

Applied ICT

Advanced GCE AS H515

Advanced Subsidiary GCE AS H115/H315

Report on the Units

June 2008

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Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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Chief Examiner's Report

There were mixed responses to the different units this session compared to previously. G041 and G054 showed an improvement on the January session, while G055 responses were weaker. Responses in section B of the papers, particularly G041 and G054 continues to limit the marks that can be awarded. Centres are reminded of the need to teach the concepts covered in the What You Need to Learn section of the units, as well as preparing candidates to complete the pre-released tasks.

Generally the quantity and organisation of pre-release work was appropriate. However, some candidates failed to specifically identify their responses to the marked tasks, although these were fewer than in previous sessions. This made it difficult for Examiners to locate these tasks in order to mark them. Please ensure that each task is clearly labelled and that the work is submitted in task order. Draft copies of tasks are **not** required and should **not** be included. If there are several copies of a task, it makes it difficult for the examiner to determine which one they should mark. Also, candidates should **not** include copies of material from the WWW used as sources for the marked tasks. It is sufficient to simply list the URLs in a bibliography.

Centres are reminded that candidates should only submit work carried out in response to the tasks for use in the examination. General class notes based on the What You Need to Learn section of the unit must not be taken in to the examination. However, all work taken into the examination room **must** be attached to the examination paper and submitted to the Examiner. Those invigilating the examination need to be given clear instructions to do so.

Centres are reminded that the work submitted in response to the tasks must be each candidate's own unaided work. It is the Centre's responsibility to ensure that the work is carried out in conditions that allow the Teacher to confirm this is the case. It should not, for example, be given as homework.

Care is needed to ensure that candidates do not share electronic files and that Teachers do not provide too much direction when helping candidates to understand what they have to do. Some diagrams will inevitably be similar if they are drawn correctly. However, if candidates produce these individually, there will be subtle differences in the length of lines, positioning of items etc.

Whilst they must not mark the work, deadlines for handing in the work should be set so that there is time for the Teacher to check the work before signing the Authentication Statement. Candidates also need to be taught the difference between using material from websites and other sources to inform their responses and simply copying it. This applies to both coursework and pre-released tasks. All units require the application of knowledge to a particular situation, so the simple copying of material is unlikely to meet the requirements of the task and may well be considered to be plagiarism.

All Centres should by now be aware of the Joint Council ruling regarding Centre authentication of coursework. This applies to both the pre-release tasks in the examined units and the Centre assessed units. Whilst most Centres submitted Centre Authentication Forms (CCS160) for the Centre assessed units, again, a significant percentage failed to include them in the script packets for the externally assessed unit. This should be done as a matter of course. Candidate Authentication Statements must be signed, but should be retained in the Centre and **not** submitted to the Examiner or Moderator.

Please ensure that all pre-release work is attached to the question paper using a treasury tag through the punched hole provided. Please also discourage candidates from tying treasury tags in knots or wrapping them several times through the punched holes. It is essential that the Examiner can separate the pre-release work from the examination paper easily to mark it.

Report on the Units taken in June 2008

Although there was some improvement in the work submitted for G048 and the accuracy of centres' assessment of it, the amount of adjustment needed in some cases is a cause for concern. Please refer to the Principal Examiner's Report for guidance on what is required.

Whilst most work submitted for moderation was of an appropriate standard, the standard of some work at AS level was more appropriate to GCSE and the standard of some work at A2 was more appropriate to AS level. Centres need to ensure that the depth and breadth of the work submitted is appropriate for an A level qualification.

The importance of Centres getting marks to the Moderator by the deadline cannot be over-emphasised. Failure to do so may result in delays in the publication of candidates' results. If there are 10 or fewer candidates entered, all the work must be sent to the Moderator with the MS1. Delay was also caused in some cases by accredited centres failing to take note of the letter informing them that their work was to be moderated as part of the random sampling process. In some cases, moderators experienced considerable difficulty in obtaining a moderation sample from such centres.

The importance of a fully and accurately completed unit recording sheet cannot be over-emphasised. Moderators must be able to match the work to the mark on the MS1, so both candidate name and number should be completed. It is also vital that the total mark is indicated, that it correctly totals the individual task marks and that the total on the unit recording sheet and the MS1 match.

As with pre-release tasks for examined units, plastic pockets, folders and particularly ring-binders should not be used to send unit portfolios. Work should be hole-punched and secured with treasury tags.

Principal Moderator's Report GCE Applied ICT

General Comments

As in previous sessions, due to accreditation, only a percentage of work was moderated. The standard of the work submitted was generally acceptable, although scaling had to be applied in a number of instances, with significant scaling being required in a few. Worryingly, it was necessary to adjust the marks of several of the accredited centres that were randomly sampled. Assessors in accredited centres need to ensure that they check the required standards by attending INSET and apply these standards when assessing work. Accredited centres are reminded that their work may get called for moderation as part of the random sample. A letter is sent to selected centres shortly before the moderation session and centres are urged to take note of this and act accordingly. A number of randomly selected centres had to be 'chased' for mark sheets this session because they had not been sent to the moderator and sometimes disputed the fact that their work was to be moderated. This delayed the moderation process considerably.

Moderation was hampered this session by the number of inaccuracies in recording marks on the mark sheets and other administration issues. For moderation to progress smoothly the task marks on the unit recording sheet must be added correctly, the total recorded in the box provided and this total must be transferred accurately to the MS1 mark sheet. If the marks are changed through internal moderation, or additional work being submitted by candidates, please ensure that both the individual task marks and the total are changed and that it is clear which the final marks are. It is also vital that the Moderator can read the marks awarded on the MS1 to select a representative sample. Changes made on the top copy are not always readable on the Moderator's copy, resulting in delays while these are clarified. When centres use electronic methods to submit marks to OCR, a printed copy of the marks submitted must be sent to the moderator.

Although fewer than in January, there were some centres where all candidates entered had been withdrawn. Where centres have withdrawn all candidates for a unit or units, it is vital that the Moderator is made aware of this, either by sending the MS1s with the candidates marked as absent, or by sending a note letting them know the candidate(s) have been withdrawn. If moderator address labels have been sent to the Centre, the Moderator will be expecting mark sheets from the Centre and is required to chase the Centre if these do not arrive. This can waste valuable time, especially when there is no work to moderate.

Similarly, Centres are reminded that, where there are **10 or fewer** candidates, **all** the candidates' work **must** be sent to the Moderator with the MS1 by the deadline. However, where **more than 10** candidates are entered, please do **not** send the work with the MS1. The moderator will request the 10 they want to see on receipt of the MS1.

Centres are also reminded of the need to complete and include Centre Authentication forms (CCS160) with the work. The Joint Council has indicated that Centres who fail to authenticate a coursework unit will not receive marks for that unit. Only one form per unit is required – it is not necessary to attach a form to each candidate's work. Also, whilst candidates must sign a Candidate Authentication form, these should be kept securely in the Centre and not submitted with the work.

In many cases unit recording sheets had been completed thoroughly. There were helpful comments as to why a particular mark had been awarded and page numbers to direct the Moderator to the evidence. However, a significant number of Centres had included little comment and no page referencing. This essentially means that the work has to be re-assessed, rather than moderated, and the Moderator may not be able to locate all the evidence claimed,

resulting in scaling. Centres are also encouraged to annotate the work to indicate where there is evidence for a particular task and mark band. A simple 'a3' in the margin, to indicate there is evidence for task a, mark band 3, is very helpful, as are comments to indicate where different parts of a task have been evidenced.

Pages should be numbered uniquely from the start to the end of the portfolio, even if this is done by hand when the work is finally assembled. Representative page numbers on the unit recording sheet are more helpful than attempting to indicate every page that contributes to the evidence. It is also most helpful if Assessors annotate the work to indicate where particular aspects of a task have been achieved at a particular mark band. Please use the task letters, rather than assessment objectives.

Some work was very poorly organised, making the moderation process more difficult. Candidates need to be taught how to assemble a portfolio, rather than merely collect together a number of different pieces of work for assessment. They should be encouraged to organise the work in a logical order, use suitable section headings and to include a contents page. However, it is not necessary to scan in hand-drawn designs. When these are drawn in pencil, the scanned image is too faint to be read. Remember, the moderator is checking the content of such designs. It is far better to simply include the original versions. The volume of work submitted should also be considered. Portfolios that are hundreds of pages long are counter-productive, as it makes it more difficult to locate the evidence required. It is the quality, rather than the quantity, of the work that is being assessed and candidates need to be selective about what they include.

Although more Centres are using treasury tags or other suitable methods to secure the work sent, plastic pockets and plastic folders were too often still being used as, occasionally, were ring binders. These should be avoided. Some methods of binding work are physically dangerous and can also lead to the plastic sacks used to send the work being damaged. Plastic comb binding is easily damaged in transit, especially when used to bind excessively thick portfolios, resulting in sharp edges. Also, the type of fastening with metal prongs that are held down by a slider can also be very sharp.

1 Comments on Individual Units

G040 – Using ICT to communicate

Although most centres had assessed this unit accurately, there was considerable variation in the quality of the work seen. Some was of a very high standard, while some was little better than would be expected at Intermediate GNVQ/GCSE level.

Some Centres continue to provide assignments that require candidates to create standard business documents such as letters, invoices, memos and agendas. These do not give candidates sufficient opportunities to demonstrate their abilities to use the range of software, facilities and media required for this unit.

Where candidates have not created all six of the required communications, they can still be awarded marks in task b. However, the mark awarded is likely to be significantly lower than the quality of those communications created would suggest.

Some of the unit portfolios produced for this unit were very extensive. This can be counterproductive as it becomes difficult for the Moderator to locate the required evidence. Unless the comparative report for task a is being used as one of the six original communications, which is not recommended, it is not necessary to include planning or draft copies of this document, neither are draft copies of evaluations required. Draft copies of other documents should be carefully selected, labelled and annotated to show development. Two or three drafts should be sufficient. Also, whilst the collection and analysis of existing documents to inform the design of the candidates' documents is good

teaching practice, these do not need to be included in the portfolio. However, the documents compared in task a must be included in the portfolio, so that the Moderator can judge the accuracy of the descriptions given.

Task a

The requirement for this task is that candidates describe and compare two types of document from each of three organisations, for example a letter and a brochure from each. Care is needed in the choice of documents. As candidates have to identify good and bad points about writing style, it is important that documents have some content. Blank letterheads, business cards etc are not suitable documents for comparison. The two types of document should also be sufficiently distinct. Comparing two different pages of websites or two types of leaflet is not acceptable. Candidates can still be awarded some marks if they fail to describe all six documents, although the mark will need to be reduced to take account of this.

Other than when discussing house style, candidates should be comparing the similar documents from the three organisations, ie comparing like with like. When discussing house style, they should be considering common features used in the two documents from each organisation.

Writing style was too often confused with text style. Candidates need to consider the type of language used, ie whether it is formal or informal, informative, persuasive etc, not whether it is emboldened or in too small a font size.

Some candidates had produced very detailed descriptions and comparisons of the documents but had included little indication of what was good or bad about them or how well they met their purpose. Discussion of house style and suggestions for improvement were also limited. Candidates tend to score better if their report is structured under headings that relate to the task requirements.

