RICHTER

Auditor's Report

To the Management of Echoworx Corporation (Echoworx):

We have audited the [Assertion](#) by the management of Echoworx that during the period 1 April 2017 through 31 March 2018 for its Certification Authority (CA) operations at Toronto, Ontario.

Echoworx has:

- Disclosed its Business, Key Life Cycle Management, Certificate Life Cycle Management, and CA Environmental Control practices in its [Echoworx Root CA2 CPS v1.7 dated 30 March 2015](#).

- Maintained effective controls to provide reasonable assurance that Echoworx provides its services in accordance with its Certification Practice Statement.

- Maintained effective controls to provide reasonable assurance that:

    o The integrity of keys and certificates it manages is established and protected throughout their life cycles;
    o The integrity of subscriber keys and certificates it manages is established and protected throughout their life cycles;
    o Subscriber information is properly authenticated (for the registration activities performed by Echoworx); and
    o Subordinate CA certificate requests are accurate, authenticated and approved.

- Maintained effective controls to provide reasonable assurance that:
    o Logical and physical access to CA systems and data is restricted to authorized individuals;
    o The continuity of key and certificate management operations is maintained; and
    o CA systems development, maintenance and operations are properly authorized and performed to maintain CA systems integrity.

for its Echoworx Root CA2 in accordance with the [WebTrust Criteria for Certification Authorities v2.1](#).

Echoworx's management is responsible for its assertion. Our responsibility is to express an opinion based on our audit.

We conducted our audit in accordance with standards for assurance engagements established by CPA Canada and, accordingly, included (1) obtaining an understanding of Echoworx's key and certificate life cycle management business practices and its controls over key and certificate integrity, over the authenticity and confidentiality of subscriber and relying party information, over the continuity of key and certificate life cycle management operations and over development, maintenance and operation of systems integrity; (2) selectively testing transactions executed in accordance with disclosed key and certificate life cycle management business practices; (3) testing and evaluating the operating effectiveness of the controls; and (4) performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

The relative effectiveness and significance of specific controls at Echoworx and their effect on assessments of control risk for subscribers and relying parties are dependent on their

interaction with the controls, and other factors present at individual subscriber and relying party locations. We have performed no procedures to evaluate the effectiveness of controls at individual subscriber and relying party locations.

Because of inherent limitations in controls, error or fraud may occur and not be detected. Furthermore, the projection of any conclusions, based on our findings, to future periods is subject to the risk that the validity of such conclusions may be altered because of changes made to the system or controls, or the failure to make needed changes to the system or controls, or deterioration in the degree of effectiveness of the controls.

In our opinion, Echoworx management's assertion, as referred to above, is fairly stated, in all material respects, in accordance with the WebTrust Criteria for Certification Authorities.

This report does not include any representation as to the quality of Echoworx's services beyond those covered by the WebTrust Criteria for Certification Authorities, nor the suitability of any of Echoworx's services for any customer's intended purpose.

Echoworx's use of the WebTrust for Certification Authorities Seal constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

Richter LLP

Richter LLP
Chartered Professional Accountants
Toronto, Ontario
25 May 2018

Assertions of Management as to
its Disclosure of its Business Practices and its Controls
over its Certification Authority Operations
during the period from 1 April 2017 through 31 March 2018

Our Commitment to Security, Controls and Integrity:
Echoworx Corporation (Echoworx) is committed to providing the highest level of security, controls and integrity to support our certification authority service. To that end, we have subjected our certification authority business practices to the highest level of audit in the form of the WebTrust Criteria for Certification Authorities v2.1. Below are our assertions, which have been audited by Richter LLP in conformity with the WebTrust Criteria for Certification Authorities.

Our Assertion With Respect to WebTrust for Certification Authorities Criteria:

Echoworx operates the Certification Authority (CA) service known as Echoworx Root CA2 and provides the following certification authority services:

- Subscriber registration
- Certificate rekey
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate validation
- Subscriber key escrow

The management of Echoworx is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure at http://www.echoworx.com/ca-repository/, CA business practices management, CA environmental controls, CA key lifecycle management controls, subscriber key lifecycle management controls, certificate lifecycle management controls, and subordinate CA certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

There are inherent limitations in any controls, including the possibility of human error and the circumvention or overriding of controls. Accordingly, even effective controls can provide only reasonable assurance with respect to Echoworx's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

Management has assessed the controls over its CA operations. Based on that assessment, in Echoworx Management's opinion, in providing its Certification Authority (CA) services in Toronto, Ontario during the period from 1 April 2017 through 31 March 2018, Echoworx has:

- Disclosed its Business, Key Life Cycle Management, Certificate Life Cycle Management, and CA Environmental Control practices in its Echoworx Root CA2 CPS v1.7 dated 30 March 2015.

- Maintained effective controls to provide reasonable assurance that:
  - The integrity of keys and certificates it manages is established and protected throughout their life cycles;
  - The integrity of subscriber keys and certificates it manages is established and protected throughout their life cycles;
  - Subscriber information is properly authenticated (for the registration activities performed by Echoworx); and
  - Subordinate CA certificate requests were accurate, authenticated, and approved.

- Maintained effective controls to provide reasonable assurance that:
  - Logical and physical access to CA systems and data is restricted to authorized individuals;

- o   The continuity of key and certificate management operations is maintained; and
- o   CA systems development, maintenance and operations are properly authorized and performed to maintain CA systems integrity.

in accordance with the WebTrust Criteria for Certification Authorities including the following:

CA Business Practice Disclosure

- o   **CA Business Practice Management**
    - CP Management
    - CPS Management

Service Integrity

- o   **CA Key Life Cycle Management Controls**
    - CA Key Generation
    - CA Key Storage, Backup, and Recovery
    - CA Public Key Distribution
    - CA Key Usage
    - CA Key Archival and Destruction
    - CA Key Compromise
    - CA Cryptographic Hardware Life Cycle Management
- o   **Subscriber Key Life Cycle Management Controls**
    - CA-Provided Subscriber Key Storage and Recovery Services
    - Requirements for Subscriber Key Management
- o   **Certificate Life Cycle Management Controls**
    - Subscriber Registration
    - Certificate Rekey
    - Certificate Issuance
    - Certificate Distribution
    - Certificate Revocation
    - Certificate Validation

CA Environmental Controls

- Security Management
- Asset Classification and Management
- Personnel Security
- Physical & Environmental Security
- Operations Management
- System Access Management
- System Development and Maintenance
- Business Continuity Management
- Monitoring and Compliance
- Audit Logging

Our commitment to these principles and criteria is on-going. Every twelve months, Richter LLP may verify our continuing compliance with the WebTrust Criteria for Certification Authorities, subject to re-engagement by Echoworx.

Echoworx Corporation
25 May 2018