

This is a first trial of online chalkboard.
Sounds good...

The Multimedia Internet
Lesson starts at 16:30
I'm writing like this...

MULTIMEDIA INTERNET
PART 1 - LESSON 1 - 09/03/2020

MULTIMEDIA INTERNET, 10 CREDITS

2 PARTS: → SKIDSETS: MN----- (5 CREDITS)

PART 1: → SKIDSETS: MS----- (5 CREDITS)

PART 2: → SKIDSETS: MS----- (5 CREDITS)

(NO CR): MULTIMEDIA INTERNET: PART 1 + PART 2

(5 CR): MULTIMEDIA INTERNET APPLICATIONS: PART 2

THURSDAY

MONDAY: PART 1
TUESDAY: PART 1
WEDNESDAY: PART 2
FRIDAY: PART 2

MATERIAL:

- SLIDESETS ON BEEP
- RECORDINGS OF LESSONS
- THHS NOTES OF LESSONS THAT I WILL UPLOAD ON BEEP

EXAM: WRITTEN EXAM

2 PARTS (PART 1 + PART 2)

↗ MULTIMEDIA INTERNET

1 PART (PART 2) → MULTIMEDIA INTERNET APPLICATIONS

YOU CAN TAKE PART 1 AND PART 2 IN
DIFFERENT EXAM SESSIONS

PREAPPELO (PRE-EXAM): I WILL TRY

X

PART 1: QUALITY OF SERVICE FOR THE TRANSPORT OF
MULTIMEDIA CONTENTS THROUGH THE INTERNET

- NETWORK: ARCHITECTURES AND PROTOCOLS TO

PROVIDE QOS. FOR MULTIMEDIA SERVICES

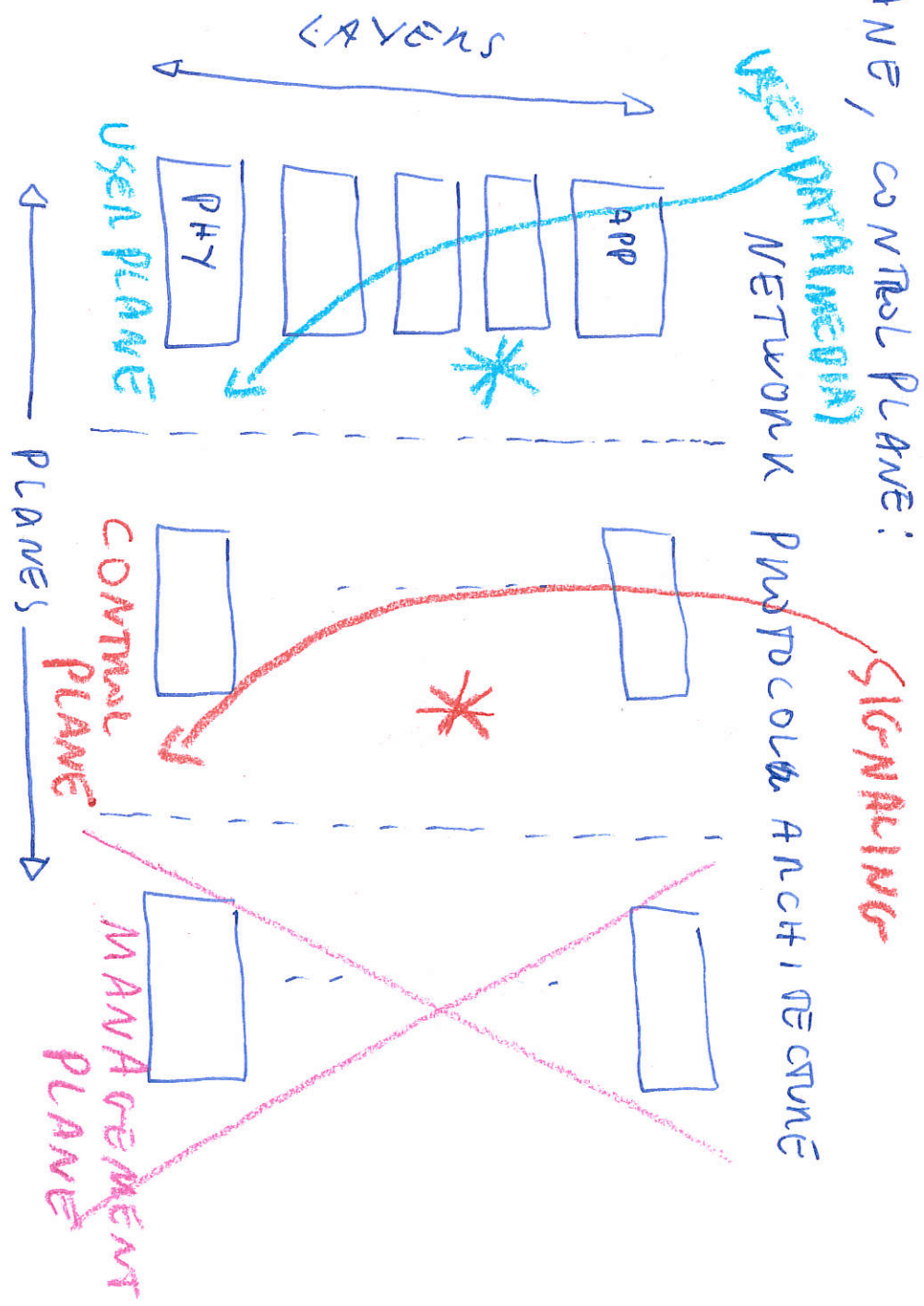
→ USER PLANE ←

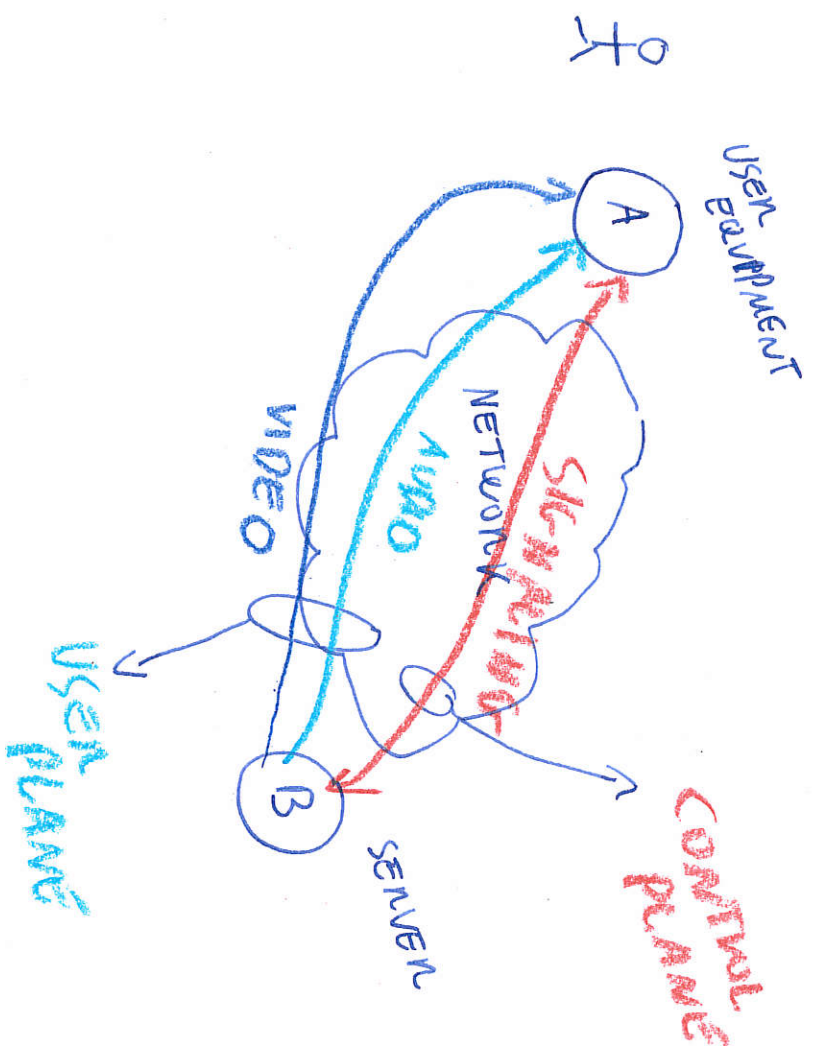
PART 2: SAME TOPIC, BUT WE WILL CONCENTRATE ON:

