Dear Dr. Bellingham,

I am reading the IT Review Consultation document and would like to help the consultation by giving my feedback. I shall try to give only feedback on things with which I have personal experience.

My first impression of the document is that it is well-written with clear and good intentions. I shall divide my feedback into "Concerns" and "Support".

Concerns:

On page 14, the review reads "The difficulties caused by the diversity of e-mail systems ... were mentioned.". I find this unclear and perhaps alarming. SMTP (1982), POP 3 (1988) and IMAP (1986) are not new protocols, and I am worried that "fixing" a "diversity" of email systems would prevent me from using an email client of my choice, and force me to use the Hermes web interface (which I find useless).

On page 16, it suggests "One undergraduate and one post-graduate student representative.". I would suggest increasing this number to two of each, one from arts and one from sciences, since computing needs will be different.

On page 18-19, it reads "76. The panel felt that the UCS culture, perhaps for understandable historical reasons, was too inclined towards constructing systems in house, rather than purchasing industry standard solutions. It was also not clear how the priorities of users across the University translated into the priorities of the UCS.". I feel that there is a strong argument in favour of adopting or creating free software solutions, possibly in partnership with other institutions with similar needs, as opposed to "purchasing industry standard solutions". I would be against basing vital University services on untrusted and inflexible (proprietary) software.

This is perhaps reflected in point 78 on page 19, and point 121 on page 29.

Support:

On page three, the review reads "almost without exception, administrators and academics praised IT staff across the University for their commitment and professionalism.". I would like to add my voice to this. The computing staff at [redacted] have consistently impressed me with their smooth operation.

On page twelve, it reads "ii. direct access to a secure University–wide (i.e. including the Colleges) wireless network, with connection via eduroam, to allow for mobile working;". This would be extremely popular.
On page 13, it reads "A9. The governance structure should ensure that the University’s needs for information systems and services are met in a way that reduces carbon dioxide emissions as much as is practicable."
I *strongly* support this and am pleased to see this emphasis continue throughout the document (e.g. p32-33).

On page 21, it reads "...it is clear that there needs to be, ..., an affordable desktop service...". I support this and suggest that students also be allowed to purchase single units.

On page 22, it reads "93. Another common theme across Departments large and small was the value placed by users on having local, responsive, and expert support from dedicated IT staff who understood the needs of the institution.". I echo this.

I strongly support Recommendation F4 re: Modular approaches.

I hope that this feedback is of use to you.

Yours sincerely,
The Report is excellent but I would like to make a few detailed observations based on certain experiences over the last few years. I also have one more major comment on something I find surprisingly lacking from the Report: See f)

a) End-user charging by Clin Sch CS

From the sample I know, there is significant dissatisfaction with the charging scheme for the CSCS. I am informed academics can receive no help unless they sign up to a package deal including the Exchange email.

I am surprised this end-user charging problem is not addressed more in the report and it requires closer examination. The view given is from the provider not the customer.

b) Use of CSCS

i) Our School's dept, in trialling this service, is paying differently for it and is concerned about how that charge might change. Its view of what it receives would be very different if its users already paid the same way as do Clin Sch users.

ii) So far the CSCS is not supporting HPC needs and apart from minute use of the actual HPCS No doubt this will be resolved in the longer term but maybe not by expansion of CSCS. See c), d) and e)

c) Technical aspects of CSCS provision

The support is not always as good as claimed and I wonder how many users have contributed input to the Report. There are significant issues with Apple Mac/Exchange server, for example.

Perhaps somehow this is being solved within the trial but I receive adverse comments from senior academic users of the CSCS who use it directly (not)

d) Comparison to similar service from MISD

The similar MISD provision to offices such as has a locked down system that is indeed inflexible but therefore is more likely to work. Desktop support for non standard needs for by MISD is unacceptably low from what I hear. But as they have to use Windows, Outlook etc they are not struggling with Apple/Mac issues on top.

CSCS and MISD could fruitfully merge.

e) Comment from the scientific computing services
the confusion about HPC and Camgrid is well represented in the report and I endorse the recommendations here. I would welcome fusion with a central provision.

f) There seems to be an extraordinary lack in the report of discussion of teaching computing provision. As this is the case I will not comment further at this point but should you wish for more input about this please let me know.

g) Overall comments on report

A major challenge is clearly to marry up the best of UCS and MISD and suppress the worst. The fear is that this will not happen.

However the waste of resources and shockingly poor management that has gone on all around me since the last review makes me see the review report as largely correct in all major conclusions.
Dear Dr Bellingham,

As I read your report I was hoping that finally someone with some clout at their disposal would finally iron this unhelpful division out. But alas nothing.

I think it has to go one of two ways; Bring all COs down to Technical Staff, or raise all IT working Technical Staff to COs.

Yours sincerely,
Dr. Bellinghan I'd like to make a suggestion, that I should have made much earlier.

I suggest we work with the Senior Tutors, departments, Schools and Colleges, and come up with a list of minimum required/recommended applications for each course of study, so that the Computing Service could then use to make a recommendation on the minimum specification for computers, and that we should then work with a few selected computer companies so that we could then fully support (hardware, software, and applications) said machines fully under warranty ourselves. We could/should publish this so prospective students would know before they arrive what is supported and what's not, parents and students and staff too, could then purchase equipment based on this. This really is no different than a catalog of classes that students can review prior to joining the University. This is done a number of universities and colleges around the world.

Currently the only company that we can fully do this with (both laptops and desktops) is Apple for which they reimburse us for labor at a standard rate, based upon what's replaced. I suggest that we work with some of the major Windows based laptop companies like Dell, HP, Toshiba so that we can source replacement parts direct from the manufactures, instead of third parties, and where we'd supply access to the technical data (service manuals, take apart diagrams, parts lists, etc.) and they would reimburse us for our labor. As it is now a lot of students and staff purchase equipment that is not suited to their needs and the after sales support is difficult to arrange at best with some companies.
Dear Dr Bellingham,

Please find below a number of points which I hope are both useful and falling within your remit.

