

# Report

---

**Title:** Computer-aided Assessment Policy and Procedures

---

**From:** iSolutions

**Date:** June 2009

---

## Contents

1. Scope of this document
2. Assessment Lifecycle
3. Design of Assessments & Questions
4. Guidance Provided to Students
5. Pre-examination Procedures
6. Invigilation
7. Delivering CAA assessments using Perception
8. Post-examination Procedures
9. Exam Irregularities and Grievance Procedures

## Appendices

- A. Computer Aided Assessment - Pre-event registration form
- B. Computer Aided Assessment- Workstation booking form
- C. Computer Aided Assessment - Post-Event report form
- D. General background to CAA at Southampton
- E. General Procedures of Good Practice for Assessments
- F. QA and British Standards
- G. Policy with Respect to Schools-based CAA Systems
- H. Reliability
- I. Security of Assessments
- J. Disability and Accessibility Support
- K. Plagiarism
- L. Copyright Guidance
- M. Health and Safety Matters
- N. Guidelines for the Physical Room and PC Environment
- O. Sensitive academic material
- P. Outline of CAA Services and other University IT Systems
- Q. Range of Assessments and General Guidelines
- R. Assessment Lifecycle using QM Perception

---

**Acknowledgements:** This guidance is based on experience gained within the University and was informed by documents in use at other institutions including the Universities of Dundee (Dr. Richard Parsons being the prime contributor), Portsmouth and Loughborough.

# 1. Scope of this document

1.1 This document sets out policies for the use of Computer-aided Assessment (CAA) at the University of Southampton. All staff involved in the design, presentation, setup and invigilation of CAA for low, medium and high stake assessments must read this document.

1.2 The policies and procedures described here are based on principles that assessments provided to students by CAA will be fair, confidential, accurate, secure and safe. Schools must ensure that their students are familiar with the CAA system to be used before they undertake a medium or high stakes exam.

1.3 Assessment applications may be generally categorised according to the impact they have on the test-taker's life as 'Low Stakes', 'Medium Stakes' or "High Stakes". An example of a high-stakes test would be a PhD *viva voce* examination, because the outcome has a significant impact on the subject's life and cannot normally be retaken. An example of a medium stakes assessment is a driving test: although the outcome has a significant effect, it can usually be re-taken if failed. Low stakes tests can usually be re-taken and do not necessarily have much impact (Shepherd, 2001).

1.4 The following policies and procedures for CAA supplement the University Calendar and the Exam office's Instructions for supervisors and invigilators. Any assessments occurring within the University using IT are covered here, including

- Assessments that use computers for only partial delivery or input of assessment information.
- Assessments for formative purposes only or with low stakes, medium stakes or high stakes outcomes for summative purposes.

1.5 Assessments using IT carried out at the University of Southampton, at a level of medium or high stakes should comply with the guidelines presented British Standard BS ISO/IEC 23988:2006:2002 entitled: "Code of Practice for the Use of Information Technology (IT) in the Delivery of Assessments". Where appropriate, sections of the standard are referenced throughout this document. iSolutions has a copy of BS ISO/IEC 23988:2006:2002 for inspection.

## 2. Assessment Lifecycle

(BS ISO/IEC 23988:2006, s1.3)

2.1 It should be recognised that any assessment has a lifecycle:

- a. identification of need to assess
- b. design of outcomes/assessment methodology
- c. preparation and calibration
- d. pre-registration
- e. distribution
- f. authentication (includes identification)
- g. delivery
- h. response return
- i. scoring, result determination and/or feedback
- j. data return
- k. analysis
- l. appeals
- m. certification

This document concerns items c (preparation) through k (data analysis).

## 3. Design of Assessments and Questions

3.1 The Learning and Teaching Enhancement Unit (LATEU) and the CAA Officer can provide guidance on the construction and configuration of medium and high stake assessments. Standardised and functional Perception templates will be provided for presenting assessments, together with clear guidance on how to use them.

3.2 In addition to tailored advice for departments, LATEU will provide general academic sessions within the Staff Development programme. It should be normal practice for academic staff using CAA to have completed the half day Perception course run by iSolutions, and users are encouraged to attend LATEU's courses for CAA objective testing using Perception and Blackboard.

3.3 Assessment should be aligned with the intended outcomes of the module. Specifically, the use of CAA should not result in assessments that are optimised for CAA, rather than related to the aims and intended outcomes of the module.

3.4 Questions should be carefully designed with due regard for the material being assessed. Particular care should be taken in multiple choice (MCQ) or multiple response questions (MRQ) that a sufficient quantity and quality of distracters are used. Negative marking may be used, or compensation for baseline guess factors included. It is important that the calculation regime used should be made clear to the students before the exam.

