

Category 7 / Class F Cabling



- *Definition and Implementation*
- *Technical Issues*
- *Economics and Trends*

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The History



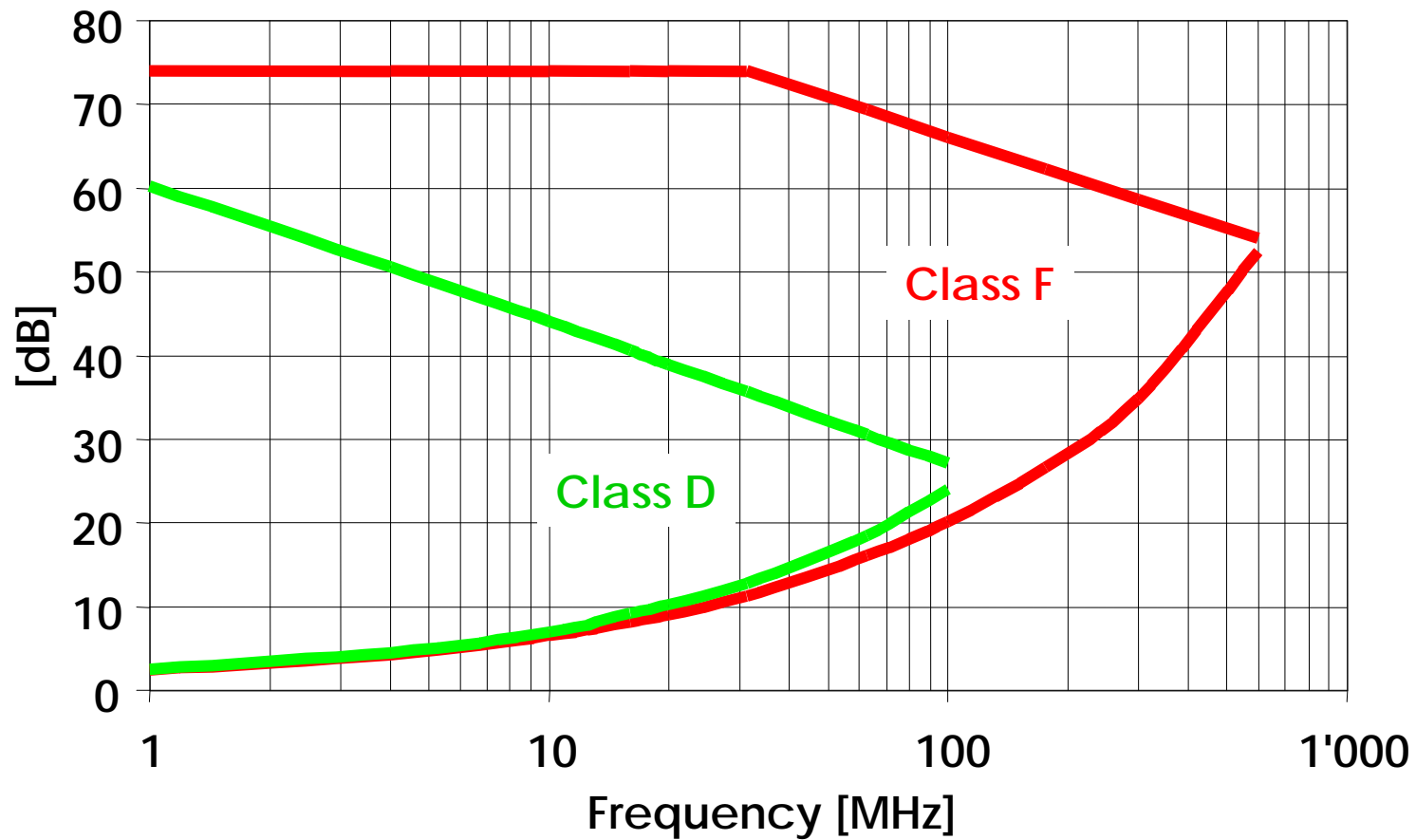
- **1994** *Proposals for 300 MHz cable from France and Denmark.*
- **1995** *Proposal for 300 MHz cable from NEMA.*
- **1995** *Proposal for 600 MHz Cabling system from Germany.*
- **1996** *DIN E 44312-5 Standard proposal for 600 MHz Cabling system.*

