# JTLS-2017-13201 Link-16E

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## 1.0 Summary of Model Change Request

The Link-16 format has been expanded. This expanded format is named Link-16 Enhanced Throughput or Link-16E. Currently JTLS does not support many of the new fields associated with the Link-16E format. The purpose of this ECP is to add some of the new data that is part of the Link-16E format.

## 2.0 Design Summary

JTLS currently supports the following Link-16 message formats:

- J2.2 (Air PPLI), J2.3 (Surface PPLI), and J2.5 (Land PPLI) messages used for own force information. New data will be added to these messages as part of this ECP. In addition we will start to support J2.4 (Sub-Surface PPLI) messages.
- J3.2 (Air Track), J3.3 (Surface Track) messages used for detected track information. We currently do not support J3.5 (Land Track) messages. As a result of this ECP, J3.5 messages will be supported. In addition, new data will be added to the currently supported messages as part of this ECP.
- J13.2 (Air Platform), J13.3 (Surface Platform) messages used to report supply levels for own force assets. We currently do not support J13.5 (Land Track) messages. As a result of this ECP, J13.5 messages will be supported. In addition, new data will be added to the currently supported messages as part of this ECP.

## 3.0 Detailed Design

Each of the Tactical Data Link messages that will be supported by the Link-16 Message Service (l16ms) are discussed in the following sections. There is a separate table for each message and these tables are color coded using the color-scheme shown in

Table 1. Color Scheme For Design Document

| COLOR / MEANING |
| --- |
| The field is currently supported in JTLS 5.0 |

Table 1. Color Scheme For Design Document

| COLOR / MEANING |
| --- |
| The field is currently supported in JTLS 5.0, but the options allowed in the field will be expanded to meet the new capabilities of the Link-16E format. |
| The field is currently not supported in JTLS 5.0, but will be supported as a result of this ECP. |
| The field is currently not supported nor will it be supported as a result of this design. As much as possible, our reasoning for this decision is provided. |

## 3.1 Precise Participant Location and Identification (PPLI) Message Support

Table 2 describes the JTLS support for the J2.2, the Air PPLI messages, Table 3 describes the JTLS support for the J2.3, the Surface PPLI messages, Table 4 describes the JTLS support for the J2.4, the Sub-Surface PPLI messages,, and Table 5 describes the JTLS support for the J2.5, the Land PPLI messages.

Table 2. J2.2 Air PPLI Data

| FIELD | IMPLEMENTATION PLAN |
| --- | --- |
| | |
| | |
| | |

Table 3. J2.3 Surface PPLI Data

| FIELD | IMPLEMENTATION PLAN |
| --- | --- |
| J2.3I Record | |
| EXERCISE INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The exercise indicator says that the surface vessel is currently participating in an exercise. We do not have the concept of the object participating in an exercise task within JTLS. As far as JTLS is concerned, the surface vessel is operating as if part of real-world operations, but is a simulated track. This will take a separate ECP to implement this data field. |
| FORCE TELL INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| EMERGENCY INDICATOR | |

Table 3. J2.3 Surface PPLI Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| COMMAND AND CONTROL INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| SIMULATION INDICATOR | The field is currently supported in JTLS 5.0 |
| ACTIVE RELAY INDICATOR, WIDE | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| AREA NETWORK | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| RTT REPLY STATUS INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| NETWORK PARTICIPATION STATUS INDICATOR | |
| TIME QUALITY | |
| GEODETIC POSITION QUALITY<br>STRENGTH | |
| ELEVATION, 25 FT | |
| MISSION CORRELATOR | |
| ELEVATION QUALITY | |
| Sub-Record J2.3E0 | |
| LATITUDE, 0.0013 MINUTE | The field is currently supported in JTLS 5.0 |
| LONGITUDE, 0.0013 MINUTE | The field is currently supported in JTLS 5.0 |
| COURSE | The field is currently supported in JTLS 5.0 |
| SPEED | The field is currently supported in JTLS 5.0 |
| Sub-Record J2.3C1 | |
| MODE I CODE | The field is currently supported in JTLS 5.0 |
| MODE II CODE | The field is currently supported in JTLS 5.0 |
| MODE III CODE | The field is currently supported in JTLS 5.0 |
| SURFACE PLATFORM | Link-16E has a new expanded list of Surface Platform values and this new list will be supported under this ECP. See Section 3.1.1. |

