



# Recommended ePetition Data Standard

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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.
- 1.2 The Local Democracy, Economic Development and Construction Act 2009 introduced a duty on local authorities to draw up a petitions scheme guaranteeing that they will respond to petitions from people who live, work or study in the area. From 15<sup>th</sup> December 2010 the duty extends to 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.
- 1.3 This set of recommended data standards has been developed by a consortium of ParticiTech, FutureGov and the Consultation Institute in consultation with the local government and technology sectors, in-line with the recommendations of the Power of Information Review. The standards aim to provide advice for local authorities that wish to take a consistent approach to petitions information and allow for information to be extracted from ePetitions for use elsewhere on the basis of improved interoperability.
- 1.4 The standards guidelines for eGIF advise that data standards should be XML with a schema. In the spirit of the Local Democracy Economic Development and Construction Act itself, the intention here was 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 A working group consisting of experts, practitioners and suppliers was convened to guide the creation of this standard in conjunction with public consultation. In publishing this initial recommendation it is recognised that ownership, such as adoption by the Local eGovernment Standards Body, is required to allow for its continued evolution.

## 2. Purpose of these standards

Data standards 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:-

#### **General requirements**

- 2.1 provide a solid starting point for standardisation of ePetitions in the future, and potentially best practice guidance to practitioners beyond the UK.
- as far as possible, protect the UK from upheaval due to any forthcoming European and International data standards and practices.
- 2.3 help circumvent the procurement of ePetition facilities which do not give proper consideration to the requirements of the Act.
- ensure security and integrity of data, protect the privacy of signatories and comply with the Data Protection Act.
- 2.5 provide a simple and satisfying experience for the general public (the signatories) and encourage maximum citizen engagement.
- 2.6 allow the majority of existing suppliers and systems to comply easily with the new standards within their existing frameworks and product roadmap.

## Support transparency and accountability by allowing monitoring and tracking of petitions

- 2.7 pave the way towards making all petition records public and easily accessible to citizens to foster greater accountability.
- 2.8 allow sufficient flexibility to incorporate all important variations of petitions data, from the simplest to the more complex.
- 2.9 facilitate good reporting, monitoring and interpretation of petition data at an individual petition level.
- 2.10 ensure good management data for reporting and monitoring the petition process, including key chronology and response times.
- 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 (e.g. number of potential signatories).

#### Support the transfer of data between systems

- 2.12 define both a private data feed between secure systems, and the public feed for use in unsecured public channels.
- 2.13 allow easy interoperability with other government systems through compliance with the eGIF and other existing standards.
- ease portability of signatures from one petitions system to another to prevent supplier lock-in. This includes the ability to transfer ePetitions on to the relevant public body.

#### Support remote interaction with petitioning systems

- 2.15 allow for information to be extracted from ePetitions for use elsewhere i.e. innovative 3rd party widgets
- 2.16 make data available in usable forms by other systems e.g. for social networking widgets, or cross comparison between councils
- 2.17 move us an API definition to open up access to petitions metadata and enable greater interoperability

# 3. Data specification

Tag	Description	Required	Public
petitions	The root tag for XML petitions documents. The default namespace needs a suitable URI. The other namespace included is to support and validate against the GML geo data format.	Yes	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. (NB. It may eventually be necessary to follow the EGMS here, possibly using the 'creator' tag.)	Yes	Yes
petition	The enclosing tag for the petition. Multiple petitions can be included in one feed, each enclosed by a <petition> tag. Each <petition> tag can contain parallel text versions in multiple languages (for example, so in Wales, a petition can be recorded in both English and Welsh). The 'lang' attribute prescribes the original language that the petition was written in, and all subsequent tags are assumed to be in this language unless a 'lang' attribute is specified. Tags which can be multiple languages are marked below with *. The 'multilingual' attribute is optional but would allow special reporting of multilingual petitions.</petition></petition>	Yes	Yes
thresholds	There are currently three official signature thresholds for all petitions included in the legislation, but this tag potentially allows more thresholds to be added later. Thresholds must be set separately for each petition by the target council or appropriate public body.	No	Yes
threshold	Each type of threshold can be defined using the attribute "type", and the number represents the number of signatures which must be reached.	No	Yes