I should say, since my feedback is quite negative, that I consider this review, and the University's attention to IT provision, to be most welcome.

1. Concerning teaching, a) I find the facilities to be unsatisfactory, on two levels: the nature of the equipment in the rooms and the network coverage in the building. My own experience, which I know anecdotally to be shared by many colleagues, is one of carrying my own laptop to a lecture, spending some time setting up by attaching to AV equipment such as data projectors, which inevitably delays the start of the lecture because the room is invariably occupied until the start of my class, and then finding that the wireless network coverage is so poor that I am unable to guarantee access to internet resources. It should not be necessary to spell out why that is unsatisfactory. I have studied in 3 universities and taught in a further 2 before appointment to Cambridge, and the provision I describe here is, quite simply, the worst I have ever seen. provides networked pcs in all large teaching rooms (i.e. seminar rooms and lecture theatres) as a matter of course. Colleagues I have spoken to, have children whose primary schools routinely use interactive white boards. By comparison, provision is simply embarrassing. In an environment where universities increasingly compete for recruitment of students, Cambridge ignores these factors at its peril.

b) is better served; and of course I have less need of such resources when teaching seminars and supervisions. But there is certainly scope for review of resources there as well. I am aware of ongoing and seemingly endless maintenance in that building; I am unaware of the detail, but have the sense that IT support staff are doing their best with a very difficult situation.

On the level of support, I have found the online information, the services provided centrally, such as PWF facilities, and the support staff in my own faculty, to be excellent.

I hope that some of this is helpful. I would ask that my comments be appropriately anonymised if circulated; but you are welcome to contact me for further comments or clarification of anything I have said.

With best wishes,
Dear Dr Bellingham,

I would like to amplify about the omission of any consideration of the training provision offered by IT service providers within the University. I differentiate this from 'teaching' in that it does not form part of any direct teaching for degrees awarded by the University. However it does provide in many cases a crucial foundation for researchers, academics and students alike in many aspects of computing that are crucial to their research, teaching & learning.

I am most familiar with the training offered by UCS so will focus on that, although I am aware that MISD also provides training courses to University and College staff on the use of key systems it provides such as CamSIS and I believe that IT training courses are also run by other parts of the University.

UCS training is delivered in two ways:

* self paced DIY learning supported by pre-packaged course materials
* instructor led training.

The full range of the current UCS training courses is listed here - [http://www.training.cam.ac.uk/ucs/Theme](http://www.training.cam.ac.uk/ucs/Theme) - may I draw your attention to the fact that there is a very wide range of instructor led courses that are delivered by UCS staff. The range includes introductory as well as more advanced courses on the use of standard software packages such as the MSOffice suite, more specialist software packages such as SPSS and Matlab, courses on software languages & scripting (Python, HTML, CSS, SQL), as well as industry recognised qualifications for IT staff such as the CISCO CCNA which underpin career development and progression opportunities for Computer Officers within the University.

I think the latter is an area that could potentially be extended to include more professional qualifications to enhance staff career progression opportunities.

Regards,
Dear Dr Bellingham

The Review of IT infrastructure and support is timely and much needed. The comparisons with other Universities in the Russell Group are illuminating, however cautious we may need to be about the results.

One aspect that has not caught the attention of this review is the area of management information reporting. CUFS, CHRIS and CAMSIS, the big three applications, are all mentioned but the various reporting tools in use are not. Reporting tends to be the last component to be added in the project implementation sequence. The review mentions reporting only in the context of statutory returns which as one respondent has already acknowledged places a great burden on the UAS in particular and the sector in general (re: a post by Dr Padman on 21 July to the discussion thread “Two central organisations”). But management information reporting activity covers a range of activity from operational delivery/decision support, performance measurement, dashboard reporting and data modelling. We carry out a great deal of operational reporting but much more needs to be done to develop the University’s ability to run a strategic reporting function. I would like to see this balance of activity change but we face a number of barriers.

Currently have a mix of reporting approaches in MISD which *per se*, may not be seen as a problem. Both HR and Financial reporting have relied on Cognos whereas another tool appears to have been selected for CAMSIS. The Finance Division have had designed and delivered numerous data extracts which has allowed speedy reporting and reasonable performance to be achieved. HR is still reliant on a third party catalogue first adopted in 2008 and while this was a very quick fix at the time, problems of performance, suitability and reliability occasionally arise.

Despite all of this investment it is still difficult to extract timely and meaningful information and to be able to deliver it securely to those that require it. I am not aware that we have a reporting or management information strategy. As the volume of data handled is increasing we are fast outgrowing our capacity to deliver information across longer time frames with speed to the correct target audience: the lack of a secure email infrastructure makes the need to rely on bursting approaches essential for those clients in receipt of sensitive data – this is particularly the case with HR data. Until the issues with the email system are resolved it is difficult to see how another approach can be adopted. A more tailored approach to information provision is highly desirable. It would be interesting to see how other Universities handle these issues.

Legitimate requests are considered carefully whereas the would-be spammer is politely turned away. However these requests introduce problems if we cannot have confidence in the email address data. Identity management is still a major issue - other universities simply don’t have this problem. Standardised work email address formats are the norm elsewhere.

I would like to see a scenario where authorised middle managers can help themselves to the management information presented in an easy to digest manner. Elsewhere senior managers could be offered KPI information on a monthly or termly basis. We cannot expect many management staff to become reporting analysts so we have to find a way of providing information at varying levels of
granularity without imposing extensive training requirements. We want to roll out reporting provision without massively increasing the workload imposed by increased user administration that comes with each additional reporting tool in use. We should be able to increase the variety of information themes offered and maintain data security without constantly running up against performance issues. All of these problems point to a data mart or data warehousing approach.

Will the review offer an opportunity for a review of management information reporting provision?
Dear Jim,

I have read the IT review many times over and have the following comments.

