

**Forest Service Handbook
National Headquarters - Washington Office
Washington, DC**

**Forest Service Handbook 6609.14 – Telecommunications Handbook
Chapter 20 – Technical Approvals**

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Approved by: Jack Ward Thomas, Chief

Date approved:

Responsible Staff:

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Digest: Following is an explanation of the changes throughout the directive by section.

01: Incorporates authorities into FSM 6640.1 and adds cross reference to that section.

02: Incorporates objectives into FSM 6640.2 and adds cross reference to that section.

03 & 04: Establishes code for Policy and Responsibility.

05: Adds the definitions for the terms: Compressed Video Transmission Service (CVTS); Emergency; Frequency Management; Local Access Transport Area (LATA); Local Area Network (LAN); Metropolitan Area Network (MAN); T-1; Telecommunications; Ultra High Frequency (UHF); Very High Frequency (VHF); and, Wide Area Network (WAN);

Removes the definitions for the terms: Answering Device; Answering Service; Auto Dialers; Business Line; DB4; Dedicated Line; Features; Key Telephone System; Operational Plan; Pager

Service; Speakerphone; and, Subsystem. These terms were removed because they are no longer specifically addressed in this handbook.

Revises the term Radio Frequency Authorization (RFA) to Radio Frequency Assignment (RFA) and Voice Mail to Voice Processing to more accurately reflect their application.

06: Removes section on Program Management.

10.3: Removes policy direction from this section and incorporates it in FSM 6640.6-6640.62.

11: Revises caption from Strategic Plan Format to Strategic Plan.

12: Revises caption from Tactical and Operational Plan Format to Tactical Plan.

12.1: Incorporates and revises direction on guidelines (formerly found in section 13.1).

13: Revises caption from Planning to Telecommunications Systems Planning.

13.1: Revises caption from Guidelines to Radio Communications Planning.

13.12: Removes direction on voice communications planning. (This direction is incorporated into section 13.2).

13.13: Removes direction on data communications planning. (This direction is incorporated into section 13.3).

13.2: Incorporates direction on voice communications planning (formerly found in section 13.12).

13.3: Incorporates direction on data communications planning (formerly found in section 13.13).

13.4: Establishes direction on video communications planning.

13.41: Establishes direction on cost analysis.

14: Establishes section for exhibits.

20.42: Revises responsibilities of the Washington Office, Director of Information Systems and Technology to include annual delegation of technical approval authority and thresholds.

20.62: Revises technical approval levels and removes technical approval authority thresholds which has been incorporated into section 20.42.

21.1: Corrects terms in radio frequency assignments section.

22: Revises direction on voice to reflect usage of FTS2000.

22.8: Establishes direction for voice processing.

22.9: Establishes direction for shared voice services.

24: Establishes direction for video conferencing.

25: Incorporates ID 6609.14-95-1, revises exhibit numbering, and adds exhibits on documentation requirements for cost thresholds (ex. 02) and local area network (LAN) requirements (ex. 05).

30.1: Revises and updates authority references.

31: Revises caption from Forest Service Standards to Standards.

31.1: Revises caption from Data Communications to Radio Communications and adds related direction.

31.11-31.14: Establishes pertinent direction on radio communications and incorporates direction formerly provided in sections 31.21-31.24d.

31.2: Revises caption from Radio Communications Equipment to Voice Communications which is reserved for use by field offices for supplementation purposes.

31.21-31.24d: Removes codes and captions concerning radio communications equipment. This direction has been incorporated in sections 31.11-31.14.

31.3: Revises caption from Telephone Equipment to Data Communications and adds related direction.

31.4: Establishes direction on video communications.

40: Incorporates ID 6609.14-95-2.

41: Revises direction throughout on frequency management.

41.3: Revises direction on national frequencies. Changes authorizations listed in exhibit 01.

41.31: Incorporates direction on air safety guard, air tactics, local air, and aeronautical multicom (formerly set forth in sections 41.31a-41.31d).

41.31a-41.31d: Moves direction on air safety guard, air tactics, local air, and aeronautical multicom, formerly found in these sections and incorporates it in section 41.31.

41.32: Revises caption from National Fire Radio Cache to National Incident Radio Support Cache (NIRSC). Incorporates direction on command, tactical I and II, and incident tactical (formerly set forth in sections 41.32a-41.32c).

41.32a-41.32c: Moves direction on command, tactical I and II, and incident tactical formerly found in these sections and incorporates it in section 41.32.

41.34: Revises caption from Incident Air-to-Ground to VHF/AM Aeronautical Band Frequencies.

41.38: Incorporates direction on law enforcement and wildlife telemetry (formerly set forth in sections 41.38a-41.38b).

41.38a-41.38b: Moves direction on law enforcement and wildlife telemetry and incorporates it in section 41.38.

