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<p style="text-align: center;">JOINT INTEROPERABILITY TEST COMMAND (JITC) GEOSPATIAL-INTELLIGENCE (GEOINT) REPOSITORY SAMPLE DATA COLLECTION AND SUBMISSION INSTRUCTIONS</p>

INTRODUCTION. The Geospatial Intelligence (GEOINT) Repository recommends the following guidance for GEOINT sample data collection and submission for submission to be placed within the GEOINT Repository. As a data collector, you will be required to coordinate with different GEOINT systems to collect the GEOINT Sample Data (GSD) Files required to be sent to the repository. This document gives the basic information in order to collect these files.

Presently, the GEOINT Repository has guidance from the Motion Imagery Standards Laboratory (MIS-LAB) and National Imagery Transmission Format Standards (NITFS) Compliance Test and Evaluation (CTE) Facility for the collection of MI and NITF data (See Enclosures 1 &2). Included in this guidance are the procedures for collection, labeling, submitting, and shipping to the MIS-LAB and NITFS CTE and GEOINT Repository.

COLLECTION POINTS TO CAPTURE GEOINT SAMPLE DATA.

- GEOSPATIAL Information: Instructions to be published.
- Ground Moving Target Indicator (GMTI): See the attached NITF instructions (See Enclosure 2).
- Motion Imagery (Full Motion Video): See the attached MI instructions (See Enclosure 1).
- NITFS: See the attached NITF instructions (See Enclosure 2).
- Video Moving Target Indicator (VMTI): See the attached MI instructions (See Enclosure 1).

MEDIA DEVICE USED FOR COLLECTION. Check your local Security Officer on what type of file storage media is permitted for collecting the GSD. Data collectors should always attempt to collect data at the unclassified level and complete the data pedigree form at the unclassified level. If this is not possible, all data and files should be properly marked and handled per the security operating procedures of the location and organization. The GEOINT Repository has used the following typeS of media to collect data, but GSD should be pulled from a system and burned to optical media (see below) wherever possible.

Compact Disk (CD) or Digital Versatile Disk (DVD) Blue-ray-R (BR-R)

Universal Serial Bus (USB) External Hard Drive (see Required Information word/text attachment) - **PLEASE DO NOT COLLECT OR SUBMIT DATA ON THUMB DRIVES.**

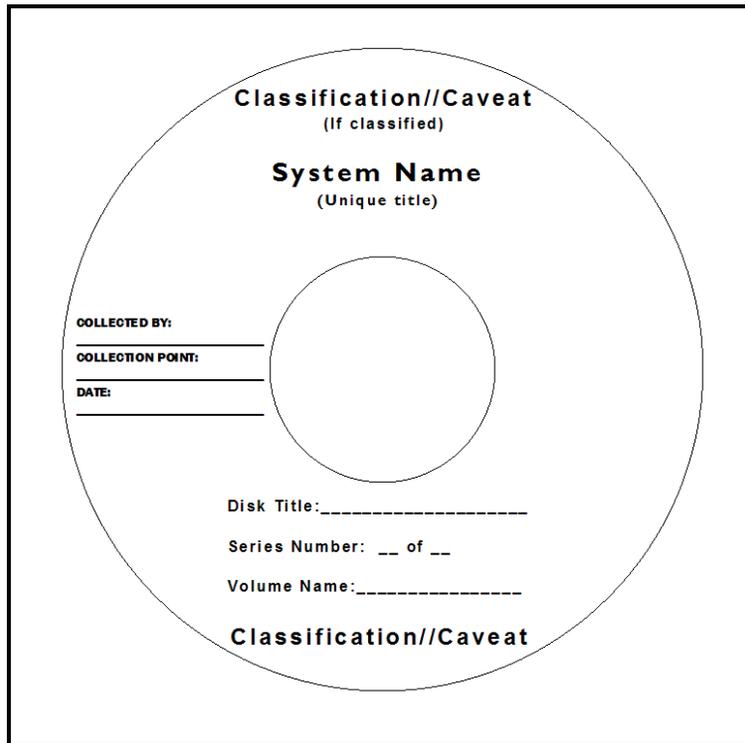
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LABELING REQUIRMENTS. *Mark all media according to appropriate Security regulations / procedures.*

At a minimum, the GEOINT Repository requests the following information be provided on the label for the media device (an example disk label is on the next page:

