AFRTS

LEVELS OF SERVICE

AND

SYSTEMS GUIDE

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Table of Contents

PURPOSE:

This document describes the Concepts of Operations for all manned AFRTS (AFN) facilities located O-CONUS, and provides system and level of service guidance for the same.

CONCEPTS OF OPERATIONS (CONOPS) OF MANNED FACILITIES

The American Forces Radio and Television Service (AFRTS) fulfills its mission of providing information and entertainment to US military personnel overseas using content creation and product delivery systems at permanent manned American Forces Network (AFN) facilities in Europe, Asia and the Americas regions. AFN employs three types of manned facilities with corresponding capabilities, based upon the Concepts of Operations outlined here: Stations, Centers, and Bureaus. AFN has identified three manned facility variations: Station-Centers, Station-Bureaus and Superstations. Details of all required capabilities are located in the Levels of Service (LOS) tables and their associated Standard Facilities Equipment Lists (SFEL). When viewed through the lens of joint planning, each CONOP of a manned facility and each SFEL roughly equates to a Unit Type Code (UTC) capability.

❖ Station

Purpose: The purpose of this Concept of Operation is to define the radio, TV and web requirements for an AFN station. While the core mission and capabilities remain consistent, advances in technology will drive changes in platforms and workflow. This CONOP seeks to address the various core mission areas and support functions translated into deliverables that will be required to sustain operations.

Core Mission of the AFN Station: The core mission of the AFN station is to provide local community radio, television and web products. The AFN station is the local community commander's tool for providing internal information and routine, special and emergency announcements. A station will insert locally produced radio products into the AFN Broadcast Center programming stream, and deliver locally produced television products to AFN-BC or other DMA entities for local, regional or worldwide use.

Operations: To meet core mission requirements and maintain an adequate logistical and technical support function, the facility capabilities include two (2) radio studios, video editing functions, Electronic News Gathering (ENG) camera kits, maintenance work center, and adequate storage. TV studio operations require single camera set-up and basic production capability. Content delivery capability includes Studio to Transmitter Links (STL), file transfer protocols, cloud technology and network connectivity.

Manpower: To manage daily operations and meet deliverables the following manpower is required:

Authorized Manpower (based on historical workload data):
Full Service: Up to 15 Personnel – Consisting of Management, Producers, Technical personnel
Limited Service (aka Radio-Plus): Up to 8 Personnel – Consisting of Management, Producers, Technical personnel

Deliverables: *Note: All deliverables depend on connectivity and file transfer capability*

Television Programming Deliverables: Television programming is derived from the American Forces Radio and Television Service's Broadcast Center (AFN-BC) in Riverside, California, and locally produced products.

Radio Programming Deliverables: Radio is a combination of the AFN-BC satellite program stream and live local radio shows. Local live programming consists of radio entertainment programs produced and broadcast daily during the week. The remainder of the programming is provided by automated satellite feeds from American Forces Radio and Television Service. Local command information (CI) will be inserted into the programming stream when the station is not broadcasting live. The community will also be supported through remote radio broadcasts as required. Capability must also exist to pre-record local radio programs for later playback.

News Content Deliverables: Provide coverage of command or community activities for the local community audience on TV, radio and social media. Provide news products for insertion into AFN family of channels throughout the broadcast day and support products produced by DMA, Regional Media Centers, and Bureau operations. Stations will tailor news products to fit into the standardized station breaks. A capability also exists at select locations, and with regional support, for occasional non-standard live productions for delivery to CONUS and intra-theater broadcast of DV/VIP events.

Description of Command (Community) Information Spot Deliverables: Provide radio and TV spots in support of local commanders' themes and messages, targeted to various segments of the local authorized audiences. Provide products with changing daily and weekly information as interstitials within AFRTS programming. Examples include: weather, DFAC menus, DODEA programs, movie schedules, club event calendar, etc. Products with a longer shelf-life will require more production value and enduring themes.

Social Media and Internet Deliverables: AFN Stations will:

- Strive to tie social media engagements to a local command message.
- Stream, live, the AFN radio station and other pre-determined radio entertainment and news services. Capability should exist for up to 8 local radio services. The output of the studio will feed cloud technology to be played back on desktop computers, tablets and mobile devices that have internet connectivity.
- Provide media products for use on DoD, Service, DMA, regional, local websites/mobile app and station specific social media sites. Products provided as "livestream" for interviews and special events when the capability exists to do so.
- Connect with the local community through updates and promotional campaigns using approved social media sources such as Facebook, Twitter, etc.

Notes:

- Variations to a standard AFN station will be addressed on a case-by-case basis.

❖ Regional Media Center

Purpose: The purpose of this Concept of Operation is to define the role of the DMA Regional Media Centers. While the core mission and capabilities remain consistent, advances in technology will drive changes in platforms and workflow. This CONOP seeks to address the various core mission areas and support functions translated into deliverables that will be required to sustain operations.

Core Mission of Regional Media Centers: The core mission of the Regional Media Centers (RMC) is to provide Public Affairs media coverage to the Combatant Commands (CCMD) and supporting component commands. This is accomplished in Europe, Africa and the Pacific areas of operations via coordination and direction from the applicable DMA Forward Center in the region. The RMC function is to create radio, television and social media platform media with CCMD themes and messages, and is used in various DMA-managed DoD and Service-level products, broadcast on AFN and placed on DMA social media platforms. Coordination lines include DMA's Joint Operations Center, DMA Forward Centers, US Pacific Command, US European Command, US Africa Command and subordinate command public affairs offices to determine the best news and features stories, and delivery strategy. The RMCs are also responsible for providing regional information spot announcements - both radio and television - to ensure key leader messages are delivered to personnel serving in their respective area of operation.

Operations: To meet core mission requirements and maintain a logistical and technical support function, the facility capabilities include a television studio with studio cameras and control room, audio production, video editing functions, portable cameras/kits, maintenance work center, media delivery capability and storage. Delivery capability includes file transfer protocols, satellite, cloud technology and through network connectivity. Regional Media Center support to other CCMDs requires additional resources for long term steady state operations. Regional media assets support contingency operations through the Services' deployment process.

Manpower: To manage daily operations and meet deliverables, the following manpower is required:

Authorized Manpower (based on historical manpower data):
25-28 Personnel – Consisting of Management, Producers, Graphics personnel

Deliverables: *Note: All deliverables depend on connectivity and file transfer capability.*

News Content Deliverables: Provide coverage of significant command activities to regional and DoD-wide audiences on TV, radio and social media. Provide products for insertion into the AFN family of channels and support products produced by DMA, Regional Media Centers and Bureau operations. The Regional Media Centers produce a weekly regional TV long-form television newscast. Additionally, Centers may produce feature magazines highlighting special events in the region. Centers will also produce a variety of radio and television "newsbreaks." A capability also exists for occasional non-standard live productions and feeds to CONUS and broadcast intra-theater. All productions for radio and television must conform to established station break lengths.

Description of Command (Community) Information Spot Deliverables: Provide audio and video spot products with CCMD, service component command and sub-unified command themes and messages, targeted to various segments of the regional authorized audiences. The products will be scheduled within AFN programming and through web platforms. Examples include region-specific policies such as curfew notices, host country cultural events, exchange rates, regional DODEA messages, DECA news, etc.

Regional Radio Deliverables: Daily regional radio newscasts. A radio information program, either live or pre-produced, targeted to multiple installations within the theater area of operations. An example is a live radio program with the Commander of USPACOM as the featured guest and carried by all AFN Stations in the Pacific region. Elements of the program are also edited and repurposed as news and command information deliverables.

Social Media and Internet Deliverables: Regional Media Centers will:

- Strive to tie social media engagements to a local command message.
- Be responsible for managing the region's website and products are updated in a timely fashion, and ensuring sites are adhering to DOD policy.
- Provide media products for use on DoD, Service, DMA, regional, local websites/mobile app and station specific social media pages.
- Internet products can be provided as a "livestream" for interviews and special events. Ensure products are delivered to the right venue at the right time.
- Connect with the CCMD through updates on coverage while traveling, and through story delivery using social media platforms.

Notes:

- Variations to a standard Regional Media Center will be addressed on a case-by-case basis.
- Technical support for a Regional Media Center is provided by Regional Technical Services

❖ Bureau

Purpose: The purpose of this Concept of Operations is to define the requirements for a DMA Bureau. While the core mission and capabilities remain consistent, advances in technology will drive changes in platforms and workflow. This CONOP seeks to address the various core mission areas and support functions translated into deliverables that will be required to sustain operations.

