REGISTRY AGREEMENT

This REGISTRY AGREEMENT (this "Agreement") is entered into as of Sunday, May 1, 2016 (the "Effective Date") between Christmas Island Domain Administration Limited , a Christmas Island non-profit public benefit company Limited by Guarantee ("cxDA"), and CoCCA Registry Services (NZ) Limited, a limited liability New Zealand company ("CoCCA ").

ARTICLE 1.
TOP–LEVEL DOMAIN REGISTRY SERVICES; REPRESENTATIONS AND WARRANTIES

1.1   Domain and Designation. The Top-Level Domain to which this Agreement applies is .cx (the "TLD"). Upon the Effective Date and until the earlier of the expiration of the Term (as defined in Section 4.1) or the termination of this Agreement pursuant to Article 4, cxDA designates CoCCA as the back-end Registry Operator for the TLD.

1.2   Representations and Warranties.

(a)   cxDA represents and warrants to CoCCA that cxDA is a non-profit public benefit corporation duly organized, validly existing and in good standing under the laws of Australia. cxDA has all requisite power and authority enter into and duly execute and deliver this Agreement.

(b)   CoCCA represents and warrants to cxDA as follows:

(i)   all material information provided and statements made in - during the negotiation of this Agreement were true and correct in all material respects at the time made, and such information or statements continue to be true and correct in all material respects as of the Effective Date except as otherwise previously disclosed in writing by CoCCA to cxDA;

(ii)   CoCCA is duly organized, validly existing and in good standing under the laws of the jurisdiction set forth in the preamble hereto, and CoCCA has all requisite power and authority to enter into and duly execute and deliver this Agreement.

ARTICLE 2.

COVENANTS OF COCCA

CoCCA covenants and agrees with cxDA as follows:

2.1   Approved Services and Additional Services. CoCCA shall be entitled to provide the Registry Services described in clauses (a) and (b) of the first paragraph of Section 2 in the Specification 6 attached hereto ("Specification 6") (the "Approved Services"). If CoCCA desires to provide any Registry Service that is not an Approved Service or is a material modification to an Approved Service (each, an "Additional Service"), CoCCA shall submit a request for approval. CoCCA may offer Additional Services only with the written approval of cxDA, and, upon any such approval, such Additional Services shall be deemed Registry Services under this Agreement. In its reasonable discretion, cxDA may require an amendment to this Agreement reflecting

the provision of any Additional Service, which amendment shall be in a form reasonably acceptable to the parties.

2.2   Compliance with Policies and Legislation. CoCCA shall comply with and implement all policies found at <https://cxda.org.cx >, as of the Effective Date and as may in the future be developed and adopted by cxDA, provided that cxDA notifies CoCCA of any such changes according to the provisions of this Agreement. CoCCA shall ensure that the operation of the TLD complies at all times with applicable Australian legislation.

2.3   Data Escrow. CoCCA shall comply with the registry data escrow procedures set forth in Specification 2 attached hereto ("Specification 2"). The beneficiary of the Escrow Agreement shall be cxDA.

2.4   Monthly Reporting. Within twenty (21) calendar days following the end of each calendar month, CoCCA shall deliver to cxDA reports in the format set forth in Specification 3 attached hereto ("Specification 3").

2.5   Publication of Registration Data. CoCCA shall provide public access to registration data in accordance with Specification 4 attached hereto ("Specification 4").

2.6   Reserved Names. Except to the extent that cxDA otherwise expressly authorizes in writing, CoCCA shall comply with the requirements set forth in Specification 5 attached hereto ("Specification 5"). cxDA may at any time establish or modify policies concerning CoCCA 's ability to reserve (i.e., withhold from registration or allocate to CoCCA , but not register to third parties, delegate, use, activate in the DNS or otherwise make available) or block additional character strings within the TLD at its discretion. Except as specified in Specification 5, if CoCCA is the registrant for any domain names in the registry TLD, such registrations must be through a cxDA-accredited registrar, and will be considered Transactions (as defined in Section 6.1) for purposes of calculating the Registry-level transaction fee to be paid to cxDA by CoCCA pursuant to Section 6.1.

2.7   Registry Interoperability and Continuity. CoCCA shall comply with the Registry Interoperability and Continuity Specifications as set forth in Specification 6 attached hereto ("Specification 6").

2.8   Protection of Legal Rights of Third Parties. CoCCA shall implement protections of the legal rights of third parties. Any changes or modifications to the process and procedures required by Specification 7 following the Effective Date must be approved in advance by cxDA in writing. CoCCA must comply with all remedies imposed by cxDA pursuant to Section 2 of Specification 7, subject to CoCCA 's right to challenge such remedies as set forth in the applicable procedure described therein.

2.9   Law Enforcement Cooperation. CoCCA shall take reasonable steps to investigate and respond to any reports from law enforcement and governmental and quasi-governmental agencies of illegal or abusive conduct in connection with the use of the TLD. In responding to such reports, CoCCA will not be required to take any action in contravention of applicable law. CoCCA will, if requested, provide CERT Australia,

(https://cert.gov.au/) read - only access to the TLD registry data on a continuous basis in order to assist them to prevent and mitigate abuse of the DNS.

2.10   Registrars. All domain name registrations in the TLD must be registered through cxDA accredited registrars; provided, that CoCCA need not use a registrar if it registers names in its own name in order to withhold such names from delegation or use in accordance with Section 2.6. Subject to the requirements of Specification 10, CoCCA must provide non-discriminatory access to Registry Services to all cxDA accredited registrars that enter into and are in compliance with the registry access agreement for the TLD; provided that CoCCA may establish non-discriminatory criteria for qualification to register names in the TLD that are reasonably related to the proper functioning of the TLD. CoCCA must use a uniform non-discriminatory agreement with all registrars authorized to register names in the TLD (the "Registry Access Agreement"). CoCCA may amend the registry access agreement from time to time; provided, however, that any material revisions thereto must be approved by cxDA before any such revisions become effective and binding on any registrar. CoCCA will provide cxDA and all registrars authorized to register names in the TLD at least fifteen (15) calendar days written notice of any revisions to the registry access agreement before any such revisions become effective and binding on any registrar. During such period, cxDA will determine whether such proposed revisions are immaterial, potentially material or material in nature. If cxDA has not provided CoCCA with notice of its determination within such fifteen (15) calendar-day period, cxDA shall be deemed to have determined that such proposed revisions are immaterial in nature. If cxDA determines, or is deemed to have determined under this Section 2.10, that such revisions are immaterial, then CoCCA may adopt and implement such revisions. If cxDA determines such revisions are either material or potentially material, cxDA will thereafter follow its procedure regarding review and approval of changes to registry access agreements at <https://cxda.org.cx >, and such revisions may not be adopted and implemented until approved by cxDA.

2.11   Pricing for Registry Services.

(a)   With respect to initial domain name registrations, CoCCA shall provide cxDA and each cxDA accredited registrar that has executed the registry access agreement for the TLD advance written notice of any price increase (including as a result of the elimination of any refunds, rebates, discounts, product tying or other programs which had the effect of reducing the price charged to registrars, unless such refunds, rebates, discounts, product tying or other programs are of a limited duration that is clearly and conspicuously disclosed to the registrar when offered) of no less than fifteen (15) calendar days. CoCCA shall offer registrars the option to obtain initial domain name registrations for periods of one (1) to ten (10) years at the discretion of the registrar, but no greater than ten (10) years.

(b)   With respect to renewal of domain name registrations, CoCCA shall provide cxDA and each cxDA accredited registrar that has executed the registry access agreement for the TLD advance written notice of any price increase (including as a result of the elimination of any refunds, rebates, discounts, product tying, Qualified Marketing Programs or other programs which had the effect of reducing the price charged to registrars) of no less than sixty (60) calendar days. Notwithstanding the foregoing sentence, with respect to renewal of domain name registrations: CoCCA

needs only provide fifteen (15) calendar days notice of any price increase if the resulting price is less than or equal to (A) for the period beginning on the Effective Date and ending twelve (12) months following the Effective Date, the initial price charged for registrations in the TLD, or (B) for subsequent periods, a price for which CoCCA provided a notice pursuant to the first sentence of this Section 2.11(b) within the twelve (12) month period preceding the effective date of the proposed price increase. CoCCA shall offer registrars the option to obtain domain name registration renewals at the current price (i.e. the price in place prior to any noticed increase) for periods of one (1) to ten (10) years at the discretion of the registrar, but no greater than ten (10) years.

(c)   In addition, CoCCA must have uniform pricing for renewals of domain name registrations ("Renewal Pricing"). For the purposes of determining Renewal Pricing, the price for each domain registration renewal must be identical to the price of all other domain name registration renewals in place at the time of such renewal, and such price must take into account universal application of any refunds, rebates, discounts, product tying or other programs in place at the time of renewal. The foregoing requirements of this Section 2.11(c) shall not apply for (i) purposes of determining Renewal Pricing if the registrar has provided CoCCA with documentation that demonstrates that the applicable registrant expressly agreed in its registration agreement with registrar to higher Renewal Pricing at the time of the initial registration of the domain name following clear and conspicuous disclosure of such Renewal Pricing to such registrant, and (ii) discounted Renewal Pricing pursuant to a Qualified Marketing Program (as defined below). The parties acknowledge that the purpose of this Section 2.11(c) is to prohibit abusive and/or discriminatory Renewal Pricing practices imposed by CoCCA without the written consent of the applicable registrant at the time of the initial registration of the domain and this Section 2.11(c) will be interpreted broadly to prohibit such practices. For purposes of this Section 2.11(c), a "Qualified Marketing Program" is a marketing program pursuant to which CoCCA offers discounted Renewal Pricing, provided that each of the following criteria is satisfied: (i) the program and related discounts are offered for a period of time not to exceed one year (365) calendar days (with consecutive substantially similar programs aggregated for purposes of determining the number of calendar days of the program), (ii) all cxDA accredited registrars are provided the same opportunity to qualify for such discounted Renewal Pricing; and (iii) the intent or effect of the program is not to exclude any particular class(es) of registrations (e.g., registrations held by large corporations) or increase the renewal price of any particular class(es) of registrations. Nothing in this Section 2.11(c) shall limit CoCCA 's obligations pursuant to Section 2.11(b).

(d)   CoCCA shall provide or contract with third parties for public query-based DNS lookup service for the TLD (that is, operate the Registry TLD zone servers) at its sole expense.

(e)   CoCCA shall contract with a third parties for ICANN - compliant data escrow via an ICANN approve provider, at its sole expense.

2.12   Contractual and Operational Compliance Audits.

(a)   cxDA may from time to time (not to exceed twice per calendar year) conduct, or engage a third party to conduct, contractual compliance audits to assess compliance by CoCCA with its representations and warranties contained in

Article 1 of this Agreement and its covenants contained in Article 2 of this Agreement. Such audits shall be tailored to achieve the purpose of assessing compliance, and cxDA will (a) give reasonable advance notice of any such audit, which notice shall specify in reasonable detail the categories of documents, data and other information requested by cxDA, and (b) use commercially reasonable efforts to conduct such audit during regular business hours and in such a manner as to not unreasonably disrupt the operations of CoCCA . As part of such audit and upon request by cxDA, CoCCA shall timely provide all responsive documents, data and any other information reasonably necessary to demonstrate CoCCA 's compliance with this Agreement. Upon no less than ten (10) calendar days notice (unless otherwise agreed to by CoCCA), cxDA may, as part of any contractual compliance audit, conduct site visits during regular business hours to assess compliance by CoCCA with its representations and warranties contained in Article 1 of this Agreement and its covenants contained in Article 2 of this Agreement. cxDA will treat any information obtained in connection with such audits that is appropriately marked as confidential (as required by Section 7.14) as Confidential Information of CoCCA in accordance with Section 7.14.