- TITLE: Unique title of system name
- DATE: Date the media was created
- CLASSIFICATION: Highest level of data on the media provided
- COLLECTION POINT: Identify the collection point (s)
- COLLECTOR: Information regarding who collected the data



The diagram shows a CD-ROM label format within a rectangular border. At the top, it says "Classification//Caveat (If classified)". Below that is "System Name (Unique title)". On the left side, there are three horizontal lines with labels: "COLLECTED BY:", "COLLECTION POINT:", and "DATE:". In the center, there is a smaller circle representing the CD-ROM hole. Below the hole, there are three lines for "Disk Title: _____", "Series Number: __ of __", and "Volume Name: _____". At the bottom, it says "Classification//Caveat".

Figure 1. Sample CD-ROM Label Format

The GEOINT Repository requires additional data pedigree information be provided using the GEOINT Repository Data Submission Form and Disclaimer (Available from GEOINTREPOSITORY@disa.mil).

SENDING GSD TO GEOINT Repository. Now that you have the sample files, you will need to get them to the GEOINT Repository. There are several ways to do this:

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- **Secret Internet Protocol Router Network (SIPRNet)** (CLASSIFIED) (when transferring data over SIPRNet, follow up with a NIPRNET email to GEOINTREPOSITORY@disa.mil to alert us that you sent a classified email).

BE AWARE OF SIPRNET FILE SIZE LIMITATIONS

GEOINTRESPOSITORY@FHJ.DISA.SMIL.MIL

- **Non-classified Internet Protocol Router Network (NIPRNet)** (UNCLASSIFIED)

BE AWARE OF EMAIL FILE SIZE LIMITATIONS

GEOINTREPOSITORY@disa.mil

- Ship the sample data to the MIS-LAB (instructions below)

UNCLASSIFIED ship to:

Joint Interoperability Test Command (JITC)
FedEx: BLDG 57305 / **US Mail:** PO Box 12798
ATTN: JTF2 GEOINT Repository
2001 Brainard Rd.
Ft. Huachuca, AZ 85670-2796

CLASSIFIED ship to:

Outside Label:

ATTN: DOCUMENT CONTROL
Building 57305
Joint Interoperability Test Command (JITC) (38)
2001 Brainard Rd.
Ft. Huachuca, AZ 856613-7051

Inside Label:

ATTN: JTF2 GEOINT Repository
Building 57305
Joint Interoperability Test Command (JITC) (38)
2001 Brainard Rd.
Ft. Huachuca, AZ 856613-7051

If you have any concerns/question regarding the above information or if you have questions while collecting GSD, please contact one of the following:

GEOINT REPOSITORY CONTACT INFORMATION

GEOINTREPOSITORY@disa.mil

GEOINT POINTS OF CONTACT	PHONE
Task Leader	520 538-4407 / DSN 879
Database Analyst	520 538-2632 / DSN 879
Action Officer	520 538-1888 / DSN 879

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JOINT INTEROPERABILITY TEST COMMAND (JITC) MOTION IMAGERY STANDARDS LABORATORY (MIS-LAB) SAMPLE DATA COLLECTION AND SUBMISSION INSTRUCTIONS

INTRODUCTION. The Motion Imagery Standards-Laboratory (MIS-LAB) recommends the following guidance for Motion Imagery Standards Profile (MISP) sample data collection and submission for assessment purposes. As a MI data collector, you will be required to coordinate with different MI systems to collect the MI Sample Data Files (MISDF) required to be sent to the MIS-LAB. This document gives the basic information in order to collect these files.

Follow the instructions provided for collection, labeling, submitting, and shipping for the MISDF. The MIS-LAB will analyze and assess the files once they have been received and provide a high level brief explanation of the results. The following is required for sample data and submission information when collecting MI for assessment purposes.