Core Mission of the Bureau: The core mission of a Bureau at the tactical level is to cover news and important events of regional impact. At the strategic level, the Bureau maintains contacts and liaises with combatant and component command Public Affairs representatives to determine coverage requirements and develop coverage plans. Bureaus are established at strategic locations serving sub-unified or major command operations. Bureaus provide media products to DMA Regional Media Centers and the Defense Media Activity for export to Service users.

Operations: To meet core mission requirements and maintain an adequate operational function, the facility capabilities include audio production, video editing functions and portable

cameras/kits. A Bureau is supported operationally by the region Center, and logistically and technically by the region Tech services and AFRTS. Studio-type operations (interviews, anchored leads, etc.) are fulfilled with a single camera set-up and limited production capability. Bureaus can acquire, manipulate and deliver audio and video. Delivery capability includes file transfer protocols, cloud technology, satellite, and network connectivity.

Manpower: To manage daily operations and meet deliverables the following manpower is required:

Authorized Manpower (based on historical manpower data):
6 Personnel – Consisting of Manager, Producers, and photojournalists

Deliverables: *Note: All deliverables depend on connectivity and file transfer capability.*

News Content Deliverables: Provide coverage of significant command or community activities for regional and DoD-wide audiences on TV, radio and social media. Provide news products for insertion into the AFN family of channels and support products produced by DMA and Regional Media Centers. Coverage products include news and feature packages, VoVs, scripted B-Roll, etc. A capability also exists, with AFN regional support, for occasional non-standard live productions for delivery to CONUS and broadcast intra-theater via IP, VSAT or SFEL 10. Bureaus may produce radio and TV newsbreaks, and regularly produced feature vignettes. All radio and TV news productions must conform to AFN programming station break lengths.

Description of Command (Community) Information Spot Deliverables: Provide audio and video products with CCMD, service component command and sub-unified command, targeted to various segments of the regional authorized audiences. The products will be scheduled as interstitials within AFN programming and for use on the web. Examples include region-specific policies and command themes.

Social Media and Internet Deliverables: Bureaus will:

- Provide media products for use on DoD, Service, DMA, regional, local websites/mobile app and media sites.
- Connect with the CCMD through updates on coverage while traveling, and through story delivery using social media platforms.

Notes:
- Variations to a standard Bureau will be addressed on a case-by-case basis
- Technical support for a Regional Media Center is provided by Regional Technical Services

Approved Variations:

Station–Centers: The AFN station is organized as part of, and shares resources with, a Regional Media Center. While staff roles and end-products may differ, efficiencies are realized in common capability requirements in all functional areas.

Station–Bureaus: The AFN station is organized as part of, and shares resources with, an AFN Bureau. While staff roles and end-products may differ, efficiencies are realized in common capability requirements in all functional areas.

Superstations (Future): Multiple AFN Stations co-located and sharing resources to cover large geographical regions not necessarily constricted by international borders. While staff roles and end-products may differ, efficiencies are realized in common capability requirements in all functional areas.

Except as noted, all Level of Service variances are based upon FY14 manning authorizations.

DMA AFN Atlantic - Acronyms/Levels of Service

AFN UK	UKD	Bureau
AFN Sembach	SEM	Center
AFN Aviano	AVN	Station
AFN Bavaria	BAV	Station
AFN Benelux	BLX	Station-Bureau
AFN Guantanamo Bay	GTM	Station
AFN Honduras	HDO	Station
AFN Incirlik	ICK	Station
AFN Rota	RTA	Station
AFN Sigonella	SIG	Station
AFN Souda Bay	SDB	Station
AFN Spangdahlem	SPG	Station
AFN Vicenza	VIC	Station
AFN Bahrain	BHN	Station
AFN Kaiserslautern	KTN	Station-Bureau
AFN Naples	NAP	Station-Bureau
AFN Stuttgart*	STG	Station-Bureau
AFN Wiesbaden	WBN	Station-Bureau

*Stuttgart Bureau responsibility is in the process of transitioning to a DMA Forward Center

DMA AFN Pacific – Acronyms/Levels of Service

Location	Acronym	Level of Service
AFN Guam	GUM	Bureau
AFN Yokosuka	YOK	Bureau
AFN Camp Casey	CSY	Station
AFN Daegu	DGU	Station
AFN Diego Garcia	DGA	Station
AFN Iwakuni	IWA	Station
AFN Kunsan	KSN	Station
AFN Misawa	MIS	Station
AFN Okinawa	OKI	Station
AFN Osan	OSN	Station
AFN Sasebo	SAS	Station
AFN Humphreys (Yongsan)	HMP (YSN)	Station-Bureau
AFN Yokota	TOK	Station-Center

FUNCTIONAL AREA: PRODUCTION [0-29]

- ***Service: Radio Studio***
  - **System: Radio Studio Support SFEL 03**

Description
Digital Networked Radio Studio System consisting of any number Digital Control Consoles with integrated console engine and interface nodes, Digital Radio Automation System, Multi-Channel Audio Production Workstation; 2 or more Studio Microphones, CD Players, Studio Headphones, Video Monitors, Tone Decoder, Telephone Interface, Audio Codec for Radio Remote Kit, Loudspeakers, KVM Matrix User stations, On Air Light controller, and Program Audio Delay. Also includes all radio studio furniture systems.

Purpose
Radio Studio Support includes radio studio equipment, radio automation equipment, and audio production equipment which provide a means to increase morale and quality of life in the community while preserving the ability to get time-sensitive information on the air immediately for those in the listening audience. It serves as the primary delivery point of local command information and delivery of force protection and emergency information for the commands that are served in the assigned geographical area.

Concept of Operation
Radio Automation System – This system is located within 2 to 3 equipment racks in a central location. Primary operations on this system are conducted in radio on-air and production studios. Servers and workstations are located in the equipment racks and are accessed via KVM Matrices or Extenders to reduce CPU fan noise in the studios.

Radio Studios – The Radio On-Air studio's primary purpose is for live local radio broadcasts. Secondary purpose is for production during non-live hours. The Radio Production studio is used for the production of audio for use within radio and television command information products. It also acts as a backup studio when the on-air studio cannot be used. A single SFEL 03 System may have as few as one and as many as four individual studios.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	1	1	1	1	1	1	1	1	1	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

- ***Service: Radio Studio***
  - **System: Audio Booth SFEL 04**

Description
Audio Booth (either portable or fixed), Multi-Channel Audio Production Workstation, Studio Microphone, Audio Mixer, Studio Headphones, Video Monitor.

Purpose
An audio booth used by talent and producers to do voiceover and audio production work in a soundproof space, especially in facilities which do not have access to a radio studio. These facilities are equipped with professional microphones and audio mixers and connect to an audio production workstation.

Concept of Operation
The Audio booth will be utilized at Bureaus and Centers. It can be either a fixed or portable space with the proper acoustical properties to create a quiet room to do voiceover or audio production work. The booth will have the required professional equipment connected to an audio editing workstation so voice recordings can be exported to either Radio Automation or Video Editing Systems for editing or airing.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
1	0	0	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
1	1	0	0	0	0	0	0	0	0	0	0	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

- ***Service: Radio Studio***
  - **System: Radio Remote SFEL 05**

Description
Portable Digital Portable Audio CODEC Systems consisting of an audio mixer (2 or more channels) with interfaces for POTS, IP, ISDN, X21, and/or 3G/LTE; Wireless Microphone System, Stereo Audio Amplifier, Audio Snake, Outdoor rated loudspeakers with speaker stands, 2-man lift road cases, AM/FM Tuner, Feedback Suppressor, Wired Headset Microphones, speaker cables, and microphone cables.

Purpose
The radio remote kits provide a means to increase interest in community events, and improve morale and quality of life. They accomplish this by encouraging listeners to attend the event from which the broadcast originates, and by entertaining listeners who are on-duty or otherwise are unable to attend the event. They raise the profile of the local radio station within the community, give the community the chance to see and hear the show hosts, and increase audience interaction in the live show. Uses include town hall events, sporting events, community fairs or bazaars, and installation open houses.