Where is the strategic direction for teaching and learning within the review? Managed Cluster Service (MCS) which is a multi-platform rich application experience used within departments and colleges (18 and 24 respectively). The MCS runs system specific software across Windows, Linux and Mac both within classrooms and labs on over 1700 machines. Where is the mention of this provision? I believe a major part of the review has not addressed this facility and the direction taken as a primary service from the UCS.

The MCS also provides a central file store which has over 20,000 users, which can be accessed on managed and unmanaged machines, alongside a web interface inside and outside of the cam domain. This again is used primarily within teaching, yet no mention of this is in the report or recognises it function. Is this a complete removal of service or a service which has been overlooked?

Alongside the MCS is the UCS teaching rooms, which provide a valuable service not only for courses, but for outside hire and drop in facility. This again is based on having an application set of over 300 separate software installs and has not been mentioned at all in the review.

The MCS also provides an opportunity for local IT staff to concentrate on local support and developments, whilst the desktop provision is provided centrally. The reversal of this would devalue the local staff and they would be continually packaging software and updating images for teaching and learning. Whilst this is a choice per institution, any usage of the MCS allows for a standard and flexible desktop to be provided across the University and Colleges. Where is the flexibility within the IT review for teaching and learning?

The definition of a desktop is unclear. At present, this seems to include any device that interfaces with a user. The MCS provides this within a classroom and lab, and will be evolving towards an investigative mobile strategy. Where within the report is the mention of a mobile strategy which allows for equivalent use of the MCS? I again find the omission an oversight.

To sum up, the IT review has missed an opportunity to mention and concentrate on the flexible and rich application service for teaching and learning. The review should address this with appropriate amendments and allow the wider community to see that whilst administrative functions are important, the strong element of teaching and learning is paramount to providing a strong, cohesive, consistent and robust function for the diverse student and lecturing body alike from within a “desktop” environment.

Kind Regards.
Dear Dr Bellingham,

I am deeply concerned about the proposed governance of the projected merged MISD/UCS. It is suggested that the line manager of its Director will be the Registrary.

The University’s core business is education, and research. It requires administration only to serve these ends, not as an end in itself.

Information Technology is central to both core activities, embracing all aspects of research, from grant submission, review, publication, reporting, as well as being an absolute requirement for the conduct itself of research. Similar considerations apply to the education of our undergraduate and graduate students, through application, recruitment, the delivery and management of teaching, and examination.

I should perhaps remind you that the Administration's approach to IT systems, through MISD, has included the implementation of off-the-shelf bookkeeping systems (CAPSA [1]) and grant application management systems (pFACT) that, in the first instance, left us unable to place orders for several weeks, and in the second, still requires the user to subvert software designed for a different purpose to achieve a usable outcome.

The management of IT within the University must reflect its crucial position in our core business. Therefore, I am firmly of the view that the Director of the merged Information services should report to the ultimate manager of our core business, that is, the Vice Chancellor.

kind regards

[1]
I don’t have enough time to write an extensive review of the report - there are many gaps that could be mentioned but there are a few things that jump out at me as being worthy of response.

1. In the report both Caret’s and the Clinical School Computing Service’s roles in providing IT support and infrastructure are noted (15 and 97-100) and yet they are not considered in a review that is intended to improve the provision of services and support. It isn’t logical that such improvements should be made without including the services that these two groups provide, from budgetary considerations and especially since C2 proposes that they may migrate into the new organisation after it has been established.

2. There is very little consideration of either students or teaching and learning in the review. UCS is to a large part aimed at support of teaching and learning, so this is remiss.

3. The full extent of examples for research computing are the HPC and the Grid, and the recommendation G1 and G2 reiterate this (along with a suggested membership of a subcommittee). There are massive challenges in the support of research computing that are outside this small area, most importantly the handling and storage of 'big data' but also the digital challenges in humanities computing.

4. If it is to be credible that the new structure sits outside the UAS, then the director should not report to the Registry.
Dear Jim Bellingham,

As part of the consultation process, I would like to say that the current service provided by UCS is excellent: their management and knowledge of the UNIX and remote Linux service is superb and much appreciated.

I also feel that it's part of the job of a university to be able to create software in-house [such as Camtools] rather than to out-source it to commercial providers. Some of the best software I use has been developed by universities and I'd hope this links research with practice.

I hope this might be useful to the consultation.

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A response to the IT Review

30 November 2012

I shall structure my comments according to the draft recommendations in the document.

A3, A4  Facilities for staff and students

The principles are quite straightforward: “people should have what they need”. Why, then, does the panel try to pre-judge what they will need in the body of its text? §45 specifies what staff and Ph.D. students will need in contrast to non-Ph.D. students. Where do research-based Masters’ courses fit in? Experience suggests that any classification of courses leads to a panoply of special cases. This University prides itself on the close association of researchers and students. Locking the students out of the common file storage that researchers might want to use to pass data to them seems short-sighted at best. It is also symptomatic of the neglect of teaching throughout this entire piece of work. I would advise against any such qualitative split.

A5  Whatever happened to Teaching and Research?

Standing alone, principle A5 is ridiculous. Either it can be taken as read or, if it needs spelling out, then so do its peers for Teaching and Research:

A5b  The University needs information systems that promote efficient and innovative research and support its statutory and academic reporting requirements.

A5c  The University needs information systems that promote effective and innovative teaching and learning.

The cynic in me would suggest that A5 was parachuted in solely to support the line management chain through the Registrary.

A6, A8  Faster horses

“If I had asked people what they wanted, they would have said faster horses.” — Henry Ford

Principle A6 as given runs the risk of providing purely reactive IT in Cambridge. Principle A8 suggests that innovation should be driven by the Schools but makes no suggestion about how this should be achieved. Does the panel have any evidence that the Schools are currently bursting with innovative ideas which are being held back by the poor IT structures of the University? The panel should quote such examples if they have them. We run the risk of academics asking for faster horses.

I believe this can be addressed in the structures of the IT Committees and the School Councils. See my comments in B1 below.