The History



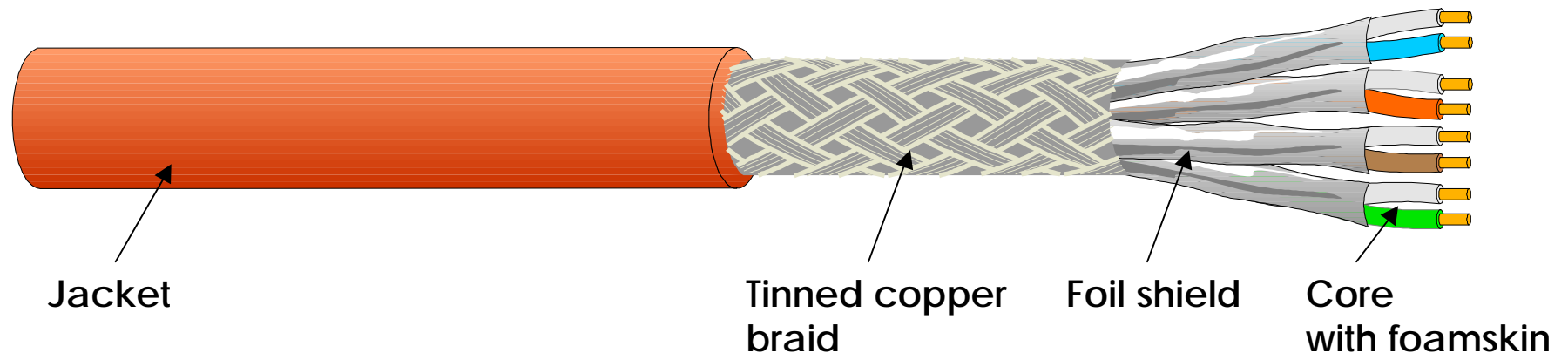
- **1996** *Introduction of German proposal for 600 MHz in ISO/IEC.*
- **1997** *Commitment of ISO/IEC to support a new Category 7 / Class F for 600 MHz Cabling system.*
- **1997** *CENELEC SC46XC launches voting procedure on 600 MHz cable standard.*

