



# **GCE EXAMINERS' REPORTS**

**APPLIED ICT  
AS/Advanced**

**SUMMER 2010**

## **Statistical Information**

This booklet contains summary details for each unit: number entered; maximum mark available; mean mark achieved; grade ranges. *N.B. These refer to 'raw marks' used in the initial assessment, rather than to the uniform marks reported when results are issued.*

### ***Annual Statistical Report***

The annual *Statistical Report* (issued in the second half of the Autumn Term) gives overall outcomes of all examinations administered by WJEC.

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**APPLIED ICT**  
**General Certificate of Education**  
**Summer 2010**  
**Advanced Subsidiary/Advanced**

Chair of Examiners: Warren Davies  
 Chief Examiner AS: Martin Gillies  
 Chief Examiner A2: Jennifer Gillies

**Unit Statistics**

The following statistics include all candidates entered for the units, whether or not they 'cashed in' for an award. The attention of centres is drawn to the fact that the statistics listed should be viewed strictly within the context of this unit and that differences will undoubtedly occur between one year and the next and also between subjects in the same year.

<b>ADVANCED SUBSIDIARY</b>						
		<b>Grade Boundary</b>				
<b>Unit</b>	<b>Max Mark</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>AICT1</b>	<b>100</b>	<b>71</b>	<b>61</b>	<b>52</b>	<b>43</b>	<b>34</b>
<b>AICT2</b>	<b>100</b>	<b>80</b>	<b>69</b>	<b>59</b>	<b>49</b>	<b>39</b>
<b>AICT3</b>	<b>100</b>	<b>78</b>	<b>67</b>	<b>56</b>	<b>45</b>	<b>34</b>
<b>AICT4</b>	<b>100</b>	<b>77</b>	<b>66</b>	<b>55</b>	<b>45</b>	<b>35</b>

*N.B. The marks given above are raw marks and not uniform marks.*

<b>ADVANCED</b>						
		<b>Grade Boundary</b>				
<b>Unit</b>	<b>Max Mark</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>AICT5</b>	<b>100</b>	<b>79</b>	<b>68</b>	<b>58</b>	<b>48</b>	<b>38</b>
<b>AICT6</b>	<b>100</b>	<b>82</b>	<b>72</b>	<b>62</b>	<b>52</b>	<b>43</b>
<b>AICT7</b>	<b>100</b>	<b>80</b>	<b>70</b>	<b>60</b>	<b>50</b>	<b>40</b>
<b>AICT8</b>	<b>100</b>	<b>80</b>	<b>69</b>	<b>58</b>	<b>48</b>	<b>38</b>
<b>AICT9</b>	<b>100</b>	<b>80</b>	<b>70</b>	<b>60</b>	<b>59</b>	<b>40</b>

*N.B. The marks given above are raw marks and not uniform marks.*

## AICT 1 - eBusiness

*Principal Examiner:* Jennifer Gillies

### General Remarks

The AICT 1 paper was provided in a digital format that required candidates to enter their responses into an on-screen examination. Where centres were not able to access the on-screen examination the candidates used traditional examination papers that took the question and answer booklet format. Neither examination format appeared to cause problems from the candidate's perspective nor did the format appear to influence candidate outcomes.

In many cases candidates provided brief responses to questions that carried a significant number of marks. Candidates should note the wording of the questions, which is designed to suggest the level of the detail required in candidates' responses by the use of words or phrases such as 'state', 'describe briefly', 'explain' or 'describe in detail'.

Centres and candidates are reminded of the value of giving examples. A good example, even if not specifically requested, can often help to secure a mark when a description is lacking clarity or detail.

Some candidates lost marks in not relating their responses to the context of the question or the given scenario. Candidates should be aware that this is an applied qualification and the examination is designed to test their ability to put their knowledge of ICT into the given situations. If a question describes a specific context, and invites the candidates to refer to the context, then marks will be lost if this is not done.

Some candidates did not read the questions with sufficient care and gave detailed responses but not to the question asked. Centres should remind candidates to read the question and ensure that they relate their responses to the question and given context.

The standard of language used was generally good, though some weaker candidates lost marks through the apparent inability to express themselves clearly.

The AICT 1 paper is divided into two parts; Part A comprising a one hour written examination paper and Part B, a series of tasks to be carried out in a practical two hour examination.

### Part A - Written paper (40 marks)

#### Q.1 (a) Name the type of organisation that currently describes FAB Limited.

Many candidates were able to identify that FAB Limited was a manufacturer. However some candidates simply copied text from the scenario rather than giving the correct organisation type.

#### (b) Describe a method that could be used to gather information from primary sources to help them decide whether or not to offer hot-air balloon flights.

Most candidates were able to identify a method of gathering data but few went on to describe their chosen method in sufficient detail to gain the second mark available for the question.

**Q.2 Identify one relevant secondary source and explain how information from this source could help them decide whether to manufacture special shaped balloons.**

This question was not well answered. Many candidates suggested unrealistic sources such as commercial information held by competitors.

The specification includes a list of secondary sources that organisations may choose to use.

**Q.3 Distinguish between data and information.**

The majority of candidates were able to differentiate between data and information but some struggled to use a relevant example to illustrate their understanding.

**Q.4 Describe two advantages of using a spreadsheet package to carry out this analysis.**

The question was not well answered. Many candidates failed to identify the features of a spreadsheet package, such as the use of pivot tables and charts, which would facilitate the analysis of gathered data.

Candidates appeared to struggle to use appropriate technical language to describe any advantages of using spreadsheets for this task.

**Q.5 Describe two advantages of using database software to store and retrieve accurate staff records.**

Many candidates experienced problems with this question and failed to relate their answers to the storage and retrieval of information. It is not sufficient at this level for candidates to produce responses that simply comment on the need for fewer filing cabinets or that the data could be backed up. Neither of these responses identifies the features of the software that facilitate the tasks of storing and retrieving data.

