

Joint Tactical Radio System (JTRS) Standard Device IO Signals Application Program Interface (API)



Version: 1.1.1
29 March 2007

Statement A- Approved for public release; distribution is unlimited (29 March 2007)

REVISION HISTORY

Version	Authorization	Description	Last Modified Date
1.0		Initial release ICWG Approved	23-January-2006
1.1		Update outline format ICWG Approved	26-January-2006
1.1.1		Preparation for public release	29-March-2007

Table of Contents

A. DEVICE IO SIGNALS..... 6

Table of Contents

A. DEVICE IO SIGNALS.....	6
A.1 Introduction.....	6
A.1.1 Overview.....	6
A.1.2 Service Layer Description.....	6
A.1.3 Modes of Service.....	6
A.1.4 Service States.....	6
A.1.5 Referenced Documents.....	7
A.1.5.1 Government Documents.....	7
A.1.5.2 Commercial Standards.....	7
A.2 Services.....	8
A.2.1 Provide Services.....	8
A.2.2 Use Services.....	8
A.2.3 Interface Modules.....	8
A.2.3.1 DevIOS.....	8
A.2.4 Sequence Diagrams	8
A.3 Service Primitives and Attributes	9
A.3.1 DevIOS::DeviceIOSignals	10
A.3.1.1 <i>setCTS</i> Operation.....	10
A.4 IDL.....	11
A.4.1 DeviceIoSignals IDL	11
A.5 UML.....	12
Appendix A.A Abbreviations and Acronyms.....	13
Appendix A.B Performance Specification.....	14

Lists of Figures

FIGURE 1 – DEVICEIOSIGNALS INTERFACE CLASS DIAGRAM..... 8

A. DEVICE IO SIGNALS

A.1 INTRODUCTION

This document defines a common set of *Device IO Signals* interfaces to be used by Joint Tactical Radio (JTR) Set Applications and Services. The *Device IO Signals* interface provides a signal to start and stop data packet flow.

The *Device IO Signals* interfaces are documented within to minimize coupling between the device and service interfaces that utilize the *Device IO Signals* interfaces.

A.1.1 Overview

- a. Section A.1, *Introduction*, of this document contains the introductory material regarding the overview, service layer description, modes, states and referenced documents of this document.
- b. Section A.2, *Services*, provides summary of service interface uses, interface for each device component, port connections, and sequence diagrams.
- c. Section A.3, *Service Primitives and Attributes*, specifies the operations that are provided by *Device IO Signals*.
- d. Section A.4, *IDL*.
- e. Section A.5, *UML*.
- f. Appendix A.A, *Abbreviations and Acronyms*.
- g. Appendix A.B, *Performance Specification*.

A.1.2 Service Layer Description

Not applicable.

A.1.3 Modes of Service

Not applicable.

A.1.4 Service States

Not applicable.

A.1.5 Referenced Documents

The following documents of the exact issue shown form a part of this specification to the extent specified herein.

A.1.5.1 Government Documents

A.1.5.1.1 Specifications

A.1.5.1.1.1 Federal Specifications

None

A.1.5.1.1.2 Military Specifications

None

A.1.5.1.2 Other Government Agency Documents

None

A.1.5.2 Commercial Standards

None

A.2 SERVICES

A.2.1 Provide Services

Not applicable.

A.2.2 Use Services

Not applicable.

A.2.3 Interface Modules

A.2.3.1 DevIOS

A.2.3.1.1 DeviceIOSignals

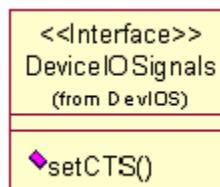


Figure 1 – DeviceIOSignals Interface Class Diagram

The interface design of *DeviceIOSignals* is shown in Figure 1. A packet producer is derived from this interface. The *DeviceIOSignals* provides an operation to start the flow of data to the packet consumer.

A.2.4 Sequence Diagrams

None

A.3 SERVICE PRIMITIVES AND ATTRIBUTES

To enhance the readability of this API document and to avoid duplication of data, the type definitions of all structured types (i.e., data types, enumerations, exceptions, and structures) used by the Service Primitives and Attributes have been co-located in section A.5. This cross-reference of types also includes any nested structures in the event of a structure of structures or an array of structures.

A.3.1 DevIOS::DeviceIOSignals

A.3.1.1 *setCTS* Operation

The *setCTS* operation is used to transition the consent control (accept or decline) for the flow of data packets to the packet consumer.

A.3.1.1.1 Synopsis

oneway void setCTS(in boolean CTS);

A.3.1.1.2 Parameters

Parameter Name	Description	Type	Units
CTS	TRUE = enable, accept data flow. FALSE = disable, decline data flow.	boolean	N/A

A.3.1.1.3 State

Not applicable.

A.3.1.1.4 New State

Not applicable.

A.3.1.1.5 Return Value

None

A.3.1.1.6 Originator

Not applicable.

A.3.1.1.7 Exceptions

None

A.4 IDL

A.4.1 DeviceIoSignals IDL

```
/*  
** DeviceIoSignals.idl  
**/  
  
#ifndef __DEVICEIOSIGNALS_DEFINED  
#define __DEVICEIOSIGNALS_DEFINED  
  
/* DevIOS */  
  
module DevIOS {  
  
    interface DeviceIoSignals {  
  
        oneway void setCTS (  
            in boolean CTS  
        );  
  
    };  
  
};  
  
#endif
```

A.5 UML

None

APPENDIX A.A ABBREVIATIONS AND ACRONYMS

API	Application Program Interface
CTS	Clear To Send
ICWG	Interface Control Working Group
IDL	Interface Definition Language
IO	Input/Output
JPEO	Joint Program Executive Office
JTRS	Joint Tactical Radio System
N/A	Not Applicable
UML	Unified Modeling Language

APPENDIX A.B PERFORMANCE SPECIFICATION

Not applicable.