Implementation of Channel



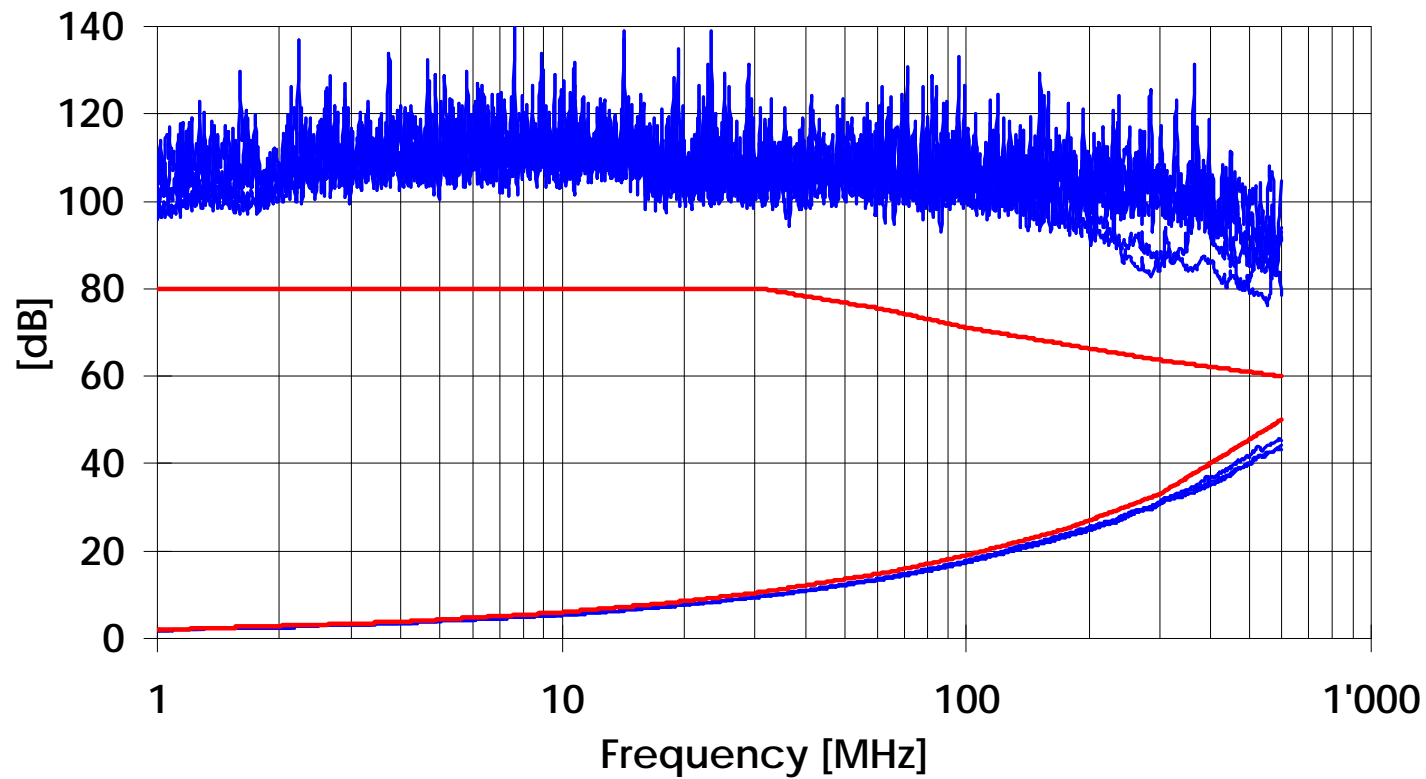
Technical Issues: Cable

- *STP, 4 pair, 100 Ohm Impedance, typically 23 AWG (0.57 mmØ) bare copper*



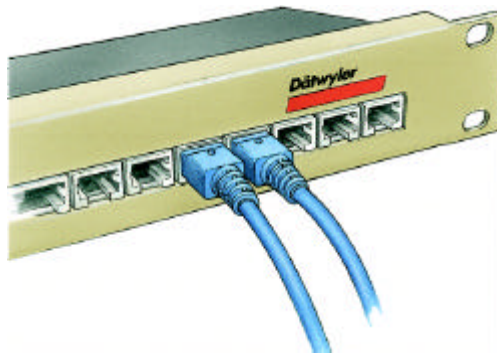
Technical Issues: Cable

Cable Performance Category 7

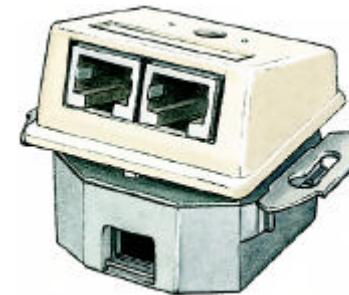


Technical Issue: Connector

- *Default connector is RJ45.*
- *600 MHz Performance by RJ45 delivered only through pins 1/2 and 7/8.*