Concept of Operation
Radio remote broadcasts are live shows done by connecting an off-site location with the radio studio, usually at a community event or high-traffic location (i.e. command sponsored community events). Two teams are required: a studio team and an on-location team. The studio team (one DJ, one tech) controls board operations, and breaks into and rejoins regular programming at the start and finish of the broadcast. They also play music and pre-recorded CI, and interact with the remote team, on air, as appropriate. The on-location team (at least one DJ and one tech) provides on-scene, as-it-happens event CI, performs interviews and conducts other audience engagement. A phone call, by cell or landline, to the radio studio does not constitute a radio remote.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	1	1	1	1	1	1	1	1	1	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

▪ System: Flyaway Video Production SFEL 10

Description
Portable multi-camera video production system consisting of the following: 3 camera HD video production switcher with mix effects, virtual set capability, onboard CG, DDR, Streaming Server and control surface; analog intercom system with 2 channel master station, belt packs, IFB talent receivers, and headsets; wireless microphone system, wired microphone headsets, 2 man lift stackable rolling rack system with rear rack rails, road cases for monitors and switcher control surface, audio mixer (6 or more channels); cable reels, uninterruptible power supply, impedance matching device, hum elimination device, monitor stand, keyboard, video and audio cables.

Purpose
The Flyaway video production system provides equipment to support remote multi-camera productions of DV visits, changes of command, and town hall events as well as the remote production of Command Information programming. These items are integrated into portable road cases that can be transported in a non-tactical government-owned vehicle.

Concept of Operation
The Flyaway Video Production systems will be staged at strategic locations throughout the world to be able to support CCMD commanders (CCDR) and DV visitors within the Area of Responsibility. The video production system will be set up to support a multi-camera video production in high definition. Cameras will be utilized from either SFEL 20 or 22 to support the video production. The system has an onboard recording device that will allow recording of the event, as well as a built-in streaming engine to connect to commercial live streaming services if an outbound IP connection is available. The system is also designed to connect to the portable flyaway uplink in SFEL 50 so it can be deployed to support events wherever they may occur. It can also serve as a backup TV control room system to support the production of news and command information products.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	1	0	0	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

- ***Service: TV Studio***
  - **System: Full Studio SFEL 11**

Description
Multi-camera Video Production system consisting of the following: 3 camera HD video production switcher with mix effects, virtual set capability, onboard CG, DDR, streaming server and control surface; EUCON audio control surface, digital matrix intercom system with master station, user stations, belt packs, IFB talent receivers, headsets, and 2 wire & telephone interface; microphones, 3 each 1/3" CCD camera systems with studio configuration kit, camera control unit, control cables and zoom & focus control; 3 each studio pedestals with fluid lens and pan bar; scan converter, chroma key curtain, teleprompter system, networked workstation with video caption card for use as digital disk recorder (DDR), multi-format video monitor system, LED displays in the TV control Room and TV studio, amplified speakers for TV control room and TV studio, wheeled stands for LED displays in TV Studio; A/V monitor with stereo speakers, 5 bay TV studio control console system, lighting grid, DMX control system, LED or fluorescent studio lighting system with mounting grid.

Purpose
The Full Studio system provides the required TV control room furniture systems, HD video camera systems, and production equipment to support the production of news and command information programming at Centers. Retention of this SFEL will be reviewed at time of LCR.

Concept of Operation
The system consists of a studio and a control room, and serves as a production suite and the nerve center of a "live" TV newscast through streaming or delivery over IP to AFN-BC or HQ, DMA. It will also aid in production of any longer-form programs, studio interviews and special productions. The system will include the following:

a. Studio cameras suitable for providing a video feed of the talent and/or subject-matter expert.

b. Mobile pedestal support for studio camera. Pedestal must be easily moveable to allow for different distances and shot compositions, not necessarily for on-camera movement (trucks, dollies, etc.)

c. Studio lighting system to support studio productions. Should include multiple LED or fluorescent lights, support grid, simple dimmer panel, and light meter test equipment.

d. Studio set area, which should include a desk for newscasts, chroma key curtain/wall, and a separate set for interviews, if space allows.

e. Teleprompter system.

f. Program monitor for anchor.

g. An intercom system to allow for clear communications between the technical director, camera operators, producer and talent on the news desk or interview set.

h. Switcher system (control surface), with buttons assigned to various sources including studio cameras, DDR, and routing system. Switcher will also include the following:

- Digital video effects (DVE) for transitions, though the majority of the transitions between sources in news programs will likely be straight cuts.
- Support for over-the-shoulder graphics, which the system should be able to transition through on-air via cuts or dissolves.
- Integrated character generator suitable for creating graphical titles (namekeys).

i. LED monitors for each camera, as well as for "preview" and "program" sources using multi-image processing from the switcher.

j. Tools to monitor levels: waveform / vectorscope, audio, etc.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	**1**	**0**	**0**	**1**

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	1*	1

* Variance authorized due to level of command clients supported, to be reviewed at LCR.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

- ***Service: TV Studio***
  - **System: Lite Studio SFEL 12**

Description
Lite Studio: 1/3" CCD camera with studio configuration; pedestal; portable chroma key curtain system; teleprompter, LED Light kit with filters, wireless microphone system with hand held and lavalier microphone.

Purpose
The lite studio system provides the minimal amount of video production and lighting equipment to support the production of news and command information programing at Stations and Bureaus.

Concept of Operations
The lite studio system is a minimal video production center that permits Stations and Bureaus to produce stand ups and spot productions using chroma key to place virtual sets and or other backgrounds into their news and command information productions. The system is designed to be able to be transported to another site to support CI productions of DV's and installation leadership when they are unable to travel to the AFN facility. Products will be recorded on approved storage media and transferred to a SFEL 34, 25, or 28 editing system where the final product will be edited for broadcast or other distribution.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
1	0	1	1	0

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
1	1	1	1	1	1	1	1	1	1	1	0	0

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

- ***Service: Electronic News Gathering (ENG)***
  - **System: Production Camera Kit SFEL 20**

Description
One-third-inch (1/3”) P2 format HD Camcorder with solid state memory cards, slot-in wireless microphone kit and batteries; battery charger, hot pod tripod system with fluid head, spreader, quick release tripod adapter and carrying bag; camera mounted LED light with filters, handheld and lavalier microphone; hot shoe extension bar, patrol pack, camera body armor, carry-on camcorder soft case, rain cover, folding headphones, portable teleprompter system, phantom power shotgun mic, reflector, camcorder hard case for checked or palletized transit, and equipment cart.

Purpose
Production Camera Kit is the primary camera system for the acquisition of video to support command information requirements in a garrison environment. It is the primary camera system for covering DV events and interviews with CCMD and installation leadership. It is the primary camera system for creating CI spot products for broadcast and fulfilling video support requests from DMA Production Component and AFN-BC.

Concept of Operation
The Production Camera Kit system is used to record interviews, events and other supporting video and audio primarily for use in spot production. These professional-grade cameras have solid state recording media that seamlessly interface into the video and graphics editing systems SFEL 24 thru SFEL 28. These cameras will be deployed primarily in the garrison environment and will make use of rain covers any time they are used out of doors to protect the electronics. The camera can either be used on the shoulder or on a tripod. Spreaders should always be employed when used with a tripod system to prevent the camera from falling and damaging either the camera body or lens. Included lighting and reflectors should be used whenever possible to prevent shadows when interviewing guests or producing command information spots. Cameras and all accessories should be transported in the proper case based on the mission. Windscreens should be used on all microphones to prevent indiscriminant noise from environmental factors beyond control of the operator.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
1	5	1	2	6

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
1	1	1	1	1	1	1	1	1	1	1	2	6

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	5	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2

- ***Service: Electronic News Gathering (ENG)***
  - **System: News Camera Kit SFEL 22**

Description
Small form factor P2 format HD camcorder with solid state memory cards, batteries, and charger; tripod system with fluid head spreader, and carrying bag; rain cover, quick release plate, shotgun microphone with windscreen, portable LED Light kit and backpack travel case.

Purpose
News Camera Kit is the primary camera system for the acquisition of video to support news and command information requirements in a field environment as well as routine news products in a garrison environment. It is the primary camera system for event coverage and interviews with guests, and when conducting ENG operations at sea, in the air, or on the range. It is the primary camera system for CI spot campaigns, promotions and news programming being produced for social media.