Centres are reminded that the quality of the candidates' written communication is assessed through this task. In some cases, too little account was taken of poor spelling, punctuation and grammar when deciding what mark to award. It is not sufficient for candidates to simply run the spell checker, although this should be used as a matter of course, they should also proofread the work and correct errors not identified or those of punctuation or grammar.

Task b

Tasks bi to iv should be assessed across all six communications created. To achieve the top of a mark band, candidates must demonstrate the requirements of that mark band consistently across most, if not all, of the six communications. Too often, candidates had produced good planning and drafting, good quality final communications or detailed evaluations for a few communications but had 'gone off the boil' and failed to demonstrate the required consistency. The 'presentation' on methods of communication must be one of the six communications. It should, therefore, be planned drafted and evaluated as well as the other five. This session, some candidates had failed to produce six communications, mostly because they treated a letterhead and a letter as two separate communications. It is not.

Task bi

There are several aspects to this task; planning, development of drafts, accuracy checking and listing of sources. Lack of any of these aspects should reduce the mark awarded significantly. It is expected that even at mark band 1 the documents have been checked so

that few obvious errors remain. This was often overlooked. Planning needs to be included for all six documents to achieve mark bands 2 or 3. For mark band 3 the planning must be detailed. Candidates should consider the layout, content and aspects such as font style and colour schemes. Only one hand-drawn plan is required for each communication. All drafts should be computer generated.

It is not sufficient to merely include draft copies. These need to be annotated to show what the candidate intends to do to improve them. This should include improvements to the layout and positioning of elements as well as proof reading the text. Again, annotated drafts should be included for all documents. In some cases, candidates had provided step by step guides with screen prints to show how the documents were created. This is not what is required and does not fulfil the requirement for annotated draft copies. The listing of sources was often the poorest aspect of this task. At mark band 3 a detailed bibliography is required. This should include at least title, author, publisher and date published for printed material and, for web-based material, exact URL, date accessed, author (if known) and date last updated (if known). This was rarely seen in candidates' work.

Task bii

Although it is not necessary to include extensive before and after printouts to show how information was located and adapted, annotation of the work to indicate which information had been located and how it had been adapted would do much to aid the moderation process. To reach mark band 3, the communications should be of near professional standard. Whilst some very high quality communications were seen, some were quite poor but still awarded marks in this mark band. For maximum marks all six communications should be of a consistently high standard.

Task biii

Again, annotation would help to show the Moderator where the automated features required by mark band 3 have been used. Alternatively, a few well chosen screen shots would help the moderator to confirm that automation had been used. Centres are reminded that the key terms in this task are 'appropriate use', 'suit the purpose' and 'improve impact'. Candidates should not be awarded mark band 3 simply because they have used mail merge or a template. In addition, to achieve this mark band, throughout the portfolio candidates need to use a wide range of graphics and other media that are both appropriate and improve the impact of the communications. As mentioned in the introductory paragraphs for this unit, the types of communication candidates are asked to produce will do much to aid or limit them in achieving marks in this task. More varied communications, such as multimedia presentations, web pages or newsletters, will give candidates greater opportunities to achieve higher mark bands. Assessors should consider the use of detailed witness statements to evidence the appropriate use of sound and video.

Task biv

Candidates need to evaluate the communications they produce and their own roles and actions. The latter aspect was frequently missing. Mark band 3 requires candidates to carry out ongoing evaluation of their draft communications. Too often a mark in this mark band was awarded when the candidate had only evaluated the final versions of their communications or where they had simply described how the drafts had been developed. Candidates need to describe the strengths and weaknesses of each draft and their own performance in detail to achieve high marks in this task.

Task bv

This task should form the content of one of the six communications created, rather than being addressed as a separate entity. It requires an explanation of the methods of communication listed at the top of page 5 in the What You Need to Learn section of the unit specification. To achieve mark band 2 or 3, candidates would be expected to describe at least six of the communication methods listed. There was some confusion between types of information and communication methods. The technologies that support communication methods were often omitted or lacking the detail required.

Candidates are unlikely to be able to provide the level of detail required by mark band 3 in a slide presentation alone. The required detail could be provided in presenter notes to accompany the presentation. Centres are reminded that the term 'presentation' is used in its widest sense. Candidates might find it easier to provide the detail required by mark band 3 if they presented the information in a report or newsletter, rather than a slide presentation. The best work for this task was seen when candidates had produced a report, rather than a PowerPoint presentation.

Although candidates should be encouraged to research the methods of communication and the technologies which support them - including their relative advantages and disadvantages – they should not simply copy and paste articles from the internet. Note taking and rewriting text from a number of sources into the candidate's own factual account should be promoted, as these are vital study skills which candidates will require at university. The sources used should also be referenced properly.

G042 – ICT solutions for individuals and society

Although better than in previous sessions, this unit, again, probably attracted more scaling than any other. This was largely due to a lack of suitable evidence to show what candidates had actually done. Candidates need as much guidance on how to present their evidence as they do on how to search for information, analyse it and present results. In some cases, candidates had aimed their evidence at mark band 3 and failed to include the required evidence of development through the task. However, some Centres had 'got it right' and candidates had produced excellent evidence.

Centres are reminded that all of the tasks, with the possible exception of task b, should relate to a single investigation. Guidance on the evidence required for this unit has been given out at OCR training events and is available in the documents section of the e-list. This can be accessed at <http://community.ocr.org.uk/lists/listinfo/ict-gce-applied>. The document 'Unit 3 – Further Guidance' can be found in the Public Documents and Resources section, so can be accessed if you have not yet subscribed to the e-list.

Task a

Although some good evidence was seen for this task, some was very poorly structured, making it difficult to determine what searches candidates had carried out and what information they had found. Screen shots were often too small for the Moderator to read the search criterion entered or the screen shot did not include the criterion. In some cases, candidates were using a totally different search topic to 'test' which search engine is best before using one for their investigation. This is not appropriate as the results will be subject specific and the search engine they find the best in their testing may not be the best for the subject of the investigation.

Candidates need to be systematic, starting by clearly defining what they are looking for and then initially using simple searches, progressing to the use of the advanced search facilities and then building their own search strings using logical operators. Whilst it is not

necessary to print out and include all the information found, candidates do need to indicate the results obtained from each search and to compare the results of similar searches using different search engines. This refinement of searching will also allow candidates to address the criteria for mark band 3 of task g.

To reach mark band 2 the advanced search facilities must be used, while mark band 3 requires the use of logical operators in the standard search box. Many candidates had approached this task 'back to front' by using logical operators and then going back to using advanced search facilities. The intention was that candidates use the advanced search facilities and discover the functions they offer before realising that similar searches can be carried out by using logical operators in the standard search bar. In some cases, mark band 3 had been awarded when it was clear that the logical operators were those included by the search engine as a result of carrying out an advanced search. Too often, logical operators were being used within the fields of the advanced search option when the whole point of the task is that more efficient searching is carried out by using these operators rather than the advanced search options.

Too often also, poor use had been made of both the advanced search facilities and logical operators. Entering a single word in the 'exact phrase' box, for example, is unlikely to make much difference to the search results, as is the use of AND in Google or any operator in lower case. Google and other search engines provide useful help on the use of operators and candidates should be encouraged to follow this guidance. Candidates should also be encouraged to use a range of operators including OR or NOT (-), as well as AND (+).

Mark band 2 requires a comparison of results as well as the use of advanced searches, while mark band 3 requires justification of the most appropriate search engine. We would expect candidates working at mark band 3 to show progression from mark band 2, ie they need to show the use of the advanced options of more than one search engine and compare the results to inform their choice of the most appropriate.

Task b

There was some misunderstanding of the requirements of this task. It requires discussion of the impact of the availability of electronic information, not the impact of ICT in general or the advantages and disadvantages of the internet. This session again produced a number of reports entitled 'How organisations communicate', ie Centres had addressed the mark band 3 criterion, rather than the banner of the assessment evidence grid which asks for 'an explanation of the availability of electronic information on individuals and society'. The resultant report often related more to the requirements of task bv in G040 than this task.

Candidates tended to describe how the internet is used for shopping, banking and other tasks, rather than the impact on the people using these services. The impact on society for mark band 2 was rarely more than a generalisation of the material discussed in relation to themselves and their family. Mark band 3 requires detailed explanations of the methods organisations now use to communicate with individuals and society and how this affects people who do not have or want access to electronic communication. Whilst candidates could often identify those who don't have access and why this is so, explanation of the impact this has was often limited.

As with task a in G040, insufficient account was taken of poor spelling, grammar and punctuation when awarding marks for this task. A few Centres had required candidates to concentrate on one particular website or method of using electronic information. This does not meet the requirements and limits candidates' discussion. A more general report is

required. Similarly, detailed descriptions of different public service websites and how they might be used does not fulfil the requirements, although this may provide a good teaching strategy.

Task c

This task requires evidence of the use of a large website to find required information. The information required needs to be identified and candidates then need to provide evidence of how they located it. Candidates should include screen shot evidence of how they found the required information. A witness statement should also be included to confirm that this was done independently or that the candidate needed help to find it.

Task d

This task requires evidence of complex searches involving both relational (= > < etc) and logical (AND, OR, NOT) operators. For mark bands 2 and 3, both on-line and local databases must be evidenced. Evidence of searching on-line databases may be linked with task c if an internal search engine has been used, but not to the use of generic search engines in task a. Most on-line databases will provide an internal search engine. Where it is possible to select two or more criteria, this is equivalent to AND, and if several options are selected within one criterion, this is equivalent to OR. We would expect to see complex searches of this nature.

For the local database, it is not sufficient to use a table in a spreadsheet as it is not then possible to easily demonstrate the required complex searches or to present the results as a database report. Whilst logical and relational operators can be used in custom filters in a spreadsheet package, candidates are limited to mark band 2 due to the lack of reporting facilities – a pivot table, for example, does not meet this requirement.

Some care is needed in developing local databases for candidates to search. These need to contain sufficient data to make searches meaningful. It is not necessary for candidates to create their own local database. Indeed, when they do, they tend to concentrate on this aspect, rather than the required search techniques. Candidates must include screen print evidence of the queries they set up in design view. For higher marks we would expect to see a number of different complex searches. Reports produced to achieve mark band 3 must be fit for purpose and must be printed out, rather than simply screen printed. For maximum marks, the database reports produced must have meaningful titles and suitable layouts to ensure the data being presented is visible and understandable. Rather than simply using the report wizard, candidates should access reports in design view so that they can adjust column widths and the alignment of data, and edit titles and column headings so that it is clear what the report shows.

Task e

Although some good spreadsheet evidence was seen, much did not demonstrate sufficiently complex analysis. The document mentioned at the beginning of this section provides guidance on the types of functions and processing expected for mark bands 2 and 3. Candidates must evidence the functions and formulae they use by formula printouts or other suitable methods. They also need to show evidence of testing, not just a table stating that the results were 'as expected'. The testing should show that formulae and functions return the expected result, not just that macro buttons work. This is a task where candidates would benefit from guidance on how to present their evidence. Too often it was difficult to determine what the spreadsheet was designed to do, how it appeared on screen or how the various sheets were linked, if at all. Macros need to do more than simply move from sheet to sheet. The mark band 2 criterion requires macros to speed up the input of data and the production of results.