41.4: Clarifies authorization on coordination for additional Continuous Tone-Controlled Squelch System (CTCSS) tones.

41.5: Revises caption from Cooperative Arrangements to Cooperative Communications.

41.6: Revises caption from Call Signs to International Call Signs.

41.77: Adds direction on use of Form FS-6600-4, Initial Report of Radio Interference.

50: Revises the title of Chapter 50 from Telephone to Voice.

51.1-51.3: Incorporates and adds direction on management tools (formerly set forth in section 51).

52.3: Revises caption from Interexchange Carriers (IC) to Services for Employees with Disabilities (formerly set forth in section 52.4). Adds direction to consider equipment and services to assist employees with disabilities in all plans, installations, or system upgrades. Removes direction for ICs previously set forth in this section.

52.4: Revises caption from Services for the Handicapped to Technical Approvals (formerly set forth in section 52.5) and incorporates direction on services for employees with disabilities in section 52.3.

52.5: Removes direction on technical approvals from this section and incorporates it in section 52.4.

53.4: Removes direction on recording (CDR) records from this section and incorporates it in FSM 6642.2.

60: Removes references to DEPNET contract and establishes local area network specifications in support of the Integrated Information Management Program (Project 615).

62: Adds a cross reference to section 52.3 which requires that services be provided for employees with disabilities.

70: Provides guidelines for the implementation of video conferencing, including shared services (sec. 71); issues and concerns (sec. 72); installation and testing (sec. 73); and training (sec. 74).

80: Incorporates ID 6609.14-94-1, with no substantive changes in text.

81.3: Incorporates direction intermediate distribution facility to work station interface in a local area network environment (formerly set forth in section 81.4) to correct coding.

81.4-81.41a: Incorporates direction on backbones (sec. 81.4), Local area network backbones (sec. 81.41), and local area segmentation (sec. 81.41a) (formerly set forth in sections 81.5-81.51a) to correct coding. Moves direction on intermediate distribution facility to a work station interface in a local area network environment from section 81.4 to 81.3.

90: Provides guidelines for the Federal Telecommunications System 2000 (FTS2000) including the service order process (sec. 91), switched voice services (sec. 92), virtual on-net services (sec. 93), packet switched services (sec. 94), acceptance (sec. 95), trouble handling and escalation (sec. 96), and billing hierarchy (sec. 97).

This Handbook is now available electronically in the National Information Center in the same format as the paper copy.

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This chapter provides guidelines for preparing technical approval requests for telecommunications services, hardware, software, and maintenance. The chapter defines technical approval documentation requirements for all telecommunications acquisitions. Further, the chapter covers authorities, approvals, and responsibilities delegated to the Forest Service as the Department of Agriculture representative for radio frequency management.

20.1 – Authority

Federal policies and procedures governing the management of telecommunications are contained in the Federal Information Resources Management Regulations (FIRMR) (FSH 6309.33). The following USDA regulations describe acquisition procedures in detail:

1. Departmental Regulation 3100-1, Telecommunications, provides additional rules and guidelines on telecommunications acquisitions.
2. Departmental Regulation 3130-1, Acquisition of IRM Resources, provides additional rules and guidelines on telecommunications technical approvals.

20.2 - Objectives

1. To obtain technical approval for telecommunications products or services.
2. To determine the scope of the effort necessary to justify proposed acquisitions.

20.3 – Policy

Grant technical approval for requested facilities only if the request is accompanied by supporting documentation described in this Handbook.

See FSM 6645 for a description of technical authorization policy and section 25, exhibit 01, for approval levels for telecommunications.

20.4 - Responsibility

20.41 - Line Officers

All line officers are responsible for the acquisition of telecommunications systems developed and operated within their areas.

20.42 - Washington Office, Director of Information Systems and Technology

It is the responsibility of the Director of the Washington Office, Information Systems and Technology Staff, to:

1. Delegate technical approval authority and thresholds on an annual basis.

2. Review requests that require General Services Administration (GSA), Department of Agriculture, or Washington Office technical approval to determine whether such requests have the required documentation and adequate justification.

20.6 - Required Action and Documentation

20.61 - General Requirements

The extent and content of the documentation required to support a telecommunications technical approval request vary a great deal depending upon the item or service requested and its value. The primary purpose of the technical approval process, however, is the same in all cases. The process is intended to ensure careful consideration of the acquisition, from the standpoint of the need, to effectively meet overall Forest Service objectives.

This section describes the various requirements systematically in a building block format based upon acquisition cost. Higher cost acquisitions must not only meet the requirements for that particular acquisition level, but also for all lower levels as well.

Do not initiate acquisition of telecommunications equipment or services from commercial sources until it is determined that it is not possible to obtain the required capability by using existing Federal resources.