**Q.6 Describe two procedures that could be used to back up the data.**

The responses to this question were of a better quality than the last time this was asked. However, too few candidates related their responses to the context and the scale of data to be backed up by the organisation. It is not appropriate for candidates to suggest that commercial organisations could back up their IT systems to data pens or CDs. Candidates should be familiar with standard back up procedures such as tape streaming.

**Q.7 Describe how the intranet could be used to improve internal communication.**

Many candidates produced confused responses to this question and often identified features and facilities of networked computers rather than those of an intranet.

**Q.8 Describe one advantage and one disadvantage of using each of the following methods of communication for these discussions.**

Most candidates gained some marks on this question. Centres should ensure that candidates are aware that responses should not be repeated when answering this type of question. It is not sufficient for candidates to claim that an advantage for one method of communication is a disadvantage for another. They should identify the unique advantages and disadvantages for each method of communication.

Few candidates appeared to be familiar with the concept of video conferencing.

**Q.9 Describe two methods that staff should take to organise and manage their stored data.**

Many candidates were able to describe the need for folders and sub-folders to store meaningfully named files. Some candidates also described the need for effective version control. However other candidates repeated responses to a previous question and described methods for backing up data.

**Q.10 The hot-air balloon flights will require FAB Limited to set up a network of staff across the UK. The staff will be home-based and Frank hopes to make use of technology to improve efficiency.**

**Describe, with examples, ways in which these staff could use technology to help them carry out their work.**

The final question on the paper is used to assess the quality of the candidates' written communication in addition to their knowledge of the topic under discussion. This question will always require an extended approach and the marks will reflect the candidates' knowledge and their ability to use the technical language of the specification correctly.

It is important that candidates take the opportunity of the extended answer question to gain credit for well-written responses that make appropriate use of technical language.

Candidates were able to identify the use of technologies such as email to improve communications but many appeared simply to draw on the content of previous questions to form their responses. Few candidates were able to describe technologies that could be used for remote access to the company's computer systems with any accuracy.

Many responses were vague and concentrated on the use of Office based software rather than web-based communications and Web 2.0 technologies.

## Part B - Practical tasks (60 marks)

Many candidates were able to access marks for both practical tasks. However, some candidates appeared to have difficulties in carrying out even the most basic tasks and some even discussed their lack of familiarity with the software applications to be used in their evaluations.

### Task 1 - Database

**(a) The sales and marketing department has details of bookings made by customers. These details now need to be organised.**

Most candidates were able to import the given data into an appropriate data handling application. Many candidates attempted to split the data into two tables. Few candidates used the facilities of the software to create the two tables but appeared to have produced two copies of the original data and deleted information from each table.

Some candidates set appropriate data types for the tables but few set appropriate data types for the Yes/No fields. Few candidates were able to use validation rules appropriately.

Most candidates attempted to create a relationship between the two tables. However, where candidates had not removed repeated data they were unable to enforce the relationship.

**(b) FAB Limited has some corporate customers who make repeat bookings for other people. The sales and marketing department would like to send out personalised letters to their corporate customers to tell them about a new discount scheme.**

Most candidates were able to create the query required to produce the information for the mail merge task. Where candidates had not removed duplicate names from the data file the query produced repeated recipients for the letter.

Although most candidates were able to insert merge fields into the given letter they were often not well laid out.

Most candidates appeared to be unfamiliar with decimal tabbing and very few examples of the use of the correct tabs were seen.

**(c) Bookings are very low for hot air balloon flights in June. To encourage more bookings the sales and marketing department have decided to offer corporate customers a discount on Weekday am flights in June, reducing the cost by £15.00 per person.**

Few candidates were able to create a query that met all the requirements for this part of the task. Although the majority of candidates were able to create the calculated field to display the savings on each booking, many candidates ignored the requirement for bookings to be made in the month of June. The omission of this criterion meant that the query produced a larger number of records and led to difficulties with the formatting of the final report.

Most candidates attempted to create the required report, but formatting errors were commonplace. Candidates who had failed to set sensible field lengths when importing or structuring the data experienced difficulties with the layouts of their reports. Many candidates did not appear to be familiar with the procedures for creating page breaks or totals in their reports.

- (d) Explain why validation rules are used when creating data structures and describe the validation rules you have created for Task 1. Present your work as a word processed document.**

Many candidates did not attempt this part of the task. Where candidates did produce a response most were able to identify the need for validation and those who had created validation rules were able to describe their purpose.

## **Task 2 - Website**

Candidates were required to produce a series of linked prototype web pages. Most candidates selected an appropriate web-authoring package to carry out this task and many were able to use the basic facilities of their chosen package to produce the pages as required. However, although most of the solutions were of an acceptable technical standard many lacked any consideration of layout.

Some candidates appeared to experience difficulties in the creation of basic web pages and were unable to demonstrate any of the other skills required by the set task. Centres should ensure that candidates are adequately prepared for the practical part of this examination and are familiar with all software identified in Section 1.8 of the Specification.

- (a) FAB Limited has decided to market their balloon flights via their company's website. You are required to produce a prototype website for the marketing manager.**

Most candidates produced three web pages although it was surprising that many were not able to create hyperlinks between the pages. The candidates were provided with a series of images and text files that were to form the basis for the content of the pages.

Most candidates were able to import both text and images. However, few were able to reformat the text on the Prices page correctly. A significant number of candidates appeared to have moved their images after linking them to the web pages and therefore they did not display correctly when viewed by the examiners.

- (b) Identify improvements that could be made to your prototype and present your suggestions as a word processed document.**

Generally the quality of the suggestions for improvements was poor with most candidates producing a narrative of the processes carried out rather than specific suggestions for improvement.



## AICT 2 - eSkills

*Principal Moderator:* Linda Jennings

### General Remarks

This summer many good projects were submitted for moderation with a large number of centres marking to the correct standard. The majority of centres correctly completed the required paperwork. It would help in the moderation process if the centres' assessors could complete the comment/justification part of the cover sheet.