A7, E1  IT Staff

Principle A7 makes the pious remark that we must look after our IT Staff. Recommendation E1 then fails to deliver on that promise with a weak excuse in §116 that the problem is bigger than just IT Staff. The review needs to take a lead on what HR needs to deliver for the IT Staff at least, and if HR feels it is appropriate to widen the remit then it is welcome to do so.

I recommend a greatly strengthened recommendation E1:

“The University’s HR Committee should immediately review the employment conditions of IT Staff employed directly by the University with a view to

1. moving the posts to being School appointments,
2. permitting greater mobility between posts,
3. establishing a career progression path, and
4. determining suitable training for various stages of the career path.”

1 Alas, this quote is probably apocryphal.
B1 Syndicates and committees

Recommendation B1 is the most important structural recommendation in the document. Unfortunately, all it does is to recreate the PRC and General Board in yet another guise.

The Heads of the Schools are not IT professionals. They are very senior members of the University’s academic body. They are not going to have the direct knowledge of innovative IT. They are not going to be the technologically disruptive influences that progress requires. Having these six members of the committee will lead to it being entirely hide-bound and full of old men (and typically they are men) moaning that they can’t see their grants online.

The Librarian should not be a member of this group. She is conflicted by her control of an additional University-wide IT organisation, the combination of the Library’s Automation Group and CARET. This body is not under the control of the proposed committee so she is has a conflict of interests. Alternatively, if the UL’s computing service was brought under the ægis of the committee then she should have the same attending rights as the proposed CIO rather than full membership.

I agree that the PVC for Teaching, PVC for Research and the Registrary (for Administration) should be members. Similarly I agree that two students should be members.

What would the Heads of School be better replaced with? One of the topics that has come up repeatedly in the consultation is the lack of communication in IT in the University. I would address that issue and my innovation concerns with the following recommendation:

“Each School should identify an academic known for his or her innovative use of IT in research and teaching. This academic should be co-opted onto the Council of the School if not already a member to advise on IT within the School and should represent the School on the ISSC.”

This will give a clear communication line between the front lines where IT is in real use for teaching and research, the Councils of the Schools, and the ISSC where University-wide priorities will be discussed. It will also give a more innovative and proactive ISSC.

More thought also needs to be given as to whether a single College position on the committee is adequate. The Colleges account for a sizeable fraction of the greater University’s user base. I would suggest very strongly that there also be a member of the Senior Tutors’ committee on the ISSC.

The principle that this committee have a common pot of money to allocate between administrative and research needs is entirely admirable. I would suggest that the panel go further, though, and integrate the use of IT for teaching into the ISSC’s remit and have a larger pot divided up according to the needs of the three constituencies: teaching, research and administration.

B2, G2 Subcommittees

There is an inconsistency in the text of the consultative document regarding how much the new committee gets to define its own structures and subcommittees. One the one hand §66 says that the panel does not wish to dictate to the ISSC but on the other recommendations B2 and G2 make a number of “suggestions” which, of course, will be treated precisely as diktats regardless of any caveats.

I would recommend removing this ambiguity by specifying the subcommittees (and their remits) that the ISSC starts with and instructing them to review the situation after one year of operation.

The four subcommittees identified in the consultative document are these:

1. (Non-networks) Operations subcommittee ($\S 68$)
2. Networks and telephones subcommittee ($\S 71$)
3. Administrative systems subcommittee ($\S 71$)
4. Research subcommittee ($\S 139, \S 140$)

Astonishingly there is no mention of teaching as a peer of research. Currently there is a Teaching and Learning Steering Committee under the General Board. This was established in what was, to be frank, an abuse of the General Board’s powers. There is an opportunity here to put it on a more legitimate foundation by reforming it as the ISSC’s Teaching Subcommittee.

The consultative document also recommends that the operations subcommittee provide technical advice to the ISSC. There is a serious danger of “toys for the boys” here as it is unclear that its parent committee will be able to fairly judge...
the advice they receive with the Heads of School as its members. My proposed membership would be capable of far better liaison with any technical advisors in the subcommittee.

C1 The CIO and strategy

If the panel is serious in its desire to recruit a good enough individual it needs to start by using language that the rest of the world understands. If we want to recruit a Chief Information Officer then we should call the post that. I would argue that he should have attending rights at University Council and General Board too.

There is also ambiguity as to who gets to define strategy. Is it the ISSC or the CIO? With my modified ISSC I would be comfortable with the committee defining strategy and the CIO being responsible for tactics. With the currently proposed ISSC I feel the CIO would have to define strategy in consultation with the committee and I am not sure that is healthy for the University; I would rather that strategy was academically led.

As part of the maintained focus on the University's academic purpose I also think it is inappropriate for the CIO to report to the Registrary. This invalidates the concept of being “accountable to” the chair of the committee. It is not clear what this even means if the position is not line managed by the chair. I strongly recommend that the CIO be line managed either by the chair of the ISSC or by the Vice-Chancellor. A direct reporting line to the V-C would also boost the esteem associated with the post and encourage applicants of the quality we desire.

I have heard suggestion that the Registrary’s line management will be purely for “pay and rations”. §86 declares that the Registrary needs influence over the CIO for regulatory purposes. In fact, this is an argument for the Registrary to chair the corresponding subcommittee, not to line manage the CIO.

C2 Merging University IT organisations

I support the merger of the UCS and the MISD if it is done properly.

There are two very different cultures in the two organisations. The UCS has a quasi-academic background and MISD’s is administrative. The merger must be handled carefully, therefore. Unfortunately the language of the recommendation “as soon as possible” is likely to provoke haste rather than care. Members of Council with experience of mergers know just how long it can take to do it properly and maintain the goodwill of both parties.

I support a merger, but not an acquisition.

The recommendation makes a wishy-washy comment that the “ISSC should examine whether other central service providers should also migrate to the new organisation.” Unfortunately it makes no comment on what authority the ISSC should have in this regard. Can the ISSC seize bodies? Is it expected to suggest integration in its annual report to Council? A sentence answering this in the recommendation would define the committee’s powers more clearly.