(b)   Any audit conducted pursuant to Section 2.12(a) will be at cxDA's expense, unless (i) the audit relates to CoCCA 's compliance with Section 2.14, in which case CoCCA shall reimburse cxDA for all reasonable costs and expenses associated with the portion of the audit related to CoCCA 's compliance with Section 2.14, provided that CoCCA (A) controls, is controlled by, is under common control or is otherwise Affiliated with, any cxDA accredited registrar or registrar reseller or any of their respective Affiliates, or (B) has subcontracted the provision of Registry Services to an cxDA accredited registrar or registrar reseller or any of their respective Affiliates, or (ii) the audit is related to a discrepancy in the fees paid by CoCCA hereunder in excess of 5% in a given quarter to cxDA's detriment, in which case CoCCA shall reimburse cxDA for all reasonable costs and expenses associated with the entirety of such audit. In either such case of (i) or (ii) above, such reimbursement will be paid together with the next Registry- Level Fee payment due following the date of transmittal of the cost statement for such audit.

(c)   Notwithstanding Section 2.12(a), if CoCCA is found not to be in compliance with its representations and warranties contained in Article 1 of this Agreement or its covenants contained in Article 2 of this Agreement in two consecutive audits conducted pursuant to this Section 2.12, cxDA may increase the number of such audits to one per calendar quarter.

(d)   CoCCA will give cxDA immediate notice of CoCCA 's knowledge of the commencement of any of the proceedings referenced in Section 4.3(b) or the occurrence of any of the matters specified in Section 4.3(c).

2.13   Emergency Transition. CoCCA agrees that, in the event that any of the emergency thresholds for registry functions set forth in Section 6 of Specification 9 is reached, cxDA may designate an emergency interim back-end Registry Operator of the registry for the TLD (an "Emergency Operator") until such time as CoCCA has demonstrated to cxDA's reasonable satisfaction that it can resume operation of the registry for the TLD without the reoccurrence of such failure. Following such demonstration, CoCCA may transition back into operation of the registry for the TLD provided that CoCCA pays all reasonable costs incurred (i) by cxDA as a result of the

designation of the Emergency Operator and (ii) by the Emergency Operator in connection with the operation of the registry for the TLD, which costs shall be documented in reasonable detail in records that shall be made available to CoCCA . In the event cxDA designates an Emergency Operator pursuant to this Section 2.13 CoCCA shall provide cxDA or any such Emergency Operator with all data (including the data escrowed in accordance with Section 2.3 regarding operations of the registry for the TLD necessary to maintain operations and registry functions that may be reasonably requested by cxDA or such Emergency Operator. CoCCA agrees that cxDA may make any changes it deems necessary to the IANA database for DNS and WHOIS records with respect to the TLD in the event that an Emergency Operator is designated pursuant to this Section 2.13.

 2.14 **Registry Code of Conduct**. In connection with the operation of the registry for the TLD, CoCCA shall comply with the Registry Code of Conduct as set forth in Specification 8 attached hereto ("Specification 8").

 2.15 **Registry Performance Specifications**. Registry Performance Specifications for operation of the TLD will be as set forth in Specification 9 attached hereto ("Specification 9"). CoCCA shall comply with such Performance Specifications and, for a period of at least one (1) year, shall keep technical and operational records sufficient to evidence compliance with such specifications for each calendar year during the Term.

 2.16 **Additional Public Interest Commitments**. CoCCA shall comply with the public interest commitments set forth in Specification 10 attached hereto ("Specification 10").

 2.17 **Personal Data**. CoCCA shall (i) notify each cxDA-accredited registrar that is a party to the registry access agreement for the TLD of the purposes for which data about any identified or identifiable natural person ("Personal Data") submitted to CoCCA by such registrar is collected and used under this Agreement or otherwise and the intended recipients (or categories of recipients) of such Personal Data, and (ii) require such registrar to obtain the consent of each registrant in the TLD for such collection and use of Personal Data. CoCCA shall take reasonable steps to protect Personal Data collected from such registrar from loss, misuse, unauthorized disclosure, alteration or destruction. CoCCA shall not use or authorize the use of Personal Data in a way that is incompatible with the notice provided to registrars.

ARTICLE 3.

COVENANTS OF CXDA

 cxDA covenants and agrees with CoCCA as follows:

 3.1 **Open and Transparent**. Consistent with cxDA's expressed mission and core values, cxDA shall operate in an open and transparent manner.

 3.2 **Fair Treatment**. cxDA shall not apply standards, policies, procedures or practices arbitrarily or unjustifiably.

3.3   Authoritative Root Database cxDA shall use commercially reasonable efforts to (a) ensure that the authoritative root will point to the top-level domain nameservers designated by CoCCA for the TLD, (b) maintain a stable, secure, and authoritative publicly available database of relevant information about the TLD, in accordance with cxDA publicly available policies and procedures, and (c) coordinate the TLD name servers in the Authoritative Root Server System so that they are operated and maintained in a stable and secure manner; provided, that cxDA shall not be in breach of this Agreement and cxDA shall have no liability in the event that any third party (including any governmental entity or internet service provider) blocks or restricts access to the TLD in any jurisdiction.

ARTICLE 4.2

TERM AND TERMINATION

4.1   Term. The term of this Agreement will be ten (10) years from the Effective Date (as such term may be extended pursuant to Section 4.2, the "Term").

4.2   Renewal.

(a)   This Agreement will be renewed for successive periods of ten (10) years upon the expiration of the initial Term set forth in Section 4.1 and each successive Term, unless:

(i)   Following notice by cxDA to CoCCA of a fundamental and material breach of CoCCA 's covenants set forth in Article 2 or breach of its payment obligations under Article 6 of this Agreement, which notice shall include with specificity the details of the alleged breach, and such breach has not been cured within thirty (30) calendar days of such notice, (A) an arbitrator or court of competent jurisdiction has finally determined that CoCCA has been in fundamental and material breach of such covenant(s) or in breach of its payment obligations, and (B) CoCCA has failed to comply with such determination and cure such breach within ten (10) calendar days or such other time period as may be determined by the arbitrator or court of competent jurisdiction; or

(ii)   During the then-current Term, CoCCA shall have been found by an arbitrator (pursuant to Section 5.2 of this Agreement) or a court of competent jurisdiction on at least three (3) separate occasions to have been in (A) fundamental and material breach (whether or not cured) of CoCCA 's covenants set forth in Article 2 or (B) breach of its payment obligations under Article 6 of this Agreement.

(b)   Upon the occurrence of the events set forth in Section 4.2(a) (i) or (ii), the Agreement shall terminate at the expiration of the then-current Term.

4.3   Termination by cxDA.

(a)   cxDA may, upon notice to CoCCA , terminate this Agreement if: (i) CoCCA fails to cure (A) any fundamental and material breach of CoCCA 's representations and warranties set forth in Article 1 or covenants set forth in Article 2,

or (B) any breach of CoCCA's payment obligations set forth in Article 6 of this Agreement, each within thirty (30) calendar days after cxDA gives CoCCA notice of such breach, which notice will include with specificity the details of the alleged breach, (ii) an arbitrator or court of competent jurisdiction has finally determined that CoCCA is in fundamental and material breach of such covenant(s) or in breach of its payment obligations, and (iii) CoCCA fails to comply with such determination and cure such breach within ten (10) calendar days or such other time period as may be determined by the arbitrator or court of competent jurisdiction.

(b)   cxDA may, upon notice to CoCCA, terminate this Agreement if (i) CoCCA makes an assignment for the benefit of creditors or similar act, (ii) attachment, garnishment or similar proceedings are commenced against CoCCA, which proceedings are a material threat to CoCCA's ability to operate the registry for the TLD, and are not dismissed within sixty (60) calendar days of their commencement, (iii) a trustee, receiver, liquidator or equivalent is appointed in place of CoCCA or maintains control over any of CoCCA's property, (iv) execution is levied upon any material property of CoCCA, (v) proceedings are instituted by or against CoCCA under any bankruptcy, insolvency, reorganization or other laws relating to the relief of debtors and such proceedings are not dismissed within sixty (60) calendar days of their commencement, or (vi) CoCCA files for protection under the United States Bankruptcy Code, 11 U.S.C. Section 101, et seq., or a foreign equivalent or liquidates, dissolves or otherwise discontinues its operations or the operation of the TLD.

(c)   cxDA may, upon thirty (30) calendar days' notice to CoCCA, terminate this Agreement pursuant to Section 2 of Specification 7 or Specification 10, subject to CoCCA's right to challenge such termination as set forth in the applicable procedure described therein.

(d)   cxDA may, upon thirty (30) calendar days' notice to CoCCA, terminate this Agreement as specified in Section 7.5.

4.4   Termination by CoCCA.

(a)   CoCCA may terminate this Agreement for any reason upon ninety (90) calendar day advance notice to cxDA.

4.5   Transition of Registry upon Termination of Agreement. Upon expiration of the Term pursuant to Section 4.1 or Section 4.2 or any termination of this Agreement pursuant to Section 4.3 or Section 4.4, CoCCA shall provide cxDA or any successor registry operator that may be designated by cxDA for the TLD in accordance with this Section 4.5 with all data (including the data escrowed in accordance with Section 2.3) regarding operations of the registry for the TLD necessary to maintain operations and registry functions that may be reasonably requested by cxDA or a successor registry operator. After consultation with CoCCA, cxDA shall determine whether or not to transition operation of the TLD to a successor registry operator in its sole discretion and in conformance with the Registry Transition Process; provided, however, that CoCCA demonstrates to cxDA's reasonable satisfaction that (A) all domain name registrations in the TLD are registered to, and maintained by, CoCCA or its Affiliates for their exclusive use, (B) CoCCA does not sell, distribute or transfer control or use of any registrations in the TLD to any third party that is not an Affiliate of CoCCA,

and (C) transitioning operation of the TLD is not necessary to protect the public interest, then cxDA may not transition operation of the TLD to a successor registry operator upon the expiration or termination of this Agreement without the consent of CoCCA (which shall not be unreasonably withheld, conditioned or delayed). CoCCA agrees that cxDA may make any changes it deems necessary to the IANA database for DNS and WHOIS records with respect to the TLD in the event of a transition of the TLD pursuant to this Section 4.5.

4.6   Effect of Termination. Upon any expiration of the Term or termination of this Agreement, the obligations and rights of the parties hereto shall cease, provided that such expiration or termination of this Agreement shall not relieve the parties of any obligation or breach of this Agreement accruing prior to such expiration or termination, including, without limitation, all accrued payment obligations arising under Article 6. In addition, Article 5, Article 7, Section 4.5, and this Section 4.6 shall survive the expiration or termination of this Agreement. For the avoidance of doubt, the rights of CoCCA to operate the registry for the TLD shall immediately cease upon any expiration of the Term or termination of this Agreement.

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ARTICLE 5.

DISPUTE RESOLUTION

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5.1   Mediation. In the event of any dispute arising under or in connection with this Agreement, before either party may initiate arbitration pursuant to Section 5.2 below, cxDA and CoCCA must attempt to resolve the dispute through mediation in accordance with the following terms and conditions:

(a)   A party shall submit a dispute to mediation by written notice to the other party. The mediation shall be conducted by a single mediator selected by the parties. If the parties cannot agree on a mediator within fifteen (15) calendar days of delivery of written notice pursuant to this Section 5.1, the parties will promptly select a mutually acceptable mediation provider entity, which entity shall, as soon as practicable following such entity's selection, designate a mediator, who is a licensed attorney with general knowledge of contract law, has no ongoing business relationship with either party and, to the extent necessary to mediate the particular dispute, general knowledge of the domain name system. Any mediator must confirm in writing that he or she is not, and will not become during the term of the mediation, an employee, partner, executive officer, director, or security holder of cxDA or CoCCA . If such confirmation is not provided by the appointed mediator, then a replacement mediator shall be appointed pursuant to this Section 5.1(a).

(b)   The mediator shall conduct the mediation in accordance with the rules and procedures that he or she determines following consultation with the parties. The parties shall discuss the dispute in good faith and attempt, with the mediator's assistance, to reach an amicable resolution of the dispute. The mediation shall be treated as a settlement discussion and shall therefore be confidential and may not be used against either party in any later proceeding relating to the dispute, including any arbitration pursuant to Section 5.2. The mediator may not testify for either party in any later proceeding relating to the dispute.