Table 3. J2.3 Surface PPLI Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| SURFACE ACTIVITY | Currently this field is filled based on the posture of the surface ship. This methodology will be improved and will change based on the explicit task in which the ship is participating. See 3.1.2 Surface and Sub-Surface Activity Data for description of the various tasks and how the ship activity will be determined. |
| Sub-Record J2.3C2 | |
| VOICE CALL SIGN INDICATOR | Not supported. |
| LINK 4A ADDRESS INDICATOR | Not supported. |
| VOICE CALL SIGN | Not supported. |
| LINK 4A ADDRESS | Not supported. |
| VOICE FREQUENCY/CHANNEL | Not supported. |
| CONTROL CHANNEL | Not supported. |
| ACTIVE RELAY INDICATOR, VOICE CHANNEL | Not supported. |
| ACTIVE RELAY INDICATOR CONTROL CHANNEL | Not supported. |
| Sub-Record J2.3C3 | |
| U COORDINATE | Not supported. |
| V COORDINATE | Not supported. |
| BETA ANGLE | Not supported. |
| RELATIVE POSITION QUALITY | Not supported. |
| RELATIVE AZIMUTH QUALITY | Not supported. |

Table 4. J2.4 Sub-Surface PPLI Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| J2.4I Record | |
| EXERCISE INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The exercise indicator says that the surface vessel is currently participating in an exercise. We do not have the concept of the object participating in an exercise task within JTLS. As far as JTLS is concerned, the surface vessel is operating as if part of real-world operations, but is a simulated track. This will take a separate ECP to implement this data field. |

Table 4. J2.4 Sub-Surface PPLI Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| FORCE TELL INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| EMERGENCY INDICATOR | |
| COMMAND AND CONTROL INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| SIMULATION INDICATOR | The field will be supported when implementing the J2.4 capability. |
| ACTIVE RELAY INDICATOR, WIDE | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| AREA NETWORK | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| RTT REPLY STATUS INDICATOR | The field is currently not supported nor will it be supported as a result of this design. The design team has no idea concerning the purpose of the field. |
| NETWORK PARTICIPATION STATUS INDICATOR | |
| TIME QUALITY | |
| GEODETIC POSITION QUALITY | |
| DEPTH, 15 METERS | The field will be supported when implementing the J2.4 capability. |
| DEPTH CATEGORY | The field will be supported when implementing the J2.4 capability. We will only support the following Depth Categories since we do not represent thermal layers within JTLS. Surface, Estimated Shallow, Periscope Depth, estimated Deep, and Bottomed. Section 3.1.3 described how these depth categories will be assigned. |
| MISSION CORRELATOR | |
| DEPTH QUALITY | The field will be supported when implementing the J2.4 capability. |
| Sub-Record J2.4E0 | |
| LATITUDE, 0.0013 MINUTE | |
| LONGITUDE, 0.0013 MINUTE | |
| COURSE | |
| SPEED | |
| Sub-Record J2.4C1 | |
| MODE I CODE | |
| MODE II CODE | |

Table 4. J2.4 Sub-Surface PPLI Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| MODE III CODE | |
| SUBSURFACE PLATFORM | |
| SUBSURFACE ACTIVITY | |
| Sub-Record J2.4C2 | |
| VOICE CALL SIGN INDICATOR | |
| LINK 4A ADDRESS INDICATOR | |
| VOICE CALL SIGN | |
| LINK 4A ADDRESS | |
| VOICE FREQUENCY/CHANNEL | |
| CONTROL CHANNEL | |
| ACTIVE RELAY INDICATOR, VOICE CHANNEL | |
| ACTIVE RELAY INDICATOR, CONTROL CHANNEL | |
| Sub-Record J2.4C3 | |
| U COORDINATE | |
| V COORDINATE | |
| BETA ANGLE | |
| RELATIVE POSITION QUALITY | |
| RELATIVE AZIMUTH QUALITY | |

Table 5. J2.5 Land PPLI Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |
| | |

### 3.1.1 Surface and Sub-Surface Platform Data

The Platform Data will be expanded as part of this ECP. This expansion is necessary to support new surface platform options and to expand these platform option to support the Sub-Surface J2.4 message. In addition the data held within the data will be re-organized to centralize all C4I specific description data is located on one place.

