UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	RF Systems Networking & Media Management
Module Code	FAM7020-B
Academic Year	2021/2
Credits	20
School	Department of Media Design and Technology
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	8
Tutorials	10
Directed Study	182

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims

This module will provide students with a broad understanding of the function of RF Systems, Networking and Media Management in outside broadcasting. These include the options for choosing RF systems, networking technologies and video and audio recording systems. It will use industry standards and formats and learners will become adept in the use of a wide variety of different RF, networking and media management systems.

Outline Syllabus

Video paths, colour-matching, vision mixer systems, vision processing, fibre optic systems and signals. Video and audio recording systems, integration of edit choices, timecode, codecs, wrappers, file formats, processing, graphics and audio packagingRadio Frequency (RF) Systems - video and audio signals, levels & compression. Radio waves, polarization, antennas, gain, beam-width and the dB scale. Transmission data rate and power levels. Quality of Service, bit error rate, carrier to noise ratio. Digital transmission systems, modulation and coding techniques. Delays from digital encoding and transmission medium. Frequency Management, bandwidth allocation and regulation. Weather effects on transmission quality. Broadcast standards: Digital Video Broadcast - Terrestrial (DVB-T). Digital Video Broadcast - Satellite (DVB-S). Service classifications - streaming, conversational, background, interactive.Networking Technologies - Addressing protocols, compression algorithms for video / audio transport, external network storage systems and bandwidth bottlenecks, network architecture, constituent elements, star and mesh configurations. Unicast (1-to-1), multicast (1-to-many) and broadcast (1-to-all) techniques. Medium Access Control, CDMA, TDMA, FDMA, hybrid schemes. Contention Access Schemes, Aloha and its derivatives..Key Texts:Ballou G (2015) Handbook for Sound Engineers, RoutledgeLuther, A.C. and Inglis, A.F. (1999) Video Engineering, McGraw HillPohlmann Ken C (2010) Principles of Digital Audio, McGraw Hill

Learning Outcomes

Outcome Number	Description
01	Apply industry practise to determine the appropriateness of networking technologies and media management practises in outside broadcasting and guard against the causes of system failures. Evaluate the benefits of a range of video and audio recording equipment, and networking technologies to meet the needs of clients and the venue. Synthesise a systematic knowledge of industry standards for operating networks to deliver media
02	Configure equipment to work with an existing network and use analysis tools for fault finding. Monitor recording and media management systems for quality deviations and malfunctions.
03	Communicate ideas effectively Solve problems methodically

Learning, Teaching and Assessment Strategy

N/A

Mode of Assessment

Type	Method	Description	Weighting
Summative	Other form of assessment	Assessed practical scenario activity	60%
Summative	Examination - Closed Book	Closed Book examination (1 Hr)	40%

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:
This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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