

SEMI E116.1-0703

SPECIFICATION FOR SECS-II PROTOCOL FOR EQUIPMENT PERFORMANCE TRACKING (EPT)

This specification was technically approved by the Global Information & Control Committee and is the direct responsibility of the North American Information & Control Committee. Current edition approved by the North American Regional Standards Committee on April 11, 2003. Initially available at www.semi.org June 2003; to be published July 2003. Originally published March 2003.

1 Purpose

1.1 This document maps the services and data of the Equipment Performance Tracking Standard (EPT) to SECS-II streams, functions, and data definitions.

2 Scope

2.1 This document applies to all implementations of EPT that use the SECS-II message protocol (SEMI E5).

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 Communications Standard 2 Message Content (SECS-II)

SEMI E30 — Generic Model for Communications and Control of Manufacturing Equipment (GEM)

SEMI E53 — Event Reporting

SEMI E116 — Provisional Specification for Equipment Performance Tracking (EPT)

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

4 Events Mapping

4.1 Table 1 shows the specific SECS-II streams and functions that shall be used for SECS-II implementations of the events defined in EPT. A single collection event is used to report the equipment level events. A single collection event per module is used to report ALL module-level events (including all transitions in the EPT State Model) for an individual EPT module. This approach differs from state models that are defined in other 300 mm-related SEMI standards, which utilize a unique CEID for each transition in the state model. For example, a piece of equipment with 3 EPT modules would use one CEID to report equipment-level events and 3 CEIDs corresponding to the equipment's 3 EPT modules to report EPT module-level events.

Table 1 Event Mapping Table

<i>Event Name</i>	<i>Stream, Function</i>	<i>SECS-II Message Name</i>
EPTStateChange ₀ (Equipment based)	If SEMI E30 style events: S6F11/F12 If SEMI E53 style events: S6F11/12 S6F13/F14	If SEMI E30 style events: Event Report Send/Acknowledge If SEMI E53 style events: Event Report Send/Acknowledge Annotated Event Report Send/Ack
EPTStateChange ₁ (Module based)	If SEMI E30 style events: S6F11/F12 If SEMI E53 style events: S6F11/12 S6F13/F14	If SEMI E30 style events: Event Report Send/Acknowledge If SEMI E53 style events: Event Report Send/Acknowledge Annotated Event Report Send/Ack

5 Variable Data Item Mapping

5.1 Table 2 shows the mapping between module level variable data items defined by EPT and the data items defined by SEMI E5.

5.2 Table 3 shows the mapping between equipment level variable data items defined by EPT and the data items defined by SEMI E5.

5.3 Table 4 shows the mapping between event variable data items defined by EPT and the data items defined by SEMI E5.

5.4 Table 5 shows the mapping between additional variable data items defined by EPT and the data items defined by SEMI E5.

Table 2 Module Level Variable Data Item Mapping Table

<i>Variable Name</i>	<i>Class</i>	<i>Format</i>
ModuleName _i	ECV	A[0..80]
EPTState _i	SV	51(U1)
PreviousEPTState _i	SV	51(U1)
EPTStateTime _i	SV	54(U4)
TaskName _i	SV	A[0..80]
TaskType _i	SV	51(U1)
PreviousTaskName _i	SV	A[0..80]
PreviousTaskType _i	SV	51(U1)
BlockedReason _i	SV	51(U1)
BlockedReasonText _i	SV	A[0..80]

Table 3 Equipment Level Variable Data Item Mapping Table

<i>Variable Name</i>	<i>Class</i>	<i>Format</i>
EqpName	ECV	A[0..80]
EPTState ₀	SV	51(U1)
PreviousEPTState ₀	SV	51(U1)
EPTStateTime ₀	SV	54(U4)
NumModules ₀	SV	51(U1)
NumBusy ₀	SV	51(U1)
NumBlocked ₀	SV	51(U1)
NumIdle ₀	SV	51(U1)
BlockedReason ₀	SV	51(U1)
BlockedReasonText ₀	SV	A[0..80]