20.62 - Documentation Requirements

The value and complexity of an acquisition dictate the required level of technical approval and associated documentation.

The extent of the effort necessary to justify the acquisition depends upon the complexity of the application. A dollar value not exceeding 10 percent of the procurement cost is suggested as a rule for quantifying the scope of effort for feasibility studies and document preparation. Recognize that this rule is a rough average because some relatively low-cost acquisitions can be quite complex and require extensive preliminary analysis while the requirements for some expensive acquisitions may be straightforward and easily defined and justified.

Sections 20.63-20.67 outline the documentation requirements based on the cost of the item or services being acquired. For a summary of the documentation required, see section 25, exhibit 02. Within a cost range it is expected that higher cost acquisitions require more thorough documentation than lower cost items. Exercise judgment in using the guidelines in each specific situation. Should the cost exceed the base threshold, as defined in Departmental Regulation 3130-1, Acquisition of IRM Resources, ensure that documentation adheres to the requirements in that regulation.

20.63 - Requests Under \$1,000

Telecommunications procurements under \$1,000 do not require technical approval unless required by other regulations, such as mandatory requirements contracts. Maintain the documentation associated with these procurements on file for consolidated upward reporting requirements.

20.64 - Requests From \$1,001 to \$25,000

In addition to the requirements for under \$1,000 requests, supply the following information. The complexity and amount of documentation should be consistent with the complexity and total cost of the equipment, software, or services being acquired.

Requests requiring Washington Office, USDA, or GSA technical approval must be signed by the Regional Forester, Director of the Station, Institute, or Area, a Washington Office Staff Director, or a delegated representative.

1. Management Summary. Describe the existing system. State the specific requirements of the proposed system, such as: new services, increased capacity, legislative and policy requirements, privacy, security, and audit controls. Present a clear picture of the desired system capabilities. The expected installation/completion date of the new system should be stated.

Identify the major objectives of the proposed system, such as: reduced equipment costs, increased productivity, improved telecommunications services, improved controls, or compliance with regulations.

State the reasoning which supports the recommendation of the proposed system over alternative systems. Explain known constraints (budget, policy, and so forth).

2. Functional Requirements. Identify the major functions of the proposed system. Ensure that workload and characteristics are congruent with the products and services being requested. Assess future requirements.

3. Alternative Systems. At least two feasible alternatives, in addition to the recommended alternative, should be evaluated. One alternative should be continuing with the current system or operation. This alternative could be used as the base line for measurements.

4. Cost/Benefit Analysis. Use the cost/benefit analysis as a way of providing managers, users, designers, and auditors with adequate cost and benefit information to analyze and evaluate alternative approaches. The level of detail provided should be consistent with the size and complexity of the acquisition.

The comparative cost/benefit analysis may be limited to an analysis that demonstrates that the benefits of acquiring the proposed system or item outweigh the costs. At a minimum, this

should include a table of anticipated costs and anticipated benefits over the system life. State these costs and benefits in terms that relate to organizational objectives, goals, missions, functions, and operating environment.

5. Noncompetitive Procurement Justification. If an acquisition is proposed to be conducted on a noncompetitive basis, prepare a sole source justification. Title this document, "Justification for Noncompetitive Procurement," and ensure it is in accordance with Public Law 98-369, Section 303, the Federal Acquisition Regulations (FAR), Agriculture Acquisition Regulations (AGAR), and any Departmental Regulations which implement the FAR. The final decision whether an acquisition is to be noncompetitive rests with the Contracting Officer. The essential elements of a noncompetitive justification are: the quantitative description of how much cost can be saved and the details of why only one vendor's product or service is practical.

20.65 - Requests From \$25,001 to \$50,000

In addition to the requirements in section 20.64, provide the following information:

1. Expanded Alternative Systems. For each alternative, describe the major processing/data flow. Specify the volume of work to be handled by the system and identify costs incurred in operating the system such as: manpower, equipment, space, support services, materials, and/or overhead. Identify the limitations of each system such as resource constraints or organization and policy problems. Identify any other factors which are unique to this system.

If other alternatives were considered, summarize each alternative and state the reason for non-selection.

2. Expanded Cost/Benefit Analysis. Conduct a cost/benefit analysis for each feasible alternative. Describe the development and operation costs of each system.

Present costs in a table format supplemented by a narrative describing how the costs were determined and discussing any assumptions upon which the costs are based. Include costs for telecommunications services, maintenance, software, and services such as conversion/transition, maintenance, facility management, and operations. Also, include other non-recurring costs such as personnel costs of technicians, training and travel expenses, overhead costs for management and support staff, space, environment, utilities, and supplies costs. Estimate recurring costs for these items over the system life and include them in the cost table.

