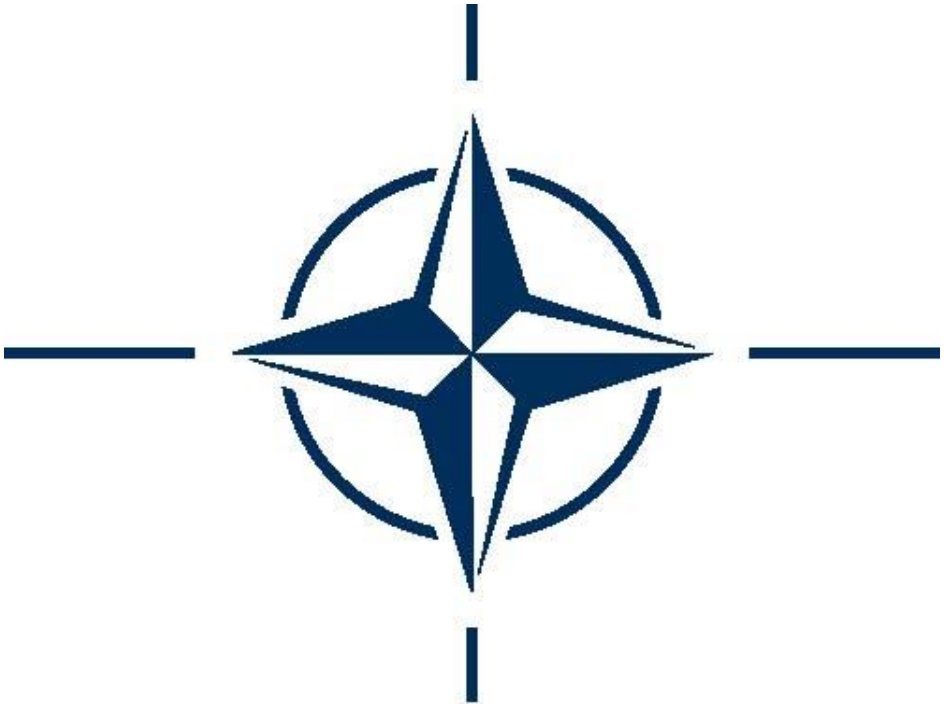
NATO STANDARD

ATDLP-6.16
VOLUME IV

STANDARDS FOR DATA FORWARDING BETWEEN TACTICAL DATA SYSTEMS EMPLOYING LINK 16 AND TACTICAL DATA SYSTEMS EMPLOYING JREAP

Edition B Version 1
MAY 2021



NORTH ATLANTIC TREATY ORGANIZATION

ALLIED TACTICAL DATA LINK PUBLICATION

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NATO LETTER OF PROMULGATION

21 May 2021

1. The enclosed Allied TACTICAL DATA LINK Publication ATDLP-6.16, Volume IV, Edition B, Version 1, STANDARDS FOR DATA FORWARDING BETWEEN TACTICAL DATA SYSTEMS EMPLOYING LINK 16 AND TACTICAL DATA SYSTEMS EMPLOYING JREAP, which has been approved by the nations in the Consultation, Command, and Control Board (C3B), is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 5616.

2. ATDLP-6.16, Volume IV, Edition B, Version 1, is effective upon receipt.

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4. This publication shall be handled in accordance with C-M(2002)60.

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Brigadier General, HUNAF
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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS
Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.	

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RECORD OF SPECIFIC RESERVATIONS

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STANDARDS FOR DATA FORWARDING

BETWEEN

TACTICAL DATA SYSTEMS EMPLOYING DIGITAL DATA LINK 16

AND TACTICAL DATA SYSTEMS EMPLOYING JREAP

ANNEXES

A. Data Link and JREAP Characteristics.
B. Data Forwarding Specification.

RELATED DOCUMENTS

ATDLP-1.75(B)(1)	-	Technical Characteristics of the Multi-Functional Information Distribution System (MIDS).
ATDLP-5.16(B)(1)	-	Tactical Data Exchange - Link 16.
ATDLP-6.16(B)(1) Volume 1	-	Standards for Data Forwarding Between Tactical Data Systems Employing Link 16 and Tactical Data Systems Employing Link 11/11B.
ATDLP-6.16(B)(1) Volume 2	-	Standards for Data Forwarding Between Tactical Data Systems Employing Link 22 and Tactical Data Systems Employing Link 16.
ATDLP-6.16(B)(1) Volume 3	-	Standards for Data Forwarding Between Tactical Data Systems Employing Link 22 and Tactical Data Systems Employing Link 11/11B.
ATDLP-5.18(B)(2)	-	Interoperability Standard for the Joint Range Extension Application Protocol (JREAP)

OBJECT

1. The aim of this Agreement is to provide specifications for data forwarding between Link 16 and Link 16 over non-MIDS/JTIDS media in order to achieve and maintain a high degree of interoperability between the participating tactical data systems.

AGREEMENT

2. Participating nations agree that the specifications contained in Annex B to this Agreement shall govern data forwarding between Link 16 and Link 16 over non-MIDS/JTIDS media. These specifications will not preclude the alternate means of handling air defense information via RATT, voice, CW, etc., when necessary.

3. The implementation of the ATDLP shall be deemed to indicate an undertaking by the nation or Strategic Command (SC) concerned:

a. to operate transmission/reception and data terminal equipment in accordance with the specifications contained in Annex B;

b. to not transmit data without the capability of receiving and translating, where applicable, the associated data required to support the transmissions; and

c. to have the capability to reject any message or field combination for which it has no use.

4. Participating nations agree that the failure or degradation of the computer program of any system due to the receipt of data shall be considered the fault of the receiving system. A system must protect itself against any data it cannot use.

5. Participating nations agree that the continued operation of a facility or a unit's tactical data system shall not be dependent upon the receipt of any message or field from another unit/facility.

6. Participating nations agree that it is not intended that this ATDLP specify any minimum implementation of Link 16. If translation or

conversion is intended to be implemented, this document specifies the way it is to be done.

IMPLEMENTATION OF THE AGREEMENT

7. This ATDLP is considered to be implemented when a nation or SC is able to forward information between Link 16 and Link 16 over non-MIDS/JTIDS media as described in Annex B of this ATDLP.

TERMS AND DEFINITIONS

8. A list of acronyms and their definitions is included in Annex B, Glossary.

The following terms and conventions are used for the purpose of this ATDLP:

SHALL indicates a procedure or capability is mandatory.

MAY indicates a procedure or capability is optional.

WILL/IS/ARE generally used descriptively for information purposes.

DESCRIPTION OF ANNEXES

9. ATDLP-6.16 Volume 4 contains reference to two annexes:

a. Annex A - Data Link and JREAP Characteristics. This annex contains a brief description of the general, technical, procedural and message characteristics of Link 16 and a general description of the Joint Range Extension Application Protocol (JREAP).

b. Annex B - Data Forwarding Specification. This annex contains a detailed description of the data forwarding rules that must be followed and the data element translations that must be implemented in order to provide operationally effective data forwarding between Link 16 and Link 16 over non-MIDS/JTIDS media.

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DATA LINK AND JREAP CHARACTERISTICS

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ANNEX A - DATA LINK AND JREAP CHARACTERISTICS

CHAPTER 1

1 LINK 16 DATA LINK CHARACTERISTICS

This chapter briefly describes the characteristics of Link 16.

1.1 CHARACTERISTICS

The following paragraphs give the general, technical and message characteristics of Link 16.

1.1.1 General Characteristics

Link 16 is a secure, ECM resistant data link which provides for communications, data exchange, relative navigation and identification for application to tactical operations. The link will be used for distribution and exchange of real-time/near real-time and nonreal-time tactical data. The data will be transmitted in one of two ways: formatted in accordance with ATDLP-5.16 or unformatted as digital voice or alphanumeric text. Link 16 is an interface design standard that incorporates J-Series message standards (formats and user protocols), specific communications media, Time Division Multiple Access (TDMA) architecture, specific communications protocols and procedures to fulfil the operational requirement to exchange tactical data (including voice and teletype) between specified tactical systems.

1.1.2 Technical Characteristics

The following relationship has been established between ATDLP-5.16 and ATDLP-1.75. ATDLP-5.16 is intended to define a specification for Link 16 to include message standards, data link protocols and network management procedures. It is the governing document with respect to MIDS network management, messages, and protocols. ATDLP-1.75 is intended to provide a detailed technical specification for MIDS terminals, specify how the network management messages and protocols of ATDLP-5.16 are implemented in the MIDS terminals and explain how these terminals will interoperate technically. ATDLP-1.75 is the governing document for MIDS terminal design.

1.1.3 Message Characteristics

J-Series messages are functionally oriented with variable length strings of 75-bit words. A message is started by an initial word; it may then be followed by extension words to transmit logically associated data field groupings that are longer than can be accommodated by the initial word. The extension words may be followed by continuation words which supply supplemental information normally transmitted on an infrequent basis; (see ATDLP-5.16, Annex B, paragraph 2.3). There may be multiple J-Series messages varying in function within a time slot. However, each message shall reside and be capable of complete interpretation within a single time slot.

1.2 MESSAGE DESCRIPTION

Since ATDLP-6.16 Volume 4 describes data forwarding between Link 16 and Link 16 over non-MIDS/JTIDS media, descriptions of individual J-Series messages are not included here. See ATDLP-5.16, Annex B, for descriptions of the J-Series messages.

1.3 TRACK NUMBER

The Link 16 track/address numbering scheme is specified in ATDLP-5.16 Annex B, paragraph 1.1.3 and is summarized below:

a. Track/Address Numbering. A track number (TN) is used to provide a common reference number for information and directives exchanged within the interface. The reference numbers are used for both digital and voice communications to denote all IUs and/or tactical information reports, e.g., tracks. For the purpose of TN assignment, tactical information reporting includes reference numbers assigned to all tracks, strobes, bearing lines, areas and points exchanged on the interface. When applied to an IU, such a number is termed an address; when applied to a point, it may be an address or TN, as appropriate. In the messages, the address is termed "Source TN" when used to identify the IU originating the data and is termed "Addressee TN" when used to identify the IU that is to receive the data.

b. Track Number/Address Allocation. The octal numbers 00001 - 00076 and 00100 - 00175 are allocated as addresses on Link 16 for Command and Control (C^2) JTIDS Units (JUs). NonC^2 and C^2JU addresses and TNs for the

use of reporting tactical information are allocated from octal numbers 00200 - 07776 and 10000 - 77776. The octal number 77777 is reserved as the Network Manager dedicated address and is assigned in addition to the unit's JU address. The alphanumeric octal characters 0A000 - ZZ777 are reserved as TNs for exclusive use in reporting tactical information. The octal number 00000 is reserved as No Statement. The octal number 00176 is reserved as a pseudo-TN for forwarding data to Link 11/11B from Link 16 C^2 JUs with TNs greater than 00177 (octal) (see ATDLP-6.16 Volume 1, Annex B, paragraph 1.7.2). The octal number 00177 is reserved as the collective address; it is not assignable as a unit address. The octal numbers 00077 and 07777 are illegal for use on the interface.