(c) Each party shall bear its own costs in the mediation. The parties shall share equally the fees and expenses of the mediator. Each party shall treat information received from the other party pursuant to the mediation that is appropriately marked as confidential (as required by Section 7.14) as Confidential Information of such other party in accordance with Section 7.14.

(d) If the parties have engaged in good faith participation in the mediation but have not resolved the dispute for any reason, either party or the mediator may terminate the mediation at any time and the dispute can then proceed to arbitration pursuant to Section 5.2 below. If the parties have not resolved the dispute for any reason by the date that is ninety (90) calendar days following the date of the notice delivered pursuant to Section 5.1(a), the mediation shall automatically terminate (unless extended by agreement of the parties) and the dispute can then proceed to arbitration pursuant to Section 5.2 below.

5.2   Arbitration. Disputes arising under or in connection with this Agreement that are not resolved pursuant to Section 5.1, including requests for specific performance, will be resolved through binding arbitration conducted pursuant to the rules of the International Court of Arbitration of the International Chamber of Commerce. The arbitration will be conducted in the English language and will occur in Sydney, Australia. Any arbitration will be in front of a single arbitrator, unless (i) cxDA is seeking punitive or exemplary damages, or operational sanctions, (ii) the parties agree in writing to a greater number of arbitrators, or (iii) the dispute arises under Section 7.6. In the case of clauses (i), (ii) or (iii) in the preceding sentence, the arbitration will be in front of three arbitrators with each party selecting one arbitrator and the two selected arbitrators selecting the third arbitrator. In order to expedite the arbitration and limit its cost, the arbitrator(s) shall establish page limits for the parties' filings in conjunction with the arbitration, and should the arbitrator(s) determine that a hearing is necessary, the hearing shall be limited to one (1) calendar day, provided that in any arbitration in which cxDA is seeking punitive or exemplary damages, or operational sanctions, the hearing may be extended for one (1) additional calendar day if agreed upon by the parties or ordered by the arbitrator(s) based on the arbitrator(s) independent determination or the reasonable request of one of the parties thereto. The prevailing party in the arbitration will have the right to recover its costs and reasonable attorneys' fees, which the arbitrator(s) shall include in the awards. Each party shall treat information received from the other party pursuant to the arbitration that is appropriately marked as confidential (as required by Section 7.14) as Confidential Information of such other party in accordance with Section 7.14. In any litigation involving cxDA concerning this Agreement, jurisdiction and exclusive venue for such litigation will be in a court located in Sydney, Australia; however, the parties will also have the right to enforce a judgment of such a court in any court of competent jurisdiction.

5.3   Limitation of Liability. cxDA's aggregate monetary liability for violations of this Agreement will not exceed an amount equal to the Registry-Level Fees paid by CoCCA to cxDA within the preceding twelve-month period pursuant to this Agreement. CoCCA 's aggregate monetary liability to cxDA for breaches of this Agreement will be limited to an amount equal to the fees paid to cxDA during the preceding twelve-month period, except with respect to CoCCA 's indemnification obligations pursuant to Section 7.1 and Section 7.2. In no event shall either party be

liable for special, punitive, exemplary or consequential damages arising out of or in connection with this Agreement or the performance or nonperformance of obligations undertaken in this Agreement. Except as otherwise provided in this Agreement, neither party makes any warranty, express or implied, with respect to the services rendered by itself, its servants or agents, or the results obtained from their work, including, without limitation, any implied warranty of merchantability, non-infringement or fitness for a particular purpose.

5.4   Specific Performance. CoCCA and cxDA agree that irreparable damage could occur if any of the provisions of this Agreement was not performed in accordance with its specific terms. Accordingly, the parties agree that they each shall be entitled to seek from the arbitrator or court of competent jurisdiction specific performance of the terms of this Agreement (in addition to any other remedy to which each party is entitled).

ARTICLE 6.

FEES

6.1   Fees.

(a)   CoCCA shall pay cxDA transaction fees. The transaction fees will be equal to the number of annual increments of a domain name registration or renewal (at one or more levels, and including renewals associated with transfers from one cxDA-accredited registrar to another, each a "Transaction"), during the applicable calendar month. If a registrar purchases a block of credits in oder to qualify for volume discounts, the Transaction fee is payable in the month transaction occurs.

(b)   In accordance with the cxDA board resolution approved February 11, 2016 the registry Transaction fee shall not exceed the fee that charged by AU Domain Administration Limited (auDA) to the .au back-end registry provider.

(c)   cxDA may, at its sole discretion, increase the Transaction fee once in a calendar year, on a 90 days' notice, provided the increase is no greater than the consumer price inflation rate published by the Reserve Bank of Australia at http://www.rba.gov.au/ or 8% (whichever is the lesser).

(d)   The registry level transaction fee of 1.75 has been calculated as half the figure published by auDA on 1 July 2014 for a two-year registration (3.85)[1], less GST.

(e)   CoCCA may charge registrars any Transaction fees it deems appropriate, provided that (a) transaction fees charged for an individual transaction are the same as on the date the registrar purchased the credits to enable the transaction, and (b) the renewal fee does not increase by more than 20% in any given year from the non-discounted renewal fee that was in place on the day the domain was initially registered.

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[1] http://www.auda.org.au/industry-information/registrars/registrar-accreditation/

(f)   Subject to Section 6.1(a), CoCCA shall pay the Registry-Level Fees on a monthly basis to an account designated by cxDA within thirty (30) calendar days following the date of the invoice provided by cxDA.

6.2   Additional Fee on Late Payments. For any payments thirty (30) calendar days or more overdue under this Agreement, CoCCA shall pay an additional fee on late payments at the rate of 1.5% per month or, if less, the maximum rate permitted by applicable law.

ARTICLE 7.

MISCELLANEOUS

7.1   Indemnification of cxDA.

(a)   CoCCA shall indemnify and defend cxDA and its directors, officers, employees, and agents (collectively, "Indemnities") from and against any and all third-party claims, damages, liabilities, costs, and expenses, including reasonable legal fees and expenses, arising out of or relating to intellectual property ownership rights with respect to the delegation of the TLD to CoCCA , CoCCA 's operation of the registry for the TLD or CoCCA 's provision of Registry Services, provided that CoCCA shall not be obligated to indemnify or defend any Indemnities to the extent the claim, damage, liability, cost or expense arose: (i) due to the actions or omissions of cxDA, its subcontractors, panelists or evaluators specifically related to and occurring during the registry TLD application process (other than actions or omissions requested by or for the benefit of CoCCA), or (ii) due to a breach by cxDA of any obligation contained in this Agreement or any willful misconduct by cxDA. This Section shall not be deemed to require CoCCA to reimburse or otherwise indemnify cxDA for costs associated with the negotiation or execution of this Agreement, or with monitoring or management of the parties' respective obligations hereunder. Further, this Section shall not apply to any request for attorney's fees in connection with any litigation or arbitration between or among the parties, which shall be governed by Article 5 or otherwise awarded by a court of competent jurisdiction or arbitrator.

7.2   Indemnification Procedures. If any third-party claim is commenced that is indemnified under Section 7.1 above, cxDA shall provide notice thereof to CoCCA as promptly as practicable. CoCCA shall be entitled, if it so elects, in a notice promptly delivered to cxDA, to immediately take control of the defense and investigation of such claim and to employ and engage attorneys reasonably acceptable to cxDA to handle and defend the same, at CoCCA 's sole cost and expense, provided that in all events cxDA will be entitled to control at its sole cost and expense the litigation of issues concerning the validity or interpretation of cxDA's policies, Bylaws or conduct. cxDA shall cooperate, at CoCCA 's cost and expense, in all reasonable respects with CoCCA and its attorneys in the investigation, trial, and defense of such claim and any appeal arising therefrom, and may, at its own cost and expense, participate, through its attorneys or otherwise, in such investigation, trial and defense of such claim and any appeal arising therefrom. No settlement of a claim that involves a remedy affecting cxDA other than the payment of money in an amount that is fully indemnified by CoCCA will be entered into without the consent of cxDA. If CoCCA does not assume full control over the defense of a claim subject to such defense in accordance with this Section 7.2, cxDA will have the right to

defend the claim in such manner as it may deem appropriate, at the cost and expense of CoCCA and CoCCA shall cooperate in such defense.

7.3   Defined Terms. For purposes of this Agreement, unless such definitions are amended pursuant to a cxDA policy at a future date, in which case the following definitions shall be deemed amended and restated in their entirety as set forth in such CxDA policy, Security and Stability shall be defined as follows:

(a)   For the purposes of this Agreement, an effect on "Security" shall mean (1) the unauthorized disclosure, alteration, insertion or destruction of registry data, or (2) the unauthorized access to or disclosure of information or resources on the Internet by systems operating in accordance with all applicable standards.

(b)   For purposes of this Agreement, an effect on "Stability" shall refer to (1) lack of compliance with applicable relevant standards that are authoritative and published by a well-established and recognized Internet standards body, such as the relevant Standards-Track or Best Current Practice Requests for Comments ("RFCs") sponsored by the Internet Engineering Task Force; or (2) the creation of a condition that adversely affects the throughput, response time, consistency or coherence of responses to Internet servers or end systems operating in accordance with applicable relevant standards that are authoritative and published by a well-established and recognized Internet standards body, such as the relevant Standards-Track or Best Current Practice RFCs, and relying on CoCCA 's delegated information or provisioning of services.

7.4   No Offset. All payments due under this Agreement will be made in a timely manner throughout the Term and notwithstanding the pendency of any dispute (monetary or otherwise) between CoCCA and cxDA.

7.5   Change of Control; Assignment and Subcontracting. Either party may assign any of its rights and obligations under this Agreement without the prior written approval of the other party. For purposes of this Section 7.5, a direct or indirect change of control of CoCCA or any subcontracting arrangement that relates to any Critical Function (as identified in Section 6 of Specification 9) for the TLD (a "Material Subcontracting Arrangement") shall be deemed an assignment.

(a)   CoCCA must provide no less than thirty (30) calendar days advance notice to cxDA of any assignment or Material Subcontracting Arrangement, and any agreement to assign or subcontract any portion of the operations of the TLD (whether or not a Material Subcontracting Arrangement) must mandate compliance with all covenants, obligations and agreements by CoCCA hereunder. CoCCA must also provide no less than thirty (30) calendar days advance notice to cxDA prior to the consummation of any transaction anticipated to result in a direct or indirect change of control of CoCCA .

(b)   cxDA must provide no less than thirty (30) calendar days advance notice to CoCCA of any assignment of any of cxDA's rights or obligations under this Agreement.

(c)   Within thirty (30) calendar days of either such notification pursuant to Section 7.5(a), cxDA may request additional information from CoCCA establishing (i) compliance with this Agreement and (ii) that the party acquiring such control or entering into such assignment or Material Subcontracting Arrangement (in any case, the "Contracting Party") and the ultimate parent entity of the Contracting Party meets the cxDA-adopted specification or policy on CoCCA criteria then in effect (including with respect to financial resources and operational and technical capabilities), in which case CoCCA must supply the requested information within fifteen (15) calendar days.

(d)   In connection with any such assignment, change of control or Material Subcontracting Arrangement, CoCCA shall comply with the cxDA registry transition process.

(e)   Notwithstanding the foregoing, (i) any consummated change of control shall not be voidable by cxDA; provided, however, that, if cxDA reasonably determines to withhold its consent to such transaction, cxDA may terminate this Agreement pursuant to Section 4.3, (ii) cxDA may assign this Agreement without the consent of CoCCA upon approval of the cxDA Board of Directors in conjunction with a reorganization, reconstitution or re-incorporation of cxDA upon such assignee's express assumption of the terms and conditions of this Agreement, (iii) CoCCA may assign this Agreement without the consent of cxDA directly to a wholly-owned subsidiary of CoCCA, or, if CoCCA is a wholly-owned subsidiary, to its direct parent or to another wholly-owned subsidiary of its direct parent, upon such subsidiary's or parent's, as applicable, express assumption of the terms and conditions of this Agreement, and (iv) cxDA shall be deemed to have consented to any assignment, Material Subcontracting Arrangement or change of control transaction in which the Contracting Party is an existing operator of a generic top-level domain pursuant to a registry agreement between such Contracting Party and cxDA (provided that such Contracting Party is then in compliance with the terms and conditions of such registry agreement in all material respects), unless cxDA provides to CoCCA a written objection to such transaction within ten (10) calendar days of cxDA's receipt of notice of such transaction pursuant to this Section 7.5. Notwithstanding Section 7.5(a), in the event an assignment is made pursuant to clauses (ii) or (iii) of this Section 7.5(e), the assigning party will provide the other party with prompt notice following any such assignment.