### Specification

**Produce a specification for your database and spreadsheet project that:**

- **Clearly summarises the purpose of the project**
- **Describes the methods that you will use to produce solutions to the problem**
- **Provides objectives for the project that include clear success criteria that can be used to evaluate the outcomes of the project**

Many candidates were able to analyse the scenario and produced a working specification summarising the purpose of the project, but most were unable to give technical justification of the methods to be used in the solution, as they appeared not to have the necessary prior skills and knowledge of the database and spreadsheet software.

Many candidates would have benefitted from including a clearer set of objectives for their systems that could have been used as a framework for the following sections of the project

### Database design

**Produce a design for a database solution that includes:**

- **Suitable data structures to enable the given data to be managed**
- **Proposals for validation rules and input masks to control data input and limit errors**
- **Designs for input formats including features to aid data entry**
- **Designs for outputs including the intended layout of reports to be generated by the system**
- **Processing stages including sorting, searching and calculation**

The majority of candidates completed this section to a reasonable standard. Areas for improvement include output design, as many of the reports seen would have benefitted from some earlier consideration of layout, and process design, including selection of fields and search criteria for queries and identification of required calculations.

## **Database implementation**

**Use your design to create your database. You need to make sure that the finished solution:**

- **is functional and easy to use**
- **includes a series of related tables with suitable fieldnames, data types, field sizes and key fields**
- **has data entry forms that aid data entry**
- **has an efficient user interface**
- **carries out the required sorts, searches and calculations**
- **produces the required output**

There was an improvement on last year in the quality of the database solution with the majority of candidates producing a series of related tables and effective data entry forms. The output of some of the reports would have benefited from additional formatting to replicate the existing documentation.

## **Spreadsheet design**

**Produce a design for a spreadsheet solution that includes:**

- **Layouts for worksheets including titles, column and row headings and cell formats**
- **Proposals for validation rules to control data input and limit errors**
- **Formulae and functions to achieve required outcomes**
- **Designs for input formats including features to aid data entry**
- **Designs for outputs that illustrate the intended layout and content**
- **Designs for a user interface that aids user efficiency**
- **Automated routines that will aid user efficiency**

The majority of candidates completed this section to a good standard, although proposals for data validation were rarely seen and several of the proposed interfaces would have benefited from some additional consideration of the communication required for the user.

## **Spreadsheet implementation**

**Use your design to create your spreadsheet. You need to make sure that the finished solution:**

- **is functional and easy to use**
- **includes a series of linked worksheets**
- **provides data validation to limit input errors**
- **includes input formats to aid data entry**
- **has an interface that improves user efficiency**
- **produces the required outputs**
- **includes automated routines that aid user efficiency**

Most candidates submitted effective and functional spreadsheet solutions. Where the solutions were less successful this was usually because the spreadsheets had been left incomplete, with interfaces that had not been developed beyond the basic and lacking any measures to improve user efficiency.

## Testing

**Carry out prototyping and obtain feedback at all stages of development of your database and spreadsheet solutions. Refine solutions in response to the feedback you receive where appropriate.**

**You need to carry out thorough testing:**

- **Produce a test plan to test all areas of the database and spreadsheet solutions. Present the results of the testing including suitable commentaries**

Many candidates achieved good marks in this section, having evidenced testing of the systems produced, together with prototyping and obtained sufficient feedback. Some candidates however only produced a test plan - it is a requirement of the bottom mark band for candidates to produce a test plan for most areas of the system and present some results with brief discussions.

## Documentation

**Produce screen based tutorials to guide new users through both the database and spreadsheet solutions.**

**Produce technical documents to explain the technical components of both the database and spreadsheet solutions.**

Most candidates produced good screen-based instructions for the use of both the database and spreadsheet solutions. However, many candidates failed to produce technical documentation that provided sufficient technical detail to enable a competent third party to carry out maintenance of the systems.

## Review

**Produce a review document that evaluates your work covering:**

- **the database and spreadsheet solutions against the original objectives**
- **the strengths and weaknesses of your own performance in the design and production of the database and spreadsheet solutions**
- **changes of approach that could be adopted in future to avoid problems experienced during this project**

Candidates who had produced a specification that included measurable objectives tended to complete this section to a good standard. It was noted that some centres encouraged the use of a design and implementation log and this was useful for candidates to comment on their own performance and changes of approach.

## ePortfolio

The majority of candidates used web-authoring software to produce good eportfolios that showcased their work.

## **AICT 3 - eWare**

*Principal Examiner:* Martin Gillies

### **General Remarks**

In some cases candidates had successfully addressed the requirements of the controlled assignment and produced the required outcomes completed to an appropriate standard for AS level. However, due to the small number of entries this year, this report will focus on providing additional guidance rather than an analysis of overall findings from June 2010.

The assessment is carried out in two parts. The first part provides an opportunity for candidates to apply their knowledge of ICT systems and carry out research on hardware and software to suit given requirements.

### **Task 1**

#### **Preliminary research**

Candidates need to include evidence of useful Internet based research that concentrates on the software and hardware requirements indicated in the scenario. The research should generate summarised information that will support responses to the tasks of the controlled assignment. The tasks will require candidates to specify hardware and software to meet the stated requirements and a budget. The tasks will also include a requirement to consider enhancements to the specifications to suit an increase in the budget.

Candidates should be reminded to acknowledge their sources.

### **15 Hour controlled assessment**

#### **Task 2 - Specification**

Candidates need to produce technical specifications that cover the hardware requirements indicated in the scenario. Specifications by manufacturer should be avoided. Candidates should include alternative specifications with discussion on relative merits and disadvantages, leading to well reasoned final recommendations. They should not rely on manufacturers' promotional text to support their selections.

Candidates should give software equal consideration and cover the specialised software applications referred to in the scenario, in addition to the standard office applications that a business is likely to require.

Candidates will receive credit for providing clearly explained justifications of their selected specifications that relate their choices to their interpretation of the client's requirements.

Quotations based on retail prices obtained from online catalogues are expected. Candidates may consider using a spreadsheet to present their quotation, possibly designed to allow consideration of identified alternatives.