Concept of Operation
News Camera Kit systems are used to record interviews, events and other supporting video and audio primarily for use in news production and secondarily for use in spot production. These prosumer grade cameras have solid state recording media that seamlessly interface into the video and graphics editing systems SFEL 24 thru SFEL 28. These cameras will be deployed primarily in the field environment and will make use of rain covers any time they are used out of doors to protect the electronic systems within the camera. The camera can be either used on the shoulder or on a tripod. Spreaders should always be employed when used with a tripod system to prevent the camera from falling and damaging either the camera body or lens. Cameras and all accessories should be transported in the proper case based on the mission. Windscreens should be used on all microphones to prevent indiscriminant noise from environmental factors beyond control of the operator. When used in a deployed location camera should be married up with SFEL 24 Electronic Field production editor to allow the assigned operator the ability to acquire as well as produce media from their location.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
3	15	4	7	19

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
3	3	3	3	4	6	2	5	6 (01)	3	5	7	19

(01) Extra kits supplied to support contingency operations.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
2	15	4	4	4	3	2	4	4	4	4	4	4	3	7	7	7	7

- ***Service: Electronic News Gathering (ENG)***
  - **System: Still Camera Kit SFEL 23**

Description
Prosumer to Pro level DSLR with solid state memory cards, batteries, and charger; tripod system with fluid head spreader, and carry bag; rain cover, quick release plate, 3.5mm external microphone recorder with windscreen, portable flash kit and backpack travel case.

Purpose
The Still camera kit is the primary camera system for the acquisition of still photos to support news documentation and command information requirements in a field environment as well as routine print products in a garrison environment. It is the primary camera system for photojournalism news operations and products produced for social media.

Concept of Operation
Photojournalist Camera kit systems are used for capturing news events as necessary in support of CCMD and component requests. These prosumer grade cameras have solid state or flash recording media that seamlessly interface into the editing systems SFEL 24 thru SFEL 28. These cameras will be deployed primarily in the field environment and will make used of rain covers anytime they are used out of doors to protect the electronic systems within the camera. The camera can be either used on the neck or on a tripod. Spreaders should always be deployed when used with a tripod system to prevent the camera from falling and damaging either the camera body or lens. Cameras and all accessories should be transported in the proper case based on the mission. Windscreens should be used on all external hot-shoe microphones to prevent indiscriminant noise from environmental factors beyond control of the operator.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
1	3	0	1	3

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
1	2 (02)	0	0	0	0	0	0	0	0	0	1	3

(02) Variance authorized due to multiple ship deployments.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	3	0	0	0	0	0	0	0	0	0	0	0	0	0 (03)	1	1	1

(03) Photographer position currently located at Sembach.

- ***Service: Video & Graphics Editing***
  - **System: Electronic Field Production (EFP) SFEL 24**

Description
Portable field production kit consisting of: Laptop or tablet with video/photo/audio (Adobe CC) editing and office productivity software (DMA.mil image), port replicator, spare battery, and monitor stand; travel bag, P2 memory card reader, mouse, keyboard, audio speakers, 24 to 27 inch HD video monitor, AC power adapter kit.

Purpose
The portable Electronic Field Production kit is designed to be used as a media editing and IP delivery platform in a field or deployed environment. It serves as the primary editing platform for news Bureaus and personnel on quick reaction status in a garrison environment using a docking station or port replicator and as a backup editor for those at Stations and Centers. It is the primary editing platform for AFN personnel when deployed in support of military exercises, at sea, or covering dignitaries travelling within the theater of operation.

Concept of Operation
The portable Electronic Field Production kits are equipped with DMA standard editing software for both audio and video as well as office productivity software. They serve as a portable platform that allow personnel to quickly produce video and audio products when working outside the office, whether in the field or travelling, and deliver them to a Center, Station, DVIDS or DMA for distribution on TV, radio, or social media. The portable field production kit will normally pair up with the news camera kit in SFEL 22 to allow for easy transport aboard military or commercial aircraft as well as pack easily into mission gear. When the production kit is used in the office it should normally be connected to a port replicator or docking station to allow connectivity to the network so files can be easily moved to and from the Storage Area Network (SAN).

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
4	10	1	6	11

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
3	4	1	1	1	1	1	1	3 (04)	1	1	6	13

(04) Extra kits supplied to support contingency operations.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
4	10	1	1	1	1	1	1	1	1	1	1	1	1	6	6	6	6

- ***Service: Video & Graphics Editing***
  - **System: Desktop Video Editor SFEL 25**

Description
Video Editing System. Consists of desktop or tower workstation with video/photo/audio (Adobe CC) editing and office productivity software (DMA.mil image) with mouse, keyboard with CAC reader, dual hard drives, CD/DVD burner, professional graphics card, media card reader and speakers; P2 memory card reader, Two each 24 to 27 inch HD Video Monitors

Purpose
The Desktop Video Editing system is designed to be used as a primary media editing platform in an office environment to create media products for radio, TV, and social media. It serves as the primary editing platform for Stations and Centers. These editing systems have at least 2 high definition video monitors and are equipped with multi-core processors to allow for speedy high definition video editing as well as sufficient memory and drives to allow for graphics and effects rendering.

Concept of Operation
The Desktop Video Editing Systems are equipped with DMA standard editing software for both audio and video as well as office productivity software. It is the primary editing platform and administrative workstation for journalists and videographers assigned to Stations and Centers. These video editing systems will have sufficient processing power, storage and onboard memory to allow for rendering of video effects to support the production of news and command information products. They will be equipped with at least two high definition video monitors and speakers to allow the journalist to properly review projects. These computers will be properly configured to allow connection to the DMA.mil network and will have the required accessories to allow users to easily import media from video cameras into their workstation as well as being able to use CAC cards to access military websites. It shall have enough on board storage to maintain short term media projects as well as graphics packages.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
3	26	10	10	36

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
3	4	6	6	6	4	6	4	4	6	4	12	8

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
6	26	10	11	10	7	5	10	10	10	10	10	10	4	10	10	10	10

- ***Service: Video & Graphics Editing***
  - **System: Desktop Graphics Editor SFEL 28**

Description
Graphics Editing System. Consists of desktop or tower workstation with video/photo/audio (Adobe CC) editing, office productivity software (DMA.mil image), 3D graphics design software, enhanced font software, keying software, color correction software, video effects software and visual elements software with mouse, keyboard with CAC reader, dual hard drives, CD/DVD burner, professional graphics card, media card reader and speakers; P2 memory card reader, and two each 27 to 29 inch HD Video Monitors.

Purpose
The Desktop Graphics Editing system is designed to be used as a primary graphic design platform to create graphics for TV and social media. Not only do they have the DMA standard editing and office productivity software they also have specialized software to allow for the development of high definition video graphics and effects. These graphics editing stations are located at Centers only. These editing systems have at least 2 High Definition video monitors and are equipped with multi-core processors to allow for high definition video editing as well as sufficient memory and drives to allow for the development and rendering of high definition video graphics and effects.

Concept of Operation
The Desktop Graphic Editing Systems are equipped with DMA standard editing software, office productivity software and specialized video graphics, titling, and effects software. It is the primary media platform and administrative workstation for video graphic artists assigned to Centers. These graphic editing systems will have sufficient processing power, storage and onboard memory to allow for the development of high definition graphics and video effects to support the production of news and command information products. They will be equipped with at least two high definition video monitors with speakers to allow the graphic artist the ability to properly review projects. These computers will be properly configured to allow connection to the DMA.mil network and will have the required accessories to allow users to easily import media from video cameras into their workstation as well as being able to use CAC cards to access military websites. They will have enough onboard storage to maintain media projects as well as graphics development tools to support news and command information productions.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	4	0	0	2

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	2	2

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	4 (10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FUNCTIONAL AREA: BACKBONE & INFRASTRUCTURE [30-39]

▪ System: Media Storage System (Region) SFEL 30

Description
Network Attached Storage – 75TB or larger connected to Regional Server VLAN.

Purpose
Shared storage drives for collaboration, media, and administrative documents for the region located at the hub sites. Also serves as storage for IT server and security backups.

Concept of Operations
The Media Storage System is the central location for the storage of media, scripts, and graphics for the region. These devices will be located at each regional hub site. They will host all shared drives for Stations, Centers and Bureaus. All media that is transcoded using SFEL 39 will be delivered to the Network Attached Storage and can then be pulled back to the required user(s) for further editing or distribution. It will also serve as the location for all required backups for all servers and security devices in accordance with DMA.mil SOPs.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	1 (05)	1

(05) Yongsan currently using legacy MSS.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

▪ System: Technical Control SFEL 31

Description
Technical Control Facility consists of the following: Seven to 10 each 45RU equipment racks with tapped rails, rear doors, ventilation, ganging hardware, and side panels; 40X40 HD-SDI router matrix with control panels, 12 port Layer3 managed switch, multi-format video monitor with analog and AES monitoring; PC workstation / thirty each analog audio & video to SDI converters with chassis, thirty each S/PDIF to AES audio converters, four each bantam patch panels, QAM CATV tuner, four each 17-inch rack mount HD video monitors, seven each 8X1 vertical interval switchers, master sync generator, analog video distribution amplifiers, KVM Matrix with user stations and interface devices for broadcast systems.