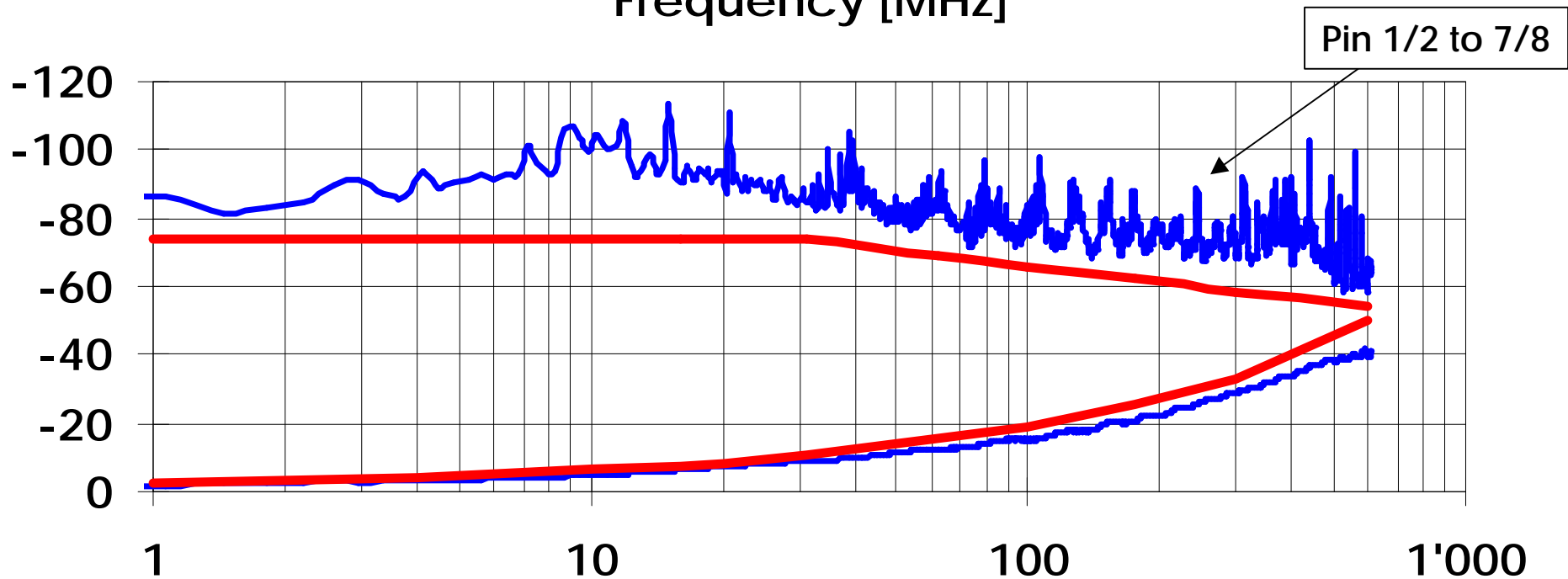


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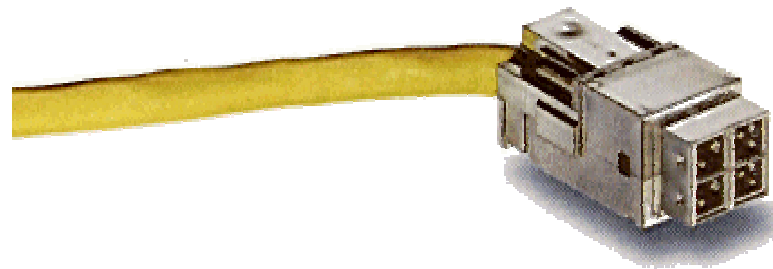
Technical Issue: Connector

Link Performance on RJ45
Frequency [MHz]

