Communication Networks

VITMAB06

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BME TMIT

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Introduction

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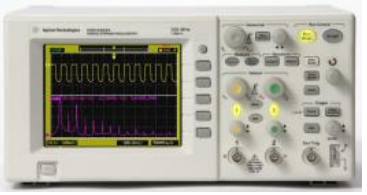
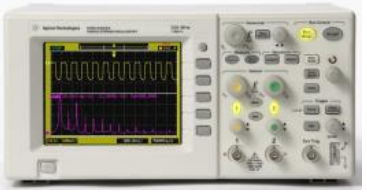
TMiT

Labs



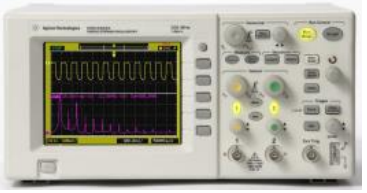
- Goal: getting to know in practice what was said at lectures
- 3 on-line labs
  - LAN
    - Ethernet measurement
    - GNS3 in a virtual environment with simulated Mikrotik WiFi routers
  - VoIP
    - Getting to know a VoIP (Voice over IP) system
    - Asterisk electronic switch software
  - IPTV
    - Examination of real-time (recorded with DVB-T) TV stream
    - Getting to know IP multicast (IGMP).
    - Quality control: channel change time, tv guide download time, ...
- Approximately 4*45=180 minutes each

Lab requirements



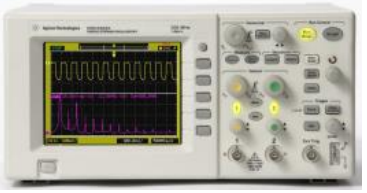
- You can make it at home at any time
- The measurement reports shall be uploaded to Teams (Assignments)
  - 10 May at latest
  - Strict deadline
  - Only ONE lab can be repeated/improved on the last week
  - Lab average counts in the exam mark with a weight of 20%.
- Do the labs on your own
  - Not difficult measurements
  - They are interesting
  - They don't last unrealistically long
  - You can learn a lot from them
  - If you have questions, you can ask them in the given lab's Teams Channel

Lab requirements



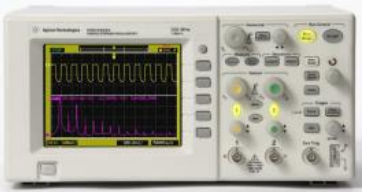
- There is a dedicated Teams Channel to each lab
  - Should you have questions you can ask them here
- Under ‘Files’ tab in it you can find
  - A virtual machine image by which you can carry out the measurement (VoIP, LAN) or recorded voice and image files that you shall analyze (IPTV)
  - A User Guide that contains
    - Summary of theory
    - Introduction how to use image
    - Reference guide to tools/programs in image
  - Report file
    - Contains the detailed exercises you have to carry out + questions
    - You shall write your answers into it
    - Shall be uploaded

If you get stuck…



- First read the User Guide carefully
- Discuss with your colleagues, who completed the lab yet
- Ask question on the lab channel
  - But before read it through, probably some of your colleagues asked it before and was answered

Lab supervisors



- Ivett Kulik
  - VoIP

- Al Nahdi Amad Salim
  - LAN
  - IPTV

Planned schedule

09.04 Tue 14:15-15:45	Lab requirements Historical overview Voice transmission, numbering Analog systems
10.04. Wed 8:30-10:00	PCM, codecs
16.04. Tue 14:15-15:45	VoIP
17.04. Wed 8:30-10:00	IPTV
23.04. Tue 14:15-15:45	Signaling
24.04. Wed 8:30-10:00	Fiber Optic
30.04. Tue 14:15-15:45	Test
07.05. Tue 14:15-15:45	Mobile Networks
08.05. Wed 8:30-10:00	Repeated Test
14.05. Tue 14:15-15:45	Mobile Networks
15.05. Wed 8:30-10:00	Mobile Networks
21.05. Tue 14:15-15:45	WiFi
22.05 Wed 8:30-10:00	Mobile Networks