

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

**Forest Service Handbook 6609.14 – Telecommunications Handbook
Zero Code**

Amendment: 6609.14-1995-1

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Duration: This amendment is effective until superseded or removed.

Approved by: Jack Ward Thomas, Chief

Date approved:

Responsible Staff:

Last Change:

Superseded Document(s): 6609.14, Contents; 6609.14,0 Code Contents; 6609.14,0 Code; 6609.14,10 Contents; 6609.14,10; 6609.14,20 Contents; 6609.14,20; 6609.14,20,Ex.06; ID 6609.14-95-1; 6609.14,30 Contents; 6609.14,30; 6609.14,40 Contents; 6609.14,40; 6609.14,41.3,Ex.01; ID 6609.14-95-2; 6609.14,50 Contents; 6609.14,50; 6609.14,60 Contents; 6609.14,60; 6609.14,80 Contents; ID 6609.14-94-1; Amendment 6609.14-94-2, May 24, 1994; Amendment 6609.14-94-1, May 24, 1994; Amendment 6609.14-91-1, September 3, 1991

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 handbook provides Forest Service standards and procedures for acquiring, operating, and maintaining telecommunication and information transfer systems.

01 – Authority

(FSM 6640.1).

02 – Objectives

(FSM 6640.2).

03 – Policy

(FSM 6640.3).

04 – Responsibility

(FSM 6640.4).

05 – Definitions

The following terms are for telecommunications equipment, facilities, and services which are not currently covered in Federal Standard Glossary of Telecommunications Terms (FED-STD 1037B), the National Telecommunications and Information Administration (NTIA) Manual for radio frequencies, or are referred to so frequently that they must be incorporated in this Handbook:

Compressed Video Transmission Service (CVTS). A teleconferencing service offered in the FTS2000 contract. CVTS differs from other forms of video communications, including Closed Circuit Television for campus or in-house communications, security and monitoring applications, and broadcast quality video transmission. FTS2000 offers the following conference modes:

1. Point-to-Point. Allows users to establish a two-way (interactive) video and audio link between two conference rooms. Each room has the capability to transmit and receive video and audio signals.

2. Multipoint - Broadcast. One origination site and multiple receiving sites. Only one video transmission is seen by all sites, while the audio is interactive among sites. This type is best suited for informational announcements needing widespread distribution.

3. Multipoint - Dynamic. Fully interactive with both voice and video being present at multiple locations. The voice is continually interactive while the video transmitting site is dynamically selected by either a control operator or voice activated.

Emergency. (Defined for radio communications purposes.) An emergency must actually exist or immediately threaten. An emergency means a situation of temporary duration resulting directly or indirectly from a natural catastrophe or other occurrence that seriously affects the welfare of a community or of an area to the extent of endangering human life and property and in connection with which special communications facilities are required temporarily (NTIA Manual, para. 7.3.1).

Frequency Management. The administration and control of electro-magnetic radiation to permit the orderly, efficient, and effective use of the spectrum.

Frequency Modulated Land-Mobile Radio (FM LMR). Frequency modulated radios in the Land-Mobile Radio service.

Local Access Transport Area (LATA). Under terms of the Modified Final Judgment (MFJ), a geographical area within which a Bell Operating Company (such as US West or Southern Bell) is permitted to provide exchange telecommunications and exchange access services upon divestiture by AT&T.

Local Area Network (LAN). A non-public data communications system within a limited geographic area designed to allow a number of independent devices to communicate with each other over a common transmission-interconnected topology. (Note 1: LANs are usually restricted to relatively small geographical areas, such as rooms, buildings, or cluster of buildings, and use fairly high data rates. Note 2: A LAN is not subject to public telecommunications regulations.) For clarification two key words are emphasized:

1. Independent. This means that the device must be able to function without being connected to the LAN.

2. Common. This implies one or singular medium and therefore must always be available, that is it cannot be switched.

Local Dial Area. A specific geographical area which does not incur any additional charges for placing a call.

Metropolitan Area Network (MAN). A loosely defined term generally understood to describe a network covering an area larger than a LAN. It typically interconnects 2 or more LANs, may operate at higher speeds, may cross administrative boundaries, and may use multiple access methods.

Microwave Radio. A radio capable of simultaneously transmitting and receiving many voice and/or data channels in the frequency range above 900 MHz.

Mobile Telephone. Mobile Telephone Service (MTS) or cellular. A commercial service which, by means of transportable equipment, gives access to the public telephone network.

NETGEN. The Data General network address scheme.

Pager System. A system used to summon a person or deliver a message. Some paging systems use a selective radio signal. More sophisticated systems deliver voice messages to the person carrying the pager.

Pagers. A small portable device used to inform the person carrying it that they have a message.

Radio Frequency Assignment (RFA). An authorization from the National Telecommunications and Information Administration (NTIA) for a radio station to use a specific radio frequency under specified conditions.

Strategic Plan. A plan to afford the maximum support to line managements policies and direction. It is a statement of what is to be done in broad terms and sufficiently flexible to permit its use in setting the telecommunications direction for the organization over a period of 10 years. The accomplishment is detailed in "how to" tactical plans.

T-1 - 24 channel, 1.544 Mbps telecommunications carrier facility.

Tactical Plan. The tactical telecommunications plan includes a set of actions that serve to satisfy the strategic plan. The plan is to be updated every three years and reviewed annually.

Telecommunications. Any transmission, emission, or reception of signs, signals, writing, images, sounds, or other forms of communications by electromagnetic or visual means.

Ultra High Frequency (UHF). Frequencies from 300 MHz to 3000 MHz.

Very High Frequency (VHF). Frequencies from 30 MHz to 300 MHz.

Voice Processing. A computer-based system where the use of voice information facilitates the process of responding, collecting, and distributing accurate caller information over the telephone. Voice Mail, Automated Attendant, and Voice Response are three of the several components of a commonly used voice processing system.

1. Voice Mail. A personalized messaging service that accepts a telephone caller's message when the person called is away or already on the telephone. The caller should have the option of leaving a message or transferring to a receptionist. It allows the user to receive, send, and save messages for later retrieval. It can be accessed from touchtone or cellular telephones.

2. Automated Attendant. (Also known as Call Router.) This allows incoming calls to connect with individuals, staffs, recorded messages, or an operator. The caller selects from a menu of recorded options.

3. Call Router. See the term automated attendant.

4. Voice Response. This allows a caller to interact with the system through a touchtone telephone that provides a synthesized voice response to the touchtone commands. The caller has the option of leaving a message or transferring to a receptionist.

Wide Area Network (WAN). A physical or logical network that provides capabilities for a number of independent devices to communicate with each other over a common transmission-interconnected topology in geographic areas larger than those served by local area networks.

XODIAC. The Data General network software.