7.6   Amendments and Waivers.

If the cxDA Board of Directors determines that an amendment to this Agreement is desirable (each, a "Special Amendment"), cxDA may adopt a Special Amendment; provided that a Special Amendment may not include: (A) an amendment of Specification 1, (B) except to the extent addressed in Section 2.10 hereof, an amendment that specifies the price charged by CoCCA to registrars for domain name registrations, (C) an amendment to the definition of Registry Services as set forth in the first paragraph of Section 2 of Specification 6, or (D) an amendment to the length of the Term.

7.7   No Third-Party Beneficiaries. This Agreement will not be construed to create any obligation by either cxDA or CoCCA to any non-party to this Agreement, including any registrar or registered name holder.

7.8 **General Notices**. All notices to be given under or in relation to this Agreement will be given either (i) in writing at the address of the appropriate party as set forth below or (ii) via facsimile or electronic mail as provided below, unless that party has given a notice of change of postal or email address, or facsimile number, as provided in this Agreement. Any change in the contact information for notice below will be given by the party within thirty (30) calendar days of such change. Any notice required by this Agreement will be deemed to have been properly given (i) if in paper form, when delivered in person or via courier service with confirmation of receipt or (ii) if via facsimile or by electronic mail, upon confirmation of receipt by the recipient's facsimile machine or email server, provided that such notice via facsimile or electronic mail shall be followed by a copy sent by regular postal mail service within three (3) calendar days. In the event other means of notice become practically achievable, such as notice via a secure website, the parties will work together to implement such notice means under this Agreement.

> If to cxDA, addressed to:
> Christmas Island Domain Administration Limited
> 6RCI Nursery Road, Drumsite
> Christmas Island, Indian Ocean
> Australia WA 6798
>
> Telephone: +61.8.9467.5918
> Email: info@cxda.org.cx
>
> If to CoCCA , addressed to:
> CoCCA Registry Services (NZ) Limited
> 4a / 36 College Hill Road
> Freemans Bay, Auckland 1011
> New Zealand
>
> Telephone: +64.9.446.6370
> Email: accounts@cocca.org.nz

7.9 **Entire Agreement**. This Agreement (including those specifications and documents incorporated by reference to URL locations which form a part of it) constitutes the entire agreement of the parties hereto pertaining to the operation of the TLD and supersedes all prior agreements, understandings, negotiations and discussions, whether oral or written, between the parties on that subject.

7.10 **English Language Controls**. Notwithstanding any translated version of this Agreement and/or specifications that may be provided to CoCCA , the English language version of this Agreement and all referenced specifications are the official versions that bind the parties hereto. In the event of any conflict or discrepancy between any translated version of this Agreement and the English language version, the English language version controls. Notices, designations, determinations, and specifications made under this Agreement shall be in the English language.

7.11 **Ownership Rights**. Nothing contained in this Agreement shall be construed as (a) establishing or granting to CoCCA any property ownership rights or interests in the TLD or the letters, words, symbols or other characters making up the

TLD string, or (b) affecting any existing intellectual property or ownership rights of CoCCA .

7.12   Severability; Conflicts with Laws. This Agreement shall be deemed severable; the invalidity or unenforceability of any term or provision of this Agreement shall not affect the validity or enforceability of the balance of this Agreement or of any other term hereof, which shall remain in full force and effect. If any of the provisions hereof are determined to be invalid or unenforceable, the parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible.

7.13   Court Orders. cxDA will respect any order from a court of competent jurisdiction, including any orders from any jurisdiction where the consent or non-objection of the government was a requirement for the delegation of the TLD. Notwithstanding any other provision of this Agreement, cxDA's implementation of any such order will not be a breach of this Agreement

7.14   Confidentiality

(a)   Subject to Section 7.14(c), during the Term and for a period of three (3) years thereafter, each party shall, and shall cause its and its Affiliates' officers, directors, employees and agents to, keep confidential and not publish or otherwise disclose to any third party, directly or indirectly, any information that is, and the disclosing party has marked as, or has otherwise designated in writing to the receiving party as, "confidential trade secret," "confidential commercial information" or "confidential financial information" (collectively, "Confidential Information"), except to the extent such disclosure is permitted by the terms of this Agreement.

(b)   The confidentiality obligations under Section 7.14(a) shall not apply to any Confidential Information that (i) is or hereafter becomes part of the public domain by public use, publication, general knowledge or the like through no fault of the receiving party in breach of this Agreement, (ii) can be demonstrated by documentation or other competent proof to have been in the receiving party's possession prior to disclosure by the disclosing party without any obligation of confidentiality with respect to such information, (iii) is subsequently received by the receiving party from a third party who is not bound by any obligation of confidentiality with respect to such information, (iv) has been published by a third party or otherwise enters the public domain through no fault of the receiving party, or (v) can be demonstrated by documentation or other competent evidence to have been independently developed by or for the receiving party without reference to the disclosing party's Confidential Information.

(c)   Each party shall have the right to disclose Confidential Information to the extent that such disclosure is (i) made in response to a valid order of a court of competent jurisdiction or, if in the reasonable opinion of the receiving party's legal counsel, such disclosure is otherwise required by applicable law; provided, however, that the receiving party shall first have given notice to the disclosing party and given the disclosing party a reasonable opportunity to quash such order or to obtain a protective order or confidential treatment order requiring that the Confidential Information that is the subject of such order or other applicable law be held in confidence by such court or

other third party recipient, unless the receiving party is not permitted to provide such notice under such order or applicable law, or (ii) made by the receiving party or any of its Affiliates to its or their attorneys, auditors, advisors, consultants, contractors or other third parties for use by such person or entity as may be necessary or useful in connection with the performance of the activities under this Agreement, provided that such third party is bound by confidentiality obligations at least as stringent as those set forth herein, either by written agreement or through professional responsibility standards.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives.

Christmas Island Domain Administration Limited.

By: _____

Garth Miller
Chairman and CEO
Date: Saturday, April 23, 2016

CoCCA Registry Services (NZ) Limited

By: _____

Marina Chibisova
Managing Director
Date: Monday, April 25, 2016

SPECIFICATION 1

POLICIES SPECIFICATION

1. **Policies.** "Policies" are those policies established by cxDA promote the operational stability and utility and acceptable use of the .cx ccTLD they include but are not limited to the following.

    1.1   to ensure a cost effective administration of the .cx ccTLD and its sub-domains;

    1.2   to establish a policy framework for the development and administration of the .cx ccTLD including:

    1.2.1 rules governing acceptable use of the cx ccTLD;

    1.2.2 rules governing the accreditation of registrars and registry operators;

    1.2.3 rules governing the registration of names;

    1.2.4 ensuring that registrars have equal access to registry services.

    1.3   to exercise oversight of the operation of critical technical functions including:

    1.3.1 the primary and secondary .cx name servers;

    1.3.2 zone files for second level domains; and

    1.3.3 a searchable data base containing information on registrations within the .cx ccTLD.

    1.4   to establish appropriate complaints handling and dispute resolution processes to provide for conciliation or redress of grievances on matters associated with the administration and use of the .cx ccTLD.

2. **Notice and Conflicts**. CoCCA shall be afforded a reasonable period of time following notice of the establishment of Policy in which to comply with such policy or specification, taking into account any urgency involved. In the event of a conflict between Registry Services the Polices shall control, but only with respect to subject matter in conflict.

SPECIFICATION 2

DATA ESCROW REQUIREMENTS

CoCCA will engage an independent entity to act as data escrow agent ("***Escrow Agent***") for the provision of data escrow services related to the Registry Agreement. The following Technical Specifications set forth in Part A, and Legal Requirements set forth in Part B, will be included in any data escrow agreement between CoCCA and the Escrow Agent, under which cxDA must be named a third-party beneficiary. In addition to the following requirements, the data escrow agreement may contain other provisions that are not contradictory or intended to subvert the required terms provided below.

PART A – TECHNICAL SPECIFICATIONS

1. **Deposits**. There will be two types of Deposits: Full and Differential. For both types, the universe of Registry objects to be considered for data escrow are those objects necessary in order to offer all of the approved Registry Services.

    1.1 "**Full Deposit**" will consist of data that reflects the state of the registry as of 00:00:00 UTC (Coordinated Universal Time) on the day that such Full Deposit is submitted to Escrow Agent.

    1.2 "Differential Deposit" means data that reflects all transactions that were not reflected in the last previous Full or Differential Deposit, as the case may be. Each Differential Deposit will contain all database transactions since the previous Deposit was completed as of 00:00:00 UTC of each day, but Sunday. Differential Deposits must include complete Escrow Records as specified below that were not included or changed since the most recent full or Differential Deposit (i.e., newly added or modified domain names).

2. **Schedule for Deposits**. CoCCA will submit a set of escrow files on a daily basis as follows:

    2.1 Each Sunday, a Full Deposit must be submitted to the Escrow Agent by 23:59 UTC.

    2.2 The other six (6) days of the week, a Full Deposit or the corresponding Differential Deposit must be submitted to Escrow Agent by 23:59 UTC.

3. **Escrow Format Specification**.

    3.1 **Deposit's Format**. Registry objects, such as domains, contacts, name servers, registrars, etc. will be compiled into a file constructed as described in draft-arias-noguchi-registry-data-escrow, see Part A, Section 9, reference 1 of this Specification and draft-arias-noguchi-dnrd-objects-mapping, see Part A, Section 9, reference 2 of this Specification (collectively, the "DNDE Specification"). The DNDE Specification describes some elements as optional; CoCCA will include those elements in the Deposits if they are available. If not already an RFC, CoCCA will use the most recent draft version of the DNDE Specification available at the

Effective Date. CoCCA may at its election use newer versions of the DNDE Specification after the Effective Date. Once the DNDE Specification is published as an RFC, CoCCA will implement that version of the DNDE Specification, no later than one hundred eighty (180) calendar days after. UTF-8 character encoding will be used.

3.2   **Extensions**. If a CoCCA offers additional Registry Services that require submission of additional data, not included above, additional "extension schemas" shall be defined in a case by case basis to represent that data. These "extension schemas" will be specified as described in Part A, Section 9, reference 2 of this Specification. Data related to the "extensions schemas" will be included in the deposit file described in Part A, Section 3.1 of this Specification. cxDA and the respective CoCCA shall work together to agree on such new objects' data escrow specifications.

4.   **Processing of Deposit files**. The use of compression is recommended in order to reduce electronic data transfer times, and storage capacity requirements. Data encryption will be used to ensure the privacy of registry escrow data. Files processed for compression and encryption will be in the binary OpenPGP format as per OpenPGP Message Format - RFC 4880, see Part A, Section 9, reference 3 of this Specification. Acceptable algorithms for Public-key cryptography, Symmetric-key cryptography, Hash and Compression are those enumerated in RFC 4880, not marked as deprecated in OpenPGP IANA Registry, see Part A, Section 9, reference 4 of this Specification, that are also royalty-free. The process to follow for the data file in original text format is:

(1)   The XML file of the deposit as described in Part A, Section 9, reference 1 of this Specification must be named as the containing file as specified in Section 5 but with the extension xml.

(2)   The data file(s) are aggregated in a tarball file named the same as (1) but with extension tar.

(3)   A compressed and encrypted OpenPGP Message is created using the tarball file as sole input. The suggested algorithm for compression is ZIP as per RFC 4880. The compressed data will be encrypted using the escrow agent's public key. The suggested algorithms for Public-key encryption are Elgamal and RSA as per RFC 4880. The suggested algorithms for Symmetric-key encryption are TripleDES, AES128 and CAST5 as per RFC 4880.

