PROTOCOL

to exercise

Ethernet

Group / Class	Secretary	Signature
5 / **3BHEL**	**HOFSTÄTTER A.**	
Exercise- / Delivery date 10th March 2014	Employee	Signature
Teacher GRASINGER	Employee	Signature
Grade	**Employee**	Signature

Ethernet

(Layer 2)

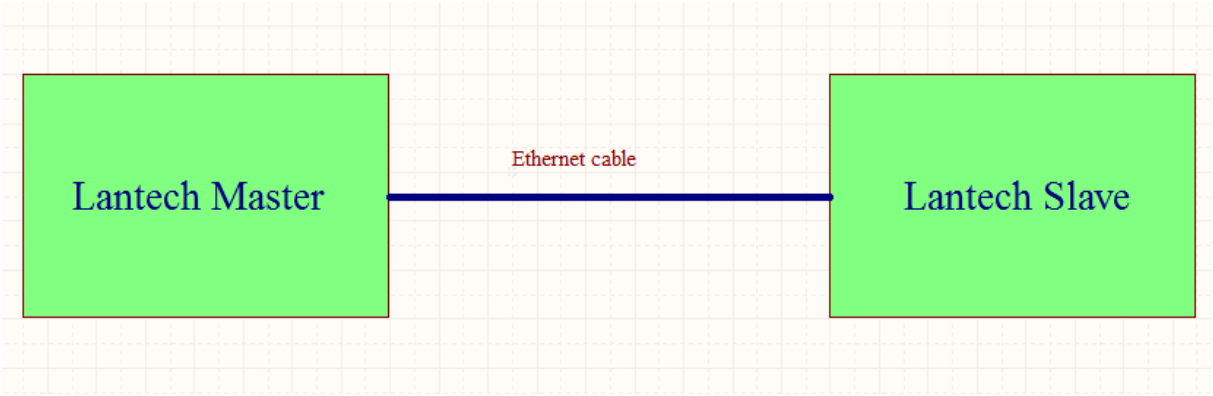
Used Devices

Nr.	Device	Manufacturer	Type	Place Nr.
1.	**Network Measurement Tool**	**Lantek**	**Lantek 64**	-

Tasks:

The task of this workshop lab was to measure several different values attributable to the ethernet network installed in P429. Given was an ethernet cable with a length of 9m. The measurements had to be done with a measurement device called LANTEK 6A by the company Ideal Industries Inc. The ethernet cable had to be connected to the measurement devices as shown in the figure below.

Fig.1: Measurement setup



By doing so, it was possible to generate the following values:

Length:

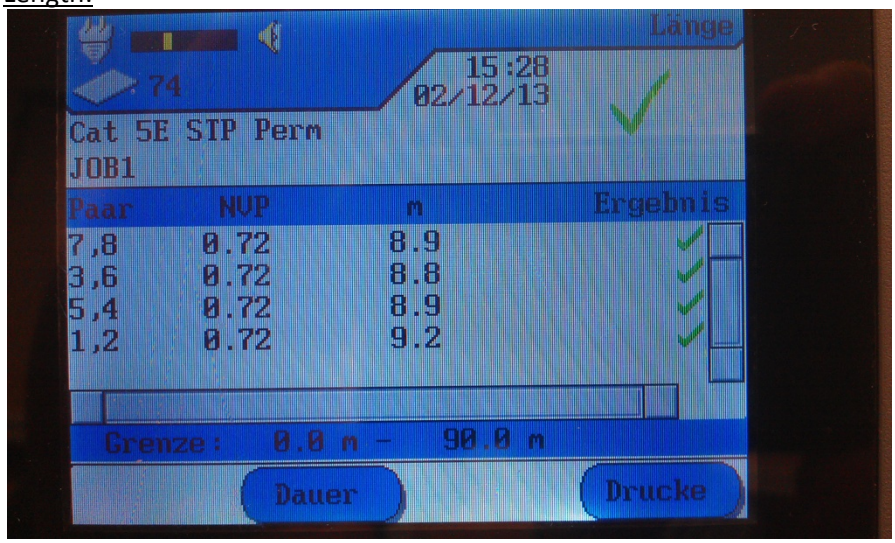


Fig.2: Length of the cable

The pair of conductors varies because the length is measured from the running time and this depends on the capacity.

