



ePETITIONS DATA STANDARDS

Draft 2 – circulation to wider group

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1. Background

- 1.1 For several years electronic petitioning has been implemented on an ad hoc basis by individual local authorities trying out tools and processes for managing these services, with varying degrees of success. From this work, various examples of best practice have emerged, along with recognised good suppliers and open source models. The success of these projects, together with the demand for greater public accountability, has convinced the Government to incorporate electronic petitioning within its local democracy policies. The next stage is to build on these initial successes and roll out comparable services to all UK citizens.
- 1.2 Part 1 of the Local Democracy, Economic Development and Construction Bill aims to reinvigorate local democracy - putting local authorities at the forefront of the drive to reconnect people with public and political decision-making. The petitions provisions in the Local Democracy Bill will oblige local authorities in England and Wales to draw up a petitions scheme guaranteeing that they must respond to both paper and electronic petitions. The provisions set minimum entitlements that all citizens can expect but give local authorities flexibility about how they approach the duty - leaving a lot of scope for local determination. Government expect the Local Democracy Bill to achieve Royal Assent at the end of 2009. Subject to Royal Assent, the Government will then be consulting on draft statutory guidance on the petitions duty.
- 1.3 To ensure that local authorities adopt a consistent approach to petitions information and are able to work together effectively in the future, the Government has commissioned, in consultation with the local government and technology sector, a set of recommended data standards, in-line with the recommendations of the Power of Information Review, which that would allow for information to be extracted from e-petitions for use elsewhere. The resulting paper should be written in a manner accessible to those without technical expertise in this area and include a standalone summary of data standards which is suitable for publication.
- 1.4 The standards guidelines for eGIF advise that data standards for the interoperable exchange of data should be XML with a schema (it does not state that the data itself should be stored or modelled internally as XML, although this is of course an option). In the spirit of the Local Democracy Bill itself, the intention here is to focus on the high level business requirements, ontologies and data structure, particularly reporting and data export, and to leave the detail of how data should be stored to the discretion of local authorities and their suppliers.
- 1.5 An initial consultation group of experts, practitioners and suppliers was approached to guide the creation of an initial document for public consultation. What follows is a draft set of data standards to kick off discussions and highlight the key issues. It is not intended to be a full or final set of data standards, merely a catalyst for the next

phase of open consultation and discussion. As such, it is not intended for policy makers, but rather people concerned with designing and developing e-petitioning systems and associated tools.

2. Purpose of these standards

Data standards of course are not an end in themselves; their purpose is always to make other activities possible. These data standards have been created to facilitate the following activities:

Support openness of data and innovative reporting by third parties

- 2.1 pave the way towards making all petition records public and easily accessible to citizens to foster greater accountability
- 2.2 provide a simple and satisfying experience for the general public (the signatories) and encourage maximum citizen engagement
- 2.3 facilitate good reporting, monitoring and interpretation of petition data at an individual petition level
- 2.4 allow for information to be extracted from ePetitions for use elsewhere i.e. innovative 3rd party widgets (*from DCMS specification*)
- 2.5 expose interesting information for use by others – eg. for social networking widgets, or cross comparison between councils
- 2.6 ensure good management data for reporting and monitoring the petition process, including key chronology and response times
- 2.7 enable aggregation of metadata from all petitions for statistical analysis across a wider demographic and similar/dissimilar categories of petitions, within and between authorities and against external figures (eg. number of potential signatories)
- 2.8 make council migration between different petitions software platforms easy and free of lock-in
- 2.9 ensure third parties can submit validly formatted petitions directly into the council's queue of petitions awaiting moderation, so that third parties can build interfaces for creating petitions that the council does not itself have to run or fund.