Task f

This task requires candidates to draw all the information they have found together to answer the investigation question. As such it should be a stand-alone document. As in G040, the term presentation should be taken in its widest sense. The task cannot be assessed across the whole portfolio.

The presentation should present what the candidate has found out, not how they have gone about finding the information, which is the subject of the rest of the portfolio. Too often this session, the presentation for task f simply repeated the methods used, with screen prints of searches and how the spreadsheet was created. In some cases the headings were the six types of information listed in section 3.2.6 of the unit specification. Whilst this may ensure that all six are included, it will not produce a well thought out presentation that presents the investigation results coherently. Where candidates have not addressed an individual investigation, it becomes difficult for them to produce the evidence required for this task. Also, if candidates have not listed their sources it is difficult to award any marks for this task as it is impossible to ascertain how many they have used. Mark band 3 requires a detailed and correctly structured bibliography. The same details are required here as for task bi in unit 1.

Task g

Evaluations for this unit were weak. It is the methods used to find information and present results that should be evaluated, rather than the outcome or a task by task evaluation. Too often, evaluations were simply descriptions of what candidates had done. For mark band 3, this evaluation should be ongoing rather than just at the end. Some evidence may appear in task a, but this must be clearly identified and cross-referenced if credit is given.

G043 – System specification and configuration

Tasks a and b are two separate stages of the specification process and cannot be interwoven. Task a requires candidates to investigate and describe in detail what the user wants to do with the system they will specify. This should include detailed descriptions of all tasks together with details of what data will be input and how the output will be presented. This should **not** include consideration of input and output **devices** or the software required, which form part of task b. In task b, candidates should use these detailed requirements to specify a system that can carry them out. As well as specifying the hardware and software required, candidates must include the specification of any required configuration and, for mark band 3, designs of toolbars, templates, menus and macros. All of this should form a stand-alone document that could be presented to the user for their approval. Too often high marks were awarded when the specification lacked detail and the configuration requirements had been omitted.

Photographic and/or screen print evidence backed up by a detailed, signed and dated observation record would improve the evidence for the practical tasks in task c. This must include evidence of configuration as well as installation. Candidates must include a test specification and evidence of testing to go beyond mark band 1. To achieve mark band 3, the testing must be thorough and there should be clear evidence of how candidates overcame problems found as a result of testing. Testing seen often lacked the detail required for the marks awarded.

Similarly, candidates need to include clear evidence of the design of templates, toolbars, menus and macros and annotated screen prints or printouts of those that they create. Any screen prints must be large enough for the content to be read. All four items must be evidenced and, to go beyond mark band 1, there must be evidence of testing. For mark

band 3, the installed templates, toolbars, menus and macros must be those designed by the candidate and must demonstrably improve the efficiency of the user. An explanation of how the user's efficiency would be improved would be helpful here.

Task e is best evidenced by a report or handbook for the user on health and safety and security issues. It should cover the content of section 4.2.4 in the unit specification. While most ergonomic issues were covered, management issues were rarely covered in sufficient detail. As with task a in G040, insufficient account was taken of poor spelling, grammar and punctuation when awarding marks for this task.

More Centres are correctly addressing task f, although a little more detail is required. Centres should refer to section 4.2.3 of the unit specification. However, some candidates are still including descriptions of the stages of the Systems Life Cycle. This is not acceptable.

Evaluation was weak for task g. Candidates must evaluate both their specifications and the methods they used for installation, configuration and testing. It might help if these were treated as two separate evaluations. The first could appear immediately after the specification and consider how well it meets the needs of the user as identified in task a. The second could be produced immediately after completing the practical tasks and consider how they went about them, any problems that arose, how these were overcome and how they might approach a similar task in the future. As with other units, for mark band 3 this should be ongoing.

G044 – Problem solving using ICT

The entry for this unit was comparatively small, resulting in only a small number of Centres being moderated. Some candidates had made a reasonable attempt at producing the evidence required, although there were also some serious misconceptions. The majority of Centres used one of the scenarios issued by OCR or based their own scenario on one of them. However, in a few instances the problem set did not provide sufficient scope for candidates to produce meaningful evidence or resulted in non-ICT solutions. In some cases, the solution related too specifically to hardware and networking, without considering the software aspects.

Where candidates gained low marks it was often because they simply regurgitated theory, rather than applying it to the scenario provided. This approach also increases the possibility of plagiarism. Although weaker candidates had clearly only used the information provided in the AS text book, more able candidates had carried out thorough research on types of information, types of software and quality procedures and had applied this to the scenario. There were good examples of system diagrams, although explanations of the system boundaries and environment lacked detail. Evaluation was also a weak area. Candidates must detail the goals, aims and objectives of their solution in task b, so that they can evaluate, in task g, whether these have been met.

G045 – Software development – design

Evidence submitted for this unit was generally of a good standard, although there were some Centres who had assessed it somewhat leniently. Despite the title of this unit, some candidates described alternative hardware, rather than software, solutions.

There are two parts to the assessment evidence for this unit. Tasks a, b and c are theoretical, identifying and describing the tools and techniques available. Task d to g relate to the solution of a given problem. Where Centres had attempted to combine these two aspects, candidates rarely covered the requirements of tasks a to c sufficiently.

Tasks a, b and c

To achieve mark band 3 for these tasks, candidates need to research the tools and techniques available so that they can describe a wide range, possibly going beyond those listed in the unit specification. Although there is overlap between the stages, candidates were often confused as to which tools are used for analysis, which are used for design and which are used for investigation. It may help to consider section 6.2.3 of the unit specification, as far as the penultimate bullet list on page 72, in relation to task a. Although they can form part of analysis, decision tables, flowcharts and structured English are often part of system design, so task b should include these and the content of 6.2.4. Task c should include the content of 6.2.2. To gain mark band 3, candidates should explain the advantages and disadvantages of each tool or technique and how it might be used – examples for the given problem can be included here.

Task d

The report for this task should include both feasibility and design. The latter was lacking in some cases. Candidates must include designs for input screens and output screens and reports. The latter should include consideration of any calculations required to produce the output. As indicated above, the alternative solutions should relate to software rather than hardware, although some consideration of hardware should be included. While some excellent reports were produced with detailed alternative solutions and full consideration of technical, economic, legal, operational and social feasibility, others provided very limited alternatives with only a passing consideration of costs and benefits. The number of marks available for this task should be taken as a guide to the depth of evidence required. As with task a in G040, insufficient account was taken of poor spelling, grammar and punctuation when awarding marks for this task.

Task e

Most candidates attempted to produce DFDs using formal graphical representation with varying degrees of success. Both level 0 and level 1 DFDs are required for mark band 3. These need to use consistent symbols. The flows/entities represented on the Level 0 must be matched by those expanded in the Level 1, showing a full and complete representation of the current system. All external entities, data stores and processes must be shown with the links between them being correct. However, mark band 3 was often not achieved because the documentation lacked the detail required. All entities, processes, stores and data flows need to be described in detail to achieve mark band 3. Also, in some cases, there were clear errors in the diagrams produced, such as no indication of the direction of data flows or diagrams with entities and processes but no data stores.

Task f

Again, although some good ERDs were seen, the documentation limited the mark awarded. A detailed data dictionary should accompany the ERD to reach mark band 3. A number of ERDs were seen that contained obvious errors or where many to many relationships had not been resolved. Such diagrams are not acceptable for mark band 3 or even, in some cases, mark band 2.

Task g

This task requires candidates to evaluate both the solution and their own performance. Whilst there was sometimes good evidence of one or the other aspect, there was rarely good evidence of both.

G046 – Communicating using computers

The work submitted for this unit was generally appropriate and in most cases had been accurately assessed, although there was some lenient assessment.

Suitable organisations had been investigated for task a, although candidates did better when they investigated a real organisation, such as their school/college, rather than using case study material. However, whilst it is clearly convenient to base this task on the Centre's use of the internet and intranet, candidates should be given the opportunity to investigate other organisations' use of these facilities where possible. The organisations' objectives were rarely stated overtly. Candidates must describe advantages and disadvantages of both internet and intranet use, as well as suggesting improvements to both to achieve mark band 3. Some candidates had confused an intranet with a shared network drive, particularly when describing their own centre's use. The two are not synonymous and candidates must be taught the distinction between them.

Centres should refer to section 7.2.6 to identify what is meant by internet technologies for tasks bi and di. Discussion of HTML is not sufficient. In task bii, marks were awarded somewhat leniently. Candidates need to do more than simply identify that a particular section of code produces a table or a hyperlink to reach mark band 3. They should explain how the various tags are used and how they translate into the features seen in the browser. Candidates do not need to include the entire code for each of the three pages. They could include a screen print of the page as shown in the browser along with a **number** of relevant sections of the code that they can then explain in relation to the browser image. However, care is needed that a sufficient range of different features have been explained. The web pages annotated should be part of the website discussed in task bi, rather than an entirely different site or one they have created.

In task c, candidates tended only to consider the costs of hosting the site online. Bandwidth was given little consideration in some cases and candidates failed to describe a range of connection methods, hardware and software. The hardware and software should be that required to produce the website and host it locally. This will include a web server and software, as well as web design software. As in other units, insufficient account was taken of poor spelling, punctuation and grammar. This task should be a single coherent report, rather than a number of disparate sections including material downloaded from websites.

In task di, candidates must identify the internet technology they have used in their web page to achieve mark band 2. Evidence that the site has been uploaded is required for mark band 3. Task dii is about evaluating how they approached the development and uploading of the web page, rather than the web page produced. There was insufficient detail in some cases.

Centres should endeavour to ensure that candidates have the opportunity to install three pieces of communications software so that they have the opportunity of achieving mark band 3 in task e. It is not possible to cross reference the descriptions of hardware, software etc for this task to those for task c, as task c relates to hosting a website, while this task relates to simply accessing the internet and sending and receiving emails. For maximum marks, candidates need to produce a high quality user guide for installing and configuring the communications software. This should be separate from the evidence that they actually carried out the installation. A detailed witness statement is helpful to confirm the installation and configuration tasks. Care is needed as to what is considered communications software. Compression software, for example, is not communications software, although it may be beneficial to reduce the file size of attachments. Likewise, virus checking software, while essential on any computer connected to the internet, is not

communications software. Also, simply configuring an email client that already exists on the system is not installation. There are many freely downloadable browsers, email clients and instant messaging software that can be installed for this task.

G047 – Introduction to programming

Although some candidates who submitted work for this unit had been well taught and produced suitable evidence, others had followed a very minimalist approach. If all that candidates submit is the annotated code that they have produced, the Moderator cannot determine whether the programs actually run, making it difficult to confirm the marks awarded in both tasks ai and aiii. Candidates should state clearly what user need each program is designed to meet, so that the Moderator can judge whether the program meets the requirements. They should also be encouraged to include designs for the program, both in terms of the structure of the code and screen design. Although not overtly part of the assessment evidence, this is good programming practice. As well as the annotated code, candidates should include a test specification and evidence of testing to show that the program runs as designed. At the very least they must include screen prints to show stages of the program running.