Тад	Description	Required	Public
petitioner	The lead petitioner, or owner, who submitted this petition. NB. The data definition for this person matches the definition for a signatory and is documented twice below.	Yes	Yes
person	The person tag holds data about the person who created the petition, which is structured in the standard Government schema.	Yes	Yes
fullName	The petitioner's name in structured form	Yes	Yes
personNameTitle	The petitioner's title	Yes	Yes
personGivenName	The petitioner's forename	Yes	Yes
personFamilyName	The petitioner's surname	Yes	Yes
address	The petitioner's address in structured form	Yes	No
line	A single line of the petitioner's address	Yes	No
postcode	The petitioner's postcode in a valid format.  Suggested regular expression for validation: [A-Z]{1,2}[0-9R][0-9A-Z]? [0-9][A-Z]{2}	Yes	No
email	The enclosing tag for the standard email address information	Yes	No
emailAddress	The petitioner's email in a valid format. Suggested regular expression for validation: $^{[A-Z0-9\%+-]+@[A-Z0-9]+\.[A-Z]\{2,6\}}$ \$	Yes	No
addressType	This tag defines the relationship between the person and the local area, to enable analysis of the validity of signatures for threshold levels. Signatories must specify whether their address given is: "work", "home", "study" or "other"	Yes	Yes

Tag	Description	Required	Public
maintainer	The maintainer of this data set, who can be contacted in the event of issues with the data.	Yes	Yes
title*	The petition's title. This is optional as some systems may use the "action" field as the main signifier for the petition.	No	Yes
preamble*	This tag contains the first half of the petition statement ("We the undersigned") in a standardised form specified by the UI of the client system to ensure good standardisation. Note that the targeted body might be fixed in the client system, or chosen from options in the UI. It is not compulsory because some systems may instead choose to include the full petition statement in the 'action' field.	No	Yes
action*	The action which the petition aims to make happen. (We recommend that this field be should limited to 2000 characters long.)	Yes	Yes
background*	Background information to accompany the petition, where petitioners can write detailed explanations of what they are petitioning about. Background can contain links, embedded videos, HTML text formatting and so on, as long as it is in valid xHTML formatting. (Note that, for all user-submitted fields, the content must either be a valid XML string with escaped entities, or an xHTML fragment complete with xHTML namesapace.)	No	Yes
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	Yes
link*	Link to external background information. This is not a required tag but, if present, it must be contained within the 'links' tag.	No	Yes

Tag	Description	Required	Public
tags	Enveloping tag for tags (taxonomical terms / user tags). If present, the 'scheme' attribute must be included to specify either the taxonomy scheme from which they derive (this should be a URI to a resource defining the taxonomy provider), or the label 'folksonomy' to specify free tagging. By default, all petitions should be tagged with at least one IPSV term.	Yes	Yes
tag*	An individual user tag. If present, must be enclosed in a 'tags' tag. If the tags derive from an existing taxonomic scheme (eg. IPSV) the 'uri' attribute must be present and be a unique URI that identifies that tag (to the taxonomy provider).	No	Yes
target	The target organisation for the petition. Targets should be referenced against the SNAC data set (where available) and one non-governmental data set (here we use Mysociety's Whatdotheyknow.com), but with the option for other targets to be added if needed later. URI is also included as a quick reference for the organisation, and along with the string itself, is mandatory.	Yes	Yes
location	This series of tags provide GML geolocation information about the petition, whether a single point or a definition of a polygon.	No	Yes
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	Yes
signatures OpenDate, signatures CloseDate	These tags define the date range specified by the owner (and/or system admin) during which the petition can collect signatures. These can be cross-referenced with the <statusdates> information. All dates are in standard XS:dateTime format. Note that if times are not specified, petitions should open and close at midnight and NOT close of business.</statusdates>	Yes	Yes