Data exchange

2.10 ease portability of signatures from one petitions system to another, eg. passing petitions on to the relevant public body

Compliance with legal requirements and generally accepted good practice

2.11 allow the majority of existing suppliers and systems to comply easily with the new standards within their existing frameworks

2.12 provide a solid starting point for standardisation of all UK Government ePetitions in the future, and potentially best practice guidance to practitioners beyond the UK as appropriate

2.13 in so far as possible, protect the UK from upheaval due to any forthcoming European and International data standards and practices, and position the UK as a best practice leader in epetitioning in Europe.

2.14 allow easy interoperability with other government systems through compliance with the eGIF and other existing standards

2.15 allow sufficient flexibility to incorporate all important variations of petitions data, from the simplest to the more complex

2.16 give us an API definition to open up access to petitions metadata and enable greater interoperability

An underlying priority throughout this process is to ensure security and integrity of data, protect the privacy of signatories and comply with the Data Protection Act

To be clear, the current version of the standard does not include interaction with petitioning system, for instance to support the submission of a new petition or registration of new signatures.

3. Data specification - Petition

Tag	Description	Required
Edata	The root tag. The reason for enclosing the following in an enclosing tag is to allow for expansion of this framework (should it be so desired) to incorporate information other than petitions.	Yes
epetition	The root tag for the XML petition document. The default namespace needs a suitable URI. The other namespaces are included to support the various 'standard' geo data XML formats.	Yes
generator	Information about the application that created the XML file. The 3 attributes - name, version and src are all required to be non-empty	Yes
petition	The enclosing tag for the petition. The 'lang' attribute prescribes the language that the petition is written in. Multiple petitions are catered for.	Yes
owner	The lead petitioner, or owner, of the petition. I propose using the almost-standard W3C RDF vCard format (see http://www.w3.org/TR/vcard-rdf).	
Title	The petition's title.	Yes
statement	This tag contains the approved petition statement (i.e. an approved statement such as 'We, the undersigned...' plus the user-defined second part of the statement)	Yes
background	Background information to accompany the petition.	No
Links	Enveloping tag for links to external background information. This is not a required tag but, if present, it must be contained within the 'background' tag.	No

Tag	Description	Required
Link	Link to external background information. This is not a required tag but, if present, it must be contained within the 'links' tag.	No
Tags	Enveloping tag for tags (taxonomical terms / user tags). The 'provider' attribute must be included. This should be a URI to a resource defining the taxonomy provider. By default, all petitions should be tagged with at least one IPSV taxonomical term.	Yes
Tag	An individual taxonomical term / user tag. If present, must be enclosed in a 'tags' tag. The 'uri' attribute must be present and be a unique URI that identifies that tag (to the taxonomy provider).	No
targets	The target organisations for the petition. Usually there will be one target, but the target tag is wrapped in 'targets' tag so that more than one target can be defined for a petition.	Yes
target	Further investigation into how to define these targets needs to be done, as there should be some UK-wide determination for this. For local authorities there is an Officer of the National Statistics code scheme, further information is needed for central government.	No
geo:*, georss:* & sub-tags	This series of tags provide geolocation information about the petition. It has been suggested that, if geo information is being included, that all these forms are present, in order to support the maximum number of clients.	No
guid	Defines a URI for the petition (on the generator's system). This becomes redundant once the petition is imported into another application, but could be used (in future) by the importing system to communicate with the originating system (via API call of some sort).	Yes

Tag	Description	Required
start_date, closing_date	These tags define the date range during which the petition can collect signatures. These may be rendered redundant by the <status_dates> information, but this information is what the petition submitter is likely to enter and may need to be preserved.	Yes
status_dates	For management reporting and auditing/accountability purposes, the data about state changes to the petition has been included in these data sets. Each time the petition status changes (see below) this should be recorded so that the administrators, owners and third parties can track the progress and response times for each petition, individually and collectively	Yes
date	Each timestamp simply records the status changed from and to, and the time. Each petition should begin with the “created” timestamp as shown in the example feed.	Yes
status	The current status of the petition. Select from: <i>submitted, approved, open, closed, analysis, before_council, responded, withdrawn, archived, rejected.</i>	Yes
signatures	Enveloping tag for the list of electronic signatures. The attributes provide quick access to the number of electronic and paper signatures along with the total (i.e. the sum of the former two). The data framework for signatures is described in Section 5.	Yes

