GCSE

Information & Communication Technology A

General Certificate of Secondary Education **GCSE 1994/1094**

Report on the Units

January 2008

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Any enquiries about publications should be addressed to:

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GCSE Information and Communication Technology A (1994/1094)

REPORTS ON THE UNITS

Chief Examiner's Report

The Full Course (Specification 1994) is comprised of four units: 2357, 2358, 2359 and 2360. The Short Course (1094) consists of Units 2357 and 2358 only.

Units 2358 and 2360 are internally assessed coursework. Units 2357 and 2359 are externally assessed written papers.

General Comments on Externally assessed Units (Units 2357 and 2359)

For this specification, Centres are requested to remind their candidates that all responses (answers) must be written on the lines provided, within the marked areas and that any use of additional pages should be clearly referenced by the candidate.

Units 2357 and 2359 are of equal difficulty and candidates should be adequately prepared for these papers. It would appear from the poor responses seen in Unit 2359 that many candidates are ill-prepared and Centres are referred to the specification which details the content that will be examined.

General Comments on Internally assessed Units (Units 2358 and 2360)

It is a requirement for both Unit 2358 (Projects 1a/1b) and 2360 (Project 2) that Centres submit a Centre Authentication Form (Form CCS160), signed by its teacher/assessors, and this form should be posted to the moderator with the mark sheets (MS1) and, where applicable, coursework mark summary sheets. It is also a requirement for each candidate to sign a Candidate Authentication Form indicating that the work submitted is their own. These forms should be retained at the Centre unless requested by the moderator.

Centres are again reminded that there must be internal moderation of the coursework to ensure that all candidates from a Centre have their work marked to the same standard. Moderators who find that work has not been internally moderated are required to return work to a Centre for remarking.

Centres are referred to the published OCR documents relating to coursework administration, to the 1094/1994 Specification and to the Teacher's Guides.

Note also that OCR offers a Coursework Consultancy Service for those in any doubt of the suitability of the coursework being submitted.

2357/01 (Foundation)

General Comments

The paper was fair and the candidates seemed able to answer in a way which reflected their ability. Candidates appeared to have been entered for the correct tier. Most candidates attempted all the questions and most were able to gain over 25 with very few getting less than 20 marks.

Comments on Individual Questions

1		This question was answered quite well. Many candidates obtained two marks and most three. The most common wrong answer was to class "Internal warning speaker" as input.
2		Most candidates gained both marks for this question. Candidates failing to do this usually gave only one answer.
3		A surprising number of candidates failed to obtain full marks with a common mistake being a pattern of ticks that was a mirror image of the correct answers.
4		Most candidates could identify the type of computer and achieved full marks.
5		Most candidates achieved at least four marks for the question. The most common mistake was to tick *True* for "Sensors are output devices".
6	**(a)**	Most candidates scored this mark. Those that did not usually copied without pasting…both were required to score the mark.
	(b)	The most common answer was cropping, but a significant number of candidates failed to get this correct, usually leaving it blank.
	(c)	This required knowledge of the technical term align or justification. Few produced these, and many gave an answer involving the circle.
	(d)	Most candidates obtained this mark, but quite a few candidates expanded their answers by giving a meaning to every part ie written by Ellen in 2008 and has her copyright on it.
	(e)	This question was answered well with most candidates gaining both marks. The most common answers involved the printer running out of ink or paper.
	(f)	This was answered quite well, but a significant number of candidates gave the answer to (g) here.
	(g)	If the candidate gave the answer to (g) in (f), it was difficult to give the correct answer here. Wrong answers involved situations such as "backing up coursework".

(h) Most candidates failed to get any marks here and it was very rare for anyone to get both. Common wrong answers were to keep a copy in a different folder on the same machine.

7 Most candidates gained marks for answers such as cropping and resizing. However, a significant number of candidates thought they were dealing with the software to manipulate the already scanned image, hence answers such as fill colour, layer it, etc. gained no credit.

8 **(a)** This question was poorly answered. Many candidates gave a vague answer such as 'so they know who it is' and did not make it clear that the system was identifying the user.

(b) Most managed to get this mark.

(c) There were many vague answers along the lines of "don't make it obvious" without stating what this meant. Good answers included most of the selections shown on the mark scheme.

(d) Many candidates achieved both marks for this, although quite a few candidates thought there were only two computers involved.