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ANNEX A - DATA LINK AND JREAP CHARACTERISTICS

CHAPTER 2

2 JREAP CHARACTERISTICS

This chapter briefly describes characteristics of the Joint Range Extension Application Protocol (JREAP). The following paragraphs give a general overview of the JREAP and describe its operation over various media.

2.1. GENERAL JREAP CHARACTERISTICS

The Joint Range Extension Application Protocol is a generalized application protocol. The JREAP enables tactical data to be transmitted over digital media and networks not designed originally for tactical data exchange. Formatted tactical digital messages are embedded in JREAP messages as data fields within available commercial and Government protocols (e.g., those used over satellites and terrestrial links). The JREAP also provides specialized management messages that transport data not contained in the formatted messages. These management messages support TDL-unique functions.

2.2 JREAP CAPABILITIES

The JREAP provides network and transport layer functionality for media that do not support the OSI network and transport layers. For media that support the OSI network and transport layers, the JREAP is encapsulated within those layers. JREAP software can be integrated into a host system or into a stand-alone processor. The appropriate interface terminals are required at each end of any JREAP alternate media link. The JREAP offers users the following capabilities:

a. Extending the range-limited tactical networks to beyond line-of-sight while reducing their dependence upon relay platforms.

b. Reducing the load on stressed networks.

c. Providing backup communications upon the loss of the normal link.

d. Providing a TDL connection to a platform that may not be equipped with the specialized communications equipment for that TDL.

2.3 JREAP OPERATION OVER DIFFERENT MEDIA

The JREAP is designed to support operations over most communication media (i.e., JRE media). Each JRE medium has unique characteristics. Military Ultra High Frequency (UHF) satellite and terrestrial Radio frequency (RF) communications are half-duplex. Military Super High Frequency (SHF) Satellite Communications (SATCOM) support full-duplex operations, but are limited to point-to-point circuits. Military Extremely High Frequency (EHF) Medium Data Rate (MDR) SATCOM has circuit configuration limitations. Commercial SATCOM is mostly point-to-point and supports full-duplex usage. IP communications can have packet loss, packet reordering, and packet delay characteristics that are difficult to predict. The JREAP supports all of these media, and others, by providing a flexible protocol design with common fields.

2.4 JREAP MANAGEMENT AND MONITORING FEATURES

The JREAP is designed to support the networking of two or more JRE Processor nodes for the purpose of passing selected data from one node to any other node(s) via JRE media. The JREAP contains management and monitoring features for maintaining required communication capabilities between JRE nodes. In order to manage the JRE network and report connectivity and filtering, joint operational planners will assign a unique 16-bit Designator to each JRE link that connects JRE Processors and to each TDL serviced by a JRE Processor (e.g., Link 16). These Designators provide operational users the capability to identify uniquely each JRE sub-net in a global JRE environment. For point-to-point communications, each (logical or physical) connection between each pair of JRE Processors will have a unique link Designator. A single Designator will be used for a JRE medium that connects several JRE Processors over a multicast or broadcast link.

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GLOSSARY

AAW	Antiair Warfare
ADatP	Allied Data Publication
BLOS	Beyond Line-of-Sight
C^2	Command and Control
C^2 JU	Command and Control MIDS Unit
CRU	Cruiser
CV	Aircraft Carrier (US)
CW	Continuous Wave
DD	Destroyer
ECCM	Electronic Counter Countermeasures
ECM	Electronic Countermeasures
EHF	Extremely High Frequency
EPLRS	Enhanced Position Location Reporting System
EW	Electronic Warfare
FJU	Forwarding MIDS Unit (the letters following FJU indicate the other links involved)
FJUABG	Forwarding JTIDS Unit ABG (between Link 11, 11B, Generic Data Links and Link 16)
FJUB	Forwarding MIDs Unit B (between Links 11B and 16)
FJUBG	Forwarding JTIDS Unit BG (between Link 11B, Generic Data Links and Link 16)
FJUG	Forwarding JTIDS Unit Generic
GU	Generic Unit
IFF/SIF	Identification Friend or Foe/Selective Identification Feature
IP	Internet Protocol
IU	Interface Unit
JRE	Joint Range Extension
JREAP	Joint Range Extension Application Protocol
JREJ CIU	Joint Range Extension MIDS Concurrent Interface Unit
JREU	Joint Range Extension Unit
JTIDS	Joint Tactical Information Distribution System
JU	MIDS Unit
LCC	Amphibious Command Ship
LEP	List of Effective Pages
LHA	Amphibious Assault Ship (General Purpose)
LHD	Amphibious Assault Ship (Multipurpose)
LOS	Line-of-Sight
MCMV	Mine Countermeasures Maritime Vessel
MDR	Medium Data Rate
MIDS	Multifunctional Information Distribution System
MIL-STD	Military Standard (US)
NA	Not Applicable
NSA	NATO Standardization Agency

NATO	North Atlantic Treaty Organization
NPG	Network Participation Group
NS	No Statement
OSI	Open System Interconnection
PPLI	Precise Participant Location and Identification (Link 16)
RATT	Radio Teletype
RF	Radio Frequency
SATCOM	Satellite Communications
SC	Strategic Command
SHF	Super High Frequency
STANAG	Standardization Agreement
STN	Source Track Number
TDL	Tactical Data Link
TDMA	Time Division Multiple Access
TN	Track Number
TQ	Track Quality
UHF	Ultra High Frequency
US	United States of America

ANNEX B - DATA FORWARDING SPECIFICATION

CHAPTER 1

1 DATA FORWARDING RULES

This chapter describes the general forwarding rules for the exchange of J-Series messages over non-MIDS/JTIDS media.

1.1 GENERAL

The JRE interface is intended to provide improved information distribution by extending the range of nets exchanging tactical information beyond line-of-sight (BLOS). The general rules governing the exchange of J-Series messages on a JRE interface are as follows.

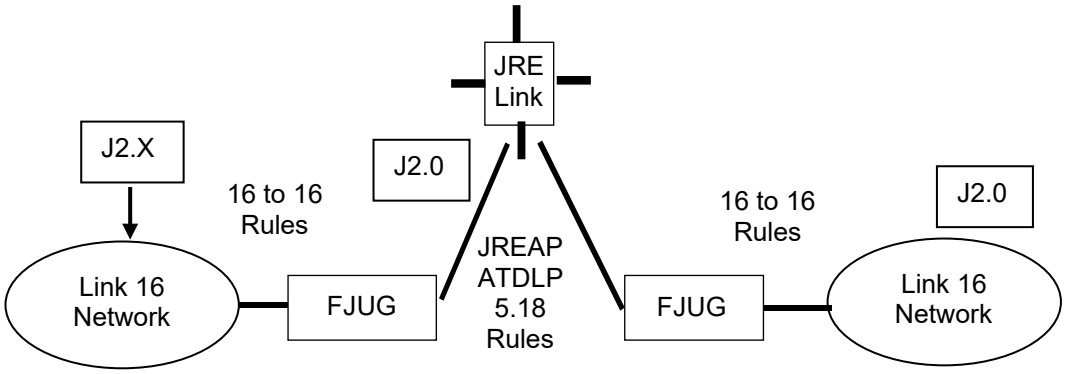

Figure B-1-1 JRE Interface Between Two Link 16 Networks

1.1.1 The JRE Interface Between Link 16 Networks

The JRE interface between Link 16 Networks enables the passing of J-Series messages using non-MIDS/JTIDS Media, as illustrated in Figure B-1-1. The Forwarding MIDS Unit Generic (FJUG) forwards designated J-Series messages in accordance with the forwarding rules in this annex. The J-Series messages are packaged and time tagged for latency and extrapolation purposes in accordance with the JRE Application Protocol (JREAP) defined in ATDLP-5.18. As an example, a J2.X is transmitted on a Link 16 network. It is received by an FJUG, translated to a J2.0 Indirect Interface Unit PPLI message, time tagged and packaged according to the JREAP protocol and forwarded over a JRE link to another FJUG that unpackages, extrapolates, and transmits the J2.0 PPLI on another Link 16 network. Other J-Series

messages are time tagged, packaged and forwarded without any translations, but are unpackaged, extrapolated if necessary, and transmitted on the other Link 16 network. Except for the change in PPLI message types and the filtering of selected messages, the J-Series message forwarding between two or more Link 16 networks is transparent to the networks and it appears as though the two networks are one.

1.1.2 The JRE Interface Between Link 16 Units and a Link 16 Network

This interface requires at least two FJUG (or JREJ CIU) on Link 16 that are also capable of exchanging J-Series messages using ATDLP-5.18 without altering the intent or usefulness of the information exchanged as illustrated in Figure B-1-2. In this interface one of the FJUG is exchanging J-Series messages between its MIDS/JTIDS terminal connected to the Link 16 network and the other FJUG is connected via a JRE link using ATDLP-5.18. This interface is commonly used for the following capability:

a. Operational Continuity In this application a FJUG (e.g., BLOS ground or surface unit) maintains connectivity with the Link 16 network via the JRE link to the other FJUG when the direct connection is lost.