### **Task 3 - Enhancements**

It is intended use the scenario to guide candidates towards a selected area for further enhancement e.g. additional input devices or further application packages. Candidates need to identify the area in the scenario rather than suggest general enhancements to their specifications.

When requested in the scenario candidates should extend their quotation to include the cost of the enhanced specifications.

### **Task 4 - Configuration**

Candidates will be required to carry out five separate configuration tasks using the simulation software provided. The simulation software will be extended and, in due course updated, with prior notice to centres. Candidates use screen prints to evidence their configuration work. They need to select their screen prints carefully and present them clearly, with suitable labels.

It is intended to select configuration tasks that involve alternative settings. In these instances candidates will be asked to justify their selections and will receive due credit for this work.

### **Task 5 - Customisation**

Candidates will be required to create three automated routines or macros. Two of the routines will be specified, the third will need to be designed by the candidate and should have some relevance to the given scenario.

Candidates will be required present evidence of their macros as annotated listings. No additional credit is gained from the presentation of screen shots demonstrating the recording of the macros.

### **Tasks 6 and 7 - Standard ways of working**

Candidates will be asked to produce documentation on standard ways of working to suit two distinct audiences or purposes. The intention of this section is to assess the candidates' knowledge of standard ways of working, as described in section 3.8 of the specification. The specific topics are 'Safe working', 'Ergonomics', 'Security' and 'File management'. The specification lists the areas that should be covered for each topic.

The documents produced by the candidates will need to be fit for purpose. They will require information to be summarised and presented usually as guidelines.

### **Task 8 - User support**

Candidates will be required to create flow charts, each designed to help trouble shoot a common ICT problem. Two of the problems will be specified, the third will need to be identified by the candidate and should have some relevance to the given scenario.

For each problem candidates will need to produce a sequence of questions that will form the basis of a troubleshooting flow chart. Candidates will then need to present their questions as a chart with a logical flow between alternative responses, leading to the problem being solved or reference to further technical support.

Candidates should treat each problem individually and avoid copying and pasting one flow chart three times and then making minor changes to suit the differing problems.

### **Task 9 - Review**

Candidates should relate their technical specifications to the client's requirements and consider the value for money they have achieved. They should also present evaluative comments about their work and avoid simple narratives about process.

For high marks candidates will need to identify changes of approach likely to lead to improvement of performance and / or outcomes. They should avoid vague suggestions about organisation of time and making greater effort.

### **Task 10 - Client Information Pack**

Candidates are required to link their work to a given template, or Client information pack. The use of the template is intended to help candidates ensure that all work is completed and that the finished versions of the work for each task are presented to the examiner. It should be noted however, that if work is not linked to the cover sheet the examiner will look for work in the folders and will give credit for all work found.

## **AICT 4 - eMobile**

*Principal Moderator:* Richard George

### **General Remarks**

This is the second time this coursework unit has been moderated and there were only a small number of candidate entries. Due to the small number of entries this year, this report will focus on the guidance information provided rather than an analysis of overall findings from June 2010.

As in the previous series, many candidates did not approach the production of evidence as expected. It is recommended that in future series all candidates be familiar with the on-screen guidance information. It is the intention that this will feature as a link from the published scenario.

The applied nature of the course is geared towards a realistic situation from which the evidence should be compiled. Candidates need to be reminded to put their proposals and recommendations into the context of the scenario. They should consider themselves as working for a company with the aim of encouraging the family to purchase the proposed items from them. They should avoid directing the family to another provider. Most coursework submissions included live hyperlinks to other providers. This should be avoided.

Even though detailed information and guidance is provided to candidates in the coursework scenario, candidates also need to be made aware of the content of the course specification.

### **Requirements Specification**

Candidates are required to produce a requirements specification document to summarise their interpretation of information provided in the scenario. It is important that candidates state clearly any assumptions that they are making along with proposals for further developments and enhancements. Candidates should highlight their interpretation of the Hardware, Networking, Connectivity and Internet requirements given in the scenario. Candidates are required to summarise the budgetary limitations provided.

### **Hardware Requirements**

Candidates commonly copy and paste much detail from Internet sites to complete this section. They need to be guided to focus on the detail to match the scenario. Candidates should discuss the benefits and drawbacks of each item presented. Candidates should include costs for each item and ideally a total for the recommended hardware solutions.

## **Networking Requirements**

As above, candidates commonly present evidence of their theoretical knowledge of networks. This is unnecessary. Candidates should interpret the requirements for the family and make specific recommendations for networking solutions to meet the requirements of the scenario. The specification gives explicit guidance in the areas of networking that are expected.

Candidates need to:

- Discuss the benefits and drawbacks of each proposed option and make recommendations
- Include costs for each item and a total for the recommended networking solutions
- Consider a network diagram / animated model for their eQuote
- Explain security issues and options for the family

## **Connectivity Requirements**

As above, candidates commonly present evidence of their theoretical knowledge of connection types. This is unnecessary. Candidates should interpret the requirements for the family and make specific recommendations for connectivity solutions to meet the requirements of the scenario and correspond to their hardware and networking solutions.

Candidates need to:

- Avoid theory bookwork and make specific recommendations for their solutions
- Include wired and wireless options
- Discuss the benefits and drawbacks of each option and make recommendations
- Include costs for each item and a total for the recommended connectivity solutions
- Consider a connection diagram / animated model for their eQuote

## **Internet Requirements**

Candidates should interpret the requirements for the family and make specific recommendations for up to date Internet connection packages suitable for the family.

Candidates need to:

- Include Internet, email and VoIP solutions where appropriate
- Discuss the benefits and drawbacks of each option and make recommendations
- Include costs for each item and a total for the recommended Internet connection options
- Identify security issues and make recommendations to the family

## **Culture & Society**

Candidates should again avoid theory bookwork - they need to make specific recommendations for the appropriate use of their proposals. Candidates should consider the benefits of adopting the proposals, and summarise the benefits to the family. The specification gives clear guidance on areas for inclusion in this section.