Particular points to consider at this stage:

- 3.1 We've made the assumption that petitions will be in a single language and translated where / if required. This makes the XML simpler (as the language can be assumed throughout) and resolves any issues over the legality, or otherwise, of user translated petitions.
- 3.2 For the <owner> tag, which vCard data is to be included as compulsory and which as optional is not resolved. We would suggest that name, postcode and email are required, to match the signatory specification below. Data Protection Act compliance has to be taken into account when considering what data to make available through public API.
- 3.3 The <target> tags will need to draw from a list of govt and public bodies affected. What level of granularity do we need, and does each council maintain its own list that needs to be referenced as applicable?
- 3.4 The <tags> are currently proposed as being taxonomic, but folksonomic keyword tagging may also be appropriate. Do we need both, or just one?
- 3.5 The taxonomic tags could (and perhaps should?) be based on a shared ontology for public body activities. Should we use the Integrated Public Sector Vocabulary (IPSV¹) maintained by IDeA, the related LGNL² or another shared vocabulary? Using an existing standard opens up the potential for automatically creating cross-links to relevant council pages.
- 3.6 Recording location in a flexible and accurate way can be tricky and we would appreciate advice from a specialist in this field.
- 3.7 The decision to impose timestamps and status changes instead of/in addition to start and end dates reflects an intention to record and monitor the efficacy of the process and allow proper auditing and accountability for those processing and responding to petitions. Including this data would provide excellent monitoring and public accountability information, but are they practical to produce in the current systems, and is this overkill?
- 3.8 The status values here are crude a first pass and will need to be considered carefully. We would welcome discussions of these values and what purposes they will need to serve.
- 3.9 Do we need a tag for the responsible officer in charge of responding and processing the petition? And what about connections to individual councillors? Is it enough simply to have the <targets> information or do we need the body currently responsible for this petition's official progress?

¹<http://www.esd.org.uk/standards/ipsv/>

² <http://www.esd.org.uk/Standards/lgnl/>

- 3.10 Do petitions have targets for number of signatures sought, and if so do we need to include this information in the status options and signatures tags, or do we need separate tags for this information?
- 3.11 Should there be an alternative XML feed of all petitions which is only accessible to council representatives with login access to the petitions admin interface? This feed would have additional elements and attributes that for privacy reasons should not be published in the public feeds. This includes, for example, the email address of each signer, making vendor lock-in impossible.

4. Example feed - Petition

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Author: Mr D Standards (mr.standards@example.com, 29 Oct 2009 V0.3 DRAFT -->
<edata>
<epetitions
  xmlns='http://somewhere.com/epetition/framework.xst'
  xmlns:geo="http://www.w3.org/2003/01/geo/wgs84_pos#"
  xmlns:georss="http://www.georss.org/georss"
  xmlns:gml="http://www.opengis.net/gml">
<generator name='ePetitions Software' version='2.0.0' src='http://www.vendor.com/epetition' />
<petition lang='en-gb' >
  <owner>
  <!--          Standard 'person' XML using the W3C's RDF vCard format
                (see http://www.w3.org/TR/vcard-rdf) -->
  </owner>
  <title>Petition for shared data standards for Government ePetitions</title>
  <statement>
    We, the undersigned, believe the Government should standardise the data structure for all
    electronic petitions between local authorities.
  </statement>
  <background>
    <!-- Further background information -->
    <links>
      <link href='http://www.example.com'>Link title</link>
    </links>
  </background>
  <tags provider='http://example_taxonomy_server.org'>
    <tag uri='http://example_taxonomy_server.org/test/uri/23'>Development</tag>
    <tag uri='http://example_taxonomy_server.org/test/uri/2192'>Brown-field sites</tag>
  </tags>
  <targets>
```