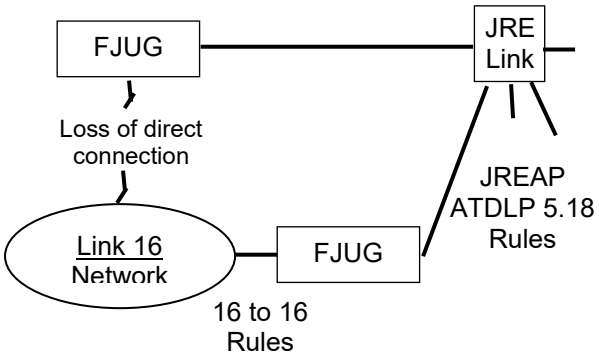

Figure B-1-2. JRE Interface Between Link 16 Units

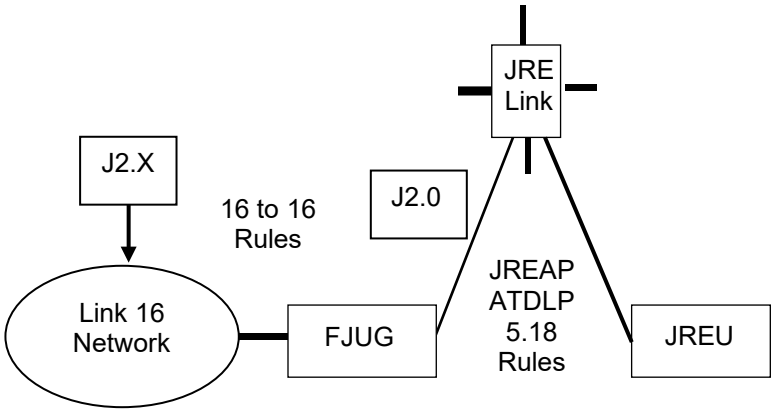

Figure B-1-3 JRE Interface Between a Link 16 Network and a JREU

1.1.3 The JRE Interface Between a Link 16 Network and JREU

The JRE interface between a Link 16 network and a JRE Unit (JREU) enables the passing of J-Series messages to a unit not on a Link 16 network using non-MIDS/JTIDS Media as illustrated in Figure B-1-3, as if it were part of the Link 16 network. The FJUG forwards designated J-Series messages in accordance with the forwarding rules specified in this annex. The J-Series messages are time tagged and packaged for forwarding over the JRE link in accordance with ATDLP-5.18. As an example, a J2.X PPLI message received over the Link 16 network is translated to a J2.0 Indirect Interface Unit PPLI message by the FJUG, time tagged, and forwarded over the JRE link to the receiving JREU, which unpackages the message, performs any necessary extrapolation, and passes the J2.0 message to the host. The JREU would send the host's J2.0 PPLI over the JRE link to be forwarded by the FJUG onto the Link 16 network. Other J-Series messages do not require translation and are time tagged and forwarded using JREAP over the JRE link. Those messages received by the JREU are unpackaged, extrapolated as appropriate, and presented to the host. Those received by the FJUG over the JRE link are unpackaged, extrapolated as appropriate, and forwarded onto the Link 16 network.

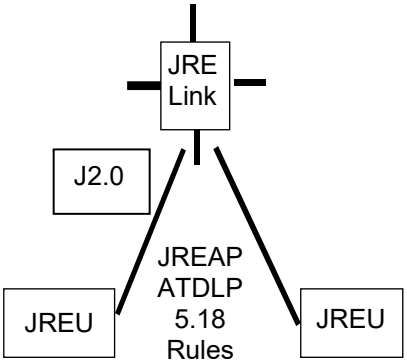

Figure B-1-4 JRE Interface Between Two JREUs

1.1.4 The JREU to JREU JRE Interface

The JRE interface between two JREUs is the simplest case that enables the passing of J-Series messages using non-MIDS/JTIDS Media as illustrated in Figure B-1-4. The initiating JREU time tags, packages, and forwards designated J-Series messages in accordance with ATDLP-5.18. The receiving JREU unpackages, extrapolates the messages as appropriate, and passes it to its host. As an example, the JREUs pass their J2.0 PPLI messages between each other with no translation required, but the PPLI is extrapolated for the time it takes to pass over the JRE link.

1.1.5 THE CONCURRENT OPERATING UNIT JRE INTERFACE

This interface has several possible configurations, but as a minimum consists of a Tactical Data System communicating on a Link 16 network and on a JRE link at the same time (JREJ CIU), but not directly forwarding J-Series messages between the two. Another possible configuration could be an FJUG operating on a Link 16 network, as illustrated in Figure B-1-5, and other links where one or more links are not being forwarded between it and the Link 16 network (e.g., a member of a Navy Battle Group). The basic concurrent operating JREJ CIU exchanges information held in its local database, but J-Series messages are not forwarded to or from the Link 16 Network. The concurrent operating unit adheres to the protocols of each link. The local data base of a concurrent operating unit may contain the normal assimilation of data by that unit and may include local sensor data, local operator inputs, and data received and accepted into the local data base from the data links (e.g., ID or IFF/SIF data).

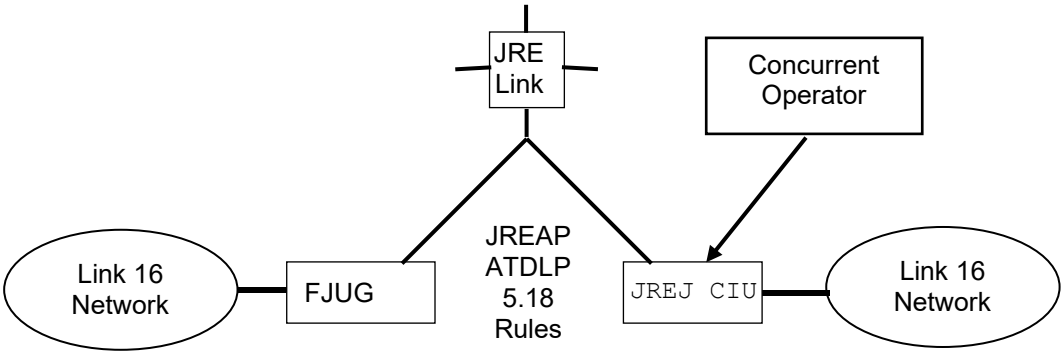

Figure B-1-5 JRE Interface with Concurrent Operations

1.2 PRECISE PARTICIPANT LOCATION AND IDENTIFICATION (PPLI)

1.2.1 PPLI REPORTING BY JUs

Each JU shall transmit an appropriate J2 PPLI message on the PPLI Network Participation Group (NPG), in the specified access mode, at least once per time interval. The time interval is defined as the maximum time differential between PPLI reports that allows C^2 JUs to maintain other JUs with active status. The location of moving JUs shall be extrapolated to the time of transmission. To maintain an active status on a JU, at least one PPLI must be received every 40-60 seconds, or the JU will be considered inactive. In the latter case, C^2 JUs may delete the track or begin transmitting a surveillance track (based on own sensor data, or as a nonreal-time track). For surveillance purposes (see ATDLP-5.16), J2.x messages shall be transmitted periodically in accordance with the appropriate J2.x message Transmit Rules.

1.2.2 PPLI REPORTING OF FORWARDED IUs

An FJU shall transmit a J2.0 message on the Surveillance NPG (NPG 7) at least once per time interval for each IU which is being forwarded. The time interval for the reporting of forwarded units shall be the same as specified in paragraph 1.2.1 above. The TN, Identity (ID), location, and amplifying information shall be identical to the latest information received from the forwarded unit on the other link. The location of moving forwarded units may be extrapolated to the time of transmission.

1.2.3 SELF REPORTING BY AN FJUG, JREJ CIU, OR JREU

1.2.3.1 Any FJUG, JREJ CIU, or JREU will report itself or its associated host using the J2.0 Indirect Interface Unit Precise Participant Location and Identification (PPLI) message on the JRE link.

1.2.3.2 FJUGs and JREJ CIUs report themselves using the J2.X PPLI message on the Link 16 network if not directly tied to a host system. When directly tied to a host system that is generating its own PPLI message, no additional PPLI is needed on the Link 16 network for the FJUG or JREJ CIU.

1.2.4 FORWARDING PPLI REPORTS ON JRE LINKS

1.2.4.1 J2.2 Air PPLI, J2.3 Surface PPLI, J2.4 Subsurface PPLI, J2.5 Land Point PPLI, and J2.6 Land Track PPLI messages received on Link 16, are forwarded by the FJUG in a J2.0 Indirect Interface Unit PPLI message over the JRE link.

1.2.4.2 In addition, the FJUG is responsible for forwarding all J2.0 Indirect Interface Unit PPLI messages received via a JRE link over the directly tied Link 16 network.

1.2.5 SPECIAL CONSIDERATIONS

Due to link architecture there are situations when a Link 16 participant can receive a J2.X PPLI report on Link 16 and a J2.0 Indirect Interface Unit PPLI report that came over a JRE link for the same unit. When this situation occurs, the Link 16 unit will accept the following PPLI reports directly from Link 16: J2.2 Air PPLI, J2.3 Surface PPLI, J2.4 Subsurface PPLI, J2.5 Land Point PPLI, and J2.6 Land Track PPLI. The Link 16 unit will discard the J2.0 Indirect Interface Unit PPLI messages for the same units.

1.3 JRE SOURCE TRACK NUMBER FIELD

1.3.1 Link 16 uses a 15-bit Address number to identify Link 16 participants, but the JRE Source Track Number (STN) field in the JRE application protocol is a 16-bit field. (This adds flexibility to JRE for non-link 16 applications.) This field is used to identify the source of the information transmitted over the JRE link. When forwarding J-Series

messages, the JRE STN field will use the 15-bit Link 16 Address assigned to it or its host with a 0 in the first bit position to identify the source.

1.3.2 Any host utilizing J-Series message fixed-word format communications, whether on a Link 16 network, or using JRE, must have a 15-bit Link 16 Unit Address in order to identify itself and report its position using the PPLI message. In the case where there is no associated host, as with a stand-alone FJUG, the JRE processor acting as the FJUG will have and use its own assigned Link 16 unit address for its JRE STN.

1.3.3 When a FJUG receives the 16-bit JRE STN over the JRE link with a 0 in the first bit, it will discard the first bit of the 16-bit JRE STN field and forward the associated Link 16 message using the 15-bit number as the Link 16 STN over the Link 16 network.

1.4 FORWARDING ADDRESSED MESSAGES HAVING RECEIPT/COMPLIANCE OVER THE JRE INTERFACE

Forwarding addressed J9.0 Command, J9.1 Engagement Coordination, J10.3 Handover, J12.0 Mission Assignment, J12.1 Vector, J12.4 Controlling Unit Change or J14.2 EW Control/Coordination messages that involve Receipt/Compliance (R/C) requires special handling procedures by the FJUG. The FJUG must maintain a connectivity list of all the JUs and JREUs it serves, enabling it to accept messages addressed to units for which it provides a connection over a JRE link. This allows the FJUG to accept messages addressed to these units and identify over which JRE link the message is forwarded. The FJUG that is forwarding messages from a Link 16 net requiring R/C between the message originator and the addressee will respond with a Machine Receipt (MR) on the Link 16 network to either the Original Messages (OM) or the Reply Message as if it were the addressee for those messages. The FJUG will forward the original message on the JRE link that provides the path to the addressee, using ATDLP-5.18 for the retransmission of messages. When an FJUG receives a message over the JRE link addressed to a JU on its associated Link 16 network, it will then forward the addressed messages as received. When the addressed unit on the Link 16 network fails to send a MR to an OM or the Reply message, the FJUG assumes responsibility in accordance with ATDLP-5.16 for the transmission of redundant messages. When a MR or other reply in lieu of a MR is received by the FJUG, forwarding responsibility for that specific addressed message is complete. The FJUG has no responsibility with respect to matching replies to an OM except when a reply is received in lieu of an MR.

