
AV AWARDS 2009

PHOENIX AV
SOLUTIONS LTD

Application Documentation

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CHARNWOOD HOSPITALITY & CATERING TRAINING ACADEMY

1. Background

Charnwood Hospitality & Catering Academy based in Kirkby-in-Ashfield was set up by Steve Smith & Jeremy Scorer, both from the Brewery industry, to improve the training given to hospitality personnel, particularly bar, restaurant and kitchen staff.

As a result of collaboration with the local college and government funding, they acquired a newly built training centre to run their specialised diploma courses for students from the college, the hospitality industry and newcomers.

The centre consists of two storeys; on the first floor are training kitchens, a restaurant area, and two small rooms. On the upper floor are a number of rooms for use as offices and training suites.

2. General Overview

a. Requirement

The requirement was for a facility to meet a number of key proviso's including:

- i. Two fully equipped training rooms for use by in-house lecturers or for hire out to external users.
- ii. Training rooms to allow for use as individual rooms or opened to a larger single presentational theatre
- ii. Ability for the chef to have access to AV systems in support of his training
- iii. Ability for visiting celebrity chef's to demonstrate to live and remote audiences
- iv. Ability for trainers to review, monitor and record activities in a number of training environments including the training rooms, kitchens, bar, restaurant and mock cellar room.
- v. For any of the activities to be recorded for conversion if required to on-line media libraries for access by students.
- vi. Ability for external trainers to be able to access information and if possible engage in real time interaction with the centre.
- vii. For visitors in the restaurants to be able to view activities (e.g. kitchen / training rooms) at the discretion of the management.

b. Project Management

The customer and project initiator was Charnwood Training who engaged Aonix Limited to install the electrical and network systems.

Due to their working association, Aonix contracted Phoenix to complete the Audio Visual element with the project being managed by Dennis Silverlock in association with Sharleen Toller (systems specification and procurement) and Adrian Fisher (on-site management, system programming and configuration). Installation was provided by Phoenix AV personnel.

c. Funding

Due to the government scheme, the training facility was provided by the college and funding for the audio visual elements partly by Charnwood training and partly by a government scheme.

The original quotation for the complete system was in excess of £ 100,000 and provisionally agreed at the end of 2008. Unfortunately, due to the recession, changes in the project build programme and other influencing factors, the final budget was reduced by about 25% for the first phase with the possibility of a second phase at a later date.

d. Timescale

Due to a variety of reasons including awaiting confirmation of funding, the AV part of the project processes although started in December 2008 with the design proposals was not completed until the beginning of June 2009.

Once started, the actual audio visual installation itself took approximately 3½ weeks. Much of this was partly due to the training centre being in use and access to various key areas such as the kitchens and restaurant restricted to 'out of hours' periods.

e. Results

The results have been excellent and in its short period are having an impact not just for internal training but within wider areas of the hospitality industry.

i. Internal Use

The Charnwood trainers now have a facility allowing them greater flexibility in the way that they train their students. Lessons and lectures can become more interactive with the ability to call up material from many sources including recordings, live lectures and TV.

Students have 'hands-on' access to equipment and their progress is monitored remotely, thus allowing them the freedom to operate without the pressures of others nearby. Furthermore, not only will students will have access to a library of on-line information via the netbooks they are issued for home study and review, but will be able to take away recorded evidence of their work for future potential employers.

ii. External Use

Thanks to the MediaSite system, off-site trainers will be able to access media library information for competence work at external locations with students (e.g. at a restaurant, public house, hotel etc) thereby assisting them with their teaching. They can also record external training and demonstration sessions for uploading to the central facility and conversion for the on-line libraries if required, thus building up an ongoing wealth of material.

The mobile MediaSite system can also be set up at remote locations and provide both live streaming and recordings of events allowing those unable to attend to watch in real or recorded time at their convenience on-line. In this way, any celebrity chefs visiting the Charnwood centre can also be recorded and watched by invited guests on-line.

3. Main Locations

The following areas are the key locations for audio visual enhancement.

a. Restaurant Area

Set out as a small restaurant with tables, chairs and soft seating areas, it can be quickly changed to provide for buffets, social events and a presentation area for visiting celebrity chefs. It also provides a live working outlet for the students' activities and food is sold to guests and visitors mainly from the local college lecturers and business community.