→ CONTROL PLANE ←

USER PLANE, CONTROL PLANE:

User plane and control plane carry different types of info.





SIGNALING:

- setting up connections for the media transfer
- modifying the delivery of media
- e.g. (PAUSE, FASTFORWARD, ...)
- tearing down connections

EXAM:

PART 1:

- 2 EXERCISES (NUMERICAL) } 1:30 hour
- 1 OPEN QUESTION

PART 2 : - 4 OPEN QUESTIONS] 1 hour

IN AN EXAM SESSION PART 1 AND PART 2 ARE DONE IN SEQUENCE:

FIRST PART 1

SECOND PART 2

NO MIDTERM EXAMS: HOPEFULLY PRE-EXAM AT END COURSE

PART 1, FIRST SLIDESET.

QoS multimedia applications

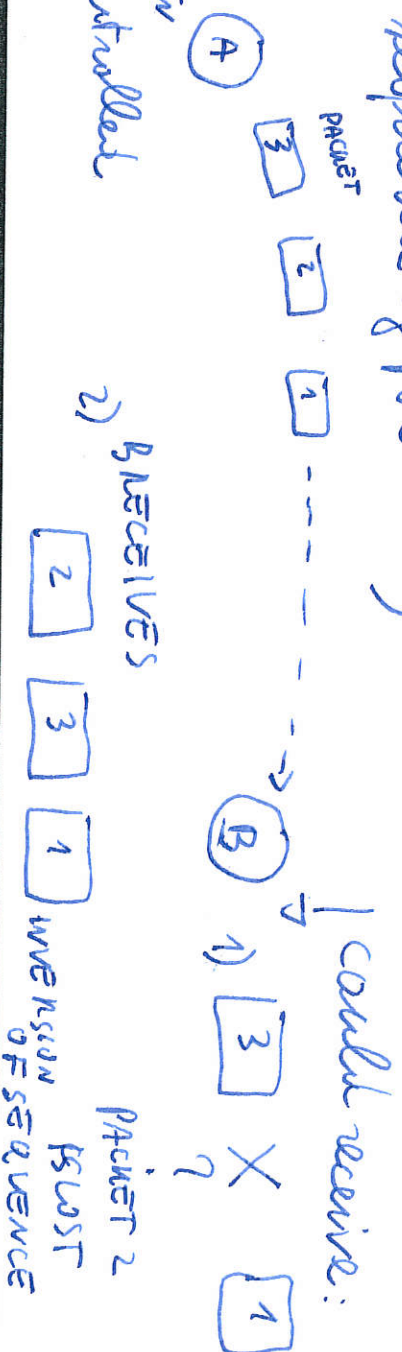
The current internet is a **BEST-EFFORT** network (mostly)

There is no guarantee on:

- packet delay
- packet loss
- correct sequence of packets

} The current IP service in the internet

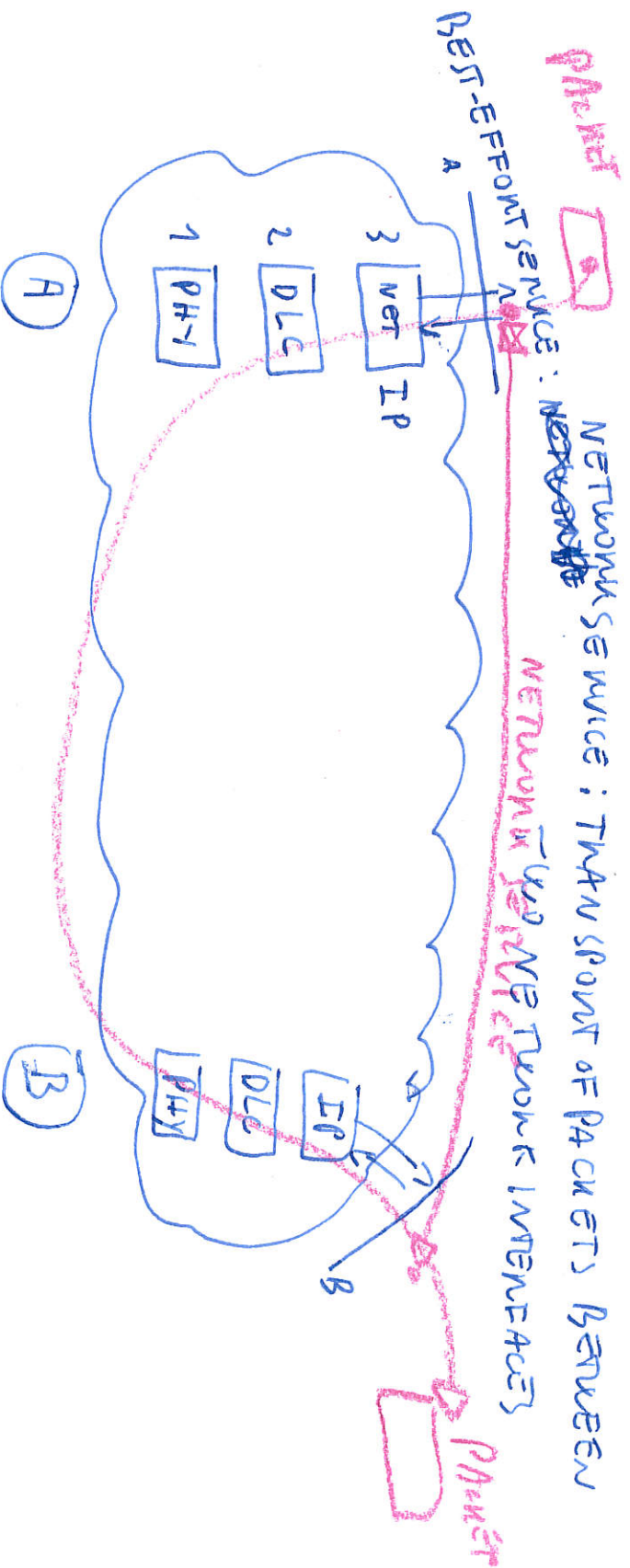
DELAY: delay of packets cannot be controlled