(e) Very few managed to gain all the marks. Most candidates gained two marks, but failed to expand on their answers eg just stating "viruses" instead of the downloading of them. Full marks could have been gained if four separate points were mentioned, but this was rare.

(f) Very few candidates scored this mark.

9 **(a)** Many candidates scored full marks. A common mistake was the reversing of the first two points. Some candidates did not use the given words - particularly in the third part and some stated names from the database extract.

(b) It was very rare for candidates to get this wrong, but there were some notable errors eg 13th March being Boolean, Y/N being 'Data Type'.

10 **(a)** Many candidates gained the mark, but quite a few answers of CD ROM and email/fax gained no credit.

(b) Many candidates obtained the marks by mentioning storage capacity, size of device or portability. Candidates could get both marks even if the answer to (a) was wrong.

11 This question was poorly answered. Candidates failed to state that people needed to see/hear each other, Too many answers merely described the characteristics of mobile phones.

12 Most candidates gained some marks by mentioning formulae and/or calculations and graphs. Very few mentioned in-built functions etc. and therefore did not achieve full marks. Some candidates merely wrote about why Anne wanted to make a profit.

2357/02 (Higher)

General Comments

The paper produced the intended discrimination with various questions identifying higher grade candidates but allowing all candidates the opportunity to access all of the questions.

Candidates appeared to have been entered for the correct tier.

1		Most candidates scored at least two marks here, usually for stating cropping and sizing. A significant number of candidates discussed altering the image after it had been scanned which was not answering the question. One word answers such as crop, enlarge and colour, were common. On this occasion , these were allowed but Centres are reminded that one word answers are usually not given credit as they are often ambiguous.
2	**(a)**	This question was usually well answered, but some candidates gave vague answers eg *'so they know who the user is'* which were not given credit.
	(b)	Most candidates scored the mark for this question, however there were too many references to *'prevent hacking'*; this was not given credit as it does not *prevent* hacking.
	(c)	There were many vague answers along the lines of "don't make it obvious" without stating what this meant. There were, however, some good answers seen.
	(d)	Many candidates scored both marks for this question but quite a few candidates assumed there were only two computers involved and therefore nearly failed to gain both marks.
	(e)	Very few candidates scored all the available marks. Most candidates gained two marks, but failed to expand on their answers eg just stating "viruses" but not expanding the response to include the downloading of them. Many candidates gave repetitive answers, stating the same point several times over.
	(f)	Too many answers restated the question eg *' it's a digital phone line',* although it was noticeable that this was answered well here in comparison to the candidates' responses for the same question on the Foundation paper.
3	**(a)**	Most candidates scored the full 4 marks but there were still a number of candidates who reversed the first two responses, although this was not as common as on the Foundation paper and very few candidates who gave the names of the people from the database extract.
	(b)	It was very rare for a candidate to get this question wrong, although there were still the occasional silly errors, eg one candidate pointed the title Data Type to Y/N.
4	**(a)**	Many candidates scored this mark, but quite a few answers gave CD ROM and/or email/fax which gained no credit. Candidates also scored no marks for merely stating "USB".

(b) Many candidates scored the marks by referring to storage capacity, size of device or portability. However, Centres are minded to advise their candidates that the responses should appear on the separate lines provided as sometimes both marking points appeared on the same line, often after an incorrect answer and candidates should be made aware that this may lose them marks.

5 This question differentiated well between candidates. Many candidates were aware of what tele-conferencing is but were unable to accurately describe it.

6 Most candidates scored some marks by referring to formulae and/or calculations and graphs. There were many references to (unconditional) formatting of cells and the ability to place data out in rows and columns. Many candidates gave repetitive answers and thus failed to score full marks.

7 Very few candidates gave explanations of the features they mentioned and, thus, few scored above 3 marks. Too many candidates used the explanation *"to make it more interesting"* which was restating the question. Also quite a few candidates decided to use different software for different objects ie MP3 player for music, Publisher for pictures and PowerPoint for slides.

8 This question was very poorly answered. Most candidates scored only 1 or 2 marks, often for "volatility" and/or "ROM/RAM", however too many candidates thought ROM was in internal memory and RAM was in backing store. Too many answers were about backups and backing store items such as removable drives/memory sticks.

9 Very few candidates understood what is meant by CAL. Most candidates wrote about using computers in school in general, too many candidates referred to disabilities and the use of ICT.

