



HOME
TECHNOLOGY
EVENT 2010
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SEMINAR GUIDE

14-17 June 2010

ICC LONDON EXCEL

Crosspoint 8 HD Sources to Any or All 8 Displays For HDMI

Extra Long Distance

**Extension for HDMI, IR, &
Ethernet up to 100 meters**

The revolutionary Extra Long HDMI Extender is using only one CAT-5 cable between the Sender and Receive units. It extends HDMI v1.3 (supporting most features) at 1080p/60, with IR and Ethernet extension.

EXT-HDMI1.3-848CP

The Gefen 8x8 Crosspoint Matrix for HDMI 1.3 routes high definition up to 1080p/60 from any eight Hi-Def sources to any eight HDTV displays. Source selection is done by front panel switching, RS232, or IR Remote control.

Feature

Fast-switching software using key bundling

EXT-HDMI1.3-CAT5-ELR



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WELCOME TO THE CEDIA HOME TECHNOLOGY EVENT 2010 SEMINAR GUIDE

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The CEDIA education programme is the industry's richest source of learning. Frankly, there is nowhere better to access the wealth of information and expertise on offer than at the CEDIA Home Technology Event.

With over 120 hours of training, the four-day education offering embraces all career paths to offer something for everyone. We have devised a varied and exciting seminar programme that will give insight across multiple tracks; with courses targeted at technicians, project managers and business owners alike.

Underlying the education offering is my personal desire to keep things as valuable, relevant and as accessible as possible. Out of the 38 CEDIA courses on offer, 24 are new for 2010 and initiatives such as our 'Passport to Education' mean that it has never been easier, or more cost-effective, to book multiple courses at the show. Allowing a holder to book as many CEDIA courses as they like, over the four days, for as little as £400+VAT, the 'Passport to Education' is a cost effective way of starting your education journey. Furthermore, companies who book five passports at a time will be entitled to a sixth, absolutely free.

On the exhibition floor, we've built on the momentum of previous years and further extended the Outreach Conference and Show Floor Seminar Theatre programmes. This year we are delighted to welcome a prestigious line-up of speakers, including our own experts Mike Heiss and Steve Moore plus big-hitters from the BBC, BSkyB, BEAMA and other influential organisations.

Additionally, there will be training available from the BADA and we have increased opportunities for exhibitors to provide Trade Supplier Product training sessions. These are great courses which are free to all visitors.

All that remains for me to say is a big 'thank you' to all the presenters, volunteers, trade suppliers and office staff who help make the CEDIA Home Technology Event seminar programme such a valuable offering.

I look forward to seeing you there.

Cheers,

Simon Buddle, CEDIA Region 1 Education Chair

RAISING STANDARDS THROUGH EDUCATION

CEDIA is committed to supporting the growth of the residential custom installation industry and at the heart of the Association is its commitment to education and training. CEDIA believes that this is the key to member businesses and their employees developing and prospering in the years ahead.

The CEDIA education programme is the industry's richest source of learning, embracing the key career paths open to industry professionals through a diverse range of courses, workshops and examinations. At the annual Home Technology Event we deliver an extensive programme of these seminars and workshop sessions.

Within this programme, CEDIA Certification sets the standard for the industry. CEDIA Certified status is recognised throughout the industry, and, increasingly, by property developers, architects and interior designers as the established mark of quality and expertise. CEDIA Certification brings the industry in-line with other construction professionals e.g. plumbers, builders and electricians by introducing recognised qualifications.

The CEDIA Education Programme is developed by Subject Matter Experts and

is continually monitored and reviewed, so that course improvements can be identified and implemented.

Whether you are new to the industry, or looking to develop your technical or business skills in this fast-growing sector, then the CEDIA education programme at The Home Technology Event will put you on the path to succeed.

Passport to Education

A cost effective initiative, the Passport to Education allows the holder to book as many CEDIA courses as they like over the four day event, and all for as little as £400+VAT! (CEDIA member rate). The Passport to Education is applicable to individuals only and non-transferable; however, companies who book five passports at a time, will be entitled to a sixth, absolutely FREE!

Whilst the CEDIA Passport to Education is undoubtedly the most efficient way to book multiple courses, CEDIA are also offering a 10% discount on individual courses booked by the 'early bird'. These offers are only available until Tuesday 1 June and do not apply for CEDIA Certification or BADA



courses. Passports are available to non-members at the rate of £525+VAT.

Trade Supplier Product Training

An important part of a business is understanding the products and technologies you are working with. In addition to CEDIA's extensive generic education programme, CEDIA exhibitors offer a wide variety of free of charge training courses throughout the event (some of which are CEDIA CEU accredited).



Key Information

Venue: **ICC London ExCeL**
 Web: **www.excel-london.co.uk/icc**
 Hall: **N24 - Capital Hall**
 Training: **14 – 17 June 2010**
 Exhibition: **15 – 17 June 2010**
 Nearest DLR: **Prince Regent**
 Parking: **East End Orange Parking**

Dates and Timings

Seminars

09:00 – 17:00 Monday 14 June
 09:00 – 17:00 Tuesday 15 June
 09:00 – 17:30 Wednesday 16 June
 09:00 – 16:00 Thursday 17 June

Exhibition

09:30 – 18:00 Tuesday 15 June
 09:30 – 18:00 Wednesday 16 June
 09:30 – 16:00 Thursday 17 June
 NB: Monday 14 June is seminars only.

Hotel Accommodation:

Preferential rates have been negotiated at a number of hotels, for further information on accommodation or to make a booking please contact Jigsaw Conferences on **+44 (0) 870 752 0433** or email: **kashy@jigsawconferences.co.uk**

The CEDIA HQ hotel will be the Novotel London ExCeL.

Deadlines:

Tuesday 1 June –
 Passport to Education and early bird discount.

Tuesday 1 June –
 Free of charge registration for the event.

Registration Queries

email: registrations10@showdata.com
 tel: +44 (0) 844 5450047

General Queries

email: expo@cedia.co.uk
 tel: +44 (0) 1480 213744

Follow us

Keep up to date with all the latest news about the event on Twitter, search for **CEDIA_Expo** and begin to follow.



CEDIA CERTIFICATION

Introduced in 2003, CEDIA Certification establishes clear, objective standards for knowledge in residential electronic systems design and installation.

Currently, CEDIA has the following levels of Certification:



EST2 (previously called Installer Level 1)

Intended for technical staff who are being supervised.



EST3 (previously called Advanced Installer)

Intended for technical team leaders and advanced installers.

This Certification is not available at the Home Technology Event.



Designer Level 1

Intended for designers of integrated residential systems.



Home Cinema Design Specialist

A specialist exam held over two days that is intended for experienced designers of high performance home cinemas. It is a requirement that candidates have already passed Designer Level 1 and that they also pass an online pre-test in order to register for the Home Cinema Design Specialist exam.

CEDIA Certified status is recognised throughout the industry, and increasingly by construction professionals, as the established mark of quality and expertise within the residential custom installation sector.

This Certification is not available at the Home Technology Event.



CEU Points

CEDIA Certification brings the industry in line with other construction professionals e.g. architects, surveyors, M&E consultants and electricians, by introducing recognised mandatory qualifications. It also gives prospective clients the confidence to appoint Certified businesses and provides the installer with a competitive advantage.

Once CEDIA Certification has been achieved, this is valid for a period of three years. In order to maintain this status the individual must obtain 30 CEUs (Continuing Education Units) through further training. Any training taken before Certification has been obtained does not count towards this total.

All CEDIA courses have a CEU value attached to them, with the exception of the Certification Q&A. In addition, an increasing number of Trade Supplier product training courses have CEU accreditation. However, no more than 15 CEUs may be obtained via product specific training courses.

CURRICULUM

EST2

CERTIFICATION

The CEDIA Certified Professional EST2 candidate is an individual with around 12 months of experience and wishes to advance their career. This person works under the direction of a supervisor, has a firm understanding of what to do and how to do it but not always “why”. This person is assumed to have become proficient at most 1st and 2nd fix duties, and is in training in all other areas. As a result the majority of questions on this exam are “Application” based meaning the candidate will need to be able to “apply” existing knowledge to a specific problem. CEDIA EST2 certification provides a baseline of technical and procedural knowledge to enable successful candidates to study for, and take, higher-level CEDIA certifications. This person has studied for the exam. CEDIA EST1 Boot Camp and CEDIA Technical School are strongly recommended and together cover the majority of the curriculum for EST2.