Also, although the evidence requires a number of simple programs, many were too simple, generating only a few lines of code. Programs should be sufficiently complex for a range of programming techniques to be incorporated. Clearer evidence of the use of modularity and file handling is needed for mark band 3 of tasks ai and aiii. In particular, when using VB, candidates would be expected to write and call procedures, rather than simply using the subroutines associated with a button. Evidence of annotation is often clearer if the code is copied into a word processed document so that comments can be added in a different font style, colour or attribute to distinguish it from the code. It is very helpful if the Assessor annotates the code to indicate where particular techniques have been used / annotated. Although most candidates had used a version of visual basic for task a, a variety of languages were used for task b including Java, Pascal and C. Most of the programs provided for task b were suitable, with many Centres using one of those provided in the sample assignments. However, in some cases the programs were too simple for candidates to demonstrate the understanding required for higher mark bands. Candidates **must** annotate the program listings to gain marks in any of the three sections of task b. This must use a different programming language and cannot be the annotation of the programs written for task a. They must use ICT tools to do so. This may be either the comment tool in the programming language or, as suggested above, comments entered using a word processing package. To be awarded marks in mark band 3 of tasks bii and biii, candidates must provide detailed explanation of the code, for example the purpose of a sub-routine and how it is called by the program. There should also be no errors or misconceptions in the explanations. As well as actually annotating individual lines of code, candidates should give some indication of what the program is designed to do.

Task c requires evaluation of the programs in relation to the user's needs, evaluation of the suitability of the programming languages used and evaluation of the candidate's own performance. Coverage of all three aspects was rare in most of the work seen. If there is no indication of what the user requires of the programs written for task a, it is difficult for candidates to evaluate how well those needs have been met and for the Moderator to determine the accuracy of comments made. It is not necessary for candidates to implement any improvements suggested, although many had done so.

H515/715: GCE Applied ICT (A2 units)

Introduction

This will overlap with the introduction to AS units – perhaps a common introduction?

This was the fourth moderation opportunity for this qualification at the end of the second year of delivery for the A2 units.

Unit G049 Numerical Modelling Using Spreadsheets

For this unit candidates were required to produce:

- a design specification that analysed a suitable problem and described how they would solve it by numerical modelling;
- evidence of implementing their solution using suitable entry aids and processing facilities;
- a record of how they overcame their problems;
- a specification for testing their spreadsheet, and evidence of the results of these tests;
- technical documentation that explained how their spreadsheet works, and user documentation that explained how it is used;
- an evaluation of the effectiveness of their solution and their personal performance.

A small number of Centres continue to fail to identify that the emphasis of this unit is on numerical modelling rather than data manipulation even though this has been fed back in every Principal Moderator report for this unit. However, it is pleasing to note that the proportion of Centres in this category is lower than in previous sessions. The problem that the candidates attempted to solve must provide the opportunity for significant numerical processing. Using a spreadsheet to simply store and present information, eg database solutions that involve little or no data processing are not suitable for this unit.

The design specifications produced by a number of candidates lacked the necessary detail. At the simplest level, these must incorporate consideration of user requirements, data sources, processing to be carried out and output to be generated. More able candidates incorporated ideas for screen layouts, identification of spreadsheet layout, spreadsheet facilities to be utilised and considered how the numerical processing aspects of the solution met the user requirements. Candidates achieving high marks for task a must produce a specification that is detailed enough to enable a competent third party to implement it independently.

The solution implemented in task b by some candidate showed clear evidence of the use of complex spreadsheet facilities, as listed in section 10.2.3 of the unit, as well as clear evidence of a range of spreadsheet functions appropriate to the solution of the problem. Some Centres awarded high marks for task b when there was little or no evidence of the use of specialist numerical processing functions and complex spreadsheet facilities; marks were adjusted accordingly. Annotation of printouts or a commentary detailing the spreadsheet solution provided clear evidence of the use of the spreadsheet facilities and functions. This in turn provided evidence towards task c, the strategy for implementing the solution. Where no clear evidence could be found, often due to lack of annotation, marks were adjusted downwards as the Moderator could not easily locate the use of the functions within the spreadsheet solution.

For task c, the evidence presented often lacked details of the problems encountered by the candidate whilst developing the spreadsheet solution and how these were surmounted. Testing the spreadsheet solution was carried out poorly by the many candidates. There should be clear evidence of planning the testing to be performed. This should address testing functionality with the use of normal, abnormal and boundary data.

The technical and user documentation need to be separate documents as they are for different readers. The technical documentation must be sufficiently detailed to allow somebody to maintain or amend the spreadsheet. In many cases the documentation provided would not allow this to happen.

A small number of candidates performed well in mark band 3 in task f. In some cases the evaluation was descriptive rather than critical, restricting marks that should have been awarded. Candidates must refer back to the initial requirements of the problem and, in order to access the higher mark bands, consider feedback from users and relate to the design specification.

G050 Interactive Multimedia Products

For this unit candidates were required to produce:

- a review of two commercially produced interactive multimedia products showing how their design influenced the design of the interactive multimedia product that they produced;
- detailed designs, of which one is chosen as the design for the final product;
- a multimedia product to meet the client's requirements;
- a detailed test plan;
- a detailed user guide;
- a review of both the interactive multimedia product that they produced and their personal performance.

A number of Centres still need to give careful consideration to the software used to evidence this unit. Section 11.2.4 indicates the types of interaction that could be incorporated into the final product. Not all multimedia software will facilitate the majority of these. The design of a website is not appropriate; candidates wishing to design websites should undertake G053 Developing and Creating Websites. The unit specification makes it clear that this should be a standalone product; task e requires evidence of the system requirements and how to install and use the product, none of which are fitting for a website.

In order to access the higher marks in task a, candidates must evaluate the commercial multimedia products, rather than describe them. There must also be a detailed explanation of how the product influenced the design of the product that the candidates produce. A number of candidates evaluated websites rather than multimedia products. This disadvantaged candidates as many of the sites only demonstrated hyperlinks and the candidates did not have the opportunity to consider the user documentation, bearing in mind that they have to create user documentation for their own product in task e. Regrettably the evaluation produced often provided little or no evidence for task a. If a candidate chooses to evaluate a web-based product for one of the products, Centres must ensure that it contains elements outlined in section 11.2.4 of the unit; otherwise the candidate will not be able to incorporate such elements into the design, based on the evaluation of the product. Evaluation of two web-based products is not appropriate as candidates are unlikely to appropriate exposure to sufficient user documentation for multimedia products, disadvantaging candidates.

For task bi some candidates produced plans for completely different products; the requirement is to produce different designs for the same product. Content must be considered as part of the plan to access higher marks; some plans seen in this session contained very little indication of content.

Task bii required a critical analysis of the designs in order to access higher mark points, not just a description of the designs. Good and bad points of each design need to be identified and a reasoned argument presented to explain why the final design was chosen by the candidate and how it met the needs of the client.

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Task ci required evidence of the use of a variety of ICT skills to produce a multimedia solution. The nature of these skills is identified in section 11.2.4 of the unit. Candidates should annotate their evidence to explain how the skills have been used and how the skills are aiding the development of the multimedia product.

Task cii required the candidate to bring together the various components into a complete solution. This is where the nature of the multimedia software may restrict the nature of the product developed. A small number of Centres continue to allow candidates to create products that are mainly text and image based with little or no interaction.

The testing of the product for task d was carried out well by a minority of Centres. The candidates needed to test not just the functionality of the product, but the fact that the product met the requirements of the design specification.

Task e required candidates to incorporate installation instructions as part of the user guide for the product. Candidates are encouraged to incorporate images within their user guide in order to clarify the steps within the user guide. As already indicated, the user guide needs to include details of the system specification for the product and details of how to install the product. Some candidates omitted to explain what the purpose of the multimedia presentation was.

For task f the candidates must critically analyse their solution in order to access the higher mark points. More able candidates provided evidence of obtaining feedback from users that tested the product, as well as providing clear evidence of linking the product to the design specification.

G051 Publishing

For this unit candidates were required to produce:

- notes taken during an initial, and any subsequent, meeting with a client, evidence of negotiating and amending a brief for the production of a camera ready copy (CRC) document;
- evidence of the drafting and production of a CRC of their final document to meet the brief and, in so doing, show that they could create and capture images, as well as import material from other packages, utilise object libraries such as clipart, and select and further develop images to meet the style and content of the final copy, as negotiated with the client;
- a CRC document, of at least ten pages, that combined different types of information presented to the client for approval, together with a letter which correctly described the final production stage and external factors which may affect completion of the final published document;
- an evaluation of both the layout and content of their final copy and their performance.

The evidence of the meeting(s) with client varied greatly. If the candidates cannot access real clients, then the teacher, or other suitable person, should act as the client.

It is a requirement of mark band 3 in task bi that candidates explore different means of presenting the same information and use a comprehensive range of editing and manipulation tools. Some candidates were awarded marks in mark band 3 when there was no evidence to support this.

Evidence for task bii frequently lacked evidence of the design stage processes. To access marks in mark band 2 there must be explicit evidence to include the following:

- sketching different initial document designs;
- following housestyle;
- creating master page layouts;
- presenting page proofs;

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- producing artwork sketches;
- setting text orientation;
- creating style sheets.

Annotation of evidence generated enable candidates to access mark band 2, whereas accompanying explanation will enable candidates to access mark band 3.

Higher marks in task ci required clear evidence of using more than four text styles, more than two text attributes and editing a piece of imported text. This is best evidenced through careful annotation of the evidence as the evidence should be explicit rather than implicit.

Task d requires analysis of the CRC and how the solution was refined to meet the client's needs. Candidates in mark band 3 will produce a critical analysis of the development of the product. There will be an evaluation, not a description, of the candidate's role in the development of the solution.

G052 Artwork and Imaging

For this unit candidates were required to produce:

- a portfolio of artwork samples produced to demonstrate a range of artwork skills;
- evidence of the development of computer artwork, using a variety of graphics software, following negotiation of a brief from a client, from initial ideas to final product accepted by the client, to include:
 - a range of initial proposals in response to a complex problem;
 - development of a final product, showing editing techniques;
- an evaluation of both the final product, including consideration of the hardware and software used, and their own performance.

In task a some candidates failed to include samples of artwork produced covering the range listed on the assessment grid. A small number of candidates included material which they had not produced, but taken from other sources. Mark band 3 was achieved in only a small number of portfolios as few candidates explored the development of the materials using advanced editing and manipulation techniques. It should be noted that it is not necessary to provide step-by-step screenshots explaining how the original images were produced. The referencing for task a must relate solely to the portfolio of artwork and must not include reference to the product developed for the client.

A significant number of Centres did not ensure that an appropriate product was created for the client. Candidates are required to develop **artwork**, not publications, presentations, web pages or other such products; other units exist within the GCE Applied ICT specification addressing the development of such items and such evidence should be used for these units.

Task bi was poorly evidenced by many candidates as the sketches, in response to the client brief, were very brief and in many cases did not consider the capabilities of the software. In some cases, it was not clear if the client existed; if there is no opportunity for a real client, then the Teacher or other suitable person should act as the client. Task bii was difficult to achieve if task bi was poorly evidenced, as it was not easy to comment on the strengths and weakness of the designs. Mark band 3 required critical analysis and not just descriptive comments. Task bii requires explicit evidence that ICT skills have been developed. A diary can help to evidence this, or alternatively annotated screenshots can provide evidence. Evidence for task biv varied greatly as some candidates provided clear evidence of the development of the final product, including manipulation of material as part of the process.