3.5 LATEU can provide general guidance on the overall quality and design of questions and assessment scoring. This analysis should be carried out well in advance of any planned assessment. Schools should be aware that analysis after the assessment (facilitated by Perception's web-based reporting software) can help determine the quality of questions and should be used as part of the ongoing assessment design process.

## 4. Guidance Provided to Students

(BS ISO/IEC 23988:2006, s5.1.2)

4.1 The following items should be made clear to students before an assessment takes place:

- a. the number and type of question items to be used
- b. the scoring rules for individual items and the overall assessment
- c. the contribution this assessment makes to an overall module
- d. how the question items are selected for each assessment (all or random selection)
- e. any time limit and how this may be judged
- f. any restraints on navigation between question items, or blocks of questions
- g. assessment regulation included permitted and excluded resources
- h. feedback to be provided (including their mark if appropriate)
- i. details of the appeals procedure available to students
- j. how they will be identified for the assessment (i.e. they must present their student ID cards)

This information should normally be provided within the module handbook, which may appear in a Blackboard course.

## 5. Pre-examination Procedures

- a. Book sufficient workstation space. Practical considerations should include a 5% to 10% oversupply of workstations (in case of problems with hardware e.g. mouse, keyboard, VDU) and that it is easier to manage and invigilate a few large rooms than many smaller ones. Room bookings within the University are usually made in the central room booking system by Schools-based officers using the "WORKSTATION-ALL" building resource which is available to staff from the Services tab of the SUSSED portal (see Appendix B of this document).
- b. Notify iSolutions of the planned assessment/examination (Appendix A of this document). Details should be given of the assessment system being used, student numbers, which workstation rooms have been booked on which dates and the assessment type (summative/diagnostic/formative). This enables iSolutions to ensure that workstation rooms meet fully the requirements of the assessment.
- c. Prepare and test the assessment. iSolutions may be able to assist with this; if you would like assistance please send an email to [serviceline@soton.ac.uk](mailto:serviceline@soton.ac.uk) headed '*Preparation for CAA test*'.
- d. Have a backup means of delivering the test available, for example an alternate time or a paper copy of the assessment that can be photocopied at short notice.
- e. The assessment should be peer-reviewed by academics for accuracy and if it's a QM Perception test, can be checked for correct operation by iSolutions – send an email to [serviceline@soton.ac.uk](mailto:serviceline@soton.ac.uk) with the subject '*Verify QMP CAA test*'. Experience gained over the past few years has shown that at least two weeks should be allowed for this to be done before the test is scheduled to be taken.
- f. Ensure correct invigilation procedures are in place (see section 6)

## 6. Invigilation

6.1 CAA assessments require a higher level of invigilation and support than traditional paper based exams.

- a) One of the invigilators must be a senior academic with knowledge of both the assessment and the assessment software.
- b) A technical administrator of the examination system (normally a Perception administrator) must be contactable during the examination.

## 7. Delivering CAA assessment using Perception

- a. The assessment must be pre-tested by its academic 'owner', using the same format that students will use for the exam.
- b. Instructions for Logging in to a Perception exam
  - Login to the computer using University username and password.
  - Perception assessments can be scheduled via Blackboard in which case participants will log into Blackboard to access the test, or they can be scheduled to a static link by iSolutions in which case they will log into Perception directly using their University username and password.
- c. *An hour should be included in the workstation room booking to allow iSolutions time to test the workstations. Online examinations work more smoothly when all the workstations have been restarted (Ctl+Alt+Del → Restart) immediately before the exam begins.*
- d. Do not encourage all students to login to the server at exactly the same time, because this is known to place a high load on the servers. Let students begin the exam when they are ready within a period of 2 to 5 minutes or alternatively start them in 'rows'. Students should be made aware that no matter when they login, they will all have exactly the same exposure to the assessment apart from those with specific learning differ.
- e. A yellow "Examination Attendance Slip" detailing the examination completed, PC used, student name, and date must be completed by the student.

**UNIVERSITY OF Southampton**

**Examination Attendance**

**To be completed by the candidate before beginning each**

|         |              |
|---------|--------------|
| Seat No | Registration |
|---------|--------------|

Surname \_\_\_\_\_ Initials \_\_\_\_\_  
(Block Capitals)

Examination Paper No \_\_\_\_\_  
(As shown on right hand of Question Paper)

These forms are provided by the examinations office which retains them after use.