A new data table will be created within the Database Development System (DDS) to hold all needed C4I specific description data. This new data table will be called the Ship Real World (srw) data. It will contain the fields described in Table 6.

Table 6. New Ship Real World Data Table

| ATTRIBUTE NAME | ATTRIBUTE DESCRIPTION |
|---|---|
| SRW NAME | This is the name of the Ship Real World Data record. During the conversion a record will be created for the list of unique sup_specific_class_type that are used in the database. The name of the newly created record will be the name of the sup_specific_class_type concantenated with the characters ".SRW". For example,<br>• Assume the database has 15 SUPs and within that list of SUPs there are only three unique sup_specific_class_types referenced.<br>• Assume these three referenced sup_specific_class_types are: AE, CV, DDG.<br>• Three records will automatically be created as part of the conversion process these are: AE.SRW, CV.SRW, and DDG.SRW<br>The name of the real work record will be the normal 15 character JTLS name limit. |
| SRW OTH GOLD TYPE | This holds the OTHGold ship type that should be reported for a Naval Unit that uses a SUP which points to this SRW record. The DDS currently contains a lookup table, specific_class_type_lu, that holds all legal values for this field.<br>During database conversion, the field is filled with the sup_specific_class_type from the SUP record that created this record in the new SRW table. For example, the conversion created record called "AE.SRW" will have this field filled with the type "AE", the record called "CV.SRW" will have this field filled with type "CV", and the record called "DDS.SRW" will have this field filled with type "DDG".<br>This field must be filled and the default value should be "DDG". |
| SRW OTH GOLD CATEGORY | Put in table and removing the UT BASIC TYPE |
| SRW LINK16 SUBSURFACE PLATFORM | The list of legal Link16 Platform types will become a Lookup Table in the DDS. This field is optional and NULL is allowed. This list is a combination of the legal Surface Platform types and Sub-Surface Platform types. This combined list is included as Table 8. |
| SRW LINK16 SURFACE PLATFORM | |

Table 6. New Ship Real World Data Table

| ATTRIBUTE NAME | ATTRIBUTE DESCRIPTION |
|---|---|
| SRW LINK16 SUBSURFACE TYPE | In Link-16 terminology, this is the Surface Specific Type and the Sub-surface Specific Type. This list is too long to include in the design, but a spreadsheet is available to fill the needed new Look-Up table within the DDS. This field is optional and NULL is allowed. |
| SRW LINK16 SURFACE TYPE | |
| SRW NATO C4I TYPE | Currently the model links the OTH-Gold Type is linked within the code to the North Atlantic Treaty Organization (NATO) C4I type needed by NATOs Integrated Command and Control (ICC) system. This in-code data will be removed and it will be placed in the database using this structure. This field is optional and NULL is allowed. Table 9 holds the values that will be placed in the Look-Up table referenced by this data field. |

Table 8 contains the combined list of Link-16 Surface Platform types and Link-16 Sub-Surface Platform types. The Platform Type column is color coded using the meaning shown in

Table 7. Color-Coded Mean For Combined List Of Link16 Platform Types

| COLOR CODE MEANING |
|---|
| This is a legal platform type for non-submarine Ship Unit Prototypes |
| This is a legal platform type of submarine Ship Unit Prototypes |
| This is a legal platform type for all Ship Unit Prototypes |
| Although this is a legal platform type, it will not be included in the DDS Lookup Table and cannot be assigned to an SWR record. The reason for this limitation will be listed. |