GENERAL TECHNICIAN ROLES AND RESPONSIBILITIES

1. Maintain a “safety first” mindset by understanding and following personal and property safety procedures and preventing accidents in order to prevent harm to self and others.
 - Applicable regional codes/articles specific to personal safety and accident prevention (both on-site and off)
 - Applicable construction codes specific to safety and property protection
 - Motor Vehicle safety and accident prevention
 - Basic First Aid treatments and procedures for minor incidents

- Emergency procedures for major incidents
- Company safety policies
- Proper use and care of hand and power tools
- Proper use and care of ladders and scaffolds
- Read and interpret applicable codes/laws
- Analyse a situation and choose/apply the correct solution
- Recognise potentially hazardous situations and react accordingly
- Demonstrate basic first aid techniques
- Demonstrate an understanding of emergency procedures
- Operating a motor vehicle safely
- Operating job related heavy equipment (personnel lifts, etc..) safely
- Care and use of personal protective equipment (PPE)
- Demonstrate safe use of hand and power tools
- Demonstrate safe use of ladders and scaffolds

- Understands site maintenance/safety issues
2. Represent the company by demonstrating appropriate professional behavior, reporting work activities, and engaging in best practices.
 - Typical company reporting methods
 - Typical employment (HR) issues
 - Company management structure and chain of command (communications)
 - Timecards, Work/Change orders (think daily, on-going personal and project tracking reporting methods)
 - Personal/Professional behavior and appearance
 - Workplace / jobsite etiquette
 - Understands the importance and necessity of typical employment procedures
 - Reading and interpreting common company documents
 - Using personal and project tracking/ reporting methods
 - Follow directions accurately
 - Using clear, concise communications
 - Handling difficult situations/conflict resolution
 - Working with others/trades
 3. Use project documentation by interpreting, creating or modifying appropriate field documents as required in order to confirm compliance with design specifications.
 - Proposals; Bill of Materials; Pick List; Inventory Logs
 - System Overviews/Summaries (Functional)
 - Plans (Architectural)
 - Schedules (Time; Wire; Materials; etc..)
 - Charts
 - Drawings (Block Diagrams; One-Line Drawings; Point-to-Point Schematics; Cabinetry; Mechanical; etc.)
 - Instruction and Service Manuals
 - Understand the importance and proper use for typical field documents
 - Basic redlines and document updates
 - Read and interpret typical field documents
 - Creating necessary documentation that is clear and concise for others to follow
 4. Compute project related data using relevant technical and mathematical equations, terms, and principles in order to ensure successful completion of work.
 - Modify documentation properly using approved methods
 - Assist project supervisor in document revision(redlines)/ as-built
 - Writing clearly and legibly
 - Algebra
 - Geometry
 - Electronics/Industry specific Math
 - Decibels
 - Fractions/Decimal (convert)
 - Ohms Law
 - Basic Audio (i.e., signal types; levels; frequencies; noise; etc...)
 - Basic Video (i.e., signal types; levels; frequencies; noise; RF; etc...)
 - Basic Communications (i.e., telephone; intercom; signal types; signal levels/voltages; etc...)
 - Basic Data and Networking (i.e., baud rates; signal types; data rates; IP; etc...)
 - Basic Control System (data rates; polarity; relays; contact closure; voltage; meta data; feedback)
 - Read and interpret typical industry related mathematics
 - Read and interpret typical industry related terminology
 - Understand when and how to properly use industry specific mathematics
 - Understand when and how to properly use industry specific terminology
 - Solve typical industry related problems using proper mathematic equations
 - Convert fractions to decimals and decimals to fractions
 - Proficiency in uses and applications of Ohms Law

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INFRASTRUCTURE (1ST AND 2ND FIXES)

1. **Pre-wire an electronic system as specified in order to facilitate proper performance of audio, video, control, and related**
 - Cable/wire types, applications
 - Construction/structural techniques/requirements/issues
 - Device Installation techniques
 - Device placement
 - Wire dressing
 - Ventilation
 - Space requirements
 - Suspended/hanging device requirements
 - Outside service provider requirements (Telco/CATV/ISP/SAT)/ Demarcation point
 - Fire rated back boxes and other special circumstance devices and provisions
 - ID wire/cablings types/labeling
 - Ability to choose proper wire/cable for a specific purpose
 - Understanding of proper installation methods/requirements of prewire materials
 - Installing mounting devices (brackets, back-boxes, etc...)
 - Applying theory to practical
 - Deductive Reasoning, Problem Solving
 - Tool Usage
 - Communicating with other trades proficiently
 - Understands foundational outside service provider requirements (Telco, CATV, ISP, SAT)
2. **Trim-out an electronic system by labeling, terminating, and testing cables and properly mounting and installing 2nd Fix related devices in order to support installation of audio, video, control, and other subsystem devices.**
 - Termination methods of all signal types
 - Types of terminating devices and their appropriate use
 - Applicable Codes and Standards specifically related to 2nd Fix activities
 - Typical related tools and their proper use
 - Test tools/Verify Results
 - Properly terminating all cable/wire/signal types
 - Choosing/identifying typical termination devices
 - Interpreting applicable codes and standards
 - Testing/verification of proper termination/ signal quality
 - Troubleshooting/correcting test results
 - Using label makers
 - Cable dressing
 - Reading/filling out cable schedules

EQUIPMENT MOUNTING

1. **Install equipment into a rack or cabinet while providing for proper ventilation, power management, and mounting considerations in order to facilitate ease of use and maximum performance.**
 - Cabinet Construction methods
 - Theoretically correct equipment layout
 - Safe and secure equipment mounting techniques/methods
 - Ventilation techniques - active and passive
 - Ventilation requirements for specific equipment
 - Risks associated with improper ventilation
 - Cabinet and rack construction methods that aide ventilation
 - Identify various cabinet parts
 - Laying out equipment properly in a cabinet (theoretically correct)
 - Mounting equipment in a cabinet properly
 - Constructing racks
 - Identify different rack types/specific uses
 - Installing ventilation equipment
 - Proper management of cable
2. **Mount mechanically system devices such as camera housings, flat panel displays and projectors brackets or other mechanical devices by selecting and installing proper brackets, housings and mounting hardware in order to provide proper performance and safety**
 - Types of display mounting brackets and their uses
 - Types of projector mounting brackets and their uses
 - Types of camera mounting brackets, housings and their uses
 - Choosing and installing various types of display brackets and mounting devices
 - Choosing and installing various types of projector brackets and mounting devices
 - Choosing and installing various types of camera brackets, housings and mounting devices
3. **Install power management devices such as surge suppressors, battery backups, and power conditioners in order to ensure safe and maximised performance of installed systems.**
 - Basic device recognition
 - Basic device purpose
 - Basic electricity and electrical distribution
 - Choosing correct devices for the job
 - Basic Set-up and use of devices

AUDIO/VIDEO SYSTEMS SET-UP

1. **Set-up basic audio devices such as sources, amplifiers, and speakers in order to produce a desired listening experience.**
 - Basic audio device recognition (Analog vs. Digital)
 - Basic audio device purpose
 - Basic signal flow
 - Choosing correct device for job
 - Basic installation of audio related devices
2. **Set-up basic video devices such as sources and displays in order to produce a desired viewing experience.**
 - Basic video device recognition (Analog vs. Digital)
 - Basic video device purpose
 - Basic installation of video related devices

COMMUNICATIONS (TELEPHONY AND DATA)

1. **Set-up basic telephony devices such as handsets and intercoms in order to establish basic voice communication.**
 - Basic phone device recognition (includes doorbells, intercoms, etc)
 - Basic phone device purpose
 - Basic installation of phone related devices
2. **Set-up basic data network devices such as switches and routers in order to facilitate basic data communication.**
 - Basic data device purpose
 - Basic installation of data related devices

INTEGRATED CONTROL SYSTEMS SET-UP

1. **Set-up basic control devices such as remotes, keypads, volume controls, touch screens in order to allow user control over electronic devices and systems.**
 - Basic remote control device recognition
 - Basic remote control device purpose
 - Basic remote control protocols and methods
 - Interface technologies (RS232, RS485, IR, contact closure, relays, IP)
 - Basic installation of remote control related devices
 - Basic CCTV/Security device purpose
 - Basic installation of CCTV and Security related devices
2. **Set-up basic security and surveillance devices such as cameras and sensors in order to provide basic monitoring of secured areas.**
 - Basic CCTV/Security device recognition

3. **Set-up terrestrial antenna, cable and satellite TV systems, distribution and equipment in order to provide proper reception of TV signals.**
 - Basic CATV/DBS device recognition
 - Basic CATV/DBS device purpose
 - Basic installation of CATV/SAT related devices
 - Basic set-up and use of device

SYSTEM VERIFICATION AND TESTING

1. **Review the installed system in order to confirm compliance with design specifications.**
 - Basic understanding of all system components (not individually but how it functions as a system)
 - Basic understanding of system wiring, termination, signal flow
 - Basic understanding of proper system operation (is audio coming out of speakers, video on screen)
 - Audio and video formats, resolution, data rate, surround modes
 - Calibration procedures and terminology
 - Deductive reasoning
 - Interpretation of results
 - Using/manipulating equipment and all associated devices
 - Reading instruction manuals
 - Verifying component operation
 - Navigating menus
 - Systematic, methodical procedures
 - Recording results accurately
 - Using test equipment, meters, continuity, data rate, RF, etc.
2. **Verify system performance by testing device and system functionality in order to confirm proper operation.**
 - Basic understanding of techniques and methods for troubleshooting devices/ systems
 - Basic understanding of methods to correct
 - Use of appropriate commonly used, basic test equipment
 - Common failure modes
 - Troubleshooting Guides
 - Using/manipulating test equipment
 - Deductive reasoning, troubleshooting
 - Diplomacy/tact, accountability, and patience
 - Basic troubleshooting

CURRICULUM DESIGNER LEVEL 1

The CEDIA Certified Professional Designer certification is for an individual who communicates with clients and design and installation professionals. A certified designer selects the appropriate products and materials to design individual (integrated) residential systems (including alarm, telephone, cable television, satellite television, data, audio, video, home theatre, HVAC, and lighting control). This person has around five years of related industry experience prior to taking the examination. Major content areas covered by the examination are as follows:

- Needs analysis (project evaluation, installation criteria, budgets, contractor management, client relationships)
- Design documentation (generating equipment detail, generating facilities plans, creating wire schedules, block diagrams, schematics, drawings)
- Project design (designing an integrated system according to the needs analysis, using contractors, developing programming, overseeing projects)
- Design management (orders, technology, prototypes, mockups, communication, validating system performance)

EST2 PRE – KNOWLEDGE (15% OF EXAM)

(See CEDIA EST2 Curriculum)

DOMAIN 1: NEEDS ASSESSMENT (10% OF EXAM)

Task 1: Initiate and investigate the scope of a project using a structured information gathering methodology to obtain customer in-formation.