Two wall mounted [Networked Digital Signage](#) screens have been installed to allow the management to remotely schedule information to the screens according to the day's programmes, be that menu information, coursework or visitor news:

i. 46" Digital Signage Screen

In addition to the general information, this screen can have an area dedicated to a 'KitchCam'. This ceiling camera mounted within the kitchen is set on a 'roaming' pattern and gives a view of the students working; however, the management can also switch views to show the lecture rooms if any activities of interest are going on there.

ii. 40" Digital Signage Screen

The smaller screen is set in a location that can also be used as a mini presentation area for visitors. Not only will it show the marketing material as remotely scheduled by the management, it has a touch screen and built in processor allowing staff to access the central database for presentations to small numbers of guests / students, or for guests to connect their laptops via a local access point and use it as a large monitor for their own mini presentations.

iii. Audio

A [Ceiling Speaker](#) system has been put in place allowing music to be played throughout to help create the right ambience. However, when required, they can be used for voice amplification for presentations by celebrity visitors or larger training sessions. (Users will have [Wireless Headphone](#) or [Tie Microphone](#) systems).

Should **Phase 2** be approved, a consideration is to move the 46" screen to a new location and replace it with a larger digital signage screen, either 52" or 57" in size.

b. Kitchen

The training kitchen is designed to teach students the basics of good food skills and cooking. The Training Chef has a demonstration position at the head of the kitchen and there are a number of training positions for the students down the length of the room.

Within the kitchen, there are a number of [Camera](#) locations; one is set above the Training Chef to record his activities, one set as the 'KitchCam' allowing images to the digital signage systems and a third for monitoring activities.

The Chef's location has a [52" Interactive Touch Monitor](#) connected to his computer (located in another room) from which he is able to operate a number of features:

- i. Operate his computer via the touch screen for access to general information including a specialised catering package of menus, pictures, procedures and video clips.
- ii. Call up video clips from his computer, [DVD/VCR](#) or [TV Tuner](#)
- iii. Use the Starboard Software to interact with his applications including using the screen as an electronic flipchart or annotate over his programmes such as the menus and images.
- iv. Using local [Control Buttons](#), the Chef can activate the [Recording Systems](#), switch camera views within the kitchen and even call up views from other cameras including those within the bar and restaurant areas.
- v. Within the kitchen are special [Heat-proofed Speakers](#) allowing the Chef to communicate to the students above the noise without raising / straining his voice via a [Wireless Headset](#).

Should **Phase 2** be approved, one consideration is for each student position to have a playback monitor. This will allow them to return to their position after a recorded demonstration and rewind to any point they need to recap whilst recreating the procedures.

c. Bar

Within the restaurant is a live bar area containing coffee machines, fridges and drinks pumps for both alcohol and soft drinks.

A [Ceiling Camera](#) with local [Control Buttons](#) as well as remote access has been set up to monitor and record the activities within this area, allowing trainers to view students remotely without the need to infringe in a confined location. The camera can be selected from any main teaching areas such as the training rooms, restaurant or kitchen for real time viewing or the recordings selected for student debriefs at a later time.

d. Cellar Room

The mock-up cellar room contains the various pumps, cylinders and coolers found within a bar or restaurant and acts as a training room as well as providing for the in-house bar.

A [Ceiling Camera](#) with local [Control Buttons](#) and remote access is located within the room to monitor activities. Furthermore, [two-way communication](#) is available allowing for example, a trainer in the upstairs lecture room to send a student to the cellar, watch him on the main lecture room screen (controlling the camera positions remotely) and converse / instruct / monitor his activities. All of this can again, be recorded to central recorders for student debriefs at a later time.

e. Training Rooms (2)

The two training rooms are formed from one large room with a divider which can be opened up allowing for one large presentation and training room.

Within each room is an [Interactive Whiteboard](#), [Short Throw Projector](#) system, [Ceiling Camera](#), [AV Cabinet](#) housing [PC](#), [DVD/VCR](#) and wall mounted [Button Control Pads](#).

The training rooms are for internal use by the centres' instructors as well as hired out to the local college and business community.

