



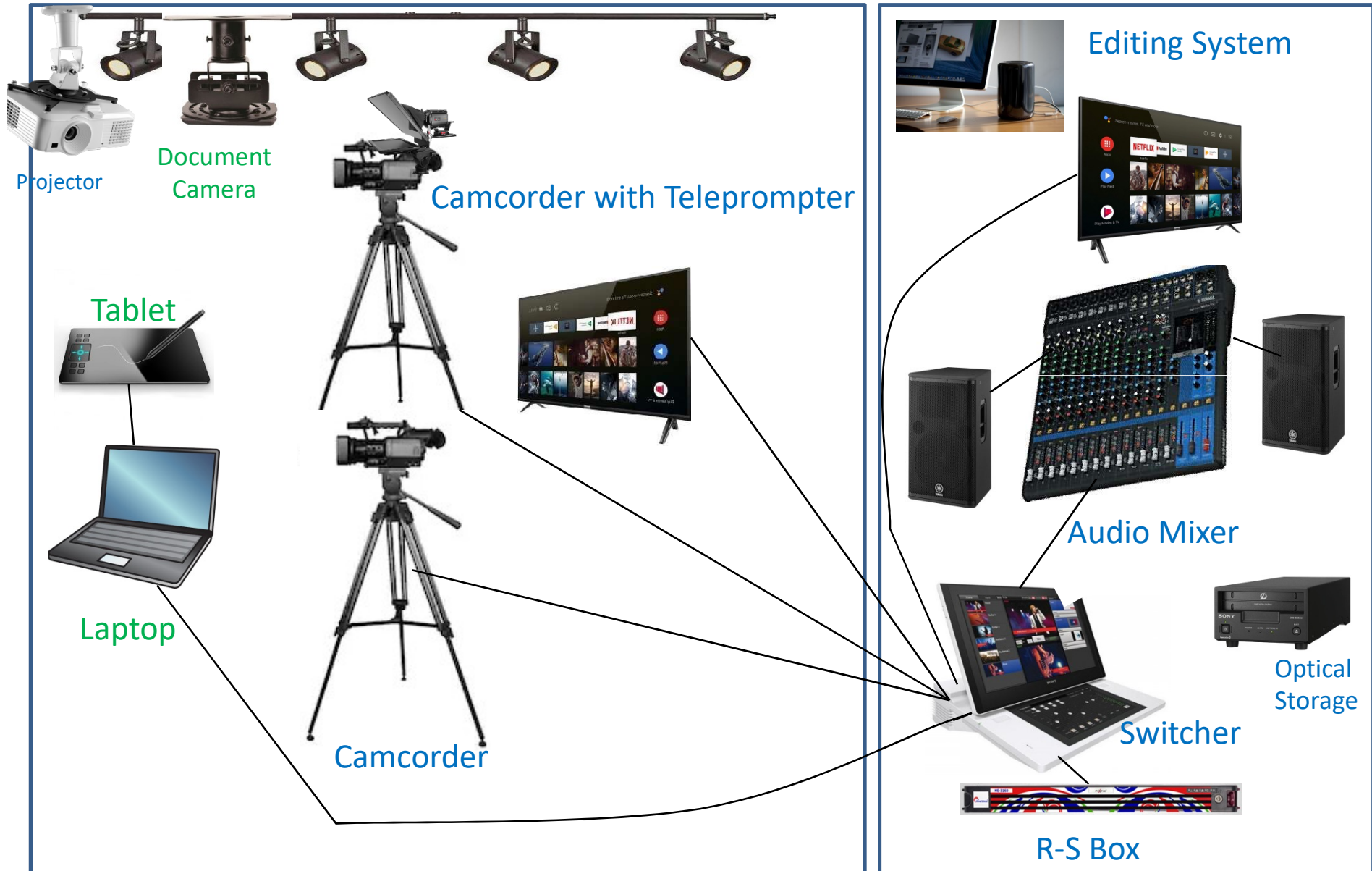
MOOCs Development Centre

Madhav Institute of Technology & Science

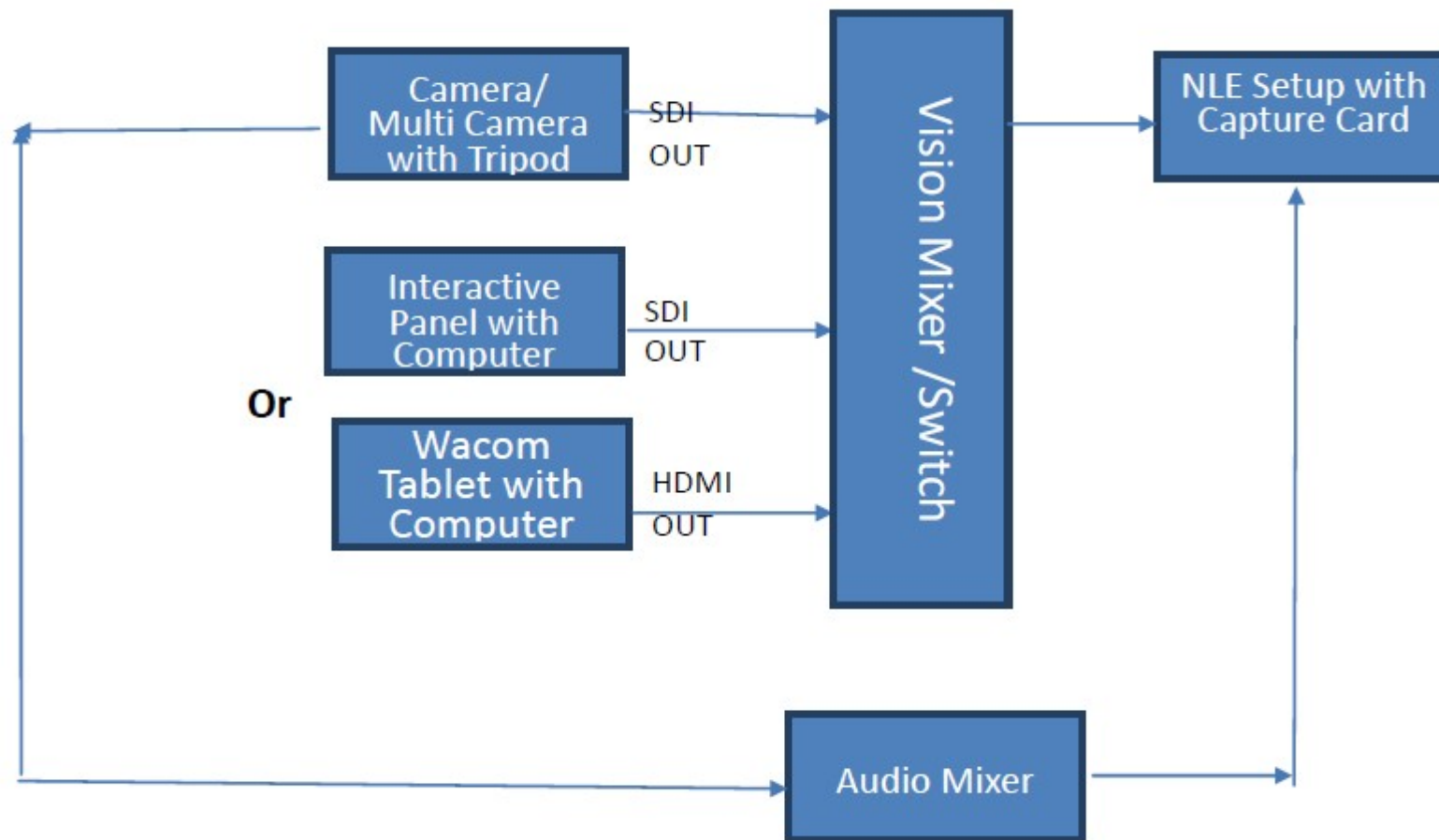
Setup at MITS

Recording Room

PCR Room



Equipment Setup & Specifications for use in development of MOOCs.



Camera

Specification: **Three 1/3" type; Full HD CMOS sensors;** PAL color; 1920x1080/50i; Gross Pixels ≥ 2.2 Million; camera to have a resolution of ≥ 850 TVL; Sensitivity: $\geq F10$; S/N 54 db; Motorized Zoom Lens $>20X$ (28 mm to 560mm) with optical image stabilization; Proxy Video; Aspect Ratio 16:9; Audio: AAC 2ch, 16bit, 48kHz; Multi-Camera Synchronizing with Genlock IN and TC IN/OUT; **HD Recording ≥ 50 Mbps**, should also support Intra / LONG GOP recording. Two or more Memory Card/Media Slots, Hot Swap for Continuous Recoding, with content security features. To support AVC H.264/MPEG4, MOV Files / Quick Time; **Video out: SDI & HDMI.**



Camera to have a suitable **Tripod**, with minimum payload ($>$ the weight of Camera setup). Tripod should have floor spreader.





Vision Mixer/Switcher

- **Specification:** For connecting Cameras, Interactive Panel and Tablet: 4-CH HD Video Switcher with Inbuilt Frame Synchronizer on all inputs, Frame Storage capabilities, supporting 2-CH HD-SDI, 2-CH HDMI inputs, 2-CH HD-SDI & 1-CH HDMI outputs, 1 x Chroma-Keyer, 1x DSK.

