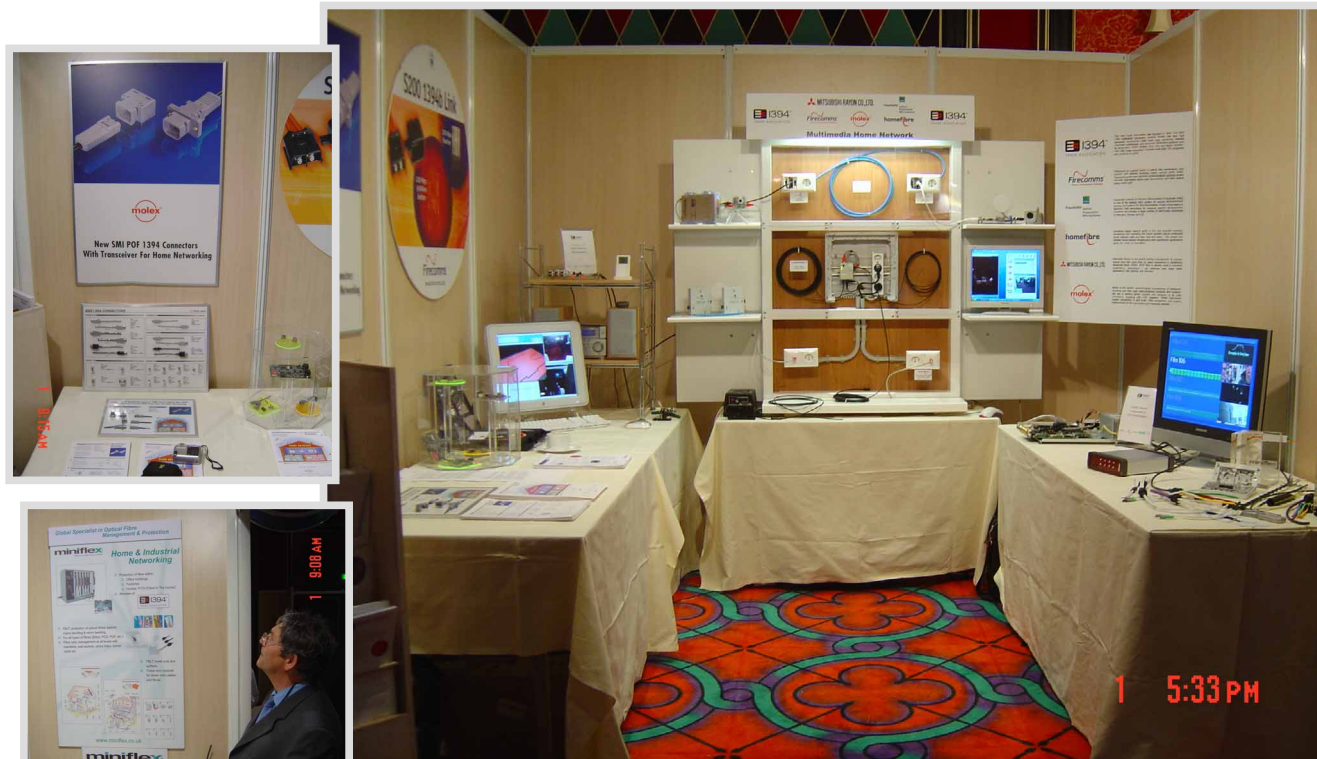


- POF auf Messen und Konferenzen
 - Net at Home
 - CES 2005
- Vergleich der Netzwerk Technologien
- Smart House - Cenelec

