SEMI E116.1-0707 (Reapproved 0518)
SPECIFICATION FOR SECS-II PROTOCOL FOR EQUIPMENT PERFORMANCE TRACKING (EPT)

This Standard was technically approved by the Information & Control Global Technical Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on December 13, 2017. Available at www.semiviews.org and www.semi.org in May 2018; originally published March 2003; previously published July 2007.

1 Purpose

1.1 This Document maps the services and data of the Equipment Performance Tracking (EPT) Standard 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). Compliance to this Standard requires compliance to both SEMI E116 and SEMI E5.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards and Documents

3.1 *SEMI Standards and Safety Guidelines*

SEMI E5 — Specification for SEMI Equipment Communications Standard 2 Message Content (SECS-II)

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

SEMI E39 — SECS-II Protocol for Object Services Standard (OSS)

SEMI E116 — Specification for Equipment Performance Tracking (EPT)

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

4 SECS-II Attribute Definitions

4.1 Table 1 provides the SECS-II structure definitions for the SEMI E116 EPTTracker Object. This must be compliant with the SEMI E39 (OSS) protocol. The host does not have the ability to create or destroy these objects. However, the host must be able to access all attributes via the default SEMI E39 GetAttr services (for all attributes) and SetAtt services (for RW attributes).

4.2 A subset of these object attributes are enumerated via SECS-II Data Variables that may be provided via event-reports. See the section on Variable Data Item Mapping in this Document.

Table 1 EPTTracker Object SECS-II Attributes Definitions

Attribute Name	*Attribute Data Form: SECS-II Structure*
ObjType	20 (A[10]) must always be set to EPTTracker
ObjID	20 (A[1..80]) <OBJECTIDENTIFIER> ObjID is equipment defined. Examples: EQUIPMENT, CHAMBER A, ROBOT ARM. Conforms to the restrictions of ObjID as specified in SEMI E39.1.

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Attribute Name	*Attribute Data Form: SECS-II Structure*
BlockedReason	51 (U1) BlockedReason where the values are enumerated as: 0 = Not Blocked 1 = Unknown 2 = Safety Threshold 3 = Error Condition 4 = Parametric Exception 5 = Aborting, Aborted 6 = Pausing, Paused 7 = Reserved 8 = Reserved 9 = Reserved
BlockedReasonText	20 (A) BlockedReasonText Usage is equipment defined. Examples: Abort – Host-requested Abort, Fault – Reticle Stage Error; Pause – Host-requested Pause
EPTElementType	51 (U1) EPTElementType where the values are enumerated as: 0 = Equipment 1 = Production EPT Module 2 = EFEM/Load Port EPT Module
EPTState	51 (U1) EPTState where the values are enumerated as: 0 = Idle 1 = Busy 2 = Blocked
EPTStateTime	54 (U4) EPTStateTime
EPTElementName	20 (A) EPTElementName Usage is equipment defined. Examples: EQUIPMENT, CHAMBER A, ROBOT ARM.
PreviousEPTState	51 (U1) PreviousEPTState where the values are enumerated as: 0 = Idle 1 = Busy 2 = Blocked 3 = No State
PreviousTaskName	20 (A[0..80]) PreviousTaskName Usage is equipment defined. Examples: Loading, Etching, Pumping Down
PreviousTaskType	51 (U1) PreviousTaskType where the values are enumerated as: 0 = No Task 1 = Unspecified 2 = Process – adding value (e.g., exposing) 3 = Support – incapable of adding value (e.g., Handling/Transport) 4 = Equipment Maintenance (e.g., Equipment-initiated clean cycle) 5 = Equipment Diagnostics (e.g., Equipment-initiated health check) 6 = Waiting (e.g., chamber waiting for a robot to remove a substrate)
TaskName	20 (A[0..80]) TaskName Usage is equipment defined. Examples: Loading, Etching, Pumping Down

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