Tag	Description	Required	Public
status	The current status of the petition. Select from: submitted, approved, open, closed, analysis, before_council, responded, withdrawn, rejected, archived	Yes	Yes
statusDates	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 above for status options) 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	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	Yes
rejectionReason	If the status is changed to 'rejected', this tag records the reason(s) for the rejection. Administrators should pick one from the list below, and can also add their own reasons:  • petition is similar to and/or overlaps with an existing petition or petitions; • petition asks for things outside the remit or powers of the target body; • statement doesn't actually request any action; • wording is impossible to understand; • contains statements that amount to advertisements; • petition is intended purely to be humorous, or has no point about public issues; • e-petition is not the appropriate channel for this issue (for example, correspondence about a personal issue); • Freedom of Information request. • petition is a nomination for Honours.	Yes, if 'rejected' status is used.	Yes

Тад	Description	Required	Public
signatures	Enveloping tag for the list of 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), although this may not all be necessary if the signature set data can be used for reporting.	Yes	Yes
signatureSet	Enveloping tag for a subset of the total petition signatures, specifying in the attributes the source of this set of signatures (a council website, paper forms, a Facebook application). This allows many sets of signatures for the same petition to be combined and tracked in one data set.	Yes	Yes
signature	Enveloping tag for a single signature. The "date_created" attribute records the date and time that the person signed the petition (as recorded by the application).	Yes	Yes
person	The person tag holds data about the person who signed the signature.	Yes	Yes
name	The signatory's name in unstructured form	Yes	Yes
address	The signatory's address in unstructured form. (Note that Government guidelines specify either postal address or email address must be present for the signature to be valid.)	Yes, if email not present	No
postcode	The signatory's postcode in a valid format Suggested regular expression for validation: [A-Z]{1,2}[0-9R][0-9A-Z]? [0-9][A-Z]{2}	Yes, if email not present	No
email	The signatory's email in a valid format. Note that email is currently required for all electronic signatures, although guidelines may need to be reviewed later to incorporate SMS signatures and future identity systems and submissions channels. Suggested regular expression for validation: ^[A-Z0-9%+-]+@[A-Z0-9]+\.[A-Z]{2,6}\$	Yes, if address/ postcode not present	No

Тад	Description	Required	Public
addressType	This tag defines the relationship between the person and the local area, to enable analysis of the validity of signatures for threshold levels. Signatories must specify whether their address given is: "work", "home", "study" or "other"	Yes	Yes
optln	The 'value' attribute determines whether or not the person has opted in to receive email notifications about this petition.	No	No
comments	Enveloping tag for the person's additional comments.	No	Optional
comment*	The person's comment. If present, the 'private' attribute indicates that the signatory does not want to make their comment public; the 'removed' attribute indicates whether the comment has been removed by moderators of the originating application.	Yes, if the 'comment' tag is present	Optional
removalReason	The reason the comment was moderated to 'removed' by the originating application's moderators.	Yes, if the comment attribute 'removed' is 'yes'.	Optional
authenticated	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. Eventually, attributes may be required to record details of the authentication date and method. It may be that this tag evolves to record enough information to allow the authentication process to be audited and re-performed if necessary. (Also, it may be necessary to include failed or incomplete authentications.)	No	Yes