Net at Home 2004



Net at Home 2004




Fraunhofer Institut
Photonische
Mikrosysteme


Photonics Communications Technology





By members of 1394TA

 **MITSUBISHI RAYON CO.,LTD.**

CES 2005

**By Mitsubishi Rayon at the booth of
POFTO**



CES 2005



CES 2005

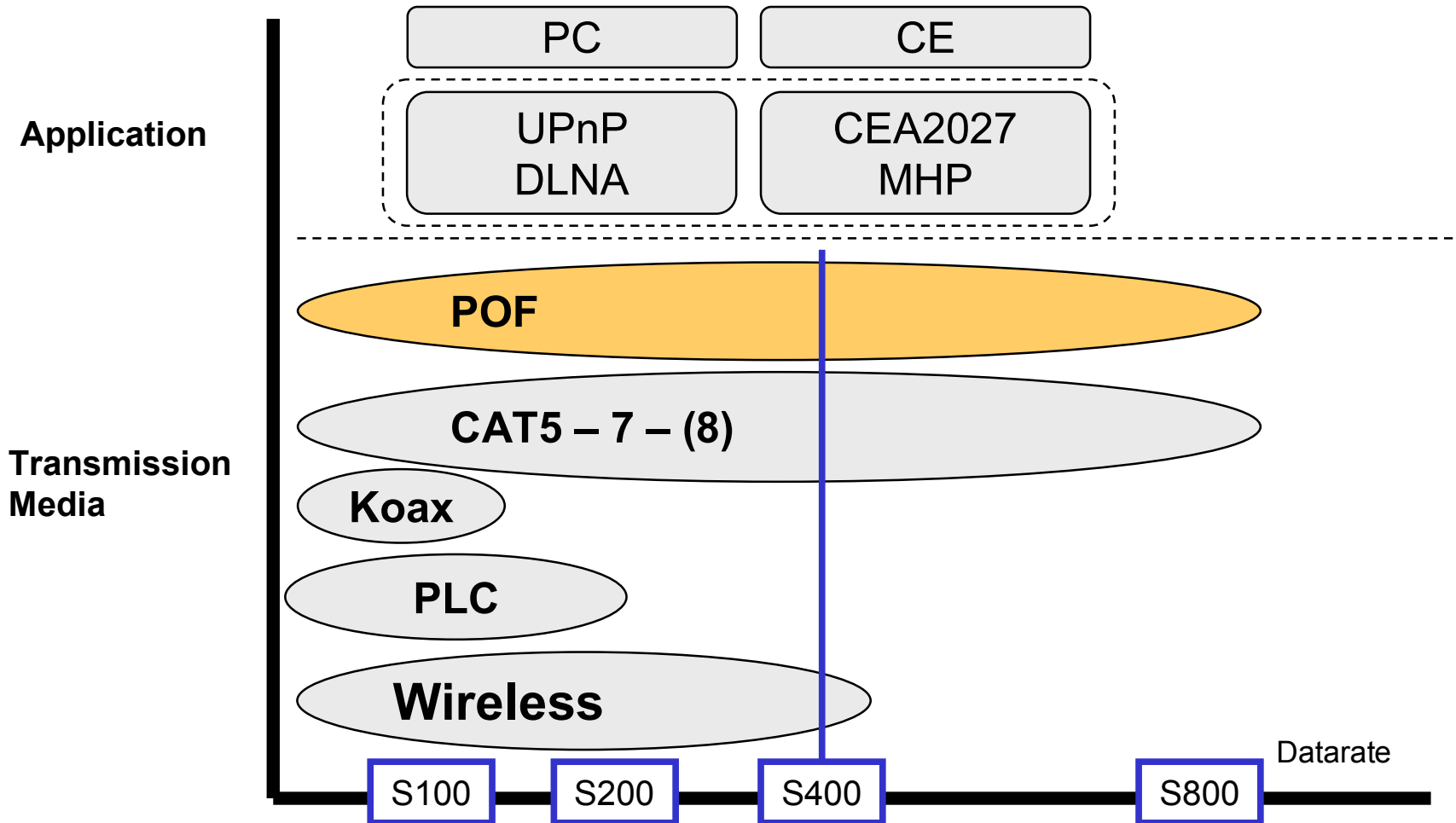


8 March 2005

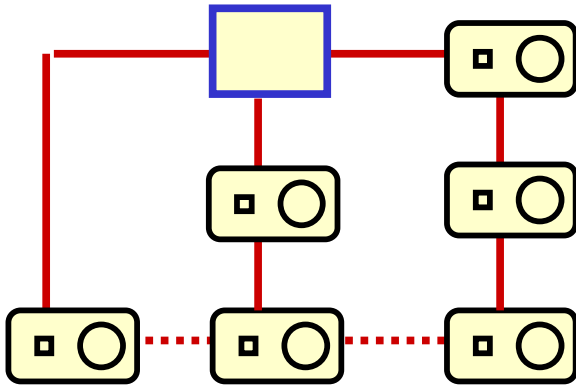
POF for Home Networks - Status / Activities 2005

6

Competition Technologies

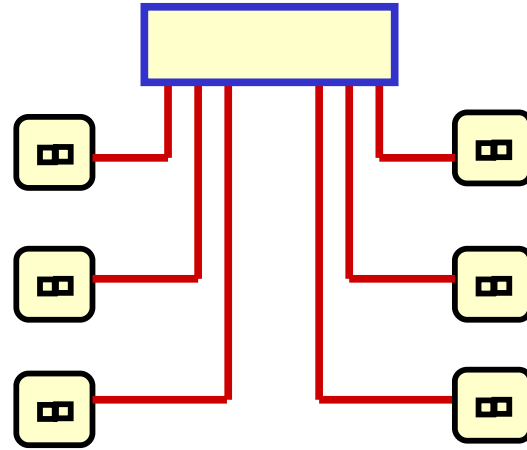


Active versus passive infrastructure



Power Budget:	
Loss FOT Repeater:	1,5 dB
Attenuation cable:	3,0 dB
Loss FOT:	1,5 dB
.....	