Knowledge of:

- Customer desires and expectations
- Expectations for reliability and usability
- Lifestyle and day-to-day use of the home

Skill in:

- Organising and developing the content necessary to create a formal client survey
- Clarifying requirements
- Interviewing/qualifying a client
- Recording pertinent information and responses accurately

- Determining the project stakeholders and decision maker(s)
- Communicating efficiently and effectively

Task 2: Assess the site conditions by reviewing architectural plans and/or visiting the site in order to pre-empt architectural and structural complications.

Knowledge of:

- General construction methods
- Specialty and structural issues (i.e., equipment mounting and location, risers, etc.)
- Industry installation methods (e.g., wire types and routing)
- Local codes and regulations

Skill in:

- Working with architectural and engineering drawings
- Taking accurate field measurements (e.g., tape measures)
- Determining spatial relationships
- Sketching room/existing conditions
- Interpreting codes, regulations, and local covenants
- Locating and sizing any and all project components or devices

- Working with software based drawing/estimating programs (e.g., CAD)
- Determining site conditions (i.e., distance to the site, site map and directions, site parking, existing and new construction, house layout, equipment location, unusual site conditions, and notation of existing permanent conditions)

Task 3: Establish the budget requirements by setting realistic expectations of deliverables while explaining tangible quality differences in order to deliver the optimum performance/cost balance for the systems.

Knowledge of:

- Estimation techniques (Bottom-Up, Top-Down)
- Cost analysis
- Value engineering
- Time, cost, scope, and quality relationships
- Installation complexities and design options
- Life cycle costs
- Work package (complete package of equipment, materials, and labor for each deliverable in the system)
- Work package dictionary (document that describes each component in the Work Breakdown Structure)
- Work Breakdown Structure (deliverable oriented decomposition of work to be executed)

Skill in:

- Creating cost estimates (Bottom-Up, Top-Down, Parametric, etc.)
- Analysing differences in how solution options affect the design
- Maintaining and referencing product databases
- Applying relevant mathematical calculations
- Identifying appropriate product(s) for each application
- Acquiring product knowledge

Task 4: Determine internal vs. external resource requirements for the system under design for the purpose of completing cost estimation.

Knowledge of:

- Submittal process (RFI, RFQ, RFP, etc.)
- Understanding terms used by associated trades
- Trade-off analysis, including make/buy decisions, organisational limitations, and core competencies
- Effective meeting techniques

Skill in:

- Reading, interpreting, and supplying specifications
- Setting meetings and agendas and accurately documenting the results
- Using precise, measurable language
- Interpreting associated trades documents
- Defining scope of work for designated tasks
- Communicating the design requirements effectively (written and verbally)
- Decision making (i.e., make/buy decisions)

DOMAIN 2: PROJECT DESIGN (50% OF EXAM)

Task 1: Create functional specifications by translating the results of the needs assessment into activity based scenarios that can be understood by all project stakeholders.

Knowledge of:

- Equipment functionality and technicalities
- Cognitive principles and ergonomics
- Designing behaviors that support the personal goals of the users

Skill in:

- Describing the sequence of product touch points
- Creating documents that communicate sequential behaviors and interdependences (i.e., flowcharts)
- Writing scenario narratives
- Establishing performance levels

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Skill in:

- Considering future design expansions
- Reading and interpreting product specifications
- Documenting system specifications
- Identifying applicable technologies
- Performing system related calculations
- Evaluating and choosing products
- Calculating heat, electrical, and structural loads
- Determining ventilation requirements (CFM, pathways, penetrations, etc.)
- Designing and balancing audio/video distribution
- Specifying, calculating, and analyzing acoustic design
- Specifying spatial/mechanical/mounting/installation methods
- Establishing performance levels

- Determining functionality and programming requirements
- Designing for serviceability, usability, and reliability

Task 3: Define the programming specification from the functional specification in order to determine what is to be controlled, the method and complexity of control, and the operational parameters including scripts, zone maps, and input/output relationships for the full integration of the system.

Knowledge of:

- Product functionality and configuration variables
- Operational requirements
- Method and complexity of control
- Structured programming

- Programming languages and development
- Boolean logic and truth tables
- Flowcharts, state diagrams, and macros
- Interface protocols (i.e., RS232, RS485, TCP/IP, IR, digital I/O, etc.)
- Pseudocode and conditional logic

Skill in:

- Describing sequential events
- Specifying I/O relationships between events and actions
- Determining fault scenarios, backup, and error recovery (i.e., reboot)
- Reading and interpreting product manuals

Task 4: Create the user interface specification by proposing physical control arrangements in order to provide control consistent with client needs.

Knowledge of:

- Ergonomics, aesthetics, and human factors
- User interface options and applications
- Graphic design basics
- Web based control systems
- Hierarchical methods of control
- Metaphors
- Limitations of user interfaces
- Defaults
- Usability testing

Skill in:

- Communicating ideas, concepts, and necessities
- Choosing the appropriate physical control device
- Evaluating the user interface designs through usability testing
- Basic drawing (i.e., paper and pencil)

Task 5: Direct the creation and evaluation of prototypes and/or working mock-ups to ensure design requirements.

Knowledge of:

- Equipment space and load bearing requirements
- Equipment power requirements
- Equipment ventilation requirements
- Equipment control requirements
- Design, test, and evaluation process
- Function and limitations of the prototype and/or mock-ups
- Performance requirements
- Test equipment

Skill in:

- Sketching design ideas
- Operating basic test equipment
- Documenting the test outcome and/or sample evaluation and obtaining signoff
- Researching changes in codes, regulations, and standards
- Testing the validity of new technologies in the design

DOMAIN 3: DESIGN DOCUMENTATION (20% OF EXAM)

Task 1: Create a proposal (bill of material, resource list, and labour products) based on the cost estimate by generating appropriate documentation in order to communicate the requirements of the project.

Knowledge of:

- General knowledge of all trades, sub contractors, and other design professionals and their responsibilities
- Relevant product knowledge
- Component interconnection and interaction
- Subsystem interconnection and interaction

Skill in:

- Communicating efficiently and effectively
- Generating equipment, parts, and materials details
- Describing assemblies and sub-assemblies

Task 2: Generate electronic system plans for distribution to relevant parties by preparing or modifying architectural plans in order to determine the location of devices and wire routes, including installation and construction notes.

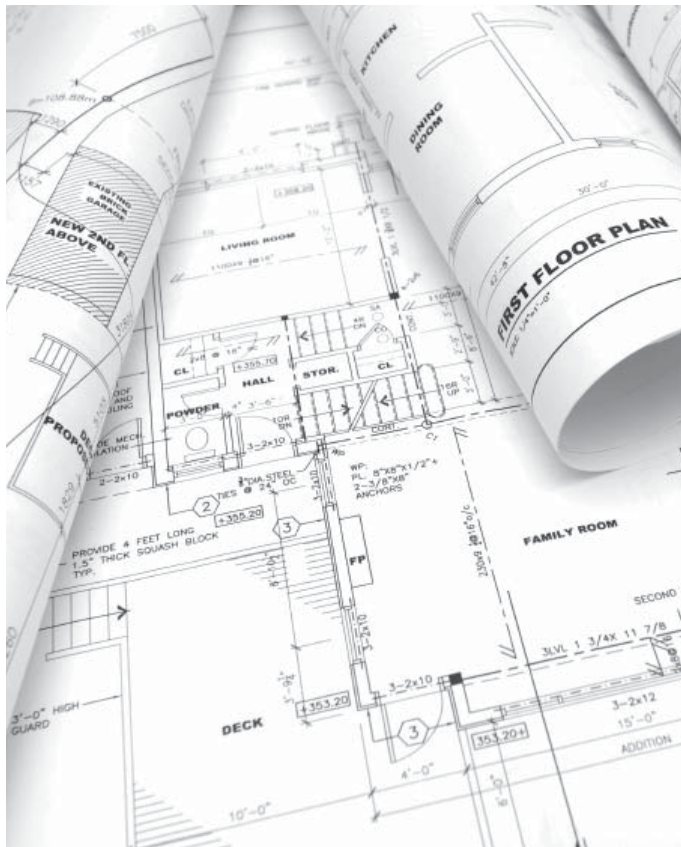
Knowledge of:

- Accepted building regulations (local and national)
- Drawing legends, symbol/icon definition, and usage
- Fundamental ergonomics
- Product placement criteria
- Serviceability and usability
- Drawing layers
- Installation guidelines and criteria
- Document revision control
- Interior design (i.e., aesthetic considerations, furniture layout)
- Site considerations
- Traffic patterns

Skill in:

- Reading drawings
- Annotating drawings
- Interpreting installation guidelines and criteria
- Creating the facilities plan drawings
- Product placement (i.e., user interfaces, components, equipment mounting, speaker layout, etc.)

