Lord Hill of Oareford CBE
Department for Education
Sanctuary Buildings
Great Smith Street
London SW1P 3BT   17th September 2010

Dear Minister,

Department for Education Interoperability Review

Recently a summary of a review undertaken last year by Cap Gemini on behalf of the Department for Education about data sharing in the Education, Skills and Children's Services system was published on the DfE website[1]. It includes a section on the Systems Interoperability Framework (SIF) which is largely inaccurate. I am writing on behalf of the members of the SIF Association, and specifically the Association's UK Management Board. The board, an annually elected group from the UK members of the Association, is made up senior staff from a range of organisations including Management Information System suppliers, ICT solution providers, local authorities, Regional Broadband Consortia and schools.

The Association and its members are concerned about the numerous inaccuracies in the published review and would be grateful for an urgent meeting with you to ensure that these are corrected and communicated to the marketplace, and to discuss how we can best support the needs of the education community from schools through to national government and its agencies. For clarity we have set out the specific inaccuracies in an attachment to this letter, which we will also share with the wider SIF community.

We agree with the findings of the review that there is a compelling case for a national interoperability capability, and that is the reason that we have been working together within the SIF community, which includes the Department for Education as well as colleagues from the administrations in Wales, Northern Ireland and Scotland, for the last four years or so, to develop an interoperability solution which meets the identified needs of UK schools and the wider education system. The SIF specification is now deployed increasingly widely at school, local authority and regional broadband consortium level to share data between systems in a non-proprietary and secure way.

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[1] http://publications.education.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DFE-00523-2010

You may be aware that this report has been awaited with interest by the SIF community and others for some time, since John Callery, Chief Enterprise Architect, from your Department first shared some of its findings with the industry back in February and March. We have been keen to see the detailed report since then, and are disappointed that only a summary has so far been published. We understand from one of our members that the terms of reference for the review included reference to a number of deliverables and objectives which we have attached to this letter. Quite clearly the summary review as published does not cover much, if any, of the ground in that document. We would therefore be grateful if you would meet with representatives of our board to discuss how and when these major issues are to be addressed by your Department, and to understand how we can build on the power, size and momentum of the SIF community to help to deliver interoperable solutions that will help to address the needs of schools, local authorities and your Department.

We look forward to hearing from you,

Yours sincerely,

Karen Crowston and Paul Shoesmith

Co-Chairs, SIF Association UK Management Board

For and on behalf of SIF Association UK Management Board members:

Paul Shoesmith	Director, Technical Strategy, Becta - Co-Chair of the UK Board
Karen Crowston	Birmingham Local Authority - Co-Chair of the UK Board
Nick Barron	Head of UK Business Development, Edustructures
Tony Brown	Director, Children´s Services Strategy, CACI
Mike Edge	Head of Technical Architecture Group, RM Education
Rupert Hay-Campbell	MIS Adviser, London Borough of Barking and Dagenham
Ian Lehmann	Operations Manager, London Grid for Learning
Lyn McCullagh	Core and Curriculum Officer, C2K, Northern Ireland
Philip Pearce	Strategic Technical Manager, East of England Broadband Network (E2BN)
Roger Plant	Managing Director, Pearson Phoenix
Lawrence Royston	Managing Director, Groupcall
Ian White	Consultant, South West Grid for Learning

Invited school representation:

Laurence Nicholas	Assistant Principal, Ninestiles School, Birmingham
Isabel Riley	Headteacher, English Martyrs School, Birmingham

cc David Bell, Permanent Secretary, Department for Education

Comments on DfE Interoperability Review summary

Our comments on the section on SIF are set out below. Where we quote from the report its wording is given in italics.

SIF was designed to support the horizontal flow of information across different systems within a school (e.g. school MIS to catering and library) and vertically through geographic domains e.g. school to district to state.

The SIF specification now allows for the reporting of information traditionally viewed as "horizontal" at regional and federal levels. This model is used in both the United States and Australia.

Implementation of SIF in the UK context has resulted in complex workarounds to support horizontal interoperability (e.g. between schools and FE colleges for Diplomas) within a SIF geographic region (Tier 1) and is likely to prove unworkable for inter-region and cross local authority (Tier 2) interoperability.

The challenge of sharing data between schools and FE colleges to support 14-19 requirements has been mainly due to the institution centric nature of systems used in those schools and colleges. Implementation was difficult as business processes had to change, not because the SIF specification does not meet the requirements. Inter region interoperability has been demonstrated to work in the US and Australia.

SIF is designed to "broadcast" to all recipients within a SIF Zone rather than being targeted at specific users and / or systems

This is incorrect. There are two modes of transferring data – (i) request/response is a tightly controlled transfer between two specific systems; and (ii) broadcast events allows data to flow from a source to several recipients at once. However, even in this case, the list of recipients which can receive each specific type of data is strictly and explicitly controlled.

In addition, changes and additions to the specification during the last 12 months have addressed the outstanding concerns from within the community on how messages can be targeted at specific recipients.

There is no capability for optimising traffic flow through the SIF Zone or for assuring end-to-end delivery across Zones.

These capabilities do exist within the specification and are implemented based on business needs and requirements.

Vendors are developing proprietary workarounds to address these issues at the local (Tier 1) level

All specifications evolve and develop in order to solve new problems. SIF is evolving in this way so that these problems are resolved within the specification itself. This is far better than using proprietary interoperability solutions which require bespoke workarounds in every deployment.

UK and EU security and data privacy regulations are significantly more extensive than those in the US.

