

TIA TR-42 Liaison to IEEE

Val Rybinski
The Siemon Company
Vice-Chair, TR-42.7

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Interim TIA TR-42.7 Meeting

- **December 6, 7, and 8, 2004**
- **Orlando, FL**
- **Reviewed IEEE 802.3an 10GBASE-T cabling needs**
- **Addressed revisions to TSB-155 and addendum 10 (augmented category 6) to '568-B.2**

Summary of TIA TR-42 Output

- **Draft 1.2 of TSB-155: legacy category 6 cabling from 250 MHz up to 500 MHz**
- **Draft 1.3 of TIA-568-B.2-10: augmented category 6 cabling**
- **Documents are anticipated to be ready for committee ballot in February of 2005**

Status of TSB-155

PN-3-0134 (proposed TSB155): Additional Requirements for 4-Pair 100Ω Category 6 Cabling, draft 1.2

- Maximum frequency specified is 500 MHz**
- All shall statements are removed**
- Cabling insertion loss**
- Cabling NEXT/PSNEXT loss**
- Cabling ELFEXT/PSELFEXT loss**
- Cabling PSANEXT**
- Mitigation methods**
- Level IIIe field testers**

TSB-155 Mitigation

Mitigation is one strategy to reduce alien crosstalk coupling for existing category 6 cabling plant. Mitigation includes:

- **Unbundling cables and cords**
- **Interconnect vs. cross-connect**
- **Use of long length cords**
- **Use of augmented category 6 components**
- **All of the above**
- **See TR42.7-05-01-013-NEXTMitandTest.pdf**

Status of '568-B.2-10

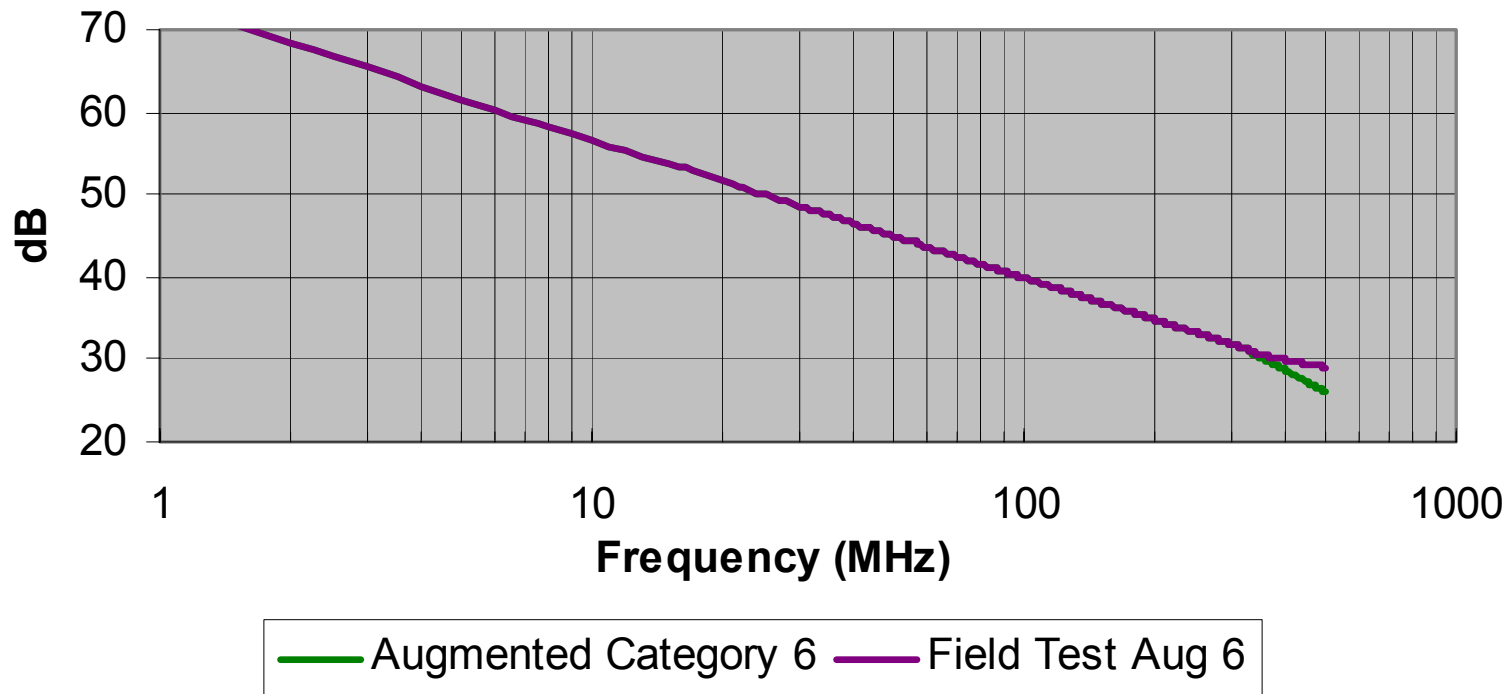
PN-3-4426-AD10 (augmented category 6): Additional Requirements for 4-Pair 100Ω Augmented Category 6 Cabling, draft 1.3