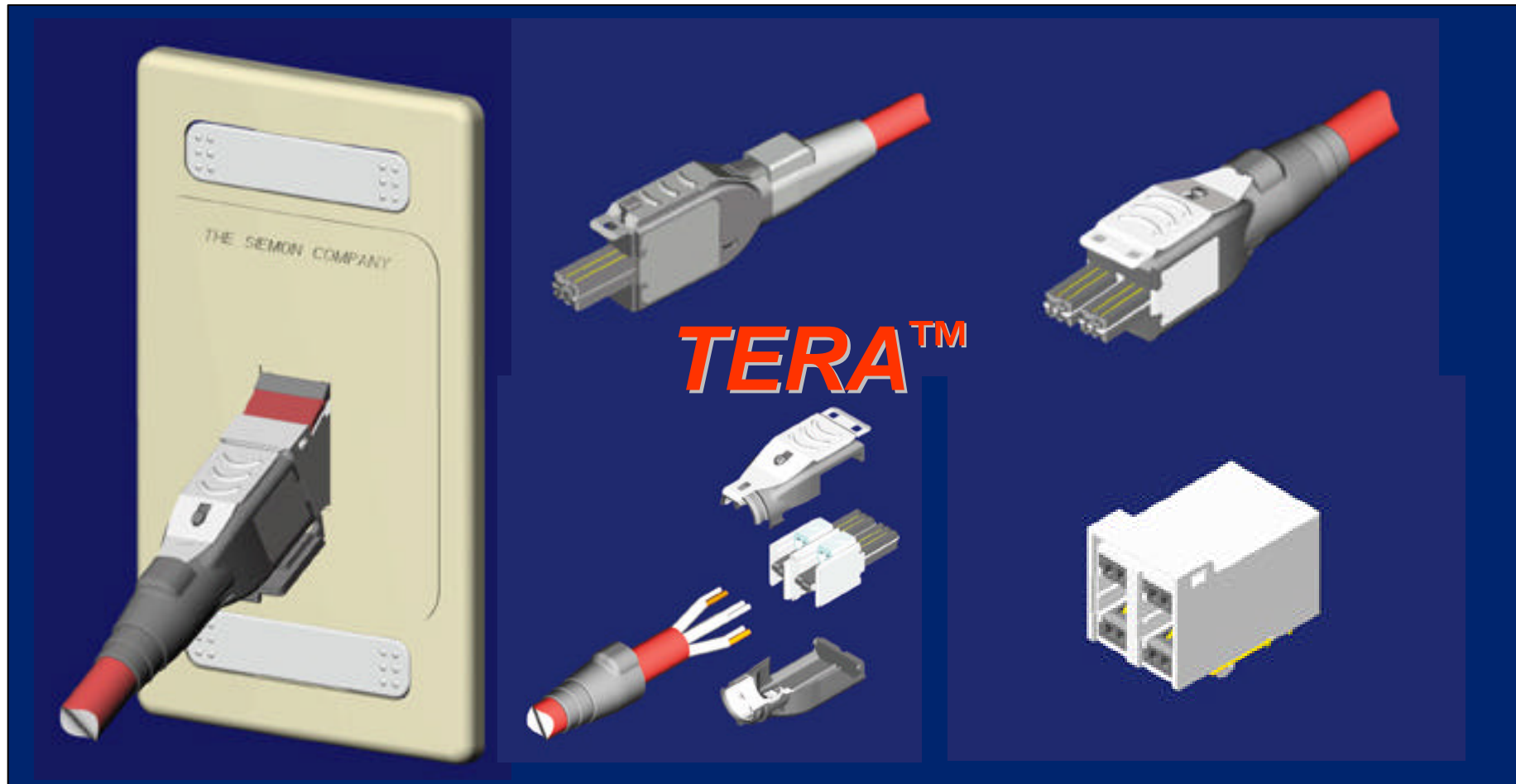


Technical Issue: Connector

- *Several new "Cat. 7" connectors are under Development. (e.g.: AMP, BKS, Siemon, Telesafe, T&B)*
- *IEC/TC48 is currently discussing new standard proposals.*