UK and EU security and data privacy regulations are different to those in the US, but the SIF specification is deployed in the UK in a way which meets UK and EU requirements. Security and data protection are not issues which are specific to the use of any particular interoperability specification; rather they apply in all interoperability situations. The SIF Association UK has produced an implementation guide which demonstrates how to address these regulations when deploying solutions that make use of SIF.

SIF has no facilities for the discovery of services (such as access and authentication; and national and regional indexes of service recipients, practitioners and providers).

If this is a requirement then there is a process for the introduction of new functionality to the SIF specification which involves contributions from members across the global SIF community. The SIF specification is developed in order to meet real world business needs and continually develops to meet those as they are brought to the Association by the education community. This particular requirement may also result in further challenges around security, which may make implementation of any specification harder to achieve securely.

Local organisations are developing proprietary solutions for identity verification and learner indexes.

These solutions are being developed in the absence of a national solution, but work effectively with existing federated solutions such as the UK Access Management Federation to meet national requirements. The SIF community is also establishing an Application Profile which standardises how areas such as Identity Management can be addressed.

SIFA UK has agreed to adopt the ISB National Business Data Standards

The SIF Association UK has been working with the Information Standards Board Technical Support Service to ensure that the SIF data model is consistent with the DfE Business Data Architecture. The DfE model, however, does not include all data items that need to be shared at local level. The SIF Association UK community continues to be willing and determined to work with the Information Standards Board Technical Support Service and DfE Chief Information Officer group to develop the data model in a way which supports business needs at local, regional and national level.

The UK Systems Interoperability Framework Association (SIFA UK) is driven by members' and managed through committees of willing volunteers. Consequently developments tend to be driven piecemeal by immediate operational needs, without the direction of an overarching strategic roadmap. Progress is reliant on volunteer effort. Whilst this approach has been very successful in building community interest, it is not at this stage of evolution sufficient to drive through the development of substantive national interoperability specifications, where dedicated expertise and a coherent design mentality is needed

The way in which the UK community has developed over the last four years is a strength rather than a weakness. It is proven to deliver a data model which meets business needs, and is now deployed in many situations across the UK, as well as similar deployments in the US and Australia. Support provided by the Department for Education to the SIF Association working groups has been and continues to be welcomed. The expertise within the SIF Association working groups is second to none, and the Department should use and support the activity to ensure that the work can continue at an even faster pace.

Ownership of the SIF interoperability specification (Agent and Zone) is retained by the US organisation and any changes have to be agreed at this level

The SIF Association is an international organisation working mainly in three countries, the US, UK and Australia. There is a governance structure which has been developed to ensure that the needs of all three countries are taken into account within the specification development. The most recent changes to the infrastructure specification have arisen from needs identified in the UK. Working collaboratively across all three countries has been shown to enhance the specification for the benefit of all members. The SIF Association owns the brand, but ownership of the specification rests locally with the community.

SIF US has a stated intention to release a web services version of the interoperability specification towards the end of 2010 (Columbus). This would theoretically open SIF up to the independent Web Services market (e.g. for security). However, the roadmap for delivering this has not been articulated and it is not clear how SIF would deal with issues of backwards compatibility (a particular issue with its substantial US user base), and variability between the US and UK specifications that would invariably be required

This issue was identified and addressed before development of the latest release began.

In summary, SIF was not designed for the UK education skills and children's services system, and requires substantial vendor specific workarounds to meet requirements in key areas such as security.

While the SIF specification originated in the US, it has been demonstrated through the numerous deployments in the UK that it does meet the needs of the UK market, and that it continues to be developed to ensure that emerging needs are met. There is a localised UK specification, as there are local versions in the US and Australia. Any vendor specific workarounds that have been implemented are more to do with the generic challenges of sharing data between systems that were not designed with the business processes necessary to data sharing in mind.

System-wide interoperability review: Capgemini commission

The DCSF is looking to deliver a workable interoperability architecture to support the 14-19 reform agenda and other policy initiatives that require data sharing. This piece of work requires knowledge of the cross government landscape and how similar central government departments have addressed the issues.

The business scope of this review will cover data sharing between:

•   The ESCS [education, skills and children's services] system and other government departments
•   Organisations within the ESCS system (National, Regional and Local Delivery Partners (including the Third Sector where applicable))

1.   Geographic scope will focus on England but will need to take account of requirements, and capabilities for sharing data between the Education, Skills and Children's Systems of England, Wales, Scotland and Northern Ireland if necessary.
2.   The scope will focus on the physical means of sharing data (such as networks, data centres, middleware and web services, and security) and any ongoing business service required. [Business data standards and information sharing protocols are therefore not within the scope of this review.]

The deliverable will be a final report that will include:

•   business drivers and requirements for data exchange
•   assessment of current ESCS sector capability (including SIF)
•   assessment of UK government direction of travel and capability
•   target conceptual architecture for the sharing / exchange of data
•   solution options for delivering the target architecture and recommendations
•   consideration of issues relating to the ongoing provision of any required business services, including options and recommendations
•   high level investment case
•   outline delivery roadmap

The objectives of the Interoperability Review are to:

•   Confirm the requirements for the physical exchange of data across the Education, Skills and Children's System (ESCS) and out to other government departments;
•   Review current physical data exchange capability (including SIF);
•   Understand UK government thinking and "direction of travel" in sharing data across heterogeneous IT landscapes;
•   Develop a target conceptual data sharing architecture (based on a high level understanding of likely capacity / scalability, security, disaster recovery requirements);
•   Develop a high level investment case for establishing a data exchange shared service;
•   Agree roles and responsibilities for data sharing and IT system interoperability across the ESCS;
•   Define a roadmap and supporting plan;
•   Identify the issues associated with delivering and supporting a shared service for the exchange of data across the ESCS including governance, capability, funding and charging.