COLLECTION POINTS TO CAPTURE MI SAMPLE DATA. The MISDF requested for collection are files produced by recording the output streams of hardware / software encoders prior to dissemination to the network. There are multiple places to collect the digital MISDF, but it is ideal for the collection to be made from the output of the imaging system encoder. If the platform does not enable this capability or if the imaging system is analog, the point of collection should be after the data is converted to its digital form in the ground station. When requesting MISDF from the system operator(s), specifically indicate the need for an MPEG-2 Transport Stream file. A typical MPEG-2 Transport Stream (Figure 1) contains the following:

- MPEG 2 or H.264 compressed pixel data
- Key Length Value (KLV) metadata (e.g. information such as aircraft position & attitude, sensor operational parameters, security & releaseability data, etc.)
- Audio data may be included

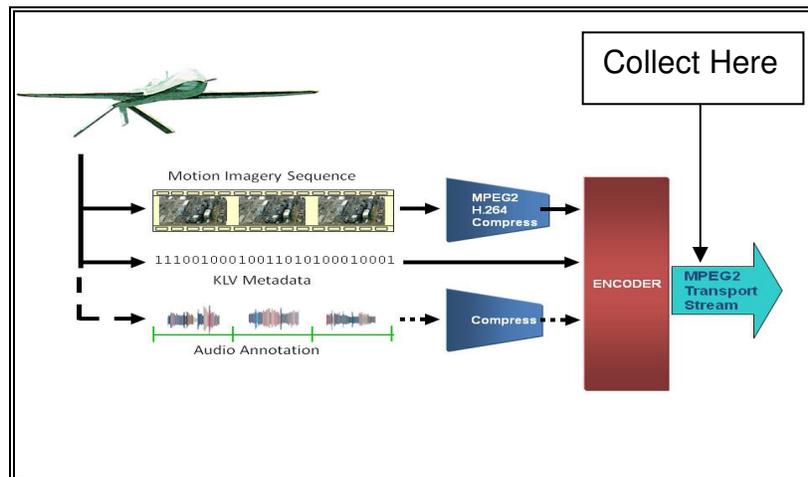


Figure 1. MPEG-2 Transport Stream
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Figure 2 shows a generic MI system data flow, starting from the platform (imaging system) to the Ground Control Station (GCS) where the analog video is encoded (compressed) and disseminated to MI users. The ideal collection point for collecting the MI samples as shown below is the output from the system at the GCS prior to dissemination to MI users.