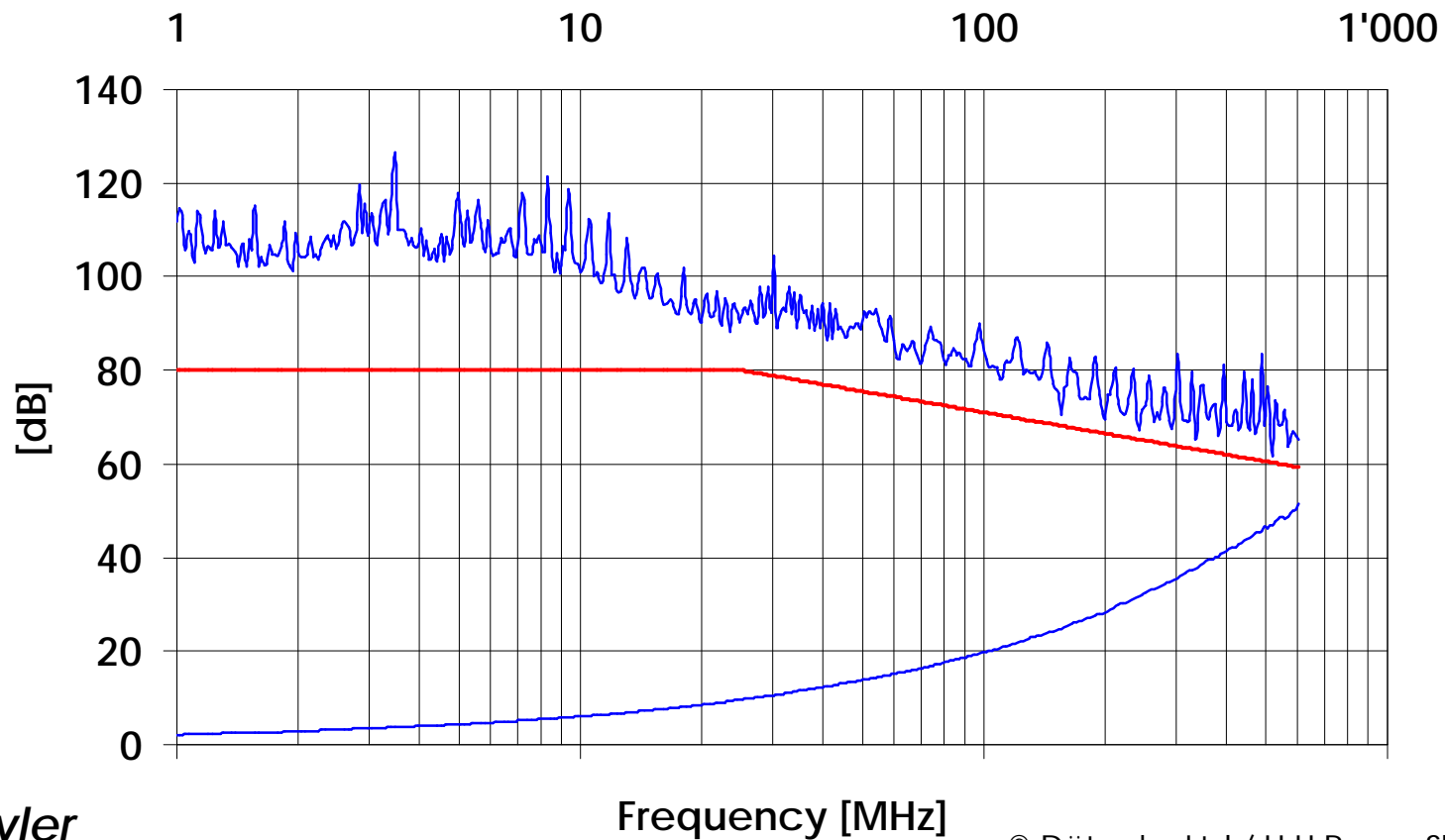
Technical Issues: Connector



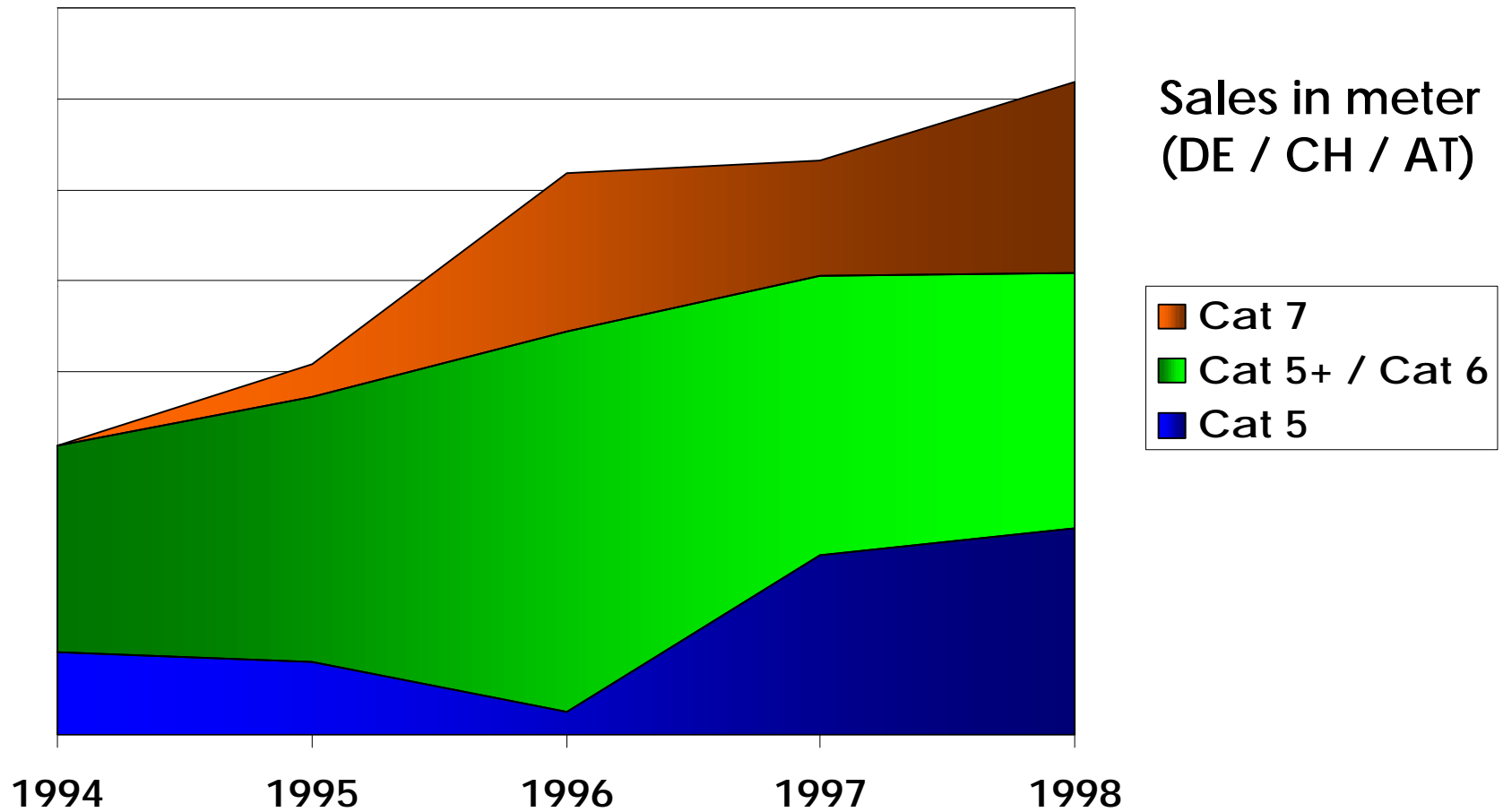
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Technical Issue: Connector

