IEEE802.3da D3p2 review and comments

A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

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Comment 1: Table 189-8

Current Table

Table 189–8—MPD response to DISCOVERx events

DISCOVERx Event 1	DO_DISCOVERY1					
DISCOVERx Event 2	DO_DISCOVERY2					
DISCOVERx Event 3	DISCOVERY_LOW_TYPE_0					
DISCOVERx Event 4	DISCOVERY_LOW_TYPE_1					
DISCOVERx Event 5	DISCOVERY_LOW_TYPE_0/1					
DISCOVERx Event 6	DO_DISCOVERY6					
Discovery event:	**1**	**2**	**3**	**4**	**5**	**6**
Type 0	1	0	1	0	0	x
Type 1	1	0	0	1	0	x
Type 0/1	1	0	0	0	1	x
Extended discovery	1	0	x	x	x	1

Proposed Table

Table 189–8—MPD response to DISCOVERx events

DISCOVERx Event 1	DO_DISCOVERY1					
DISCOVERx Event 2	DO_DISCOVERY2					
DISCOVERx Event 3	DISCOVERY_LOW_TYPE_0					
DISCOVERx Event 4	DISCOVERY_LOW_TYPE_1					
DISCOVERx Event 5	DISCOVERY_LOW_TYPE_0/1					
DISCOVERx Event 6	DO_DISCOVERY6					
Discovery event:	**1**	**2**	**3**	**4**	**5**	**6**
Type 0	1	0	1	0	0	**0**
Type 1	1	0	0	1	0	**0**
Type 0/1	1	0	0	0	1	**0**
Extended discovery	1	0	x	x	x	1

Clause/Table	Issue	Suggested remedy	Notes
Table 189-8	1. In discovery event 6 there are x for type 0, type 1, type 0/1 .According to flow chart it should be 0, see next page 2. No definition of extended discovery	1. In Discovery Event 6 event change x to 0 2. Make separate note or add to the table text: Extended discovery is for future extension	

Comment 1: Table 189-8-continue

- **On flow chart value at event 6 is 0 (present MARK)**

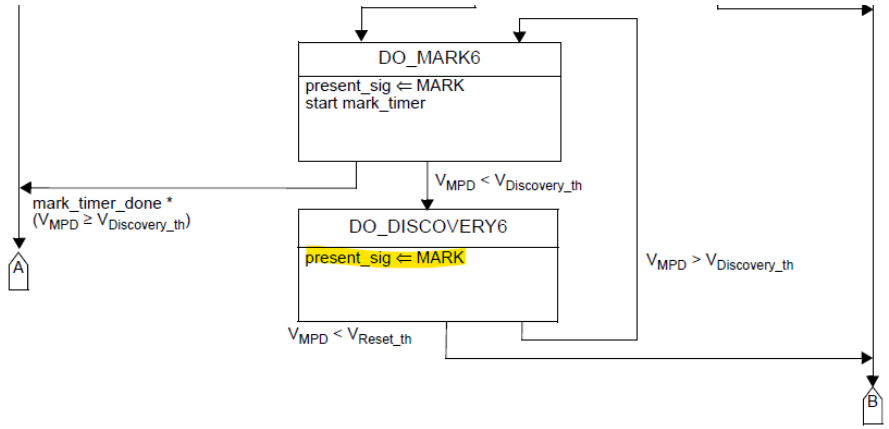


Figure 189–9—Top level MPD state diagram continued, part b

From Michael Paul presentation – in MPOE .da value at event 6 is 0

DEVICES

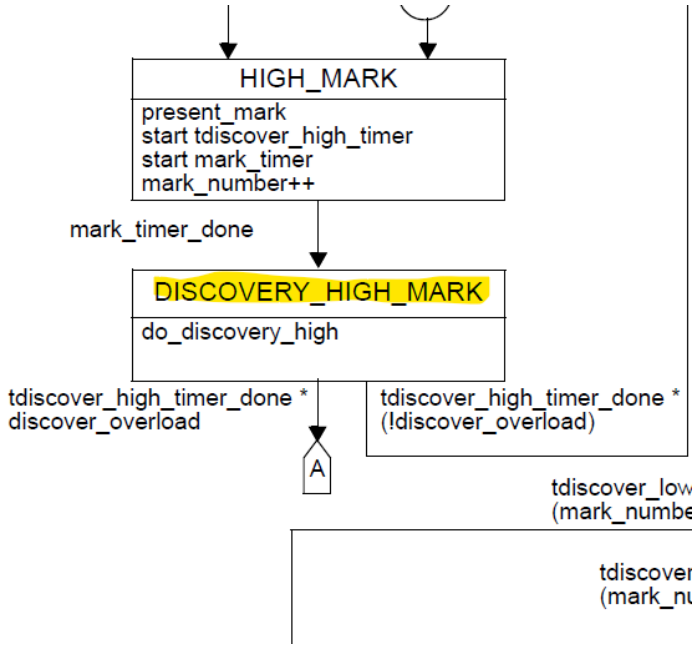
Extending Discovery Event Meaning

Discovery State	MPoE T1M (Multidrop)	Future
DISCOVERYx EVENT 1	DO_DISCOVERY1	
DISCOVERYx EVENT 2	DO_DISCOVERY2	
DISCOVERYx EVENT 3	DISCOVERY_LOW_TYPE_0 (24V?)	Not assigned
DISCOVERYx EVENT 4	DISCOVERY_LOW_TYPE_1 (48V?)	Not assigned
DISCOVERYx EVENT 5	DISCOVERY_LOW_TYPE_MIXED	Not assigned
DISCOVERYx EVENT 6	0 = DA	1 = Extended
DISCOVERYx EVENT 7	DA Extended	Not assigned
DISCOVERYx EVENT 8	DA Extended	Not assigned
DISCOVERYx EVENT n	DA Extended	Not assigned