Task 3: Create cable documentation (i.e., cabling plan and schedule) by describing the origin, destination, and type of each wire along with associated devices for distribution to associated trades.



Knowledge of:

- Cable types, outlets/inlets, connectors, back boxes
- Connection of all sub-systems
- Signal types
- Cable characteristics
- Trades involved
- Local codes, regulations, and standards
- Wire management practices

Skill in:

- Using electrical formulas to calculate wire specifications
- Specifying appropriate cable types (i.e., fire ratings, class, shielding, etc.)
- Specifying connectors and connectorisation

Task 4: Generate block diagram (single-line drawing) by showing basic system level interconnection between components and sub-systems in order to troubleshoot and illustrate signal flow and functionality.

Knowledge of:

- Concepts of signal flow and control nomenclature
- Flow charts in order to create block diagrams
- Components used in system
- Cables and terminations

Skill in:

- Generating block diagrams
- Appropriate drawing/drafting skills
- Organising layout and annotating for clarity of presentation
- Creating a symbolic representation of components and devices

Task 5: Generate point-to-point wiring diagram by describing the specific input-output, wire and connector types, and method of interconnection in order to document how the components will be connected.

Knowledge of:

- Concepts of signal flow and control nomenclature
- Components used in system
- Cables, connectors, pinouts, terminations, and color codes
- Back-panel layout of all devices in the system
- Basic point-to-point information including symbols, grounding, voltage requirements, and other safety related information

Skill in:

- Generating point-to-point drawings
- Referencing point-to-point to wiring schedule



Image Courtesy of Sensory International

- Applying electrical and safety codes
- Organising layout and annotating for clarity of presentation
- Detailing cable connector, pinouts, terminations, and color code requirements
- Defining drawing layers (e.g., audio, video, control, RF, power, etc)

Task 6: Compile as-built drawings and Operations/Maintenance manuals by updating all post-installation construction documents.

Knowledge of:

- Red-lining techniques
- Change orders
- Project history

Skill in:

- Creating and managing archive files
- Reading construction documents
- Version control
- Recording setup parameters

Task 7: Prepare test specifications to verify system performance and functionality.

Knowledge of:

- Functions and limitations of test equipment
- Process of evaluating entire system
- Thorough understanding of the finished project
- Set-up parameters and performance specifications

Skill in:

- Verifying that the design principles were satisfied
- Creating a quality control and assurance checklist
- Making qualitative assessments and inspections
- Preparing test reports
- Interpreting the results of the tests

DOMAIN 4: DESIGN MANAGEMENT (5% OF EXAM)

Task 1: Assess the impact of change orders on the overall design.

Knowledge of:

- Technical limitations of all associated equipment within the system
- Comprehensive understanding of original design intent
- Comprehensive understanding of original design intent
- Impact of industry factors (i.e., new technologies, back orders, codes and standards, etc.)
- Impact of organisational factors (i.e., internal vs. external resources, etc.)
- Impact of customer factors (i.e., colour preference, budget)

Skill in:

- Recalculating budget costs
- Analysing how different solution options affect the design
- Consulting with clients, installers, and other design professionals
- Recalculating resource requirements for impacted work packages

Task 2: Monitor progress of the project to ensure design compliance.

Knowledge of:

- Assigned responsibilities of the contractors and sub-contractors
- Existence of key project milestones
- Communication plan
- Original design intentions

Skill in:

- Documenting progress
- Inspecting installation progress by conducting periodic site visits
- Initiating periodic status reports
- Maintaining communication log
- Generating, reviewing, and approving submittals

DAILY PLANNER

MONDAY 14

09.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00

	ESB1 Becoming a Manager			ESB3 Cash Flow Strategies						
	ESPM1 Earned Value Management			ESPM2 Project Cost Management						
		EST5 Design Documents								
		EST12 Structured Cabling and Data Networks								

TUESDAY 15

09.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00

	ESB4 Developing Marketing Strategies			ESB2 Building a Functional Organisation						
	ESPM3 Project Scope Management			ESPM4 Project Risk Management						
	EST1 Maths, Science and Engineering for Technical Staff									
		EST10 The Guide to Control Systems		EST3 Understanding, and Eliminating Ground Loops						
		CED01 Intro to Residential Custom Integration				CED03 Certification Overview				

WEDNESDAY 16

09.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00

	ESB5 Introduction to Human Resources		ESB7 The Business Side of Project Management						
	ESPM7 Creating Documents for Tender		ESPM5 Managing MDU Projects						
	EST2 Audio & Video Set-up and Calibration Hands On								
	CED04 How to Win a CEDIA Award		EST6 Distributing HDMI <i>Round Table</i>		CED02 Industry Standards		EST7 3DTV Challenges <i>Round Table</i>		
	EST13 IP for Integration				EST14 Advanced IP - Remote Access and Network Segmentation				

THURSDAY 17

09.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00

	ESB6 Introduction to Entrepreneurship		ESB9 Creating a PR Strategy For Your Business						
	C-D1 Designer Level 1 Q&A Session		ESPM6 Project Management Forum						
	EST11 Build the Perfect Rack		EST4 Designing Integrated Gaming Rooms						
	EST8 Cloud Media and Content Aggregation		EST9 iPhones, iPads and Tablets <i>Round Table</i>		CED05 CEDIA Certified Home <i>Kick-off Meeting</i>				
	EST15 802.11 – Getting it Right			EST16 Designing Ethernet Networks					
	C-EST2 EST2 Q&A Session		EST2 (3 hrs) and DL1 Exams (4hrs)						

SHOW FLOOR SEMINAR THEATRE PROGRAMME

HDMI, 3D, smart meters, interior design and the digital future are all issues that will come under close scrutiny in the Show Floor Seminar Theatre.

Set to prove a major attraction yet again, our line-up of expert speakers will feature involvement from major corporates, such as, BSkyB, and the BBC who will give audiences the broadcaster's perspective on HD and 3D content delivery into the home.

At the same time, visitors will be able to find out more about relevant issues, including new technologies, HDMI, smart metering, and the integration of electronic systems within good interior design.

All sessions in the theatre will be free of charge. Availability will be limited and offered on a strictly first come, first served basis on the day.



09.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00

TUESDAY 15		3DTV Tech Brief	HDMI Tech Brief	BSkyB - The Roadmap for 3D	Moore and Heiss Pre-Game Show	Smart Metering - The Effects	New Technologies Update		
WEDNESDAY 16		3DTV Tech Brief	HDMI Tech Brief	Futuresource		BBC HD and 3DTV	Sustainability in Interiors		
THURSDAY 17		3DTV Tech Brief	Moore and Heiss Post- Game Show	HDMI Tech Brief					



CONFERENCE PROGRAMME

Building on the success of last year's conference for the interior design community, CEDIA is extending its outreach programme significantly at this year's Home Technology Event. CEDIA is providing a total of 4 conferences dedicated to educating different audiences about the Association and the benefits of professional smart home design and integration. In addition to a second Designing Interiors With Technology conference, this year sees a dedicated half day education programme for mechanical and electrical consultants and contractors; architects and also electricians as CEDIA continues to raise the profile of the CI industry through education.



KNX01 KNX UK CPD PRESENTATION

Venue : Conference Theatre

Tuesday 15.00 to 16.00

Thursday 15.00 to 16.00

FREE OF CHARGE



The KNX UK Association promotes KNX technology and its members within the UK. It is supported by leading manufacturers, integrators, training providers, user groups and specialist wholesalers. The association is funded by its membership and its aim is to ensure KNX technology is the first choice for consultants, engineers and architects in the development of both commercial and residential buildings.

Course Outline:

- Introduction to KNX UK
- What is KNX?
- KNX – The All Round Advantages
- KNX and International Standards
- Manufacturers & Products
- KNX Product Certification, System, Devices, and Software Tools
- KNX Communications Media, Systems Interfacing and Visualisation
- KNX Training
- Applications: Residential and Commercial
- KNX is Green
- KNX Projects



For further information email education@cedia.co.uk

ENGINEERING SMART HOME NETWORKS

Location : Conference Theatre

Tuesday 10.00 to 13.00

FREE TO M&E CONSULTANTS & CONTRACTORS

NEW FOR 2010 This FREE half day education programme is dedicated to mechanical and electrical consultants and contractors who want to find out how electronic systems, including audio-visual, data, lighting control, security and HVAC can be successfully installed and integrated into significant residential schemes.

Supported by Building Services & Environmental Engineer Magazine and sponsored by Lutron, "Engineering Smart Home Networks" will help provide an important introduction to CEDIA, smart homes and the sector in general. It will include a session looking at the top ten tips for a successful smart home design and a case study which examines a real project, demonstrating how M&E services can work hand in hand with the designer and integrator of the smart home network to deliver a solution. The floor will then be open for an interactive Panel Q&A session.

Sponsored by:



Supported by:



Image courtesy of F&B. Credit Trevor Burton

DESIGNING INTERIORS WITH TECHNOLOGY

Location : Conference Theatre

Wednesday 10.00 to 13.00

FREE TO DESIGN PROFESSIONALS*

Sponsored by Crestron and supported by the British Institute of Interior Design, Decorex and idFX magazine, this FREE half day conference is for interior designers seeking to work more effectively with custom installation firms.