The FJUG shall not generate a CANTPRO response to the originator of an OM if the addressed unit is inactive or if the addressee fails to MR the forwarded message.

1.5 JRE FILTERS

a. JRE can be a multi-link node capable of exchanging tactical data simultaneously over multiple media (e.g., SATCOM, SIPRNET, and RF). When JRE is being used, the potential exists on a Link 16 network to receive the same track message both directly and forwarded from a JRE link. Other problems may arise due to the combining of messages from many remote sources. JRE provides checks for data loops and alerts the operator when a data loop is detected. It provides filtering that can be applied by the operator or network manager to each JRE link independently to address duplicate track reports, data looping, and other reporting related problems. It also checks for data latency and discards messages that have been in the JRE process longer than a specified time. This specified time is selectable by the network manager and generally is related to the update interval based on the label/sublabel of the message.

b. Some JRE links have limited throughput capacity and may experience link overloading and excessive latency. JRE filters can be applied separately or in combination to each JRE link to selectively reduce traffic of less importance or to reduce latency and data loss.

c. An FJUG shall implement all of the JRE filter types listed below on all of its JRE links to manage the transmission of J-Series messages. Each FJUG shall implement all transmission filter types listed below for forwarding onto a Link 16 network.

d. To facilitate flow control and selective message reduction over a JRE link to an FJUG or another JREU or JRE JU, a JREU or JREJ CIU shall implement all the transmit filter types in paragraph 1.5.1 on each of its JRE links, with the exception of filters that only pertain to messages it does not implement.

1.5.1 JRE FILTER TYPES

The filter types are as follows:

a. Category/Identity. The JRE Category/Identity filter allows filter settings to be applied to PPLI (J2.0 by category) and Surveillance (J3.X) messages. For the Identity portion of the filter, the following settings are available:

(1) Pending.

(2) Unknown.

(3) Assumed Friend.

(4) Friend.

(5) Neutral.

(6) Suspect.

(7) Hostile.

b. Label/Sublabel. The JRE Label/Sublabel filter allows filter settings to be applied to J-Series messages based on message type, as specified in the Label/Sublabel fields of the message.

c. Point Type/Point Amplification. The JRE Point Type/Point Amplification filter allows filter settings to be applied to J3.0 Reference Point messages and the Point Amplifications for each Point Type.

(1) Point Type 0 (Hazard).

(2) Point Type 1 (Reference Point - General).

(3) Point Type 2 (Station - General).

(4) Point Type 3 (Station - Air).

(5) Point Type 4 (Line).

(6) Point Type 5 (Area - General).

(7) Point Type 6 (Area - Hazard).

(8) Point Type 7 (ASW).

(9) Point Type 8 (ASW, 1).

d. Special Processing. The JRE Special Processing filter allows filter settings to be applied to data based on the Special Processing Indicator field in the J-Series messages.

e. Simulation. The JRE Simulation filter allows filter settings to be applied to data based on the Simulation Indicator field in the J-Series messages.

f. Geographic Area. The JRE Geographic filter may be applied to either a Category/Identity or Point Type/Point Amplification specifying the attributes of the Surveillance (J3.X) messages the filter applies. The JRE Geographic filter may have the settings of "filter", meaning the messages matching the filter setting will be excluded, or "exception to filter", meaning the receiving message matching the criteria shall be forwarded. Overlapping filters may be used and are processed in the order designated in the ATDLP-5.18 Filter Settings message.

(1) Ellipse-Rectangle. The JRE Ellipse-Rectangular filter contains fields for the latitude and longitude of the center of the filtered area, lengths of the major and minor axes, and the orientation of the major axis. A flag is used to specify if the filter is for a rectangle. This filter also contains minimum and maximum altitude filter settings.

(2) Closed Polygon. The JRE Closed Polygon filter contains a series of between 3 and 15 Latitude and Longitude fields that define an arbitrary area. The first coordinate listed acts as both the starting point and ending point for the perimeter of the polygon. Each pair of coordinates defines a line segment that is one of the vertices of the polygon. The Closed Polygon filter also contains minimum and maximum altitude filter settings.

g. Source Track Number. The JRE STN filter allows filter settings to be applied to one or a series of Link 16 STNs. All messages from these STNs, including the PPLI of the Source, shall be filtered from transmission on the selected JRE link.

h. J28.2(x). The JRE J28.2(x) filter allows filter settings to be applied to allow specific J28.2 messages to be sent over JRE (e.g., J28.2 (0) text messages).

i. Data Age. The JRE Data Age Filter controls the filtering of messages by label/sublabel that have latencies within the JRE forwarding process greater than a specified amount of time.

J. J3.6 Rocket. The J3.6 Rocket Type Filter is used to filter the reporting of Rockets in the J3.6 message. All Link 16 J3.6 messages containing the Space Specific Type (DFI 749/DUI 002) values of 2043 and 2044 shall be filtered from transmission on the designated link.

K. National Use Sub-sublabel. Used to set and report filter settings applied to the filtering of national use messages by sub-sublabel.

L. Network Participation Group. The Network Participation Group filter allows filter settings to be applied to a network based on NPG and Source Link Designator as specified in the X7 message.

1.5.2 JRE FILTER RULES

The filtering rules below apply to JRE:

a. The use of link filters shall be coordinated with all IUs to minimize track management problems. Coordination of filtering requests may be done by voice or other communications media.

b. Tracks are eligible for transmission on the link only if they are not inhibited from transmission by any of the transmission filters currently set. Transmit filters shall apply to tracks received prior to filter activation as well as to tracks received while the filter is active.

c. Filter overrides may be applied to individually designated JRE links to accommodate passing of certain critical messages that would otherwise be filtered.

(1) Force Tell. J-Series messages in which the Force Tell Indicator is set to 1 shall be forwarded when this filter override is set.

(2) Emergency. J-Series messages in which the Emergency Indicator is set to 1 shall be forwarded when this filter override is set.

(3) Command and Control. J-Series messages in which the C^2 Indicator is set to 1 shall be forwarded when this filter override is set.

1.6 Purpose of ATDLP-6.16 Volume 4

The purpose of ATDLP-6.16 Volume 4 is to specify the rules, protocols, and translations required when forwarding data between Link 16 and Link 16. In the process, J2.2 Air PPLI, J2.3 Surface (Maritime) PPLI, J2.4 Subsurface (Maritime) PPLI, J2.5 Land (Ground) Point PPLI, and J2.6 Land (Ground) Track PPLI messages received on Link 16, are forwarded in a J2.0 Indirect Interface Unit PPLI message on the JRE link. Data forwarding is accomplished by the selected FJUGs simultaneously participating on Link 16 and JRE links. The data that is forwarded is based on the message/data received and is neither dependent upon the local system data of the data forwarding unit, nor its implementation of the received messages.

1.6.1 Forwarding Requirements

A forwarding requirement exists between Link 16 and other tactical data links. This section covers only the forwarding between Link 16 and Link 16.

1.6.2 Forwarding Considerations

The Link 16 to Link 16 forwarding rules and procedures are designed to:

a. Ensure that data transmitted by the forwarding unit agree as closely as possible with the meaning of the data received for forwarding.

b. Satisfy the Link 16 timing requirements.

c. Consider any throughput limitations of the JRE interface media.

d. Satisfy BLOS requirements for Link 16.

e. Ensure that the JRE transfer of data is as transparent as possible to the interfacing Link 16 networks and indirect units.

1.6.3 Design Considerations

It is not the intent of this volume to specify the design or architecture of the FJUG system. Inevitably, data forwarding will involve additional processing by the FJUG. This volume does not attempt to distinguish between what is expected of the FJUG processing, protocols and procedures as opposed to that of the host system of the unit designated to perform the data forwarding function. Addition of a JRE capability to a Link 16 host does not change the way that host operates on Link 16. It will continue to operate on Link 16 as when JRE is not present, but for the JRE interface and forwarding between the two, it will have the additional responsibilities contained herein. No Link 16 changes are required for continued participation on Link 16.

1.7 GENERAL FORWARDING RULES

These forwarding rules are established to standardize data forwarding for the exchange of J-Series messages over non-MIDS/JTIDS media.

a. When data link networks are established with multiple communications paths, data looping must be avoided. With JRE, a communication path is a combination of digital data links and interconnecting FJUG nodes that provide a path for information exchange. Functions and capabilities are specified in ATDLP-5.18 to prevent data looping when data is being received on more than one path.

b. With JRE, flexibility is present to have multiple communications paths with benefits such as providing a higher probability of data delivery with minimum latency under poor conditions, and providing an immediate backup for a link failure. Filters are used to control what goes over each link and a check is made to ensure duplicate messages are not transmitted on the Link 16 network that could lead to confusion and additional net loading.

c. The FJUG shall have the capability to forward all J-Series messages, as required by this volume. The FJUG shall not forward J-Series messages that fall within a JRE filter for that link or network.

d. The FJUG shall use the same Link 16 transmit rules to forward data received over a JRE link that a JU would use to transmit locally originated data of the same type.

e. The FJUG shall inhibit the forwarding of received data when:

(1) The filter criteria for the appropriate link prohibit forwarding the data (see ATDLP-5.16, Annex B, paragraph 1.14.5.2).

(2) Message data awaiting transmission is superceded by newer data. The message with the most current data shall replace the original message when the message compositions are identical. The message compositions are identical when both messages contain the same Link 16 message words, are from the same STN, and reference the same TN.

f. When an addressed message requiring receipt/compliance is addressed to a unit that is connected by a JRE link and is received over a Link 16 network, the FJUG responsible for forwarding that message shall transmit a machine receipt to the message originator. Machine receipts shall not be forwarded.

g. It is possible for a unit to receive both a line-of-sight (LOS) Link 16 transmission and a JRE forwarded transmission of the same message. However, JRE timing protocols ensure that time sensitive messages forwarded over a JRE link will not exceed the nominal update rate for that given message. Those that exceed the limit set by the data age filter, when used, shall be discarded. If both are received within the nominal update rate, since extrapolation has been applied to both when appropriate, entity positional variants will be transparent to the receiver.

h. J-Series messages are forwarded onto a Link 16 Network Participation Group (NPG) according to message label/sublabel parameters set at the time of initialization.