## **Review**

In order to access the higher mark ranges in this section, candidates need to:

- State the information sources used
- Discuss the strengths and weaknesses of their own performance.
- Produce a detailed comparison of their eQuote with other electronic media
- Discuss problems experienced and identify future changes in their approach

The review should be clearly structured, error free and demonstrate competent use of technical terminology.

## **eQuote (eBook)**

For the higher marks in this section, candidates need to produce an on-screen eQuote which should:

- Be professionally formatted in the context of the scenario
- Introduce themselves as the contact for the organisation
- Provide the family with a complete quotation for the proposed solutions.
- NOT include links to external websites - all links should be self-contained. Candidates need to be reminded that external web pages frequently change!

Candidates should explore other published examples of eBooks

Candidates will gain credit for incorporating suitable multimedia components e.g. images, animations, sounds, and videos to support the promotion of their proposals. For access to the higher marks, the format of the eQuote needs to appear as a corporate publication.

## AICT 5 - eProject

*Principal Moderator:* Peter Lewis

### **General Remarks**

This series was the second opportunity for candidates to enter for this module and it was once again very encouraging to see the quality of work produced by some candidates. There were a full range of marks awarded across all grades and it was clear that, in most cases, centres had heeded the clear warnings in the specification (and reiterated at INSET) about the requirement to use specialist project planning software.

The majority of centres used Microsoft Project and centres that used this software generally used it effectively and candidates were able to demonstrate a high level of capability. Some centres used the free products available such as Gantt Project and Open Project and, whilst there appeared to be greater variation in its use, some candidates were able to score highly.

However, there were a small number of centres that did not make use of proper project management and candidates from these centres were significantly disadvantaged. As this is a project management unit, it is not appropriate for candidates to use generic Office applications such as Excel or Word.

### **Outside Controlled Conditions**

Each group is expected to prepare detailed agenda to ensure that meetings are focussed and productive. Candidates must remember that anything discussed in a meeting and therefore part of the minutes for that meeting can be taken into the clean area for the 15 hour controlled assessment. For example, if a group were to draw up a detailed prototype for the spreadsheet solution and discuss this in a meeting, then this spreadsheet model can be used by the candidates in that group in the controlled environment as a basis for their individual work.

There was some very good practice seen and it was clear that candidates who made full and effective use of the group work outside of the controlled conditions gave themselves every opportunity of achieving high marks in the 15 hour controlled task. Candidates who worked in groups where the group work was not undertaken fully tended to penalise themselves by leaving too much for the controlled time.

In some centres, groups were given company names and developed identities and this seemed to encourage them to develop their group work more fully. In the very best examples, candidates were given individual roles within the group for which they had responsibility for the preparatory work and for reporting back at group meetings.

### **Problem Definition**

Candidates were, on the whole, able to produce a set of clear objectives based on the Client's needs as presented in the scenario, and on assumptions made by the candidates. To award marks in Mark Band 3, however, candidates must indicate how these will be measured. This is difficult in controlled conditions, but candidates would be expected to identify some success criteria for each objective, which will be used to assess the success of the solution.

In the best practice, candidates colour coded their Individual Problem Definition to show the changes between the work produced in the group work stage and the individual work produced in the controlled conditions. For example, when a candidate updated their Project Definition to reflect the revised client requirements at the start of the controlled time, these changes were shown in red. Similarly, any other changes or assumptions made by the candidate in the controlled time were also shown in red to differentiate what was done as part of the group work and what was done in the controlled time.

Any assumptions made by the candidate must be clearly explained.

A number of aims are clearly identified in the scenario, but further aims could be identified and developed based on the research undertaken at the group work stage. In the best examples, candidates were able to break down the aims from the scenario and enhanced these considerably by widening the scope of the project based on their research into the problem area. Weaker candidates tended to focus only on the aims given in the scenario.

### **Project Organisation**

Centres used a variety of Project Planning software. The most common program used was Microsoft Project, but a number of free software titles were used and these included Gantt Project and Open Project. There is a clear expectation that candidates make use of specialist project planning software for this unit and use this software to manage all aspects of the project. A small number of candidates did not use specialist software and consequently were penalised heavily for not being able to monitor their own progress, resources and critical path effectively.

In the best examples of work, candidates were able to use project planning software effectively and were able to exploit the features of the software to both plan for the 15 hours of the controlled time and communicate their progress. For example, these candidates used features such as dependencies, resources and notes, amongst other things. Weaker candidates used the project planning software superficially.

Candidates are expected to produce a number of versions of their plan and to communicate their progress. In the best examples, candidates used the Notes feature of the software. Some candidates presented a project diary, which was also useful. When showing the different version of the plan, candidates are expected to account for any changes. For example, if a subtask took longer than expected, they should explain how they will make up that time by reducing the amount of time spent on some other subtasks, or by using any of the contingency time that had been built into the plan. Similarly, if a subtask took less time than expected, they should describe how they would spend the time that has been gained on other aspects of their work.

In the best examples of work, candidates made use of contingency time in their initial plan and also set 'checkpoints' at regular intervals throughout the 15 hours. These checkpoints were used to assess their progress to ensure that they were on target for completion of the project.

### **The Project**

The majority of candidates were able to produce good quality spreadsheet models that met the objectives of both the Client and any further objectives set by the candidate. A wide range of features and functions of spreadsheet software was evident.

The majority of candidates were able to implement the Revised Client Requirements and there were some outstanding solutions to the given scenario.

There were a small number of superficial solutions developed. It is expected that candidates make use of, and build upon the skills acquired in spreadsheets during the AS part of the course.

### **Review**

A number of candidates did not devote sufficient time to this section of their work and did not recognise that this represented 20% of the total number of marks available for this unit. Based on this, candidates should spend approximately 3 hours on this review and should ensure that they cover all aspects detailed in the Specification.

Some candidates produced reviews that were superficial. In some cases, the review was more of a reflective 'diary' of what happened during the 15 hour controlled conditions. In these cases, candidates were penalised.

### **Presentation**

In most cases, candidates produced excellent ePortfolios, which were used effectively to demonstrate evidence. In some cases, however, high marks were awarded, even though there were some broken links, which necessitated browsing through the accompanying folders.

