

London

13 July 2009

Dear Sir Christopher,

I am grateful for the opportunity to present the Committee with some recommendations to help ensure that in future information relating to MPs' expenses and allowances are published in the most useful, efficient and trustworthy way possible.

I am writing this letter in my own name, but it represents the combined advice of several dozen technical experts, most notably the community of staff and volunteers that makes up mySociety, and the participants at the Open Tech 2009 conference. I would like to thank them publicly for their contributions.

Why send technical recommendations to a committee focusing on rules and processes?

Despite being largely a story of failing processes and weak morals, technology has played two important roles in the MP expenses scandal of 2009. First through the security failings which allowed the initial leak of data to the Telegraph, and second in the poor quality of redactions when the official version of the expense receipts were published.

There is every reason to believe that without the Committee making quite detailed recommendations relating to the exact way in which expenses should be published that the process will again 'go wrong' in some similar way. This letter aims to help the Committee by supplying a draft specification which is specific enough to reduce the chance of a publication scheme being produced 'to spec', but still being perceived by the public as inadequate.

What does the technical description below mean?

It is, in short, a description of a new computer system that:

- 1) Enables MPs easily to file their expense claims with the authorities (whoever they may be).
- 2) Enables authorised staff to efficiently vet those claims.
- 3) Publishes those parts of the claims which the Committee feel should be made public in the most cost effective, timely, easy to use fashion possible.

Clearly, given that the Committee has not yet reported the following specification cannot be final. Instead it is a framework that can be easily modified to successfully deliver the recommendations of the committee in relation to publication. I would be happy to update the following technical specifications in accordance with the Committees desires.

Note: For brevity, I will use 'expenses' to refer to all expenses, allowances and any other funds extant or brought into being in the future which MPs receive from Parliament.

The Recommended System: A Technical Description

Given to a competent team of developers, the following specification should be sufficient to ensure a good quality system that suits the needs of the public, MPs and the staff who have to vet expense claims.

Whichever body is ultimately tasked with the future processing of MPs' expense claims should procure the external development of a software system which:

- 1.) Is easy enough to use that current expenses vetting staff can be retrained to use it quickly, and which has the overall effect of improving the efficiency, accountability and quality of their work.
- 2.) Provides both the back-end system for submitting and vetting expenses, and the external interface that presents information to the public.
- 3.) Wholly replaces Parliament's current technical systems used for receiving, storing, vetting, querying and approving expenses, but which does not replace the actual payment systems (which are expensive to reproduce, and which do not need improving for the goals of this project).
- 4.) Provides a master administration interface that makes it easy to create and maintain user accounts for MPs, their staff members, and staff who will administer the process of vetting and approving claims. Furthermore, the administration interface can be used to change permitted expenses categories as the rules change over time, without the system having to be expensively modified.
- 5.) Uses a security model based on user names and passwords generated to usual ecommerce standards, such as Amazon.com, and which rejects attempts to slow the process of development through the use of more complex and unnecessary methods of gaining access to the system, such as physical digital tokens.
- 6.) Enables MPs and their staff to log in, enter the details of a new claim, and prove it up with a scan or a photo of their receipt. We do not at this stage know what details the Committee will decide are essential, but we expect them to include a) the expenses scheme claimed under b) the category of the expense (e.g. furniture or printer paper) c) the cost d) the date it was incurred e) the supplier f) the property to which it relates (if any) g) the duration a service paid lasts for (i.e. 1 month of rent). It is possible to build a user interface that makes this process easier and quicker for MPs than the previous process of submitting claims, even if it asks for slightly more information than under the previous regime. It will also save money, as the data will not have to be re-entered by hand later for publication.
- 7.) In each case where a field is stored in the database, constrains the permissible data to a predetermined set of options, options which can be modified by a user with master administration rights. For example data in the 'date' field must be a date that the computer recognizes as a date, and the company a product is purchased from must be a company known to Companies House, or marked distinctly as a sale from an unincorporated seller. This is to ensure that the data is consistent, comparable and valid across all datasets. This is vital to be able to definitively answer simple questions, such as "How much was spent across all MPs on rent?"
- 8.) Uses standardized, freely reusable public identifiers for each MP, such as from TheyWorkForYou.com.
- 9.) Retains a version history for every field of data in every record, including the previous content of each field at each stage of revision, the date and time of each revision, the author of each revision, and a free text field for an optional explanation of any edit. This feature is vital to help track who made any administrative mistakes (such as redacting the wrong thing) so they can be helped to understand and enforce the rules better.