Table B-1-1. Messages Requiring Originator TN Forwarding on Link 16

Message Number	Message Title	TN Required
J0.3	Time Slot Assignment	X
J0.4	Radio Relay Control	X
J0.6	Communications Control	X
J1.4	Communicant Status	X
J1.5	Net Control Initialization	X
J1.7	Fine Pulse Count Report	X
J1.6	Needline PG Assignment	X
J2.0	Indirect Interface Unit PPLI	X
J3.0	Reference Point	X
J3.1	Emergency Point	X
J3.2	Air Track	X
J3.3	Surface (Maritime) Track	X
J3.4	Subsurface (Maritime) Track	X
J3.5	Land (Ground) Point/Track	X
J3.6	Space Track	X
J3.7	EW Product Information	X
J5.4	Acoustic Bearing/Range	X
J6.0	Amplification	X
J7.0	Track Management	X
J7.2	Correlation	X
J7.3	Pointer	X
J7.4	Track Identifier	X
J7.5	IFF/SIF Management	X
J7.6	Filter Management	X
J7.7	Association	X
J8.0	Unit Designator	X
J9.0	Command	X
J9.1	Engagement Coordination	X
J9.2	ECCM Coordination	X
J10.2	Engagement Status	X
J10.3	Handover	X
J10.5	Controlling Unit Report	X
J10.6	Pairing	X
J12.0	Mission Assignment	X
J12.1	Vector	X
J12.2	Precision Aircraft Direction	X
J12.3	Flight Path	X
J12.4	Controlling Unit Change	X
J12.5	Target/Track Correlation	X
J12.6	Target Sorting	X
J13.0	Airfield Status	TN in message
J13.2	Air Platform/System Status	TN in message
J13.3	Surface Platform/System Status	TN in message
J13.4	Subsurface Platform/System Status	TN in message
J13.5	Land Platform/System Status	TN in message
J14.2	EW Control/Coordination	X
J28.2(0)	Text	X
J31.0	Over-the-Air Rekeying Management	X
J31.1	Over-the-Air Rekeying	X

1.7.1 Preservation of TN, Originator

For J-Series messages that require preservation of the STN, the JREAP packages the Link 16 STN with the message when it is forwarded over the JRE link, then extracts the Link 16 STN and reinserts it into the Link 16 header of the message as it is forwarded onto the Link 16 network. Since preserving the originating TN is not required for all Link 16 messages, the JRE's primary TN may be used as the STN to pack those messages for Link 16 network bandwidth preservation. Table B-1-1 below defines the specific Link 16 messages that require the original TN for forwarding on Link 16.

1.7.2 Forwarding of J-Series Messages From a JRE Link to Link 16 or a Host

a. The FJUG, JREJ CIU, and JREU shall extrapolate positional data for real-time tracks, moving units, moving reference points, and moving TN, Objectives to the time of transfer to the JTIDS terminal or host. This extrapolation will be performed as specified in ATDLP-5.18 for the J-Series messages indicated in Table B-1-2 below.

Table B-1-2. Link 16 Messages to be Extrapolated

MESSAGE NO.	MESSAGE TITLE
J2.0	Indirect Interface Unit PPLI
J3.0[1]	Reference Point
J3.2[1]	Air Track
J3.3[1]	Surface (Maritime) Track
J3.4[1]	Subsurface (Maritime) Track
J3.5[1]	Land (Ground) Point/Track
J12.0	Mission Assignment
J12.1[2]	Vector
J12.6	Target Sorting

Notes

[1] Non-real-time tracks (Track Quality (TQ) = 0) are not extrapolated.

[2] When the elapsed time exceeds 1 second, the "Time to Intercept" should be reduced by the elapsed time (in seconds) (If .5 or greater round up and if less than .5 round down).

b. When forwarding J-Series messages from a JRE link to a Link 16 network, the FJUG shall preserve the identity of the source of all J-Series messages that require STN preservation (see Table B-1-1). This is done by

setting the STN, located in the header of the Link 16 time slot, and Track Number, Source in the J2.0I word to the address of the Link 16 unit whose J-Series messages are being forwarded.

c. When forwarding J-Series messages from a JRE link to a host, the JREJ CIU or JREU will provide the STN to the host with the J-Series messages it generated.

1.7.3 Forwarding of J-Series Messages From Link 16 to a JRE Link

a. The FJUG shall extrapolate positional data for real-time tracks, moving units, moving reference points, and moving TN, Objectives to the data valid time set in the JREAP header, as specified in ATDLP-5.18.

b. When forwarding J-Series messages from a Link 16 network to a JRE link, the FJUG shall forward all J-Series messages as received with the exception of extrapolation requirements and translation of all J2.2 Air PPLI, J2.3 Surface (Maritime) PPLI, J2.4 Subsurface (Maritime) PPLI, J2.5 Land (Ground) Point PPLI, and J2.6 Land (Ground) Track PPLI messages to J2.0 Indirect Interface Unit PPLI messages before forwarding to a JRE link.

1.8 Forwarding J2.0 Messages

1.8.1 J2.0 Message Summary and Purpose

The J2.0 Indirect Interface Unit PPLI message is used to provide unit information on the Link 16 network when network participation status, identification, and positional information is forwarded from other links. For indirect interface units, the J2.0 message provides the Originator Environment (Surface, Subsurface, Land, Air), type of site (JU, PU, RU, GU, FPU/FRU), and Unit Type (e.g., Tactical Air Operation Center (TAOC), Message Processing Center (MPC), Control and Reporting Center (CRC), etc.). The Source TN field in the Header word that accompanies each J2.0 message will contain the TN associated with the forwarded unit.

1.8.2 J2.0 MESSAGE TRANSMIT RULES

a. The J2.0B Indirect Interface Unit PPLI basic message consists of the J2.0I Indirect Interface Unit PPLI initial word and the J2.0E0 Indirect

Interface Unit PPLI extension word. The J2.0B basic message shall be transmitted by a Forwarding JTIDS/MIDS Unit when data received from an indirect interface unit indicate that the unit is active. The J2.0B message shall be transmitted periodically at a RRN = 6 (12 seconds, 8-20 second interval) or, when specified, at the access rate in the time slot assignment.

b. Applicable continuation words shall be transmitted in a J2.0I/J2.0E0/J2.0CX word sequence.

c. If no data exists for the continuation word, the J2.0B message shall be transmitted.

1.8.3 J2.0 MESSAGE RECEIVE RULES

When a J2.0 Indirect Interface Unit PPLI message is received with the same Source TN as held for a J2.2 Air PPLI, J2.3 Surface PPLI, J2.4 Subsurface PPLI, J2.5 Land Point PPLI, or J2.6 Land Track PPLI message, then the J2.0 Indirect Interface Unit PPLI message will be discarded.

1.8.4 FORWARDING THE J2.0 MESSAGE

The Source TN in the message header shall be the same as the Source TN in the J2.0 message. Only one J2.0 message shall be transmitted in a time slot.

1.9 DATA FORWARDING OF INFORMATION REQUIRING SPECIAL PROCESSING

An FJUG shall adhere to all current constraints concerning the handling of data requiring special processing.

1.10 USING LINK DESIGNATORS AND NETWORK PARTICIPATION GROUPS (NPGS)

a. Multiple Link 16 Networks.

(1) With Link 16 Networks, certain messages may be transmitted on more than one Network Participation Group (ATDLP-5.16 TABLE V.0.1-2 Message to Network PG Applicability Table). For example, a J3.6 Space Track message could be transmitted on either NPG 7 or NPG 21 depending on the content of the information in the message. The host generating the

information normally tells its JTIDS/MIDS terminal in which NPG to transmit the message. When transmitting these Link 16 messages over a JRE Link, their NPG assignment shall be provided to support transmission onto another Link 16 Network. Figure B-1-6 shows the situation where Link 16 Network #1 and Link 16 Network #2 both contain NPG 7 and NPG 21. In this example, the FJUG #1 is required to populate the X7.0 Link 16 NPG Assignment message. FJUG #1 shall populate the Source Link Designator, Transmit Link Designation and Network Participation Group fields as follows.

(a) Populate the Source Link Designator field with the link designator that has been assigned to Link 16 Network #1 (from the OPTASKLINK).

(b) Populate the Transmit Link Designator field if the message is targeted specifically to Link 16 Network #2 (from the OPTASKLINK) or otherwise is set to value 0 (No Statement) indicating the message is not targeted to a specific Link 16 network.

(c) Populate the Network Participation Group field with the NPG as follows:

(i) J3.6 messages with the Significant Object Indicator set to values 3 or 4 shall be forwarded in an X7 message with the NPG field set to 21. J3.6 messages with any other values of the Significant Object Indicator shall be forwarded in an X1.

(ii) J7.7 messages with ACT = 3 (BMD Association) shall be forwarded in an X7 message with the NPG field set to 21. J7.7 messages with values other ACT = 3 (BMD Association) shall be forwarded in an X1.

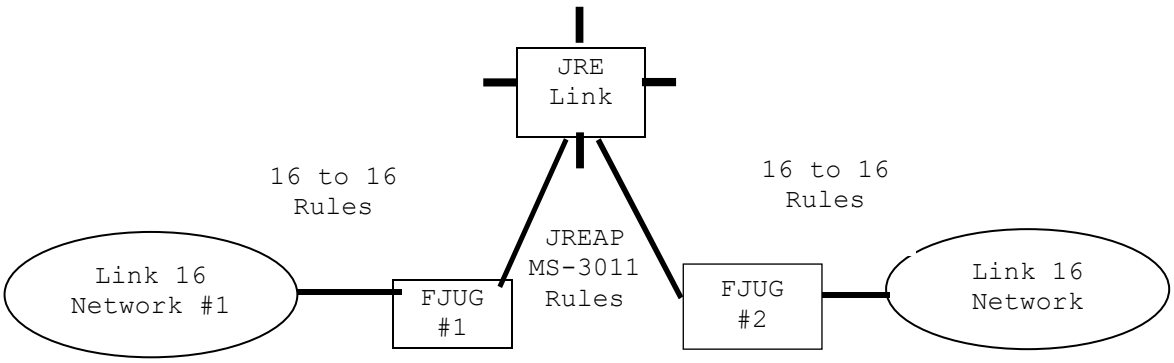

Figure B-1-6 JRE Interface Between Two Link 16 Networks

(2) FJUG #2 receives the X7.0 message and uses the Source Link Designator, Transmit Link Designator and Network Participation Group fields as follows.

(a) The Source Link Designator field is used to determine if the information from this network is to be sent on Link 16 Network #2 (from the OPTASKLINK).

(b) The Transmit Link Designator field, if set to the link designator for Link 16 Network #2 or set to value 0 (No Statement) tells FJUG #2 to transmit on Link 16 Network #2.

(c) The Network Participation Group field provides the NPG to which FJUG #2 is required to transmit the link 16 message, if Link 16 Network #2 contains the NPG. If the FJUG #2 terminal does not have time slots assigned for the specified NPG, it shall not transmit the message on any NPG for that message.

b. JRE to a Link 16 Network. A JREU enables the passing of J-Series messages to a unit on a Link 16 network using non-JTIDS/MIDS Media as illustrated in Figure B-1-7. The only difference to this processing from the processing in paragraph B.1.6(a) above, is that the Host System shall populate the Network Participation Group field. The JREU shall populate the Source Link Designator (Network #1) and the Transmit Link Designator (Network #2) fields if they have not been populated by the Host System.