Within each training room, the user can perform the following:

- i. Use the interactive whiteboard with the in-house connected computer giving them access (for authorised personnel) to the network and database. The software allows them to use the board as an interactive whiteboard / flipchart or to integrate with their programmes, annotating over software, images and video.
- ii. Using the special 'Plug & Present' key, guest users can connect their own laptop to the interactive board and have access to the interactive features / software allowing them to control their laptop and annotate over programmes from the boards' location without installing software to their computer.
- iii. The Starboard software also has a built-in network capability allowing the staff to communicate with other like systems (external staff have tablet PCs) and hold real time interactive sessions in remote locations.
- iv. Using local control buttons, the trainer can activate the recording systems, allowing his session to be recorded. These can be converted at a later date via the MediaSite system to the on-line libraries.
- v. Using the local control buttons, the trainer can switch to any camera view within the building allowing him to monitor student activity – for example in the cellar rooms.
- vi. The trainer can playback recorded sessions from the online library via the main screen and projection system.

Once the rooms are opened up, the interactive boards and projector are located adjacent to each other along the same wall. The presenter can now locate himself centrally to the room and show his presentation to both screens simultaneously.

Should **Phase 2** be agreed, there is a proposal to add the Polyvision RoomWizard, room booking system for each room to assist with bookings along with a document camera for each room although in the interim period, the ceiling camera can act as a visualiser.

f. Server Room

There is a server room which contains the main server and audio racks. All cabling throughout the building returns to here along with the recorders, matrices, switchers and amplifiers.

4. Main Components

The following systems formed the main component parts of the project.

a. Projection System

i. Hitachi CP-A100 Ultra Short Throw projector (2)

This was chosen as a reliable projector offering excellent functionality. The short throw lens means that the interactive whiteboards can be used with minimal shadowing and the presenter does not have the problem of the light shining into his eyes when facing the audience.

b. Interactive Whiteboards & LCDs

i. Hitachi FX/Duo Board (2)

These were chosen for their outstanding software and flexibility. The board can be used either as a standard marker board or interactively via the permanently connected computer. The interactive software not only offers superb functionality but also has built-in networking capability for real time interaction between sites and remote computers (the intention being to connect to the external trainers via their tablet laptops).

In addition, using the 'Plug & Present' USB Key, visitors can connect to the interactive board with their own laptops and utilise the boards' interactive features with their own computers without having to install any software.

ii. Sahara Interactive Touch Monitor (1)

This was chosen for use in the kitchen by the Training Chef. The large screen offers excellent picture quality for playback of computer information or media (DVD / TV etc). Wall mounted, it is unobtrusive, allows the Chef to interact with his computer (in the adjoining office) via the touch screen as well as use it as an interactive flipchart with the Hitachi Starboard software.

c. Digital Signage

i. Samsung MagicInfo (2)

These were chosen for their excellent screen quality, functionality and wide range of products, from which we chose the [SM460DXn](#) for the main restaurant area and the [SM400TSn](#) for the small restaurant area.

Due to its in-built processor, there are no external boxes to hide. Connected to the server PC via the network, the users can create templates for each screen, schedule their playback and if required add external sources (such as the 'KitchCam' or local PC / TV etc).

d. Ceiling Cameras

i. Elmo PTC450 (7)

A CCTV system, the image quality offered was considered better than anything else for the price. The cameras allowed the rooms to be quickly fitted out and are quick and simple to learn; programme presets are via the various localised Button Control Pads.

The cameras record back to digital recorders within the server room as well as being able to show their images direct to the required projectors and screens. The images can then be saved, recorder to CD or utilised within the MediaSite system for uploading to the on-line libraries.

e. Audio Systems

A range of items were used to provide sound coverage and communications throughout the various areas including:

i. Ceiling Speakers (14)

- * CMS20T (11)
- * CM6E (3)

ii. Amplifiers

- * Marantz PM5003 (3)
- * Apart MA20

iii. Microphone Sets

- * EW352-G2 (2)
- * AudioTechnica AKGD542 - Lectern Mics

f. Control Panels

A simple control system was set up using AMX 16 & 8 Button Panels for ease of use by the client.

- i. Novare YP2016-02 (2)
- ii. NO-CP-2008-UK-WH (2)
- iii. NO-CP-2016-TR-WH (1)

g. Additional Systems

Additional switchers, matrices and support items included:

- i. Kramer Matrix Switcher KE-VS-162AV
- ii. Extron 12 x 8 RGB Matrix

h. Recording Devices

i. MediaSite

This is the single most expensive item. This mobile system combines video, audio and computer presentation into a single media presentation format that can be uploaded to online libraries. It also allows for live streaming, meaning viewers can go online and watch real time events such as training, presentations, lectures etc.

ii. Sumvision Cyclone Digital Recorders

i. FizzBook Netbooks

The centre wanted to give each student a practical incentive to join their courses. Initially, PDA's were considered but after evaluations, the FizzBook – a 10" screen, tablet PC with rotating touch screen was decided on and the first 55 systems ordered. This will allow students to log in and review on-line library content as well as maintain their own work. Additional features include built-in webcam.