```

        <target uri='http://www.communities.gov.uk'>DCLG</target>
        <target uri='http://www.camden.gov.uk'>Camden Council</target>
</targets>
<geo:lat>51.4266144971</geo:lat>
<geo:long>-2.59414672852</geo:long>
<georss:point>51.4266144971 -2.59414672852</georss:point>
<georss:where>
  <gml:Point>
    <gml:pos>51.4266144971 -2.59414672852</gml:pos>
  </gml:Point>
</georss:where>
<guid>http://www.vendor.com/petitionurigoeshere</guid>
<start_date>Tue, 20 Oct 2009 00:00:00 +0000</start_date>
<closing_date>Sat, 25 Dec 2010 00:00:00 +0000</closing_date>
  <status_dates>
    <date from='' to='Submitted'>Mon, 12 Oct 2009 00:00:00 +0000'</date>
    <date from='Created' to='Approved'>Mon, 19 Oct 2009 00:00:00 +0000'</date>
    <date from='Approved' to='Open'>Tue, 20 Oct 2009 00:00:00 +0000'</date>
    <date from='Open' to='Closed'>Sat, 25 Dec 2010 00:00:00 +0000'</date>
  </status_dates>
<status value='Closed' />
<signatures total='220' electronic='2' paper='218'>
  <!-- Signatures go here (see later) -->
</signatures>
</petition>
<!-- Further petitions in 'petition' tags -->
</epetitions>
</edata>

```

5. Data specification - Signature

Data Protection Act compliance has to be taken into account when considering what data to make available through public API

<i>Tag</i>	<i>Description</i>	<i>Required</i>
Signature	Enveloping tag for the signature. Each single signature is expressed by a <signature> tag, wrapped in the <signatures> tag, described in the previous section.	Yes
date_signed	The date and time that the person signed the petition (as recorded by the application)	Yes
Person	The person tag holds data about the person who signed the signature. I propose using the almost-standard W3C RDF vCard format (see http://www.w3.org/TR/vcard-rdf). Which vCard data is to be included as compulsory and which as optional is not resolved.	Yes
ip_address	The IP address of the person's browser, as recorded by the application.	Yes
opt_in	The 'value' attribute determines whether or not the person has opted in to receive email notifications about this petition.	No
Comment	Enveloping tag for the person's additional comments. The hidden attribute shows whether or not the comment was hidden by moderators of the originating application (defaults to not hidden if not provided)	No
Content	The person's comment. If the comment has been removed from public view by a moderator, the attribute 'hidden' should be added.	Yes, if the 'comment' tag is present
removal_reason	The reason the comment was moderated to 'hidden' by the originating application's moderators.	Yes, if the comment attribute 'hidden' is set to 'yes'.

<i>Tag</i>	<i>Description</i>	<i>Required</i>
Verified	If this signature has been verified by petition administrators (eg. as part of a survey of sample signatures to confirm they are valid individuals), this tag should be added.	No

Particular points to consider at this stage:

- 5.1 Do we need to match the person specification for interoperability of contact data, when it would provide more security for petition signatories if their data was never linked to other CRM data?
- 5.2 There needs to be some discussion over how much information is provided in the <person> tag, from an interoperability perspective but also to ensure protection of signatory privacy and Data Protection Act requirements. What this bare minimum is needs to be determined? We would suggest that only name, town and date of signature should be exposed publicly. Full contact and verification information should only be made available over a secure channel
- 5.3 Is IP address sufficient verification, or do we need a standard for electronic signatures, SSL or unique hashes to prevent tampering? Note that the IP address is considered to be personal information in this context as it can be used to identify an individual in conjunction with the data/time of signature.
- 5.4 An alternative could be to have a separate (flexible) validation area in the XML record. In the proposed initial framework it would hold IP address and a 'validated' attribute (and maybe a note on validation mechanism used). This gives the standard a mechanism to expand as required.
- 5.5 Again, content could be timestamped for auditing purposes like the petitions themselves, but this may be overkill here?

6. Example feed - Signature

The following is an example signature XML snippet. Multiple signatures would appear within the <signatures>...</signatures> section of the petition XML, described above.