More importantly, the recommendation does not define what a “central service provider” is. Schools are free to set up their own computing services. The Clinical School has done this. The Clinical School Computing Service (CSCS) is now offering IT support to departments in other Schools and is slowly taking over IT for the School of Biological Sciences. Is running the IT for two Schools enough to count as a “central service provider”? How many Schools does it take? (Six?)

C4 Costing central provision

I support recommendation C4 but caution the panel that there is a financial issue that must be addressed with the word “affordable” and with the concept of competing service provisions.

Centrally provided services tend to be properly costed. Electrical charges, staff costs, building overheads etc. all get included along with hardware and software prices. When departments provide services in house they often neglect many of these costs. If there is to be rational competition then some uniform accounting standard for full economic costing must be defined and enforced.

D1 The missing “else” clause

Recommendation D1 gives Schools the responsibility for ensuring that they meet the minimum standards. What happens if, in the eyes of the ISSC, they don’t? I would suggest that this recommendation be enhanced with a requirement that the ISSC’s annual report to Council contain a formal note of compliance or non-compliance with the standards. Council has authority to make demands of a School; the ISSC does not.

It is also worth making clear what the complaint route is for people who believe a School is failing in its duty. The first point of call should be to the Council of the School, but the ISSC should be formally recorded as the next place to report to should the complainant not be satisfied with the School’s response.
D2 IT coordinators and communication
IT coordinators are a sticking plaster over the gaping wound of poor communication between the senior committee and the front line IT staff. I think this problem is better addressed by having an academic responsible for IT on each School Council and having an IT career path that spans a School. The “IT Coordinator” naturally maps into the senior IT staff post in this structure and can act as Executive Officer to the academic, who should own School IT policy.

F1, F4 Only “particular systems”?
I am not sure what the qualifier “particular” is doing in recommendation F1. All systems should have an intuitive user interface, period. Recommendation F4 should similarly be applied uniformly.

F3 Passing the buck
This recommendation seems rather strange. Does the panel think urgent action is needed? If it does then it should say so and justify its claim. If it doesn’t then why does this recommendation exist? Ensuring that adequate services are provided is already part of the ISSC’s proposed remit.

G1 Funding the HPCS and the Data Centre
There is a cart before its horse in §140(iv). There should be a full economic costing of computing. (See my comments above for recommendation C4.) This costing can involve a formally decided carbon cost. If that costing model leads to a central data centre then such a centre should be funded, built and used. A proper analysis of costs will also inform us about how much it is reasonable to spend on a data centre and see savings over a certain period. To say that any pricing model must have use of a data centre as one of its results is intellectually dishonest.

H0 Teaching
This is the recommendation that the panel did not make in any shape, having unreasonably omitted Teaching from the consultative document. The only reference to Teaching is the suggestion that non-Ph.D. students need fewer facilities than Ph.D. students.

I cannot overstate the significance of this neglect; it fundamentally undermines any claim to have a view on the entirety of the University’s IT needs.

The University rests on its laurels to a dangerous extent with respect to teaching. We receive decent aggregate figures in the National Student Survey but these are strongly biased by an appreciation of the supervision system. The University needs a strategy to improve its teaching and IT will, almost certainly, be an essential part of that.

So this is my recommendation for teaching in the IT Review:
“The Teaching Subcommittee should establish, within one year, a three year plan to demonstrate uses of IT for teaching in the University to improve the quality of the students’ education in all six Schools. Educational IT projects should have access to the same pot of money as Research and Administrative projects.”
Computer Service IT Review – Comment in relation to Graduation Photography

Dear Dr Jim Bellingham,

I appreciate that this topic is not mentioned in the review it being a small specialist aspect of the work of the Photography and Illustration Service (PandIS) which itself is at the periphery of the Computing Service and this much wider review.

The in-house service grew out of dissatisfaction with external providers and the lack of understanding why Cambridge is special. At that time the following benefits were realised by bringing the service in-house:

- Greater quality control;
- Introduction of photography within the Senate-House capturing the moment at which the degree was conferred on each student;
- Lawn photography enhancements;
- Upgrading the service to include graduation ceremonies throughout the year, something external suppliers had not be interested in as they did not offer such attractive profit margins as the main June Congregation;
- Income remained within the University helping to finance services provided by what is now PandIS and an income contribution for the Registrary to finance the overheads for Graduation, Scarlet Days’ and other events.
- Improving certificate framing point of sale

I see PandIS in decline. This comes as no surprise. PandIS and its predecessor the Audio Visual Aids Unit, grew during the heady days of analogue imagery when there were more than 50 University technical Photographers and imaging scientists across the campuses and disciplines. With the advent of the digital age such services need to continually develop their offer if they are to survive.

While sad to see PandIS in decline I feel the Graduation photography service which it provides needs to be considered as a service to the university as whole. Given the current financial climate now may be the time to look again at out-sourcing the service, but with suitable safeguards to ensure a year round service and maintenance of the high standards set by PandIS.

If you wish to pursue this further and I can assist please feel free to contact me.

Yours sincerely
Dear Dr Bellingham,

I have followed this review with interest, and am convinced of its merit.

I have a couple of possible solutions to address various concerns raised by the IT review, and would be grateful if you would put them forward for consideration at the appropriate time.

Those issues being:

- The gestation of best practice (Principle A6)
- The avoidance of duplicated effort
- Staff mobility and the flexibility of teams (Recommendation E1)
- A modular approach to systems that accelerates delivery (Recommendation F4)
- Support, development and retention of talented and committed computing support staff (Principle A7)

I propose that we enable a form of internal consultancy.

1. IT staff should be given the opportunity to join a searchable IT personnel database which lists their specialities, so that they may be approached as experts on subjects as the University requires.
   - This would allow the very best possible practice to be established in novel or emergency situations.

For this to be a searchable system, pre-defined skill sets would need to be attributable to individuals. The individual would then be able to include a free text self-description (or CV) laying out the exact nature of their abilities.