5. System Value & Effectiveness

-- User assessment of the value and effectiveness of the system --

Right from the initial discussions with Dennis, and his team at Phoenix, we have been extremely impressed with their professional and efficient approach to our scheme. Their ability to correctly interpret our vision and impartially advise on equipment suitability has afforded us tremendous confidence in the effectiveness of the exceptional facility that we now have at our disposal.

The facility that we now have, here at Charnwood, has been confirmed by many within our field as innovative and “ahead of the game” within Work Based Learning centres. Our regional network (consortium of similar organisations) are already promoting our facility as “state of the art” and a “guiding light” in training provision for the foreseeable years.

Our students now have access to a comprehensive library of bespoke resources, personal to Charnwood, and relevant to their learning requirement. Our facility also allows us to create personalised materials, at short notice, to support individual progression and achievement. Recorded assessment of learning will increase retention on programmes as well as improving our percentage rate of success and achievement.

The portability of the equipment means that we can capture exceptional examples of learning wherever they exist (Bars, Hotels, Clubs and restaurants); this will further enhance the broad content of resources and evidence of achievement/progression.

The new facility also supports our mission to become an exemplary employer of choice; attracting the very best tutors and lecturers to our organisation. One such tutor has already accepted a post based on our facility impressing him so much.

Beyond our main provision of programme learning, these new resources will enhance other industry partnerships and opportunities. Employer groups and associated industry groups (Breweries, Hotel groups and leisure organisations) will be able to utilise our facilities under commercial arrangements; helping to financially contribute towards the ongoing costs and future technological developments of the Academy.

In summary, Charnwood are now leading the way in embracing technologies to support work base learning provision. Already, as a result of the new facility, we have been asked to present at a number of regional road shows and seminars; describing how our business has benefitted from such an ambitious, yet innovative solution. The School, with whom we work in close association with, have won a regional award for Enterprising Education; achieved in some part through our provision. They are also short-listed for the National Final.

A handwritten signature in black ink, appearing to read "J Scorer".

Jeremy Scorer

Managing Partner

Charnwood Training Group

6. Potential Second Phase

Had the original funding been available at the final start date, there were a number of additional features under consideration in the overall design. If Phase 2 funding becomes a reality, these may be revived and are worth noting for the additional enhanced services and features they will offer.

a. Additional Kitchen Cameras

These would be placed above the student teaching positions allowing their work to be monitored and recorded individually. The videos could then be reviewed for debriefing or used for the students' CPD.

b. Kitchen Recorders

These included a review monitor at each students teaching position. Having watched the live demonstrated by the Training Chef (recorded via his camera), the students could return to their own positions and if required, replay any part of the demonstration to recap on procedures etc.

c. Room Scheduling

Due to the Training Rooms being made available not only to internal staff, but for the local college's use and potential hire to the business community, the RoomWizard Scheduling and Booking System was the system of choice.

A small touch panel would be wall mounted outside each room and connected to the network; authorised users would be able to go online, check availability and book the room remotely. The information would appear on the panels allowing visitors to check if the room is in use without disturbing the occupants or find relevant meetings. Ad-hoc bookings can also be made directly from the touch panel.

7. Long Term

The Training Centre has already created a great deal of interest within the hospitality community and some educational circles. As a result, the following projects are already being investigated or initiated to further enhance the long-term benefits identified by the project.

a. Corporate Use

i. Internal

In addition to college student use, the centre is being made available for companies within the leisure industry to book specific periods when they can send their staff on properly structured and regulated training or refresher courses. The centre can customise some of the systems to replicate those used by the clients thus helping to familiarise clients with the procedures.

ii. External

Another potential offering that has arisen since the centre has opened is that of external function management. Due to its working kitchen and restaurant, the centre is being asked to assist with external functions be that providing food, staffing or the management element. The centre Directors have recognised this as a weak area within many training establishments and are now looking to possibly incorporate this into future course curriculum.

b. Mobile Training Facility

Due to the impact made by the centre and the interest from external agencies, a feasibility and costing exercise has been initiated (June 2009) to investigate the commissioning of a customised bus or articulated trailer incorporating a fully fitted training kitchen and hospitality suite for 2010.

