

HUAWEI ENTERPRISE **A BETTER WAY**

# PD Measurement Baseline

Yan Zhuang, Huawei Technologies

Shiyong Fu, Huawei Technologies

**[enterprise.huawei.com](http://enterprise.huawei.com)**

HUAWEI TECHNOLOGIES CO., LTD.



# Purpose

- According to L2 ad hoc discussion, propose baseline text for PD measurement for IEEE 802.3bt

# New TLVs for PD measurement

## $V_{PD}$ and $I_{port-PD}$ TLV

Enable a PSE to request the measured  $V_{PD}$  and  $I_{port-PD}$  from the PD. This can be used to calculate retracted power on the cable.

Bit	Function	Value/meaning
15:0	$V_{PD}$	$V_{PD} = 0.1 \times (\text{decimal value of bits}) V$ Valid values for these bits are decimal 1 through 570

Bit	Function	Value/meaning
15:0	$I_{PORT-PD}$	$I_{PORT-PD} = 0.1 \times (\text{decimal value of bits}) mA$ Valid values for these bits are decimal 1 through 9620

## Changes in 30.12.2 LLDP Local System Group managed object class

### 30.12.2.1.x aLldpXdot3LocPDMeasuredVoltageValue

APPROPRIATE SYNTAX:

INTEGER

BEHAVIOUR DEFINED AS:

A GET attribute that returns the PD measured voltage value. For a PD, it is the measured voltage value that the PD has currently measured and sent to the remote system. PD measured voltage value is the voltage measured at its PI. The PD measured voltage value is encoded according to Equation (79–x), where X is the decimal value of aLldpXdot3LocPDMeasuredVoltageValue.

### 30.12.2.1.x aLldpXdot3LocPDMeasuredCurrentValue

APPROPRIATE SYNTAX:

INTEGER

BEHAVIOUR DEFINED AS:

A GET attribute that returns the PD measured current value. For a PD, it is the measured current value that the PD has currently measured and sent to the remote system. PD measured current value is the voltage measured at its PI. The PD measured current value is encoded according to Equation (79–x), where X is the decimal value of aLldpXdot3LocPDMeasuredCurrentValue.

## Changes in 30.12.3 LLDP Remote System Group managed object class

### 30.12.3.1.x aLldpXdot3RemPDMeasuredVoltageValue

ATTRIBUTE

APPROPRIATE SYNTAX:

INTEGER

BEHAVIOUR DEFINED AS:

A GET attribute that returns the PD measured voltage received from the remote system by a PSE. The definition and encoding of PD measured voltage value is the same as described in aLldpXdot3LocPDMeasuredVoltageValue (30.12.2.1.x).;

### 30.12.3.1.x aLldpXdot3RemPDMeasuredCurrentValue

ATTRIBUTE

APPROPRIATE SYNTAX:

INTEGER

BEHAVIOUR DEFINED AS:

A GET attribute that returns the PD measured current value received from the remote system by a PSE. The definition and encoding of PD measured current value is the same as described in aLldpXdot3LocPDMeasuredCurrentValue (30.12.2.1.x).;

## Changes in 79.3.2.x Power Via MDI TLV

Bit	Function	Value/meaning
15:0	$V_{PD}$	$V_{PD} = 0.1 \times (\text{decimal value of bits}) \text{ V}$ Valid values for these bits are decimal 1 through 570

Bit	Function	Value/meaning
15:0	$I_{PORT-PD}$	$I_{PORT-PD} = 0.1 \times (\text{decimal value of bits}) \text{ mA}$ Valid values for these bits are decimal 1 through 9620

### 79.3.2.x PD Measurements

The PD measured voltage value field may be included to carry the PD's measured voltage value at the port defined in Table 79–x.

The PD measured current value field may be included to carry the PD's measured current value at the port defined in Table 79–x.

**Thank you!**