Often identifiable costs can be found but cannot be readily evaluated nor estimated. If no relationship can be established to gauge their magnitude, they should be described so they can be considered in the alternative selection decision.

Describe non-recurring and recurring benefits which could be attained through the use of the proposed system. State benefits in terms that relate to organizational objectives, goals, missions, functions, and operating environment.

20.66 - Requests From \$50,001 to \$100,000

For those information items already discussed in earlier sections, the level of detail provided should reflect the higher acquisition cost and be consistent with other documentation requirements for requests in this price range. In addition to the requirements in sections 20.64 and 20.65, supply the following information:

1. Additional Cost/Benefit Analysis. Calculate the present value cost of the acquisition, the adjusted cost, and the present value of benefits by using a 10 percent discount rate for system life costs. Calculate the benefit/cost ratio by dividing the total present value of benefits by the adjusted cost.

20.67 - Requests Over \$100,000

Ensure that all documentation requirements in Departmental Regulation 3130-1, Acquisition of IRM Resources are met for requests whose acquisition cost exceeds \$100,000.

See section 25, exhibit 01 for telecommunications approvals. Submit requests for approvals that must be approved by the Washington Office or higher to the Washington Office, Information Systems and Technology Staff, Policy, Planning, and Standards Branch, for review and decision. The Washington Office, Information Systems and Technology Staff also coordinates requests which require approval by the Department, Office of Information Resources Management or the General Services Administration.

21 - Radio

See section 25 for approval levels. See section 20.6 for required action and documentation requirements for technical approvals.

21.1 - Radio Frequency Assignments (RFA)

1. Frequency Assignment. All Forest Service operations on radio frequencies must be authorized by a frequency assignment from the National Telecommunications and Information Agency (NTIA). Obtain site specific RFA's for all base stations, exceptions apply only to mobile operations.

2. Frequency Approvals. Submit requests for new radio systems and major changes at least 1 year prior to the date needed because the process is lengthy. Each agency has a responsibility to protect their interests in the frequency spectrum and, at the same time, every user of the spectrum has a responsibility to not infringe on others. In keeping with the NTIA's

request for compliance with policy concerning the Spectrum Planning Subcommittee (SPS), submit all new radio systems and major changes (greater than 30 percent) to existing systems to both the SPS for spectrum approval and to the Frequency Assignment Subcommittee (FAS) for frequency coordination. These submissions cannot run concurrently. The NTIA policy states that requests are submitted first to the SPS and then to the FAS. All submissions are made by the Washington Office, Information Systems and Technology Staff. The SPS is an integral part of the NTIA and, as such, serves as the review body for frequency availability and Electromagnetic Compatibility (EMC).

Each approved application for a new frequency assignment, modification to an existing assignment, or update in a 5-year review results in the issuance of a new authorization from the NTIA. A copy of the RFA's should be kept with each base station and repeater. Each month, the NTIA mails copies of all existing assignments to the Washington Office Frequency Manager and to each authorized Regional Frequency Manager. Each assignment should be compared to existing operations to ascertain if there is proper authorization.

3. Frequency Use. Use of another forest or station frequency is permitted, provided such operation is coordinated (formal agreement not required) with the particular unit. See section 41.5 for direction on cooperative arrangements with non-Forest Service agencies.

Use Very High Frequency (VHF high-band 162 to 174 MHz and low-band 30 to 50 MHz) radio communications systems to accomplish the objective stated in FSM 6640. Ultra High Frequency (UHF) and microwave point to point communications may be used to augment the capability of systems where necessary.

Written cooperative arrangements, in lieu of RFA, may be used in contingency plans, provided the arrangement is not for planned day-to-day operations (including seasonal operations where the frequency is expected to be used on a recurring basis).

21.11 - Preparation of Request for New Radio Frequency Assignments

Ensure that each request contains the following:

1. Cover Letter. Provide the name, title, mailing address, and telephone number of a person with knowledge of the system in the cover letter.

2. System Description. Provide a brief description of system functions and proposed use and name of the office or activity requiring the assignment.

3. System Drawing. Submit a system drawing for each system in the Fixed Service operating above 30 MHz and each system in the Mobile Service with three or more land stations. Systems that are wholly mobile or transportable do not require a system drawing. In each system drawing, show and identify the following:

- a. All stations in the system.
- b. Frequencies used at each station.
- c. Type of station (station class).
- d. Remote control facilities (as appropriate).
- e. Interconnects to other systems (as appropriate).
- f. Normal points of communications.

System drawings should be functional (not geographic) in nature, showing the relationship between stations in a system. See section 25, exhibit 03 for an example of a functional system drawing.

4. Forest Map. Include a large scale forest map with each station location highlighted for forest systems which require a system drawing. Do not submit an additional forest map if a revised map was submitted within 1 year.