This will allow the centre to offer its training on-site at remote client locations thus reducing the disruption for the client in sending staff for short initial or refresher training courses.

CHARNWOOD IMAGES



External view of the Charnwood Academy



External view of the Charnwood Academy
(Part of the Ashfield Skills Centre)



Samsung SM460DXn Digital Signage Screen in restaurant area
(Showing full screen image from 'KitchCam')



Samsung SM400TSn Digital Signage Screen in restaurant area



Training Chef's 52" Interactive Touch Monitor in kitchen
(Showing full screen image from 'KitchCam')
(Button Control Panels on left side with Chef's wireless microphone)



'KitchCam' – one of the kitchen ceiling mounted Elmo PTC450's
(Photo is of view through server hatch to restaurant)



View of servery and into bar area
(Ceiling mounted Elmo PTC450 camera indicated)



The Cellar Room with its ceiling mounted Elmo PTC450



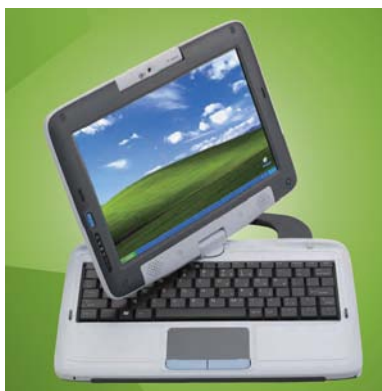
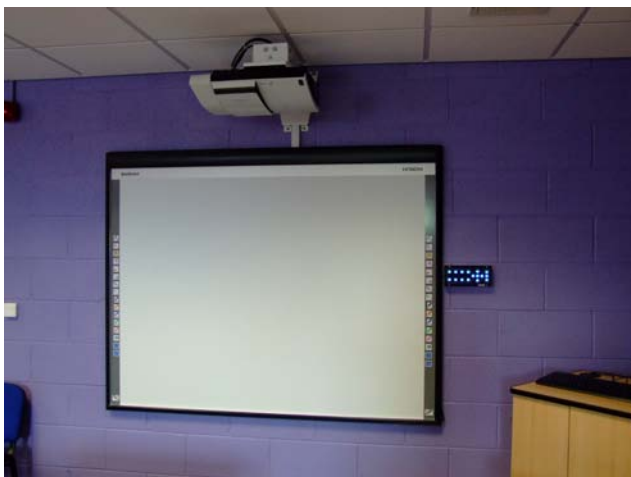
Bar area with ceiling mounted Elmo PTC450
(Samsung SM460DXn in background)



Photo of ceiling mounted speaker and Elmo PTC450
(Each camera records to central recorders in Server Rack and has a local button control pad for different views etc)



Training Room Showing Hitachi CP-A100 Ultra Short Throw Projector, Hitachi FX/Duo Interactive Whiteboard and AMX Control Panel

