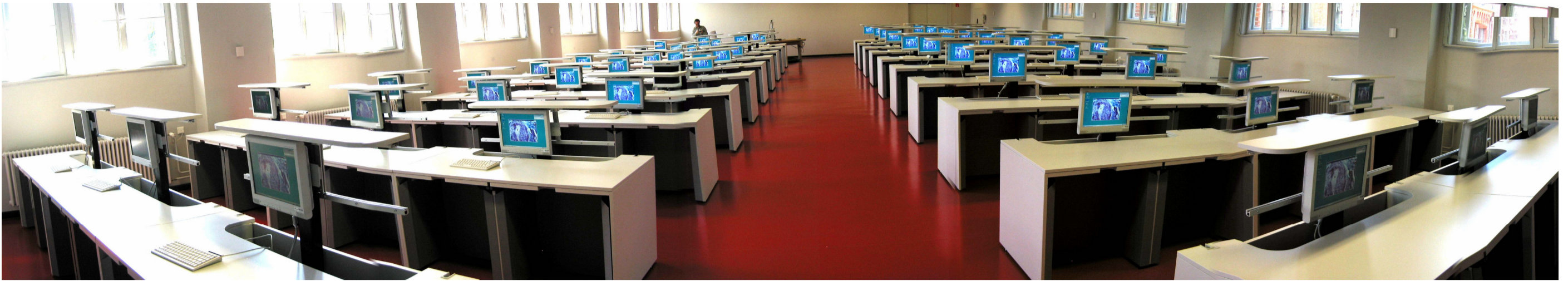
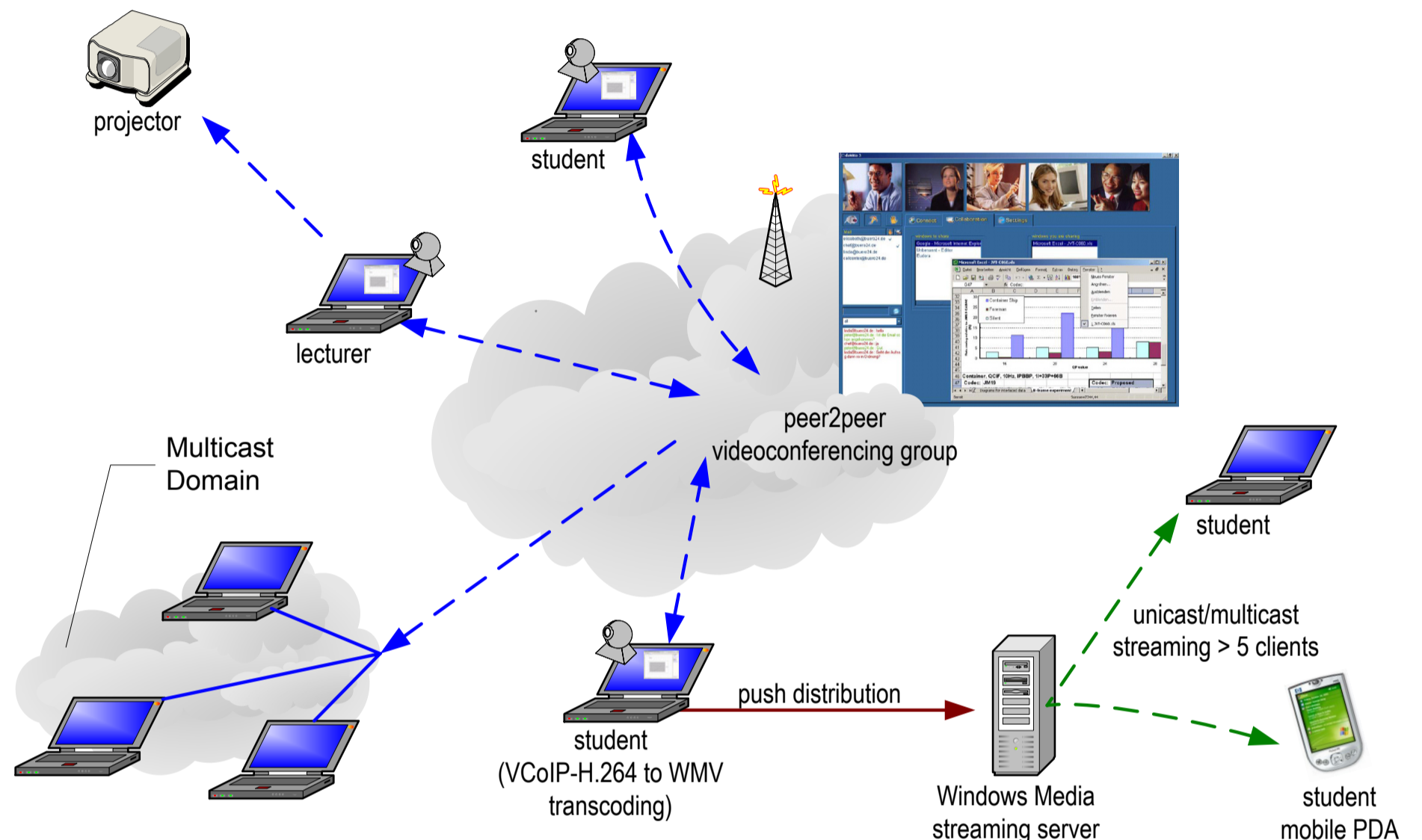


New Scenarios for Distributed Video Based Distant Learning



- **distributed collaborative synchronous and asynchronous video based system**
- **using ordinary PC technology over IP on a peer to peer basis**
- **audio/video based distant learning on a lowest technical level**



Functional Description:

- Learning session participants will establish mutual connections via web server. Teachers can send their audio/video presentation inclusive dynamic applications to students PCs via internet. Students can see and listen, listen only or participate via a video/audio back channel.
- Students can also initiate small buddy groups via full video conferencing.
- Everybody in the group can send, receive and work on any PC-applications for collaboration.
- All sessions can be converted into a live streaming format for to serve a broader audience.
- For asynchronous distributed learning, each station can record all sessions.



Realization:

- The scenarios are realized by a multimedia communication system including VCoIP (Video Conferencing over IP) software with a distributed architecture i.e. without MCU.
- The system is based on a fast, highly efficient (H264/AVC) video codec implementation.
- The transmission protocol can be switched between TCP and UDP transmissions to adapt various network conditions and topologies (unicast, multicast, etc.).
- For nomadic users changing networks we introduce and investigate new concepts and experiments to IPv6 user and session mobility, with the special focus on real-time video group communication. Mobile multicast using tree morphing methods for specific source multicast protocol (SSM).