5. Justification. Indicate that the requests are in compliance with section 13 and FSM 6641.32.

6. Application Form. Submit applications electronically to the Washington Office, Information Systems and Technology Staff, Customer Services Branch (NTIA Manual, Part 9.7 and sec. 25, ex. 04). Submit a separate application for each frequency required by a fixed station, a group of mobiles, or a transportable station in a system.

21.12 - Modifications to Existing Assignments

See chapter 9 of the NTIA Manual for direction. Submit modifications electronically and separately from applications for new assignments.

Modify existing assignments whenever any of the following are changed:

1. Transmitter Antenna Location (XAL).
2. Power (PWR).
3. Emission Designator (EMS).
4. Transmitter Antenna Dimensions (XAD) particulars (type, height above ground, elevation above sea level, and direction).

5. Addition or change of Receiver Antenna Location (RAL).

Submit a new system drawing and forest map (as required in section 21.11) to the Washington Office, Information Systems and Technology Staff, Customer Services Branch, whenever a transmitter (XAL) and/or receiver (RAL) site are moved or added.

21.13 - Five-Year Review

Review all frequency assignments and resubmit to NTIA within 5 years of the review date (RVX) on the assignment. If the majority of assignments to a system require a 5-year review, a review of all assignments (a system review) for the entire system may be appropriate. Any review which adds stations to a system, including stations accessing an existing repeater, shall include a system drawing and large scale forest map (sec. 21.11). Submit assignments to be reviewed to the Washington Office, Information Systems and Technology Staff, Customer Services Branch, in the same format as that used for modifications (\$\$MOD).

21.2 - Radio Procurement

The consolidated Land-Mobile Radio procurement program is intended to meet normal requirements of field units. The contracts awarded through this program are mandatory sources of procurement for the Forest Service. Units having emergency or special requirements that cannot be met by the consolidated contracts must receive a waiver from the Washington Office, Information Systems and Technology Staff, prior to procurement. In the request for a waiver, include a justification statement explaining the emergency or special requirement, specifications not met by the consolidated contracts, and the reason the next contracting cycle is unacceptable.

22 - Voice

See section 25 for approval levels. See section 20.6 for required action and documentation requirements for technical approvals.

22.1 - Federal Telecommunications System 2000 (FTS2000)

Switched Voice Service (SVS) and Virtual On Net (VON) are the primary voice communication services used by the Forest Service. The Federal Card may be used as the method for an office to access the FTS2000 SVS network. Submit requests for service to the FTS2000 Designated Agency Representative (DAR).

For an exception to the use of FTS2000, obtain approval from the General Services Administration (GSA). Submit requests for exceptions to the Washington Office, Information Systems and Technology Staff, for coordination with the Department, Office of Information Resources Management, and GSA.

22.2 - Direct Inward System Access (DISA)

The requirement for technical approval is due to the security issues which surround this type of system access. In the request for technical approval, provide detailed information in the following areas:

1. Purpose/justification,
2. Alternatives considered,
3. Cost comparisons, and
4. Planned security measures.

22.3 - International Voice Communications

International calling is not provided under the FTS2000 contract. However, provisions have been made to integrate an international calling card account with the FTS2000 Federal Card. Contact the FTS2000 DAR for specific details.

International calls made from the office would appear on the established monthly invoices.

22.4 - GSA Mandatory Local Telecommunication Service Area

See Federal Information Resources Management Regulations (FIRMR) Bulletin C-15 for the current list of mandatory local telecommunications service areas. Submit requests for exceptions through the Washington Office, Information Systems and Technology Staff, for coordination with the Department and the General Services Administration. See FIRMR Bulletin C-5 for information on preparing the Agency Procurement Request which must accompany a request for exception.

22.5 - Telephone Lines in Private Residences

Provide a copy of the technical approval to the employee's Property Management Officer (PMO). Reflect the government provided service on Form OF-130, Custodial Property Report Record. Prepare the Form AD-474, Transmittal - Telephone and Utilities, to reflect the base monthly cost plus 10 percent. Where the local exchange company has the capability, restrict the line to local and 800 access only. The Federal Card should be used for long distance voice communications and packet dial-up or FTS2000 800 service should be used for long distance data communications.

22.6 - Radio Telephone Interface (RTI)

The RTI is a method used to access telephone service (such as manual or automatic telephone patch) from portable or mobile radios. Do not use this as a means to bypass Local Exchange Companies (LECs). Approving unit shall ensure that the following are met:

1. Ensure that the installing unit is responsible for the RTI management and prevention of abuse.
2. Limit use of the RTI to essential traffic for which other means are not practical.
3. Do not use the RTI as an interconnection between forests.