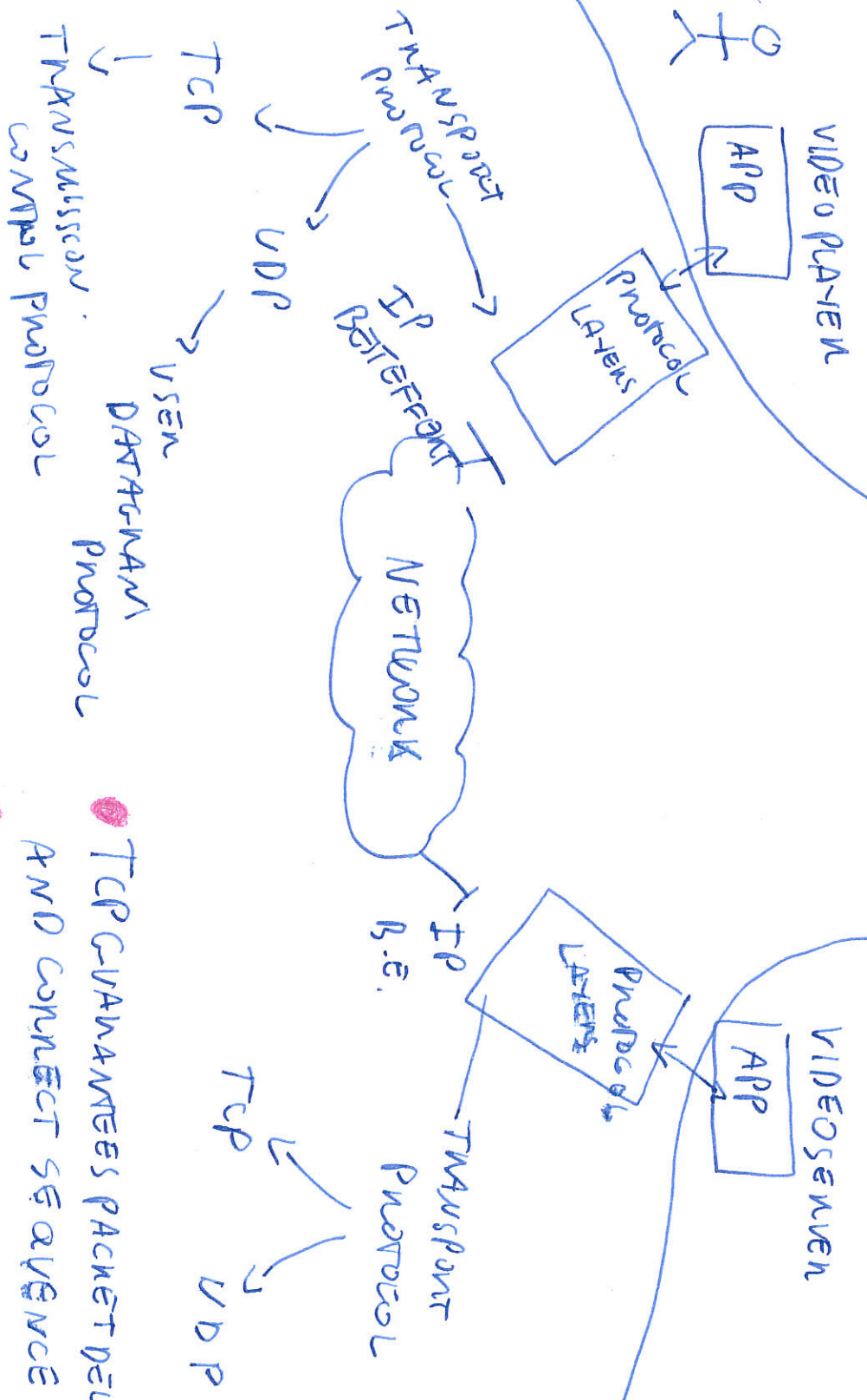


IS THE UDP PROTOCOL THE CAUSE OF "NO GUARANTEES":

ANSWER: NOT REALLY:

The Best Effort service is referred to IP (NETWORK LAYER)





- TCP GUARANTEES PACKET DELIVERY AND CORRECT SEQUENCE
- UDP DOES NOT

IP
BEST EFFORT
SERVICE

	WE USE TCP OVER IP	WE USE UDP OVER IP
NO GUARANTEE		
ON DELAY	STILL NOT GUARANTEED	STILL NOT GUARAN.
ON PACKET DELIVERY	OK	STILL NOT GUARAN.
ON PACKET SEQUENCE	OK	STILL NOT GUARAN.

MULTIMEDIA APPLICATIONS REQUIRE STILLING NOT QOS THAT THE IP SERVICE ALONE CANNOT PROVIDE

THE REAL SOLUTION IS PROVIDING QUALITY ATTITUDE IP LAYER: QOS ATTITUDE → FOCUS OF PART 1

DEFINE QUALITY OF SERVICE: BY SERVICE LEVEL AGREEMENTS (S.L.A.)

SLA DEFINES A SET OF QUALITY METRICS TO BE SATISFIED.

TRADITIONAL SLA OF NETWORK: **AVAILABILITY, A**

$A > 99.975\%$ THE REFERENCED EQUIPMENT ON NETWORK WHEN FACE IS UP FOR AT LEAST THE 99.975% OF TIME