Table 8. Legal Link-16 Platform Types For Look-Up Table

| PLATFORM TYPE | COMMENTS |
|---|---|
| AIRCRAFT CARRIER | Will be on the Look-Up Table List |
| BATTLESHIP | Will be on the Look-Up Table List |
| CRUISER | Will be on the Look-Up Table List |
| DESTROYER | Will be on the Look-Up Table List |
| FRIGATE | Will be on the Look-Up Table List |
| FAST PATROL BOAT | Will be on the Look-Up Table List |
| AMPHIBIOUS | Will be on the Look-Up Table List |

Table 8. Legal Link-16 Platform Types For Look-Up Table

| PLATFORM TYPE | COMMENTS |
|---|---|
| LHA/LHD | Will be on the Look-Up Table List |
| AMPHIBIOUS ASSAULT COMMAND SHIP (LCC) | Will be on the Look-Up Table List |
| LANDING CRAFT (LC) | Will be on the Look-Up Table List |
| TROOP SHIP | Will be on the Look-Up Table List |
| TANKER/OILER | Will be on the Look-Up Table List |
| AUXILIARY SHIP | Will be on the Look-Up Table List |
| MINE WARFARE SHIP | Will be on the Look-Up Table List |
| MINE COUNTERMEASURES MARITIME VESSEL (MCMV) | Will be on the Look-Up Table List |
| SURFACED SUBMARINE | The JTOI will need to switch from a J2.4 Subsurface Link-16 reporting to the J2.3 Surface Link-16 reporting when a submarine surfaces. This information is available to the JOI on the JODA. The Link-16 JOI will hard code this platform type when a submarine surfaces. When the submarine re-submerges, the LInk-16 JOI will removed the J2.3 message and return to reporting the ship using the J2.4 message and its database assigned Sub-Surface Platform Type. |
| HOSPITAL SHIP | Will be on the Look-Up Table List |
| HYDROFOIL | Will be on the Look-Up Table List |
| AIR CUSHION VEHICLE | Will be on the Look-Up Table List |
| INTELLIGENCE COLLECTOR | Will be on the Look-Up Table List |
| SURVEY VESSEL | Will be on the Look-Up Table List |
| NON-MILITARY | Will be on the Look-Up Table List |
| LANDING PLATFORM | Will be on the Look-Up Table List |
| LANDING SHIP | Will be on the Look-Up Table List |
| COMMAND | Will be on the Look-Up Table List |
| OCEAN RESEARCH | Will be on the Look-Up Table List |
| PATROL | Will be on the Look-Up Table List |
| SUPPORT | Will be on the Look-Up Table List |
| FISHING VESSEL | Will be on the Look-Up Table List |
| MERCHANT VESSEL | Will be on the Look-Up Table List |
| PATROL CRAFT ESCORT | Will be on the Look-Up Table List |

Table 8. Legal Link-16 Platform Types For Look-Up Table

| PLATFORM TYPE | COMMENTS |
|---|---|
| AMPHIBIOUS GENERAL ASSAULT | Will be on the Look-Up Table List |
| MISSILE CONTROL UNIT | Will be on the Look-Up Table List |
| DECOY | The design team does believe that there is a user requirement to represent ship decoys, but there is no existing ECP for this capability. When such an ECP is submitted and funded, then we will need to consider these Platform types that are legal for both Surface Platform types and Sub-Surface Platform types. They will not be included in the Platform Look-Up table. |
| INFRARED DECOY | |
| CHAFF DECOY | |
| ACTIVE ELECTRONIC DECOY | |
| CORVETTE | Will be on the Look-Up Table List |
| SUBMARINE PROPULSION UNKNOWN | Will be in the Look-Up Table List |
| DIESEL ELECTRIC SUBMARINE GENERAL | Will be in the Look-Up Table List |
| DIESEL ELECTRIC ATTACK SUBMARINE | Will be in the Look-Up Table List |
| DIESEL ELECTRIC MISSILE SUBMARINE | Will be in the Look-Up Table List |
| DIESEL ELECTRIC BALLISTIC MISSILE SUBMARINE | Will be in the Look-Up Table List |
| TYPE 1 DIESEL | Will be in the Look-Up Table List |
| TYPE 3 DIESEL | Will be in the Look-Up Table List |
| NUCLEAR SUBMARINE GENERAL | Will be in the Look-Up Table List |
| NUCLEAR ATTACK SUBMARINE | Will be in the Look-Up Table List |
| NUCLEAR MISSILE SUBMARINE | Will be in the Look-Up Table List |
| NUCLEAR BALLISTIC MISSILE SUBMARINE | Will be in the Look-Up Table List |
| TYPE II NUCLEAR | Will be in the Look-Up Table List |
| TYPE III NUCLEAR | Will be in the Look-Up Table List |
| NON-SUBMARINE | The design team cannot imagine what type of object would be assigned this Sub-Surface Platform Type; therefore, it will note be included in the Look-Up table. |

