



Development of Regional Joint Master Program in Maritime Environmental Protection and Management - MEP&M -

Demonstration and study visit: Digital learning at the University of Ljubljana

Remote and Hybrid video lectures
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Virtual meeting via Zoom application

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Agenda

- using videoconferencing systems at UL
- integration for better user experience
- real cases presentations

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Videoconferencing tools

- during Covid crisis, it's an essential way of pedagogical process performance
- it will remain so in the future; to the lesser extent, but still – we got used to it; for SMARTTEL partners it is essential;
- used for
 - remote or hybrid lectures (hybrid means that part of the students are present in the lecture room, part are online) – webinars or meetings
 - practical or laboratory work - meetings
 - tutoring, additional support (1:1, one to many) - meetings
 - record lectures?
 - different scenarios

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Videoconferencing at UL

- at the UL level, two systems are supported
 - Zoom
 - Microsoft Teams
 - *(We will also present the third one, which may be of interest to MEP&M partners, due to interesting specifics, used in one of the UL members - MiTeam)*
- there are other solutions; in videoconferencing, it is not like in LMS – there is one opensource system, not as strong & positioned player like moodle: BigBlueButton (issues: maintenance, API development,...)

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Zoom at UL

- in the cloud, well supported, pre-existing API for Moodle, SSO, all features needed for pedagogical process
- licencing on the level of UL (for all teachers and students); Needs caution, since the features depend on the type of licence (eg. Webinar costly, max. number of participants)
- recording lectures: limited space on the Zoom cloud (max. 2-3hrs); Complex recording on the computer (time consuming, what to do with the lecture afterwards)
- short teachers training

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MS Teams at UL

- slightly different use than Zoom
- includes collaborative space for synchronous/asynchronous collaboration
- why both (Zoom and Teams)?
 - UL has Office 365 licences; MS Teams comes along;
 - many teachers found MS Teams not appealing for use;
 - Microsoft was slightly behind in features development during Covid19;
 - use for participants outside of UL was limited; (SSO)
 - integration with Moodle – API is different, needed amendments;
 - advantage: collaboration space – if the pedagogical process is online and interactive, then MS Teams has some advantages
 - teacher use on or another
- let's see...

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MiTeam at UL (all in one)

- we did not speak a lot about recording lectures for subsequent use; *Why?* because you need additional software – Multimedia repository to:
 - store (enough space),
 - simply provide access rights to video
 - equip with meta data - search and browse
 - convert videos to appropriate format and deliver video lectures to students on the video portal, in the LMS, 3rd party applications...
- MiTeam provides both features (and is closely integrated with LMS): videoconferencing & multimedia repository
 - let's see...

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Video use cases at the UL

- note: the quality of video is important, depending on the content teacher wants to deliver
 - case 1: lab exercise presentation; live-to-tape (live production); no streaming; recording for subsequent use; PTZ camera, pre-set positions; separate microphone; can be used in Zoom, or Teams – the same as the presentation computer;
 - case 2: AV production for distance learning; again note the details; high quality; multiple recording for better understanding of the content; additional graphics and animations;
 - case 3: interactive lecture live, Zoom; composite of different AV sources to present 360 video live stream. Common capturing and use of lecturer camera and mic, computer with web browser, mobile phone with application; Mobile phone is captured and presented wirelessly, real time;

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Multimedia equipment – various purposes

- multimedia everywhere
- digitalisation
- new approaches
- technologies
- availability
- opportunities

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Designation

- Zoom, Teams, CISCO Webex, BBB, ...
- live webinars
- professional meetings
- offline pre-recorded materials
- quality vs quantity
- affordable?

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Equipment bundles

- 4 bundle ranks
 - list of equipment
 - purposes
 - features
 - limitations
 - basic scheme
 - price range
 - target user

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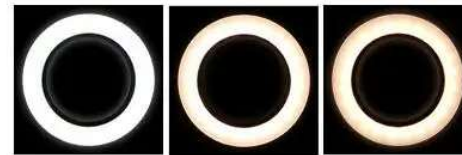
Bundle #0 – KISS

- Keep It Short and Simple
 - use something you already have/own
 - add some minimal effort
 - some additional equipment
 - work less, do more!
 - what is in there?
 - smartphone
 - stabilisation device
 - stand (simple tripod)
 - light

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Equipment



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Bundle #1 – personal bundle

- classical lectures capture option
- some additional equipment needed
 - computer
 - built-in or additional camera
 - light
 - stand
 - creative pen tablet
 - whiteboard or e-whiteboard
 - background × 2
 - positioning

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Green screen 😊



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Bundle #2 – simple lecture room

- installation in small lecture rooms
- shorter cabling
- possible separated processing and streaming unit
- mobility and space
- HDMI capture with additional equipment
- wireless microphone

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Bundle #2 – what is in there

- Logitech PTZ Pro2
- Magewell USB capture HDMI Plus
- Intel NUC with i7 10th gen. and monitor
- Shure BLX14/CVL M17
- Manfrotto Compact Light Tripod
- lighting (if necessary additional light)

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Bundle #3 – big or medium lecture room

- better camera
- wall/ceiling mounted or tripod
- suitable for larger distances between camera and table/presenter
- longer cabling
- based on NDI
- requires some additional knowledge and installation (HW and SW)

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Bundle #3 – what is in there

- Panasonic AW-HN38H with FEC-40WM wall mount)
- Magewell USB capture HDMI Plus OR Newtek Spark I/O
- Intel NUC with i7 10th gen. and monitor
- Shure BLX14/CVL M17
- Manfrotto Compact Light Tripod
- lighting (if necessary additional light)
- optional: Dante AVIO Analog 2/0

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Bundle #4 – basic event coverage

- more sources
- remote control
- NDI input and output converters
- based on NDI - longer cabling
- requires more ETH ports or local switch
- requires some additional knowledge and installation (HW and SW)

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Bundle #4 – what is in there

- 2 × 4K cameras (Panasonic AW-UN70)
- remote control AW-RP60
- NDI input and output converters 4K
- Dante AVIO Analog 2/0
- Computer with GPU
- network switch
- stands

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Bundle #4 – requirements

- staff
 - could be semi-automatically driven
 - best practise: 1 or 2 MM engineers
- network
 - bandwidth
 - NDI
 - video and audio over IP
 - connectivity
- challenges

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Bundle #4 – why?

- quality content
- hybrid events with online streaming
- creating HQ learning content
- laboratory work where details matters
- promotional events
- ...

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Questions and remarks?

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