(4)   The file may be split as necessary if, once compressed and encrypted, it is larger than the file size limit agreed with the escrow agent. Every part of a split file, or the whole file if not split, will be called a processed file in this section.

(5)   A digital signature file will be generated for every processed file using CoCCA 's private key. The digital signature file will be in binary OpenPGP format as per RFC 4880 Section 9, reference 3, and will not be compressed or encrypted. The suggested algorithms for Digital signatures are DSA and

RSA as per RFC 4880. The suggested algorithm for Hashes in Digital signatures is SHA256.

(6)   The processed files and digital signature files will then be transferred to the Escrow Agent through secure electronic mechanisms, such as, SFTP, SCP, HTTPS file upload, etc. as agreed between the Escrow Agent and CoCCA . Non-electronic delivery through a physical medium such as CD-ROMs, DVD-ROMs, or USB storage devices may be used if authorized by cxDA.

(7)   The Escrow Agent will then validate every (processed) transferred data file using the procedure described in Part A, Section 8 of this Specification.

5.   **File Naming Conventions**. Files will be named according to the following convention: {gTLD}_{YYYY-MM-DD}_{type}_S{#}_R{rev}.{ext} where:

5.1   {gTLD} is replaced with the gTLD name; in case of an IDN-TLD, the ASCII-compatible form (A-Label) must be used;

5.2   {YYYY-MM-DD} is replaced by the date corresponding to the time used as a timeline watermark for the transactions; i.e. for the Full Deposit corresponding to 2009-08-02T00:00Z, the string to be used would be "2009-08-02";

5.3   {type} is replaced by:

(1)   "full", if the data represents a Full Deposit;

(2)   "diff", if the data represents a Differential Deposit;

(3)   "thin", if the data represents a Bulk Registration Data Access file, as specified in Section 3 of Specification 4;

5.4   {#} is replaced by the position of the file in a series of files, beginning with "1"; in case of a lone file, this must be replaced by "1".

5.5   {rev} is replaced by the number of revision (or resend) of the file beginning with "0":

5.6   {ext} is replaced by "sig" if it is a digital signature file of the quasi-homonymous file. Otherwise it is replaced by "ryde".

6.   **Distribution of Public Keys**. Each of CoCCA and Escrow Agent will distribute its public key to the other party (CoCCA or Escrow Agent, as the case may be) via email to an email address to be specified. Each party will confirm receipt of the other party's public key with a reply email, and the distributing party will subsequently reconfirm the authenticity of the key transmitted via offline methods, like in person meeting, telephone, etc. In this way, public key transmission is authenticated to a user able to send and receive mail via a mail server operated by the distributing party. Escrow Agent, CoCCA and cxDA will exchange public keys by the same procedure.

7. **Notification of Deposits**. Along with the delivery of each Deposit, CoCCA will deliver to Escrow Agent and to cxDA (using the API described in draft-lozano-cxDA-registry-interfaces, see Part A, Section 9, reference 5 of this Specification (the "Interface Specification")) a written statement (which may be by authenticated e-mail) that includes a copy of the report generated upon creation of the Deposit and states that the Deposit has been inspected by CoCCA and is complete and accurate. CoCCA will include the Deposit's "id" and "resend" attributes in its statement. The attributes are explained in Part A, Section 9, reference 1 of this Specification.

If not already an RFC, CoCCA will use the most recent draft version of the Interface Specification at the Effective Date. CoCCA may at its election use newer versions of the Interface Specification after the Effective Date. Once the Interface Specification is published as an RFC, CoCCA will implement that version of the Interface Specification, no later than one hundred eighty (180) calendar days after such publishing.

8. **Verification Procedure**.

    (1)   The signature file of each processed file is validated.

    (2)   If processed files are pieces of a bigger file, the latter is put together.

    (3)   Each file obtained in the previous step is then decrypted and uncompressed.

    (4)   Each data file contained in the previous step is then validated against the format defined in Part A, Section 9, reference 1 of this Specification.

    (5)   If Part A, Section 9, reference 1 of this Specification includes a verification process, that will be applied at this step.

If any discrepancy is found in any of the steps, the Deposit will be considered incomplete.

9. **References**.

    (1)   Domain Name Data Escrow Specification (work in progress), http://tools.ietf.org/html/draft-arias-noguchi-registry-data-escrow

    (2)   Domain Name Registration Data (DNRD) Objects Mapping, http://tools.ietf.org/html/draft-arias-noguchi-dnrd-objects-mapping

    (3)   OpenPGP Message Format, http://www.rfc-editor.org/rfc/rfc4880.txt

    (4)   OpenPGP parameters, http://www.iana.org/assignments/pgp-parameters/pgp-parameters.xhtml

    (5)   cxDA interfaces for registries and data escrow agents, http://tools.ietf.org/html/draft-lozano-cxDA-registry-interfaces

PART B – LEGAL REQUIREMENTS

1. **Escrow Agent**. Prior to entering into an escrow agreement, CoCCA must provide notice to cxDA as to the identity of the Escrow Agent, and provide cxDA with contact information and a copy of the relevant escrow agreement, and all amendments thereto. In addition, prior to entering into an escrow agreement, CoCCA must obtain the consent of cxDA to (a) use the specified Escrow Agent, and (b) enter into the form of escrow agreement provided. cxDA must be expressly designated as a third-party beneficiary of the escrow agreement. cxDA reserves the right to withhold its consent to any Escrow Agent, escrow agreement, or any amendment thereto, all in its sole discretion.

2. **Fees**. CoCCA must pay, or have paid on its behalf, fees to the Escrow Agent directly. If CoCCA fails to pay any fee by the due date(s), the Escrow Agent will give cxDA written notice of such non-payment and cxDA may pay the past-due fee(s) within fifteen (15) calendar days after receipt of the written notice from Escrow Agent. Upon payment of the past-due fees by cxDA, cxDA shall have a claim for such amount against CoCCA , which CoCCA shall be required to submit to cxDA together with the next fee payment due under the Registry Agreement.

3. **Ownership**. Ownership of the Deposits during the effective term of the Registry Agreement shall remain with CoCCA at all times. Thereafter, CoCCA shall assign any such ownership rights (including intellectual property rights, as the case may be) in such Deposits to cxDA. In the event that during the term of the Registry Agreement any Deposit is released from escrow to cxDA, any intellectual property rights held by CoCCA in the Deposits will automatically be licensed to cxDA or to a party designated in writing by cxDA on a non-exclusive, perpetual, irrevocable, royalty-free, paid-up basis, for any use related to the operation, maintenance or transition of the TLD.

4. **Integrity and Confidentiality**. Escrow Agent will be required to (i) hold and maintain the Deposits in a secure, locked, and environmentally safe facility, which is accessible only to authorized representatives of Escrow Agent, (ii) protect the integrity and confidentiality of the Deposits using commercially reasonable measures and (iii) keep and safeguard each Deposit for one (1) year. cxDA and CoCCA will be provided the right to inspect Escrow Agent's applicable records upon reasonable prior notice and during normal business hours. CoCCA and cxDA will be provided with the right to designate a third-party auditor to audit Escrow Agent's compliance with the technical specifications and maintenance requirements of this Specification 2 from time to time.

    If Escrow Agent receives a subpoena or any other order from a court or other judicial tribunal pertaining to the disclosure or release of the Deposits, Escrow Agent will promptly notify CoCCA and cxDA unless prohibited by law. After notifying CoCCA and cxDA, Escrow Agent shall allow sufficient time for CoCCA or cxDA to challenge any such order, which shall be the responsibility of CoCCA or cxDA; provided, however, that Escrow Agent does not waive its rights to present its position with respect to any such order. Escrow Agent will cooperate with CoCCA or cxDA to support efforts to quash or limit any subpoena, at such party's expense.

Any party requesting additional assistance shall pay Escrow Agent's standard charges or as quoted upon submission of a detailed request.

5. **Copies**. Escrow Agent may be permitted to duplicate any Deposit, in order to comply with the terms and provisions of the escrow agreement.

6. **Release of Deposits**. Escrow Agent will make available for electronic download (unless otherwise requested) to cxDA or its designee, within twenty-four (24) hours, at CoCCA's expense, all Deposits in Escrow Agent's possession in the event that the Escrow Agent receives a request from CoCCA to effect such delivery to cxDA, or receives one of the following written notices by cxDA stating that:

   6.1. the Registry Agreement has expired without renewal, or been terminated; or

   6.2 cxDA has not received a notification as described in Part B, Sections 7.1 and 7.2 of this Specification from Escrow Agent within five (5) calendar days after the Deposit's scheduled delivery date; (a) cxDA gave notice to Escrow Agent and CoCCA of that failure; and (b) cxDA has not, within seven (7) calendar days after such notice, received the notification from Escrow Agent; or

   6.3 cxDA has received notification as described in Part B, Sections 7.1 and 7.2 of this Specification from Escrow Agent of failed verification of the latest escrow deposit for a specific date or a notification of a missing deposit, and the notification is for a deposit that should have been made on Sunday (i.e., a Full Deposit); (a) cxDA gave notice to CoCCA of that receipt; and (b) cxDA has not, within seven (7) calendar days after such notice, received notification as described in Part B, Sections 7.1 and 7.2 of this Specification from Escrow Agent of verification of a remediated version of such Full Deposit; or

   6.4 cxDA has received five notifications from Escrow Agent within the last thirty (30) calendar days notifying cxDA of either missing or failed escrow deposits that should have been made Monday through Saturday (i.e., a Differential Deposit), and (x) cxDA provided notice to CoCCA of the receipt of such notifications; and (y) cxDA has not, within seven (7) calendar days after delivery of such notice to CoCCA , received notification from Escrow Agent of verification of a remediated version of such Differential Deposit; or

   6.5 CoCCA has: (i) ceased to conduct its business in the ordinary course; or (ii) filed for bankruptcy, become insolvent or anything analogous to any of the foregoing under the laws of any jurisdiction anywhere in the world; or

   6.6 CoCCA has experienced a failure of critical registry functions and cxDA has asserted its rights pursuant to Section 2.13 of the Agreement; or

   6.7 a competent court, arbitral, legislative, or government agency mandates the release of the Deposits to cxDA; or

6.8   pursuant to Contractual and Operational Compliance Audits as specified under Section 2.12 of the Agreement.

Unless Escrow Agent has previously released CoCCA 's Deposits to cxDA or its designee, Escrow Agent will deliver all Deposits to cxDA upon expiration or termination of the Registry Agreement or the Escrow Agreement.

7.   **Verification of Deposits**.

7.1   Within twenty-four (24) hours after receiving each Deposit or corrected Deposit, Escrow Agent must verify the format and completeness of each Deposit and deliver to cxDA a notification generated for each Deposit. Reports will be delivered electronically using the API described in draft-lozano-cxDA-registry-interfaces, see Part A, Section 9, reference 5 of this Specification.

7.2   If Escrow Agent discovers that any Deposit fails the verification procedures or if Escrow Agent does not receive any scheduled Deposit, Escrow Agent must notify CoCCA either by email, fax or phone and cxDA (using the API described in draft-lozano-cxDA-registry-interfaces, see Part A, Section 9, reference 5 of this Specification) of such nonconformity or non-receipt within twenty-four (24) hours after receiving the non-conformant Deposit or the deadline for such Deposit, as applicable. Upon notification of such verification or delivery failure, CoCCA must begin developing modifications, updates, corrections, and other fixes of the Deposit necessary for the Deposit to be delivered and pass the verification procedures and deliver such fixes to Escrow Agent as promptly as possible.

8.   **Amendments**. Escrow Agent and CoCCA shall amend the terms of the Escrow Agreement to conform to this Specification 2 within ten (10) calendar days of any amendment or modification to this Specification 2. In the event of a conflict between this Specification 2 and the Escrow Agreement, this Specification 2 shall control.