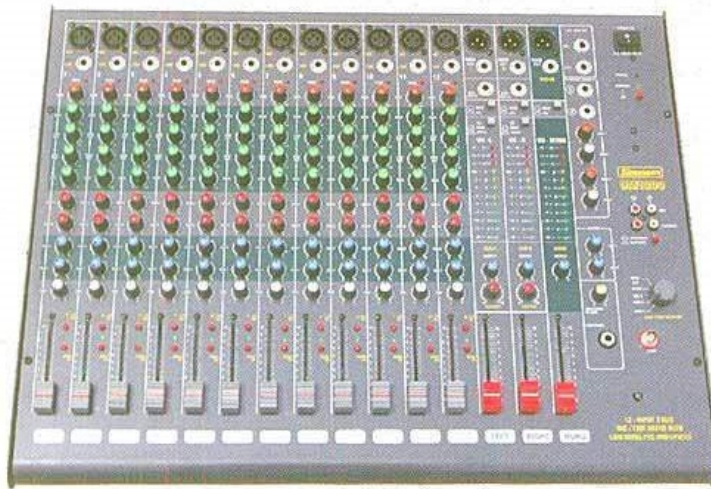
Some famous Brand

- 1) Sony
- 2) Balckmagic
- 3) Data Video
- 4) Roland



Audio mixer

- **Specification:** Input channels: **8 Channels** with minimum **6 Mic/Line selectable inputs**. ,I/O interface: XLR / Phono, (balanced/un-balanced). Input sensitivity: Mic -60 db or better, Line 0 db , Audio frequency response: $\leq 20 \text{ Hz} - \geq 20 \text{ KHz} \pm 0.5 \text{ db}$, Total harmonic distortion & noise: $\leq 0.01 \%$ -30dbu input routed to Mix, Mic gain 30dB , S/N ratio: Better than 100 dB , EQ bands: 2 (HF, MF & LF) , Variable send (aux) buses: Minimum 2 , Returns: Minimum 2



Microphones

- Specification: UHF wireless **Lavalier** / collar diversity microphone with Compatible Receiver having minimum of 6 selectable channels as per Indian region , THD: $\leq 1\%$, Signal/Noise ratio: ≥ 100 dB , Rf output: ≥ 25 mW , Battery life (operating time): Min. 8 hours (2AA Batteries) , Polar pattern: Supercardioid / Hypercardioid / Cardioid , Mic type: Electret / Condenser / permanent Polarised, Frequency range: ≤ 40 Hz to ≥ 20 kHz ± 3 db, Receiver Output: XLR (Balanced) Line output , Accessories: Wind shield, Mic Clip & other standard accessories



Storage



G-RAID

7200RPM hard drive storage system featuring Thunderbolt 3, USB-C™ (supports USB 3.1 Gen 2) and HDMI® connectivity for ultimate flexibility.

Transfer Rate: up to 500MB/s

**Transfer speeds of 1Gbps write (verify on) and 2Gbps read.
50+ years life**



Optical Disc Archive

Post Production processes & Standards

- Video recording format: Full HD 1920x1080 pixels.
- Videos aspect ratio: 16:9 (widescreen).
- Module Delivery: 1080i following MPEG-4 AVC Compression.
- Full screen Video Frame.
- The expert/teacher should speak extempore as delivery made in case of classroom set-up and avoid reading from written material or a Teleprompter.
- Video quality and Audio levels should be constantly monitored while recording.

Software for editing

- adobe creative cloud for teams
- Apple final cut pro

Recording Clips

- [Example 1](#)
- [Example 2](#)
- [Example 3](#)
- [Example 4](#)
- [Example 5](#)

MOOCs Development Guidelines

- **Development of e-text**
- Subject matter expert (EME) is required to prepare 8 week/12 week course material as per the Course syllabus.
- Each week is consisting of approx 4 hour course material which is divided into at most 40 minute lectures. For a single topic at most 2 lecturers can be recorded.
- Each week is followed by one quiz/Assignment. Quiz should consist of at least 10 MCQ based questions.
- In the end of the course, SME should provide a MCQ based question bank consist of 100 questions.

- **Guidelines to avoid plagiarism/Copyright handling**
- It is required to obtain copyright clearance from Content writers for any readings, images, and video clips used as core and supplementary reading in case of licensed material if used.
- Direct references to specific materials should be avoided in video content or other course material till clearance has been obtained.
- Ensure that content is not plagiarized and the similarity of the e-text should not exceed 15%.
- Please check content using turnitin software.
- All contents (text, audio, video, animation, quiz etc.) developed will be the property of MITS Gwalior.

- **Guidelines for recording of videos**
- SMEs should prepare power point presentation in the given template
- A clear description of visuals as well as text is required.
- Training demonstration, illustration of examples, case study, documentary, etc should be added wherever applicable.
- Please avoid wearing green/blue cloths for recording due to cromakey projection.

Thanks