## 8. Post-examination Procedures

1. As soon as possible after a CAA assessment has finished (and certainly within 60 minutes), a copy of the results must be made and transferred to a second secure computer system. This can be done in two different ways:
  - *If the test was invoked using Blackboard integration*, the results will be copied to Blackboard and will appear in the instructor's view of the Blackboard Gradebook. The Instructor can choose whether students can see these grades or not and even whether or not they are allowed to see what answers they gave during the test. iSolutions' web pages contain further information about the integration with Blackboard which is specific to the University. Detailed generic information can be found in the QM book *Blackboard Connector for Questionmark Perception Instructors Guide* which is also accessible from the iSolutions web pages.
  - *If the test was not invoked via Blackboard integration*, the Instructor can export the results to Excel. QM Perception V4 supports this via the Export to ASCII and Export to Excel report types.
2. The assessment "Post-Event Report Form" should be completed and emailed to iSolutions. The aim of this is to assist with the development of CAA procedures at the University.
3. The assessment results must be checked, forwarded to the examination office, then forwarded to the School or published to the students as appropriate.
4. Question responses should be analysed for the question quality. QM Perception includes an Item Analysis report which automatically performs classical test analysis (CTA) on the results of assessments provided there are more than 25 responses (although for the statistics to be valid, a minimum of 50 results is recommended and 200 or more results is preferable). The kinds of questions typically asked during post test QA analysis are readily answerable using the figures from this report and include:
  - a. How did people who did well in the exam do within this particular question?
  - b. Were the correct answer distracters used, appropriate?
  - c. Were any correct answers marked incorrect?
  - d. Was the question overly easy or difficult, beyond that expected?
5. Mechanisms of feedback to students should be considered.
  - a. Will they get access to their results online when they can see how they performed on individual questions?
  - b. The gradebook feature of Blackboard may be used to make individual marks available to the individual students.
  - c. Are students shown the detailed result of the test (for example via the Blackboard Gradebook) or would they have to consult a tutor?

## 9. Exam Irregularities and Grievance Procedures

9.1 In the event of any examination irregularity or grievance relating to an assessment involving CAA, the CAA Officer must be informed who will ensure that appropriate procedures are followed (as is the case with other examinations).

9.2 Schools must keep records of any medium or high stakes assessment. Schools may find it convenient to keep these data electronically, for instance in a spreadsheet. Electronic logs of assessment details will be retained by iSolutions for a minimum of 90 days.

9.3 Software used for medium or high stakes assessments must permit the interrogation of individual question answers and must allow human re-marking of questions if judged necessary.

### Reference

SHEPHERD, E. (2001) *Assessment Stakes*. PowerPoint presentation found at <http://www.questionmark.com/uk/learningcafe/lowmediumandhighstakesassessments.ppt> on 19.8.03

# Appendix A - Notification of pending CAA Test

A.1 Test authors should complete and submit the online *Notification of pending CAA Test* form which will help to ensure that any preparative work for an assessment is completed in good time.

A. 2 The current version of the Pending CAA Test form is available on the iSolutions CAA web pages at:

[http://www.southampton.ac.uk/isolutions/computing/elearn/CAA/Policies-and-Procedures/CAA\\_test\\_delivery\\_request.html](http://www.southampton.ac.uk/isolutions/computing/elearn/CAA/Policies-and-Procedures/CAA_test_delivery_request.html)

## Notification of pending CAA test

This form should be filled in by tutors running CAA tests in public workstation areas maintained by ISS. The aim is to allow sufficient time for workstation rooms to be prepared and/or checked so ensure that they meet the requirements of the assessment application.

**Course details**

Please tell us about your test:

- the Banner course code (e.g. EDUC9999)
- maximum number of students to be tested in one sitting
- your workstation booking (allow extra time for logging in etc.)

\*Banner Course:

\*Max. number of students:

Workstation rooms:

\*Start date:

\*Start time:

\*End date:

\*End time:

**Assessment details**

Please tell us about the kind of assessment you plan to deliver.

**What type of assessment are you planning to run?**

Diagnostic:  Formative:  Summative:

Contributes to students' grades ('high stakes'):

Will the test be invigilated:

**Assessment system to be used:**

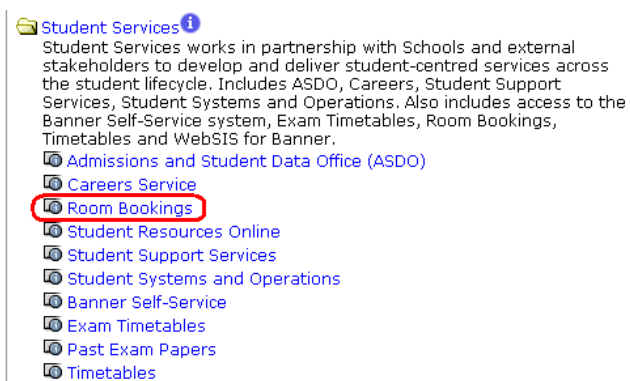
**Other assessment system:**

Please enter any other information here:

**Submit**

# Appendix B - Computer Aided Assessment- Room booking forms

**B.1** Workstations rooms are booked by School Timetabling Officers on behalf of tutors. They book these resources through the University's central Room Booking facility, which is accessible through the SUSSED portal's *Services* tab under *Student Services*.