2. IT groups (at whichever size they operate) should be encouraged to register their successful technical implementations on a similar database, along with their availability to consult on them.

   For instance, they may choose to offer:
   a. Advice in emergencies only
   b. Planning assistance
   c. Onsite Consultancy
   d. Full Implementation and Training

These would be provided as a charged service, at ISSC set hourly rates, designed to compensate the consulting department for the training and time of the borrowed staff. The hourly rates would increase with the level of involvement (as suggested above), and would not vary with the grade of the staff. Thus, inviting a grade 6 or a grade 8 to provide onsite consultancy would cost the same and it would be at the discretion of the requestor to choose someone they felt could help them. This would ensure a fair level of compensation between small and large departments, that often grade differently.
• This system would reward departments for training their staff and encourage development of transferable, innovative technical solutions. A pool of capable IT staff would become a financial asset to the department.

• Staff completing multiple implementations of a technology would become better skilled, more efficient and therefore more desirable as an employee, benefitting them.

• Successful implementations could feed into appraisals and the contribution point scheme to reward IT staff.

• Other departments considering implementing an established technology would have the option of ‘quick starting’ their project for a modest outlay that would stay within the University.

• If common tasks are performed in a more centralised manner, as per the recommendations of the IT Review, a probable consequence would be an increased number of technology specialists available within departments, which would lend itself to this system.

• A record of the flow of consultancy (and money) within this system would inform the School-Level IT Co-Ordinators which technologies were becoming important to their school, and could therefore guide the ISSC in which systems to look to provide centrally.

In order that this system have enough of an enrolment so as to be effective, it would need to be enabled and promoted centrally, and obstacles to smaller departments minimised. As well as the central databases, a simple mechanism for recording and billing for consultancy time would need to be provided, with a reporting mechanism for the Co-ordinators.

Historically, it has been very hard to tell IT staff what they should do or should not do with their time, and very hard to convince departments to give up their in-demand staff. However, I feel that this system has enough built-in rewards for all parties and that it should be possible to implement. It would be very to be able to locate people with the existing skills that we need to borrow in return.

If you have any comments or queries, please feel free to contact me. I hope that the recommendations of the IT review move ahead successfully.

All the best,
Dr Bellingham,

I would like to submit the comments below for the consideration of the review panel. To put these comments into context I should say that I am wholly in favour of this review; I think it is long overdue, and the report’s recommendations will have a huge positive impact on the provision of IT at Cambridge if they are implemented. My points below are intended to address details which I think may have been unintentionally omitted from the report. I hope addressing these can add weight to the report, and potentially avoid problems in the future when the new ISSC looks to implement the report’s recommendations.

(These points are made in the order in which they occur in the report, not in order of importance. The role of School IT Co-ordinator is the one on which I have most to say, and which I feel is most important in my submission).

1. I understand from attendance at the first open meeting that there is some confusion about the use of the word “desktop” or “desktop service”. In principle A3 “access to a desktop” could be phrased “access to a client system”. This covers desktop computers, workstations and laptops as well as mobile computing devices such as tablets and smartphones. However, I think more importance should be given to the wider University’s understanding of the phrase “desktop service” or “desktop”, and not to Computer Officers’ understanding of the same.

2. The minimum levels of service (paragraph 45) should be informed by and refer directly to;
   a. The relevant legislation (e.g. Data Protection Act 1998 and the Computer Misuse Act 1990),
   b. Policies, conditions and contractual obligations to which the University is a signatory (e.g. JANET Acceptable Use Policy), and
   c. The conditions which may be attached to funding centrally or directly to departments (e.g. the Department of Health Research Governance Framework for Health and Social Care).

I recognise that it is difficult within the University to impose rules from the centre, but I think referring to existing external legal and quasi-legal conditions would carry more weight, especially when breach of such would carry a significant financial penalty.

3. In paragraph 64 point iv the wording “deliver the administrative and management needs of the University” should be amended to read “deliver the teaching, research, administrative and management needs of the University”. I’d also recommend any similar sentences are adjusted in the same way, to avoid any interpretation at the Council that the report does not address the needs of academic staff. I’m sure there was no intention to exclude research or teaching, but the report has already been interpreted in such a way.

4. Whilst paragraph 64 point vii proposes that the ISSC should “make and publish rules for the regulation and security of the use of information technology and systems within the University”, I agree with other submissions on this topic that Information Security Strategy should be made an explicit responsibility of the ISSC. I also suggest that the Operations Sub-Committee should be made directly responsible for information security across the University, and given the authority to achieve that
end (including sanctions of or withdrawal of service from individuals or institutions whose use of IT resource threatens the security of the network).

5. I am not sure that the choices offered in recommendation D1 should be exclusive (or whether they were meant to be), and therefore suggest the sentence should be changed to read “done by local provision, at School level, by use of a centrally provided service, or a combination of the above”. This gives total freedom to the school or institution to mix and match from the available services, and would address the concern some institutions may have of entirely giving over their service provision to a larger institution.

6. I am strongly in favour of the role of School IT Co-ordinators. An effective two-way dialog between service providers and service users is critical to maintaining value for money and effective provision. The role is not very well defined in the report though, and as a result there is a risk that the roles will be interpreted differently by each school, and the effectiveness of the role drastically reduced. I have made some suggestions below which I believe are worthy of consideration, either for inclusion in the report or for the attention of the new ISSC when it is formed.

   a. A better title for the role would be “School IT Service Manager”, which focuses not only on the technical specifics but also on the successful delivery of services, and places more emphasis on the professional nature of the role.

   b. Service Managers are traditionally focused on building relationships within their organisation to properly understand user needs, and building relationships with external bodies to facilitate service delivery. This matches paragraph 103 points i and iv perfectly.

   c. The Service Manager role does not normally include line management of IT staff who are delivering services. This allows them to be more balanced and independent in their role liaising between technical IT staff and (generally) less-technical users.

   d. This role should be described more clearly in the report, ideally defining the relationship between the role holder and school and department management, and between the role holder and school and department level IT staff. There are potential tensions in both relationships, but unless the role is given some authority it is unlikely to be effective.

   e. Because School’s may not be convinced of the importance of this role it may be necessary for some central funding to be allocated to it; either to fund a full time role, or match funding with the School to provide a full time role post. It would be extremely difficult to fulfil such a role on a part time basis, especially in Schools were service provision is fragmented into smaller departmental IT departments, and where there is no cohesive view of user needs. In the School of Clinical Medicine, where IT provision is already centralised, and there is a supporting management structure, this role could added to an existing post holder. However, in the interests of balance I am not sure whether the role should be independent of the service provider to maintain its autonomy.