A number of candidates chose not to use the given ePortfolio template and developed their own multimedia ePortfolios using buttons and graphics. Whilst laudable, candidates would be wise to recognise the small number of marks available for this and concentrate their efforts in the controlled time to other aspects of this Unit, which attract more marks. Candidates can still be awarded 5 marks for using the given ePortfolio template and the emphasis should be on the efficient demonstration of evidence linked in an appropriate format, rather than the appearance of the ePortfolio itself. Candidates can, of course, expand the given ePortfolio template if necessary to afford them every opportunity to demonstrate the work that they have undertaken for this unit.

A small number of candidates password protected some of their documents, which made access to these files unnecessarily time consuming for the moderators. Furthermore, some candidates either did not provide a password for these files in their ePortfolio, or the password provided was incorrect which made access to these files impossible. Candidates should be discouraged from password protecting documents that are linked from their ePortfolios.

In a small number of cases, CD's had not been adequately tested by the centre before despatch and some links from ePortfolios pointed to files on centre network drives and not to files stored on the CD itself.

## AICT 6 - eStudio

*Principal Moderator:* Martin Gillies

### General Remarks

This is the first time this unit has been moderated. This was the most popular of the A2 project units and many very good eportfolios of work were seen. Centres had generally ensured that their candidates had access to a range of suitable software and the skills to produce effective graphic and multimedia products.

The unit requires candidates to produce both graphic and multimedia products and for this series was based on the 'Fun to Run' scenario. The objectives of the scenario were to promote 'Fun to Run' as a brand, raise money for educational charities, raise awareness of educational charities' work, promote fitness and encourage participation in fun runs.

### Requirements Specification

**Produce a requirements specification document to summarise:**

- **the purpose of the campaign**
- **measurable success criteria related to the campaign objectives**

**Produce a test plan to give details for testing the final products.**

Most candidates produced an accurate summary describing the purpose of the campaign and were able to list a series of success criteria based on the given campaign objectives. Success criteria that were both realistic and measurable proved to be a difficulty and candidates were not penalised at moderation if this was not achieved.

The majority of candidates produced test plans that provided for objective testing, where this was possible e.g. length of video, navigation of website etc. and subjective testing of graphic outcomes, usually involving peer surveys. In several cases the results of the subjective tests would have benefited from the opinions of other groups less connected with the project.

### Graphic Design

**Produce a design log for the required graphic products to include stimulus material, initial ideas, illustration of their development and related design decisions.**

**Include details of elements and tools and techniques required for further development of the proposed designs.**

Most candidates presented initial ideas and some illustration of their development, but the recording of stimulus materials and the explanation of design decisions are areas for future improvement. In many examples significant changes in the designs were illustrated without any accompanying explanation.

Few candidates addressed the requirements to include details of elements and tools and techniques required for further development. The intention is for candidates to illustrate or describe ideas for additional elements, such as text, landscape features, backgrounds etc. and for them to demonstrate their knowledge of the available software by identifying the tools and techniques they intend to use in the development of their work.

## **Multimedia Design**

**Produce a design log for the required multimedia products to include stimulus material, initial ideas, illustration of their development and related design decisions.**

**Include details of components and tools and techniques required for further development of the proposed designs.**

Again most candidates presented initial ideas and some illustration of their development, but the recording of stimulus materials and the explanation of design decisions are areas for future improvement. The use of storyboards and timelines in the design of the video and animation is another area for further development that should be to the benefit of the final outcomes, as is the early identification of the requirements for any accompanying sound track.

As for graphic design few candidates demonstrated their knowledge of the available software by identifying the tools and techniques they intend to use in the development of their work.

## **Graphic Products**

**Carry out prototyping and testing to develop the final graphic products. Prepare evidence of prototyping and testing for your design log.**

Most candidates provided screen shots that confirmed the software used and some extensive records, comprising step-by-step screen shots of the production process were seen. The most successful candidates were more selective and presented screen shots to demonstrate significant developments and the use of software tools that they had found to be particularly effective.

Few candidates included evidence of subjective testing of prototypes and several would have benefitted from obtaining useful feedback on their work at an interim stage.

- **Fun to Run' logo, for use on all promotional products.**

Most candidates produced a logo that was relevant to the campaign, although it was disappointing to see several 'clip-art' like logos that did not reflect the nature of the charity work, or the standard required at this level. The most successful candidates produced professional designs that were clearly related to the campaign and not over complicated, in terms of content or use of colour.

- **A 4 Information pack for runners containing:**

**Directions to your local fun run venue and course map**

**Sponsorship form**

**Information sheet explaining what will happen to the money raised**

**Promotional 'Fun to Run' Day car sticker**

The information pack produced very varied results. Many candidates took the opportunities provided to create a set of original publications with common elements and presented their work in files and using photographs of the final outcomes. Other candidates included a series of simple word-processed documents with inserted secondary images that were not of an appropriate level.

- **Three promotional items such as wristbands, caps etc.**

Some very imaginative promotional items were seen. The more successful candidates took the opportunity to demonstrate their photo-editing skills and included images of their items in use. In other examples candidates presented very simple designs that demonstrated only limited software skills.

- **Versions of a paper-based advertisement about the local fun run adapted for:**

**a local paper  
a wall display poster  
a large billboard**

Again results were varied with the more successful candidates benefitting from their initial research and demonstrating a clear understanding of the differences in content needed between the three adverts. Some excellent results were seen including adverts edited into images of newspaper pages and images of billboards and posters in context.

## **Multimedia Products**

**Carry out prototyping and testing to develop the final multimedia products. Prepare evidence of prototyping and testing for your design log.**

Several candidates included clear evidence of prototyping their animations and some useful testing was noted, although few candidates presented similar evidence for their videos and several of these would have benefitted from constructive interim feedback.