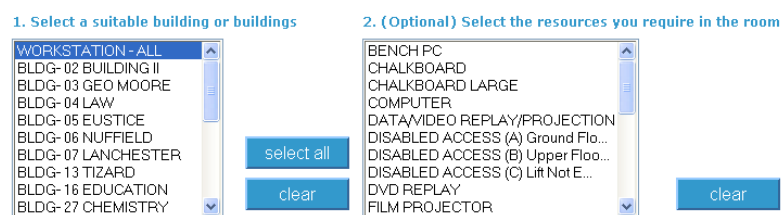


Copyright © SunGard 1998 - 2005.

**B.2** The School Timetabling Officer uses the 'WORKSTATION -ALL' building resource to schedule public workstation rooms. Sufficient workstation rooms should be booked to allow at least a 10% margin for workstations that have problems on the day of the test. If multiple workstations are to be used, it is advisable to ensure that they are as close together as possible in order to ease the invigilation and supervision loads.

## Room Booking Request Specification - Step One

1. Specify Buildings and Resources -- 2. Specify Weeks, Day, Time and Duration -- 3. Select Room



The interface shows two columns of options. The first column, '1. Select a suitable building or buildings', lists various buildings including 'WORKSTATION - ALL' (which is selected). The second column, '2. (Optional) Select the resources you require in the room', lists resources like 'BENCH PC', 'CHALKBOARD', and 'COMPUTER'. There are 'select all' and 'clear' buttons for each column.

To make multiple selections or clear selection hold down the control key.

To select rooms that have a computer workstation layout the building resource "WORKSTATION-ALL" has to be explicitly selected from the top of the list and no resources must be selected.

Disabled Access Categories: (A) Ground Floor Room Fully Accessible; (B) Upper Floor Room Egress Standard Lift & Evac Management Plan; (C) Lift Not Egress Standard, Room Suitable for PEEP.

3. How many people are you expecting to attend?



Four buttons are displayed: 'continue', 'reset', 'cancel', and 'exit'.

# Appendix C - CAA test- Post-Event Report Form

C.1 The current version of the *CAA post-test report* is available on the iSolutions CAA web pages at

[http://www.southampton.ac.uk/isolutions/computing/elearn/CAA/Policies-and-Procedures/CAA\\_post\\_test\\_report.html](http://www.southampton.ac.uk/isolutions/computing/elearn/CAA/Policies-and-Procedures/CAA_post_test_report.html)

C.2 A Post-test Report must be submitted after every CAA event by the academic 'owner' of the assessment within one week of the assessment's completion. The information will be used by iSolutions to rectify any issues identified during the test and to reduce the risk of future incidents.

## CAA post-test report

This form should be completed after every CAA event by the academic 'owner' of the assessment within one week of the assessment's completion. The information will be used to help resolve any issues identified during the test.

### Course details

Please tell us about the circumstances of your test:

- the Banner course code (e.g. EDUC9999)
- the number of students who took the test
- workstations used

---

\*Banner course code:

\*Number of students:

\*Workstation rooms:

\*Start date:

\*Start time:

\*End date:

\*End time:

### Assessment details

Please tell us how your assessment went.

---

**What type of assessment did you run**

Diagnostic:  Formative:  Summative:

Contributes to students' grades ('high stakes'):

Was the test invigilated:

**Assessment system used:**

**Other assessment system:**

---

\*Did the test go according to plan? If not, why not?:

Specific requests for improvement/action:

## **Appendix D - General background to CAA at Southampton**

**D.1** CAA is undergoing a significant increase in use as the technology, staff skills and student capabilities develop to ensure that some of the advantages of CAA can be realised. British Standard (BS ISO/IEC 23988:2006) provides guidelines to systems, procedures and policies for using IT for delivering assessments. The procedures described here, for use at the University of Southampton, are designed to be compliant with BS ISO/IEC 23988:2006.

