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Queensland Parliamentary Service

Our Ref: A646936

16 February 2021

Standing Committee on Petitions
PO Box 6021
Parliament House
Canberra ACT 2600

Dear Mr O'Dowd

Thank you for your invitation to make a submission to the Federal Parliament's House of Representatives Standing Committee on Petitions' inquiry into petitioning system security and accessibility. Please find below a submission focusing on the security and accessibility of Queensland Parliament's e-petitions system.

The genesis of Queensland Parliament's e-petitions system was the Queensland Government's *Restoring Integrity Good Government Plan* which was released in 2001 and intended to increase public trust and confidence in government, and to increase public involvement in the democratic functions of Parliament. Following a trial commencing in 2002, e-petitions became a permanent democratic function in Queensland. In 2017, the system was redesigned incorporating security features to both the public-facing petition 'signing' webpage, and in the creation of an enhanced administration portal which is only accessible to officers with access privileges, namely the Petitions Officer and IT Support.

Conditions of use and self-declaration of citizenship and residency

The procedures by which e-petitions are accepted are set out at Chapter 21 of the Standing Rules and Orders of the Legislative Assembly (enclosed). Standing Order 119(4) sets out that an e-petition must:

- be in the correct form, stating a grievance and containing a request for action by the House
- be either sponsored by a member, or the Clerk on behalf of a principal petitioner, and lodged with the Clerk for publication on the Parliament's website for a nominated period (between a week and six months), and
- that persons may indicate their support of the petition (at least one person must 'join the petition') by electronically providing their name, address (including postcode), email address and signifying their intention to join the petition.

As with paper petitions, once the e-petition has closed, a printed copy is tabled in the House on the next sitting day, or at the request of a member or a principal petitioner on a particular sitting day. The Clerk then refers the petition to the Minister responsible for the administration of the subject matter for a response within 30 days. The Ministerial response is then e-mailed to signatories of the e-petition who on joining the e-petition elected to receive the response.

Security of Queensland Parliament's e-petition system

The e-petition system is designed on a 'minimal possible permissions' basis, meaning that the application itself and its users, only have access to what is really needed for the system to function. The system is monitored 24/7, with a support team alerted to any system faults or unusual signature patterns who will then determine any necessary action to be taken. The general security functions also maintain a full audit trail of all signatures, including those refused, and a full audit trail of business activity so that any disputes can be investigated and reported on.

Security during signing process

The Parliament's Current E-Petitions website takes users to a list of existing petitions which they can elect to join. To ensure use of the e-petitions system is in the correct form, when attempting to join a petition, users are taken to the 'E-Petitions Conditions of Use' webpage (Figure 1). This webpage provides initial security checks by: requiring self-declaration of citizenship and residency, ensuring users have not already joined the petition, and warning users that the consequences of failing to comply with the conditions of use could amount to a contempt of Parliament under the *Parliament of Queensland Act 2001*.

> The petitions process is governed by the Standing Orders. These Standing Orders enable the Queensland Parliament to accept electronic petitioning ("E-Petitions").
>
> By electing to join an E-Petition, you acknowledge that you meet the conditions detailed below.
>
> 1. You meet the eligibility requirement specified for the E-Petition. This means that you fall into one of the three broad groups of petitioners:
>   a. Queensland residents; or
>   b. Queensland citizens; or
>   c. Queensland electors in a nominated electorate.
>   The eligibility requirement for each E-Petition is identified on the web site.
> 2. You have not already joined the E-Petition.
> 3. The name, address and email address details provided are your true details.
>   Otherwise, you are entering the name, address and email address details of someone else because they are physically incapable of entering their details and:
>   ○ have given you express permission to act on their behalf to record their details for the purposes of joining the E-Petition (provided that the authority to act on their behalf is not revoked at the time of joining the E-Petition); and
>   ○ to the best of your knowledge the details that you enter are true and correct
>
> Information on the collection and storage of personal information is available in our Privacy Statement
>
> **IMPORTANT** Failing to comply with these Conditions of Use may amount to a contempt of Parliament under the Parliament of Queensland Act 2001. Actions that are considered to be in contempt of Parliament include:
>
> • presenting a forged or falsified document to the House or a committee;
> • submitting a petition containing false, scandalous or groundless allegations; or
> • inducing a person to sign a petition by fraud and misleading the House.
>
> You could be fined for committing a contempt of Parliament, or even imprisoned if you fail to pay such a fine.
>
> [Accept the conditions of use] [I disagree; close this window]

Figure 1. Public facing e-petitions conditions of use

There are a number of security mechanisms at work during the signing process. In addition to the use of firewalls and security systems functioning outside the application, a multi-level approach is taken to ensure security within the application:

1. use of an industry-standard anti-forgery token (also called *request verification tokens*) to prevent cross-site[1] submission of signatures (i.e. from another site)
2. basic verification of the data entered into the form
3. time limitations on the signing time (e.g. to prevent non-human signing occurring within seconds)
4. a mathematically complex, therefore processor intensive, exercise during submission to slow down any potential bot attacks; and the use of hidden fields with common names, e.g. 'name' to occupy bots but remain hidden to a valid user, and
5. multi-level slowing down of any given IP addresses' signings, first by increasing the difficulty of the exercise noted above at 3, and eventually a time-limited suspension.