- 22.) Provides MPs with small pieces of code for their own website maintainers which allows automatic republication of their own expenses onto their own sites, to prevent costly and unnecessary manual republishing. This system would use the public API.
- 23.) Is built from software released under an open source license, so that the facility can be made easily available for reuse elsewhere in the public sector at low cost.
- 24.) Is built by a company or consultants external to the Parliamentary Information and Communications Technology Department (PICT), in order to avoid certain conflicts of interest.
- 25.) Provides unique web addresses (URIs) for every piece of information and ensure that once public they never change, and in particular that are not regularly taken down as is common practice in other parts of the Parliamentary web project. This is in accordance to the best practice for such addresses described by Sir Tim Berners-Lee, inventor of the Web.

Special note: If the committee recommends that MPs be given single expense credit-cards, the above system will need some further features outside this specification.

Lastly, I would like to make two recommendations that are personal, and normative:

Non-technical Recommendations

- All MPs expenses and allowances should be published online at the same moment as they are approved, with redactions made only for credit card numbers and bank account numbers.
- All locations relating to an MPs expense should be public, such as home addresses and locations of travel, unless a police report is produced citing a specific threat, and the MP shows how they have taken other measures to hide their address. If this is not possible, then all legislation concerning the location of MPs homes should at least be made consistent (which is not the case at present).

All the best,
T Steinberg
Director, mySociety

- 10.) Provides a user interface for MPs and their staff to see a history of what they claimed for and when, along with facilities to download the raw data for submission to accountants and other permitted third parties.
- 11.) Provides an interface for vetting staff that allows them to view all expenses currently awaiting assessment, search for any claim, mark them as at different stages in the approval process, request clarifications from MPs, reject requests, or approve them. This facility will also allow approval staff to redact parts of receipts that are deemed not appropriate for publication by the Committee whilst leaving an auditable trail explaining which category of justification they were redacted under, who did the redaction, and when.
- 12.) Provides a public-facing web site which will allow instant access to all parts of the expenses data that the Committee deem should be ultimately public. This service will look very similar to the MPs' view of their own data, except with certain parts of the data made inaccessible, such as the original unredacted receipts. The website doesn't need to contain great functionality, as the raw data will allow for greater innovation elsewhere on the internet. It is, for example, not necessary for this site to provide quarterly or yearly reports, as the data will allow for these to be compiled elsewhere.
- 13.) Provides an Application Programming Interface (API), a way of providing raw data to other websites, so that they can collect and reuse information cheaply and automatically. For example, the API would exclude access to the passwords of MPs logging into the system, or copies of unredacted images of receipts, but would reveal every other field of data in the back end database, even those not considered 'useful' by the system designers. This would help embed the idea that everything was public unless excluded, instead the other way round.
- 14.) Supplies payment authorizations to the current staff in the House that deal with the transfer of funds to MPs. Said authorizations, probably emails or automatically filled-in paper forms will be generated automatically by the system and automatically sent to the relevant person for processing.
- 15.) If a staff member authorizing requests chooses to query part or all of request, or request more information, they should do so through a messaging facility built into the expenses system. All correspondence between staff member and MP will therefore be stored in an auditable fashion, linked to the expense request.
- 16.) Provides a feature on the public facing website which allows users to request a review of specific redaction believed to be erroneous. This would involve clicking on the redaction, filling in required fields, and pressing submit.
- 17.) Provides a complete, easy to read explanation of the current rules that govern expenses on both the public and private sites.
- 18.) Provides a feature for fully documenting repayments by MPs if later judged to have been erroneous.
- 19.) Documents why payments made are different from those requested, i.e. because a Member has been told they may only claim part of a cost incurred.
- 20.) Reveals as much as possible about the location of houses, even if it is determined that actual house locations cannot be published. In practice this employing two features. The first is to give every full address a unique but anonymous identifier every time it occurs, i.e. "MP Home No. 123". This means the public can see if an MP claimed something for "Home 123" and something else for "Home 124". Second, each of these unique identifiers should also show at least a Partial postcode, such as SW1A 1. Together these two solutions would have exposed the problem of 'flipping', whilst not publishing actual addresses. This was a notable failure of the actual redaction exercise.
- 21.) Ensures that public facing data is licensed under a license that cannot be used to restrict its reuse on spurious intellectual property grounds. Creative Commons or Public Domain would be ideal, Crown Copyright less desirable but OK, Parliamentary Copyright least desirable of all.