Table 8. Legal Link-16 Platform Types For Look-Up Table

| PLATFORM TYPE | COMMENTS |
|---|---|
| SURFACE VESSEL | The design team cannot imagine what type of object would be assigned this Sub-Surface Platform Type; therefore, it will note be included in the Look-Up table. |
| TORPEDO | ECP JTLS-2018-13695 calls for representing Link-16 for missile flyout. If that ECP is implemented, then the JOI would use this Platform type when reporting the location of launched Torpedoes. Since a submarine should never have this value, it will not be included on the list. |
| MINE | We have no user requirement to have mines produce Link-16 messages; therefore it will not be included in the Look-Up table. If there is such a user requirement, an ECP should be submitted. |
| WRECK | We have no user requirement to have a ship wreck produce Link-16 messages; therefore it will not be included in the Look-Up table. If there is such a user requirement, an ECP should be submitted. |
| SEABED PIPELINE | Although with the last week, the Design Team was asked a question about representing seabed pipe and communication cables, no ECP has been submitted. Therefore, this option will not be included in the Look-Up table. If there is such a user requirement, an ECP should be submitted. |
| FISH/MARINE LIFE | We have no user requirement to have marine life produce Link-16 messages; therefore it will not be included in the Look-Up table. If there is such a user requirement, an ECP should be submitted. |
| SWIMMER/FROGMAN | We have no user requirement to have HRUs produce Link-16 messages; therefore it will not be included in the Look-Up table. If there is such a user requirement, an ECP should be submitted. |
| KNUCKLE/WAKE | The design team has found no documentation concerning what this is; therefore, it will not be included on the list. |
| ATTACK SUBMARINE | Will be in the Look-Up Table List |
| CRUISE MISSILE LAUNCHER | Will be in the Look-Up Table List |
| PINNACLE/SEA MOUNTAIN | We have no user requirement to have under-sea mountain peaks produce Link-16 messages; therefore it will not be included in the Look-Up table. If there is such a user requirement, an ECP should be submitted. |
| NON-MILITARY SUBMERSIBLE | Will be in the Look-Up Table List |
| TYPE VI NUCLEAR | Will be in the Look-Up Table List |
| TYPE VII NUCLEAR | Will be in the Look-Up Table List |
| CONVENTIONAL (COMMAND AND CONTROL) | Will be in the Look-Up Table List |
| CONVENTIONAL (AUXILIARY) | Will be in the Look-Up Table List |

Table 8. Legal Link-16 Platform Types For Look-Up Table

| PLATFORM TYPE | COMMENTS |
|---|---|
| NUCLEAR (COMMAND AND CONTROL) | Will be in the Look-Up Table List |
| TYPE 4 DIESEL | Will be in the Look-Up Table List |
| MISSILE CONTROL UNIT | The design team has found no documentation concerning what this is; therefore, it will not be included on the list. |

Table 9 includes the legal C4I Ship Types that can be used to populate ships within NATO's ICC.

Table 9. NATO C4I Ship Type Lookup Table

| NATO C3I SHIP TYPE |
|---|
| AS_TENDER |
| AH_HOSPITAL |
| AR_OILER |
| BB_BATTLESHIP |
| MERCHANT_CARGO |
| FISHING |
| CC_CRUISER |
| NAVY_BIG_CIVIL |
| CV_CARRIER |
| DD_DESTROYER |
| NAVY_SMALL_CIVIL |
| COMMAND_SHIP |
| FF_FRIGATE |
| PASSENGER |
| LA_AMPHIB |
| LS_LANDING_SHIP |
| MC_MINECLEARER |
| MH_MINEHUNTER |
| JI_INTELLIGENCE |