22.7 - Telephone Systems Using Radio

Obtain technical approval for a telephone system that uses a Forest Service radio system (for example: microwave, UHF, and VHF) as its medium of transmission. See the following examples which include: (1) systems that terminate at a telephone set(s) at each end or in the commercial telephone service at one end and in a telephone set(s) at the other end and (2) Rural Telephone Systems.

22.8 - Voice Processing

The USDA has established a multi-year voice processing contract for USDA-wide use. The terms of the voice processing contract are subject to annual review by the Department, and may change from year to year. Units in need of voice processing systems/services must first examine the terms of the Department contract with its voice processing service provider, and act accordingly.

If the Department voice processing contract is a mandatory requirements contract, voice processing systems/services not requested through this contract require technical approval and a waiver from the Department contract. Submit requests for waiver to the Washington Office, Information Systems and Technology Staff, Customer Services Branch. Include the following in a request for a waiver:

1. Requesting unit.
2. Contact person and telephone number.
3. Existing situation.
4. Functional requirements. At a minimum, they must include the following capabilities:
 - a. Zero (0) escape option.

- b. Visual or audible signal to indicate a message is waiting.
 - c. Each mailbox accessible only by entry of an individual password to retrieve messages.
 - d. Remote access to retrieve messages from a remote location.
 - e. Producing management/traffic analysis and system administration reports.
5. Description of the proposed system or service and its interface with the existing telephone system.
6. Alternatives considered. Include use of the USDA voice processing contract as one of the alternatives considered.
7. Analysis and selection of alternatives. The proposed system or service must meet or exceed the minimum requirement in the USDA voice processing contract.
8. Telecommunications requirements.
9. Estimated cost for all alternatives. (Recurring and non-recurring, including staffing.)
10. Implementation plan. Consider needs to provide information in other languages.

If the Department voice processing contract is a non-mandatory contract, units must invite the Department voice processing service provider to offer solutions to the unit's needs in competition with local service providers to determine the best value to the Government. Units should, in general, follow the outline of steps identified in paragraphs 1-10.

22.9 - Shared Voice Services

See section 25, exhibit 01, for approval levels. At a minimum, ensure that shared voice services arrangements (Memorandum of Understanding or Cooperative Agreements):

- 1. State the purpose of the agreement.
- 2. State the initiation and termination dates.
- 3. Provide for the termination of the agreement by either party.
- 4. Provide the Agency contact points (Forest Service and/or other).

5. State clearly the service(s) to be shared and the quality or performance levels expected.

23 - Data

See section 25, exhibit 01, for approval levels. See section 20.6 for required action and documentation requirements for technical approvals. See section 25, exhibit 05, for an outline of a Local Area Network Request for Technical Approval. See the following for a list of data communications services and their approval requirements.

1. Federal Telecommunications Systems 2000 (FTS2000). Dedicated Packet Switched Service (PSS) and Enhanced PSS are the primary data communications services used by the Forest Service. The Designated Agency Representatives are responsible for submitting requests for service to the FTS2000 service provider (FSH 6609.14, ch. 90).

2. Internet. Obtain technical approval prior to implementation of direct access to the Internet. See section 25, exhibit 01, for approval levels.

3. Local Service Area (IntraLATA) Data Lines. Include detailed information for local service area (intraLATA) data lines in the discussion of the selected alternative in the Tactical Plan (FSH 6609.14, ch. 10).

4. Local Area Network. See section 25, exhibit 01, for approval levels. See section 25, exhibit 05, for a suggested outline of a request for technical approval for a local area network.

5. Microwave Data Concentration. Processing of computer generated information from one unit to another unit over a Forest Service owned microwave communications system requires GSA approval when the information is transferred out of a Local Access Transport Area (LATA).

24 - Video

See section 25, exhibit 01, for approval levels. See section 20.6 for required action and documentation requirements for technical approvals.

Compressed Video Teleconferencing Service (CVTS) and Switched CVTS (SCVTS) are the primary video communications services used by the Forest Service. New installations or service changes to existing video systems require Washington Office, Information Systems and Technology Staff, or in some cases the Department, Office of Information Resources Management, approval prior to acquisition.

1. The approval request must contain the following: a facility design, cost analysis, and other pertinent information.

2. The designated Agency Representatives must submit an FTS2000 CVTS order after approval has been granted. (The CVTS orders contractually require 120 working days to be processed by the General Services Administration and the FTS2000 service provider.)

25 - Exhibits

1. Exhibit 01 - Approval Levels. Exhibit 01 identifies the level at which the authority resides to grant technical approval for the listed categories and equipment.

2. Exhibit 02 - Documentation Requirements for Telecommunications Approval at Various Cost Levels. Exhibit 02 summarizes the technical approval request documentation requirements based on the cost of the item or services being acquired.