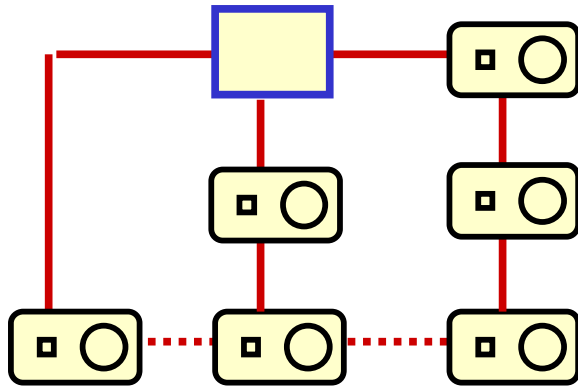
Total Loss:	6 dB



Power Budget:	
Loss FOT-Switch	1,5 dB
Attenuation cable:	5,0 dB
Loss Connector:	1,5 dB
Loss FOT:	1,5 dB

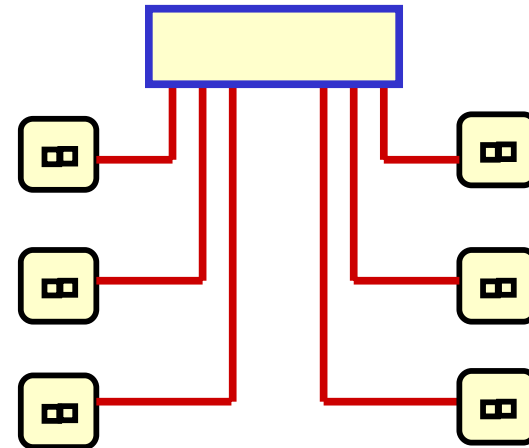
Total Loss:	9,5 dB

Free System Architecture



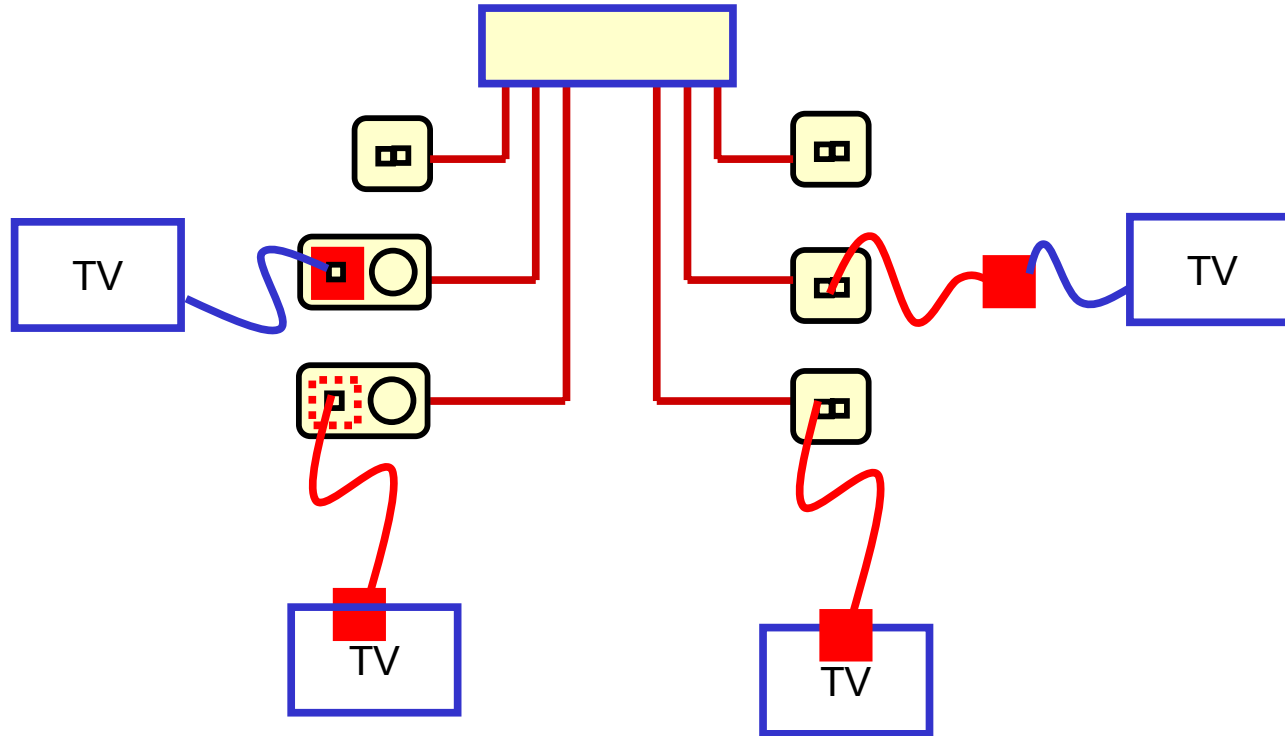
Possible with IEEE1394b
(Limited with Ethernet)