- **Fun to Run website of 3 pages, to present:**

**event information and contact details  
information about the charities' work and other items of interest  
at least one animation to advertise the 'Fun to Run' Day**

Most candidates produced a website of 3 pages that presented the required information. Several candidates included images of their graphic products on the web pages, usually to good effect and many effective animations were seen, sometimes as a splash screen, but more often as a banner to the pages. The use of animated gifs downloaded from secondary sources should be avoided in future.

The most successful candidates produced web pages with well-designed navigational features, carefully chosen colour schemes, clear fonts, consistent layouts and demonstrated skill in the use of roll-overs, transitions etc.

**A 60 second original movie with sound track selling the benefits of taking part in the fun run to secondary school pupils.**

A wide range of approaches to authoring of the movie was seen. The most successful examples involved editing and combining selected movie clips and adding multi layer, synchronised sound tracks. The movie clips were clear and usually featured running, although clips relevant to the work of the charities were also seen. Less successful movies included examples of single take 'talking head' videos, which lacked visual interest and were not appropriate for a promotional campaign.

## **Review**

**Produce a review document that evaluates and suggests improvements covering:**

- **the final products**
- **the tools and techniques used**
- **own performance**

As for other units the review was well done in cases where the evaluation of the final products included some consideration of end user feedback, leading to suggestions for further improvement. The reviews of the tools and techniques used ranged from simple descriptions of process to the consideration of the effectiveness of a range of software facilities as required for the higher marks.

When commenting on their own performance candidates need to identify changes of approach likely to lead to improvement of performance and / or outcomes. They should avoid comments about needing more time and avoid vague suggestions about their level of effort and organisation.

## **ePortfolio**

**Produce an eportfolio to provide a context and showcase for the campaign products.**

Most candidates produced a functional eportfolio that provided access to the products and supporting evidence. In general the eportfolios provided the required context and were usually easy to navigate, although the index pages of some candidate had not been clearly named.

The more successful candidates were able to design pages that showcased their achievements, highlighting their final products and often using elements taken from the products within their designs.



## AICT 7 - eConnect

*Principal Examiner:* David Pearce

### General Remarks

The AICT 7 paper is divided into two parts; Part A comprising a one hour examination paper primarily offered digitally and Part B (CD based), which provides a series of tasks to be carried out in a practical two hour examination.

The paper was provided in a digital format that required candidates to enter their responses into an on-screen examination. Where centres were not able to access the on-screen examination the candidates used traditional examination papers that took the question and answer booklet format. Neither examination format appeared to cause problems from the candidate's perspective nor did the format appear to influence candidate outcomes.

This is the second time this examination has been offered and there were only a small number of candidates. The candidates performed better in Part B of the examination, although it was apparent that some candidates were not properly prepared for the demands of an A level paper.

### Part A

**Q.1 Describe three disadvantages of using networks compared to stand alone computers.**

Most candidates were able to give at least two disadvantages of networks. A few candidates mis-read the question and gave advantages.

**Q.2 One method of connecting a Local Area Network (LAN) is to use coaxial cables. Describe two other suitable methods for connecting a LAN and a different method for connecting a Wide Area Network.**

Most candidates were able to answer this question, although there was some confusion regarding the connection for a WAN.

**Q.3 One service often provided by an Internet Service Provider (ISP) is email. Briefly describe the role of an ISP and identify two other services that they usually offer.**

Many candidates could not explain the role of an ISP - many thought that their main role was to provide a 'messaging service'

**Q.4 Graig Holiday Village has registered a domain name and has the URL shown below:  
<http://www.graigholvillage.com>**

- (a) What is their registered domain name?
- (b) Briefly describe the purpose of the letters http in the URL.
- (c) Briefly describe how an Internet web browser allows web pages to be viewed.

Most candidates provided correct responses to parts (a) and (b) but many failed to appreciate that an Internet browser interprets code to display content on screen.

**Q.5 The function of common hardware devices are described below. Name the devices**

- (a) used to link two long cable segments.**
- (b) used to allow any station with a wireless network interface card to communicate with the network.**
- (c) usually used to connect a LAN to the Internet. They hold addresses of stations on the LAN and can forward data to the correct station.**
- (d) Used to connect two or more stations on a LAN and can direct network traffic to the correct station.**

Some candidates scored well but many were unable to match the names of hardware devices with the descriptions.

**Q.6 Compare wireless communication infrastructures with cable communication infrastructures giving advantages and disadvantages of both methods.**

Many candidates scored some marks but few went on to gain all six marks, with many candidates restricting their responses to advantages, or repeating an advantage as a disadvantage of the alternative infrastructure.

**Q.7 Name the most suitable protocol for each of the following uses.**

- (a) Transferring of emails between computer systems**
- (b) Routing of voice conversations over a network**
- (c) Copying a file from one location to another via the Internet**

Most candidates demonstrated that they were aware of the protocols but some were clearly guessing.

**Q.8 Two different network topologies are star and bus**

- (a) Describe how communication takes place between two work stations, Station A and Station B, on a star network**
- (b) Describe in detail two advantages of a star network with a bus network.**

This was generally answered well.

**Q.9 Explain in detail how packet switching operates and give advantages of packet switching compared with circuit switching.**

The answers to this question were disappointing. The question was worth nine marks and the question included the words 'explain in detail'. Candidates should understand that an extended answer is required to score high marks.

## **Part B - The Recommendation**

### **Evidence**

This part of the examination was completed on-screen (with tasks and associated documents being provided in the form of a CD) and candidates provided a screenshot as evidence for Task 1 and typed their responses to the remaining tasks. This did not seem to cause any difficulties.

### **Responses**

#### **Task 1**

Most candidates were able to gain some marks. Centres should remind candidates that a 'scatter gun' approach of placing all hardware in all rooms will not gain marks, as marks were deducted for inappropriately located hardware.

There was no mention of Internet access in the question, therefore a router was not required and lost a mark for inappropriate hardware.

As the network involved only four workstations, hub or switch were accepted.

The location of each component is important. The servers and switch could be located anywhere and managed remotely. However in this scenario the servers and switch should have been located in the office as the network could then be managed if there was a problem connecting to remote rooms.