```
<signature>
  <date_signed>Tue, 20 Oct 2009 10:31:14 GMT</date_signed>
  <person>
    <!--      Standard 'person' XML using the W3C's RDF vCard format
              (see http://www.w3.org/TR/vcard-rdf) -->
  </person>
  <ip_address>127.0.0.1</ip_address>
  <opt_in value='yes' />
  <comment hidden='yes'>
    <content>
      This is the comment that I posted at the time I signed the petition.
    </content>
    <removal_reason>
      This comment was hidden because it was a test signature.
    </removal_reason>
  </comment>
  <verified value='yes' />
</signature>
```

7. Conclusion and recommendations

- 7.1 This document represents the thinking of a small number of people and is currently only a starting point for debate. Please treat this document as a draft only and we welcome all feedback and corrections to inform the next public draft.
- 7.2 Care has been taken to strike a balance between complexity and flexibility, and there are situations in which these standards may seem too detailed to be practical. However, only the required tags need to be included, and the intention here has been to specify how things should be done *if they need to be done*, and not to require everyone to add content to petitions needlessly.
- 7.3 There are many unimplemented standards in government, and having a standard is only useful to suppliers if there is some incentive to encourage its use. Proper measures should be taken to communicate these standards as part of the forthcoming e-petitions legislation, and to ensure compliance going forward it is suggested that DCLG regularly request a standards-compliant data submission from each relevant body, perhaps every six months.
- 7.4 These standards will not fit with everyone's requirements, and to ensure they develop correctly and are widely adopted, an ongoing consultation should be conducted over the next two years and open discussion sessions held every six months, to allow those who wish changes to be made to make their case.
- 7.5 Ideally, these standards should be owned by an independent third party separate to the UK Government, representing a coalition of all the interested parties, to ensure they develop and are maintained in the interests of everyone involved.

APPENDIX 1 Thanks and Acknowledgements

The authors would like to thank the following people and organisations for their contributions and support of these data standards:

Ady Coles, www.public-i.info

Peter Cruickshank, International Teledemocracy Centre, Edinburgh Napier University <http://itc.napier.ac.uk>

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Andy Perkins and Suraj Kika, www.jadu.co.uk

Mark Treveil, www.moderngov.co.uk

Stuart Harrison, www.lichfielddc.gov.uk

Colin MacKenzie, www.limehousesoftware.co.uk

Tom Steinberg, www.mysociety.org

Paul Davidson, www.legsb.gov.uk

Martin Black, www.camden.gov.uk

Morus, www.politicalbetting.com

Elie Bitar

Dave Briggs

Chris @countculture

Colin Tate

APPENDIX 2 Assumptions and methodology

We began work on this during October 2009 with the support of Particitech, the Institute, and the first draft was issued to a small working party on 29 October 2009 for discussion via a public Google Group (http://groups.google.co.uk/group/epetitions_standards/). The resulting document was critiqued and then put out to public consultation during November, after which the feedback was collated by the consultation team, and a final discussion and decision-making phase conducted in December for handover on 16 December 2009.

In producing this standard, we have tried to create a framework which is:

- as easy as possible to understand and implement for suppliers and commissioners;
- applicable to as many different kinds of petition as possible without being unwieldy; and
- workable in the real world.

No attempt has been made to validate this schema or fix the format to match other Government interoperability standards; instead we have sought to produce a document which is clear and practically useful for those who most need it, and highlights the key issues. It is assumed that the Government will adapt the format of the document as appropriate when it is officially issued to local authorities. The official eGIF format for data standards is included below to signpost the possible future trajectory of this document.

APPENDIX 3 eGIF guidelines for data standards

It may be desirable to create these standards in the recommended eGovernment Interoperability Format, which is included below to inform discussions prior to progressing the standards to a more formal adoption and dissemination stage.

Name: The full name of the Data Type/Data Item (in accordance with the Data Naming Standards as defined in Section 2.2).

Definition: A simple but unambiguous definition of the Data Type or Item