Statistics collected during the signing process are also regularly reviewed so that any changes to browsers or new technologies such as CGNAT (where multiple internet users share an IP address) are developed and implemented.

Accessibility

When redesigning the e-petitions system in 2017, it was decided early in the project to exclude 'Google Captcha' and similar security alternatives as these systems do not permit the accessibility that Queensland Parliament's e-petition system requires. Design criteria was that it must be user-friendly for petitioners of all demographics and online literacy, noting paper petitions are available to those without online access. Security functions such as 'Google Captcha' risk creating accessibility issues for some demographics and

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[1] Cross-site request forgery is an attack where a malicious site sends a request to a vulnerable site where the user is currently logged in. Token based authentication ensures that each request to a server is accompanied by a signed token which the server verifies for authenticity and only then responds to the request.

could potentially lower user engagement with the online platform. It is acknowledged, even with such measures in place there are still risks to the security of a system.

Security processes following closure of e-petition

Once an e-petition is closed and being prepared for tabling, the system will highlight signatories which potentially offend the Standing Orders in relation to both security and conformity. For example, SO 121(4) states a petition must be respectful, decorous and temperate and not contain any unparliamentary language or otherwise offend any rule or practice of the House. The Petitions Officer will adjudicate on whether to remove entries which fall within the following categories:

1. duplicate signatories
2. signatories with offensive words
3. signatories with very long or very short addresses
4. signatories with more than one signatory
5. signatories that do not have one of the standard street name suffixes (e.g. St, Road, Lane).

With respect to user privacy, personal details of users acquired during an e-petition are deleted from the database after the ministerial response has been received, tabled and emailed to signatories who opted to be notified of the response, or within six months of its closure as a matter of practice. E-petition users are advised however that their details are publicly available insofar as once the e-petition has been finalised and tabled, members of the public can request a paper copy of a petition, including the personal information it contains, from the Table Office.

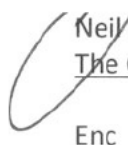### Effectiveness of Queensland Parliament's e-petition system

The current security systems supporting Queensland Parliament's e-petition system have prevented any significant data breaches to date. The system's ability to detect irregularities has been raised in the House in a number of Speaker's Rulings and Statements. For example, on 17 October 2019 when the system identified that 17% of persons who had joined an e-petition had duplicated their joining, Mr Speaker assured the House in his Ruling, 'that the e-petition software system always identifies duplicates and other irregularities in our e-petitions and such irregularities are deleted'.[2]

The subscriber feature of the e-petitions system also evidences its effectiveness, particularly in increasing democratic engagement in Queensland. Since the introduction of the subscription feature in 2017, more than 31,000 subscribers receive weekly notifications of new e-petitions. The feature has significantly increased traffic of e-petitions generally, and contributed to their signing over time. The graphs included at Attachment 1 demonstrate the historical increase in the number of e-petitions tabled and signatories since the system's inception in 2002.

The efficacy of Queensland Parliament's e-petitions system is also highlighted by its use in other Australian jurisdictions. Currently, the Parliament of Tasmania uses this system, the ACT Parliament are using a version of the system and investigating the upgrade to the latest release, and SA Parliament are investigating its use.

For further information in relation to this submission, please do not hesitate to contact the Clerk's Office on 07 3553 6451 or at clerksoffice@parliament.qld.gov.au.

Yours sincerely

Neil Laurie
The Clerk of the Parliament

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[2] Mr Speaker, Hon Curtis Pitt MP, record of proceedings, Brisbane, 17 October 2019, p 3315; https://www.parliament.qld.gov.au/documents/hansard/2019/2019_10_17_WEEKLY.pdf.

Attachment 1 – Queensland Parliament's E-Petitions Data

Figure 2. Number of e-petitions tabled between 2002 and 2020

Figure 3. Number of e-petition signatories between 2002 and 2020 (NB: 2009 peak is in relation to two e-petitions concerning increases to vehicle registration fees)