## 4. Example feed – private view

```
<?xml version="1.0" encoding="UTF-8"?>
<petitions
     xmlns='http://somewhere.com/epetition/framework.xst'
     xmlns:gml='http://www.opengis.net/gml'
     xmlns='http://www.w3.org/1999/xhtml' >
     <generator name='ePetitions Software' version='2.0.0' src='http://www.vendor.com/epetition' />
     <petition lang='en-gb' multilingual='yes'>
          <thresholds>
               <threshold type='consideration'>500</threshold>
               <threshold type='full council debate'>1500</threshold>
               <threshold type='member called to account'>3000</threshold>
          </thresholds>
          <petitioner>
               <person>
                    <fullName>
                          <personNameTitle>Mrs</personNameTitle>
                          <personGivenName>Petra</personGivenName>
                          <personFamilyName>Itioner</personFamilyName>
                    </fullName>
                    <address>
                          <line>1 London Street</line>
                          <line>Borset-on-the-Hill</line>
                          <line>Borsetshire</line>
                          <postcode>B01 1LL</postcode>
                    </address>
                    <email>
                         <emailAddress>pet.itioner@email.org</emailAddress>
                    </email>
               </person>
               <addressType>home</addressType>
```

```
</petitioner>
         <title>Petition for shared data standards for Government ePetitions</title>
         <title lang='cy-gb'>...and then the same thing in Welsh...</title>
         amble>
              We, the undersigned, petition Borsetshire County Council to
         </preamble>
         cpreamble lang='cy-qb'>
              ...and another Welsh translation here. (You get the idea...)
         </preamble>
         <action>
              publish real-time information on the internet about the location of buses to GPS
accuracy.
         </action>
         <background>
              We want easy access to the data about where
our buses are, so we don't have to wait in the cold.
              Note that background text can also be
<strong>formatted
              inks>
                  <link href='http://www.example.com'>Link title</link>
              </links>
         </background>
         <tags scheme='http://example_taxonomy_server.org'>
              <tag uri='http://example_taxonomy_server.org/test/uri/23'>Transport</tag>
              <tag uri='http://example taxonomy server.org/test/uri/2192'>Communications</tag>
         </tags>
         <tags scheme='folksonomy'>
              <tag>open data</tag>
              <taq>buses</taq>
         </tags>
         <target uri='http://www.borsetshire.gov.uk' snac='UKK24' wdtkname='Borsetshire County</pre>
Council'>Borsetshire County Council</target>
         <location>
```

```
<aml:Point>
         <gml:pos>51.4266144971 -2.59414672852
     </aml:Point>
</location>
<quid>http://www.borsetshire.gov.uk/petitionurigoeshere</quid>
<signaturesOpenDate>2009-03-15T17:15Z</start date>
<signaturesCloseDate>2009-03-15T17:15Z</closing_date>
<status value='Closed' />
<statusDates>
     <date from='' to='Submitted'>2009-03-14T14:24Z</date>
     <date from='Created' to='Approved'>2009-04-15T17:15Z</date>
     <date from='Approved' to='Open'>2009-03-15T17:15Z</date>
     <date from='Open' to='Rejected'>
         2009-03-15T17:15Z
         <rejectionReason>petition is similar to and/or overlaps with an existing petition
    or petitions</rejectionReason>
     </date>
</statusDates>
<signatures total='220' electronic='10' paper='210'>
    <signatureSet source='http://www.borsetshire.gov.uk/petitions' total='10'>
         <signature date created='2009-03-16T12:45Z' />
              <person>
                   <name>Mr Edward Petitioner
                   <address>2 Random House, London Road, Borsetshire</address>
                   <postcode>B01 2AB</name>
                   <email>epetitioner@gmail.com</email>
              </person>
              <addressType>home</addressType>
              <optIn value='yes' />
              <comments>
                   <comment private='yes' removed='yes'>
                        This is the comment that I posted at the time I signed the
         petition.
```

```
</comment>
                              <removalReason>
                                  This comment was hidden because it was a test comment.
                              </removalReason>
                         </comments>
                        <authenticated value='yes' date='2009-03-16T12:45Z' />
                    </signature>
                    <!-- Further signatures in 'signature' tags -->
               </signatureSet>
               <signatureSet source='paper' total='210'>
                    <!-- Further signatures in 'signature' tags -->
               </signatureSet>
          </signatures>
          <council_response date_updated="2009-04-20T12:25Z">We totally agree.</council_response>
          <creator_response date_updated="2009-04-21T09:54Z">Success!</creator_response>
     </petition>
     <!-- Further petitions in 'petition' tags -->
</epetitions>
```