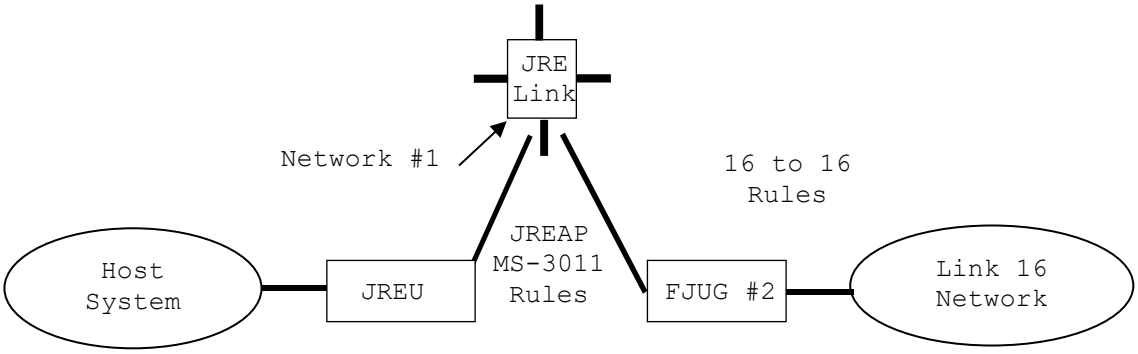

Figure B-1-7 JRE Interface to a Link 16 Network

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ANNEX B - DATA FORWARDING SPECIFICATION

CHAPTER 2

2 MESSAGE TRANSLATION REQUIREMENTS

Chapter 2 describes the message translation requirements when forwarding data from Link 16 to JRE. The detailed data element translations are given in Chapter 3. Data forwarding from JRE to Link 16 are one for one. Therefore, no translation tables are provided.

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ANNEX B - DATA FORWARDING SPECIFICATION

CHAPTER 3

3 DATA ELEMENT TRANSLATION REQUIREMENTS

Chapter 3 provides the data element translations between Link 16 and JRE as required in Chapter 1.

3.1 DATA ELEMENT TRANSLATION TABLE DESCRIPTION

A table is provided for each translation from the J2.2 to J2.0, J2.3 to J2.0, J2.4 to J2.0, J2.5 to J2.0, and J2.6 to J2.0. All the tables are read from right to left. Following each table are notes referring to that table. These tables are a data element by a data element depiction of the J2.0 message to be generated with an indication of the source of the data to be used in the data element. Note that no translation is provided for J2.0 to J2.0 since they are a one for one word, data element, and data item equivalent.

3.1.1 Data Element Translation Table Format

Data element translation tables are presented in the following format:

Table B-3-n. J2.0 Message Data Element Translation from J2.x

J2.0				J2.x			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES

where;
J2.0 WORD = The J2.0 word being generated.

J2.0 DATA ELEMENT = List of all data elements contained in the J2.0 word being generated.

J2.0 VALUE = Decimal value of the data element being generated unless otherwise noted.

TRANSLATION REQUIRED = An indication of the translation activity that is required to determine the correct value of the data element.

J2.x WORD = Identifies the J2.x word that contains the data element corresponding to the J2.0 data element.

J2.x DATA ELEMENT = Identifies the data element in the specified J2.x message that corresponds to the J2.0 data element.

J2.x VALUE = Decimal value of the data element in the J2.x message unless otherwise noted.

Notes = Reference to amplifying information that must be taken into consideration to complete the data element translation process. A note number preceded by a letter "G" indicates a "General Note" that may be found in section B.3.3. A note number with no prefix indicates a note that is specifically stated within the translation table.

3.1.2 Data Element Translation Table Entries

Within the translation tables the following entries are used:

AT = As translated.
NA = Not available in the other message series.
RX = All valid values as received.
CR = Conversion is required.
AR = As required by the formats and protocols of the link on which the message will be transmitted.
= = Data element and bit field equivalence.

3.2. DEFAULT CONDITIONS

When the message required for data element translation has not been received, the default condition will be NO STATEMENT if defined, or 0.

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Table B-3-1. J2.0 Message Data Element Translation from the J2.2 Message (Sheet 1 of 5)

J2.0					J2.2		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Label, J-Series	2	None	J2.2I	Label, J-Series	2	
	Sublabel, J-Series	0	CR	J2.2I	Sublabel, J-Series	2	
	Message Length, Indicator	AR	None	NA	NA	NA	
	Exercise Indicator	RX	=	J2.2I	Exercise Indicator	RX	
	Bailout Indicator	RX	=	J2.2I	Bailout Indicator	RX	
	Force Tell Indicator	RX	=	J2.2I	Force Tell Indicator	RX	
	Emergency Indicator	RX	=	J2.2I	Emergency Indicator	RX	
	Command and Control Indicator	RX	=	J2.2I	Command and Control Indicator	RX	
	Simulation Indicator	RX	=	J2.2I	Simulation Indicator	RX	
	Track Number, Source	RX	=	Header	Track Number, Source	RX	
	Flight Leader Indicator	RX	=	J2.2I	Flight Leader Indicator	RX	
	Mission Commander Indicator	RX	=	J2.2I	Mission Commander Indicator	RX	
	Generic Unit Type	0	None	NA	NA	NA	
	Altitude, 25 FT	RX	=	J2.2I	Altitude, 25 FT	RX	
	Altitude Quality, GU	RX	=	J2.2I	Altitude Quality	RX	
	Position Quality, GU	RX	=	J2.2I	Geodetic Position Quality	RX	
	Site	4	None	NA	NA	NA	
	Unit Type	AT	CR	J2.2C1	Air Platform	RX	1

Table B-3-1. J2.0 Message Data Element Translation from the J2.2 Message (Sheet 2 of 5)

J2.0				J2.2			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Originator Environment/ Category	3	CR	J2.2I J2.2I	Label, J-Series Sublabel, J-Series	2 2	
J2.0E0	Word Format	2	None	NA	NA	NA	
	Latitude 1, 0.0013 Minute	AT	CR	J2.2E0	Latitude, 0.0013	RX	G1
	Longitude 1, 0.0013 Minute	AT	CR	J2.2E0	Longitude, 0.0013	RX	G1
	Airborne Indicator	RX	=	J2.2I	Airborne Indicator	RX	
	Course	RX	=	J2.2E0	Course	RX	
	Speed	RX	=	J2.2E0	Speed	RX	
J2.0C1	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	1	None	NA	NA	NA	
	Mode I Code	RX	=	J2.2C1	Mode I Code	RX	
	Mode II Code	RX	=	J2.2C1	Mode II Code	RX	
	Mode III Code	RX	=	J2.2C1	Mode III Code	RX	
	Elevation, 25 FT	2047	None	NA	NA	NA	
	Air Platform	RX	=	J2.2C1	Air Platform	RX	

Table B-3-1. J2.0 Message Data Element Translation from the J2.2 Message (Sheet 3 of 5)

J2.0			TRANSLATION	J2.2		
WORD	DATA ELEMENT	VALUE	REQUIRED	WORD	DATA ELEMENT	VALUE NOTES
	Air Platform Activity	RX	=	J2.2C1	Air Platform Activity	RX
	Mission Correlator	RX	=	J2.2C5	Mission Correlator, 1	RX
J2.0C2	Word Format	1	None	NA	NA	NA
	Continuation Word Label	2	None	NA	NA	NA
	Voice Frequency Channel	RX	=	J2.2C2	Voice Frequency Channel	RX
	Voice Call Sign Indicator	RX	=	J2.2C2	Voice Call Sign Indicator	RX
	Voice Call Sign	RX	=	J2.2C2	Voice Call Sign	RX
	Track Number, Flight Lead	RX	=	J2.2C2	Track Number, Flight Lead	RX
	Control Channel	RX	=	J2.2C2	Control Channel	RX
J2.0C3	Word Format	1	None	NA	NA	NA
	Continuation Word Label	3	None	NA	NA	NA
	Minute	63	None	NA	NA	NA
	Second	63	None	NA	NA	NA
	Millisecond	1023	None	NA	NA	NA
	Position Time Quality	0	None	NA	NA	NA
	Time Latency Indicator	0	None	NA	NA	NA
	Latitude, LSBS 0.0003 Minute	16777216	None	NA	NA	NA
	Longitude, LSBS 0.0003 Minute	33554432	None	NA	NA	NA
	Altitude, LSBS 1.5625 FT	131056	None	NA	NA	NA

Table B-3-1. J2.0 Message Data Element Translation from the J2.2 Message (Sheet 4 of 5)

J2.0					J2.2		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0C3 (Cont)	Hour Tick	0	None	NA	NA	NA	
	Air Specific Type	0	None	NA	NA	NA	
	Surface Specific Type	0	None	NA	NA	NA	
	Subsurface Specific Type	0	None	NA	NA	NA	
	Land Specific Type	0	None	NA	NA	NA	
	Network Participation Status Indicator	RX	=	J2.2I	Network Participation Status Indicator	RX	

Table B-3-1. J2.0 Message Data Element Translation from the J2.2 Message (Sheet 5 of 5)

NOTES

1. Unit Type is derived from Air Platform as follows.

J2.0 Unit Type	J2.2 Air Platform
0 – No Statement	0 – No Statement/Unknown 52 – 62 – Undefined 63 – Reset to NS/Unknown All others not listed below
1 – Patrol Aircraft	17 – Maritime Patrol Aircraft 34 – Patrol
2 – Antisubmarine Warfare Aircraft	15 – Antisubmarine Warfare
3 - Airborne Early Warning (AEW)	16 - Airborne Early Warning and Control(AEW & C)
6 – Helicopter	27 – Helicopter 28 – Attack Helicopter 29 – Helicopter Gunship 30 – Antisubmarine Warfare Helicopter 31 – Mine Warfare Helicopter 32 – Transport Helicopter

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Table B-3-2. J2.0 Message Data Element Translation from the J2.3 Message (Sheet 1 of 5)