The conference will offer an introduction to CEDIA, the industry and the work of CEDIA members. It will also feature a presentation showing how technology can help in creating sustainable interiors and a session which offers an interior designers guide to cutting edge home technology. A panel Q&A session will allow the audience to quiz our experts with relevant questions.



Image courtesy of Olive AV

Sponsored by:



Supported by:



* Architects, interior designers and specifiers

For further information email education@cedia.co.uk

DESIGNING INTEGRATED FUTURE READY HOMES

Location : Conference Theatre

Wednesday 14.00 to 17.00

FREE TO DESIGN PROFESSIONALS

NEW FOR 2010 CEDIA is to host its first-ever “Designing Integrated Future-Ready Homes” conference at this year’s Home Technology Event and will be supported by RIBA (Royal Institute of British Architects).

The conference will provide training for architects and design professionals who want to learn more about residential custom installation and the benefits it can bring to their projects.

Attendees at this **FREE** half day conference will participate in the RIBA CPD course, “Designing Integrated Future-Ready Homes”, followed by CEDIA’s latest RIBA accredited, advanced CPD offering, “Using Technology to Manage Energy in the Home”.

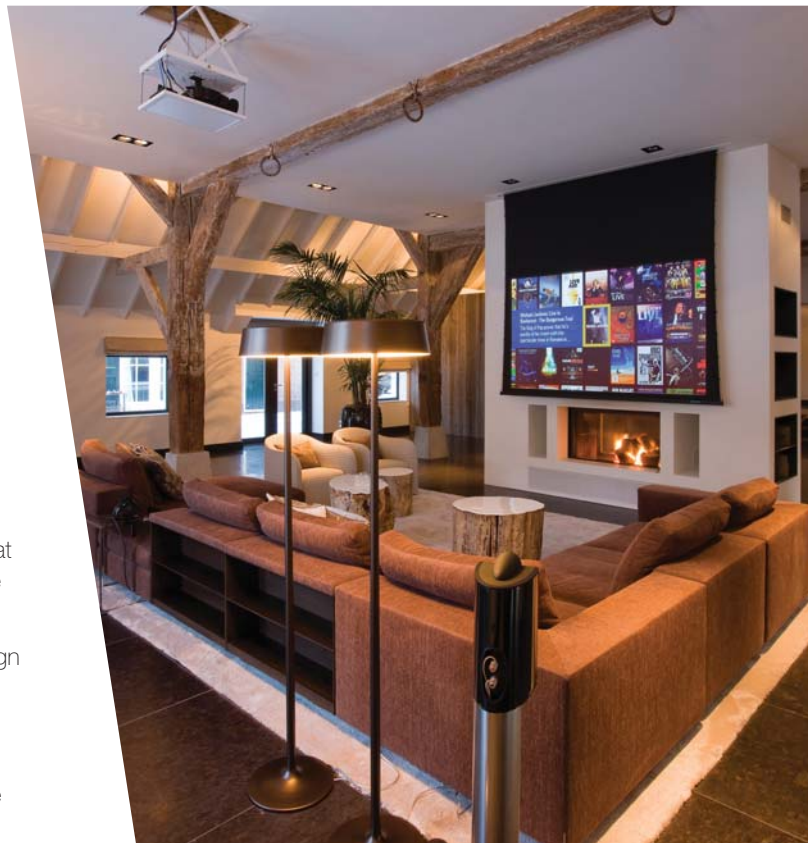


Image courtesy of MR Domitica

Supported by:

RIBA 

* Architects, interior designers and specifiers

WIRED FOR TECHNOLOGY

Location : Conference Theatre

Thursday 10.00 to 13.00

FREE TO ELECTRICAL CONTRACTORS

NEW FOR 2010

"Wired for Technology" is a FREE half day education programme dedicated to electrical contractors who want to find out more about the opportunities for their business in the smart home sector.

Sponsored by Lutron, supported by the NICEIC, the electrical contracting industry's independent voluntary body for electrical installation matters throughout the UK, and chaired by Jonathan Cole, Editor of Professional Electrician magazine, the conference will help electrical contractors find out how they can get involved and profit from the residential CI sector.

It will feature an introduction to CEDIA and the smart homes sector, including a perspective on the market from the NICEIC's Tony Cable followed by a session led by CEDIA members who have made the successful transition from electrical contracting into custom installation. The floor will then be open for an interactive Panel Q&A session.



Image courtesy of The Big Picture

Sponsored by:



Supported by:



For further information email education@cedia.co.uk

BADA01 BADA MARKETING COURSE

Presenter : Ian Williams

Wednesday 10.00 to 17.00

**£150 BADA Members | £200 CEDIA Members
£250 Non-members**



BADA's Marketing course has been designed to introduce the concept of 'marketing' to business managers and dealer principals. It will explain what marketing isn't and what it is, take the mystery out of marketing theories, show why it is vital to any business and using practical examples demonstrate to the candidates cost effective techniques they can put into practice.

SUITABILITY

Business owners, dealer principals, business managers and anyone else who is involved in the strategic and promotional activity of a retail or install business will benefit from the ideas presented in this course. The overriding objective of the course is to show you how the use of marketing techniques can improve the profitability of your business.



BADA02 BADA SALESCRAFT COURSE

Presenter : Ian Galloway

Thursday 10.00 to 17.00

**£100 BADA Members | £150 CEDIA Members
£200 Non-members**



The proposition, for the success of a group of specialists, is that we are adding value to the customer experience. Right from the moment the customer contacts us - via telephone, email, or in person - our objective is to bring something extra to the relationship that we are developing,

Through the process of discussion, presentation and demonstration, we are aiming to produce a convincing and enjoyable experience for the customer that naturally leads to a sale. To fall back on the well-rehearsed and cliched sales techniques is to discount the value of our skills and expertise and the added value that is our speciality.

Salescraft is a one day course that is designed to equip sales staff with the skills necessary to be professional in their approach to sales. It is based on the sequence of the customer's journey through the sales process, starting with the first point of contact the customer has with the business, right through to the after-sales actions.

ESB1 BECOMING A MANAGER

Presenter : TBC

3 Hours | 3 CEU Points

Monday 09.00 to 12.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 As a company grows, it is inevitable that existing staff members progress into positions where they have to manage others. This is often the case where a technician ends up managing a team of installation staff. The purpose of this course is to explore the career progression from technician to manager and to discuss key management techniques to help you become more effective.

At the conclusion of this course, participants should be able to:

- List techniques for motivating people
- Describe the manager's role
- List the characteristics of an effective manager
- List techniques for motivating people
- Use key management techniques to effectively manage people
- Outline a personal action plan that will help manage people.

SUITABILITY

This course is suitable for all, and specially relevant to experienced installers who manage people.

ESB2 BUILDING A FUNCTIONAL ORGANISATION

Presenter : Utz Baldwin, CEDIA

3 Hours | 3 CEU Points

Tuesday 13.00 to 16.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 New companies need structure and procedures. Existing companies often grow organically without considering the market, organisational and procedural systems necessary to work efficiently. The purpose of this course is to explore the available markets, processes and strategic planning involved in defining a business operating system. It provides a guide to developing an effective organisational structure, identifying your niche, determining an effective reporting structure and creating business procedures and processes. Documentation of these, as well as the forms used for each process are also discussed.

At the conclusion of this course, participants should be able to:

- Define an organisational chart and reporting structure
- Identify forms that are used in various business processes
- Define and document business processes and process flowcharts
- Discuss supporting business procedures.

SUITABILITY

This course is suitable for both new entrepreneurs looking to start a business, as well as experienced business owners and managers looking for structure and perspective on their existing processes.

ESB3 CASH FLOW STRATEGIES

Presenter : Nick Tyson, The Edge

3 Hours | 3 CEU Points

Monday 13.00 to 16.00

£100 CEDIA Members | £135 Non-members



Running out of cash has been the number one cause of company failure in this industry over the past few difficult years. Key to avoiding this is understanding and analysing the steps to develop a profitable business strategy as well as ways to improve the sources of cash (income), manage uses of cash (receivables, inventory, expenses), and use debt as a form of financing. Participants will work through exercises to study best practices which help them gain better control of their finances through planning, monitoring and forecasting cash flows.

At the conclusion of this course, participants should be able to:

- Determine the importance and impact of managing cash flows and how it directly affects the bottom line
- Create a system to monitor and forecast cash flows
- Develop a procedure for managing payments to suppliers.

ESB4 DEVELOPING MARKETING STRATEGIES

Presenter : Fraser Stride, Finite Solutions

3 Hours | 3 CEU Points

Tuesday 09.00 to 12.00

£100 CEDIA Members | £135 Non-members



The keys to developing an effective marketing strategy require understanding, defining, and leveraging the company brand, the competitive marketplace, and the company core competencies. This will enable an organisation to concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage.

This course provides business owners with essential tools to differentiate and grow their firms in an increasingly competitive environment. It provides a guide to develop a marketing plan, its core components, and decision points for business owners.

At the conclusion of this course, participants should be able to:

- Explain how a marketing plan can help their business grow
- Perform competitive and SWOT Analyses (Strength, Weakness, Opportunities, Threats)
- Brand their company
- Recognise the best opportunities in the marketplace for sales and competitive advantage
- Develop a marketing plan for their company.

ESB5 INTRODUCTION TO HUMAN RESOURCES

Presenters : Matt Dodd, Thinkingbricks and Sonal Riley

3 Hours | 3 CEU Points

Wednesday 09.00 to 13.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 This course examines the basic concept of Human Resources (HR) and the management of an organisation's most valued assets - the people hired to contribute to the achievement of the objectives of the business. It provides an overview of various HR functions involved in running a residential electronic systems office and highlights the different techniques of managing a workforce.