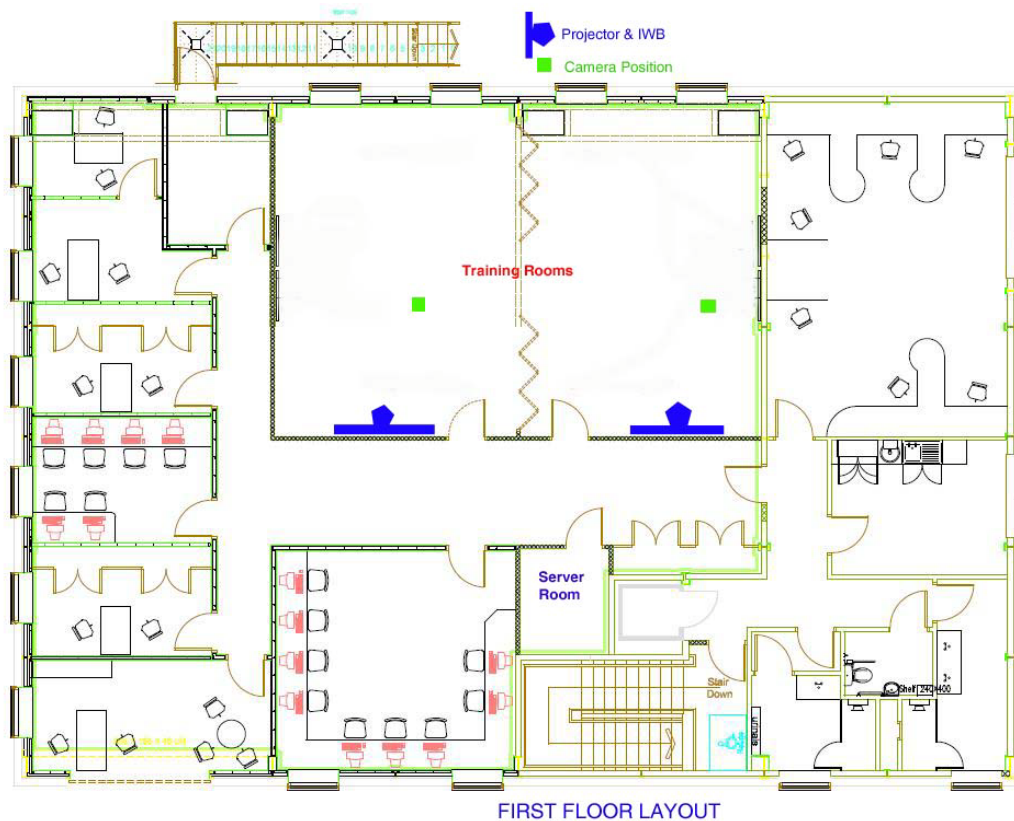
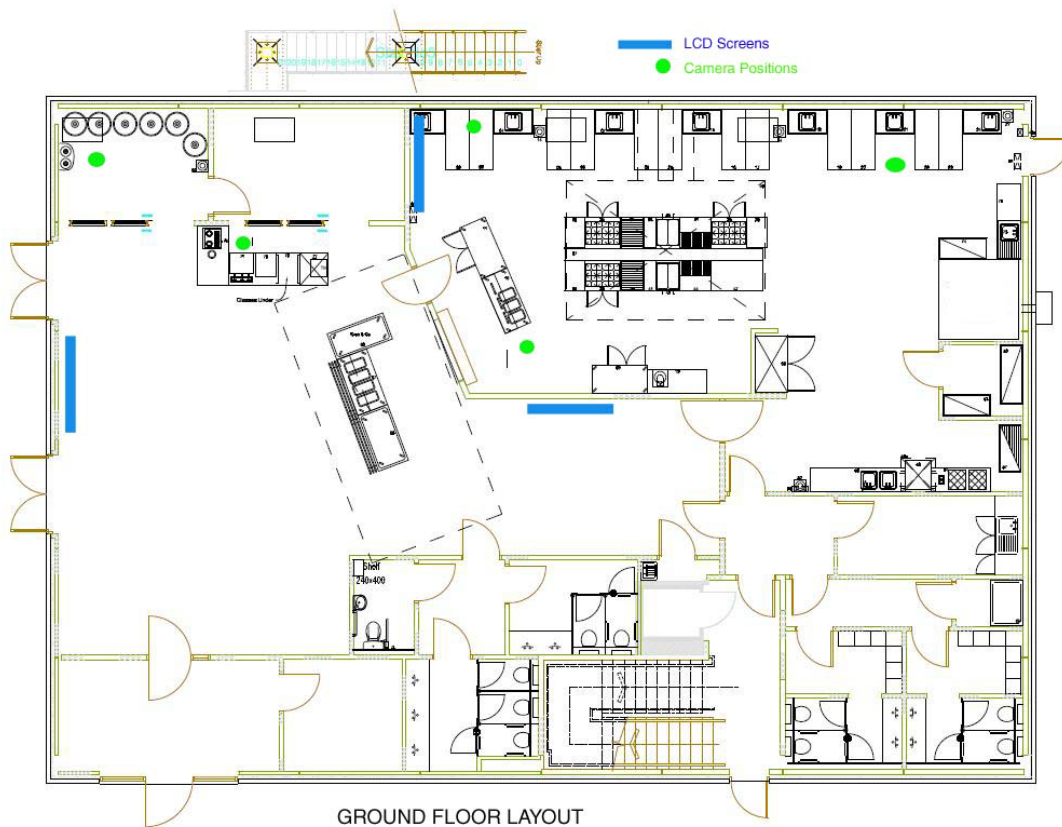


FizzBook Spin Notebook
(Being given to students for work and to access MediaSite libraries on-line)



L: Mobile MediaSite Recorder (showing pre-record / editing image)
R: Browser screenshot of typical MediaSite presentation





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