Table 9. NATO C4I Ship Type Lookup Table

| NATO C3I SHIP TYPE |
|---|
| MD_MINEDRONE |
| MS_MINESWEEPER |
| UNKNOWN |
| PC_PATROLASW |
| P_PATROL |
| SUB_SURFACE |
| MERCHANT_TANKER |
| YY_HARBORCRAFT |

The Ship Unit Prototype (SUP) Table will be changed also as a result of this design. The field sup_specific_class_type will be removed from the table definition and replaced with a new field called the sup_real_world_data (SUP.REAL.WORLD.DATA within the model and documentation). This new field will reference the Ship Real World data table in which the unique key is the SRW NAME as described in Table 6.

As noted, Table 8 will be used to create the DDS Look-Up table that for the new SRW LINK16 PLATFORM TYPE variable. The SVP must check for consistency between the JTLS SUP TYPE and the SRW LINK16 PLATFORM TYPE variable referenced by the new parameter SUP REAL WORLD DATA). This variable needs to be pointing to an appropriate SRW record. Specifically:

- A SUP TYPE of Submarine, must point to an SRW record that hold a legal Sub-Surface Platform Type.
- Similarly, all SUP that do not have a SUP.TYPE of Submarine must point to an SRW record that holds a legal Surface Platform Type.

This same check must be made before allowing the Controller to change the SUP REAL WORLD DATA parameter. To accomplish these tasks, both the Scenario Initialization Program (SIP) and the Combat Evens Program (SIP) must hold the data indicating which Platform Types can be used by Surface, Sub-Surface, or Both SUPs. This data will be establsihed within the INITIALIZE.CONSTANTS routine held within each program.

### 3.1.2 Surface and Sub-Surface Activity Data

The Activity data will now be supported as part of this ECP.

### 3.1.3 Depth Category Code Assignment

## 3.2 Track Message Support

Table 10 describes the JTLS support for the J3.2, the Air Track messages, Table 11 describes the JTLS support for the J3.3, the Surface Track messages, Table 12 describes the JTLS support for the J3.4, the Sub-Surface Track messages,, and Table 13 describes the JTLS support for the J3.5, the Land Track messages.

Table 10. J3.2 Air Track Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |
| | |

Table 11. J3.3 Surface Track Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |
| | |

Table 12. J3.4 Sub-Surface Track Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |
| | |

Table 13. J3.5 Land Track Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |

Table 13. J3.5 Land Track Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |

## 3.3 Platform Message Support

Table 14 describes the JTLS support for the J13.2, the Air Platform messages, Table 15 describes the JTLS support for the J13.3, the Surface Platform messages, Table 16 describes the JTLS support for the J13.4, the Sub-Surface Platform messages,, and Table 17 describes the JTLS support for the J13.5, the Land Platform messages.

Table 14. J13.2 Air Platform Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |
| | |

Table 15. J13.3 Surface Platform Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | Need to work out what three missiles should be reported. |
| | |
| | |

Table 16. J13.4 Sub-Surface Platform Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |
| | |

Table 17. J13.5 Land Platform Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |

Table 17. J13.5 Land Platform Data

| FIELD | IMPLEMENTATION PLAN |
|---|---|
| | |
| | |

# 4.0 Data Changes

The following database changes are needed to properly fill the newly support Link-16 fields.

# 5.0 Order Changes

The following orders will be changed as a result of this ECP. These order changes allow the Controller to change the underlying data that results in Link-16E fields to be filled with object data.

# 6.0 JODA Changes

# 7.0 Test Plan

Text [*Describe the basic test objectives and procedures. This Test Plan section may be published as a separate document.*]

### 7.1 Test 1 Title

Purpose: [*Describe the specific feature, function, or behavior to be tested or measured.*]

Step 1: Text

Step 2: Text

Expected Results: [*Describe the specific model behavior to be observed.*]

### 7.2 Test 2 Title

Purpose: [*Describe the specific feature, function, or behavior to be tested or measured.*]

Step 1: Text

Step 2: Text

[*Describe the specific model behavior to be observed.*]