursuing a nearly complete replacement of current telecommunications resources through the POTS, ASP, WITS, and FTS 2000 programs.
- Of the major network programs initiated by individual civilian agencies, several have been awarded and the remainder are in questionable status.
    - Treasury, Interior, Energy, and Agriculture have awarded long-term network service contracts.
    - APRs from other agencies have been held by GSA pending determination of the suitability of FTS 2000 for meeting agency requirements.

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LEADING AGENCY TELECOMMUNICATIONS BUYERS

- FY 1986 Leaders: Defense $1.18 Billion/ GSA $728 Million
- Defense and GSA also Lead in Initiatives:
  - Defense Switched Network (DSN)
  - GSA ASP, WITS, and FTS 2000
- Civilian Departmental Networks in Place or Delayed

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G. VENDOR COMPETITIVE OUTLOOK

- Despite divestiture and increased market pressure, AT&T remains the dominant market force. In addition to protecting its existing market share, AT&T has been successful as a team member in several recent new network procurements.

- Aside from the provision of local voice service, the RBOCs will not be a significant force in the federal market during the next several years. The continued constraints of structural separation in most cases will prevent the RBOCs from bidding major federal procurements which require both basic and enhanced services.

- Several telecommunications companies from outside the old Bell organization, especially those which provide switching equipment and specialized network services, have shown increasing success in the federal market.

- With the exception of its Rolm subsidiary, IBM has not been a major market force in federal telecommunications. Acquisitions and apparent alliances over the past two years place the company in position to make a stronger, broader-based entry in the market.

- The window of opportunity for smaller telecommunications companies will close much more quickly than it did for their counterparts in ADP systems and services. The single supplier approach dictated for FTS 2000 and the increasing preference shown by federal agencies for a systems integration approach will lock out smaller vendors who do not have close ties to established prime vendors in the federal information systems and services market.

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COMPETITIVE OUTLOOK

- **AT&T Remains Dominant**
- **Questionable Federal Future for RBOCs**
- **Non-Bell Companies in Some Market Segments**
- **Threat of Stronger IBM Market Entry**
- **Shake-Out on the Horizon**

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H. RECOMMENDATIONS

- All telecommunications vendors need to invest more effort in understanding agency missions and communications requirements. This understanding may be difficult to achieve, yet will be a key factor in successful bids for agency-wide telecommunications systems that support more than one mission.

- Since the government continues to experience a shortage of telecommunications expertise, vendors can improve their pre-bid position by providing education, technology forecasts, and planning guidelines through high-level briefings and meetings with federal officials.

- Vendors need to provide total telecommunications solutions, including pre-implementation planning and continued service. Agency officials frequently voiced concern over vendors, particularly in the hardware area, who provided inadequate support after installation. As a result, federal buyers are placing increased emphasis on corporate stability and reputation for service.

- Vendors must move quickly to establish a viable market presence in federal telecommunications. Recent rapid market growth, primarily in reaction to the AT&T divestiture, will not continue through the remainder of the 1980s, and networks and hardware acquired during FY85 and FY86 are not likely to be replaced before the 1990s.

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RECOMMENDATIONS

- Understand Agency Missions and Communications Requirements
- Provide Education and Assistance to Potential Buyers
- Emphasize Total Solution, Corporate Stability, and Service
- Move Quickly to Establish Market Position and Share

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FEDERAL TELECOMMUNICATIONS MARKET
1986-1990

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Federal Information Systems and

Billions of dollars will be spent by the federal government on information systems and services during the next few years.

The majority of those dollars will go to vendors who know enough about federal procurement practices to sell effectively in the government marketplace — who can penetrate the incredible maze of different agencies' plans and policies and *make it work for them.*

INPUT's Federal Information Systems and Services Program (FISSP) can help your company penetrate that maze.

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The backbone of the program is a series of *Procurement Analysis Reports* that analyze more than 350 major information systems and services acquisition plans of executive agencies over the next five years. These acquisitions include multiple procurements and will account for over $11 billion this year.

For each procurement plan, the report pinpoints:

- Size and timing of projected awards;
- Competitive environment;
- Background of the acquisition;
- Impacts of related contracts;
- Future demand for software, hardware, telecommunications, training, site preparation/operation, maintenance, and management.

Specific Market Intelligence

The program also provides a series of five reports on specific federal information service mode markets:

- **Systems Integration Report** — Includes both integrated systems and systems integration services.
- **Processing Services Report** — Covers primarily RCS, including that portion under TSP. Also covers user services hardware systems, and forecasts directions of TSP through 1985 and 1986.

- **Professional Services Report** — Covers I.V. & V. (independent verification and validation), software and hardware maintenance, and site preparation, as well as programming and analysis, consulting, education/training, and code conversion.
- **Facilities Management Report** — Covers both the prime and major subcontract positions, including TPM, for processing facilities management (COCO: contractor owned, contractor operated) and professional facilities management (GOCO: government owned, contractor operated).
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