Task c required a critical analysis of the final product, identifying how well it met the brief. Some candidates made little reference to the brief and some omitted to mention the printer, media or resolution. Candidates that appeared to have limited experience on working with computer artwork found it difficult to reflect critically on the final product and identify how weaknesses could be tackled in future briefs.

G053 Developing and Creating Websites

For this unit candidates were required to produce:

- an evaluation of commercial websites that have been downloaded;
- design notes for their website of at least three pages together with detailed plans for publishing your website;
- annotated print outs of their own web pages in WYSIWYG format identifying the features and techniques used in the web page;
- annotated printouts of their own web pages in HTML format identifying edits to script commands to change page layout;
- documentation of website testing;
- an evaluation both of their website and the tools used to produce it and of their own performance.

For task a some candidates failed to explain the reasons for choosing, or not choosing, features in web pages examined, as required to mark band 2. In order to access mark band 3, there must be a critical analysis of the web pages examined. Frequently, the evidence provided was solely a description of the web pages visited, meeting mark band 1 requirements.

In task b, candidates were required to identify domain names suitable for the site and, in order to access higher mark points, explain the reason for this name and provide alternative options. It was pleasing to see that a number of candidates had actually uploaded the site designed. Task b also required structure diagrams, a story board, an index of pages and a task list/action plan. Frequently some of these components were missing from the candidate work; the most common omission was the index of pages in the website.

In task c, to secure mark band 3, a full explanation is required to explain the design techniques, hyperlinks, multimedia and interactive features used.

Evidence of understanding HTML script in task d was implicit rather than explicit in a number of portfolios. For mark band 2 candidates were required to edit script commands. Evidence to support this could include a before and after screen shot of the implications of the changes as well a narrative to describe the changes. Mark band 3 requires evidence of adding script commands to include at least two from graphic, table or hyperlink. A number of candidates concentrated on embedding scripting language code, such as JavaScript, rather than editing (mark band 2) and adding (mark band 3) HTML script. The use of JavaScript contributes to task c and not task d.

In task e a small number of candidates failed to ensure that the website met the design specification; explicit evidence of this is required. It is useful if candidates include before and after screenshots if changes are required to the website as a result of testing.

Task f required candidates to produce a critical analysis of their website in order to gain higher marks. An analysis of the candidate's own performance was also required. In many cases the evidence was a description of what they had undertaken, rather than a critical analysis.

Unit G056 Program Design, Production and Testing

For this unit candidates were required to produce:

- a program specification to meet the given requirement and describe how the specification meets the program requirements and how user's needs have been considered;
- a program design arising from the specification;
- an annotated modular program to realise the design;
- test documentation including a test plan with valid, invalid and boundary data, expected results, actual results and changes identified as a result of testing;
- a program review and evaluation report including an evaluation of their own performance.

Only a small number of candidates were entered for this unit.

In task a, some candidates had only briefly identified input, processing and output; however, this could have been more detailed and would have helped to develop the specification.

In task b a clear description of design work is required; addressing processes, input, output, validation, verification, data structures and file structures. A small number of Centres failed to ensure that candidates addressed all of these.

Candidates must include evidence in task c to show that they have produced a fully working program.

Explicit evidence of testing is required in task d. Evidence presented by some candidates was minimal. Sometimes, whilst a test plan had been produced, there was no clear evidence of boundary data being tested.

To achieve mark band 3 in task e the evaluation must be critical; often the evaluations produced by candidates identified some strengths, weaknesses and areas for improvement with some user feedback, but often lacked depth and critical content.

G057 Database Design

For this unit candidates were required to produce a relational database to meet a given specification requiring at least three related tables supported by design and analysis notes, technical and user documentation and an evaluation of the database produced.

Their evidence to support this should include:

- design and analysis notes, including normalisation of the data model;
- a user interface, including data input forms and methods of obtaining output;
- a working relational database;
- user and technical documentation;
- testing of the database produced;
- an evaluation of the database;
- an evaluation of their own performance.

In order to access mark points beyond mark band 1, candidates must produce a correct entity relationship diagram and, for mark band 3, define the data model clearly and show that it is correctly normalised to 3rd normal form (3NF). Some candidates failed to provide clear details of the entities, attributes, keys, relationships and internally generated or processed data. It should be noted that the use of 'autonumber' primary keys in all entities is unlikely to be an appropriate solution to the database problem. This session, there was stronger evidence presented to explain how the model was normalised.

The data input forms for task b required evidence of data validation and should have been fully labelled in order to access mark band 2. These should also incorporate pull-down lists and labels. More able candidates demonstrated the use of forms allowing data entry into multiple tables and customised the database to hide the underlying software.

Candidates were required to evidence the manipulation of data in the database and use queries and reports. More able candidates designed reports with evidence of grouping, arithmetic formulae and used data from more than one table, accessing mark band 3.

The database documentation must enable somebody else to maintain the database. There was little evidence of the use of software generated technical documentation; such documentation does not demonstrate an understanding by the candidate of the evidence generated unless it is annotated. Design documentation created by the candidate often showed a greater understanding of the design of the database for task d.

Testing of the database must include evidence of testing both functionality and rejection of data outside the acceptable range. Where input masks have been used as part of the solution, these must also be tested.

The reflection of how well the database met the specification needed to be a critical evaluation, rather than a description, if the higher mark points are to be accessed. Likewise, the analysis of the candidate's performance needed to be more than descriptive in order to access higher mark bands.

G058 Developing and Maintaining ICT Systems for Users

For this unit candidates were required to produce records of specifying, upgrading and repairing ICT systems, to include:

- records of interviews with two different users to identify their key requirements;
- detailed specifications for an ICT system for each user along with explanations of the reasons for selecting particular components in non-technical language;
- records of carrying out an upgrade involving selecting and adding a new component to a system;
- records of carrying out an upgrade by replacing a component in a system;
- records of troubleshooting procedures carried out to identify faulty components;
- an evaluation of the information sources used to find information on components;
- an evaluation of the specifications and approaches taken to specifying, upgrading and repairing systems.

User needs were analysed, as required for task a, with use of questioning to secure mark band 2. In-depth question was not always apparent, as required for mark band 3.

The range of information sources in task b was often limited. The majority of candidates were over-reliant on the use of the Internet for such material. Rarely was there evidence of re-negotiating the configurations; if this was not necessary, an explanation by the candidate would be useful. Candidates must address 'future-proofing' to secure mark band 3; this was not always apparent.

Good use was made of photographic evidence and witness statements for task c. It is important that a witness statement is sufficiently detailed to describe what the candidate has done and is not just a tick list.

Evidence for upgrading a system in task d varied greatly between Centres. Some candidates included clear evidence that the upgrade of one component required the replacement of another component, as required for mark band 2. Few Centres provided sound evidence for mark band 3 to show that the BIOS had been changed or upgraded as a result of the upgrade.

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Task e was generally well evidence, although mark band 3 requires an index of problems; this was weak in some cases.

The use of a wider variety of sources of information may allow candidates to produce stronger evidence for task f.

The evaluation in task g was often descriptive rather than analytical, as required for mark band 3.

G059 ICT Solutions for People with Individual Needs

For this unit candidates were required to produce evidence that:

- showed an understanding of legislation and the rights of each of the individuals in connection with the ICT solutions suggested;
- showed a clear understanding of the disabilities or limiting factors, and resultant needs, identifying and showing suitable items of equipment and software as appropriate;
- for at least one case study, provided a specification for a complete system, to include configuration and customisation of software and equipment as appropriate and demonstrate that they could customise the available operating system and applications;
- evaluated the viability and effectiveness of your proposed solutions , indicating how the solutions would enhance the quality of life for each individual;
- presented their reports or presentations in a way that is suitable for the needs of the individuals outlined in each case study or for a carer if the case study is that of a young child or a person with very limited understanding.

Evidence for task a, on a few occasions, extended unnecessarily beyond the legislation listed in section 20.2.7 of the unit. Candidates need to consider the implications of the legislation on the individual to secure mark band 3.

Task b was, on the whole, evidenced well by candidates; although a small number of candidates did not evaluate the effectiveness of the recommended solution but had been awarded marks within mark band 3 by the Centre.

Evidence requirements for task c had been misinterpreted by a small number of Centres. Some candidates presented evidence suggesting that limited customisation of the operating system, application software and the hardware had been carried out. Task cii requires alternative suggestions to meet the needs of the user; evidence for this is likely to involve consideration of specialist hardware and software that is available to support people with individual needs, rather than relying on generic hardware and software customisation.

Task d required candidates to produce an analysis of their solutions in order to gain marks in mark band 3.

Task e required candidates to produce the recommendations in a format that suited each of the users. Some good evidence was presented for this task, although candidates occasionally omitted to provide evidence of verification of the accuracy of the information, as required for mark band 3.

G041: How Organisations Use ICT

1 General Comments

Performance on this paper was somewhat better than in January, with fewer very low marks and some accessing the top 20% of the mark range. However, responses to section B continue to be poor.

Although most candidates attempted all of the questions, some had not read the question carefully and gave answers that gained few marks. The need to read the question carefully and answer accordingly cannot be over-emphasised. Whilst many had produced good quality pre-release material to help them in the exam, others included little or no pre-release for Task 1, which hampered their ability to answer the questions in section A.

Centres are encouraged to use the What You Need To Learn section of the unit, as well as previous Examiner Reports, question papers and mark schemes when preparing candidates for the examination. Candidates should also be taught examination techniques to help them provide appropriate answers to the questions. The content of the What You Need To Learn section of the unit must be taught before candidates sit the examination. Questions in Section B can ask about any of the topics covered. Too many responses to the questions in this section suggested that insufficient emphasis had been placed on teaching the content of the specification for this unit.

Centres are reminded that, if candidates re-sit the examination, they must complete the new tasks 2 and 3 as described in the June Instructions to Candidates. A number of candidates had submitted the January tasks.

Centres are also reminded that all three tasks must be submitted to the Examiner with the examination paper. Candidates should only include their responses to the tasks set. Class notes, hand-outs and worksheets on aspects of the What You Need to Learn section of the unit must not be taken in to the examination.

Most pre-prepared work was word processed and most candidates had clearly labelled tasks 2 and 3, although in some cases they were not easy to find. Task 3 requires a word-processed report. Examiners were instructed not to award marks for this task if it was hand-written. However, hand-drawn diagrams for task 2 are acceptable and candidates may benefit from hand-drawing the information flow diagram, or at least hand-labelling the information flows, as marks were lost due to candidates' inability to manipulate text boxes.

It would be helpful if Centres could clearly distinguish between Task 1, Task 2 and Task 3, and put the tasks in order. Candidates should be encouraged not to tie the treasury tag into a knot or wrap it through the hole several times – this leads to the examiner having to cut the tag to mark the paper! There were instances where the work submitted for the tasks was not fastened together / named etc. Although most Centres had attached the work with a treasury tag as requested, there were still some who used plastic pockets or even plastic or envelope folders to hold the pre-released tasks. Please do not do so. The work should be hole-punched in the top left hand corner and attached to the paper with a treasury tag through the hole provided.

Centres are reminded of the need to check the work carefully, but not mark it, before signing the Centre Authentication Form. There were, again, a number of instances of identical information flow diagrams this session. Candidates should also be warned that it is very obvious when they simply copy and paste from a website for task 3. While most candidates included the required list of sources, some still failed to do so.