**D.2** CAA offers potential efficiency gains, particularly for large classes. CAA also offers a number of pedagogical advantages (such as detailed and immediate feedback, the ability to practise) making its use appropriate to promote learning. It tends to shift academic work from post-assignment (traditional marking) to pre-assignment work. In addition CAA offers flexible question design, immediate feedback and the facility to better align assignments with course objectives. Marking criteria become more explicit.

**D.3** It is anticipated that CAA assessments will be a key activity in the University of Southampton in coming years. Electronic transfers between the Banner student record system, the Blackboard Virtual Learning Environment (VLE), and the Perception CAA system will make possible major gains in efficiency at the University and permit real-time integration of academic and administration activities, further realising the potential of University staff and students. The University has expressed an intention to move towards a Managed Learning Environment (MLE) by integrating these systems.

## **Appendix E - Good Practice for CAA Assessments**

**E.1** The network and server systems in use must have been load tested at a level equal to, or greater than that expected during the assessment. iSolutions can advise on this.

**E.2** Have a complete printed list of expected participants, so that invigilators and supervisors may check that no students are unnecessarily excluded and that no students take an inappropriate assessment.

**E.3** The time limit allowed for the examination may need to be flexible to compensate for any technical delays or emergencies. Additional time may be permitted for some students, e.g. participants who are dyslexic, those using assistive technology (BS ISO/IEC 23988:2006, s6.3). All candidates should receive a time warning, typically 5 or 10 minutes before an assessment is due to finish.

**E.4** Rooms should normally be booked for 30 minutes before an assessment to provide some time for workstation testing, and at least 15 minutes after the assessment is scheduled to be finished to allow the room to be cleared and in case some students do not finish in time.

**E.5** An identical assessment may be run in sequence to make best use of facilities and staff availability. In this instance, candidates in the first session are not permitted to leave the examination room, until everyone has finished and the next group is move into the room while the initial groups leave. This may be achieved through different entrances.

**E.6** Where appropriate, individual questions may be shuffled in order for presentation to different students (to reduce opportunities for copying), similarly it may be appropriate to shuffle the order of answer options in some questions. Random selection of questions within a block may allow different students to receive similar, but different questions. This works well for numerical based assessments.

**E.7** Candidates in an assessment should receive clear guidance when they are about to finally submit their answers. This will normally take the form of an additional confirmation control.

**E.8** Technical assistance should be available to candidates to ensure they can login and use any of the equipment correctly. Advice to candidates on how to navigate within the assessment will normally be permitted.

**E.9** Be relaxed and communicate with the students. In the event of a problem follow the agreed procedures and keep the students informed of events.

## Appendix F - Quality Assurance and British Standards

**F.1** BS ISO/IEC 23988:2006:2002 is applicable to all kinds of CAA testing, but is particularly relevant to the delivery of high stakes assessments (s1.2) which have consequences for student progression and the class of their degrees.

**F.2** Definitions of what constitutes Formative, Low Stakes, Medium Stakes and High Stakes examinations are provided in the table below. A formative assessment will provide no direct contribution to the final mark of a module, while summative assessments do contribute to the final mark, either through course work, class examinations or final examination.

|                         | Low            | Medium                  | High                 |
|-------------------------|----------------|-------------------------|----------------------|
| Decisions               | None           | Can be reversed         | Difficult to reverse |
| ID individual           | None           | Important               | Very important       |
| Invigilation            | None           | Yes                     | Constant             |
| Options                 | Study more     | Pass, fail, work harder | Pass or fail         |
| Item & test development | Minor          | Takes time              | Significant          |
| Items created by:       | Subject expert | Subject expert          | Subject expert       |
| Statistics checked by:  | Subject expert | Time to time            | Psychometrician      |

**Table 1 Assessments Stakes (adapted from Shepherd 2001)**

See Appendix Q for the recommended usage of different CAA systems for different assessment applications.

## Appendix G - Policy with Respect to Schools' CAA Systems

**G.1** Schools should adopt the practices outlined in this document, particularly where tests affect student progression or the classification of their degrees (higher stakes testing).

## Appendix H - Reliability

**H.1** It is widely understood that no IT system can be 100% reliable. However, for High Stakes assessments the highest achievable standards are required. In the events of a systems failure, examiners may be forced to cancel exams and retime the event. A backup system of paper copies may be considered for special circumstances, but ought to be generally unnecessary.

**H.2** All students should be comfortable with the operation of the PC and the exam interface. General templates for exam design are provided by iSolutions and students should be familiar with these through experience gained in formative exercises. Computer screens and chairs should be adjustable. Spare PCs must be available at a ratio of at least 1 per 20 students (5%) with a minimum of 2 spare PCs.