10 This question should have been quite easy to answer as the topic has been examined in past series. Unfortunately, many candidates used the term "heat sensor" or did not specify the type of sensor at all. There were many references to "thermometer" or "electric thermometer" or "digital thermometer". In most cases these were not even connected to the computer/interface and a surprising number suggested reading the thermometers manually and keying in the readings! Also quite a few candidates decided to answer the question by stating what input and output devices they would use ie 'I would key in the data using a mouse and keyboard, I would use a printer as an output device, even scanners were mentioned! The answers to this question were disappointing.

11 Few candidates scored full marks for this question, most referred to loss of jobs with an appropriate example and similarly an increase in ICT jobs to maintain machines. Candidates seem to believe, incorrectly, that there has been an overall reduction in the workforce. Too many candidates made vague *"ageist"* remarks eg *'lost jobs due to being too old to cope with ICT'*, with little understanding of the changes in work force deployment and practices due to the increased use of ICT.

2359/01 (Foundation)

General Comments

The majority of candidates completed the whole of the paper. The multiple-choice type questions at the beginning of the paper were generally well answered with only one or two common mistakes which are detailed below.

There was no evidence that candidates were short of time to complete the paper.

Comments on Individual Questions

1   This question was answered quite well. Many candidates obtained two marks and most three. The most common wrong answer was to class "Internal warning speaker" as input.

       a)   Only a few candidates failed to score the full 2 marks.

       (b)   This question was omitted by quite a few candidates.

2   This question was generally well answered.

3   Most candidates managed to score some marks for this question and many scored the full 4 marks.

4   Many candidates confused OCR and MICR but most correctly identified those tasks which use a bar code reader.

5   This question was poorly answered with very few all correct responses. Some answers used a step 7 and omitted step 1.

6 **(a)** If candidates correctly answered one, they usually got the other. Some candidates
and **(b)** used LAN or modem/router for the answer to these question parts and used them again in part (e) suggesting that they do not understand the terms. Given that this question has appeared, in various guises, in several examination series, it is expected that candidates would know the correct terms and be able to use them appropriately.

       (c)   Many candidates failed to appreciate that hardware/software/resources could be shared. Most marks were gained for 'work can be accessed from any workstation' and ease of monitoring.

       (d)   Most candidates scored the mark here.

       (e)   Most candidates scored the mark for this question. 'Router' and 'modem' were the most popular answers.

       (f)   The most common responses involved viruses and hacking.

       (g)   This question was usually answered well.

7   This question was poorly answered; few candidates scoring any marks. Many compared producing bills by hand and using a computer.

8   **(a)**   Many candidates scored 3 marks for this; they usually missed out 'Boolean'. Some candidates completed the chart as if it was a form, putting titles of films, prices etc.

      (b)   Very few candidates appreciated that validation was about the reasonableness of the data. A common misconception was that it was about ensuring the data was correct.

      (c)   Most candidates scored the mark here.

      (d)   This question was poorly answered by most candidates. Many confused verification with validation. A few mentioned 'double entry' which was not acceptable in this case.

9   **(a)**   Expert systems seemed to be little understood by most candidates. Most gained no
and **(b)**   credit for this question. Given that this question has appeared, in various guises, in several examination series, it is expected that candidates would know about expert systems

10   Many candidates gained 2 or 3 marks here. The most popular responses referred to automated production, emailing and video-conferencing. Some answers were about how computer-produced documents were better then handwritten and how they saved space etc.

11   Some candidates gave good answers using 'user names and passwords', 'firewalls' and 'encryption'. Unfortunately, many candidates only gave one answer and then went on to describe what it was for or how it worked.

12   **(a)**   Some answers referred to faulty electric goods or just taking personal information.

      (b)   Often 1 mark was obtained for 'secure web sites' or 'shredding bills etc.' but there were some candidates who wrote about keeping pin numbers secure when using a cash point, or about security measures in general; firewalls' 'passwords', 'turning off computer when not in use etc.' There were very few candidates who scored the full 4 marks.

2359/02 (Higher)

General Comments

The majority of candidates were able to answer all the questions but the quality of response from candidates was not very high and there appeared to be large gaps in candidates' knowledge. Many questions were answered superficially and candidates showed little understanding of the technical terms required by this section of the specification. Candidates did not appear to know about validation checks or types of verification other than a rudimentary understanding of visual checking. Once again the inability to cope with questions on expert systems or processing methods was evident.