9.   **Indemnity**. Escrow Agent shall indemnify and hold harmless CoCCA and cxDA, and each of their respective directors, officers, agents, employees, members, and stockholders ("Indemnitees") absolutely and forever from and against any and all claims, actions, damages, suits, liabilities, obligations, costs, fees, charges, and any other expenses whatsoever, including reasonable attorneys' fees and costs, that may be asserted by a third party against any Indemnities in connection with the misrepresentation, negligence or misconduct of Escrow Agent, its directors, officers, agents, employees and contractors.

SPECIFICATION 3

FORMAT AND CONTENT FOR COCCA MONTHLY REPORTING

CoCCA shall provide one set of monthly reports per gTLD, using the API described in draft-lozano-cxDA-registry-interfaces, see Specification 2, Part A, Section 9, reference 5, with the following content.

cxDA may request in the future that the reports be delivered by other means and using other formats. cxDA will use reasonable commercial efforts to preserve the confidentiality of the information reported until three (3) months after the end of the month to which the reports relate. Unless set forth in this Specification 3, any reference to a specific time refers to Coordinated Universal Time (UTC). Monthly reports shall consist of data that reflects the state of the registry at the end of the month (UTC).

1. **Per-Registrar Transactions Report**. This report shall be compiled in a comma separated-value formatted file as specified in RFC 4180. The file shall be named "gTLD-transactions-yyyymm.csv", where "gTLD" is the gTLD name; in case of an IDN-TLD, the A-label shall be used; "yyyymm" is the year and month being reported. The file shall contain the following fields per registrar:

Field #	Field name	Description
01	registrar-name	Registrar's full corporate name as registered with IANA
02	iana-id	For cases where CoCCA acts as registrar (i.e., without the use of an cxDA accredited registrar) 9999 should be used, otherwise the sponsoring Registrar IANA id should be used as specified in http://www.iana.org/assignments/registrar-ids
03	total-domains	total domain names under sponsorship in any EPP status but pendingCreate that have not been purged
04	total-nameservers	total name servers (either host objects or name server hosts as domain name attributes) associated with domain names registered for the TLD in any EPP status but pendingCreate that have not been purged
05	net-adds-1-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of one (1) year (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
06	net-adds-2-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of two(2) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.

07	net-adds-3-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of three (3) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
08	net-adds-4-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of four (4) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
09	net-adds-5-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of five (5) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
10	net-adds-6-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of six (6) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
11	net-adds-7-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of seven (7) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
12	net-adds-8-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of eight (8) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
13	net-adds-9-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of nine (9) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
14	net-adds-10-yr	number of domains successfully registered (i.e., not in EPP pendingCreate status) with an initial term of ten (10) years (and not deleted within the add grace period). A transaction must be reported in the month the add grace period ends.
15	net-renews-1-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of one (1) year (and not deleted within the renew or auto-renew grace period). A transaction must be

		reported in the month the renew or auto-renew grace period ends.
16	net-renews-2-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of two (2) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
17	net-renews-3-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of three (3) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
18	net-renews-4-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of four (4) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
19	net-renews-5-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of five (5) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
20	net-renews-6-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of six (6) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
21	net-renews-7-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of seven (7) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
22	net-renews-8-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of eight

		(8) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
23	net-renews-9-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of nine (9) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
24	net-renews-10-yr	number of domains successfully renewed (i.e., not in EPP pendingRenew status) either automatically or by command with a new renewal period of ten (10) years (and not deleted within the renew or auto-renew grace period). A transaction must be reported in the month the renew or auto-renew grace period ends.
25	transfer-gaining-successful	number of domain transfers initiated by this registrar that were successfully completed (either explicitly or automatically approved) and not deleted within the transfer grace period. A transaction must be reported in the month the transfer grace period ends.
26		number of domain transfers initiated by this registrar that were rejected (e.g., EPP transfer op="reject") by the other registrar
27	transfer-losing-successfully	number of domain transfers initiated by another registrar that were successfully completed (either explicitly or automatically approved)
28	transfer-losing-nacked	number of domain transfers initiated by another registrar that this registrar rejected (e.g., EPP transfer op="reject")
29	transfer-disputed-won	number of transfer disputes in which this registrar prevailed (reported in the month where the determination happened)
30	transfer-disputed-lost	number of transfer disputes this registrar lost (reported in the month where the determination happened)
31	transfer-disputed-nodecision	number of transfer disputes involving this registrar with a split or no decision (reported in the month where the determination happened)
32	deleted-domains-grace	domains deleted within the add grace period (does not include names deleted while in EPP pendingCreate status). A deletion must be reported in the month the name is purged.

33	deleted-domains-nograce	domains deleted outside the add grace period (does not include names deleted while in EPP pendingCreate status). A deletion must be reported in the month the name is purged.
34	restored-domains	domain names restored from redemption period
35	restored-noreport	total number of restored names for which the registrar failed to submit a restore report
36	agp-exemption-requests	total number of AGP (add grace period) exemption requests
37	agp-exemptions-granted	total number of AGP (add grace period) exemption requests granted
38	agp-exempted-domains	total number of names affected by granted AGP (add grace period) exemption requests
39	attempted-adds	number of attempted (both successful and failed) domain name create commands

The first line shall include the field names exactly as described in the table above as a "header line" as described in section 2 of RFC 4180. The last line of each report shall include totals for each column across all registrars; the first field of this line shall read "Totals" while the second field shall be left empty in that line. No other lines besides the ones described above shall be included. Line breaks shall be <U+000D, U+000A> as described in RFC 4180.

2. **Registry Functions Activity Report**. This report shall be compiled in a comma separated-value formatted file as specified in RFC 4180. The file shall be named "gTLD-activity-yyyymm.csv", where "gTLD" is the gTLD name; in case of an IDN-TLD, the A-label shall be used; "yyyymm" is the year and month being reported. The file shall contain the following fields:

Field #	Field Name	Description
01	operational-registrars	number of operational registrars at the end of the reporting period
02	ramp-up-registrars	number of registrars that have received a password for access to OT&E at the end of the reporting period
03	pre-ramp-up-registrars	number of registrars that have requested access, but have not yet entered the ramp-up period at the end of the reporting period
04	zfa-passwords	number of active zone file access passwords at the end of the reporting period
05	whois-43-queries	number of WHOIS (port-43) queries responded during the reporting period

Field #	Field Name	Description
06	web-whois-queries	number of Web-based Whois queries responded during the reporting period, not including searchable Whois
07	searchable-whois-queries	number of searchable Whois queries responded during the reporting period, if offered
08	dns-udp-queries-received	number of DNS queries received over UDP transport during the reporting period
09	dns-udp-queries-responded	number of DNS queries received over UDP transport that were responded during the reporting period
10	dns-tcp-queries-received	number of DNS queries received over TCP transport during the reporting period
11	dns-tcp-queries-responded	number of DNS queries received over TCP transport that were responded during the reporting period
12	srs-dom-check	number of SRS (EPP and any other interface) domain name "check" requests responded during the reporting period
13	srs-dom-create	number of SRS (EPP and any other interface) domain name "create" requests responded during the reporting period
14	srs-dom-delete	number of SRS (EPP and any other interface) domain name "delete" requests responded during the reporting period
15	srs-dom-info	number of SRS (EPP and any other interface) domain name "info" requests responded during the reporting period
16	srs-dom-renew	number of SRS (EPP and any other interface) domain name "renew" requests responded during the reporting period
17	srs-dom-rgp-restore-report	number of SRS (EPP and any other interface) domain name RGP "restore" requests delivering a restore report responded during the reporting period
18	srs-dom-rgp-restore-request	number of SRS (EPP and any other interface) domain name RGP "restore" requests responded during the reporting period
19	srs-dom-transfer-approve	number of SRS (EPP and any other interface) domain name "transfer" requests to approve transfers responded during the reporting period
20	srs-dom-transfer-cancel	number of SRS (EPP and any other interface) domain name "transfer" requests to cancel transfers responded during the reporting period

Field #	Field Name	Description
21	srs-dom-transfer-query	number of SRS (EPP and any other interface) domain name "transfer" requests to query about a transfer responded during the reporting period
22	srs-dom-transfer-reject	number of SRS (EPP and any other interface) domain name "transfer" requests to reject transfers responded during the reporting period
23	srs-dom-transfer-request	number of SRS (EPP and any other interface) domain name "transfer" requests to request transfers responded during the reporting period
24	srs-dom-update	number of SRS (EPP and any other interface) domain name "update" requests (not including RGP restore requests) responded during the reporting period
25	srs-host-check	number of SRS (EPP and any other interface) host "check" requests responded during the reporting period
26	srs-host-create	number of SRS (EPP and any other interface) host "create" requests responded during the reporting period
27	srs-host-delete	number of SRS (EPP and any other interface) host "delete" requests responded during the reporting period
28	srs-host-info	number of SRS (EPP and any other interface) host "info" requests responded during the reporting period
29	srs-host-update	number of SRS (EPP and any other interface) host "update" requests responded during the reporting period
30	srs-cont-check	number of SRS (EPP and any other interface) contact "check" requests responded during the reporting period
31	srs-cont-create	number of SRS (EPP and any other interface) contact "create" requests responded during the reporting period
32	srs-cont-delete	number of SRS (EPP and any other interface) contact "delete" requests responded during the reporting period
33	srs-cont-info	number of SRS (EPP and any other interface) contact "info" requests responded during the reporting period
34	srs-cont-transfer-approve	number of SRS (EPP and any other interface) contact "transfer" requests to approve transfers responded during the reporting period

Field #	Field Name	Description
35	srs-cont-transfer-cancel	number of SRS (EPP and any other interface) contact "transfer" requests to cancel transfers responded during the reporting period
36	srs-cont-transfer-query	number of SRS (EPP and any other interface) contact "transfer" requests to query about a transfer responded during the reporting period
37	srs-cont-transfer-reject	number of SRS (EPP and any other interface) contact "transfer" requests to reject transfers responded during the reporting period
38	srs-cont-transfer-request	number of SRS (EPP and any other interface) contact "transfer" requests to request transfers responded during the reporting period
39	srs-cont-update	number of SRS (EPP and any other interface) contact "update" requests responded during the reporting period

The first line shall include the field names exactly as described in the table above as a "header line" as described in section 2 of RFC 4180. No other lines besides the ones described above shall be included. Line breaks shall be <U+000D, U+000A> as described in RFC 4180.

For gTLDs that are part of a single-instance Shared Registry System, the Registry Functions Activity Report may include the total contact or host transactions for all the gTLDs in the system.

SPECIFICATION 4

REGISTRATION DATA PUBLICATION SERVICES

1.   **Registration Data Directory Services**. Until cxDA requires a different protocol, CoCCA will operate a WHOIS service available via port 43 in accordance with RFC 3912, and a web-based Directory Service at <whois.nic.TLD> providing free public query-based access to at least the following elements in the following format. cxDA reserves the right to specify alternative formats and protocols, and upon such specification, CoCCA will implement such alternative specification as soon as reasonably practicable.

CoCCA shall implement a new standard supporting access to domain name registration data (SAC 051) no later than one hundred thirty-five (135) days after it is requested by cxDA if: 1) the IETF produces a standard (i.e., it is published, at least, as a Proposed Standard RFC as specified in RFC 2026); and 2) its implementation is commercially reasonable in the context of the overall operation of the registry.

1.1   The format of responses shall follow a semi-free text format outline below, followed by a blank line and a legal disclaimer specifying the rights of CoCCA , and of the user querying the database.

1.2   Each data object shall be represented as a set of key/value pairs, with lines beginning with keys, followed by a colon and a space as delimiters, followed by the value.

1.3   For fields where more than one value exists, multiple key/value pairs with the same key shall be allowed (for example to list multiple name servers). The first key/value pair after a blank line should be considered the start of a new record, and should be considered as identifying that record, and is used to group data, such as hostnames and IP addresses, or a domain name and registrant information, together.

1.4   The fields specified below set forth the minimum output requirements. CoCCA may output data fields in addition to those specified below, subject to approval by cxDA, which approval shall not be unreasonably withheld.