**H.3** Servers used for CAA must be fit for purpose which generally means stable, robust, resilient and modern. They should have uninterruptible power supplies fed from a maintained AC power supply. Where possible a second server should be available as a backup.

## Appendix I - Security of Assessments

(BS ISO/IEC 23988:2006: s6.4.3, s15.3.2)

I.1 For medium and high stake assessments students will be required to display their ID card and will complete the assessment using an account that requires their University username and password.

I.2 In the event that a student is unable to login using their University credentials, an invigilator

I.3 For medium and high stake assessments, the assessment and results must be maintained in a secure environment. This will normally involve the use of secure usernames and passwords for all administrators with access to the server, restricted availability of the assessment, and presentation of the assessment via *Questionmark Secure*.

I.4 Assessment software and the PC setup should restrict unauthorised access to the internet throughout the assessment. This can be achieved through *Questionmark Secure*.

I.5 Human invigilation of exams should be carried out with due diligence. Invigilators should make unannounced movements throughout the PC suite to check screens and general candidate behaviour, being aware of possible paper material, mobile phones, etc, as is the case in any exam.

## Appendix J - Disability and Accessibility Support

(BS ISO/IEC 23988:2006, 5.1.4)

J.1 Systems used should follow standard University procedures for good accessibility and be compliant with assistive technology (e.g. screen readers). The University aims to provide learning and teaching materials which comply with the provisions of the Special Educational Needs and Disability Act (2001) (SENDA):

*The Special Educational Needs and Disability Act (2001) (SENDA) amended the 1995 DDA to include education. The teaching and learning components come into force in September 2002. SENDA will have a major impact upon education provision within further and higher education, and will require them to address in more detail the accessibility of their learning resources and teaching materials (Phipps, Sutherland & Seale, 2001 Section 2.1).*

J.2 Candidates with disabilities may be given additional time to complete the assessment and the facility to operate the assessment for a single person in an alternative room may be required. Where appropriate, and when requested, a non-computer based assessment may be provided for a disabled candidate.

J.3 Some students with disabilities use computers as an alternative to handwriting. This is described in the Additional Examination Requirements (AER) document which can be found on the iSolutions CAA web pages.

J.4 The Learning Differences Centre (LDC) and the Learning and Teaching Enhancement Unit (LATEU) can provide help with these aspects of assessment.

LDC: <http://www.soton.ac.uk/studentsupport/lcd/index.html>

LATEU: <http://www.soton.ac.uk/lateu>

### Reference

PHIPPS L., SUTHERLAND A. AND SEALE J. (2001) *Access All Areas: disability, technology and learning*. Acrobat document produced by JISC TechDis Service and ALT, accessible from <http://eprints.soton.ac.uk/6181/01/AAA.pdf>

## Appendix K - Plagiarism

**K.1** General guidelines for the interpretation, detection and punishment of plagiarism are provided by the Learning and Teaching Enhancement Unit (LATEU) <http://www.soton.ac.uk/lateu>

**K.2** The University of Southampton has subscribed to the JISC Online Plagiarism Detection service. However usage of the system is governed by a set of additional guidelines that must be adhered to. Importantly students whose work is going to be submitted to the electronic detection service MUST have read and signed the detailed agreement form available from iSolutions. Staff must also have signed another agreement form. This service is powerful and is likely to locate most occurrences of plagiarism using web-based material. However, there are a number of legal issues relating to intellectual property and storage of submitted material that mean that all involved must understand their obligations. Procedures to be followed in the event of plagiarism being detected must be understood.

## Appendix L - Copyright Guidance

**L.1** According to the UK Government (<http://www.intellectual-property.gov.uk>, June 2009) there is an accepted copyright exception for anything done for the purpose of setting or answering exam questions (except music). This website reference is relying on section 32 of the Copyright Designs and Patents Act 1988 which provides by subsection (3) that:

**L.2** Copyright is not infringed by anything done for the purposes of an examination by way of setting the questions, communicating the questions to the candidates or answering the questions. (However, this is qualified by subsection (4) thus: subsection (3) does not extend to the making of a reprographic copy of a musical work for use by an examination candidate in performing the work.) This could be interpreted as saying that copyright would not be infringed for items used within an Examination, whether the copy is a photocopy, a digitised copy, etc. But the image can ONLY used for this examination purpose and NOT for any other, as infringement (and consequent liability) would then be involved (assuming there was no other permission/licence in place).

## Appendix M - Health and Safety Procedures

**M.1** PCs, chairs and the general assessment environment must conform to standard safe environmental guidelines (clear screen, adjustable screen, adjustable chair, good lighting and ventilation).

