Interpretation Number:	03-03/05
Topic:	Power over Ethernet Isolation requirements
Relevant Clause:	33.4.1
Classification:	Not a request for interpretation

Interpretation Request

I have read over the IEEE standards -802.3af -2003 document, section 33.4.1 on Isolation (page 57).

The statement:
The PSE shall provide electrical isolation between the PI device circuits, including frame ground and all PI leads.

Could you expand on the definition of PI device circuits?

The information I provided you on Friday (see background information below), describes our project in relation to this question:

We are building a five and eight port unmanaged Ethernet switch. As a population option, we will be end-point power-sourcing equipment for Power over Ethernet.

The Forty-eight volt PoE supply will be external to our device and our device will essentially pass the 48 volts on to the PD's via a PSE PoE manager chip. This supply is also expected to provide input power to the Ethernet Switch chip.

Our question involves the isolation required for the PI and the DC input to our device.

We realize that we must maintain 1500 Volt isolation between the PI and frame ground.

We cannot maintain isolation between the PI and the DC input power to the device. Is this a concern?

Do we need to maintain isolation between the PI and the Ethernet switch circuitry? In other words, do we need an isolated supply between out DC input and the Ethernet switch circuitry?

Interpretation for IEEE Std 802.3af-2003

This request is being returned to you because the questions asked do not constitute a request for interpretation but instead a request for consultation. Generally, an interpretation request is submitted when the wording of a specific clause or portion of a standard is ambiguous or incomplete. The request should state the two or more possible interpretations or the lack of completeness of the text. While you referred to subclause 33.4.1, you have not indicated any problem with the text.