Purpose
The Technical Control Facility is the broadcast hub for a Center. It is where all video and audio enter and depart the facility, whether by satellite, cable, or IP. It hosts the media router, all satellite encoders and decoders, STLs and the servers for all broadcast systems. It is the central location where all incoming and outgoing signals can be monitored to ensure they are within established industry parameters.

Concept of Operations
The Technical Control Facility consists of 7 to 10 equipment racks and acts as the broadcast hub of a Center. All broadcast signals transverse the Technical Control Facility and are monitored at this location. The technical control facility must have conditioned electrical power and sufficient airflow to maintain the ambient temperature at a maximum of 70 degrees Fahrenheit. The Technical Control Facility is where test and monitoring equipment are located to verify that all incoming and outgoing signals are within established industry standards. The Technical Control facility is where the media router, Center intercom, multi-image display system, cable TV system, satellite encoders and decoders are housed. It also hosts the audio- and video-over-IP CODECs as well as the backup encoding server for the radio-over-IP service.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

▪ System: A-NET (Network) SFEL 32

Description
DMA.mil Information Technology backbone consisting of the following:
Center and Station-Center: Two each 45RU Equipment racks with rails, lockable doors and side panels, power distribution, and ventilation; Border router, DISA CNDS Sensor, WAN Optimizer, DMZ Switch, Dual firewalls with intrusion detection, two each 48 port layer 3 switches with 1 GB / 10 GB / and 40 GB ports configured as internal router and VLAN switch; HyperV virtualized server system; Domain controller server, FTP Server 40X40 HD-SDI router matrix with control panels, 12 port Layer3 managed switch, two each 3KV Uninterruptible Power Supplies with power management, RJ45 and Fiber Optic patch panels, KVM Matrix with user stations and interface devices for Information technology systems.

Station and Bureau Sites: One each 45RU Equipment rack with rails, lockable doors and side panels, power distribution, and ventilation; Router, 48 port layer 3 switch with 1 GB / 10 GB / and 40 GB ports configured as internal router and VLAN switch, HyperV virtualized server RJ45 and Fiber Optic patch panels, 3KVA Uninterruptible Power Supply w/power management, Rack mounted LED/LCD monitor with keyboard, touchpad, and integrated KVM switch.

Purpose
The A-NET is the information technology backbone to connect all Bureaus, Stations, and Centers via the regional hubs to DMA and AFN Broadcast Center as well as the DISA NIPRNET. Regional hubs host the required security monitoring systems, sensors, DMZ appliances, and intrusion detection and monitoring. All Stations and Bureaus except for the Americas tie directly into a regional hub site using MPLS services provided by DISA.

Concept of Operation
The A-NET is the primary network for all DMA Bureaus, Stations, and Centers throughout the world. The A-NET is the platform for email, Internet, and media transport between DMA activities throughout the world and is carried over NIPRNET. The A-NET is part of DMA.mil which is managed overall by HQ, DMA Technical Services with regional hub sites located in both Europe and Asia. All Stations and Bureaus will have virtual LAN connections provided by DISA that will be routed through a DMA.mil hub site. The A-NET carries all audio streams, FTP traffic, media transfers, and Internet traffic. Traffic prioritization of the A-NET is managed by HQ, DMA and the IRM managers in each region, with first priority given to live media programming. IT support personnel will be located at each regional hub to provide support to all A-NET systems at both the hub and Station/Bureau location.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
1	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
1	1	1	1	1	1	1	1	1	1	1	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

▪ System: B-NET (Network) SFEL 34

Description
Commercial Information Technology backbone consisting of the following:
Commercial IP provider modem or wireless "hotspot"*, Laptop or Workstation with CD/DVD Burner and media card reader; Network Attached Storage, FTP Server.

* Commercial IP provider must provide firewall protection and IP logging as part of its service. Must request GIG waiver through region or HQ, DMA Tech Services if service is delivered over DoD communication infrastructure. SFEL 32 and SFEL 34 must have "air gap" separation between the infrastructures.

Purpose
The B-NET is commercial Internet service that is used to deliver media in those locations where DMA.mil cannot be installed due to infrastructure limitations, or in deployed locations. It also includes portable WiFi "hotspots" that are contracted through commercial providers.

Concept of Operation
The B-NET is commercially provided Internet service. The B-NET and A-NET must remain isolated from each other. At locations where DMA.mil cannot be installed or data transfers are extremely limited due to bandwidth constraints, B-NET equipment may be installed with approval of HQ, DMA, to move media between Bureaus, Stations and Centers and commercial or military media content delivery points. All computers and accessories that are attached to the B-NET at an AFN location cannot be attached to the A-NET without being completely wiped clean and must be approved by the regional IRM. B-NET also includes portable wireless "hotspots" which can be carried along with the SFEL 24 editing system to allow delivery of media files as well as conducting of administrative functions when producers are deployed away from their host installation to an area where commercial Internet may not be available.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	1	0	0	1 (06)	1

(06) Yongsan currently using legacy B-NET.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	1 (07)	0	0	0	0	0	0	0	1 (07)	0	0	0	0

(07) Authorized variance due to limited bandwidth.

▪ System: Backhaul SFEL 35

Description

- Studio to Transmitter Links: Deliver audio or video service from radio studios to transmitter sites.
- Italy: 400-410 Mhz Radio Digital Studio to transmitter link with A/D converter, COFDM digital radio, transmission line, YAGi antenna.
- Japan: Audio to IP converter, commercial modem with media converters
- Korea: Audio to IP transport with AES or Analog inputs. Delivery over ATM or Layer 3 VPN between studios and transmitters over 1st Signal Bde WAN.
- Europe: Audio over IP converter, IP to fiber media converters.
- EUR/SWA Remote Locations: 80 to 1.5 mtr Ku Satellite Antenna, L-Band distribution gear, satellite decoders, impedance matching equipment or SPIDF to AES converters.
- DMA Contingency: VSAT terminal with DVB-S2 or iDirect modem connected to MILSAT or commercial satellite circuit. Includes audio encoding system to deliver up to 256Kbps stereo audio signal from station to satellite distribution hub for delivery over SATNET or AFN360 to geographically separated transmitters.

Purpose

The Backhaul System consists of various technologies which deliver live radio program streams from the station to the transmitter site for broadcast over the air.

Concept of Operation

The Backhaul, otherwise known as the studio to transmitter link (STL), is the primary method of delivering radio programming from the station to over-the-air radio transmitters. In some AFN locations the transmitter is located in the same building as the radio studio which allows for a hard wire connection from the SFEL 03 infrastructure directly to the radio transmission chain. In those locations where the transmitter is not co-located with the transmitter an STL needs to be established. The STL can be set up in various ways and is dependent upon location and host nation requirements. In certain areas the radio signal is delivered by FM modulation or microwave to the transmitter. In others it is delivered using leased telephone lines, data circuits, or IP. For contingency locations a small VSAT terminal can be used to deliver audio to the AFN BC Network Operation Center or communications network hub in the regional Tech Control for further distribution to transmitters throughout the area of operation.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	0	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	3	3	2	1	1	1	2	1	1	3	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	0	1	5	6	2	0	0	1	0	1	1	3	1	2	1	1	1

▪ System: Format Switcher (Transcoding) SFEL 39

Description
Media transcoding system with closed captioning software for Regional Media Centers: Includes 2 each nodes with captioning software and database servers; KVM pullout drawer with KVM switch and dongles; closed captioning software installed on assigned workstation for offline caption editing.

Purpose
To transcode media files into various SMPTE and JPEG media formats for use in broadcast, social media, web, and for client review. It also includes software to create and edit closed captions for all DMA media products as required by section 508 of the Americans with Disabilities Act.