1.5   **Domain Name Data:**

1.5.1   **Query format:** whois EXAMPLE.TLD

1.5.2   **Response format:**

Domain Name: EXAMPLE.TLD
Domain ID: D1234567-TLD
WHOIS Server: whois.example.tld
Referral URL: http://www.example.tld
Updated Date: 2009-05-29T20:13:00Z
Creation Date: 2000-10-08T00:45:00Z
Registry Expiry Date: 2010-10-08T00:44:59Z

Sponsoring Registrar: EXAMPLE REGISTRAR LLC
Sponsoring Registrar IANA ID: 5555555
Domain Status: clientDeleteProhibited
Domain Status: clientRenewProhibited
Domain Status: clientTransferProhibited
Domain Status: serverUpdateProhibited
Registrant ID: 5372808-ERL
Registrant Name: EXAMPLE REGISTRANT
Registrant Organization: EXAMPLE ORGANIZATION
Registrant Street: 123 EXAMPLE STREET
Registrant City: ANYTOWN
Registrant State/Province: AP
Registrant Postal Code: A1A1A1
Registrant Country: EX
Registrant Phone: +1.5555551212
Registrant Phone Ext: 1234
Registrant Fax: +1.5555551213
Registrant Fax Ext: 4321
Registrant Email: EMAIL@EXAMPLE.TLD
Admin ID: 5372809-ERL
Admin Name: EXAMPLE REGISTRANT ADMINISTRATIVE
Admin Organization: EXAMPLE REGISTRANT ORGANIZATION
Admin Street: 123 EXAMPLE STREET
Admin City: ANYTOWN
Admin State/Province: AP
Admin Postal Code: A1A1A1
Admin Country: EX
Admin Phone: +1.5555551212
Admin Phone Ext: 1234
Admin Fax: +1.5555551213
Admin Fax Ext:
Admin Email: EMAIL@EXAMPLE.TLD
Tech ID: 5372811-ERL
Tech Name: EXAMPLE REGISTRAR TECHNICAL
Tech Organization: EXAMPLE REGISTRAR LLC
Tech Street: 123 EXAMPLE STREET
Tech City: ANYTOWN
Tech State/Province: AP
Tech Postal Code: A1A1A1
Tech Country: EX
Tech Phone: +1.1235551234
Tech Phone Ext: 1234
Tech Fax: +1.5555551213
Tech Fax Ext: 93
Tech Email: EMAIL@EXAMPLE.TLD
Name Server: NS01.EXAMPLEREGISTRAR.TLD
Name Server: NS02.EXAMPLEREGISTRAR.TLD
DNSSEC: signedDelegation

DNSSEC: unsigned
>>> Last update of WHOIS database: 2009-05-29T20:15:00Z <<<

1.6   **Registrar Data:**

1.6.1   **Query format**: whois "registrar Example Registrar, Inc."

1.6.2   **Response format**:

Registrar Name: Example Registrar, Inc.
Street: 1234 Admiralty Way
City: Marina del Rey
State/Province: CA
Postal Code: 90292
Country: US
Phone Number: +1.3105551212
Fax Number: +1.3105551213
Email: registrar@example.tld
WHOIS Server: whois.example-registrar.tld
Referral URL: http://www.example-registrar.tld
Admin Contact: Joe Registrar
Phone Number: +1.3105551213
Fax Number: +1.3105551213
Email: joeregistrar@example-registrar.tld
Admin Contact: Jane Registrar
Phone Number: +1.3105551214
Fax Number: +1.3105551213
Email: janeregistrar@example-registrar.tld
Technical Contact: John Geek
Phone Number: +1.3105551215
Fax Number: +1.3105551216
Email: johngeek@example-registrar.tld
>>> Last update of WHOIS database: 2009-05-29T20:15:00Z <<<

1.7   **Nameserver Data:**

1.71   **Query format**: whois "NS1.EXAMPLE.TLD", whois "nameserver (nameserver name)", or whois "nameserver (IP Address)"

1.7.2   **Response format:**

Server Name: NS1.EXAMPLE.TLD
IP Address: 192.0.2.123
IP Address: 2001:0DB8::1
Registrar: Example Registrar, Inc.
WHOIS Server: whois.example-registrar.tld
Referral URL: http://www.example-registrar.tld
>>> Last update of WHOIS database: 2009-05-29T20:15:00Z <<<

1.8   The format of the following data fields: domain status, individual and organizational names, address, street, city, state/province, postal code, country, telephone and fax numbers (the extension will be provided as a separate field as shown above), email addresses, date and times should conform to the mappings specified in EPP RFCs 5730-5734 so that the display of this information (or values return in WHOIS responses) can be uniformly processed and understood.

1.9   In order to be compatible with cxDA's common interface for WHOIS (InterNIC), WHOIS output shall be in the format outline above.

1.10   **Searchability**. Offering searchability capabilities on the Directory Services is optional but if offered by CoCCA it shall comply with the specification described in this section.

    1.10.1 CoCCA will offer searchability on the web-based Directory Service.

    1.10.2 CoCCA will offer partial match capabilities, at least, on the following fields: domain name, contacts and registrant's name, and contact and registrant's postal address, including all the sub-fields described in EPP (e.g., street, city, state or province, etc.).

    1.10.3 CoCCA will offer exact-match capabilities, at least, on the following fields: registrar id, name server name, and name server's IP address (only applies to IP addresses stored by the registry, i.e., glue records).

    1.10.4 CoCCA will offer Boolean search capabilities supporting, at least, the following logical operators to join a set of search criteria: AND, OR, NOT.

    1.10.5 Search results will include domain names matching the search criteria.

    1.10.6 CoCCA will: 1) implement appropriate measures to avoid abuse of this feature (e.g., permitting access only to legitimate authorized users); and 2) ensure the feature is in compliance with any applicable privacy laws or policies.

2.   **Zone File Access**

    2.1   **Third-Party Access**

    2.1.1 **Zone File Access Agreement**. CoCCA will enter into an agreement with any Internet user, which will allow such user to access an Internet host server or servers designated by CoCCA and download zone file data. The agreement will be standardized, facilitated and administered by a CoCCA Centralized Zone Data Access Provider, which may be cxDA or an cxDA designee (the "CZDA Provider"). CoCCA (optionally through the CZDA Provider) will provide access to zone file data per Section 2.1.3 of this Specification and do so using the file format described in Section 2.1.4 of this Specification. Notwithstanding the foregoing, (a) the CZDA Provider may reject the request for access of any user that does not satisfy the credentialing requirements in Section 2.1.2 below; (b) CoCCA may reject the request for access of any user that does not provide correct or legitimate credentials under Section 2.1.2 below or where CoCCA

reasonably believes will violate the terms of Section 2.1.5. below; and, (c) CoCCA may revoke access of any user if CoCCA has evidence to support that the user has violated the terms of Section 2.1.5 below.

2.1.2 **Credentialing Requirements.** CoCCA , through the facilitation of the CZDA Provider, will request each user to provide it with information sufficient to correctly identify and locate the user. Such user information will include, without limitation, company name, contact name, address, telephone number, facsimile number, email address and IP address.

2.1.3 **Grant of Access.** Each CoCCA (optionally through the CZDA Provider) will provide the Zone File FTP (or other Registry supported) service for an cxDA-specified and managed URL (specifically, <TLD>.zda.cxDA.org where <TLD> is the TLD for which the registry is responsible) for the user to access the Registry's zone data archives. CoCCA will grant the user a non-exclusive, nontransferable, limited right to access CoCCA 's (optionally CZDA Provider's) Zone File hosting server, and to transfer a copy of the top-level domain zone files, and any associated cryptographic checksum files no more than once per 24 hour period using FTP, or other data transport and access protocols that may be prescribed by cxDA. For every zone file access server, the zone files are in the top-level directory called <zone>.zone.gz, with <zone>.zone.gz.md5 and <zone>.zone.gz.sig to verify downloads. If CoCCA (or the CZDA Provider) also provides historical data, it will use the naming pattern <zone>-yyyymmdd.zone.gz, etc.

2.1.4 **File Format Standard.** CoCCA (optionally through the CZDA Provider) will provide zone files using a subformat of the standard Master File format as originally defined in RFC 1035, Section 5, including all the records present in the actual zone used in the public DNS. Sub-format is as follows:

1. Each record must include all fields in one line as: <domain-name> <TTL> <class> <type> <RDATA>.
2. Class and Type must use the standard mnemonics and must be in lower case.
3. TTL must be present as a decimal integer.
4. Use of /X and /DDD inside domain names is allowed.
5. All domain names must be in lower case.
6. Must use exactly one tab as separator of fields inside a record.
7. All domain names must be fully qualified.
8. No $ORIGIN directives.
9. No use of "@" to denote current origin.
10. No use of "blank domain names" at the beginning of a record to continue the use of the domain name in the previous record.
11. No $INCLUDE directives.
12. No $TTL directives.
13. No use of parentheses, e.g., to continue the list of fields in a record across a line boundary.
14. No use of comments.
15. No blank lines.
16. The SOA record should be present at the top and (duplicated at) the end of the zone file.

17. With the exception of the SOA record, all the records in a file must be in alphabetical order.
18. One zone per file. If a TLD divides its DNS data into multiple zones, each goes into a separate file named as above, with all the files combined using tar into a file called <tld>.zone.tar.

2.1.5 **Use of Data by User**. CoCCA will permit user to use the zone file for lawful purposes; provided that (a) user takes all reasonable steps to protect against unauthorized access to and use and disclosure of the data and (b) under no circumstances will CoCCA be required or permitted to allow user to use the data to, (i) allow, enable, or otherwise support the transmission by email, telephone, or facsimile of mass unsolicited, commercial advertising or solicitations to entities other than user's own existing customers, or (ii) enable high volume, automated, electronic processes that send queries or data to the systems of CoCCA or any cxDA-accredited registrar.

2.1.6 **Term of Use**. CoCCA , through CZDA Provider, will provide each user with access to the zone file for a period of not less than three (3) months. CoCCA will allow users to renew their Grant of Access.

2.1.7 **No Fee for Access**. CoCCA will provide, and CZDA Provider will facilitate, access to the zone file to user at no cost.

2.2 **Co-operation and Assistance.** CoCCA will co-operate and provide reasonable assistance to cxDA and the CZDA Provider to facilitate and maintain the efficient access of zone file data by permitted users as contemplated under this Schedule.

2.3 **cxDA Access**. CoCCA shall provide bulk access to the zone files for the TLD to cxDA or its designee on a continuous basis in the manner cxDA may reasonably specify from time to time. Access will be provided at least daily. Zone files will include SRS data committed as close as possible to 00:00:00 UTC.

2.4 **Emergency Operator Access**. CoCCA shall provide bulk access to the zone files for the TLD to the Emergency Operators designated by cxDA on a continuous basis in the manner cxDA may reasonably specify from time to time.

3. **Bulk Registration Data Access to cxDA**

3.1 **Periodic Access to Thin Registration Data**. In order to verify and ensure the operational stability of Registry Services as well as to facilitate compliance checks on accredited registrars, CoCCA will provide cxDA on a weekly basis (the day to be designated by cxDA) with up-to-date Registration Data as specified below. Data will include data committed as of 00:00:00 UTC on the day previous to the one designated for retrieval by cxDA.

3.1.1 **Contents**. CoCCA will provide, at least, the following data for all registered domain names: domain name, domain name repository object id (roid), registrar id (IANA ID), statuses, last updated date, creation date, expiration date, and name server names. For sponsoring registrars, at

least, it will provide: registrar name, registrar repository object id (roid), hostname of registrar Whois server, and URL of registrar.

3.1.2 **Format**. The data will be provided in the format specified in Specification 2 for Data Escrow (including encryption, signing, etc.) but including only the fields mentioned in the previous section, i.e., the file will only contain Domain and Registrar objects with the fields mentioned above. CoCCA has the option to provide a full deposit file instead as specified in Specification 2.

3.1.3 **Access**. CoCCA will have the file(s) ready for download as of 00:00:00 UTC on the day designated for retrieval by cxDA. The file(s) will be made available for download by SFTP, though cxDA may request other means in the future.