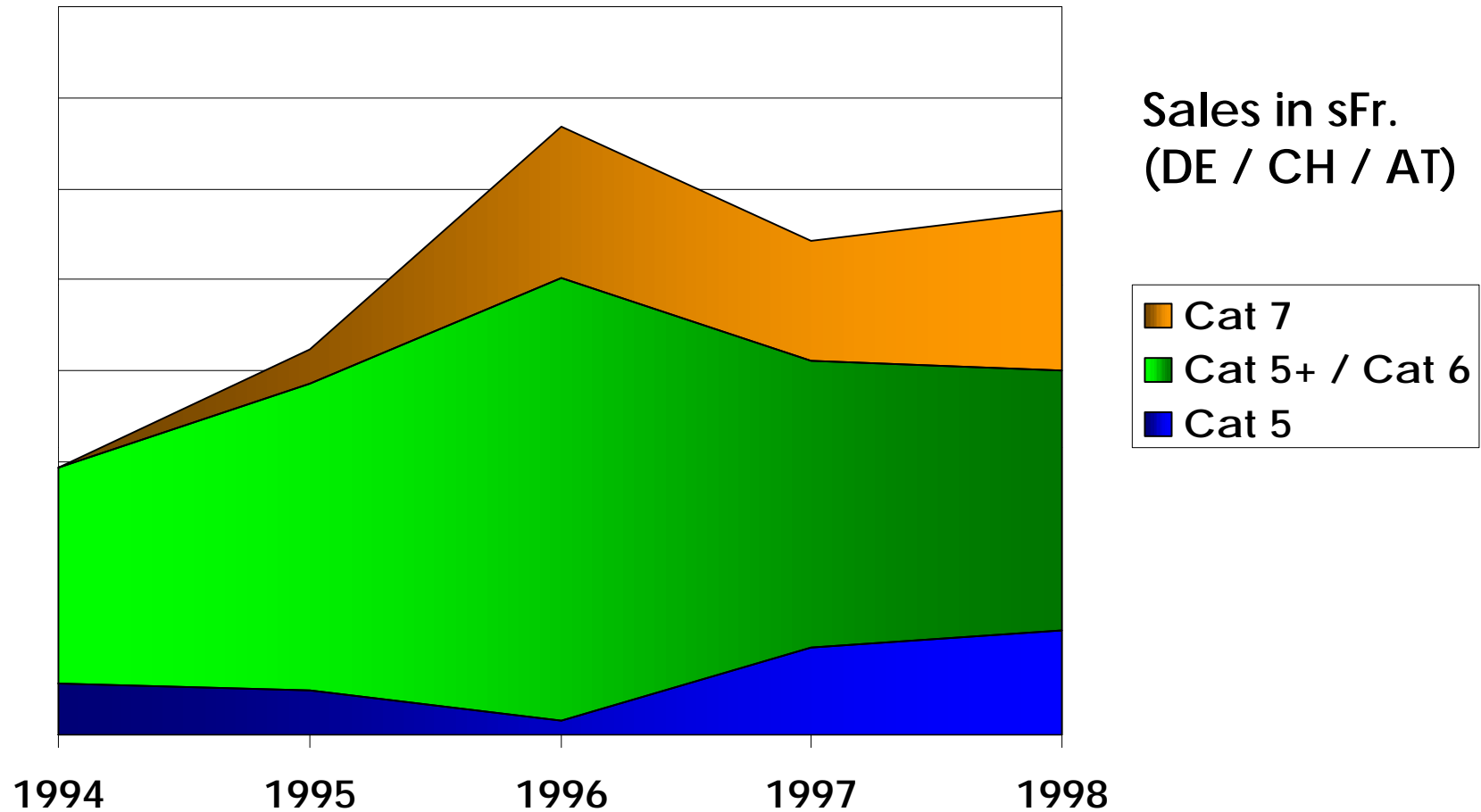
Channel Performance TERRA



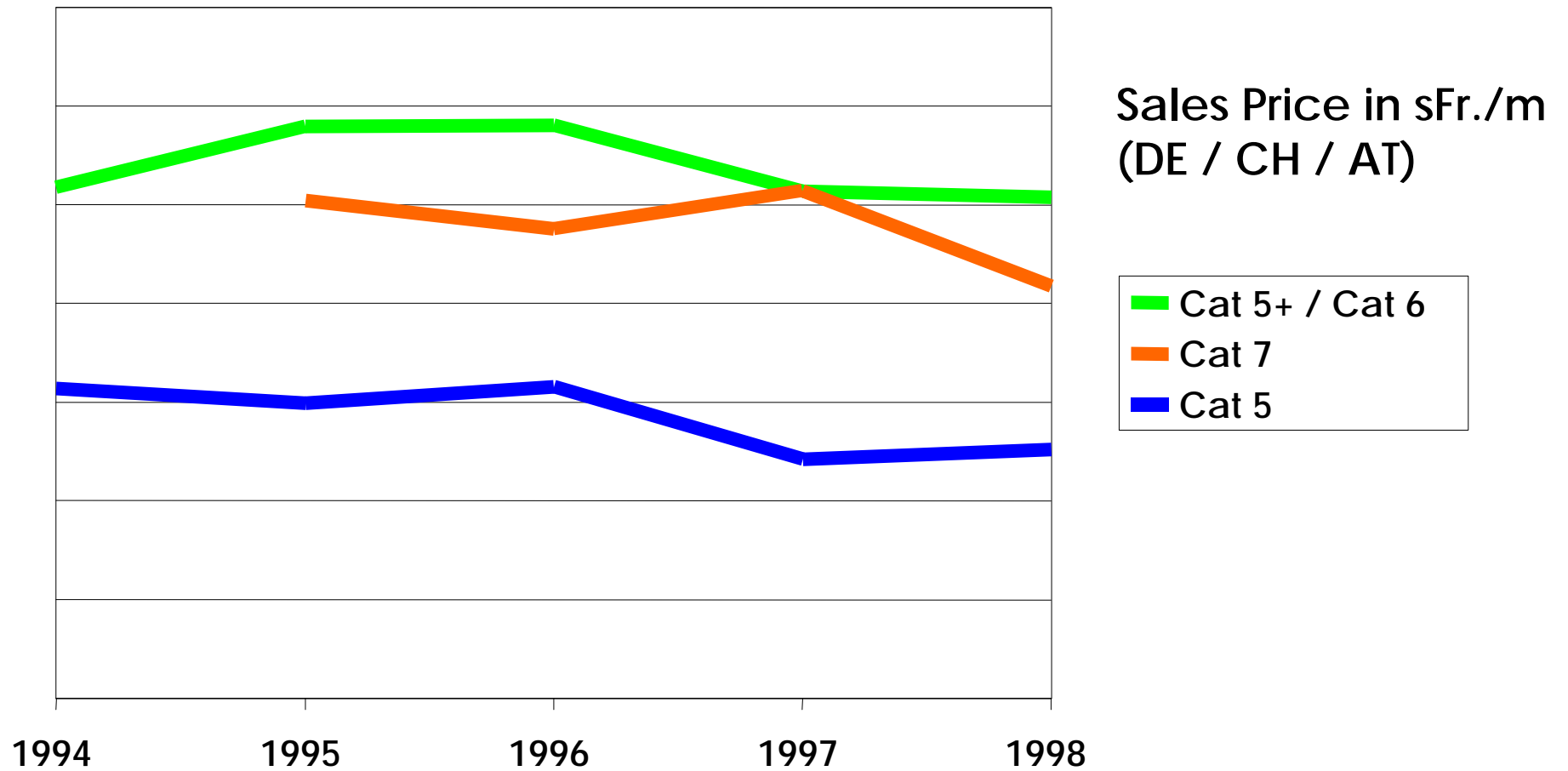
Economics and Trends



Economics and Trends



Economics and Trends



Conclusion



- *Cables and connecting hardware for 600 MHz Cabling systems are available at reasonable costs.*
- *In Europe the installed basis is growing because many end-users are investing in safety margins.*