Many candidates may have been entered for the wrong tier as there were a number of very low marks and very poor answers on a number of scripts.

Again, there was, as noted above, evidence that candidates failed to score marks because they had not been fully prepared for the theoretical aspects of work undertaken for their coursework. Centres are again reminded that candidates should be taught the theoretical specification content requirements as well as learning the use of the application tools.

Comments on Individual Questions

1   This question was quite well answered but many candidates gave simplistic answers that referred to eg "use it anywhere". Some candidates referred to the laptop rather than the wireless connection commenting that it was "portable".

2   This question was poorly answered with confusion with "mail merging" being common.

3   **(a)**   This question was usually well answered.

(b)   As on the Foundation paper, very few candidates appreciated that validation was about the reasonableness of the data. Again, a common misconception was that it was about ensuring the data was correct.

(c)   This question was quite well answered by many candidates.

(d)   Most candidates scored at least one mark here.

4   **(a)**   Most candidates did not score any marks for this question. Despite this question
and   **(b)**   appearing, in various guises, in past examination series, candidates seem unaware of expert systems and their use.

5   This question was poorly answered with many candidates producing vague and rambling responses. Few candidates scored over 3 marks. The question was about the business methods and not about specific ICT use by persons.

6   Some candidates gave good answers to this question but most failed to score more than a single mark. Vague references to "viruses" did not score any marks.

7 **(a)** This question produced very vague and rambling answers and was poorly answered. Most candidates did not refer to any fraudulent action but simply referred to *"getting other peoples data", "stealing credit card details"* without any further comment.

(b) The majority of candidates missed the point of this question and did not score any marks at all. References to installing virus protection, using firewalls etc do not answer this question. Candidates were expected to explain how one may avoid becoming a victim of electronic fraud by eg not responding to emails asking for personal data etc.

8 This question proved to be quite difficult. The inputs, outputs and processing referred to in the question are those for the manual ie the card index system stated in the question, and thus any references to computer input, output and processing were not given credit.

9 The scenario in this question is specifically referred to in the ICT A specification (page 35) so it is disappointing that candidates did not know about it and how utility companies gather data from customers.

10 This question was usually well answered but too many candidates had no idea what the terms meant.

11 This question was very poorly answered. Most candidates had no knowledge of the terms and thus could not discuss the two interfaces at all.

12 This question was well answered by a number of candidates. Most candidates scored a few marks but many merely described what an interview or a questionnaire was or how it was used. The question asks for a discussion of the different methods so candidates were expected to refer to the advantages and disadvantages of each method of data collection in order to score high marks.

2358 (Short Course Projects 1a/1b)

General Comments

Where Centres failed to apply the assessment specification accurately it was mainly in the assessment of Project 1a. It was pleasing to note that there was an increase in the number of Centres who are encouraging their candidates to annotate their work. There was also an increase in the number of Centres indicating the whereabouts in the work that the evidence for meeting the criteria could be found. However, there was still a large number of Centres who are still not taking advantage of the Teacher's Guide published by OCR and of the previous reports on the requirements of the specification. These contain good advice and, if followed, would remove many of the problems apparently experienced by Centres when assessing the work. The advice relating to the new Project 1a is particularly valuable. However, it should be read in conjunction with the current specification, particularly the section on notes for guidance. The OCR training courses also provide opportunities for individual Centres to raise issues specific to their own candidates' work.

Some Centres administration was still lax with work not arriving within the three days specified. Moderators were still having to request the Coursework summary forms rather than receiving them with MS1's.

Project 1a

It was quite clear that some Centres are still not heeding the advice given in the Teacher's Guide and the current specification. Under the scheme of assessment, candidates fail to get even the lowest ranges of marks if they do not incorporate information in their final document which originates from non-IT sources and at least one IT source. It was particularly noticeable that too many candidates were not meeting this requirement. Many candidates did not include the original, or a photocopy, with their submitted work. Those that did do so often failed to use them in their final document.

Many candidates still failed to provide evidence that they have collected, and then incorporated in their final products, information from non-IT sources. The evidence that non-IT sources have been collected is the inclusion of the original source or where this is impractical a photocopy. However, it is not sufficient to just collect information from non-IT sources. Candidates must take this information and incorporate it into their work, ie the final product. Some Centres mistakenly think that the reference in the specification and in the Teacher's Guide to a 'piece of work' includes their documentation. It does not. The piece of work referred to is the brochure or presentation they are producing for their end product. The lack of descriptions, which should include screenshots, of how information from both IT and non-IT sources was incorporated into their final brochures or presentations also led to a reduction in marks. It is not the role of the moderator to try to find an image, say, in a final booklet which matches that which has been collected earlier in the work by the candidate. Failure of the candidate to show this will result in loss of marks.