**M.2** Candidates should be advised to take "micro-breaks" to relax their muscles and eyes (i.e. stretch, look up at ceiling) (BS ISO/IEC 23988:2006 s12.1.2).

**M.3** If the assessment lasts for longer than 90 minutes, then there should be a provision for a break away from the PC. This may require supervision of candidates during the break, although facilities such as the provision of separate tests or blocks of questions may be used.

## Appendix N - Guidelines of Physical Room and PC environment

**N.1** Public workstation areas (WSAs) may be used for examinations. Care should be taken that the screens are not overlooked, and invigilators may wish to restrict access to certain PCs. The assessment administrator present is likely to require a PC to access the QMP administrator pages.

**N.2** Workstation clusters that have been popular for CAA testing are

- Building 25 1007/1009 - 158 workstations
- Shackleton (B44) 1061/1063 - 82 workstations
- Murray (B58) -168 workstations spread across multiple rooms

## Appendix O - Sensitive Academic Material

**O.1** For the purposes of assessment, staff may occasionally find it appropriate to use multimedia, image or text material that has the potential to cause unnecessary offence to users. Examples of such material include; medical images and videos detailing particular graphic detail; forensic science images of human remains; graphic text describing offensive behaviour from a legal or social work perspective.

**O.2** Whilst students studying the discipline may be familiar with the material, authors are responsible for:

- a. Ensuring students are aware of the nature of the material
- b. ensuring students are aware that others who casually view the material may be offended by it
- c. minimising the chances of offence by suggesting the material is viewed in specialist or private IT suites, or by scheduling private sessions
- d. providing guidance to students - a warning and guidelines must be provided to students **before** the material is presented. This can be configured in QuestionMark Perception by using an explanation (non-scoring) question within an initial block, before the main questions are presented. An example of a warning and guidelines is presented below.

“This material has been prepared as an interactive teaching resource that is relevant to the academic course material. Be aware that its content is both graphic and sensitive. You must not copy or distribute the material in any way.

Please do not display it in public areas or discuss it in a way which may appear to others to be disrespectful. In university or public Workstation (WS) areas you should be aware that the material may be visible to other users and may cause offence. You should act to ensure that this does not occur. Sensible precautions may involve using WS areas that are for dedicated medical use, or alternatively using WSs with screens that are not overlooked such as those at the back of the room.”

**O.3** Academic staff preparing assessments that contain material that may be regarded as offensive by those not studying the topic, should also notify the CAA staff in iSolutions prior to the publication of the assessment – send an email to [serviceline@soton.ac.uk](mailto:serviceline@soton.ac.uk) with the subject '*Preparation for CAA test*'. This could be done using the form shown in Appendix A of this document.

## Appendix P - CAA Systems Available from iSolutions

### P.1 QuestionMark Perception general purpose Assessment system

|                      | Type  | First line of support |
|----------------------|---|-----------------------|
| Application          | QuestionMark Perception Version 4.4 on twin load-balanced Dell servers with remote DFS shared file storage<br><br>Can be integrated with Blackboard | iSolutions MLE Team   |
| Database             | Oracle on dedicated SunFire dual-core V440  | iSolutions EST Team   |
| Operating System     | Windows 2003 Advanced Server  | iSolutions EST Team   |
| Hardware maintenance | Dell PowerEdge 2850 servers<br><br>Sun V440   | Dell<br><br>SUN       |

### P.2 QuestionMark Perception 'open' Survey system

|                      | Type  | First line of support |
|----------------------|---|-----------------------|
| Application          | QuestionMark Perception Version 4.4 on load-balanced Dell servers | iSolutions MLE Team   |
| Database             | Oracle 9i on dedicated SunFire dual-core V440                     | iSolutions EST Team   |
| Operating System     | Windows 2003 Advanced Server                                      | iSolutions EST Team   |
| Hardware maintenance | Dell PowerEdge 2650 servers<br><br>Sun V440                       | Dell<br><br>SUN       |