At the conclusion of this course, participants should be able to:

- List the basic functions of a typical HR department
- Describe basic techniques and the importance of the techniques used in employee recruitment, selection, and hiring policies
- Describe the importance of the employee handbook and list general items that can be included in an employee handbook
- Describe the importance of training and it how can benefit the workflow and profitability of an office.

ESB6 INTRODUCTION TO ENTREPRENEURSHIP

Presenter : Matt Dodd, Thinkingbricks

3 Hours | 3 CEU Points

Thursday 09.00 to 12.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 This course provides a high-level overview of business planning, funding, and formation, as well as information about developing a corporate culture. For participants interested in exploring the possibility of starting their own residential electronic systems business, this course outlines a logical process that guides participants in deciding if and how they should move forward with starting their own business.

At the conclusion of this course, participants should be able to:

- Describe keys to successful entrepreneurship
- List key results that belong to a business plan
- Create a corporate mission/vision statement
- Discuss a plan for the funding and formation of a new business
- List other business start-up considerations
- Discuss techniques for developing and implementing strategic thinking

SUITABILITY

This course is suitable for anyone who is either thinking of starting a business, or who is a 'one man band' looking to take the next step.

ESB7 THE BUSINESS SIDE OF PROJECT MANAGEMENT

Presenter : TBC

3 Hours | 3 CEU Points

Wednesday 13.00 to 16.00

£100 CEDIA Members | £135 Non-members



This course is designed to guide participants in the business tracking metrics involved in project management. The key to reducing project costs is to stay on schedule and this course provides techniques for managing and maintaining the schedule. The course also discusses effective management of a project, including accurate estimation of project costs and managing staff, as well as techniques for assuring product quality throughout all phases of the project.

At the conclusion of this course, participants should be able to:

- Estimate accurate project costs
- Create and maintain an effective schedule for multiple projects
- Manage staff to reduce project costs in an effective manner
- Assure product quality throughout all stages of a project
- Balance workflow among projects to maximise profits.

SUITABILITY

This is not a traditional Project Management course, but instead is a focussed session that concentrates on the key project metrics and processes that need to be understood by any business owner.

ESB9 CREATING A PR STRATEGY FOR YOUR BUSINESS

Presenter : Fraser Stride, Finite Solutions

3 Hours | 3 CEU Points

Thursday 13.00 to 16.00

£100 CEDIA Members | £135 Non-members



Effective PR is probably the most cost effective way to promote and market a business. Learn how to define the best media and outreach opportunities for target markets. Participants will explore successful PR strategies and learn how to craft a cost-effective PR strategy for their business.

At the conclusion of this course, participants should be able to:

- Identify various outreach opportunities and target media within their target markets
- Distinguish between more effective and less effective outreach opportunities
- Identify the components of a PR strategy and evaluate their business' current efforts with PR
- Identify their PR priorities based on their budget and overall marketing strategy.

ESPM1 EARNED VALUE MANAGEMENT

Presenter : TBC

3 Hours | 3 CEU Points

Monday 09.30 to 12.30

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 One of the primary success measurements of a project is to be on budget. It is the Project Manager's responsibility to track budget and costs throughout a project. This course explores the concept of tracking the financials of a project and provides the tools and techniques for reporting the fiscal health of a project at any given point in time. The concept of earned value is applied to this tracking process to provide snapshots of current project health and predict future performance.

At the conclusion of this course, participants should be able to:

- Define earned value
- Budget project resources and expenses
- Establish a cost baseline
- Monitor project costs versus budget
- Report current and forecast future project cost.

ESPM2 PROJECT COST MANAGEMENT

Presenter : TBC

3 Hours | 3 CEU Points

Monday 14.00 to 17.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 Successful project management not only requires advanced planning, process, and people management skills, but also project cost management skills.

Fundamental financial skills are necessary to be successful in completing projects. Operationally, Project Managers understand the need to plan ahead to avoid customer dissatisfaction and its effect on future business. Failing to plan projects from a financial perspective may mean a company does not have a future. Learn the Project Management Institute (PMI) processes required to plan, estimate, budget, and control costs. The course provides valuable insights on the skills, tools, and techniques needed to successfully manage projects to maximise the profitability of a company.

At the conclusion of this course, participants should be able to:

- Identify the three processes of cost management as defined by the PMI
- Clearly state the financial responsibility of a project manager
- Identify the inputs, tools and techniques, and outputs necessary for effective project cost management
- Discuss the financial framework before a project is constructed
- Review actual results to a plan and understand what the variances mean to a business
- Capitalise on future benefits through information generated through project cost management.

ESPM3 PROJECT SCOPE MANAGEMENT

Presenter : TBC

3 Hours | 3 CEU Points

Tuesday 09.30 to 12.30

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 The amount of work and cost of a project increases as the project progresses due to changes from the customer. Learn the Project Management Institute (PMI) processes required to ensure that the project includes all the work required, and only the work required to complete the project successfully. Processes covered in this course include initiation, scope planning, scope definition, scope verification, and scope change control. Real-world examples will be used to show how to properly define a project and how to accurately document the changes.

At the conclusion of this course, participants should be able to:

- Identify the five processes of scope management as defined by the PMI
- Create a clear and concise scope statement that includes all required work, and only the required work, to complete the project successfully
- Create a Work Breakdown Structure (WBS)
- Verify that the scope for a given project has been successfully completed
- List techniques for controlling scope and scope creep.

ESPM4 PROJECT RISK MANAGEMENT

Presenter : TBC

3 Hours | 3 CEU Points

Tuesday 13.00 to 16.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 The goal in planning and executing any project is to complete the project in a successful manner – one that results in a positive outcome for all stakeholders.

In order to obtain this result, it is critical to consider potential obstacles and roadblocks, as well as consequences if obstacles are not addressed. Is the timeline for completing the project reasonable? Are the necessary staff resources present? Learn the Project Management Institute (PMI) processes required to identify, analyse, and respond to risk factors. Discussion topics include risk management, identifying risk factors, planning for risk, qualitative and quantitative risk analysis, monitoring, controlling, and responding to risk.

At the conclusion of this course, participants should be able to:

- Identify the six processes of risk management as defined by the PMI
- Identify many of the risks that threaten the project objectives of on-time delivery, staying on budget, managing scope, and quality completion
- Describe methods to avoid, transfer, and mitigate project risks
- Formulate a plan of action to address negative events or occurrences.

ESPM5 MANAGING MDU PROJECTS

Presenter : Simon Buddle, SMC

3 Hours | 3 CEU Points

Wednesday 13.30 to 16.30

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 Successful ventures into the MDU market depends on a careful balance of sales, manpower, scheduling, and financial wizardry. While the project manager may not be involved in the sales process or with financial issues, his/her effectiveness in planning, executing, controlling, and closing multiple projects will have a huge impact on the project's profitability. Timing and coordination of the whole project have particular impact on timing and coordination with other trades throughout all five phases of the project lifecycle. This course is designed to raise and discuss issues for the MDU or production home project manager that are somewhat different than what is normally encountered during a typical custom installation project, arming him/her with the tools required for success.

At the conclusion of this course, participants should be able to:

- Apply the technique of assigning and designating resources
- Explain the process for creating the project plan
- Increase effectiveness when communicating with stakeholders
- Highlight and discuss special issues associated with each of the 5 project phases
- Discuss staffing and scheduling requirements
- Explain the importance of timely and accurate job costing
- Develop "tips of the trade" associated with both types of projects using an open discussion platform to identify best practices for overall coordination, execution, and controlling of these projects.

ESPM6 PROJECT MANAGEMENT FORUM

Presenter : TBC

3 Hours | 3 CEU Points

Thursday 13.00 to 16.00

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 This three-hour session takes the education track for a Project Manager in a different, but valuable direction. The forum starts with the panelists and participants working together to select the topics to be explored. It will then disperse into small break-out sessions. After the break-out sessions, there will be an open discussion among the groups to share what was learned. There is no set curriculum. The content is strictly driven by the participants. We have scheduled this session to take place last on the Project Management track which gives attendees on the other PM courses an ideal opportunity to get together and discuss

Topics may include: • What exactly does a Project Manager do in a company? • How to identify and train employees with potential in project management? • What to do about documentation problems and how to solve them.

This course is free of charge to attendees of at least three other Project Management courses.



ESPM7 CREATING DOCUMENTS FOR TENDER

Presenters : Steve Moore & David Smith, SMC

3 Hours | 3 CEU Points

Wednesday 09.30 to 12.30

£100 CEDIA Members | £135 Non-members



Increasingly, larger jobs are put out to tender by perhaps the main contractor, or an M&E consultants firm. Often complex, rarely straightforward, tender documentation contains the information needed for your company to win the bid. This course will look at how to create the correct documentation and format it in a way that puts you in a position to get the job. We will also cover method statements, health and safety policies as well as looking at additional resources to help make sure that your tenders meet and relevant legislation. Plenty of real world examples will be shown and attendees are encouraged to bring in their own documents for discussion by the group.

At the conclusion of this course, participants should be able to:

- Describe the components that make up a tender document
- Analyse tender requirements to make sure that the tender conforms to requirements
- Describe the importance of defining clear objectives within the tender
- Describe the roles of Method Statements and Health & Safety policies.



