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Project Scope Issues WRT Media

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Content of This Presentation

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- Scope of this presentation: 15 meter only
- Who is this old geezer?
- Two topics
 - Scope of Dot3cg doesn't fully address automotive needs
 - Backplane CFI presentation is deficient in several ways

Who is this old geezer?

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- Dot 3 participant/voter since March, 1983
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10 M era	TF Ch, WG Vch	Xrx, Synoptics
100 M era	WG Chair	Bay Networks
1G era	WG Chair	Nortel
Since then	802 Vchair, 802.23 Chair 802 Emeritus 802.3 Active	Nortel GraCaSI S.A. Independent

Scope of Dot3cg

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- **SPECIFY ADDITIONS TO AND APPROPRIATE MODIFICATIONS OF IEEE STD 802.3 TO ADD 10 MB/S PHYSICAL LAYER (PHY) SPECIFICATIONS AND MANAGEMENT PARAMETERS FOR OPERATION, AND ASSOCIATED OPTIONAL PROVISION OF POWER, ON SINGLE BALANCED TWISTED-PAIR COPPER CABLING.**

Two Topics

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- Scope of Dot3cg doesn't fully address automotive needs
- Backplane CFI presentation is deficient

Topic #1

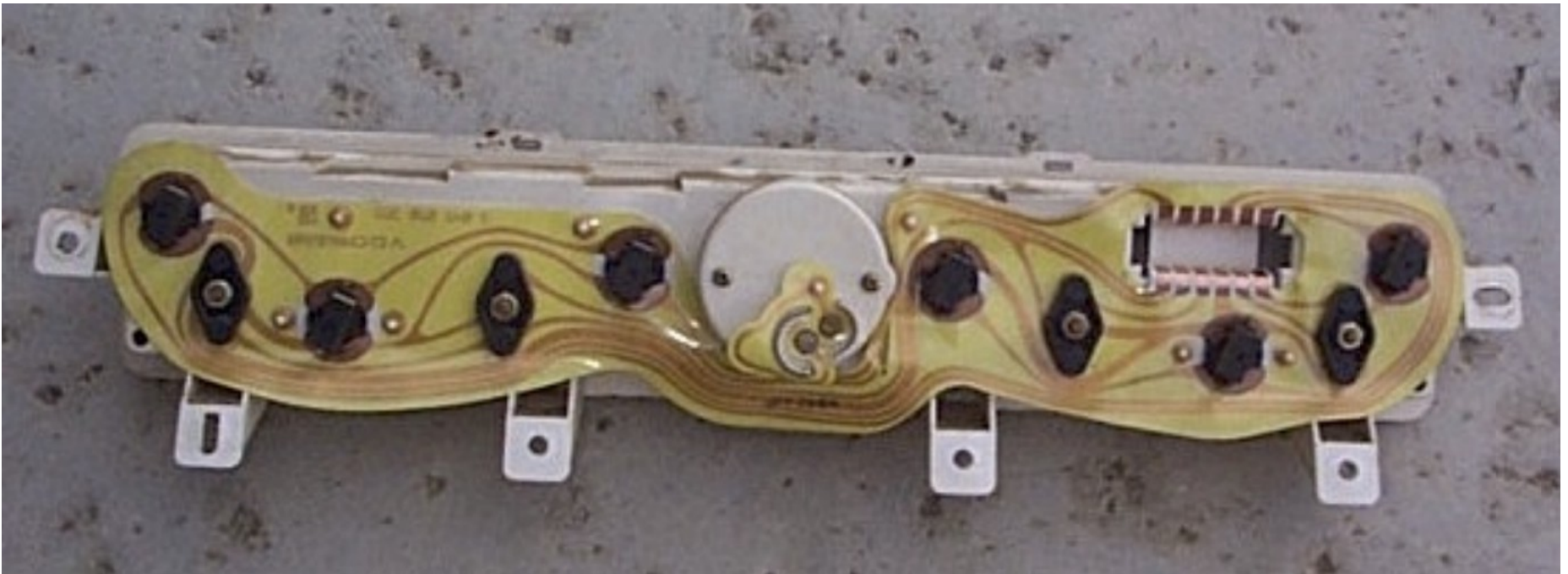
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- Scope of Dot3cg doesn't fully address automotive needs
 - Media specifically limited to **SINGLE BALANCED TWISTED-PAIR COPPER CABLING**
 - Media thus excludes (e.g.) circuit boards and flex circuit
 - Both are commonly used in automotive

Automotive Flex Circuit

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- Photo of lousy example
(Best I could find w/ Google)



Topic #1

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- Solution: Broaden scope in PAR
 - Media: **SINGLE BALANCED TWISTED-PAIR COPPER CABLING OR TRANSMISSION EQUIVALENT**
- Byproduct: Should encompass the requirements for server backplanes

Topic #2

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- Backplane CFI presentation is deficient
 - We do standards for technologies, not applications
 - The consensus deck was mostly about the market.
 - The presentation deck didn't discuss the significant implementation history of backplane Ethernet and why new technology is needed
 - In representing the backplane market for the CFI the driving factors for new technologies were not the focus of the consensus deck.

History of backplane Ethernet GraCaSI

- 1980 – 1995 “Hubs” were 1 Ethernet, many cards
- CSMA/CD across the backplane
- Many vendors: DEC, SynOptics, H-P, 3Com, ChipCom
- MILLIONS of ports shipped
-



History backplane Ethernet 2

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- Lots of Point-to-Point Gigabit Ethernet (1000BASE-T) in servers
- Much of it still in service

Driving Factors - Bkplane Servers

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- CSMA/CD a possibility
 - Significantly reduces pin count on backplane
 - Implementation easy at 10 Mb/s
 - Low b/w and latency req'ts for Ctrl Plane Netwk
- Lower signal swing than legacy – Lower noise
- Half the pin count of 10BASE-T
- Prospects good for very low cost
 - Probably below 10BASE-T at maturity
 - Share volume w/ automotive and IoT

Backplane Servers

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BUT

**WE COULD FIX ALL THIS
BY JUST**

**FIXING THE MEDIA PHRASE IN THE PAR SCOPE
(which we should do anyway for automotive reasons)**

P802.3cg MOTION:

Amend the media portion of the P802.3cg
PAR statement to read:

**...ON SINGLE BALANCED
TWISTED-PAIR COPPER CABLING
OR TRANSMISSION EQUIVALENT**

Mover: Thompson 2nd: _____
TECH Y: _____ N: _____ Abs: _____ PASS/FAIL

IEEE 802.3 MOTION:

Amend the media portion of the P802.3cg
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Mover: Thompson 2nd: _____
TECH Y: _____ N: _____ Abs: _____ PASS/FAIL

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THANK YOU !

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STANDARDS ADVISORS

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PRINCIPAL

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