Repeater was not required but was condoned as the distance between rooms was not indicated.

#### **Task 2**

Generally if the candidates answered Task 1, they went on to gain marks in this task.

#### **Task 3**

Most candidates were able to gain these marks.

#### **Task 4**

Most candidates were able to gain some marks for this task but a few candidates thought that no drinking or eating in computer rooms would form part of an AUP. Others stated that restricting computer access for an employee would be a suitable sanction.

## **Part C - The Recommendation**

### **Evidence**

This part of the examination was completed on-screen, using simulation software provided and candidates used screenshots to evidence their work. This did not seem to cause any difficulties. Candidates labelled their screen shots as instructed. However, centres should encourage candidates not to severely crop their screenshots as evidence may be lost. Also there is no need to reduce the size of the screen shots to make them fit on one page. They are not printed so no paper is saved and it is important that the examiner can read all the detail on the screen.

### **Responses**

Candidates had clearly been schooled in the server tasks and many scored high marks.

Centres should encourage candidates to complete the table of the object names at the start and then refer to this document throughout the remaining tasks.

Some candidates gave incorrect shots for Task 8 but marks were still awarded. Candidates are reminded to take the correct screen shots at the correct times.

The main problems were related to poor naming conventions.

For example:

COMP1 and COMP2 are unacceptable names for the computers.

AO and CO are unacceptable group names.

FAO and FCO are unacceptable shared folder names.

BW is an unacceptable printer name.

It could be argued that any name, if unique, is acceptable. Candidates must be instructed to use a naming convention. If they decide to use very short abbreviations as a convention, which may not be obvious to an examiner, they should be encouraged to justify and explain their chosen convention.

## AICT 8 - eLearn

*Principal Moderator:* Jennifer Gillies

### **General Remarks**

This is the first time this coursework unit has been moderated and there were only a small number of candidate entries. Due to the small number of entries this year, this report will focus on providing additional guidance rather than an analysis of overall findings from June 2010.

### **Problem Definition**

The problem definition should be based on an analysis of current practice for the delivery of the chosen topic. It is anticipated that this will involve a review of more traditional teaching approaches used in the selected area of study.

It is also anticipated that the evaluation criteria will refer to the tasks the new package will automate and that this list of tasks will then form the basis for the following stages in the development of the package.

### **Design an eLearning package**

The design section is given a significant weighting in the overall assessment of the unit. The design should include an overall structure diagram, a detailed data dictionary and preliminary sketches of the interface covering input and output screens.

A successful design is likely to present the processes required using a combination of pseudo code and system flow charts. The design must not be retrospective. Actual code even with amendments should be avoided. The design should be evaluated against the criteria included in the problem definition.

### **Create an eLearning package**

Candidates are required to submit a working version of their package for assessment and moderation. A fully annotated program listing is also required. The system should provide an interface that is well matched to the intended users and include facilities for assessment in addition to the storage of users' details and presentation of learning materials.

### **Tutorial**

An on screen tutorial is required. This should be interactive and provide instructions of the use of the package that are well matched to the intended learners.

### **Test an eLearning package**

Testing should concentrate on the main processes of the package and not comprise repetitive tests of navigation. The assessment of this section should involve the consideration of the candidate's commentary about the test results as an important differentiator.

## **Review**

The effectiveness of the final package should be judged against the evaluation criteria identified in the problem definition. The package should also be compared with similar commercial packages and with current manual methods for delivery.

When commenting on their own performance candidates need to identify changes of approach likely to lead to improvement of performance and / or outcomes. They should note the requirement for them to use specialist terms accurately.

## **ePortfolio**

As for other units the eportfolio must be functional and provide access to the e-learning package and all supporting evidence. The eportfolio should open from a clearly named index page and be designed to provide a relevant context.

## **AICT 9 - eTransact**

*Principal Moderator:* Jennifer Gillies

### **General Remarks**

This is the first time this coursework unit has been moderated and there were only a small number of candidate entries. Due to the small number of entries this year, this report will focus on providing additional guidance rather than an analysis of overall findings from June 2010.

However a small number of very successful submissions were seen. In these instances centres had overcome the technical difficulties involved in providing a local host for use by their candidates and had ensured that the transactional websites were constructed in a format that could be copied and submitted for moderation. Centres considering this unit are strongly advised to ensure that they are able to provide these facilities.

### **Design an eTransact system**

The design should arise from an analysis of existing transactional web sites and include an overall structure diagram, a detailed data dictionary and preliminary layouts for the web pages covering graphic content and navigational features. The design should include proposals for data validation and algorithms for the capture, manipulation and retrieval of all information required for the transactions to take place.

### **Create an eTransact system**

Candidates are required to submit a working version of their system for assessment and moderation. The system should provide a series of web pages that provide product information, a functional shopping basket and facilities for data collection. The system must incorporate structures for data storage.

A well-designed system will promote user confidence; present high quality output and provide a separate interface for maintenance of the database.

### **Test an eTransact system**

Centres should note the assessment requirement for formative and summative testing and give due credit for the gathering of feedback on prototypes. Summative testing should be planned and concentrate on the main transaction processes. The results of summative testing should be accompanied by a suitable commentary that explains the purpose and outcomes of the tests.

### **Provide customer advice**

The required privacy policy should be available via a link from the transactional website. The policy should be customised to suit the nature of the website. It is recommended that the more general work on e-commerce, risks and legislation be presented via separate links from the eportfolio. This work must be summaries and not straight copies of work prepared by others.

## **Review**

The effectiveness of the final package should be judged against the evaluation criteria identified in the problem definition. The final website should also be compared with similar commercial websites in terms of features incorporated and levels of security.

When commenting on their own performance candidates need to identify changes of approach likely to lead to improvement of performance and / or outcomes. They should note the requirement for them to use specialist terms accurately and for the work to be largely error free.

## **ePortfolio**

As for other units the eportfolio must be functional and provide access to the transactional website, the back office database and all supporting evidence. The eportfolio should open from a clearly named index page and be designed to provide a relevant context.





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