EST1 MATHS, SCIENCE & ENGINEERING FOR TECHNICAL STAFF

Presenter : Geoff Meads, Presto AV

7 Hours | 7 CEU Points

Tuesday 09.00 to 17.00

£150 CEDIA Members | £200 Non-members

NEW FOR 2010 The foundation of our industry, this course is both an introduction for newcomers, as well as a refresher for the experienced. Almost everything technical we do in the industry is defined by an engineering calculation. Increasingly, CEDIA Certification is based on recommended practices that require you to make calculations in order to justify your design and installation decisions. This course will cover the following essential topics - • Basic Mathematics • Wave theory (EM Spectrum, AC and Sound) • Electrical Theory • Light and Colour Theory • Heat and Thermodynamics.

If you want to understand how CFM affects BTUs, why square rooms are difficult, why adding red to green to blue does not always give you white, then this course is for you.

SUITABILITY

This course is suitable for anyone who has forgotten their Physics O and A levels, as well as excellent preparation towards some of the topics in the CEDIA EST2, EST3 and Designer Level 1 Certification exams.

EST2 AUDIO & VIDEO SET-UP AND CALIBRATION HANDS ON

Presenter : Jeff Gardner, CEDIA

7 Hours | 7 CEU Points

Wednesday 09.30 to 17.30

£150 CEDIA Members | £200 Non-members

This course will equip delegates with the knowledge necessary to properly configure multi-channel audio systems and display devices. It also teaches technicians how to apply basic acoustic theory and recognised standards to room set-up and equipment placement. We will be explaining how to get the best audio performance out of the system. We will also talk about processing parameters, encoding standards and system interconnections. For video, every display device that is installed by a CEDIA member should be calibrated. This applies from a 19" LCD to a high end 3-Chip DLP. This calibration can be done to a number of levels, all which use the same basic methodology that this course teaches. This course teaches technicians how to identify the types and functions of various video components and how to calibrate them. We will be applying these principles to the real-world set-up and calibration of display devices.

We will have a range of devices that delegates will be able to practice their skills on.

At the conclusion of this course, participants should be able to:

- Set up brightness, contrast, sharpness and colour correctly on a display device
- Define scaling and how to define which device performs this task.
- Set delays, levels and bass management on an AV processor
- Position a 5.1 speaker system correctly according to ITU specifications and for good bass performance



EST3 UNDERSTANDING AND ELIMINATING GROUND LOOPS

Presenter : Ken Erdmann, The Erdmann Group

3 Hours | 3 CEU Points

Tuesday 14.00 to 17.00

£100 CEDIA Members | £135 Non-members



Tired of making costly and unprofessional return visits to fix a hum, buzz, or video hum-bar problem? 'Ground loops' that cause these symptoms are simply a fact of life! They're the unavoidable consequence of connecting signal cables between pieces of equipment — and exist even when the residential electronic systems technician or the electrician have done everything right. This advanced level course will explain what ground loops are, how they add interference to signals, how to perform simple tests to locate the cause, and how to 'break' the loops without creating potentially deadly hazards or legal liability issues. After this course, participants will stop wasting time and money on heroic or bizarre "solutions" that offer only marginal improvements and arm themselves with the practical know-how from this course.

At the conclusion of this course, participants should be able to:

- Define the causes of ground loops
- Utilise structured problem solving to find the cause
- Outline the steps that can be taken to eliminate the ground loop.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST3 and Designer Level 1 Certification Exams.

EST4 DESIGNING INTEGRATED GAMING ROOMS

Presenters : Jeff Gardner, CEDIA and Mike Heiss

3 Hours | 3 CEU Points

Thursday 12.30 to 15.30

£100 CEDIA Members | £135 Non-members



With games outselling music and films combined in the High Street, gaming is not a game to those in the know; they are an integral part of the home entertainment landscape that can help set your systems apart from the competition if they are properly integrated. New technology expert Michael Heiss takes the helm for the first part of the session, detailing the systems and components that are essential for successful installation of games from the largest sports simulators and PC based systems to the differences between the latest console games and the components and accessories that make them a potential source of value-added revenue for design/installation companies. Learn about the requirements for environment, infrastructure, and connectivity, and then put the theory into practice with a design exercise that will examine how to integrate this equipment in the real world.

SUITABILITY

This course is recommended for candidates studying for the CEDIA Designer Level 1 Certification Exam.

EST5 DESIGN DOCUMENTS

Presenter : Simon Buddle, SMC

3 Hours | 3 CEU Points

Monday 10.00 to 13.00

£100 CEDIA Members | £135 Non-members

Possibly the most important element in the smooth running of any project is the quality of the prepared documentation. This includes the bill of materials (The quote), functional (Architectural) specification, cable schedules, schematic drawings, plan drawings and detail drawings. This course will teach you how to use documentation to ensure great project communication. We will be giving you practical tips on how to layout the documents as well as going through proper revision management.

All delegates will be given a CD with sample drawings and documentation.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST3 and Designer Level 1 Certification Exams.

EST6 DISTRIBUTING HDMI: *ROUND TABLE*

Moderators : Mike Heiss and
Neil Davidson, Genesis Technologies

1.5 Hours | 1.5 CEU Points

Wednesday 12.30 to 14.00

£45 CEDIA Members | £60 Non-members



This is a round table discussion forum event to discuss the issues, and solutions around distributing HD AV over HDMI around the home. There is no set curriculum though the panel members have been selected to give their expertise as well as bring structure, and direction to the discussions.

The content is strictly driven by the participants who should be prepared to contribute their experiences and ideas to the group. Minutes of the discussions will be taken and distributed to participants.


EST7 3DTV – CHALLENGES AND SOLUTIONS: ROUND TABLE

Moderators : Mike Heiss and
Neil Davidson, Genesis Technologies

1.5 Hours | 1.5 CEU Points

Wednesday 16.00 to 17.30

£45 CEDIA Members | £60 Non-members

 This is a round table discussion forum event to discuss the issues, and solutions regarding implementing 3D display devices in the home. There is no set curriculum though the panel members have been selected to give their expertise as well as bring structure, and direction to the discussions.

The content is strictly driven by the participants who should be prepared to contribute their experiences and ideas to the group. Minutes of the discussions will be taken and distributed to participants.


EST8 CLOUD MEDIA AND CONTENT AGGREGATION: ROUND TABLE

Moderators : Steve Moore, SMC and
Peter Aylett, CEDIA

1.5 Hours | 1.5 CEU Points

Thursday 09.30 to 11.00

£45 CEDIA Members | £60 Non-members

 This is a round table discussion forum event to discuss the issues, and solutions regarding delivering cloud (internet) content to your clients. Discussion topics will include content aggregation as well as unifying user interfaces. There is no set curriculum though the panel members have been selected to give their expertise as well as bring structure, and direction to the discussions.

The content is strictly driven by the participants who should be prepared to contribute their experiences and ideas to the group. Minutes of the discussions will be taken and distributed to participants.

EST9 iPHONES, iPADS AND TABLETS: ROUND TABLE

Moderators : Ken Erdmann, The Erdmann Group and TBC

1.5 Hours | 1.5 CEU Points

Thursday 12.30 to 14.00

£45 CEDIA Members | £60 Non-members

NEW FOR 2010 This is a round table discussion forum event to discuss the impact of the emergence of iPhones, iPads and tablet PCs in our systems. Discussion topics will include how to embrace these devices as opportunities rather than as threats. There is no set curriculum though the panel members have been selected to give their expertise as well as bring structure, and direction to the discussions.

The content is strictly driven by the participants who should be prepared to contribute their experiences and ideas to the group. Minutes of the discussions will be taken and distributed to participants.

EST10 THE GUIDE TO CONTROL SYSTEMS

Presenter : Simon Buddle, SMC

3 Hours | 3 CEU Points

Tuesday 10.30 to 13.30

£100 CEDIA Members | £135 Non-members

NEW FOR 2010 A Control System is the heart of a fully integrated home. With today's systems becoming increasingly commodotised with the introduction of iPhones as user interfaces and with less expensive product becoming more and more sophisticated, this course is the essential guide to how to specify and select the correct control solution for your clients. The course will examine how users like to interact with technology as well as explaining how to select the correct user interface for any given situation. Also discussed will be the golden rules of systems integration which should be adhered to in order to deliver an exciting, but reliable user experience to your clients.

SUITABILITY

This course is recommended for candidates studying for the Designer Level 1 Certification Exam.

EST11 BUILD THE PERFECT RACK - INSTALLATION, CABLING & COOLING

Presenter : Carl Ambrus, T+T Automation

3 Hours | 3 CEU Points

Thursday 09.00 to 12.00

£100 CEDIA Members | £135 Non-members

Rack building and equipment mounting are often skills that are developed over time. The purpose of this course is to give technicians those skills paying special attention to ventilation, heat management, cable management, future serviceability and aesthetics. We will be giving special attention to making sure that delegates understand the theory and practice of rack building. This is the course to attend if you have ever wondered how to keep that equipment at the right temperature.

At the end of the course, you will understand how to approach the design and installation of products into their environments by using engineering principles. These principles will relate to safety, performance cooling and serviceability. You will learn about the importance of, and the implementation of thermal management for equipment.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST2 and EST3 Certification Exams as well as designers who wish to incorporate thermal calculations into their rack designs.