Care is also needed to ensure that candidates are not given too much guidance when carrying out the tasks. Whilst it is acceptable for Teachers to ensure that candidates understand the content of the case study and the requirements of the tasks, they should not give help that relates directly to carrying out each task. Too often, the diagrams created for task 2 and the topics addressed in task 3 were similar for all candidates within a Centre.

Where candidates run out of space when answering a question, they should be encouraged to ask for a supplementary sheet, rather than writing the answer elsewhere on the paper. If they do use a supplementary sheet, they must indicate to the Examiner that they have done so. Such sheets easily get mixed in with the pre-released tasks and may be overlooked.

2 Comments on Individual Questions

Task 2

Although most diagrams seen were appropriate, some candidates included far more than was required, making it difficult for candidates to label the information flows clearly. The extent of the diagram required is clearly stated in the task and candidates should only include what is required. Some candidates lost marks by including the stock database as an entity. The task asks them to identify who sends and receives information. There were still some inappropriate diagrams which gained few, if any, marks. The type of diagram required is shown in the mark scheme.

Some candidates lost marks for combining two information flows on one arrow, for example the delivery notes and purchase orders being sent from the Warehouse Manager to the Accounts Department. Where two pieces of data are sent in the same direction between the same two people but **at different times** there must be two separate arrows. If two things are given at the same time only one arrow with both things stated in the label is acceptable.

The whole point of a diagram is that it is quick to read. Labels should not include things already on the diagram, such as the name of the sender and recipient.

Candidates making these errors often managed to still score high marks. Those who scored less than 10 tended to have errors in the drawing of the diagram. The best diagrams were simple. Those who add embellishments often lost marks. For example, the addition of a shadow can make the arrow look like two arrows and lead to confusing labelling. Candidates need to look at the diagram they have produced after they have printed it. There are many candidates who obviously do not make this important check. Depending on the software used the printed diagram can look different from what appears on the screen. Last minute changes often lead to arrows that have moved away from the text box containing the label or from the box they are intended to point at. Text boxes are often too small so that the method is not printed. This is an ICT exam, so instruction in the use of the drawing tool used to create the diagram would seem to be appropriate. Centres who do this will usually find that the candidates score well on this task.

A few candidates lost marks because they had described what the sender/receiver did, rather than simply identifying them. Similarly, marks were lost when candidates described processes on the arrows, such as 'the warehouse manager checks the purchase order and sends it to the manufacturer', rather than identifying the information and method, ie 'purchase order by post. It is also important that the information being passed is accurately identified. For example, the operations director passes both the designs and production requirements to the manufacturer.

Centres are reminded that:

- the senders and receivers of information must be identified – preferably in a box
- a separate arrow should be drawn for each identified information flow
- the information and method only should be indicated on each arrow in such a way that there is no ambiguity
- there should be no description of processes – labels should be nouns, not verbs
- the boxes should be arranged so that arrows do not cross or go round corners
- diagrams should be large enough for the labelling to be clear and unambiguous
- the use of numbered arrows with a separate table of information and methods should be discouraged.

Task 3

Candidates frequently described mobile devices and did not apply them to the case study. When applied, candidates failed to apply the case study throughout the report, with the result that they failed to meet the mark scheme requirements for mark band H. The application of the case study in the responses by most candidates was minimal.

Many candidates mentioned managers and directors or worse, employees or staff, rather than discussing specific managers or directors and how they could use specific mobile devices related to their role. This is not sufficient to reach the middle mark band. Candidates must give specific examples of how a particular manager or director might use a mobile device and the impact this would have on that individual and the organisation. For example, they might suggest that the sales manager could use a laptop to take down the customer's order and then email this to the order processing clerk, which would speed up the receipt and processing of orders. Advantages and disadvantages of mobile devices were often seen, rather than positive and negative impacts on the managers and directors and the organisation of using them.

The final mark awarded within a mark band was dependent on the quality of the candidates' written communication. Candidates must ensure that they both spell check and proof read their work before submission. Examiners are judging the accuracy of the grammar and punctuation used, as well as spelling.

Although many candidates gained some marks for their evaluation for AO4, a significant number only submitted a bibliography, which did not gain marks. However, many who did attempt an evaluation only commented on their sources, rather than what they did well or badly.

Candidates are required to include a word count for this task. They should be taught how to include this using the NumWords field, rather than screen printing the document information dialogue box, often on a separate sheet.

- 1 This question was generally well answered, although some limited their score to three marks by giving a specific job role, such as Marketing Manager, rather than the job function. Weaker candidates gave completely incorrect answers, such as order processing clerk.
- 2 This question was well answered with most candidates being able to locate the appropriate section from the case study. One common error was to omit either new materials or techniques. Some weaker candidates lost marks by including tasks performed by the Marketing Manager or New Business Director.
- 3 Most candidates gained both marks for this question. A few weaker candidates gave marketing manager and warehouse manager.

- 4 Few candidates gained all 15 marks for this question.

Parts (a) and (bi): Only about 50% of candidates scored full marks in these sections. Many candidates could identify all the correct items but were unable to identify which were keyed in, putting the correct answers for part (a) in part (bi) and vice versa. They clearly had not read the question fully.

Part (bii): Many candidates failed to score on this question with most saying that a keyboard was used. Some, especially those who had mixed answers in parts (a) and (bi), contradicted themselves by giving both keyboard and drop-down lists, without indicating which method was used for which data.

Part (c): This was fairly well answered, with the main reason for not gaining the mark being the omission of 'purchase', although invoice and delivery note were frequent incorrect answers.

Part (d): Most candidates scored at least 3 marks. A lot of candidates omitted the key words of added/subtracted and simply used 'calculate'. Quite a few gave answers relating to the calculations for the creation of an invoice, or wrote in more general terms about what the warehouse manager did. The distinction between what the system does and what people do continues to cause a problem for weaker candidates.

Parts (e) and (f): Most candidates provided weak answers for both parts of this question. The most common answer for part (e) was related to the cancelling of an order but candidates then failed to further explain their answer to gain the 2nd mark. The answers given to part (f) tended to be generic issues, such as the system is slow and someone needs to maintain it. More obvious issues such as the system requiring more than three items from one manufacturer to reach the re-order level before a purchase order is generated escaped most candidates.

- 5 A worrying number of candidates gave answers that would have gained full or near full marks on the January paper.

Where they had identified the correct system, the hardware section was well answered, with many candidates gaining three or four marks. The common omission was the embroidery machines being controlled by the computers.

The software section was also fairly well answered with the majority of candidates being aware that there is specialised software to convert the image into a control file.

Input data was poorly answered. GCE candidates should be able to distinguish between hardware and software; input and output devices were described rather than input data and outputs. The most common correct answer was logo but frequently in a sentence that identified the scanner first, eg the scanner is used to scan the logo. Outputs were also fairly poorly answered. Often candidates were unable to distinguish which part of the system is the ICT system, wrongly identifying the embroidered logo as an output. Again, the hardware was often given rather than the output produced, for example the thermal printer. Where candidates did identify the slip as an output, they were also able to describe its contents, gaining 3 or 4 marks.

Few candidates gained marks for the processes section. The most common answer worthy of a mark was converting the image of the logo. Some recognised that the comparison of colours in the logo with the database of thread colours is a process.

- 6 This question defeated many candidates. Many appeared to write before being sure what the question was, not giving the question sufficient thought. Standard exam procedure such as advising candidates to read the whole question and think carefully about all the answers would improve the marks here considerably. Several candidates appear to be unable to distinguish between strengths and weaknesses, giving a similar answer to both. This is a question which requires thought rather than copying sections from the case study and many candidates do not appear to appreciate this. Few candidates were able to gain more than a very few marks.

Common errors included talking generally about networks and backup, which scored no marks, or not focussing their responses on the method of obtaining orders, writing instead about how they are processed.

Many candidates failed to distinguish between existing and new customers. Too many of the answers related to the sales manager visiting customers. These candidates thought they could gain marks in part c for answers taken from task 3. Other candidates did not appear to have read the case study and seemed to think that customers already ordered by email. Candidates who appeared to understand what was required often did not think their answer out sufficiently with discussions about the amount of paper wasted with order forms, completely overlooking the catalogue.

In part c those who were able to identify that a website would be a good addition did not appear to be able to work out why a website is an advantage beyond the standard web advantages, such as the ability to order at any time of the day or night. These candidates were often able to gain the single mark for part (iii) however as they discussed the security aspects.

- 7 This was poorly answered. Few candidates gained the mark for identifying the Act correctly; mainly because they failed to provide all of the title of the Act, despite having it in their pre-released tasks. A large number of candidates did not read / answer the question correctly, and discussed the act in context of anything but the designs.

Many of the answers were too general. A worrying number of answers talked about software. Others appeared to think that LogosRUs owned the copyright to the logos and then got very confused. There was an over confidence in the ability of legislation to stop others copying the designs, although many candidates knew that the consequence of breaking a law is financial penalty.

Candidates have a tendency to simply state the requirements of legislation in their tasks, rather than considering how these would apply to the organisation in the case study.

- 8 Most candidates understood what retail services are although a significant minority think that providing goods is the same as selling them.

Part b confused a number of candidates with candidates discussing public organisations. Few candidates gained full marks here as they made no attempt to name the service. Others talked about other services provided by retail organisations, such as customer services.

- 9 The majority of candidates gained no marks for this question.

Part (a): Candidates failed to read the question correctly and did not provide answers explaining why the DPA was introduced.

Part (b): Candidates did not focus on the rights that individuals have and tended to provide responses that described the principles of the DPA. Many think they have far more rights over their personal data than is actually the case.

- 10 This question was quite poorly answered, and all of the question or part (b) was omitted on a significant amount of papers. If candidates were also studying a business studies subject then they were able to correctly and fully answer this question. However, this was the minority of candidates. Although this is not a business studies paper, candidates need to be taught about the common business ICT systems such as accounts and finance, payroll and sales order processing, so that they know why they are used, what they are used for, the inputs to the systems and the outputs they produce.

Some candidates were able to correctly describe an accounts and finance system. However, most candidates do not understand the difference between a finance system and a payroll system. Some do not understand the difference between a system and a department. A few were able to identify the outputs but very few of these could describe them. The only output that was fairly reliably identified was an invoice but many also think a delivery note is from the finance system.

G054: Software Development

1 General Comments

It was pleasing to note that many centres had actioned the issues raised in the reports on previous examinations. Once again, there was a wide range of marks on this paper with many candidates accessing the marks available for the pre-release tasks.

Centres are reminded that all answers given to questions in Section A must be applied to the case study; in this case Island Fly, and are not theoretical. However, the performance of the candidates on section B of the paper continues to be disappointing

The majority of candidates had attempted all of the questions producing good quality pre-release material to help them in Section A of the examination paper. Centres are reminded that the work for Task 1 must only cover the topics listed in the instructions to candidates. A minority of candidates had not fully prepared the pre-release tasks failing to submit at least 1 of the tasks. This strategy disadvantaged those candidates who are unable to access all marks available for the tasks.