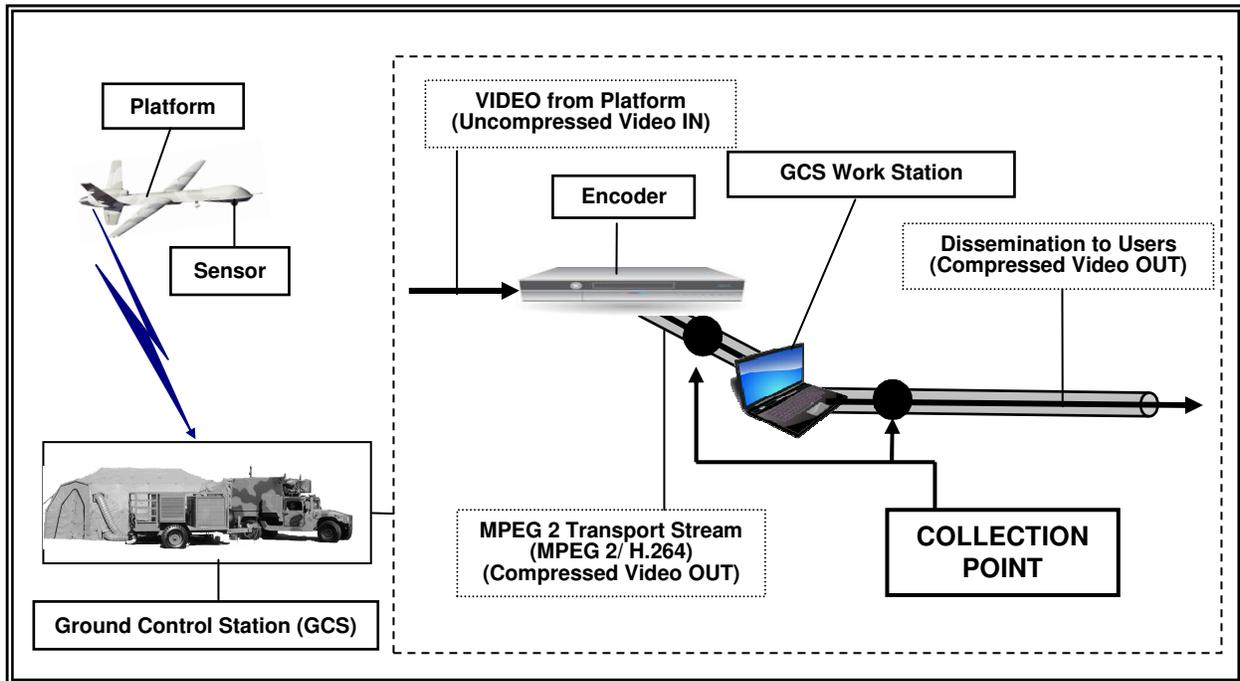


Figure 2. Generic MI Data Flow and Collection Point

WARNING: EVERY UAS THAT EMPLOYS A MOTION IMAGERY SENSOR WILL HAVE A DIFFERENT ARCHITECTURE AND PROCESS FOR GENERATING, ENCODING, AND DELIVERING DATA STREAMS TO USERS.

If the sensor system does not have an encoder as part of their system, the MISDF must be collected at the first point available after the encoder and prior to dissemination to the rest of the community.

MOTION IMAGERY (MI) SAMPLE DATA COLLECTION. The MIS-LAB requires the following MI format for assessment purposes:

- Three (3) five (5) minute samples for each imaging system as follows
 - Per imaging systems (NFOVEO, WFOVEO, IR, etc.)
 - Per compression type (MPEG-2 or H.264)
 - Per metadata level if applicable (Different metadata schema to support multiple data bandwidth categories)
- MPEG-2 Transport Stream files

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Platforms may contain multiple pods / skyballs that each may have more than one imaging system (NFOVEO, WFOVEO, IR). The collector should collect three (3) five (5) minute samples for each imaging system onboard a platform. Some imaging systems also scale the metadata based on bandwidth allocations. Collect three (3) samples for each metadata level rate as applicable. For each data collection comprised of three (3) samples, it is preferred if the samples are captured on different days to adequately represent typical data from platform.

Keep in mind that some imaging systems also have the ability to toggle a metadata overlay on and off. Preferably, the overlay will be turned off during the data collection sample. Additional MISDF attributes include:

- Five (5) minutes in length (if possible) of contiguous data. Panning and zooming during the five (5) minutes is acceptable. The data size will vary as the systems record different amounts of data per minute based on resolution, frame rate, compression, etc.

Typical MPEG-2 Transport Stream file extensions are numerous. The following are the more common MI video file extensions but is not an all-encompassing list:

- [.mpg](#), [.m2v](#) or [.mpeg](#) (MPEG-2 compressed data on MPEG-2 TS)
- [.mp4](#), [.mp4v](#) or [.h264](#) (MPEG-4/H.264 compressed data on MPEG-2 TS)
- [.ts](#) (Transport Stream File)

MEDIA DEVICE USED FOR COLLECTION. Check with local Security Officer on what type of file storage media is permitted for collecting MISDF. Data collectors should always attempt to collect data at the unclassified level and also complete the data pedigree form at the unclassified level. If this is not possible, all data and files should be properly marked and handled per the security operating procedures of the location and organization. The MIS-LAB has used the following type of media to collect data, but MISDF should be pulled from a system and burned to optical media (see below) wherever possible.

- Compact Disk (CD) or Digital Video Disk (DVD) (see Disk Labeling Requirements)
- Universal Serial Bus (USB) External Hard Drive (see Required Information word/text attachment) (no thumb drives)

LABELING REQUIREMENTS. *Mark all media according to appropriate Security regulations / procedures.*

The MIS-LAB Facility requests the following information be provided on the label for the media device:

- TITLE: Unique title of system name
- DATE: Date the media was created
- CLASSIFICATION: Highest level of data on the media provided

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- **COLLECTION POINT:** Identify the collection point (s)
- **COLLECTOR:** Information regarding who collected the data

The MIS-LAB Facility requires additional data pedigree information be provided in a text or word document on the disk or hard copy accompanying the file storage media. Please refer to the Data Pedigree document for further details.

SENDING MSDF TO MIS-LAB. Now you have the MISDF and need to get it to the MIS-LAB, there are several ways to do it.