Insert extra bit at DISCOVERYx EVENT 6 for future extension

MICROCHIP

Comment 2:



Clause/Table	Issue	Suggested remedy	Notes
Paragraph 189.4.4.3 Functions	1. In flow chart we have state DISCOVEY_HIGH_MARK but in definitions do_discovery_high or do_discovery low we call this state DISCOVEY_HIGH – no word MARK	1. Change in functions do_discovery_high and do_discovery low state function name from DISCOVERY_HIGH to DISCOVERY_HIGH_MARK, see next page	

Comment 2- continue- proposals

do_discovery_high

This function returns the following variables:

discover_fault: See 189.4.4.1.

Values: TRUE: Measured IDiscovery was equal to or greater than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.

FALSE: Measured IDiscovery was less than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.

discover_overload: A variable indicating if IMark measured by the MPSE is greater than IMark_overload as defined in Table 189–3. Values: TRUE: Measured IMark is equal to or greater than IMark_overload. FALSE: Measured IMark is less than IMark_overload. discover_high_var: Measured IMark during the most recent discovery_high_mark event.

do_discovery_low

This function measures IDiscovery. This function returns the following variables:

discover_fault: See 189.4.4.1.

Values: TRUE: Measured IDiscovery was equal to or greater than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.

FALSE: Measured IDiscovery was less than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.

discover_low_val: Measured IDiscovery during the most recent discovery_low event

Comment 3 :

Clause/Table	Issue	Suggested remedy	Notes
Paragraph 189.4.4.3	1. Description of the function do_discovery_high does not specifies what current this function measures (compare with description of the function do_discovery_low which specifies that this function measure Idiscovery) 2. Function do_discovery _high may return Discovery_fault variable which measures Idiscovery according to paragraph 189.4.4.1 but the current that measured during discovery_high_mark is referred to as “Imark” and not as “Idiscovery” (for example, see definition of “check_discovery_all” function which distinguish between “Imark” and “Idiscovery”).	1. Add to the description do_discovery_high that this function measure Imark, see next page 2. On discovery fault definition to add measure Idiscovery or Imark in paragraph 189.4.4.1. 3. Modify definition of discovery fault variable in “do_discovery_high” and “do_discovery_low” functions by adding Imark current, see next page	

Comment #3 -continue

Current definition

discover_fault

A Boolean variable indicating whether IDiscovery measured by the MPSE is equal to or greater than IDiscovery_LIM as defined in Table 189–3. The default value of this variable is FALSE.

Proposed definition

discover_fault

A Boolean variable indicating whether IDiscovery or Imark measured by the MPSE is equal to or greater than IDiscovery_LIM as defined in Table 189–3. The default value of this variable is FALSE.

Current definition

do_discovery_high

This function returns the following variables:

discover_fault:	See 189.4.4.1.
Values: TRUE:	Measured IDiscovery was equal to or greater than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.
FALSE:	Measured IDiscovery was less than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.
discover_overload:	A variable indicating if IMark measured by the MPSE is greater than IMark_overload as defined in Table 189–3.
Values: TRUE:	Measured IMark is equal to or greater than IMark_overload.
FALSE:	Measured IMark is less than IMark_overload.
discover_high_var:	Measured IMark during the most recent discovery_high_mark event.

Proposed definition

do_discovery_high

This function measures Imark. This function returns the following variables:

discover_fault:	See 189.4.4.1.
Values: TRUE:	Measured IDiscovery or Imark was equal to or greater than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.
FALSE:	Measured IDiscovery or Imark was less than IDiscovery_LIMduring most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.
discover_overload:	A variable indicating if IMark measured by the MPSE is greater than IMark_overload as defined in Table 189–3.
Values: TRUE:	Measured IMark is equal to or greater than IMark_overload.
FALSE:	Measured IMark is less than IMark_overload.
discover_high_var:	Measured IMark during the most recent discovery_high_mark event.

Comment #3 -continue

Current definition

do_discovery_low
This function measures IDiscovery. This function returns the following variables:
discover_fault: See 189.4.4.1.
Values: TRUE: Measured IDiscovery was equal to or greater than IDiscovery_LIM during most recent DISCOVERY_HIGH or DISCOVERY_LOW state.
FALSE: Measured IDiscovery was less than IDiscovery_LIM during most recent DISCOVERY_HIGH or DISCOVERY_LOW state.
discover_low_val: Measured IDiscovery during the most recent discovery_low event.

Proposed definition

do_discovery_low
This function measures IDiscovery. This function returns the following variables:
discover_fault: See 189.4.4.1.
Values: TRUE: Measured IDiscovery or Imark equal to or greater than IDiscovery_LIM during most recent DISCOVERY_HIGH_MARK or DISCOVERY_LOW state.
FALSE: Measured IDiscovery or Imark was less than IDiscovery_LIM during most recent DISCOVERY_HIGH _MARK or DISCOVERY_LOW state.
discover_low_val: Measured IDiscovery during the most recent discovery_low event.