- Maximum frequency specified is 500 MHz**
- Cabling and component insertion loss**
- Cabling and component NEXT/PSNEXT loss**
- Cabling and component ELFEXT/PSELFEXT loss (TBD)**
- Cabling PSANEXT and component PSANEXT (TBD)**
- Cabling and component AFEXT (TBD)**
- Field tester requirements TBD**

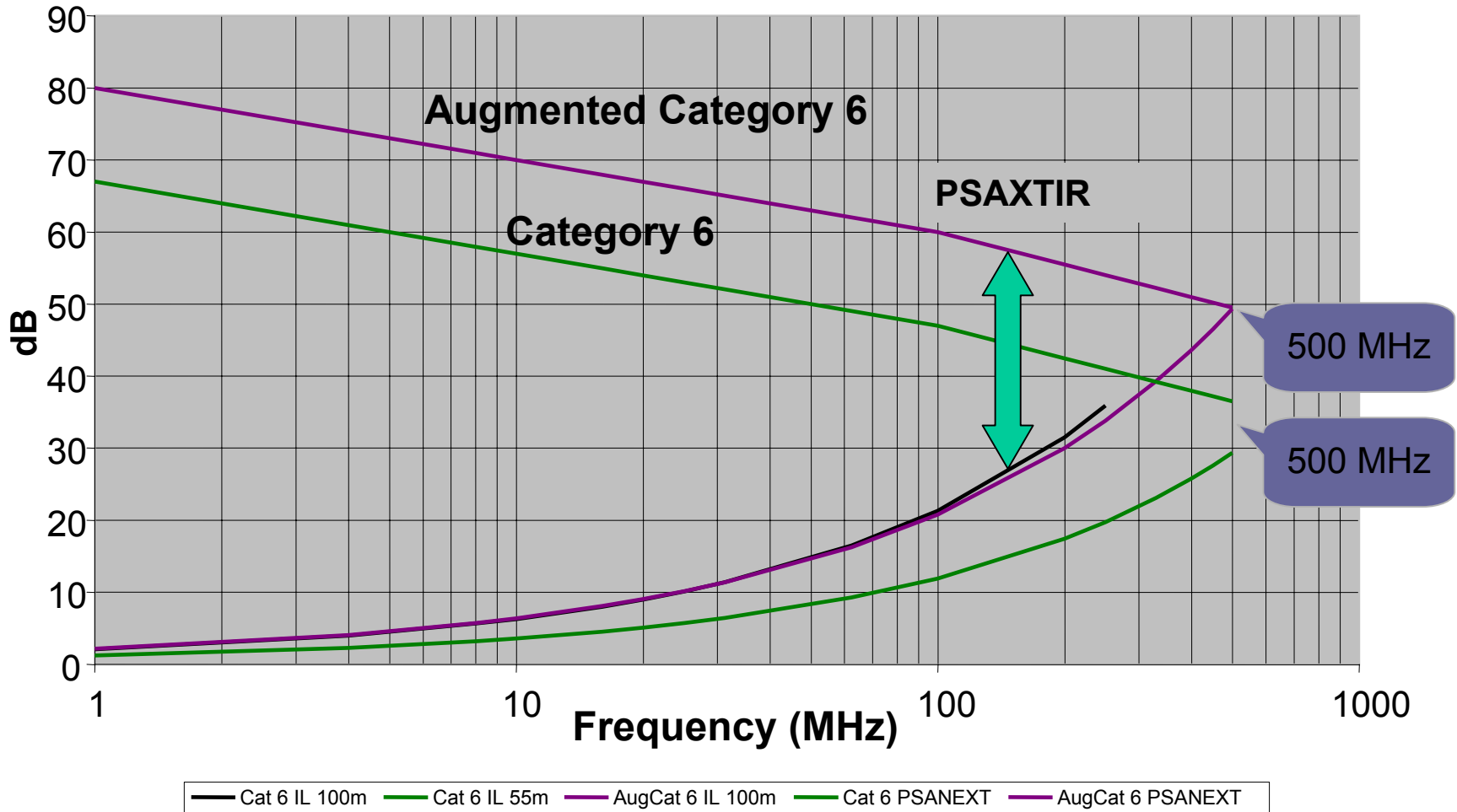
AC6 Measurement Allowance

High frequency allowance for channel NEXT loss measurement error (TBD)

Augmented Category 6 Channel NEXT Loss



AC6 and Category 6 PSAXTIR



TSB-155: PSAXTIR>0

PSANEXT at 100 MHz versus channel length for installed base category 6 cabling required for PSAXTIR > 0

– 55 meters	47 dB
– 70 meters	52 dB
– 85 meters	57 dB
– 100 meters	62 dB

Next TIA Meeting

February 28 – March 2, 2005

Mesa, AZ

www.tiaonline.org

Thank you

Contact Information:

Val Rybinski

**The Siemon Company
101 Siemon Company Drive
Watertown, CT 06795**

cell phone: (602) 793-4029

valerie_rybinski@siemon.com