That concludes my comments on the report, and I thank the review panel for their time in considering my comments, and for the review process over all.

Regards
Feedback on the Draft Report of the IT Review Panel

30th November 2012

1. The organisational proposal is unrelated to, and overshadows, the actual objectives identified

From both the Draft Report and subsequent discussion, it is clear the panel have identified a wide variety of areas in which progress could be made if agreement were obtained and sufficient focus were applied. The fact of the matter is the organisational changes are unrelated to the majority of the objectives highlighted by the panel and in the future the ramifications of the proposed organisational changes will have more impact than the many excellent but overshadowed objectives in the Draft Report.

2. The organisational proposal is highly significant and should be highlighted clearly in an initial summary to the Report

The Draft Report recommends a committee reporting of a merged UCS and MISD to a new committee chaired by the Senior Pro-Vice-Chancellor for Resources and Planning, with line management to the Registrary. The obscurity of these recommendations in the Draft Report falls far short of their relevance.

3. Increasing the administrative management of IT in the collegiate university is a step in the wrong direction

Bringing the UCS under the line management of the Registrary simply does not address any of the identified objectives, there is no justification for it in the Draft Report, it would have negligible popular support in the collegiate university, and no-one has attempted to defend the recommendation at any discussion or consultation. The university should aspire to stay ahead of its competitors in recognising the increasing strategic importance of IT to world-class research and teaching, and assume more senior level reporting would be appropriate.

4. Replicating the PRC as a top-level IT committee has more disadvantages than advantages

We would stand the best chance of success if the Pro-Vice-Chancellor for Resources and Planning were to chair the existing ISSS, and the powers of the proposed ISSC simply delegated to that committee. There is nothing to stop more senior members representing the Schools
being appointed to the existing Syndicate if that is intended. Creating new committees in Ordinances, discussing at length the representation, membership and remit of sub-committees, and getting that wrong before finding improvements is an unnecessary distraction from the intended activity of addressing the real objectives of the Review.

5. **A real or apparent increase in the centralisation of IT will actually cause departmental and college IT to move further away from the centre.**

This would be the unintended consequence of creating an apparently more centralised IT function at the university while reinforcing the self-determination of the Schools. The UCS has worked hard over many years to make the university more ‘joined up’ and merging with MISD would not help with this complex issue. This issue at Cambridge is far more subtle that it looks particularly to colleagues with a more central viewpoint.

**General**

These comments have not listed the many excellent objectives that have been highlighted in the Draft Report, and the advice presented in this feedback is entirely aimed at maximising our ability to genuinely progress those objectives over the coming decade. The objectives as expressed in the report are insightful and appropriate, and should be proactively addressed with the powers and membership of the ISSS adjusted as appropriate without needing a change in Ordinances.
Currently, the teaching and advice on IT-related skills, and assistance with many problems, are done by a large variety of people in many departments. These are not just Computer Officers, but include post-doctoral workers and Professors. Paragraph 132 is misleading to erroneous in this respect; only the simplest support is or can be done by PhD students, because they lack the knowledge and experience, and even post-doctoral workers can usually only cover one aspect.

A few departments (such as Engineering) coordinate such support; in some others (such as Physics) it is done within some research groups; but many others have no mechanism (often because they do not have anyone with the requisite skills). Currently, the Computing Service is by far the main organisation that helps researchers who have nobody else to ask.

This is not one-way. Many of us across the University collaborate informally. Whatever solution is adopted (and there are many possibilities), it needs to be University-wide. The divisions between the central support organisations and the departments, and between departments, need to be reduced both for research and teaching. One of the main defects of the proposals in this Review is that it deepens them.

As far as support for graduate and staff teaching is concerned, any such scheme must coordinate at least the relevant parts of the UCS, MISD and CARET, and involve at least the Department of Applied Mathematics and the Statistical Laboratory, but more probably a good half of the departments.

A last remark is that, in 1972, Cambridge was one of the very few universities that led the world in the advanced use of IT in Arts and Humanities but largely lost that around 1987, as the result of a 'decentralisation' very similar to the one proposed by this Review. While I think that history is unlikely to be repeated, wise people always take warnings from it.
Status of the Director

As others have said, if the University wants to appoint someone of the appropriate calibre, it will have to appoint someone to a position of sufficient status.

In 1993 (as in 1972), the Director of the UCS was an ex officio member of the Information Technology Syndicate, and secretary. The Director was also ex officio on the Computer Science Syndicate, the Faculty Board for the Computer Laboratory. Furthermore, the duties of the Syndicate were (inter alia):

   (a) to establish and keep under review, subject to the approval of the General Board and in consultation with the Tutorial Representatives Committee, a policy for the development and application of information technology in support of the activities of the University and the Colleges;

   (b) to consider the needs of Faculties and Departments for information technology facilities and services, and to advise the General Board on matters relating to the provision of such facilities and services;

Note that those are not limited to solely developing a strategy, but to establishing a policy, and include advising the General Board on whether it should provide funds for IT facilities and services in departments.

The status of the Director of the UCS has been considerably reduced in status since 1993 (and 1972), and this Review proposes to appoint someone at the same status as it is today. That is not consistent with the Review’s conclusions that IT has increased in importance, and that the need is for a University-wide strategy (e.g. Recommendation B1).