Concept of Operation
The media transcoding systems will reside at each Center and will be used when media files require transcoding and delivery to various locations or transcoding into supported SMPTE or JPEG media formats for import into DMA standard editing software. It will be attached to the A-NET, hosted in the SFEL 31 tech control and will maintained by the Center. Delivery and distribution of media files being transcoded will be done through watched folders that will reside on the SFEL 30 media storage which is also housed at the Center. The media transcoding system also includes closed captioning software which will permit media files to be distributed with closed captioning information when the required information is included with the file. Users in the field will deliver the files to the assigned watch folders via FTP and will remove media from the delivery folders per Center SOP.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	1 (08)	1

(08) Yongsan currently using legacy transcoder.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FUNCTIONAL AREA: RECEPTION [40-49]

▪ System: Radio Satellite SFEL 40

Description
AFN satellite decoders to support radio operations includes: 10 each satellite decoders with rack mounting systems, L-Band splitters, and associated cabling. It also includes satellite receiving antenna, LNB, and L-Band amplifier (where required).

Purpose
The Radio Satellite System is used to distribute AFN SATNET radio to Stations and Centers for SFEL 03. It includes 10 each satellite decoders, based upon FY14 manpower authorizations and existing LOS, that can be tuned to the various AFN SATNET radio programs streams that deliver live news and various radio programs to augment live programming.

Concept of Operation
Through the use of receiver/decoders and distribution amplifiers, incoming satellite sources are received, decoded and connected via the S/PDIF output to the radio studio support infrastructure in SFEL 03. These decoders are tunable to any AFN SATNET virtual channel that is required to support the mission of the AFN Station or Center including news, music, and special events per regional SOPs. This system is designed to seamlessly integrate into SFEL 03. The distribution of all audio signals is done through the SFEL 03 infrastructure.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	1	1	1	1	1	1	1	1	1	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

▪ System: TV & Radio Satellite SFEL 42

Description
AFN Satellite decoders to support TV and radio monitoring and distribution: 36 each satellite decoders with rack mounting systems, L-Band splitters, audio impedance matching and associated cabling. At a Media Center includes decoders and antennas for C Band and Ku band monitoring of both SATNET and DTS for their region.

Purpose
The TV and Satellite System is used to monitor and distribute the entire AFN SATNET programming cluster, from C-Band, Ku-Band, and DTS, throughout a Center. It allows both operations and engineering personnel the ability to monitor the entire AFRTS SATNET package in their location and report discrepancies immediately to the AFN Broadcast Center in California or DMA Technical Services.

Concept of Operation
Through the use of receiver/decoders, incoming satellite sources are received, decoded and distributed through SFEL 31 Tech Control via the HD routing system, internal digital cable TV system, and are made available for use through the SFEL 78 multi-image display. The Center should have the capability to receive all AFN SATNET services on C-Band, Ku DTH, and the DTS service which can be received in their theater. SFEL 42 gives AFN Centers the ability to monitor all SATNET signals and assist AFRTS, AFN-BC and DMA Tech Services in troubleshooting discrepancies with the SATNET signal as well as the ability to report such discrepancies to the AFN Broadcast Center Technical Operations Center. It can be used to support SFEL 40 in case of failure.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	1 (09)	1

(09) Yongsan currently using legacy system.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

▪ System: Live Feed SFEL 44

Description
Commercial satellite uplink terminal: Consists of 3.5 meter or larger steerable (azimuth and elevation) satellite terminal with 100 watts or more of uplink power, LNB for reception, satellite antenna controller, DVB-S2 modulator, DVB-S/DVB-S2 capable satellite receiver, L-Band distribution gear, modem and/or converter(s) for interconnect between NOC and sat terminal. Commercial satellite reception only: Consists of 3.1 meter or larger steerable satellite antenna with satellite antenna controller, DVB-S/DVB-S2 capable satellite receiver, L-Band distribution gear, modem and/or converter(s) for interconnect between NOC and satellite antenna.

Purpose
The Live Feed commercial satellite uplink and/or reception live feed is used to uplink and/or receive live events from commercial satellites not part of the AFN SATNET cluster to support CCMD and DMA news and command information requirements. Commercial satellite uplink terminals will be used to relay live programming either from a remote location or from a Center to HQ, DMA or AFN-BC for distribution either over AFN SATNET or distributed over DoD web or commercial satellite clusters. Commercial satellite reception antennas will be used to acquire important news and command information products that can be recorded, relayed via satellite uplink, IP, or web, or distributed over internal or external cable TV infrastructure.

Concept of Operation
The Live Feed commercial satellite uplink and / or reception antenna system is a steerable parabolic antenna system that is used to acquire non-AFN programming of importance to the regional or DoD audience. The Live Feed commercial satellite uplink at the Center can be used to relay regional events to either AFN-BC or HQ, DMA for distribution either over the entire AFN SATNET network or DoD News infrastructure. The Live Feed uplink can be used to relay live program from an event in theater by using the reception antenna to receive the program from a regional satellite and re-transmitting the program using the fixed satellite uplink to an intercontinental satellite transponder capable of being received within the continental USA. These Live Feed antennas can also be used to receive important live programming supporting the CCMD or DoD from commercial satellite that can be off lined or re-distributed internally.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	0

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	0	0

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FUNCTIONAL AREA: DELIVERY [50-69]

▪ System: Flyaway Uplink (NORSAT) SFEL 50

Description
Two-man transportable EUTELSAT compliant VSAT terminal: DVB-S2 and DVIDS compatible; 40W to 50W modular VSAT terminal in 2 to 3 cases with satellite tracking, universal LNB, and GUI interface; DVB-S2 modulator, iDirect modem, laptop with streaming software.

Purpose
The Flyaway uplink is a transportable VSAT terminal which has the capability of using either commercial or DVIDS satellite transponders. They are air transportable and are IATA approved for check in on commercial airlines and can be easily palletized for military aircraft. The system can be used for one camera operations or can seamlessly interface with the flyaway video production system SFEL 10 for field productions.

Concept of Operation
The flyaway uplink will be used to support DoD and CCMD news and command information requirements from remote locations throughout the theater of operations. These systems are configured to give DMA the flexibility to use either DVIDS satellite cluster or contract with a commercial broker for transponder segment on a commercial satellite. These systems are ruggedized and can be transported by two persons. The system is designed so that it can easily connect to the SFEL 10 Flyaway video production system for events that require a multiple camera production such as a DV visit, town hall, or change of command ceremony. Coordination for all satellite usage is done through DMA Technical Services. SFEL 50 systems are stored at select locations. Stations may temporarily sign out these systems when required to meet missions.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	1	0	0	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

- ***Service: Broadcast Transmitters***
  - **System: TV Transmitter System SFEL 52**

Description
Transmitter System 6 Mhz – NTSC or ATSC: VHF or UHF transmitter system from 1 to 5000 W in a main/alternate configuration; equipment rack(s), RF switch with remote control unit, RF dummy load, wattmeter with frequency agile plug in modules, RF transmission cable, radiating antenna system, audio limiter/compressor, TV receiver with rabbit ear or loop antenna.

Purpose
NTSC or ATSC over-the-air transmitter system that permits the wide distribution of AFN programming using FCC-approved transmitters and TV receivers operating in the VHF or UHF band. Consists of main and alternate transmitters, changeover unit, signal processing equipment, and monitoring equipment.

Concept of Operation
Delivery of AFN programming that can be received by TV receivers with an antenna in remote locations where it is impractical to widely distribute AFN programming by MMDS or Cable TV. Only certain AFN channels can be transmitted in the clear over the air. The only location authorized over-the-air television broadcasting is Diego Garcia (BIOT), which has no shadow audience.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	0	0	0	0

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	4 (10)	0	0	0	0	0	0	0	0

(10) Variance allowed due to absence of any shadow audience.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

- ***Service: Broadcast Transmitters***
  - **System: FM Transmitter System SFEL 54**

Description
Transmitter System Frequency Modulation 87 to 108 Mhz: FM transmitter system from 1W to 100,000W in a main/alternate configuration; equipment rack(s), RF switch with remote control unit, RF dummy load, wattmeter with frequency agile plug in modules, RF transmission cable, radiating antenna system, audio limiter/compressor, RF filtering system (where required by host nation), FM modulation monitor, silence sense with switcher and phone dialer, remote monitor and control unit with modem, audio patch panel, FM radio receiver with speaker.

Purpose
Frequency Modulation over-the-air transmitter system that permits the wide distribution of radio programming in the 87.7 to 108 Megahertz band for reception by FM tuners. Consists of main and alternate transmitters, changeover unit, signal processing equipment, antenna and monitoring equipment.

