

SEMI T13.1-1104

SPECIFICATION FOR SECS PROTOCOL FOR DEVICE TRACKING

This specification was technically approved by the Global Traceability Committee and is the direct responsibility of the Japanese Traceability Committee. Current edition approved by the Japanese Regional Standards Committee on July 23, 2004. Initially available at www.semi.org September 2004; to be published November 2004.

1 Purpose

1.1 The purpose of this document is to map services and data in SEMI T13 into SECS protocol.

2 Scope

2.1 This document is applied to SECS implementation of semiconductor device traceability with some interoperability with semiconductor Manufacturing Execution System (MES).

NOTICE: This standard does not purport to address safety issues, if any, associated with its use. It is the responsibility of the users of this standard to establish appropriate safety and health practices and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards

3.1 SEMI Standards

SEMI E5 — SEMI Equipment Communication Standard 2 Message Content (SECS-II)

SEMI E39 — Object Service Standard: Concepts, Behavior and Services

SEMI G84 — Specification for Strip Map Protocol

SEMI T12 — Specification for Tracing Jigs and Implements

SEMI T13 — Specification for Device Tracking: Concepts, Behavior and Services

NOTICE: Unless otherwise indicated, all documents cited shall be the latest published versions.

4 Requirements

4.1 *Service Mapping* — This specification maps service instructions defined in SEMI T13 into SECS stream/functions as follows. Supporting Class names specified in the following table are used as OBJSPEC or a part of OBJSPEC to request services.

Table 1 Service Message Instruction Mapping

<i>Service Message Name</i>	<i>Supporting Class</i>	<i>Stream, Function</i>	<i>SECS-II Message Name</i>
acquireDTD	DieTraceMachine	S14, F19/F20	Generic Service Request/Response
admit	DieTraceManager	S14, F19/F20	Generic Service Request/Response
catchDTD	DieTracer	S14, F19/F20	Generic Service Request/Response
collectDTD	DieTracer	S14, F19/F20	Generic Service Request/Response
devolve	DieTraceManager	S14, F19/F20	Generic Service Request/Response
enroll	DieTracer	S14, F19/F20	Generic Service Request/Response
flush	DieTraceMachine	S14, F19/F20	Generic Service Request/Response
logException	DieTraceManager	S14, F19/F20	Generic Service Request/Response
planDTD	DieTracer	S14, F19/F20	Generic Service Request/Response
registerTracer	DieTraceMachine	S14, F19/F20	Generic Service Request/Response
resign	DieTraceManager	S14, F19/F20	Generic Service Request/Response
setAlert	DieTraceClient	S14, F19/F20	Generic Service Request/Response
setForward	DieTracer	S14, F19/F20	Generic Service Request/Response
setPlanningItems	DieTraceMachine	S14, F19/F20	Generic Service Request/Response

<i>Service Message Name</i>	<i>Supporting Class</i>	<i>Stream, Function</i>	<i>SECS-II Message Name</i>
showData	DieTraceData	S14, F19/F20	Generic Service Request/Response
showDaughter	CircuitModule	S14, F19/F20	Generic Service Request/Response
showDTD	DieTracer	S14, F19/F20	Generic Service Request/Response
showPhenomena	DieTraceClient	S14, F19/F20	Generic Service Request/Response
showProperty	CircuitModule, DieTraceData	S14, F19/F20	Generic Service Request/Response
takeDTD	DieTracer	S14, F19/F20	Generic Service Request/Response

4.2 *Service Parameter Mapping* — The following table shows the mapping between service parameters defined by SEMI T13 and data items defined by SEMI E5. The data item SVCNAME used with S14F19 is the text string defined in the above table. The data item SPNAME used with S14F19/F20 is also text string defined in following table. It is recommended but not limited to be case sensitive for both data items for future extension.

Table 2 Service Message Parameter Mapping

<i>Parameter Name</i>	<i>SECS-II Data Item Reference</i>	<i>SECS-II Format</i>	<i>Remarks</i>
Alert	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = Alert SPVAL = Item (00)	SPVAL: n-element list of property item.
Clarifier	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = Clarifier SPVAL = (20)	
DataName	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = DataName SPVAL = (20)	
DataNameList	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = DataNameList SPVAL = (20)	
DataValue	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = DataValue SPVAL = (00, 1x, 2x, 3x, 4x, 5x)	“x” is an appropriate octal defined in SEMI E5.
Designation	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = Designation SPVAL = (20)	If SPVAL is null or just spaces, it means all. Spaces could be separator.
Exceptions	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = Exceptions SPVAL = Item (00)	SPVAL: n-element list of property item.
MachineType	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = MachineType SPVAL = (20)	
ManagingTracer	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = ManagingTracer SPVAL = (20)	
Phenomena	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = Phenomena SPVAL = Item (00)	SPVAL: n-element list of property item.
Property	L, 2 1. <SPNAME> 2. <SPVAL>	SPNAME = Property SPVAL = Item (00)	SPVAL: n-element list of property item.