Many Centres failed to realise that information has to be produced from a minimum of two (2) non-IT sources which must be included in their final booklet or slide show for all but the lowest mark ranges. Even at the lowest mark ranges candidates must show information from a number of non-IT sources although information from only one of these is required to be incorporated into their final piece. For marks above 13 information from a minimum of two (2) different IT sources must be included in the booklet or presentation. The Internet is considered to be only one IT source. It is not sufficient for candidates to look at the Internet or CD ROMs, or in magazines, books and newspapers for 'research' purposes. They must actually incorporate a minimum of the four (4) pieces of information (one from each source, two IT and two non-IT) into their final

booklet/presentation and at least one piece should be numeric, at least one should be text and at least one should be an image. These sources and how the information was acquired from them must be shown.

Development for purpose proved to be a weakness of many candidates' work. Many candidates awarded greater than 16 marks by Centres did not relate the following of hyperlinks to their purpose...the criterion is *"Use hyperlinks or refined searches to identify information which is suitable for the purpose of the work"* and the mark was thus inappropriate.

Too often there was a lack of numbers in the work. Many candidates included numbers in sentence form which, as has been explained in previous reports, is not acceptable. Those that did include numbers often failed to identify which of their sources provided these numbers. The requirement for including numbers is mandatory at all mark levels above 2 marks. As has been stated in many previous reports, the rationale behind the use of text, images and number is that in any given document the formatting of each of these is done differently. There is a requirement that candidates are aware that numbers are formatted differently to the other two forms of information. One example is the use of currency, where each one would have a currency symbol in front of it and each number would have the decimal point in line with its predecessor etc. All that is required is an awareness by the candidates of the need for the different formatting requirements of numbers. A number of candidates are still using phone numbers as their evidence of number. Telephone numbers do not meet the criterion for any skill which mentions number. Numbers are those which can, or have been, mathematically manipulated. Where data types such as dates or times are used they cannot have dashes or the word to (as in opening times) as this makes them text. Graphs can be construed as images unless the manner in which they are produced is fully documented. Candidates cannot base their use of number on graphs if they do not show the table of numbers on which their graph is based. Some candidates copied and pasted graphs, from their sources, and these are really images. If the original numbers are included and the method of graph production is demonstrated, then the numbers can be easily seen as numbers. Again, work lacking evidence of a list of numbers led to many marks being lost. The origin of the numbers must also be evidenced. It is an example of best practice to show the original numbers and then incorporate them into a suitably formatted table.

Yet again, Centres seemed to struggle with the concept of purpose. As it mentions in the Teacher's Guide, the purpose must include the reason for the work as well as identification of an audience and a description of the information to be communicated. Too many Centres are allowing their candidates to seemingly pick a topic of their own choice such as their favourite football team, pop group, or game platform etc. Quite often there is not a good reason for doing this. The identification of the audience is often far too vague. "People" in general or "fans" of the football club, pop group etc. are not specific enough for this purpose. Candidates who are successful tend to be those who select a narrow target audience whose features can be described appropriately. For marks higher than 7 candidates must relate the development of the work to this audience. This is easier to do when the target audience is narrow. As stated in the Teacher's Guide, development must be evidenced by printouts of at least three different stages of the development. Where candidates are producing a significant piece of work there will obviously be more stages of development. The audience must be referred to at each stage of development. The purpose of the work is the reason for producing the documents and should not be construed as the task itself.

The statement of a purpose is a requirement of mark ranges 5-7 and above in the scheme of assessment and failure to provide a reasonable purpose could lead to a large reduction in marks. In Project 1a, as in Project 1b, all criteria must be met in a mark range for that mark to be awarded. Most candidates who were successful concentrated on identifying an audience, usually a specific age group: the purpose of the work being to attract that type of audience.

Centres are reminded that for marks above 10 candidates must produce a significant piece of work. This means that a booklet or web site of 8 pages, or a presentation of 8 slides is required as a minimum. Some Centres still submitted the business oriented task of business card, letterheads, leaflets etc. This is not a significant piece of work.