J2.0					J2.3		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Label, J-Series	2	None	J2.3I	Label, J-Series	2	
	Sublabel, J-Series	0	CR	J2.3I	Sublabel, J-Series	3	
	Message Length, Indicator	AR	None	NA	NA	NA	
	Exercise Indicator	RX	=	J2.3I	Exercise Indicator	RX	
	Bailout Indicator	0	None	NA	NA	NA	
	Force Tell Indicator	RX	=	J2.3I	Force Tell Indicator	RX	
	Emergency Indicator	RX	=	J2.3I	Emergency Indicator	RX	
	Command and Control Indicator	RX	=	J2.3I	Command and Control Indicator	RX	
	Simulation Indicator	RX	=	J2.3I	Simulation Indicator	RX	
	Track Number, Source	RX	=	Header	Track Number, Source	RX	
	Flight Leader Indicator	0	None	NA	NA	NA	
	Mission Commander Indicator	0	None	NA	NA	NA	
	Generic Unit Type	0	None	NA	NA	NA	
	Altitude, 25 FT	8191	None	NA	NA	NA	
	Altitude Quality, GU	0	None	NA	NA	NA	
	Position Quality, GU	RX	=	J2.3I	Geodetic Position Quality	RX	
	Site	4	None	NA	NA	NA	
	Unit Type	AT	CR	J2.3C1	Surface (Maritime) Platform	RX	1

Table B-3-2. J2.0 Message Data Element Translation from the J2.3 Message (Sheet 2 of 5)

J2.0					J2.3		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Originator Environment/ Category	0	CR	J2.3I J2.3I	Label, J-Series Sublabel, J-Series	2 3	
J2.0E0	Word Format	2	None	NA	NA	NA	
	Latitude 1, 0.0013 Minute	AT	CR	J2.3E0	Latitude, 0.0013	RX	G1
	Longitude 1, 0.0013 Minute	AT	CR	J2.3E0	Longitude, 0.0013	RX	G1
	Airborne Indicator	0	None	NA	NA	NA	
	Course	RX	=	J2.3E0	Course	RX	
	Speed	RX	=	J2.3E0	Speed	RX	
J2.0C1	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	1	None	NA	NA	NA	
	Mode I Code	RX	=	J2.3C1	Mode I Code `	RX	
	Mode II Code	RX	=	J2.3C1	Mode II Code `	RX	
	Mode III Code	RX	=	J2.3C1	Mode III Code `	RX	
	Elevation, 25 FT	RX	=	J2.3I	Elevation, 25 FT	RX	
	Surface (Maritime) Platform	RX	=	J2.3C1	Surface (Maritime) Platform	RX	

Table B-3-2. J2.0 Message Data Element Translation from the J2.3 Message (Sheet 3 of 5)

J2.0			TRANSLATION	J2.3			
WORD	DATA ELEMENT	VALUE	REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
	Surface (Maritime) Platform Activity	RX	=	J2.3C1	Surface (Maritime) Platform Activity	RX	
	Mission Correlator	RX	=	J2.3I	Mission Correlator, 1	RX	
J2.0C2	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	2	None	NA	NA	NA	
	Voice Frequency Channel	RX	=	J2.3C2	Voice Frequency Channel	RX	
	Voice Call Sign Indicator	RX	=	J2.3C2	Voice Call Sign Indicator	RX	
	Voice Call Sign	RX	=	J2.3C2	Voice Call Sign	RX	
	Track Number, Flight Lead	0	None	NA	NA	NA	
	Control Channel	RX	=	J2.3C2	Control Channel	RX	
J2.0C3	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	3	None	NA	NA	NA	
	Minute	63	None	NA	NA	NA	
	Second	63	None	NA	NA	NA	
	Millisecond	1023	None	NA	NA	NA	
	Position Time Quality	0	None	NA	NA	NA	
	Time Latency Indicator	0	None	NA	NA	NA	
	Latitude, LSBS 0.0003 Minute	16777216	None	NA	NA	NA	
	Longitude, LSBS 0.0003 Minute	33554432	None	NA	NA	NA	
	Altitude, LSBS 1.5625 FT	131056	None	NA	NA	NA	

Table B-3-2. J2.0 Message Data Element Translation from the J2.3 Message (Sheet 4 of 5)

J2.0					J2.3		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0C3 (Cont)	Hour Tick	0	None	NA	NA	NA	
	Air Specific Type	0	None	NA	NA	NA	
	Surface Specific Type	0	None	NA	NA	NA	
	Subsurface Specific Type	0	None	NA	NA	NA	
	Land Specific Type	0	None	NA	NA	NA	
	Network Participation Status Indicator	RX	=	J2.3I	Network Participation Status Indicator	RX	

Table B-3-2. J2.0 Message Data Element Translation from the J2.3 Message (Sheet 5 of 5)

NOTES

1. Unit Type is derived from Surface (Maritime) Platform as follows.

J2.0 Unit Type	J2.3 Surface (Maritime) Platform
0 – No Statement	0 – No Statement/Unknown 40–62 – Undefined 63 – Reset to NS/Unknown All others not listed below
2 – Aircraft Carrier (CV)	1 – Aircraft Carrier (CV)
3 – Cruiser (CRU)	2 - Battleship 3 - Cruiser
4 – Destroyer (DD) / Antiair Warfare (AAW)	4 - Destroyer 39 – Littoral Combat Ship (LCS)
7 – Fast Patrol Boat	6 – Fast Patrol Boat
8 – LHA/LHD	8 – LHA/LHD
9 – Amphibious Command Ship (LCC)	9 – Amphibious Assault Command Ship (LCC)
10 – Frigate	5 – Frigate 38 - Corvette
11 – Mine Warfare Vessel	14 – Mine Warfare Ship
12 – Auxiliary	13 – Auxiliary Ship

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Table B-3-3. J2.0 Message Data Element Translation from the J2.4 Message (Sheet 1 of 4)

J2.0					J2.4		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Label, J-Series	2	None	J2.4I	Label, J-Series	2	
	Sublabel, J-Series	0	CR	J2.4I	Sublabel, J-Series	4	
	Message Length, Indicator	AR	None	NA	NA	NA	
	Exercise Indicator	RX	=	J2.4I	Exercise Indicator	RX	
	Bailout Indicator	0	None	NA	NA	NA	
	Force Tell Indicator	RX	=	J2.4I	Force Tell Indicator	RX	
	Emergency Indicator	RX	=	J2.4I	Emergency Indicator	RX	
	Command and Control Indicator	RX	=	J2.4I	Command and Control Indicator	RX	
	Simulation Indicator	RX	=	J2.4I	Simulation Indicator	RX	
	Track Number, Source	RX	=	Header	Track Number, Source	RX	
	Flight Leader Indicator	0	None	NA	NA	NA	
	Mission Commander Indicator	0	None	NA	NA	NA	
	Generic Unit Type	0	None	NA	NA	NA	
	Altitude, 25 FT	8191	None	NA	NA	NA	
	Altitude Quality, GU	0	None	NA	NA	NA	
	Position Quality, GU	RX	=	J2.4I	Geodetic Position Quality	RX	
	Site	4	None	NA	NA	NA	
	Unit Type	0	None	NA	NA	NA	

Table B-3-3. J2.0 Message Data Element Translation from the J2.4 Message (Sheet 2 of 4)

J2.0				J2.4		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Originator Environment/ Category	1	CR	J2.4I J2.4I	Label, J-Series Sublabel, J-Series	2 4	
J2.0E0	Word Format	2	None	NA	NA	NA	
	Latitude 1, 0.0013 Minute	AT	CR	J2.4E0	Latitude, 0.0013	RX	G1
	Longitude 1, 0.0013 Minute	AT	CR	J2.4E0	Longitude, 0.0013	RX	G1
	Airborne Indicator	0	None	NA	NA	NA	
	Course	RX	=	J2.4E0	Course	RX	
	Speed	RX	=	J2.4E0	Speed	RX	
J2.0C1	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	1	None	NA	NA	NA	
	Mode I Code	RX	=	J2.4C1	Mode I Code	RX	
	Mode II Code	RX	=	J2.4C1	Mode II Code	RX	
	Mode III Code	RX	=	J2.4C1	Mode III Code	RX	
	Depth, 15 Meters	RX	=	J2.4I	Depth, 15 Meters	RX	
	Depth Category	RX	=	J2.4I	Depth Category	RX	
	Subsurface (Maritime) Platform	RX	=	J2.4C1	Subsurface (Maritime) Platform	RX	

Table B-3-3. J2.0 Message Data Element Translation from the J2.4 Message (Sheet 3 of 4)

J2.0				J2.4			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
	Subsurface (Maritime) Platform Activity	RX	=	J2.4C1	Subsurface (Maritime) Platform Activity	RX	
	Mission Correlator	RX	=	J2.4I	Mission Correlator, 1	RX	
J2.0C2	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	2	None	NA	NA	NA	
	Voice Frequency Channel	RX	=	J2.4C2	Voice Frequency Channel	RX	
	Voice Call Sign Indicator	RX	=	J2.4C2	Voice Call Sign Indicator	RX	
	Voice Call Sign	RX	=	J2.4C2	Voice Call Sign	RX	
	Track Number, Flight Lead	0	None	NA	NA	NA	
	Control Channel	RX	=	J2.4C2	Control Channel	RX	
J2.0C3	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	3	None	NA	NA	NA	
	Minute	63	None	NA	NA	NA	
	Second	63	None	NA	NA	NA	
	Millisecond	1023	None	NA	NA	NA	
	Position Time Quality	0	None	NA	NA	NA	
	Time Latency Indicator	0	None	NA	NA	NA	
	Latitude, LSBS 0.0003 Minute	16777216	None	NA	NA	NA	
	Longitude, LSBS 0.0003 Minute	33554432	None	NA	NA	NA	
	Altitude, LSBS 1.5625 FT	131056	None	NA	NA	NA	

Table B-3-3. J2.0 Message Data Element Translation from the J2.4 Message (Sheet 4 of 4)

J2.0					J2.4		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0C3 (Cont)	Hour Tick	0	None	NA	NA	NA	
	Air Specific Type	0	None	NA	NA	NA	
	Surface Specific Type	0	None	NA	NA	NA	
	Subsurface Specific Type	0	None	NA	NA	NA	
	Land Specific Type	0	None	NA	NA	NA	
	Network Participation Status Indicator	RX	=	J2.4I	Network Participation Status Indicator	RX	

Table B-3-4. J2.0 Message Data Element Translation from the J2.5 Message (Sheet 1 of 5)

J2.0					J2.5		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Label, J-Series	2	None	J2.5I	Label, J-Series	2	
	Sublabel, J-Series	0	CR	J2.5I	Sublabel, J-Series	5	
	Message Length, Indicator	AR	None	NA	NA	NA	
	Exercise Indicator	RX	=	J2.5I	Exercise Indicator	RX	
	Bailout Indicator	0	None	NA	NA	NA	
	Force Tell Indicator	RX	=	J2.5I	Force Tell Indicator	RX	
	Emergency Indicator	RX	=	J2.5I	Emergency Indicator	RX	
	Command and Control Indicator	RX	=	J2.5I	Command and Control Indicator	RX	
	Simulation Indicator	RX	=	J2.5I	Simulation Indicator	RX	
	Track Number, Source	RX	=	Header	Track Number, Source	RX	
	Flight Leader Indicator	0	None	NA	NA	NA	
	Mission Commander Indicator	0	None	NA	NA	NA	
	Generic Unit Type	0	None	NA	NA	NA	
	Altitude, 25 FT	8191	None	NA	NA	NA	
	Altitude Quality, GU	0	None	NA	NA	NA	
	Position Quality, GU	RX	=	J2.5I	Geodetic Position Quality	RX	
	Site	4	None	NA	NA	NA	
	Unit Type	AT	CR	J2.5C1	Land (Ground) Platform	RX	1