EST12 STRUCTURED CABLING AND DATA NETWORKS

Presenter : Matt Dodd, Thinkingbricks

6 Hours | 6 CEU Points

Monday 10.00 to 17.00

£135 CEDIA Members | £180 Non-members

As IT continues to invade the home entertainment environment, the need for a proper structured cabling infrastructure is essential in any custom installation project. This workshop will teach you how to design, implement and test a domestic structured cabling system. You will learn how to design for the future, the types of cables used, how to handle the cables, how to terminate the cables, and how to test and certify the installation. This will be an interactive workshop with practical exercises using a range of tools, test and certification equipment, giving you hands on experience.

By the end of the course you will:

- Understand the elements that make up a structured cabling system
- Be able to correctly document how to handle and terminate category rated cables
- Understand cable testing and its importance.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST2 and Designer Level 1 Certification Exams.

EST13 IP FOR INTEGRATION

Presenter : Geoff Meads, Presto AV

3 Hours | 3 CEU Points

Wednesday 09.00 to 12.00

£100 CEDIA Members | £135 Non-members

The purpose of this course is to provide a foundation for understanding IP (Internet Protocol). It is appropriate for both beginners and individuals looking to formalise and increase their IP networking knowledge base. With the vast majority of subsystems now having the ability to be converged over an IP network, this is arguably the most important topic to make sure that you have a solid foundation in.

At the conclusion of this course, participants should be able to:

- Discuss the advantages and importance of the growth in IP networking
- Explain common network protocols such as TCP, UDP, IP, DHCP, DNS, and NAT
- Select, install, and configure consumer routers for wired environments
- Create and implement IP addressing schemes for connected network devices (computers, AV, lighting control, etc.)
- Create system documentation for IP networks.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST2, EST3 and Designer Level 1 Certification Exams.

EST14 ADVANCED IP - REMOTE ACCESS AND NETWORK SEGMENTATION

Presenter : TBC

3 Hours | 3 CEU Points

Wednesday 14.00 to 17.00

£100 CEDIA Members | £135 Non-members



The purpose of this course is to expand upon the IP for Integration course to instruct participants on more advanced IP and Ethernet networking protocols and their configurations. This course will teach comprehension and usage of the various protocols required to implement LANs and Remote Access, and will address simple design, installation, testing, and troubleshooting techniques.

At the conclusion of this course, participants should be able to:

- Define and perform port address translation
- Describe and implement a VPN
- Configure network segmentation using subnet masking and routers
- Describe and identify the proper usage of VLANs and QoS
- Define Multicasting / Broadcasting, Flooding / Storm Control, RSTP (Rapid Spanning Tree Protocol)
- Determine when a Cisco Certified Engineer is required on a project.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST3 and Designer Level 1 Certification Exams.

EST15 802.11 - GETTING IT RIGHT

Presenter : David Field, Channelserve

3 Hours | 3 CEU Points

Thursday 09.00 to 12.00

£100 CEDIA Members | £135 Non-members

The purpose of this course is to instruct participants on the design and installation of 802.11x wireless networking equipment. Almost all of the systems that we install have some kind of wireless networking component and while wireless can be made to work reliably, this needs skill and a deep knowledge of the tasks involved. If the right procedures are not followed, the system will not work properly – A scenario that has been experienced by the vast majority of us. This course will teach you about the fundamentals of designing, installing and configuring an 802.11x network so that it will meet the required performance parameters.

At the conclusion of this course, participants should be able to:

- Describe current 802.11x wireless network technologies and explain their benefits
- Select the appropriate 802.11x wireless networking product to meet the performance requirements
- Perform a basic on-site wireless survey and interpret the results
- Configure 802.11x wireless devices with the correct SSID, channel selection, encryption standard and security settings
- Perform basic troubleshooting on 802.11x networks.

SUITABILITY

This course is recommended for candidates studying for the CEDIA EST3 and Designer Level 1 Certification Exams.

EST16 DESIGNING ETHERNET NETWORKS

Presenter : TBC

3.5 Hours | 3 CEU Points

Thursday 13.00 to 16.30

£100 CEDIA Members | £135 Non-members

The purpose of this course is to educate participants about the importance of thoughtful network design when coming up with solutions for converging sub-systems onto an IP network. This course looks at analysing bandwidth and QOS, requirements and the importance of correct hardware specification for network infrastructure. Both wired and wireless networks will be covered as well as looking ahead to the requirements of future technologies. It is expected that participants will already have an understanding of fixed and dynamic host configuration protocol (DHCP) IP addressing, the Open Systems Interconnection (OSI) model, and the sub-systems that can be converged over IP.

At the conclusion of the course, participants should be able to:

- Describe the bandwidth and quality of service requirements of Ethernet networks
- Specify and describe the correct cabling infrastructure to support an IP network with given bandwidth and QOS requirements
- Design and document a cabling scheme to support a wired network
- Design a cable infrastructure to support a wireless network while considering performance requirements
- Specify the correct installed and active infrastructure components for Ethernet networks
- Assess the requirements for emerging technologies, including multicasting, bandwidth, and security.

SUITABILITY

This course is recommended for candidates studying for the CEDIA Designer Level 1 Certification Exam.

C-EST2 EST2 CERTIFICATION Q&A AND EXAM

Presenter : Geoff Meads, Presto AV

6 Hours

Thursday 09.00 to 15.00

£300 CEDIA Members | £450 Non-members

Certification is NOT INCLUDED as part of any offer

Aimed at people who wish to become CEDIA EST2 Certified, and intended for CEDIA member companies to meet the new membership requirements of employing at least one CEDIA Certified individual, the first 3 hours of the day is an optional revision session to help candidates prepare for the exam. Questions must be prepared in advance and e-mailed to peter@cedia.co.uk no later than Tuesday 1 June. We will do our best to answer additional questions on the day but cannot guarantee that appropriate teaching materials will be available - The only subjects that will be covered in the revision session will be in response to questions from attendees. The exam will be 3 hours.

This session does not cover the curriculum in any depth, and is intended only for candidates who have studied the curriculum. It is expected that candidates will have already studied to prepare for the exam.

C-D1 DESIGNER LEVEL 1 CERTIFICATION Q&A AND EXAM

Presenter : Simon Buddle, SMC and
Jeff Gardner, CEDIA

7 Hours

Thursday 09.00 to 16.00

£300 CEDIA Members | £450 Non-members

Certification is NOT INCLUDED as part of any offer

Aimed at people who wish to become CEDIA Designer Level 1 Certified, the first 3 hours of the day is an optional revision session to help candidates prepare for the exam. Questions must be prepared in advance and e-mailed to peter@cedia.co.uk no later than Tuesday 1 June. We will do our best to answer additional questions on the day but cannot guarantee that appropriate teaching materials will be available - The only subjects that will be covered in the revision session will be in response to questions from attendees. The exam will be 4 hours.

This session does not cover the curriculum in any depth, and is intended only for candidates who have studied the curriculum. It is expected that candidates will have already studied to prepare for the exam.



CED01 INTRODUCTION TO RESIDENTIAL CUSTOM INTEGRATION

Presenter : Guy Singleton, Imagine This

5.5 Hours

Tuesday 10.00 to 15.30

£80 for everyone

Aimed at new entrants to the integrated home business, this CEDIA course will provide a grounding to enable participants to either find employment within, or start their own businesses in this growing industry.

The course has been developed in response to individuals who want to make a career or start a business in the industry but are unsure where to start or what opportunities exist. The session is presented in a relaxed and informal style with lots of opportunity for discussion and questions. Though not technical, by the end of the course participants will have a good understanding about the scope of a project and will be able to decide upon their next step.

CED02 GETTING INVOLVED WITH CREATING INDUSTRY STANDARDS

Presenter : Peter Aylett, CEDIA

1 Hour

Wednesday 14.30 to 15.30

FREE of charge

CEDIA has embarked on a program to create technical standards by which a CEDIA member and The Industry can be defined and work to. This session will introduce you to the standards both currently under development, and slated for future development, and give you an insight into how you can get involved.

Being part of a standards development committee is one of the most rewarding things you can do in the industry and will gain you both knowledge and recognition.

CED03 CEDIA CERTIFICATION OVERVIEW

Presenter : Peter Aylett, CEDIA

1 Hour

Tuesday 16.00 to 17.00

FREE of charge

This session will introduce you to CEDIA Certification and give you the chance to ask questions in order to determine which route is best for you. We will be looking through the various curricula as well as examining the different learning options available.

CED04 HOW TO WIN A CEDIA AWARD - PHOTOGRAPHY, DOCUMENTATION AND STANDARDS

Presenters : Matt Nimmons & Peter Aylett, CEDIA
and Liz Anthony, Wildwood PR

1.5 Hours

Wednesday 10.00 to 11.30

FREE of charge to CEDIA members only

Winning a CEDIA Award has been the springboard for many CEDIA member companies drive towards success. Each year around 100 projects are entered into our Awards, but there can only be one winner in each category. This session has been designed to guide you through both the submissions process, as well as giving you insight into how the awards are judged. We will be giving you the information necessary to make sure that your entries are of the highest standard in order to meet both the category requirements, as well as impress both the technical and aesthetic aspects of the judging process.

This course is essential for any CEDIA member company who wishes to enter the 2011 Awards.



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HAI OmniTouch 5.7e Touchscreen displaying HAI Music Gateway interface.



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