3. Exhibit 03 - Sample System Drawing for a National Forest. Exhibit 03 provides a sample system drawing which shows the relationship between stations in a system.

4. Exhibit 04 - Radio Frequency Application Card Format. Exhibit 04 provides an example of the card format used to prepare a radio frequency application.

5. Exhibit 05 - Outline for Local Area Network (LAN) Request for Technical Approval. Exhibit 05 provides an outline for a Local Area Network Request for Technical Approval.

Forest Service Handbook 6609.14 – Telecommunications Handbook

Chapter 20 – Technical Approvals

Amendment: 6609.14-1995-1

Effective date: May 26, 1995

25 - Exhibit 01

Approval Levels

Category/Equipment	GSA	NTIA	Required Approval		R/S/A/I
			OIRM	FS/WO	
DATA COMMUNICATIONS					
Internet, Direct Access -----			X	X	X
Local Area Network -----					X
Local Area Network, Wireless -----				X	X
Local Service Area (IntraLATA)					
Data Lines -----					x ¹
Microwave Data Concentration, InterLATA -----	X		X	X	X
Microwave Data Concentration, IntraLATA -----					X
Modems -----					x ¹
Multiplexers -----					x ¹
X.25 Packet Switches -----					x ¹
<hr/>					
FEDERAL TELECOMMUNICATIONS SYSTEM 2000					
FTS2000 Services and Features (except Video) -----					x ²
FTS2000 Video Services -----			X	X	x ³
<hr/>					
RADIO COMMUNICATIONS					
Cooperative Agreement -----					x ⁴
Digital Transmission (Encoding) -----		X	X	X	X
FM LMR Contract Procurement Waiver ---				X	X
Frequency Assignment -----		X	X	X	X
Interconnecting more than one National Forest which are not administratively joined and under one supervisor ----				X	x ⁵
Local Area Network, Wireless (other than FCC, Part 15) -----				X	X
Memo of Understanding -----					x ⁴
Microwave Radio System Plans -----				X	X
Pager System Equipment -----					x ⁶
Program Synthesized Radios -----					x ⁷
Radio System Plans, R/S/A/I -----				X	X
Radio System Plans, Forest -----					X

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25 - Exhibit 01--Continued

Category/Equipment	Required Approval				R/S/A/I
	GSA	NTIA	OIRM	FS/WO	
SHARED TELECOMMUNICATIONS SERVICES					
Non-radio systems/equipment -----					X ¹
VOICE COMMUNICATIONS					
900 Service -----				X	X
Credit Cards for International Communications -----					X ¹
Direct Inward System Access (DISA)					X
Improved Mobile Telephone Service (such as, IMTS or Cellular) -----					X ¹
Listening-in Device -----	X		X	X	X
Local Service Area (IntraLATA) Voice Lines -----					X ¹
Pay Phones -----					X ^{1,8}
PBX/KTS (<50 Instruments), in GSA Mandatory Service Area -----	X ⁹				X ¹
PBX/KTS (>50 Instruments), in GSA Mandatory Service Area -----	X		X	X	X
PBX/KTS, not in GSA Mandatory Service Area -----					X ¹
Radio Telephone Interface (RTI) via FS Radio -----					X ¹⁰
Satellite -----			X	X	X
Secure Voice/COMSEC -----	X		X	X	X
Teleconferencing Systems					
Audio -----					X
Video -----				X	X
Telephone Systems using Radio (such as, microwave, UHF, VHF) -----	X		X	X	X ¹¹
Telephone Lines in Private Residences -----					X ¹
Voice Processing/Mail -----			X	X	X

25 - Exhibit 01--Continued

1. May be redelegated to the next lower organizational level at the discretion of the R/S/A/I.
2. Delegation to the next lower organizational level requires prior approval by the Washington Office.
3. Submission of a technical waiver request to the Department through the Washington Office is required when there is an existing local FTS2000 video facility.
4. Cannot be delegated below Forest Supervisor. Washington Office, Information Systems and Technology Staff must receive a copy prior to application for frequency assignment or license.
5. Where two or more National Forests have been joined into one administrative unit approval is not required. (For example: the Mt. Baker NF and Snoqualmie NF, are now the Mt. Baker-Snoqualmie National Forest.)
6. Primary use of the frequency cannot be for paging.
7. Delegation of authority permitted only in compliance with FSM 6641.36.
8. If via FS radio system, including microwave, Washington Office approval required. Do not connect pay phones to the FTS2000 network.
9. Appropriate GSA Regional Office must approve.
10. Includes accessing telephone service (such as auto patch) from mobiles. Do not use this service to bypass the Local Exchange Company (LEC).
11. If the telephone service (conventional or trunking) being transmitted over the FS Network is within a LATA, then R/S/A/I approval is required. If the transmission crosses a LATA, GSA approval is required. Do not use to bypass Local Exchange Companies (LECs). Follow guidelines in FSM 6640.