#### 5. Example feed – public view

Some of the information contained in the feed above should only be contained in private, secure data transmissions between administrating bodies. The example feed below should be used to validate public feeds where petition information is opened to scrutiny and shared with non-Governmental third parties.

```
<?xml version="1.0" encoding="UTF-8"?>
<petitions</pre>
     xmlns='http://somewhere.com/epetition/framework.xst'
     xmlns:qml='http://www.opengis.net/gml'
     xmlns='http://www.w3.org/1999/xhtml' >
     <qenerator name='ePetitions Software' version='2.0.0' src='http://www.vendor.com/epetition' />
     <petition lang='en-qb' multilingual='yes'>
          <thresholds>
               <threshold type='consideration'>500</threshold>
               <threshold type='full_council_debate'>1500</threshold>
               <threshold type='member called to account'>3000</threshold>
          </thresholds>
          <petitioner>
               <person>
                    <fullName>
                          <personNameTitle>Mrs</personNameTitle>
                          <personGivenName>Petra</personGivenName>
                          <personFamilyName>Itioner</personFamilyName>
                    </fullName>
               </person>
               <addressType>home</addressType>
          </petitioner>
          <title>Petition for shared data standards for Government ePetitions</title>
          <title lang='cy-gb'>...and then the same thing in Welsh...</title>
          amble>
               We, the undersigned, petition Borsetshire County Council to
```

```
</preamble>
         cpreamble lang='cy-qb'>
              ...and another Welsh translation here. (You get the idea...)
         amble>
         <action>
             publish real-time information on the internet about the location of buses to GPS
accuracy.
         </action>
         <background>
              We want easy access to the data about where
our buses are, so we don't have to wait in the cold.
              Note that background text can also be
<strong>formatted</strong>
              inks>
                  <link href='http://www.example.com'>Link title</link>
              </links>
         </background>
         <tags scheme='http://example_taxonomy_server.org'>
              <tag uri='http://example_taxonomy_server.org/test/uri/23'>Transport</tag>
              <taq uri='http://example_taxonomy_server.org/test/uri/2192'>Communications</tag>
         </tags>
         <tags scheme='folksonomy'>
              <tag>open data</tag>
              <taq>buses</taq>
         </tags>
         <target uri='http://www.borsetshire.gov.uk' snac='UKK24' wdtkname='Borsetshire County</pre>
Council'>Borsetshire County Council</target>
         <location>
              <qml:Point>
                  <gml:pos>51.4266144971 -2.59414672852/gml:pos>
              </aml:Point>
         </location>
         <quid>http://www.borsetshire.gov.uk/petitionurigoeshere</quid>
```

```
<signaturesOpenDate>2009-03-15T17:15Z</start date>
<signaturesCloseDate>2009-03-15T17:15Z</closing_date>
<status value='Closed' />
<statusDates>
     <date from='' to='Submitted'>2009-03-14T14:24Z</date>
     <date from='Created' to='Approved'>2009-04-15T17:15Z</date>
     <date from='Approved' to='Open'>2009-03-15T17:15Z</date>
     <date from='Open' to='Rejected'>
          2009-03-15T17:15Z
         <rejectionReason>petition is similar to and/or overlaps with an existing petition
    or petitions</rejectionReason>
     </date>
</statusDates>
<signatures total='220' electronic='10' paper='210'>
    <signatureSet source='http://www.borsetshire.gov.uk/petitions' total='10'>
         <signature date created='2009-03-16T12:45Z' />
              <person>
                   <name>Mr Edward Petitioner
              </person>
              <addressType>home</addressType>
              <comments>
                   <comment private='yes' removed='yes'>
                        This is the comment that I posted at the time I signed the
         petition.
                   </comment>
                   <removalReason>
                        This comment was hidden because it was a test comment.
                   </removalReason>
              </comments>
              <authenticated value='yes' date='2009-03-16T12:45Z' />
         </signature>
```

# **APPENDIX 1** Thanks and Acknowledgements

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Colin MacKenzie, www.limehousesoftware.co.uk

Mark Treveil, www.moderngov.co.uk

Stuart Harrison, www.lichfielddc.gov.uk

Colin Tate, www.colintate.com

Paul Davidson, www.legsb.gov.uk

Martin Black, www.camden.gov.uk

# APPENDIX 2 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 AANNNNNNA 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 numercs.

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