Concept of Operations
In most overseas locations, the FM transmitter system is the primary method of widely delivering local, regional and DoD command information, news and music to the authorized audience. This audio is processed and converted to RF within the FM transmitter system. The FM antenna is used to radiate the RF signal to individual receivers in the VHF frequency band whether in their vehicle, cell phone, music player or in their home. It serves as the primary method to distribute command information, force protection and emergency messages to the audience within the station's listening area. The FM transmitter and antenna system are to be operated within the agreed upon broadcast parameters granted by the host nation.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	0	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	2 (12)	3 (12)	2 (11)	0	2 (12)	0	1	1	0	2 (12)	0

(11) Variance allowed due to lack of AM transmitter.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	0	1	7 (12)	7 (12)	2 (12)	1	0	2 (12)	1	1	1	2 (12)	1	2 (12)	1	1	1

(12) Variance due to supporting of remote sites.

- ***Service: Broadcast Transmitters***
  - **System: MMDS SFEL 55**

Description
50 to 800 Watt UHF wide band transmitter system, 10 channel modulation system with combiner, transmit antenna, receive antenna with block down converter, receive antenna power inserter, 5 to 2400 Mhz RF splitters, cable and connectors, satellite antenna, AFN decoders.

Purpose
Multichannel Multipoint Distribution Service used to distribute up to 10 channels of AFN programming. Used primarily in areas where it is impractical to widely distribute AFN programming by cable TV or NTSC/ATSC over the air transmission.

Concept of Operation
MMDS is a broadcasting and communications service that operates in the ultra-high-frequency (UHF) portion of the radio spectrum between 2.1 and 2.7 GHz. MMDS is also known as wireless cable. It is used in areas where wide distribution of AFN programming by cable TV, over the air or satellite is impractical. The MMDS transmission system requires enough space for a transmitter, up to 10 satellite decoders, modulators, and a combiner. It also requires access to a pole, tower, or high building that gives the best line of sight available for the receiving antennas for distribution of the MMDS signal to users throughout the authorized area of coverage. The MMDS receive antenna has a block down converter that converts the MMDS channels to UHF so that it can be tuned in by any TV that has a UHF TV tuner. Any use of MMDS to distribute AFN programming must be coordinated through HQ, AFRTS and requires host nation approval to operate.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	0	0	0	0

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	0	0

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

- ***Service: Broadcast Transmitters***
  - **System: AM Transmitter System SFEL 56**

Description
Transmitter System Amplitude Modulation 530 to 1700 Khz: AM transmitter system from 1 to 150,000 W in a main/alternate configuration; equipment rack(s), RF switch with remote control unit, RF dummy load, wattmeter with frequency agile plug in modules, RF transmission cable, radiating antenna system (tower, stick or long wire) with tuning unit and ground plane, audio limiter/compressor, AM modulation monitor, silence sense with switcher and phone dialer, remote monitor and control unit with modem, audio patch panel, AM radio receiver with speaker.

Purpose
Amplitude Modulation over the air transmitter system that permits the wide distribution of radio programming in the 530 to 1700 Kilohertz band for reception by AM tuners. Consists of main and alternate transmitters, changeover unit, signal processing equipment, antenna tuning unit, tower or antenna and monitoring equipment.

Concept of Operation
The AM transmitter system is the primary or secondary method of widely delivering local, regional and DoD command information, news and music to the authorized audience. The audio is processed and converted to RF within the AM transmitter system. The AM antenna, tuning unit, and ground plane is used to radiate the RF signal to individual receivers in the MF frequency band whether in their vehicle or in their home. It serves as the primary method to distribute force protection and emergency messages to the audience within the Station's listening area where host nation FM broadcast frequencies are not available. In certain areas, AM transmitters are used to extend the reach of AFN programming allowing very wide dissemination of important news, command information, and emergency information including force protection, weather warnings and NEO evacuation information. The AM transmitter and antenna system are to be operated within the agreed upon broadcast parameters granted by the host nation.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	0	0 (13)	1	1

(13) IWA, MIS, SAS, TOK and ICK have AM as only service.

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	1 (14)	0	1	0	1	1 (15)	0	1	1	1

(14) Continuing AM service to JSA.
(15) Dual service authorized.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1 (16)	0	0	0	1 (15)	0	1	0	0	0	0	0	0	0	0	0	0

(16) Maintains transmitter at Lajes.

▪ System: Streaming SFEL 57

Description
Audio Streaming: Audio over IP streaming, includes chassis with 1 to 6 interface cards that accept analog or AES audio; layer 3 switch at Centers only.
Video Streaming: Full-duplex HD/SD video encoder/decoder for transport of live video over IP.

Purpose
Audio streaming systems are used to transmit live radio programming from the Stations to the Centers and AFN-BC over DMA.mil NIPRNET backbone. At the Centers and AFN-BC, the audio streams are decoded and fed to servers which deliver the audio to the AFN360 Internet radio contractor. Video streaming allows for the encoding and delivery of live HD/SD video to/from the Centers to HQ, DMA, DVIDS, AFN-BC as well as other locations that have connectivity to DMA.mil.

Concept of Operation
This capability consists of two systems; one is used to transmit live audio over IP between that Station, Center, and AFN-BC and the other is a server-based system that collects various audio streams and delivers them to the AFN360 contractor. Once the live audio stream from the Station arrives at either the Center and/or AFN-BC the audio is decoded and connected to an audio distribution matrix. This audio in the matrix is used for monitoring purposes, re-transmission over AFN SATNET for geographically separated radio transmitters, or is fed into a server for transmission to the AFN360 streaming service contractor for distribution through the Internet and AFN Apps.
Video streaming consists of simplex and duplex HD/SD encoders or decoders which stream video in real time between compatible devices. These could be done using WiFi, fixed IP transport or through the use of bonded 3G/4G cellular technology. These devices are used to transmit live HD video between the Centers, AFN-BC, and HQ, DMA as well as delivering live video programming from an offsite location using IP and/or bonded cellular to a Center, AFN-BC, or HQ, DMA.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	0	2	2	22

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	10 (17)	14 (17)	0	2	8	2	2	6 (17)	2	21 (17)(18)	22 (18)

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	31 (18)	2	2	2	4 (17)	0	2	2	2	2	2	2	2	2	2	2	2

(17) Variances authorized for studio-transmitter links.
(18) Variances authorized at these locations to support regional radio operations, video streaming and AFN360.

▪ System: Cable TV Head-End SFEL 58

Description
Cable TV head-end systems:
Centers: QAM Digital: Multi-decrypt satellite receiver(s) with GbE output; QAM modulators with GbE inputs; QAM modulator(s) with HD-SDI inputs, QAM modulator(s) with analog video/audio inputs, passive head-end combiner; HD video signage generator; coax taps and splitters OR fiber-optic XMT/RCV nodes.
Stations (Digital): QAM digital multi-decrypt satellite receiver with QAM modulators with GbE inputs; coax taps and splitters
Stations (Analog): 10 satellite decoders, 10 to 12 NTSC modulators, passive head-end combiner, coax taps and splitters OR fiber optic XMT/RCV nodes.

Purpose
CATV head-end systems are used for either the internal monitoring of all AFN program streams or for the external distribution of AFN programming on installation coax or fiber/coax closed circuit distribution systems. Only locations currently feeding CATV to the base for redistribution are authorized head-ends.

Concept of Operation
The CATV head-end system can be configured in several ways; For Centers: All satellite signals plus various other signals throughout the technical plant are digitally modulated in QAM and distributed over COAX cable to various monitors throughout the facility. This gives assigned personnel the ability to monitor various signals at their desktop or office. Sources feeding the head-end equipment include SATNET, DTS, Ku DTH, TV studio, radio studios, audio streams from affiliate Stations (SFEL 57), and internally generated digital signage information. The infrastructure to deliver the digitally modulated signals can include trunk lines, single mode fiber optic cabling, converters, taps, splitters, TV tuners, and COAX cable drops. The CATV head-end system for a Station is a bit smaller in that it only decodes and digitally modulates the Ku DTH signal from a multi-decrypt decoder and its local radio signal(s) for distribution to offices and desktops within the broadcast facility. If deployed at a Station, it also includes all of the required trunk lines, splitters, TV tuners, and taps required to deliver it to the end user.

The Station or Center may also have an analog or digital Cable TV head-end system through an agreement with their local installation that combines various SATNET, Ku DTH, and local sources, combining them into one RF stream, and delivering it to an installation demarcation point where it is then combined with other programming and distributed either locally or regionally by a commercial CATV contractor or by the installation communications office. From the demarcation point it is the responsibility of the contractor or installation communications office to deliver the provided signal through their Cable TV plant to customers throughout their area of responsibility.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	1	0	0	0	0	0	2	1 (19)	1

(19) Regional monitoring of AFN SATNET and radio services.