- **Secret Internet Protocol Router Network (SIPRNet) (CLASSIFIED)**
MIS-LAB@fhu.disa.smil.mil
- **Non-classified Internet Protocol Router Network (NIPRNet) (UNCLASSIFIED)**
MIS-LAB@disa.mil
- **Ship** the sample data to the MIS-LAB (instructions below)

UNCLASSIFIED ship to:

Joint Interoperability Test Command (JITC)
FedEx: BLDG 57305 / **US Mail:** PO Box 12798
ATTN: JTF2 MIS-LAB
2001 Brainard Rd.
Ft. Huachuca, AZ 85670-2796

CLASSIFIED ship to:

Outside Label:

ATTN: DOCUMENT CONTROL
Building 57305
**Joint Interoperability Test
Command (JITC) (38)**
2001 Brainard Rd.
Ft. Huachuca, AZ 856613-7051

Inside Label:

ATTN: JTF2 MIS-LAB
Building 57305
Joint Interoperability Test Command
(JITC) (38)
2001 Brainard Rd.
Ft. Huachuca, AZ 856613-7051

Any question regarding the above information or if you have questions while in the field collecting this information, please contact one of the following:

MIS-LAB CONTACT INFORMATION

MIS-LAB@disa.mil

MIS-LAB Points Of Contact	PHONE
Data Analyst	520 538-4325 / DSN 879
Task Leader	520 538-5367 / DSN 879
Action Officer	520 538-1888 / DSN 879

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ENCLOSURE 1

1-2

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<p style="text-align: center;">JOINT INTEROPERABILITY TEST COMMAND (JITC) NATIONAL IMAGERY TRANSMISSION FORMAT STANDARDS (NITFS) COMPLIANCE TEST AND EVALUATION (CTE) FACILITY SAMPLE DATA COLLECTION AND SUBMISSION INSTRUCTIONS</p>
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INTRODUCTION. The National Imagery Transmission Format Standards (NITFS) Compliance Test and Evaluation (CTE) Facility provides the following guidance for National Transmission Format (NITF) sample data collection, and submission for assessment purposes. As a NITF data collector, you will be required to coordinate with different NITF systems to collect NITF Sample Data Files (NITFSDF) for submission to the NITFS CTE Facility. This document gives the basic information in order to collect these files.

Follow the instructions provided for collection, labeling, submitting, and shipping for the NITFSDF. The NITFS CTE Facility will analyze and assess the files once they have been received, and provide a high level explanation of the results. The following is required for sample data and submission information when collecting NITF imagery or Ground Moving Target Indicator Format (GMTIF) data for assessment purposes.

COLLECTION POINTS TO CAPTURE NITF SAMPLE DATA. The NITFSDF requested for collection are any NITF-formatted files representative of a system's NITF products prior to dissemination to the network. There are multiple places one can collect the NITFSDF.

Figure 1 shows a generic NITF system data flow, starting from the platform (sensor) to the Ground Station (GS) where the still imagery is disseminated to users. The collected imagery may be formatted as NITF either on board the platform or at the receiving ground station. The ideal collection points for collecting the NITFSDF as shown below is the output NITF product from the sensor system at the GS, the export point from the GS to an Image Product Library (IPL), and the export point from the IPL to dissemination to NITF users.

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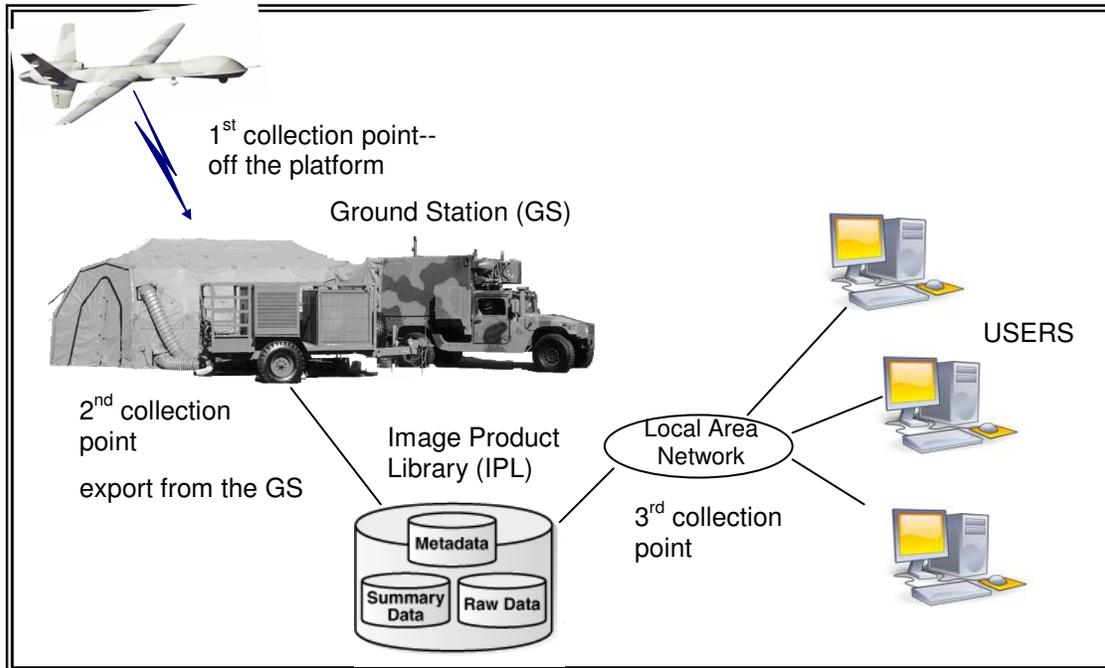