Other criteria which seem to be misunderstood are those relating to hyperlinks and proof reading. To gain marks in the 17-19 range candidates must match their selection of hyperlinks to follow to their purpose and audience. Many Centres seemed to think that marks could be awarded if there was evidence that candidates had followed hyperlinks even if they had not given reasons why these would provide information suitable for their audience. Similarly, having found information as a result of following these links, they must go on and explain why some of this information would be suitable for their audience and why some would not. Finally they must use the information which they have found suitable. Too many candidates are given credit at this level and the 8-10 range for making banal comments such as 'I chose this because it suited my audience'. Reasons why or how it matches their audience are required. Proof reading is checking the accuracy of the candidate's final piece of work. Any remaining spelling, grammatical and factual errors should be picked up at this stage. Some Centres think that it is actually a read through of the work from an aesthetic point of view. This is not the case. At the 20-21 mark range evidence of proof reading and spell checking must be provided. Finally, it is not sufficient for proof readers to simply sign the work off saying they didn't find any mistakes.

Once again, it appeared that some Centres allowed candidates to spend a lot of time producing a booklet and then, at the end of this process, tried to identify the skills which had been awarded. A more structured approach is suggested whereby candidates are advised how and where they can obtain credit for skills. One simple way of structuring the work is to allow candidates to produce between two and four pages of a booklet confining it to the use of in-house clipart and scanned images as their pictures. The candidates can then complete their booklets by moving on to use the internet as a source of further information. At the other end of the spectrum, as GCSE candidates must work independently, a structure which involves worksheets which clearly define each step in the process and dictate to the candidate what they should do is also not advisable. Such an approach, or other on-line methods such as writing frames, can limit a candidate's ability to produce their own work. An increase in the tendency for some Centres to produce prescriptive guidelines has been noticed. It is imperative that candidates are not given sentences to complete. The work must be the candidate's own.

For the additional skills marks Centres seemed to think that writing about these skills in the abstract was sufficient, or more worryingly, that copying phrases from text books was acceptable. The notes for guidance in the specification make it quite clear that majority of these skills must be referenced from the point of view of the candidates' own experiences. A common failing, which prevents candidates from gaining any of these marks, is the lack of evidence of backups having been made. Another worrying aspect is the lack of detail in many of the candidates' statements. Some Centres seemed to think that writing a few words on each aspect was sufficient. Finally, a number of Centres seem to confuse errors with problems. Many candidates failed to gain credit for the additional skills as they referred to getting on line help to help them with the features of a software package. Examples such as candidates explaining that they did not know how to crop an image, for example, so they went to the online help to find out. This aspect is not an error. Candidates are required to produce screenshots showing error messages from the system to reinforce their description of error handling.

Project 1b

A number of Centres are still not following the requirements of the specification that state that in order for a candidate to be awarded a mark within a given mark range they must match all the criteria within that mark range. Centres are reminded that in order for a candidate to be awarded a mark within a given mark range they must match all the criteria within that mark range. A number of Centres disregarded this requirement and had their marks reduced accordingly. In this specification, the criteria are hierarchical and so if a candidate fails to verify their database, for example, they are going to get very low marks no matter how many of the higher criteria they have met.

Comments on Individual Strands

Data Handling

Many Centres still do not appreciate the requirements of the 26-28 mark range. Candidates often fail to identify the required output n terms of content and format. Some candidates only showed evidence of one validation check yet were awarded marks greater than 16. Some failed to provide evidence of validation checks working just having design screens. Candidates are often awarded 14+ marks despite not giving reasons for the selection of their data.

For 14 to 16 marks to be awarded candidates must provide evidence of using a range of sources. They must also give reasons for selecting the data for inclusion in the database. The Teacher's Guide for the specification explains in detail what is required. "*Reasons for choosing fields"* cannot be based on the proposition that these were what were required by a 'user'. It can be a list of possible questions (queries) which the database is required to answer which the candidate uses to deduce the fields required to answer such questions. It could be a survey of a number of possible users as to what fields would be needed and then deducing from the response what fields are required. Some Centres feel it is acceptable evidence for candidates to show evidence of their sources as being the front page of the magazine they used. It is not. Candidates must show the actual data highlighted in the magazines or highlighted in the printouts of the websites. This must then be clearly present in their data capture form and subsequently in their database.

For marks above 16 candidates must use Boolean operands in their searches. The criterion refers to complex searches (plural) and so requires an absolute minimum of two complex searches. A minimum of two different Boolean operands must be used.