Running time

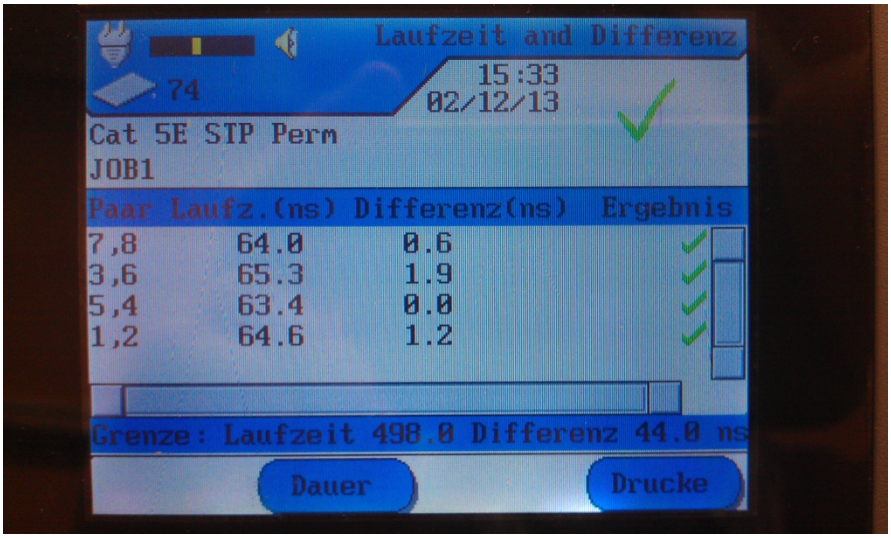


Fig.3: Running time and difference

You can see that there are different running times. They depend on the capacity produced by the twisted wire pairs.

Wiring

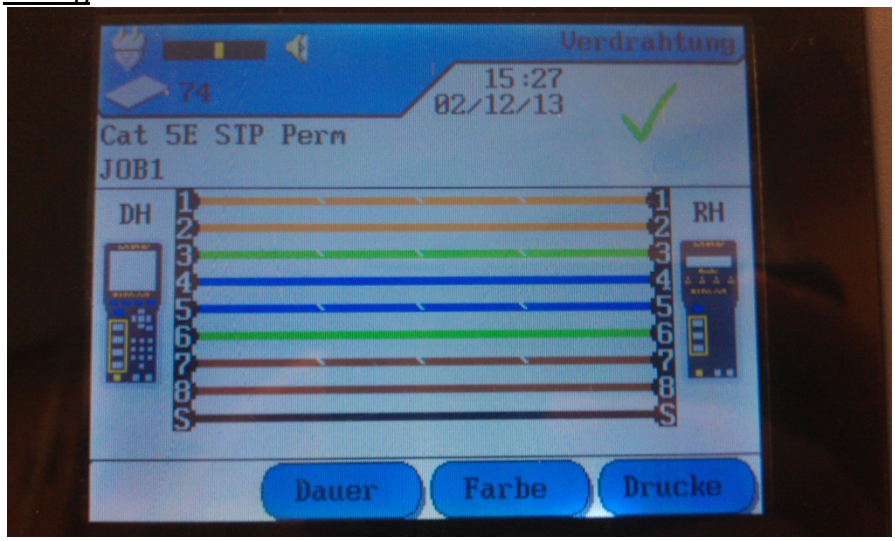


Fig.4: Wiring

The figure shows that this cable is not a cross over cable and both plugs have been mounted correctly.

Capacity

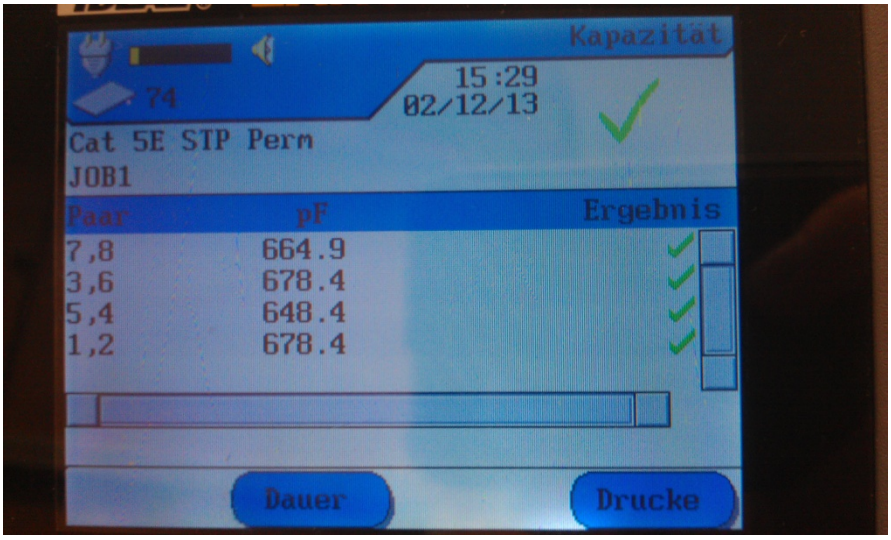


Fig.5: Capacity of the wire pairs
The capacity depends on how much the cable is twisted.