Figure 1. Generic Data Flow and Collection Points

NITF SAMPLE DATA COLLECTION. The NITFS CTE Facility requires NITF-formatted imagery and GMTIF data for assessment purposes. The NITFSDF should be representative of the various types of imagery products required by system's concept of operations. NITF imagery types may be electro-optical (EO), infrared (IR), or Synthetic Aperture Radar (SAR). DATA may also be GMTIF data.

NOTE: The initial system used to generate the original NITFSDF created an identifying file extension for that system describing the functionality or mission. The following are more common for NITF or GMTIF imagery files:

- .ntf, (NITF files)
- .gmti (GMTIF files)

MEDIA DEVICE USED FOR COLLECTION. Check with the local Security Officer on what type of file storage media is permitted for collecting NITFSDF. Data collectors should always attempt to collect data at the unclassified level and also complete the data pedigree form at the unclassified level. If this is not possible all data and files should be properly marked and handled per the security operating procedures of the location and organization. The NITFS CTE Facility has used several types of storage media in the past but NITFSDF should be pulled from a system and burned to optical media wherever possible.

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- Compact Disk (CD) or Digital Video Disk (DVD) (see Disk Labeling Requirements)
- Universal Serial Bus (USB) External Hard Drive (see Required Information word/text attachment) (no thumb drives)

LABELING REQUIREMENTS. *Mark all media according to appropriate Security policy, regulations and procedures.*

The NITFS CTE Facility requests the following information be provided on the label for the media device:

- TITLE: Unique title of system name
- DATE: Date the media was created
- CLASSIFICATION: Highest level of data on the media provided
- COLLECTION POINT: Identify the collection point (s)
- COLLECTOR: Information regarding who collected the data

The NITFS CTE Facility requires additional data pedigree information be provided in a text or word document on the disk or hard copy accompanying the file storage media. Please refer to the Data Pedigree document for further details.

SENDING NITFSDF TO NITFS CTE Facility. Once assembled, there are several ways to transmit the NITFSDF to the NITFS CTE Facility.

- **Secret Internet Protocol Router Network (SIPRNet) (CLASSIFIED)**

nitf@fhu.disa.smil.mil

- **Non-classified Internet Protocol Router Network (NIPRNet) (UNCLASSIFIED)**

jitcn@disa.mil

- **Ship** the sample data to the NITFS CTE Facility

UNCLASSIFIED media should be shipped to:

Joint Interoperability Test Command (JITC)
FedEx: BLDG 57305 / **US Mail:** PO Box 12798
ATTN: JTF2 NITFS
2001 Brainard Rd.
Ft. Huachuca, AZ 85670-2796

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CLASSIFIED media should be shipped to:

Outside Label:

ATTN: DOCUMENT
CONTROL
Building 57305
Joint Interoperability Test
Command (JITC) (38)
2001 Brainard Rd.
Ft. Huachuca, AZ 856613-
7051

Inside Label:

ATTN: JTF2 NITFS
Building 57305
Joint Interoperability Test
Command (JITC) (38)
2001 Brainard Rd.
Ft. Huachuca, AZ 856613-
7051

Any questions regarding the above information or if you have questions while in the field collecting this information, please contact one of the following:

NITFS CTE Facility CONTACT INFORMATION

jitcn@disa.mil

NITFS CTE POINTS OF CONTACT	PHONE
Data Analyst	520 538-4325 / DSN 879
Task Leader	520 538-5407 / DSN 879
Action Officer	520 538-5168 / DSN 879

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