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0

FUNCTIONAL AREA: MAINTENANCE SUPPORT [70-89]

▪ System: Test Equipment SFEL 70

Description
TMDE for regional engineering activities: Handheld spectrum analyzer, 3 each satellite field strength meters, GPS enabled RF field strength measurement system with laptop, magnetic mount antennas, and carry case; handheld AM digital field strength meter, network analysis tablet, fiber-optic verification and inspection kit, 2 each AC/DC clamp meters, video inspection scope, grounding test set, wattmeter with sampling probe and plug in line elements.

Purpose
The SFEL 70 test equipment package is used to ensure AFRTS activities are compliant with host nation commercial broadcasting regulations as well as provide the test equipment required at the regional engineering activities to conduct RF field strength readings; repair, install and upgrade broadcast and IT technical plants; repair, install and align satellite antennas and terminals as well as cable TV head-end and distribution systems.

Concept of Operation
The SFEL 70 test equipment package provides the required diagnostic equipment for the regional engineering activities to repair, align, document, and maintain broadcast systems throughout their area of responsibility including broadcast transmitters, satellite terminals, ground planes, CATV, and IT infrastructure. Equipment items can be temporarily loaned to Stations and Bureaus within the area of responsibility to allow maintainers at those locations to perform required maintenance and alignments to ensure compliance with approved host nation broadcast parameters as well as document field strength measurements using GPS technology. Clamp meters provide engineering personnel the ability to analyze power consumption and current and from electrical power lines. Additional items in SFEL 70 allow for regional IT personnel to inspect infrastructure as well as analyze IP traffic to troubleshoot and improve network connectivity.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	0	0	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	0	0	0	0	0	0	0	0	0	0	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

▪ System: Trouble Shooting & Repair SFEL 72

Description
TMDE and Tools for Station Maintenance and Regional Engineering Activities: Handheld satellite analyzer, nylon fish tape, socket set, windows laptop with serial to USB adapter; handheld HD/SD-SDI video generator and monitor, audio/video Adapter kit, RF adaptor kit, 2 each digital multi-meters, 2 each soldering stations, 2 each electronic repair tool kits, 2 each data/voice/cable premise service kits, digital/analog audio Analyzer, scopemeter.

Purpose
The SFEL 72 Troubleshooting and Repair package includes the required tools and test equipment used by Centers, Stations, and Bureaus to install, upgrade and align broadcast equipment and systems within their facility. It also provides tools to make repairs and modifications to IT and broadcast cabling infrastructure within assigned facilities.

Concept of Operation
The SFEL 72 Troubleshooting and Repair package provides the tools and equipment required for maintenance personnel to install, align, and maintain assigned broadcast systems in their Center, Station, or Bureau. Tools are provided to fabricate and repair IT and Broadcast copper infrastructure. A satellite analyzer is provided to allow local personnel to align satellite antennas which provide SATNET programming to the station supporting SFELs 40 and/or 42.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
1	2	1	1	2

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
1	1	1	1	1	1	1	1	1	1	1	1	2

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

▪ System: Power Generator SFEL 74

Description
Fixed or Portable Backup Power Generator for Critical Station Operations: Diesel or natural gas power generator from 1 to 1000 kVA: Fuel bladder, power transfer switch

Purpose
The SFEL 74 power generation package provides backup electrical power to critical broadcast and IT systems within a Station or Center when commercial power service is interrupted. It does the same for SFEL 52, 54, and 56 broadcast transmitters and ancillary systems.

Concept of Operation
The Power Generator system is used to provide backup electrical power for critical broadcast systems at a Center, Station, or Station Center. It provides these activities to remain operational during times when commercial power is interrupted. Power generator systems can be complemented by SFEL 76 backup UPS systems to provide for truly uninterruptible broadcast operations since it normally takes a couple of moments for the generator to come up to speed once a loss of commercial power has been detected. The SFEL 74 power generators require regular inspection and should be operated and switched on line at least semi-annually to ensure they are fully operational and can support the electrical needs of critical broadcast and IT systems when power is lost. Generator systems should be sized and interconnected to only those electrical panels that support broadcast, IT, and life safety systems, they should not be sized to include back up power to support non-critical administrative functions.

Level of Service (20)

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	0	1	1	1	1	1	1	2	2	1	3	2

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	1	8	8	2	1	1	1	1	1	1	3	1	2	1	1	1

(20) Variances based upon generators currently on AFRTS property book.

▪ System: UPS Backup SFEL 76

Description
Uninterruptible Power Supply providing backup and power conditioning for IT & broadcast systems:
Desktop, IT, and Automation Systems: 500vA to 3KVA battery backup system, either floor or rack mount.
Facility or Transmitter Site: 10 to 200kVA Battery Backup UPS System; AC power conditioner, bypass switch for maintenance.

Purpose
The SFEL 76 UPS backup package provides AC power conditioning and immediate backup electrical power to critical broadcast and IT systems within a Station or Center when commercial power service is interrupted and keeps systems online until SFEL 74 generator power comes online. It can also be used at SFEL 52, 54, and 56 broadcast transmitters and ancillary systems where practical.

Concept of Operation
The UPS backup system is used for two primary purposes: protect critical infrastructure from damage due to swings or spikes from commercial electrical power as well as provide power to critical systems that permit a station to continue operations during the time between the loss of commercial electrical power and the time the SFEL 74 power generator comes on line. If the station or Bureau does not have generator backup the UPS should be sized to ensure there is sufficient time to properly power down equipment until commercial power is restored. If the UPS system is supporting a Center or Station, it should be sized and interconnected to only those electrical panels that support broadcast, IT, and life safety systems, it should not be sized to support non-critical administrative functions.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	1	1	1	1	1	1	1	1 (21)	1	1	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
0	1	1	1	1	1	1	1	1	1 (21)	2	1	3 (21)	1	1	1	1	1

(21) Variances authorized to support radio transmitter sites.

▪ System: TV & Radio Monitoring SFEL 78

Description
Station & Station-Center: Multi-image display system with audio bridge, amplified loudspeakers, HD-SDI to HDMI converter, LED display monitor with wall mount; digital signage system
Station and Bureau: Satellite decoder, LED display monitor with wall mount; AM-FM tuner with amplifier and speakers OR AM-FM Tuner with amplified speakers.

Purpose
SFEL 78 TV and radio monitoring package is designed for the monitoring of AFN Satellite Television programming, local radio broadcasts, and provide a visual presentation of AFN programming to external clients and customers.

Concept of Operations
At the Center and Station-Center, a dual output multi-image display system allows for the display of all AFN programming on one screen in the maintenance facility as well as the ability customize a display profile for the lobby which can include digital signage to welcome visitors to the facility. At the Station or Station-Bureau level, the simplified video monitoring package can reside in the lobby of the facility or in a common work area. The radio monitoring package should reside either with station leadership or can be played over speakers (wall or ceiling mount) throughout the lobby and common areas of the facility yet be heard in all operational areas to monitor the off air signal coming from the transmitter.

Level of Service

Bureau	Center	Station	Station-Bureau	Station-Center
0	1	1	1	1

DMA/AFN Pacific

GUM (B)	YOK (B)	CSY (S)	DGU (S)	DGA (S)	IWA (S)	KSN (S)	MIS (S)	OKI (S)	OSN (S)	SAS (S)	HMP (SB)	TOK (SC)
0	1	1	1	1	1	1	1	1	1	1	1	1

DMA/AFN Atlantic

UKD (B)	SEM (C)	AVN (S)	BAV (S)	BLX (S)	GTM (S)	HDO (S)	ICK (S)	RTA (S)	SIG (S)	SDB (S)	SPG (S)	VIC (S)	BHN (S)	KTN (SB)	NAP (SB)	STG (SB)	WBN (SB)
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

FUNCTIONAL AREA: CONTINGENCY [SFEL 100]

▪ System: Contingency SFEL 100

Description
A compilation of elements from existing SFELs, determined on a case-by-case basis, in order to support service requested by CCMD.

Purpose
Provides minimum radio and television service to an authorized audience in a contingency location.

Concept of Operations
AFRTS support of contingency operations can range from a simple satellite dish and decoder to elaborate manned service, depending upon the level of service required by the CCMD. AFRTS, in coordination with the supporting AFN regional staff, DMA Tech Services and Television-Audio Support Activity (T-ASA), will determine the specific equipment list following approval of a Request for Service.