VSB TECHNICAL UNIVERSITY OF OSTRAVA | FACULTY OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE | DEPARTMENT OF TELECOMMUNICATIONS

# Instruction for practical lessons

# xDSL TECHNOLOGY

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# Quick general instructions for coverage xDSL technology

**Target practice:**

- Know basic principles of xDSL technology
- Named and defined basic structural for connection internet over phone line with xDSL technology
- Practical trying connection by ADSL line and measure basic parameters

**Before the practice, study from the lectures and recommended literature:**

- Main features and parameters of xDSL technology (chapter 10)
- Block schema of ADSL connection, types of xDSL technologies and their basic parameters (chapter 10)

**Assigment:**

With devices in Access network laboratory set ADSL connection and see ADSL line basic parameters and find depend of distance between end user and operator to settings your line.

1. Describe ADSL reference model and functions of ADSL device.
2. Measure according to instruction.
3. Write results to file and save to moodle system.

Comment the individual settings and answer the question to the teacher.

## Instructions for practice of xDSL technology

You already have ADSL modem connected to DSLAM and analyzer ADSL on your workplace.

1) Connect to university network over ADSL modem.

2) Find over web application transfer parameters upstream and downstream (kbit/s) on your workstation. Used this web applications:

http://speedtest.net/

http://speedtest.cesnet.cz/

1) Repeat measurement on different distances (1200m, 2400m and 3600m) The distances you set on simulator of distance situated on laboratory rack (TeleByte simulator). Follow by instructions.

2) Measure the same connection and same distances for upstream a downstream (kbit/s) by analyzer on your workstation. Manuals for analyzer placed on website http://lms.vsb.cz/ Listen information to measurement by lector.

3) Find answer for: What are differences between ADSL Annex A and Annex B?

4) Writes the results and your answer to a template (login.odt) that you download from http://lms.vsb.cz/ and create a graph of measured values (axis x – distance, axis y – down/up rate). Each student puts the completed template called by their login (abc123.odt) to http://lms.vsb.cz/. For completion of tasks, it is possible to obtain up to 2 points. It is not homework!