Some Centres are still confused over the requirements for validation. Proof that validation has worked is required. This is done by producing screen dumps showing error messages being produced as a result of the candidates setting up their own routines. The entry of text into a numeric field does not count; neither does the designing of field types which limit data entry. The criterion requires the candidates to write their *own* validation routines. More than one validation routine must be evidenced. Printouts of the error messages showing that these routines worked are essential for this mark range to be obtained.

For marks above 19 candidates must describe their choice of software in terms of the features required to solve the problem and compare it with an alternative piece of software. Many candidates lose marks because they give a list of features which are not required by the solution or fail to give a list of features required by the solution or, indeed, give a list of features required by the solution but are equally available in the package they are rejecting. It is apparent that many candidates have little experience of using alternative data handling packages to the one they used to create their database.

For marks in the highest ranges, candidates are expected to give reasons why they have chosen the fields included in their database but left out others. They will also need to give reasons for their choice of field types and explain their choice of field lengths. A number of Centres think that it is sufficient for candidates to list these rather than give reasons for their choice. This is not acceptable.

For the highest mark range of 26-28 marks, the required output must be stated. This must also be in terms of the format of the output. As one of the criteria is to comment on how easy it was to produce tables and graphs, candidates must obviously stipulate these as being part of the required output and then produce this output. This will usually be the output from a list of queries which the candidate surmises they will use to test their database. Candidates must relate all the reasons for the choice of all the various features listed in the 26 to 28 mark range to this required output.

It is to be remembered by Centres that only the most gifted of students should be awarded marks in this range as it is intended to be a true discriminator for grade A/A* candidates.

Modelling

More Centres are now aware of what constitutes a complex model.

Centres are still using writing frames as prompt sheets for candidates and this often leads to candidates being unable to truly explore the model.

Validity of a model is also still causing problems. Candidates are required to compare the model with a real life situation in order to secure credit. Some candidates failed to design a complex model but were still awarded marks above 19. It is not sufficient to make a design and then go on to create a complex model; the original design should be complex.

A number of Centres fail to understand the requirement for justifying the choice of software. Candidates should define their problem, and then produce a list of software features required to solve the problem, followed by a description of their choice of software and how well it meets the required features. The description of how they created their spreadsheet should contain a number of screenshots illustrating how these features were used.

For all mark ranges above 7 candidates must make predictions. They must then go on to produce before and after printouts of their model showing whether they were accurate or otherwise in these predictions. For marks above 19 candidates must make specific predictions. It is not sufficient to write about how certain values will increase or decrease. The actual value of the increase or decrease must be predicted.

Measuring

Too many Centres regard this as an easy option but should remember that this strand requires the same level of detail in the documentation as any other strand. The candidates' reports must still match the specification criteria in order to obtain marks. Many ICT Departments allow other departments to teach this strand and then mark the outcomes themselves although the outcomes obviously cover other requirements more than ICT. Centres are reminded that 18 hours should be spent on the teaching of and production of Project 1b.

Control

This strand still causes some Centres some problems. The advice in the Teacher's Guide clearly identifies the need for equipment to be set up by an individual, not a team, including the setting up of two different types of sensor – not contact switches. These must all be connected by the candidate to a computer through some form of interface. The creation of this system must be evidenced and photographs of the stages of creation are the best way of doing this.

Candidates must realise that they have to annotate their programs showing how they have used precision and what would have happened if they had not. Evaluations which refer to their use of precision are not the same thing.

Finally, feedback is defined as the output of system affecting the input of a system. It is not considered to be the reaction to inputs.

2360 Project 2

General Comments

As in previous January examination series, the number of Centres taking the opportunity to enter candidates at this time proved to be very small.

It is disappointing to note that that many Centres do not appear to heed the reports made to them by moderators nor heed the comments made in these paragraphs.

OCR offer both training sessions and a consultancy service, designed to clarify problems that Centres may be facing regarding the evidence required in each of the assessment strands, so it is also disappointing to note that a significant number of Centres continue to award inappropriate marks when assessing their candidates work.