Structured Cabling Architecture Star Topology



For Ethernet and IEEE1394b

Active/passive versus passive infrastructure



1798
1799

Table 2.10 – Media supported by clusters / transmission performance needed ("OSI layer 0")

Cluster → Medium ↓	Home automation	Home appliances	Security systems	Communications technology	Information technology	Audio/video
Wireless	prEN 50090-5-5	Not used		DECT	ISO/IEC 8802-11	
Infrared/optical	prTS 50090-5-4	Not used		not used		
Power-line	prEN 50090-5-1	EN 50056-1, EN 50056-2-1	Not used		Not used	Not used
CCCB	EN 50090-9-1, EN 50173-4 (CCCB 1)	EN 50090-9-1, EN 50173-4 (CCCB	EN 50173-4 (CCCB ¹⁾	EN 50173-4 (CCCB	Not used	Not used
ICT	EN 50173-4 (CCCB ¹⁾	EN 50173-4 (CCCB	EN 50173-4 (CCCB ¹⁾	EN 50173-4 ICT	EN 50173-4 ICT	Restricted to EN 50173-4 ICT
BCT balanced	EN 50173-4 (CCCB ¹⁾	EN 50173-4 (CCCB	EN 50173-4 (CCCB ¹⁾	EN 50173-4 ICT	EN 50173-4 ICT	EN 50173-4 BCT-B
BCT coaxial	Not used	Not used	Not used	Not used	Not used	EN 50173-4 BCT-C

¹⁾ Specifies the cabling infrastructure that needs to be completed for the connection of application with the proper connecting hardware.

¹⁾ Capability to share the pair used for other clusters subject to protocol used for layer 1.

Figure 2.10 – Choice of medium for ICT and BCT

In both cases the requirements of the envisaged applications are important. Table 2.10 provides an overview of standards for transmission channel performance that are either generic for a cluster, that is a group of application, or application specific. If it comes to cabled media the generic specification always shall be preferred. For other media a generic specification should be preferred, as the higher the number of applications supported by a specific solution the easier it is to make use of synergies.

ICT optical ?
BCT optical ?

1800 2.3.3.5 Choice of physical protocol (OSI layer 1)

1801 Table 2.11 provides a list of physical layer protocols that are on one hand supported by
1802 products of the clusters listed and on the other hand offer a high likelihood that
1803 communications with equipment of other clusters will be supported. The choice of physical
1804 layer protocols used within a SmartHome should be based on the specifications listed in
1805 Table 2.11.

1806 **Table 2.11 – Clusters and physical layer (OSI layer 1)**

Cluster → Using ↓	Home automation	Home appliances	Security systems	Communications technology	Information technology	Audio/video
Wireless	prEN 50090-5-5	Not used		DECT	ISO/IEC 8802-11	WiFi
Infrared/optical	prTS 50090-5-4	Not used		not used		AC3 optical
Power-line	prEN 50090-5-1	EN 60335-1,	Not used		Not used	Not used
CCCB channel	EN 50090-5-2,			POT ¹⁾	Not used	Not used
ICT channel	EN 50090-5-2, ISO/IEC 8802-3	Not used, ISO/IEC 8802-3		POT, ISDN, ISO/IEC 8802-3	ISO/IEC 8802-3	ISO/IEC 8802-3, 77
BCT balanced channel	EN 50090-5-2, ISO/IEC 8802-3	Not used, ISO/IEC 8802-3		POT, ISDN, ISO/IEC 8802-3	ISO/IEC 8802-3	ISO/IEC 8802-3, 77
BCT coaxial channel	Not used	Not used	Not used	Not used	Not used	EN 50083-7
¹⁾ A pair that is used for an analogue telephone can not be shared with equipment that uses EN 50090-5-2. Bold: Transport protocol used by front end equipment <i>Italics:</i> Transport protocol used by back end equipment						

Danke