

# MAKING OF SEIP

## Software Engineering in der industriellen Praxis (SEIP)

*Multimedia is not  
just for gaming... ;-)*

### HARDWARE: Lecturer

- **One.de Gaming PC**  
Video/Audio Production
- **Apple iPad Pro**  
Content Presentation
- **Logitech BRIO 4K (5x)**  
Cameras (1x Lecturer, 4x Room)
- **Beyerdynamic M 90 Pro X**  
Microphone
- **Beyerdynamic DT 770 Pro**  
Headphone
- **Elgato Greenscreen**  
Virtual Background Effect
- **Elgato Key Light (4x)**  
Greenscreen Lightning
- **Elgato Key Light Air (2x)**  
Lecturer Lightning
- **Elgato StreamDeck**  
Production Control

### SOFTWARE: Lecturer/Video

- **OBS Studio**  
Video/Audio Mixing
- **Head-Up Display Server (HUDS)**  
Head-Up Display Server
- **HUDS-HUD-Training**  
Head-Up Display for Training
- **ManyCam**  
Video/Audio Mixing (Room Cameras)

### SOFTWARE: Lecturer/Audio

- **Cantabile**  
Audio Processing (VST Host)
- **Acon Digital DeVerbate**  
Audio VST Plugin (Reverberation Reduction)
- **Waves NS1/WMS**  
Audio VST Plugins (Noise Suppression)
- **Waves Sibilance**  
Audio VST Plugin (De-Esser)
- **Waves F6**  
Audio VST Plugin (Equalizer)
- **BlueCat Dynamics**  
Audio VST Plugin (Expander, Compressor)
- **Tokyo Dawn Records Limiter**  
Audio VST Plugin (Limiter)

### SOFTWARE: Cloud/Server

- **YouTube Live Event**  
Video-Stream Broadcasting
- **Mosquitto**  
MQTT Message Queue
- **HUDS-HUD-Training**  
Head-Up Display for Training

### SOFTWARE: Website/Client

- **Vue.js**  
Webpage Rendering Engine
- **YouTube Player**  
Video-Stream Player
- **HUDS Pad**  
Head-Up-Display Client

### NETWORK: Protocols

- **RTMP**  
Video/Audio Ingest
- **HLS (YouTube-Variant)**  
Video/Audio Playout
- **MQTT**  
Attendee Feedback/Control