

# IEEE802.3at Task Force

## Simplifying 802.3at specifications

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# Objective

- Simplifying 802.3at project by using the same 802.3af Startup parameters.



# Background

- From 802.3af requirements
  - After detection ends PSE may turn on power within 400ms.
  - During PSE/PD startup
    - $I_{inrush} = I_{LIM}$  is 400mA to 450mA limited by PSE
    - 400mA limited by PD if  $C_{pd} > 180\mu F$
    - For 50-75ms
  - After successful startup period
    - $I_{port\ max} = 350mA$



# Proposed Concept

- 802.3at PSE and PD, will use 802.3af startup parameters (Previous slide)
- After startup period ends,
  - If PD needs  $>12.95W$ ,
    - PD waits TBD mSec (happen any way..) while consuming max 12.95W and then  
PD allowed to consume its operating power according to its class as advertised by layer 1 or layer 2.
  - If PD needs  $<12.95W$ ,
    - PD allowed to consume its operating power according to its class.
      - (Identical to 802.3af behavior)



# Summary and Recommendations

- Recommending to use the proposed concept
  - Simple
  - Proven
  - Reduce PD hardware cost of startup function
- Simplifies standard
- No need to specify special startup parameters for 802.3at at much higher currents
  
- Other operating modes parameters TBD as per table next slide



# Summary and Recommendations

1		2		3		4	
Startup linrush, Tinrush		Normal Powering, Iport		OVLD, Icut, Tcut		Short circuit ILIM, TLIM	
af	at	af	at	af	at	af	at
400-450mA		350mA	I <sub>at</sub>	350- 400mA	1.15xI <sub>at</sub>	450mA	1.32xI <sub>at</sub>
50-75mS				50-75mS		50-75mS	TBD



# Discussion