There were very isolated instances of candidates not producing work for Task 1 of the pre-release material. There were also some instances where the pre-release tasks for the January 2008 session had been completed. This disadvantaged candidates who were unable to access the marks available for Tasks 2, 3 and 4. Centres are reminded that, although the case study and Task 1 are the same for both examination sessions, Tasks 2, 3 and 4 change from January to June. It is, therefore, vital that the correct candidate instructions are used.

It would be helpful to examiners if Centres could clearly distinguish between the tasks, and put the tasks in order. Candidates should be encouraged not to tie the treasury tag into a knot or wrap it through the hole several times – this leads to the examiner having to cut the tag to mark the paper! There were instances where the work submitted for the tasks was not fastened together / named etc. This may cause problems during transit.

Some questions were poorly answered due to the students not reading / understanding the question. The need to read the question carefully and answer accordingly cannot be over-emphasised. Centres should give candidates some guidance on the key words that are used in a paper ie describe, explain and discuss, and the requirements of these key words.

Care is also needed to ensure that candidates are not given too much guidance when carrying out the tasks. Whilst it is acceptable for Teachers to ensure that candidates understand the content of the case study and the requirements of the tasks, they should not be given help that relates directly to carrying out each task. Too often, the work produced for all tasks was very similar for all candidates within a Centre.

Centres are reminded that Section B of the paper can focus on any part of the unit specification. It was obvious that some centres had concentrated on the requirements of the pre-release tasks and the case study and had not fully covered the requirements of the specification. This strategy disadvantages candidates when they are attempting to answer Section B of the paper.

2 Comments on Individual Questions

Task 2

The task required candidates to produce a L1 data flow diagram (DFD) with the start point being given as when a passenger contacts Island Fly to book a flight and ends when the booking reference number is given to the passenger. There were many instances of the start and end points shown in the DFD being different.

The main failing on this task was to produce diagrams for the whole system instead of concentrating on the current system in place at Island Fly. As a result many of the L1 DFDs did not have enough detail of the required processes. Some candidates did not understand the difference between data flows and processes and labelled arrows with processes. Most candidates tried to include data stores reasonably successfully. Few candidates correctly identified the passenger/customer as the external entities.

Many of the DFD's produced used symbols consistently. It is appreciated that there are many different sets of symbols that can be used to develop DFD's. It is irrelevant which set of symbols is used as long as they are used consistently. It is important that DFD's are produced showing a logical order – as detailed in the case study – and that processes are linked to the appropriate data stores or the relevant external entity. Some DFD's produced by candidates failed to follow the processes and data stores detailed in the case study with some centres developing a DFD that bore very little resemblance to the activities that occurred in Island Fly.

Some of the DFD's produced by candidates were simply a set of isolated processes and data stores with no links between them. A DFD should show the logical flow of data from the start of the given process to the end.

Too many candidates failed to achieve any marks for AO4, as they had made no attempt to evaluate the methods used to produce the DFD.

Task 3

This task required candidates to produce a decision tree for the part decision table given in the case study. Many candidates failed to define all the decisions and/or label these correctly (eg yes or no). This lost candidates marks for this task.

Task 4

Candidates were required to design a web-based form to enable passengers to book flights on-line. There were a large number of candidates who had produced the evidence for this task using some form of software package. This was accepted unless the screen showed any form of population of fields. If this was present then no marks were awarded for this task. However, candidates who produced evidence for this task as an HTML file did not gain the marks. The emphasis of this task was on the design of the form and not the implementation of the design.

Section A

- 1 Many candidates answered this question well. There were, however, still instances of generalised purposes such as 'to improve/modernise the business'. Some candidates appeared to be confused about the difference between the purpose and the functions of the new system.

- 2 Part (a) of this question focused on the functional requirements of the new system that have been defined by the owner of Island Fly. Many candidates did not link their answer to the owner's requirements and so failed to access the marks available for this part of the question.

The focus of part (b) of this question was the non-functional requirements relating to software. A worrying number of candidates provided answers to this question that related to hardware. This showed that some candidates failed to read the question correctly. There were isolated instances of candidates providing a definition of non-functional requirements instead of relating their answer to software. Many candidates failed to define that the applications software should be standardised and that the vendor of the operating software should remain the same.

- 3 The focus of this question was on the defined hardware constraints. Most candidates were able to provide answers relating to the laptop that has been requested by the owner. Candidates failed to describe that the existing computers should be integrated into the new systems: instead many described how many computers should be included in the new system and the location of these.
- 4 Many candidates were able to describe two problems caused by the current system at Island Fly. However, the majority of the answers given by the candidates were not linked to the Frequent Flyer scheme. Candidates who failed to link their answers to this scheme failed to score marks.
- 5 Candidates were required to explain how user names and passwords could be used at Island Fly to improve security. Most candidates were able to access the majority of marks allocated to this question demonstrating a good knowledge of this method of security.
- 6 Many candidates were able to provide good descriptions of the advantages of using questionnaires as an investigation method.
- 7 This question assessed the candidates' quality of written communication.

The question asked candidates to explain the different maintenance strategies that can be used, providing examples relating to Island Fly.

Those candidates who provided examples gave some excellent and insightful answers. Most made general comments about the different types of maintenance strategies that could be used providing little, if any, examples of how they could be used by Island Fly. This strategy restricted the marks that could be gained to the lowest mark band.

It was worrying to note, in the answers given to this question, a general confusion about the different types of maintenance that can be carried out on a system and the purpose of this maintenance. There were a number of candidates who confused the names and descriptions of the different maintenance strategies that could be used.

- 8 Candidates were required to identify and explain a training strategy that could be used with the staff who work in the hangar at Island Fly. If candidates failed to clearly identify the training strategy then they were unable to access the remaining marks allocated.

Many candidates simply gave, if they had been awarded the identification mark, generic answers rather than relating their answers to the staff who work in the hangar. This strategy limited their accessibility to the full range of marks allocated for this question.

- 9 Candidates had to explain why the phased implementation method is suitable to implement the new system at Island Fly. Many candidates provided definitions of the phased implementation method but failed to explain why this should be used at Island Fly.

Many candidates confused the phased method with the pilot implementation method.

- 10 To achieve the marks allocated to this question candidates had to identify the software before they gained any marks for their justification.

The focus of this question was on the type of software that could be used to perform a given task. A surprisingly large number of candidates failed to identify that a database would be appropriate. Many candidates gave answers relating to a spreadsheet and, in many cases, provided the brand names of the software as their answer.

Section B

As stated previously in this report it was obvious that some centres had not fully covered the requirements of the unit specification and had simply concentrated on the requirements of the pre-release tasks and the case study. This strategy led to candidates being unable to gain marks on Section B of the paper.

- 11 The confusion that was evident in the implementation question on Section A of the paper continued in this question.

Many candidates were able to gain marks on part (i) of this question providing excellent descriptions of the direct/big bang methods. However, many of the candidates, again, had confused the pilot method with the phased method of implementation. This led to few candidates gaining marks for part (ii) of this question.

- 12 Part (a) of this question required candidates to explain the function of a L0 DFD. Many candidates were able to describe a L0 DFD, gaining the marks allocated, but many failed to take their answers further to explain the function.

Part (b) of this question required the drawing and labelling of two components of a systems flowchart. Candidates had to provide a symbol and matching label to access the marks allocated. Many candidates failed to clearly draw and correctly label two components and so failed to gain the 4 marks allocated to this part of the question. Many candidates confused the components of a DFD with a system flowchart.

- 13 This question focused on a fundamental development tool, rich picture diagram (RPD), which can be used within the area of software development and the systems life cycle.

Many candidates were able to provide reasonable descriptions of a rich picture diagram so accessing 2 marks. Most candidates were unable to provide an evaluation (advantages and disadvantages) of the use of this type of diagram as a tool in the systems life cycle.

G055: Networking solutions

General Comments

Performance on this paper was poorer than in January. Many candidates did not appear to know the meaning of terms used in the paper such as 'peer-to-peer' and 'client-server'. Candidates were often unable to relate the questions to the case study and gave their answers in general terms. Candidates need much better preparation in terms of the content of the case study.

Tasks – general

Tasks 2 and 3 were clearly marked, it was obvious where each started and ended. Candidates had used the diagram provided for task 2 and had produced a report for task 3 that did not exceed 250 words and included, in most cases, a word count. Marks for the tasks were slightly above the average for the mark for the whole paper.

Task 2

A significant number of candidates received no marks for the diagram because they had included a server. Some candidates had included a print server for each printer to allow it to connect to the network and this was acceptable, but files servers, proxy servers and mail servers were not accepted.

Candidates were able to gain marks in the section where they identified the components they had used. Again, a number included servers in this section, some when servers had not been included on the diagram. In many cases there was inconsistency between the diagram and the list of components.

A significant number of candidates did not include an evaluation. Where candidates did include an evaluation, a few evaluated their network design rather than the methods used to carry out the task, these candidates were awarded no marks for this section. Where an evaluation of the methods was present, candidates often described what they had done without attempting to assess any strength or weakness.

Task 3

Candidates were often able to identify services and could relate these services to the way they might be used at IEC. A number of candidates described how IEC could use the website rather than the services that their customers might use.

Question paper – general

Candidates tended, on average, to score equally well on sections A and B.

Section A

Q1 This question was poorly answered. Many candidates missed the focus of this question and described an advantage and a disadvantage to the company of installing a network. Those who described an advantage and a disadvantage to the customer tended to gain 3 or 4 marks.

Q2a Candidates often gave advantages or disadvantages instead of features.

Q2b A number of candidates described a peer-to-peer network as being easy to set up and administer and gained no marks. Those who described this type of network as a cheaper option often missed out the lack of need to buy a server. Those candidates who described the IEC as a small network would be expected to relate this to the case study and identify the number of computers in the network.

Q3a Most candidates were able to draw a correct diagram, some showed the direction of flow and most added at least one label. A number of candidates showed a server as the central connection device and lost marks as a result.

Q3b Many candidates described features, such as all nodes connected to a central device, rather than the operation of a star network. The most common correct points made were for data travelling in both directions and all data travelling through the hub or switch.

Q3c A large number of candidates made a statement about the network failing if the central device stops working. They did not, however, describe this as a disadvantage in terms of reliance on the central device.

Q4a Candidates were often able to identify the hardware required but were unable to describe it fully. A number of candidates identified that a wireless hub or router transmits signals but not that it also receives them. Similarly, candidates identified that a wireless network card receives signals but not that it also transmits them.

Q4b The most popular answer was no need for wiring but few candidates were able to explain any other factors that might make the network suitable. Consequently most candidates only gained one mark.

Q5a Few candidates described the proxy server as dealing with requests for access to web pages. Some described functions usually attributed to a firewall and some described a server in general.

Q5b In general, candidates who knew what a UPS was were able to access both marks.

Q6 Candidates were often able to identify hardware such as modems and routers and were sometimes able to describe these. A number of candidates identified items such as network computers and network interface cards, indicating that they were describing hardware that connects a computer to a network, rather than a network of computers to the Internet.

Q7 This question required an answer that was related purely to file transfer over the Internet. Candidates who were able to identify a suitable protocol were often unable to describe it.

Q8 This question was poorly answered. Candidates often gave their answer in terms of problem logs or just described the contents of a communications log.

Q9a Candidates who scored low marks for this question did so because they described how IEC might use a website rather than the services available on the Internet generally.