Business Format: The required format of the data from the business perspective. This will include the minimum and maximum number of characters if appropriate, and the structure of the data type/item, e.g. for National Insurance Number the structure is AANNNNNA where A is an alpha character and N is a numeric character. Where Alpha is specified it refers to the full character set available through a standard UK keyboard excluding numerics.

XML Schema ID: The identifier of the XML schema where the data standard is used. It is expected that a standard will only be used in one schema and all government schemas will be held on UK GovTalk. The XML schema will show the pattern, i.e. the size and mask, of the standard.

Validation: Generic for Types and specific for Items. The validation rules to be applied for acceptance of data (e.g. first alpha character must be A, B or C).

Values: List of the acceptable values (e.g. Male, Female)

Default Value: For any list of values, the default value to be used unless otherwise stated

Owner: Name(s) of those Departments/Agencies/Other Bodies who own this standard

Based on: Derivation of standard (e.g. BACS, ISO, BSI, BSEN, W3C)

Verification: Steps taken to establish the correctness of the Data Type or Item. (For some Departments, the stringency with which data collected has been checked needs to be known prior to making use of that data – e.g. has date of birth been verified by checking Certificate of Baptism or Birth Certificate. These different levels of verification will be detailed here. Other Departments who do not have the same requirements for these levels will use only the lowest level when passing information).

Comments: Additional notes

Version: The version number of this standard

Date: The date this version was agreed as a Government Data Standard

APPENDIX 4 About FutureGov

A4.1 [FutureGov](#) works in the government and social innovation sectors specialising in the use of web technologies to address business problems in the areas of policy development, communications and engagement. FutureGov is committed to helping make change happen, supporting government to meet tomorrow's challenges through its core values of innovation and excellence.

A4.2 FutureGov supports change management through technology in government in the areas of:

Digital engagement

- Communication
- Engagement
- Digital democracy

Public service and social innovation

- Service coproduction
- Feedback and peer support
- Cross-government collaboration

A4.3 A full list of recent FutureGov clients can be found on our website at www.futuregovconsultancy.com/index.php/clients.

A4.4 The team responsible for delivering this consultation process and the resulting document is as follows:

Andy Gibson Consultant

Andy has significant experience in online product and platform development, having recently co-founded the social web start up [School of Everything](#), an award-winning, high-growth web 2.0 business that connects local learners to passionate teachers in an eBay for face-to-face learning. While at School of Everything full time, Andy led on scoping and documenting the development roadmap for current and future core website functionality.

He is now an independent consultant and Futuregov associate, and continues to work in the social innovation sector with his new start-up and campaign, [Mindapples](#). Andy also writes on the impact of social technologies on government, recently commissioned by the NESTA (the government’s innovation agency) to co-author “Social by Social”³, a guide to social technology for social good.

Dominic Campbell Director

Dominic is a leading digital government and social innovation entrepreneur with a background in policy, communications and engagement.

Having initially come into local government through the first intake into the NGDP for local government, Dominic spent 4 years at the [London Borough of Barnet](#) initially as Policy and Performance Review Manager, later heading up the project and information management teams. Following Barnet, Dominic spent a year in a small consultancy practice specialising in the use of IT in organisational change.

Dominic established [FutureGov](#) in early 2008, since supporting central and local government to better understand and exploit social media in the areas of community engagement, collaboration and customer services. Dominic most recently returned to Barnet as interim Social Media Manager, the first post of its kind in local government.

Dominic is also co-founder of social web start-ups Enabled by Design, a dot org social start up and winners of the inaugural Social Innovation Camp.

He is qualified as a Prince II project management practitioner and is a regular speaker at conferences on web 2.0 and its application within government.

³ <http://www.socialbysocial.com>