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25 - Exhibit 02

Documentation Requirements for Telecommunications
Approval at Various Cost Levels

<u>System Cost</u>	<u>FSH Ref. Sec.</u>	<u>Required Documentation</u>
< \$1,000	20.63	Summary dollar information for upward reporting
<hr/>		
\$1,001 - \$25,000	20.64	Summary dollar information PLUS Letter describing request and cost/benefits Management Summary Functional Requirements Alternative Systems Cost/Benefit Analysis Noncompetitive Procurement Justification
<hr/>		
\$25,001 - \$50,000	20.65	All of the above, PLUS: Expanded Alternative Systems Expanded Cost/Benefit Analysis
<hr/>		
\$50,001 - \$100,000	20.66	All of the above, PLUS: Additional Cost/Benefit Analysis
<hr/>		
> \$100,000	20.67	See Departmental Regulation 3130-1
<hr/>		

The repetition of a category in the requirements for a higher value acquisition indicates that new requirements have been added to that category or that a major increase in the amount of justification is required.

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25 - Exhibit 04

Radio Frequency Application Card Format

	\$\$ADD	A
TYPE OF ACTION	TYPO1	N
DATE APP IS PREPARED	DATO1	
CLASSIFIED	CLA01	U
FREQUENCY	FRQ01	M _____
NET CONTROL	NET01	_____
INTERNATIONAL COORDINATION	ICI01	_____
BUREAU	BUR01	_____
EXPIRATION DATE	EXD01	_____
STATION CLASS	STC01	_____
EMISSION DESIGNATOR	EMS01	_____
POWER	PWR01	_____
STATION CLASS	STC02	_____
EMISSION DESIGNATOR	EMS02	_____
POWER	PWR01	_____
RECORD NOTES	NTS01	_____
RECORD NOTES	NTS02	_____
TIME	TME01	_____
TX STATE/COUNTRY	XSC01	_____
TX ANT LOCATION	XAL01	_____
TX CONTROL	XRC01	_____
TX ANT LATITUDE	XLA01	_____ N
TX ANT LONGITUDE	XLG01	_____ W
TX ANT POLARIZATION	XAP01	_____
TX ANT ORIENTATION	XAZ01	_____
TX CALL SIGN	XCL01	_____
TX ANT DIMENSIONS	XAD01	__ G _____ H ____ T
RX STATE/COUNTRY	RSC01	_____
RX ANT LOCATION	RAL01	_____
RX ANT LONGITUDE	RLG01	_____ W
RX ANT POLARIZATION	RAP01	_____
RX ANT ORIENTATION	RAZ01	_____
RX ANT DIMENSIONS	RAD01	__ G _____ H ____ T
RX STATE LOCATION	RSC02	_____
RX ANT LOCATION	RAL02	_____
RX ANT LATITUDE	RLA02	_____ N
RX ANT LONGITUDE	RLG02	_____ W
RX ANT POLARIZATION	RAP02	_____
RX ANT ORIENTATION	RAZ02	_____
RX ANT DIMENSIONS	RAD02	__ G _____ H ____ T
MILEAGE RADIUS	REM0	*RAD _____
# OF STN AND SYS NAME	REM0	*NRM, _____
EQUIPMENT	REM0	*EQS,LMS
RX REPEATER	REM0	*RPT,R
SYS IDENTIFIER	REM0	*SYS,NATURAL RESOURCES
AGENCY	REM0	*AGN, PW M _____
AGENCY	REM0	*AGN, CONT FOR /BY MW
AGENCY	REM0	* _____
AGENCY	REM0	* _____
SUPPLEMENTARY DATA	SUP01	(PLAIN TEXT, 72 CHARACTERS)

:

25 - Exhibit 05

Outline for Local Area Network (LAN)

Request for Technical Approval

1. Agency name and service address.
2. Agency contact and telephone number.
3. Description of LAN.
 - a. Type - (Baseband).
 - b. Topology - (Bus).
 - c. Medium - (Fiber, Twisted pair - specify category. If 4-pair category 3 is not used, justify).
 - d. Access scheme - (CSMA/CD, IEEE 802.3).
 - e. Configuration - (Include a diagram).
 - f. Nodes in numbers.
 - g. Hardware to be connected to the LAN.
 - h. Software to be used on the LAN hardware.
4. Acquisition Cost.
5. Management.
 - a. Implementation Plans (Include a Management Summary).
 - b. Security.
 - c. LAN Management System to be used.
6. Space. Location of LAN.
7. Benefits. Connectivity, sharing of peripherals, and so forth.