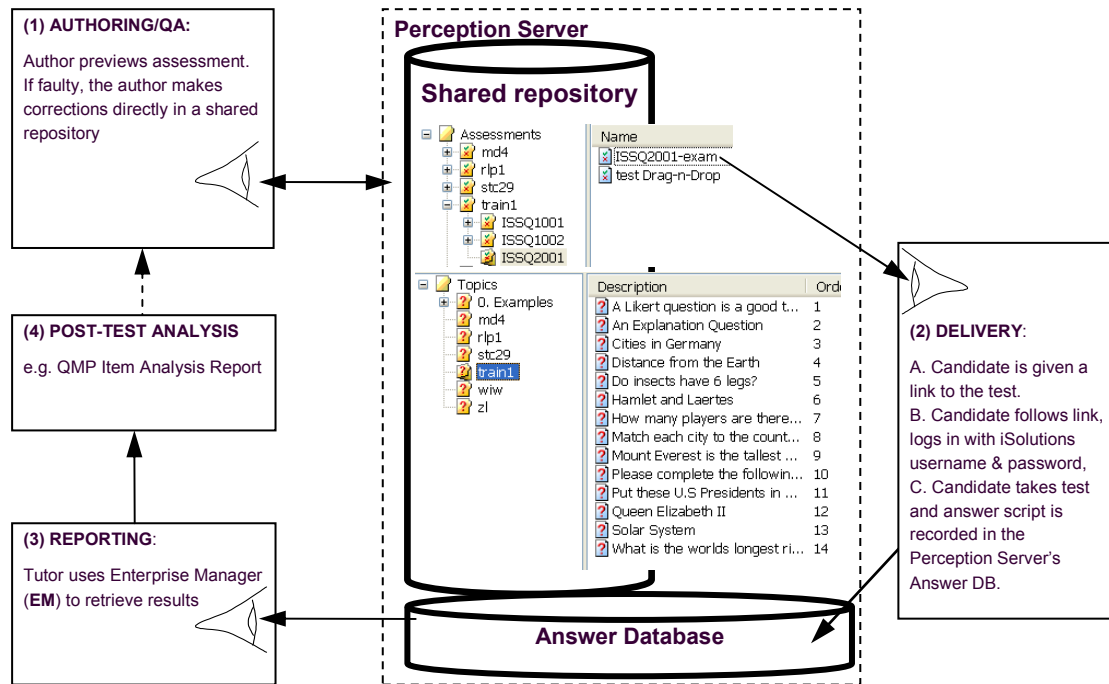
### P.3 Blackboard VLE (Enterprise Learning System Release 8)

|                  | Type          | First line of support |
|------------------|---------------|-----------------------|
| Application      | Blackboard    | iSolutions MLE team   |
| Database         | Oracle 9i     | iSolutions EST team   |
| Operating System | Sun/Solaris   | iSolutions EST team   |
| Hardware         | Load balanced | Sun                   |

## Appendix Q - Range of Assessments and General Guidelines

| Assessment classification | Typical activity   | Levels of software & hardware provision  | Levels of staff support  |
|---------------------------|--|--|--|
| Formative, open           | Numerical exercise, free repeats. Good quality of feedback given. Progression expected, important learning tool.   | Software – May be under pilot environment<br>Hardware – Single server permitted  | Academic author and if necessary iSolutions CAA staff may support  |
| Low Stakes                | In course work. May have open time period for submission. May include formative feedback   | Recommended that supported systems are used<br>May use Blackboard VLE<br>May use QM Perception   | Academic author and if necessary iSolutions staff may support  |
| Medium Stakes             | Class exams. Invigilated, and likely to run once only. Internal setting and marking.<br><br>Academic staff member and students involved should have run a CAA formative or low stakes exam before this event.  | Supported systems only.<br>QM Perception preferred.<br>May use Blackboard VLE.   | Academic author available to support event<br><br>iSolutions staff scheduled to be available during assessment<br><br>iSolutions ESS server support staff notified of assessment event |
| High Stakes (1)           | Degree exams counting toward final module marks in lower levels of degree.<br><br>Academic staff member and students involved should have run a CAA formative or low stakes exam before this event.  | QM Perception recommended – Robust, proven software. Supported by service contract and is a full commercial product. Approved as assessment tool.<br><br>Hardware – at least one 5% over-supply of workstations, minimum of 2 spare<br><br>Server systems – The assessment should be available on two separate & accessible servers. | Academic author available to support event<br><br>iSolutions staff scheduled to be available during assessment<br><br>iSolutions ESS server support staff notified of assessment event |
| High Stakes (2)           | Assessments with significant and direct contribution to honours degree classification, or similar professional qualification.<br><br>Academic staff member and students involved should have run a CAA formative or low stakes exam before this event. | May use QM Perception – Robust, proven software. Supported by service contract and full commercial product. Approved as assessment tool.<br><br>Hardware – at least one 5% over-supply of workstations, minimum of 2 spare.<br><br>Server systems – The assessment should be available on two separate & accessible servers.         | Academic author available to support event<br><br>iSolutions staff scheduled to be available during assessment<br><br>iSolutions ESS server support staff notified of assessment event |

# Appendix R – Assessment Lifecycle using QM Perception



Bill Warburton  
June 2009