Q9b Many candidates simply described the services they had identified for part a in more detail rather than evaluating the consequences or effects of the services on IEC's business.

Q10a Candidates tended to describe the process of creating a website up to the point at which it would be uploaded but did not describe the process any further. Popular descriptions that did gain marks were those referring to the use of FTP to transfer the files and accessing the server with username and password.

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Q10b This question was poorly answered. Bandwidth was often described as the amount of data downloaded. The most popular correct answer described bandwidth as the amount of data transferred at one time. Candidates tended to gain one mark rather than two by stating that a wider bandwidth resulted in faster download speeds.

Q10c Some candidates were able to demonstrate a basic knowledge of bandwidth in relation to speed of transfer even when they were unable to define 'bandwidth' or state the calculation for transfer time.

Q11 This question was poorly answered. Candidates tended to describe client-server networks or servers rather than the function of the client.

Q12 Candidates were often able to describe typing the text of a message and submitting it. This gained one mark, which was the mark achieved by the greatest number of candidates. Candidates who identified the need to log in tended to gain at least half marks.

Q13 Candidates often described safety considerations rather than health considerations. A popular wrong answer was keeping cabling tidy to reduce the risk of tripping.

Q14 Candidates were able to identify the need to restrict access by locking doors but often did not identify where the restricted access would be needed. This question was answered quite well by a majority of candidates.

G048: Working to a brief

1 General Comments:

Candidate's responses to the set briefs were generally as expected, although some candidates completed the first task as though the purpose was to organise an event, rather than set up the spreadsheet to model the finances for the event. In a few instances, candidates either completed one of last year's briefs or reinterpreted the current briefs to such an extent that they were deemed to have not followed the brief. In both cases, candidates were not awarded marks for Task A or Task G, as both of these tasks are considered to be the most brief specific.

As with previous years, the quality of administration of paperwork by Centres has improved during this session. Candidate front sheets were generally completed correctly, with clear indication of the marks for each subsection shown.

Centres' assessment was found to be more accurate than in previous years, although some Centres still had difficulty in assessing accurately, which did result in some large adjustments to the marks that had been awarded. These issues are discussed further below.

2 Comments on Individual Assessment Objectives:

- (a) For this task, candidates are expected to review current working practice within their chosen area of focus. This review must allow the candidate to identify issues of which account needs be taken when the candidate sets up their own system. This may be problems which need avoiding, or examples of excellent practice that could be used.

In some cases, the reviews of current working practice were in great detail and allowed candidates to clearly state the areas for consideration. However, in others, candidates produced basic notes on what happens currently, or, in extreme cases, a statement that "nothing happens at present", followed by maybe one or two issues that need noting. Such work is best given a mark from Mark Band 1 or the bottom of Mark Band 2. In some cases, such work was marked correctly. However, in others, centres incorrectly interpreted this as being sufficient for MB3.

Where a candidate fails to complete a brief set by the board, no marks are available for this task.

- (b) (i) Whilst some centres clearly understand how to mark this aspect of this task, many others are still over awarding. For candidates to be awarded anything other than a mark from MB1, there must be evidence that the candidate has used formal planning techniques in order to plan their solution. Such techniques are generally limited to Gantt and Pert charts and Critical Path Analysis. These techniques are considered formal, as they include clear evidence of the inclusion of timings. Other techniques that model tasks against time are also acceptable.

To be considered for MB3, candidates should use a minimum of two formal planning techniques.

- (ii) As has been stated in previous reports, MB3 and MB2 for this task are differentiated by detail. For MB3, candidates need to present a plan which works with detailed tasks, rather than allocating huge periods of time to one major task.

The usual error here was for candidates to work with major tasks – such as “produce web site” and then to allocate a large period of time to the task. Candidates need to show the sub tasks which make up this major task and allocate quite small chunks of time accordingly.

Many candidates have clearly spent some time on this task, and had produced plans that included some detail. However, in some cases, the detail that had been included was actually irrelevant to the focus of the brief. This was particularly true of the first task, where a good deal of the planning of some candidates was actually to do with putting on the event, rather than producing the spreadsheet.

There was often a large discrepancy between those marks awarded by the Centre and those by moderation. Candidates who produce a wide range of detailed tasks that cover all aspects of the project should be awarded full or nearly full, marks. However, if the candidate has provided a handful of tasks, however accurately applied, then marks from MB2 are more appropriate, as long as a formal planning technique has been used.

- (c) (i) Candidates need to show that they have developed their ICT skills. This may be shown in the diary, with an explicit column or entry aimed at this one issue, or by a self-analysis task completed before and after the project. This may be considered the first part of the diary task.

In many cases, there was a clear link between the structure of the diary and the quality of the candidates’ responses. Where candidates had adopted a formal, planned structure, it was clear that this structure had allowed candidates to address all areas.

In order to achieve MB3, candidates need to show initiative in their development. This could be that candidates show that they have used other sources of information and learning which they have identified, or that they have used resources which they themselves identified as being of use. However, this mark band does allow for some variety in the degree to which initiative has been shown. Where a candidate has shown minimal initiative, this should be given a mark from the bottom end of the band, whilst extensive use of initiative in developing ICT skills should be awarded a mark from the top end of the band.

It is also worth stressing that this task specifically deals with how candidates have developed and extended their ICT skills. Many centres have awarded initiative in working on other aspects of the project – such as finding names to add to a spreadsheet or finding names for a document, for example. Whilst this may be considered to be showing initiative, this is not evidence of showing initiative when developing ICT skills, and many centres had their marks reduced because of this misinterpretation.

- (ii) There were some very good examples of candidates using a good range of skills during the life of the project and these were usually awarded accordingly. However, the majority of candidates failed to evidence this task well. For

candidates to be awarded marks in MB3, there must be clear evidence of the use of a range of skills, with a clear indication that the candidate is fully aware that their work affects both other team members or others they are working with and the end user.

In many cases, Centres awarded marks for this task which did not reflect the quality of work submitted.

- (iii) Marking of this task has improved year on year, with many centres now looking for clear evidence that the candidates are considering long term issues. However within MB2, there is still a wide spectrum of marks available and centres need to show a degree more subtlety when awarding within such wide mark bands. The major discriminator within MB2 is the extent to which the candidate has dealt with complex tasks. Whilst the extent to which such tasks may occur may differ depending on the task completed, it is still possible to identify the possibility for complexity within each task and centres are encouraged to look for evidence of this within their candidates' work.

- (d) As with January, there was still a tendency for Centres to award production of the main task as production of supporting materials. Supporting materials support the task and are not the subject of the task.

Similarly, many candidates have been awarded marks above MB1, despite producing no evidence that they have developed or extended their ICT skills. This development may be evidenced via the diary or a separate report.

- (e),(f),(g) For the purpose of this report, the final three evaluative reports are best considered as a group, as they involve similar skills. However, candidates are strongly advised to deal with these three tasks separately.

Reports E and F deal with planning and implementation respectively. Despite the clear difference between these two focus areas, candidates are still straying from one theme into another. In many cases, this results in reports which do not fit the task. Candidates must concentrate on each theme separately if they are to make progress in these areas.

Similarly, centres must be looking for correctly themed critical analysis if they are to award anything above MB1. All too often, moderation highlighted centres that had awarded marks from MB2 and above for relatively weak discussions of elements of the planning and implementation, rather than a full analysis of the strengths and weaknesses of the work completed. For MB3 to be awarded for Tasks E or F, candidates must identify a wide range of issues and suggest clear ways that such issues would be avoided in future.

Task G is slightly different, in that candidates must review their completed product against success criteria. In the best cases, these criteria were negotiated with the client (often the teacher acting as client). These criteria then gave the candidates something concrete against which to assess their work. However, in many other cases, candidates simply discussed what they liked about their work. For MB3 to be considered, candidates are expected to involve the client in the evaluation of the work. This involvement is expected to be somewhat more than peripheral, and should play quite a central role in deciding whether the project has been a success. To this extent, the inclusion of simple user feedback, especially when it appears to have been an afterthought, is no guarantee that the candidate should be awarded a mark

Report on the Units taken in June 2008

from MB3. However, where the candidate has made the feedback from the client the pivotal point of this report, such a report would be considered appropriate for MB3.

Grade Thresholds

Applied GCE (H115/H315/H515/H715)

June 2008 Examination Series

Coursework Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
G040	Raw	50	46	41	36	31	26	0
	UMS	100	80	70	60	50	40	0
G042	Raw	50	45	40	35	30	26	0
	UMS	100	80	70	60	50	40	0
G043	Raw	50	45	40	35	30	26	0
	UMS	100	80	70	60	50	40	0
G044	Raw	50	44	39	34	30	26	0
	UMS	100	80	70	60	50	40	0
G045	Raw	50	44	39	34	30	26	0
	UMS	100	80	70	60	50	40	0
G046	Raw	50	44	39	34	30	26	0
	UMS	100	80	70	60	50	40	0
G047	Raw	50	46	41	36	31	26	0
	UMS	100	80	70	60	50	40	0
G048	Raw	100	86	76	66	56	46	0
	UMS	100	80	70	60	50	40	0
G049	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G050	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G051	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G052	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G053	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G056	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G057	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G058	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0
G059	Raw	50	46	40	35	30	25	0
	UMS	100	80	70	60	50	40	0

Examined Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
G041	Raw	100	72	64	56	49	42	0
	UMS	100	80	70	60	50	40	0
G054	Raw	100	68	61	54	48	42	0
	UMS	100	80	70	60	50	40	0
G055	Raw	100	66	58	50	42	35	0
	UMS	100	80	70	60	50	40	0

Specification Aggregation Results

Uniform marks correspond to overall grades as follows.

Advanced Subsidiary GCE (H115):

Overall Grade	A	B	C	D	E
UMS (max 300)	240	210	180	150	120

Advanced Subsidiary GCE (Double Award) (H315):

Overall Grade	AA	AB	BB	BC	CC	CD	DD	DE	EE
UMS (max 600)	480	450	420	390	360	330	300	270	240

Advanced GCE (H515):

Overall Grade	A	B	C	D	E
UMS (max 300)	480	420	360	300	240

Advanced GCE (Double Award) (H715):

Overall Grade	AA	AB	BB	BC	CC	CD	DD	DE	EE
UMS (max 600)	960	900	840	780	720	660	600	540	480

Cumulative Percentage in Grade

Advanced Subsidiary GCE (H115):

A	B	C	D	E	U
2.6	13.3	33.8	59.3	79.7	100.0
There were 10138 candidates aggregating in June 2008.					

Advanced Subsidiary GCE (Double Award) (H315):

AA	AB	BB	BC	CC	CD	DD	DE	EE	U
1.1	4.4	11.1	19.8	33.1	45.8	57.6	68.7	80.1	100.0
There were 793 candidates aggregating in June 2008.									

Advanced GCE (H515):

A	B	C	D	E	U
5.3	22.0	48.9	75.5	92.2	100.0
There were 6817 candidates aggregating in June 2008.					

Advanced GCE (Double Award) (H715):

AA	AB	BB	BC	CC	CD	DD	DE	EE	U
0.8	3.5	9.5	17.7	29.1	42.7	58.9	75.6	89.6	100.0
There were 1186 candidates aggregating in June 2008.									

For a description of how UMS marks are calculated see:

http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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