Proposed Changes to Annex C of 1394-1995 Specification
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Background

This proposal is intended to eliminate an ambiguity/contradiction between the 1394A statements about PHY-link isolation and a statement that appears in the normative Annex C of 1394-1995. In particular, according to 1394A, galvanic isolation between the PHY and link is not required and it is not required for node's logic or chassis grounds to be isolated from Vp of a cable.

The proposed modification is to clarify that the isolation being referenced is between cable power and the ac power main Proposed wording change is given below.

C.1 Overview

The cable PHY layer specification described in clause 4 is designed for external box-to-box applications. (An example would be a CPU, printer, and video camera interconnected with a Serial Bus interface in which the CPU and printer are powered from different ac outlets while the camera takes power from the Serial Bus cable.) The external cable provides power to all PHY's on the bus so that they can maintain their bus repeater capability even if the node local power is off. To accommodate different power domains (different ac power sources), each node shall provide isolation between the node's local ac power and the external cable power. The external environment requires mechanically strong shielded cables and connectors.