

# IEEE P802.3at DTE Power Enhancements Task Force

## Classification Ad Hoc Status Report

11-14-06 Dallas

Clay Stanford  
Linear Technology

# The Knoxville Problem

## THE DESIRE

Allow PD to only implement Type 1 (.af) L1 classification and then request >13W using L2.



## THE PROBLEM

If a Type 2 L1-only PSE (i.e. high-power midspan) doesn't know maximum power, will not allocate enough power for PD to operate in all modes.



## SOLUTION 1

Allow but discourage configuration in specification:  
*It is recommended that the power requested by a Type 2 PD during Layer 2 classification not exceed the power requested during the preceding Layer 1 classification. This will ensure that the maximum power required by the Type 2 PD is available when powered by a Type 2 PSE that only supports Layer 1 classification.*

OR

## SOLUTION 2

Allow Type 2 L1-only PSE (i.e. high-power midspan) to power both Type 1 (.af) and Type 2 (.at) PDs with maximum power (~30W).