Resistance

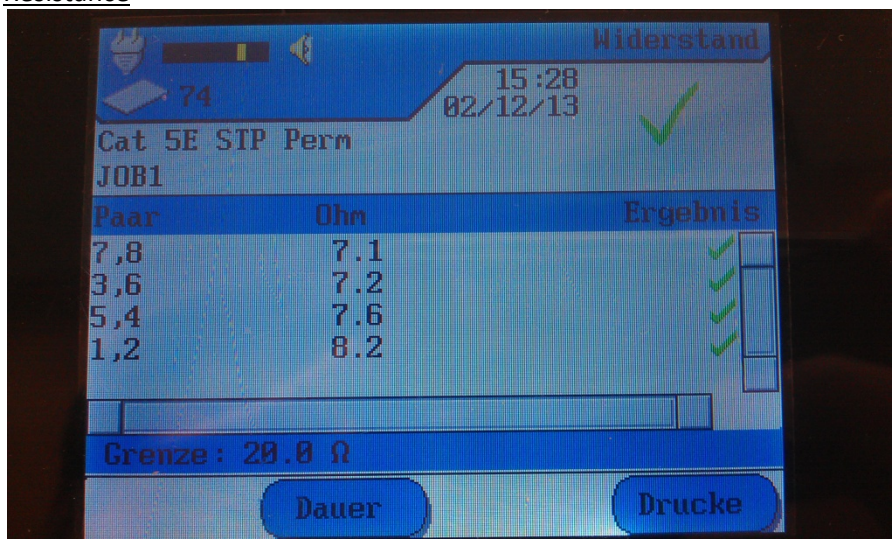


Fig.6: Resistance of the wire pairs

Attenuation

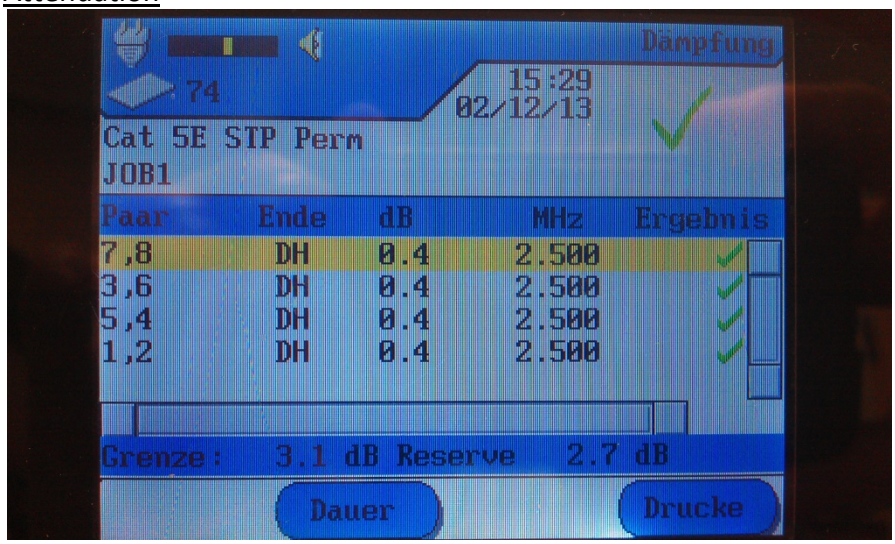


Fig.7: Damping

Impedance

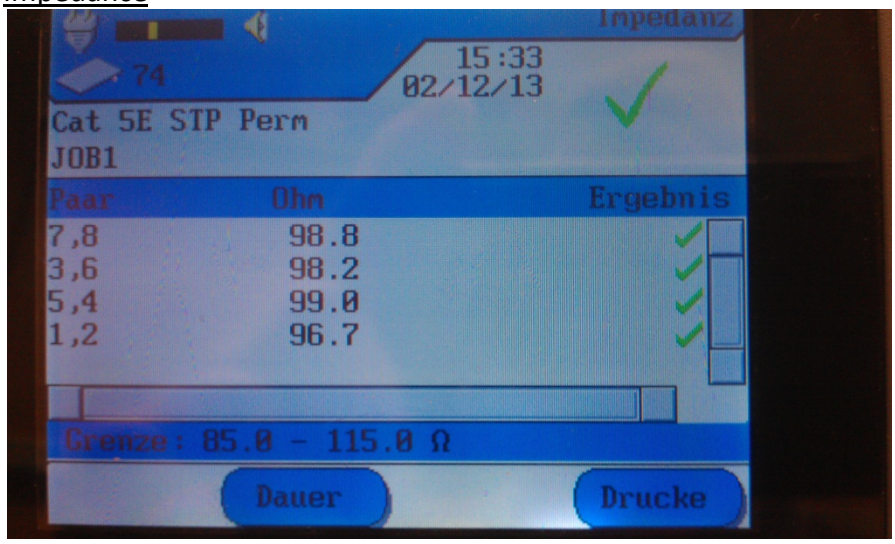


Fig.8: Impedance of the wire pairs