Again inappropriate marks were awarded in the following areas:

Analysis

- It has been consistently noted that it is unacceptable to mention the solution within the description of the problem, but candidates are still being awarded marks where within the first few lines this is the case. Extreme examples include work where the candidate began their work by stating "For my database project …..".
- Again, it has been stated in other publications from OCR for ICT A Unit 2360, as well as at training sessions, that to award marks for "Collecting Information", in addition to the chosen method actually being used, there must be supporting evidence that the method chosen has been set up. This will probably take the form of copies of correspondence between the candidate and their user(s), witness statements, etc.
- The description of inputs, processing and outputs at this point should tell the reader about the ways in which the present (and therefore the new) system is used. Without this detail, it is not possible to accept that the candidate has carried out thorough testing or evaluated their system adequately in order to comment on how it works when compared to the user requirements.

Design

In most cases seen, this section was carried out quite well. However, marking of each part sometimes seemed to be without reference to the previous work. This, on occasions, led to marks being inappropriately awarded for designing alternatives which in fact when cross-referenced were not to appropriate alternatives. In these cases, it was not possible to support the awarding of more than 1 mark in that section.

Previously it has been stated that it may be possible to accept that descriptions of hardware and software produced in the Analysis section can also be used as evidence within the Design section However, this should be avoided as the two sections should be addressed separately to avoid circumstances in which inappropriate alternatives are discussed eg discussing the merits of eg Microsoft Excel and Access as evidence in Analysis and then comparing their ability to use relational databases as evidence in Design – this is not an appropriate comparison and marks should not be awarded for either section.

Implementation

Again, the work seen in this section was assessed well by Centres and moderators made few adjustments. Changes, for the higher marks, remain an issue and should be made as a result of implementation. All too often it is obvious that the candidate has set out from the very beginning to produce a solution using a predetermined piece of software. In these cases, the candidate knows exactly what can and cannot be done and so the designs are heavily influenced by these ideas. Then when addressing this stage, to make any changes, candidates have to resort to eg altering a telephone number field from numeric data to text so as to allow the leading zero to be kept. It might be reasonable to expect any good ICT teacher to have covered this during Key Stage 3.

Testing

- Marks for the first part of this section were often awarded to candidate who merely included a large number of tests. Rarely did the candidate actually make any reference to the user requirements for the system that was documented in A3. This type of work does not provide the required evidence to award more than 2 marks for T1.
- Candidates rarely made any real attempt to explain why a particular piece of test data was selected, but, even so, often the maximum 3 marks had been awarded for T2. This should not be the case.

User Documentation

The work here was in general well documented and met the assessment requirements, although much documentation was rather biased towards the use of the chosen software package(s) rather than the actual system. However, it is appreciated that many candidates are not expert users of the software packages and so the way they tell users how to do the various tasks is limited by their experience.

Evaluation

Many Centre markers awarded high marks for this section and these could not be supported because as noted above, without evidence of "thorough testing" it is not possible for moderators to agree with the awarding of marks where a candidate comments on how their system meets the user requirements.

Centres are reminded that the assessment criteria are applied as rigorously, and in a similar manner, in the January examination series as in the June series. It was noted that some Centres appeared to be deliberately awarding higher marks that would be inappropriate for the work seen.

Grade Thresholds

General Certificate of Secondary Education
ICT A (Specification Code 1094/1994)
January 2008 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A*	A	B	C	D	E	F	G	U
2357/01	Raw	60				47	43	39	36	33	0
	UMS	55				48	40	32	24	16	0
2357/02	Raw	60	42	38	34	30	25	22			
	UMS	80	72	64	56	48	40	32			
2358	Raw	60	58	52	43	35	29	23	17	11	0
	UMS	120	108	96	84	72	60	48	36	24	0
2359/01	Raw	60				32	27	23	19	15	0
	UMS	55				48	40	32	24	16	0
2359/02	Raw	60	32	27	22	17	12	9			
	UMS	80	72	64	56	48	40	32			
2360	Raw	60	53	44	35	27	23	20	17	14	0
	UMS	120	108	96	84	72	60	48	36	24	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1094	200	180	160	140	120	100	80	60	40	0

	Maximum Mark	A*	A	B	C	D	E	F	G	U
1994	400	360	320	280	240	200	160	120	80	0

The cumulative percentage of candidates awarded each grade was as follows:

	A*	A	B	C	D	E	F	G	U	Total No. of Cands
1094	1.5	12.3	32.9	60.6	80.3	88.8	92.6	96.8	100	758
1994	2.2	30.6	53.0	74.6	94.8	97.0	98.5	100	100	149

907 candidates were entered for aggregation this series

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.