Development of Strategy and Solutions

Over the past 40 years, there has been an increasing separation of the bodies responsibility for technical strategy and decisions and the people with the expertise and experience to make accurate and innovative judgements. This particularly affects medium- and long-term changes, which are often very different from the common perception of what they will be. This separation can be seen at all levels, including within the UCS.

This results in decisions often being taken by people who do not fully understand the issues, which leads to poor decisions, unexpected costs, inferior results and even failures. CAPSA was merely the most extreme example, but there are many others.

However, the Review proposes that there be no IT professionals on the ISSC, except that the new Director would attend, but even the Director would be appointed primarily on the basis of managerial ability (paragraph 83). In 1993, as in 1972, both the Head of the Computer Laboratory and the Director of the UCS were on the ITS.
On this matter, the Swinnerton-Dyer Report recommended (paragraph 50) that the Technical Committee of the IT Syndicate should be composed of entirely computer staff, except for the chairman.

Status and Career Prospects of UCS/MISD Staff

As a general rule, high-calibre technical staff are attracted to careers where they will be involved in the development of the strategy and decisions in their area. At least one person left the UCS to become a Professor at a good UK university, and others have been of comparable calibre. But, as is mentioned above, the involvement of technical staff in strategy and decisions has reduced significantly over the years, and even since 1993.

However, the ISSC Sub-committee which makes technical recommendations to the ISSC includes only Schools’ and Institutions’ IT Co-ordinators and the managers of centrally provided services, and only the Director from UCS/MISD. If the role of UCS/MISD were to be drastically reduced, that would be appropriate. The exclusion of UCS/MISD staff makes it almost certain that the existing problems of attracting suitably high-calibre people to Computer Officerships will get worse.

But there is another, equally serious, aspect. One of the reasons that there are staff representatives on the Information Technology Syndicate and are on the ISSS is for the same reason that there are on Faculty Boards and the Library Syndicate - it is good managerial practice to involve staff in decision making. This proposal would leave UCS/MISD as the largest body with no representation on its management committee.

Good candidates for Computer Officerships speak about the aspects I describe in this section, and decide not to apply. In at least one case, they took an Associate Lecturer job at lower pay, because the prospects were so much better.

Omissions and Errata

I have not studied the Review in the detail it needs, still less checked on on references, so these are only the points that I can handle from certain knowledge.

The last two sentences of paragraph 6 are erroneous - the relevant transformations took place during the 1980s, except within administration and finance. That applies both within Cambridge and world-wide. Except as far as administrative computing is concerned, the situation is similar today to 1993.

Paragraph 75 is probably substantially misleading to erroneous, because providing such support is not, in general, the responsibility of the UCS. That is not the UCS's decision, either, but the ISSS's and General Board's.

The first sentence of paragraph 76 is incorrect. All attempts are made to find off-the-shelf solutions and it is only when they fail that solutions are built in house.
CARET (paragraph 15) and larger departments (paragraph 90) are praised for innovation, recommendation F4 is to stimulate it and paragraph 138 and principle A8 say that it is critical, but the only references to the UCS's innovation are negative (as in this paragraph).

The last sentence is incorrect because all such priorities and progress are reported to the ISSS. The comparable processes in the UAS and the Schools have no such independent overview, as far as I know.

Paragraphs 79 and 82 are substantially misleading, because they are not placing proper weight on actual teaching or research - CAMTOOLS is essentially the only exception. In those areas, the overlap is primarily between the UCS, CARET and Departments.

Regards,
A response to the Review of IT infrastructure and support

November 2012

I would hope that a revised report would include an analysis of those risks and would propose measures to avoid or mitigate them.

I do however think that the following areas would benefit from further consideration:

- The report notes (para. 8) that in 2006-7 it was agreed that there were significant opportunity costs associated with merging the UCS and MISD. I would suggest that these costs are not only financial, but also concerned with lost staff time, staff morale and staff retention. I think it would be useful for a revised report to explain why these opportunity cost are no longer seen as a obstacle to a merger.

- There is much detail in the body of the report that is not reflected in the formal proposals. It is not clear the me how much of this is intended to amplify the formal proposals, and how much simply represents examples and suggestions. To avoid future misunderstanding I think it would be helpful for the status of this material could be clarified, or that it be struck from the report.

- In respect of the merger of the UCS and MISD I think it would be helpful to clarify which parts of the UAS will actually be involved. I understand that divisional boundaries within the UAS can be blurred at times - it would be helpful for all concerned to be clear exactly which parts of the UAS would be becoming part of the new IT services organisation and which not.

- There’s nothing in the report about how the new Information Services and Systems Directory will be selected or appointed, nor how the proposed merger will be managed. These seem to me to go to the heart of much of the risk of the entire process and is an area I would like to see addressed.

- There is nothing in the report about the future funding model for IT services. There are however various references to how Schools and Departments might ‘buy in’ services that they don’t want to provide themselves. This might suggest a wish by the committee for some sort of internal market. If so it's critical that we have a far
more level playing field than we have at the moment - the report mentions one of
the 'perverse incentives' in respect of charging, or otherwise, for the electricity and
cooling needed for HPC systems. I would welcome further clarity in this.

There is some apparent approval for the approach taken by the Clinical School
Computing Service to providing support. It's worth noting that such approaches
often addresses just the easy, 'low hanging fruit', leaving to other organisations the
more difficult issues. If these other organisations are priced out of existence this
could leave important needs unmet.

• Despite claims to the contrary, it's hard to see how the Report's proposals do much
to address the identified problem with career opportunities and mobility for
computing staff. This may be better in the merged MISD/UCS, and perhaps in
School-based IT support teams if they emerge (but the report obviously can't
mandate these). Apart from this, computing staff seem to be just as isolated as they
have always been - more so if the role of the merged MISD/UCS does not include
providing the support the UCS currently provides via its 'Techlink' scheme and
related activities. If, as is often claimed, staff are the University's most important
asset the this omission is curious - I would like to see the rather week
recommendation E1 receiving some further work.