Table B-3-4. J2.0 Message Data Element Translation from the J2.5 Message (Sheet 2 of 5)

J2.0				J2.5			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Originator Environment/ Category	2	CR	J2.5I J2.5I	Label, J-Series Sublabel, J-Series	2 5	
J2.0E0	Word Format	2	None	NA	NA	NA	
	Latitude 1, 0.0013 Minute	AT	CR	J2.5I J2.5E0 or J2.5C4	Displaced Position Indicator Latitude, 0.0013 Minute Latitude, 0.0103 Minute	RX RX RX	2, G1
	Longitude 1, 0.0013 Minute	AT	CR	J2.5I J2.5E0 or J2.5C4	Displaced Position Indicator Longitude, 0.0013 Minute Longitude, 0.0103 Minute	RX RX RX	2, G1
	Airborne Indicator	0	None	NA	NA	NA	
	Course	511	None	NA	NA	NA	
	Speed	2047	None	NA	NA	NA	
J2.0C1	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	1	None	NA	NA	NA	
	Mode I Code	0	None	NA	NA	NA	
	Mode II Code	0	None	NA	NA	NA	
	Mode III Code	0	None	NA	NA	NA	
	Elevation, 25 FT	RX	=	J2.5I	Elevation, 25 FT	RX	

Table B-3-4. J2.0 Message Data Element Translation from the J2.5 Message (Sheet 3 of 5)

J2.0				J2.5			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
	Land (Ground) Platform	RX	=	J2.5C1	Land (Ground) Platform	RX	
	Land (Ground) Platform Activity	RX	None	J2.5C1	Land (Ground) Platform Activity	RX	
	Mission Correlator	RX	=	J2.5I	Mission Correlator, 1	RX	
J2.0C2	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	2	None	NA	NA	NA	
	Voice Frequency Channel	RX	=	J2.5C1	Voice Frequency Channel	RX	
	Voice Call Sign Indicator	RX	=	J2.5C1	Voice Call Sign Indicator	RX	
	Voice Call Sign	RX	=	J2.5C1	Voice Call Sign	RX	
	Track Number, Flight Lead	0	None	NA	NA	NA	
	Control Channel	RX	=	J2.5C1	Control Channel	RX	
J2.0C3	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	3	None	NA	NA	NA	
	Minute	63	None	NA	NA	NA	
	Second	63	None	NA	NA	NA	
	Millisecond	1023	None	NA	NA	NA	
	Position Time Quality	0	None	NA	NA	NA	
	Time Latency Indicator	0	None	NA	NA	NA	
	Latitude, LSBS 0.0003 Minute	16777216	None	NA	NA	NA	

Table B-3-4. J2.0 Message Data Element Translation from the J2.5 Message (Sheet 4 of 5)

J2.0					J2.5		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0C3 (Cont)	Longitude, LSBS 0.0003 Minute	33554432	None	NA	NA	NA	
	Altitude, LSBS 1.5625 FT	131056	None	NA	NA	NA	
	Hour Tick	0	None	NA	NA	NA	
	Air Specific Type	0	None	NA	NA	NA	
	Surface Specific Type	0	None	NA	NA	NA	
	Subsurface Specific Type	0	None	NA	NA	NA	
	Land Specific Type	0	None	NA	NA	NA	
	Network Participation Status Indicator	RX	=	J2.5I	Network Participation Status Indicator	RX	

Table B-3-4. J2.0 Message Data Element Translation from the J2.5 Message (Sheet 5 of 5)

NOTES

1. Unit Type is derived from Land (Ground) Platform as follows.

J2.0 Unit Type	J2.5 Land (Ground) Platform
0 – No Statement	0 – No Statement/Unknown 62 – Undefined 63 – Reset to NS/Unknown All others not listed below
1 – TAOC	59 – Air Support Operations Center (ASOC)
3 - TOC/MTOC/JMAST	41 - Maritime Headquarters 45 – Tactical Operations Center (TOC)
10 - AADCP	49 - Terminal High Altitude Area Defense (THAAD) 50 - Joint Tactical Ground Station (JTAGS)
13 – Surveillance Site	57 – Ballistic Missile Defense Site

2. The unit position is translated from the J2.5E0 if the Displaced Position Indicator is set to 0 and from the J2.5C4 if the Displaced Position Indicator is set to 1.

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Table B-3-5. J2.0 Message Data Element Translation from the J2.6 Message (Sheet 1 of 5)

	J2.0				J2.6		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Label, J-Series	2	None	J2.6I	Label, J-Series	2	
	Sublabel, J-Series	0	CR	J2.6I	Sublabel, J-Series	6	
	Message Length, Indicator	AR	None	NA	NA	NA	
	Exercise Indicator	RX	=	J2.6I	Exercise Indicator	RX	
	Bailout Indicator	0	None	NA	NA	NA	
	Force Tell Indicator	RX	=	J2.6I	Force Tell Indicator	RX	
	Emergency Indicator	RX	=	J2.6I	Emergency Indicator	RX	
	Command and Control Indicator	RX	=	J2.6I	Command and Control Indicator	RX	
	Simulation Indicator	RX	=	J2.6I	Simulation Indicator	RX	
	Track Number, Source	RX	=	Header	Track Number, Source	RX	
	Flight Leader Indicator	0	None	NA	NA	NA	
	Mission Commander Indicator	0	None	NA	NA	NA	
	Generic Unit Type	0	None	NA	NA	NA	
	Altitude, 25 FT	8191	None	NA	NA	NA	
	Altitude Quality, GU	0	None	NA	NA	NA	
	Position Quality, GU	RX	=	J2.6I	Geodetic Position Quality	RX	
	Site	4	None	NA	NA	NA	
	Unit Type	AT	CR	J2.6C1	Land (Ground) Platform	RX	1

Table B-3-5. J2.0 Message Data Element Translation from the J2.6 Message (Sheet 2 of 5)

J2.0				J2.6			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
J2.0I	Originator Environment/ Category	2	CR	J2.6I J2.6I	Label J-Series Sublabel, J-Series	2 6	
J2.0E0	Word Format	2	None	NA	NA	NA	
	Latitude 1, 0.0013 Minute	AT	CR	J2.6E0	Latitude, 0.0013	RX	G1
	Longitude 1, 0.0013 Minute	AT	CR	J2.6E0	Longitude, 0.0013	RX	G1
	Airborne Indicator	0	None	NA	NA	NA	
	Course	RX	=	J2.6E0	Course	RX	
	Speed	RX	=	J2.6E0	Speed	RX	
J2.0C1	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	1	None	NA	NA	NA	
	Mode I Code	0	None	NA	NA	NA	
	Mode II Code	0	None	NA	NA	NA	
	Mode III Code	0	None	NA	NA	NA	
	Elevation, 25 FT	RX	=	J2.6I	Elevation, 25 FT	RX	
	Land (Ground) Platform	RX	=	J2.6C1	Land (Ground) Platform	RX	

Table B-3-5. J2.0 Message Data Element Translation from the J2.6 Message (Sheet 3 of 5)

J2.0				J2.6			
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE	NOTES
	Land (Ground) Platform Activity	RX	None	J2.6C1	Land (Ground) Platform Activity	RX	
	Mission Correlator	RX	=	J2.6I	Mission Correlator, 1	RX	
J2.0C2	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	2	None	NA	NA	NA	
	Voice Frequency Channel	RX	=	J2.6C1	Voice Frequency Channel	RX	
	Voice Call Sign Indicator	RX	=	J2.6C1	Voice Call Sign Indicator	RX	
	Voice Call Sign	RX	=	J2.6C1	Voice Call Sign	RX	
	Track Number, Flight Lead	0	None	NA	NA	NA	
	Control Channel	RX	=	J2.6C1	Control Channel	RX	
J2.0C3	Word Format	1	None	NA	NA	NA	
	Continuation Word Label	3	None	NA	NA	NA	
	Minute	63	None	NA	NA	NA	
	Second	63	None	NA	NA	NA	
	Millisecond	1023	None	NA	NA	NA	
	Position Time Quality	0	None	NA	NA	NA	
	Time Latency Indicator	0	None	NA	NA	NA	
	Latitude, LSBS 0.0003 Minute	16777216	None	NA	NA	NA	

Table B-3-5. J2.0 Message Data Element Translation from the J2.6 Message (Sheet 4 of 5)

J2.0				J2.6		
WORD	DATA ELEMENT	VALUE	TRANSLATION REQUIRED	WORD	DATA ELEMENT	VALUE NOTES
J2.0C3 (Cont)	Longitude, LSBS 0.0003 Minute	33554432	None	NA	NA	NA
	Altitude, LSBS 1.5625 FT	131056	None	NA	NA	NA
	Hour Tick	0	None	NA	NA	NA
	Air Specific Type	0	None	NA	NA	NA
	Surface Specific Type	0	None	NA	NA	NA
	Subsurface Specific Type	0	None	NA	NA	NA
	Land Specific Type	0	None	NA	NA	NA
	Network Participation Status Indicator	RX	=	J2.6I	Network Participation Status Indicator	RX

Table B-3-5. J2.0 Message Data Element Translation from the J2.6 Message (Sheet 5 of 5)

NOTES

1. Unit Type is derived from Land (Ground) Platform as follows.

J2.0 Unit Type	J2.6 Land (Ground) Platform
0 – No Statement	0 – No Statement/Unknown 62 – Undefined 63 – Reset to NS/Unknown All others not listed below
1 – TAOC	59 – Air Support Operations Center (ASOC)
3 - TOC/MTOC/JMAST	41 - Maritime Headquarters 45 – Tactical Operations Center (TOC)
10 - AADCP	49 –Terminal High Altitude Area Defense (THAAD) 50 - Joint Tactical Ground Station (JTAGS)
13 – Surveillance Site	57 – Ballistic Missile Defense Site

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3.3 GENERAL NOTES FOR MESSAGE DATA ELEMENT TRANSLATION

GENERAL NOTE 1 LATITUDE/LONGITUDE CONVERSION

The forwarded latitude or longitude shall be translated to the nearest value increment of the destination link. Translations that result in one half or greater increment shall be rounded up to the next higher increment. The conversion shall be performed with sufficient precision to preclude the generation of any illegal values.

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