3.2 **Exceptional Access to Thick Registration Data**. In case of a registrar failure, deaccreditation, court order, etc. that prompts the temporary or definitive transfer of its domain names to another registrar, at the request of cxDA, CoCCA will provide cxDA with up-to-date data for the domain names of the losing registrar. The data will be provided in the format specified in Specification 2 for Data Escrow. The file will only contain data related to the domain names of the losing registrar. CoCCA will provide the data as soon as commercially practicable, but in no event later than five (5) calendar days following cxDA's request. Unless otherwise agreed by CoCCA and cxDA, the file will be made available for download by cxDA in the same manner as the data specified in Section 3.1 of this Specification.

SPECIFICATION 5

SCHEDULE OF RESERVED NAMES

Except to the extent that cxDA otherwise expressly authorizes in writing, and subject to the terms and conditions of this Specification, CoCCA shall reserve the following labels from initial (i.e., other than renewal) registration within the TLD. If using self-allocation, CoCCA must show the registration in the RDDS. In the case of IDN names (as indicated below), IDN variants will be identified according to CoCCA IDN registration policy, where applicable.

1. **Example.** The ASCII label "EXAMPLE" shall be withheld from registration or allocated to CoCCA at the second level and at all other levels within the TLD at which CoCCA offers registrations (such second level and all other levels are collectively referred to herein as, "All Levels"). Such label may not be activated in the DNS, and may not be released for registration to any person or entity other than CoCCA . Upon conclusion of CoCCA 's designation as operator of the registry for the TLD, such withheld or allocated label shall be transferred as specified by cxDA. CoCCA may self-allocate and renew such name without use of an cxDA accredited registrar, which will not be considered Transactions for purposes of Section 6.1 of the Agreement.

2. **Reservations for Registry Operations**.

    2.1 CoCCA may activate in the DNS at All Levels up to one hundred (1000) names (plus their IDN variants, where applicable) necessary for the operation or the promotion of the TLD. CoCCA must act as the Registered Name Holder of such names as that term is defined in the then-current cxDA Registrar Accreditation Agreement (RAA). These activations will be considered Transactions for purposes of Section 6.1 of the Agreement. CoCCA must either (i) register such names through an cxDA-accredited registrar; or (ii) self-allocate such names and with respect to those names submit to and be responsible to cxDA for compliance with cxDA Consensus Policies and the obligations set forth in Subsections 3.7.7.1 through 3.7.7.12 of the then-current RAA (or any other replacement clause setting out the terms of the registration agreement between a registrar and a registered name holder). At CoCCA 's discretion and in compliance with all other terms of this Agreement, such names may be released for registration to another person or entity.

    2.2 CoCCA may withhold from registration or allocate to CoCCA names (including their IDN variants, where applicable) at All Levels in accordance with Section 2.6 of the Agreement. Such names may not be activated in the DNS, but may be released for registration to another person or entity at CoCCA 's discretion. Upon conclusion of CoCCA 's designation as operator of the registry for the TLD, all such names that remain withheld from registration or allocated to CoCCA shall be transferred as specified by cxDA. Upon cxDA's request, CoCCA shall provide a listing of all names withheld or allocated to CoCCA pursuant to Section 2.6 of the Agreement. CoCCA may self-allocate and renew such

names without use of an cxDA accredited registrar, which will not be considered Transactions for purposes of Section 6.1 of the Agreement.

SPECIFICATION 6

REGISTRY INTEROPERABILITY AND CONTINUITY SPECIFICATIONS

1.   **Standards Compliance**

    1.1   **DNS**. CoCCA shall comply with relevant existing RFCs and those published in the future by the Internet Engineering Task Force (IETF), including all successor standards, modifications or additions thereto relating to the DNS and name server operations including without limitation RFCs 1034, 1035, 1123, 1982, 2181, 2182, 2671, 3226, 3596, 3597, 4343, and 5966.   DNS labels may only include hyphens in the third and fourth position if they represent valid IDNs (as specified above) in their ASCII encoding (e.g., "xn--ndk061n").

    1.2   **EPP**. CoCCA shall comply with relevant existing RFCs and those published in the future by the Internet Engineering Task Force (IETF) including all successor standards, modifications or additions thereto relating to the provisioning and management of domain names using the Extensible Provisioning Protocol (EPP) in conformance with RFCs 5910, 5730, 5731, 5732 (if using host objects), 5733 and 5734. If CoCCA implements Registry Grace Period (RGP), it will comply with RFC 3915 and its successors. If CoCCA requires the use of functionality outside the base EPP RFCs, CoCCA must document EPP extensions in Internet-Draft format following the guidelines described in RFC 3735. CoCCA will provide and update the relevant documentation of all the EPP Objects and Extensions supported to cxDA prior to deployment.

    1.3   **DNSSEC**. CoCCA shall sign its TLD zone files implementing Domain Name System Security Extensions ("DNSSEC"). During the Term, CoCCA shall comply with RFCs 4033, 4034, 4035, 4509 and their successors, and follow the best practices described in RFC 4641 and its successors. If CoCCA implements Hashed Authenticated Denial of Existence for DNS Security Extensions, it shall comply with RFC 5155 and its successors. CoCCA shall accept public-key material from child domain names in a secure manner according to industry best practices. Registry shall also publish in its website the DNSSEC Practice Statements (DPS) describing critical security controls and procedures for key material storage, access and usage for its own keys and secure acceptance of registrants' public-key material. CoCCA shall publish its DPS following the format described in RFC 6841.

    1.4   **IDN**. If CoCCA offers Internationalized Domain Names ("IDNs"), it shall comply with RFCs 5890, 5891, 5892, 5893 and their successors. CoCCA shall comply with the ICANN IDN Guidelines at <http://www.icann.org/en/topics/idn/implementation-guidelines.htm>, as they may be amended, modified, or superseded from time to time. CoCCA shall publish and keep updated its IDN Tables and IDN Registration Rules in the IANA Repository of IDN Practices as specified in the cxDA IDN Guidelines.

1.5   **IPv6**. CoCCA shall be able to accept IPv6 addresses as glue records in its Registry System and publish them in the DNS. CoCCA shall offer public IPv6 transport for, at least, two of the Registry's name servers listed in the root zone with the corresponding IPv6 addresses registered with IANA. CoCCA should follow "DNS IPv6 Transport Operational Guidelines" as described in BCP 91 and the recommendations and considerations described in RFC 4472. CoCCA shall offer public IPv6 transport for its Registration Data Publication Services as defined in Specification 4 of this Agreement; e.g., Whois (RFC 3912), Web based Whois. CoCCA shall offer public IPv6 transport for its Shared Registration System (SRS) to any Registrar, no later than six (6) months after receiving the first request in writing from a gTLD accredited Registrar willing to operate with the SRS over IPv6.

2.   **Registry Services**

2.1   **Registry Services**. "Registry Services" are, for purposes of the Agreement, defined as the following: (a) those services that are operations of the registry critical to the following tasks: the receipt of data from registrars concerning registrations of domain names and name servers; provision to registrars of status information relating to the zone servers for the TLD; dissemination of TLD zone files; operation of the registry DNS servers; and dissemination of contact and other information concerning domain name server registrations in the TLD as required by this Agreement; (b) other products or services that CoCCA is required to provide because of the establishment of a CxDA policy as defined in Specification 1; (c) any other products or services that only a CoCCA is capable of providing, by reason of its designation as CoCCA ; and (d) material changes to any Registry Service within the scope of (a), (b) or (c) above.

2.2   **Wildcard Prohibition**. For domain names which are either not registered, or the registrant has not supplied valid records such as NS records for listing in the DNS zone file, or their status does not allow them to be published in the DNS, the use of DNS wildcard Resource Records as described in RFCs 1034 and 4592 or any other method or technology for synthesizing DNS Resources Records or using redirection within the DNS by the Registry is prohibited. When queried for such domain names the authoritative name servers must return a "Name Error" response (also known as NXDOMAIN), RCODE 3 as described in RFC 1035 and related RFCs. This provision applies for all DNS zone files at all levels in the DNS tree for which CoCCA (or an affiliate engaged in providing Registration Services) maintains data, arranges for such maintenance, or derives revenue from such maintenance.

3.   **Registry Continuity**

3.1   **High Availability**. CoCCA will conduct its operations using network and geographically diverse, redundant servers (including network-level redundancy, end-node level redundancy and the implementation of a load

balancing scheme where applicable) to ensure continued operation in the case of technical failure (widespread or local), or an extraordinary occurrence or circumstance beyond the control of CoCCA . CoCCA 's emergency operations department shall be available at all times to respond to extraordinary occurrences.

3.2 **Extraordinary Event**. CoCCA will use commercially reasonable efforts to restore the critical functions of the registry within twenty-four (24) hours after the termination of an extraordinary event beyond the control of CoCCA and restore full system functionality within a maximum of forty-eight (48) hours following such event, depending on the type of critical function involved. Outages due to such an event will not be considered a lack of service availability.

3.3 **Business Continuity**. CoCCA shall maintain a business continuity plan, which will provide for the maintenance of Registry Services in the event of an extraordinary event beyond the control of CoCCA or business failure of CoCCA , and may include the designation of a Registry Services continuity provider. If such plan includes the designation of a Registry Services continuity provider, CoCCA shall provide the name and contact information for such Registry Services continuity provider to cxDA. In the case of an extraordinary event beyond the control of CoCCA where CoCCA cannot be contacted, CoCCA consents that cxDA may contact the designated Registry Services continuity provider, if one exists. CoCCA shall conduct Registry Services Continuity testing at least once per year.

4. **Abuse Mitigation**

    4.1 **Abuse Contact**. CoCCA shall provide to cxDA and publish on its website its accurate contact details including a valid email and mailing address as well as a primary contact for handling inquiries related to malicious conduct in the TLD, and will provide cxDA with prompt notice of any changes to such contact details.

    4.2 **Malicious Use of Orphan Glue Records**. CoCCA shall take action to remove orphan glue records when provided with evidence in written form that such records are present in connection with malicious conduct.

5. **Supported Initial and Renewal Registration Periods**

    5.1 **Initial Registration Periods**. Initial registrations of registered names may be made in the registry in one (1) year increments for up to a maximum of ten (10) years. For the avoidance of doubt, initial registrations of registered names may not exceed ten (10) years.

    5.2 **Renewal Periods**. Renewal of registered names may be made in one (1) year increments for up to a maximum of ten (10) years. For the avoidance of doubt, renewal of registered names may not extend their registration period beyond ten (10) years from the time of the renewal.

SPECIFICATION 7

MINIMUM REQUIREMENTS FOR RIGHTS PROTECTION MECHANISMS

1. **Rights Protection Mechanisms**. CoCCA shall implement and adhere to the rights protection mechanisms ("RPMs") specified by cxDA. In addition to such RPMs, CoCCA may develop and implement additional RPMs that discourage or prevent registration of domain names that violate or abuse another party's legal rights. CoCCA will include all RPMs required by this Specification 7 and any additional RPMs developed and implemented by CoCCA in the registry access agreement entered into by cxDA-accredited registrars authorized to register names in the TLD. CoCCA shall not mandate that any owner of applicable intellectual property rights use any other trademark information aggregation, notification, or validation service in addition to or instead of the cxDA designated entity.

2. **Dispute Resolution Mechanisms**. CoCCA will comply with the following dispute resolution mechanisms as they may be revised from time to time:

    a.   the Uniform Rapid Suspension system ("URS") adopted by cxDA is posted at https://cxda.org.cx.

    b.   the cxDA Complaint Resolution Service (CRS) is posted at https://cxda.org.cx

SPECIFICATION 8
REGISTRY OPERATOR CODE OF CONDUCT

1.   In connection with the operation of the registry for the TLD, CoCCA will not, and will not allow any parent, subsidiary, Affiliate, subcontractor or other related entity, to the extent such party is engaged in the provision of Registry Services with respect to the TLD (each, a "Registry Related Party"), to:

   a.   directly or indirectly show any preference or provide any special consideration to any registrar with respect to operational access to registry systems and related registry services, unless comparable opportunities to qualify for such preferences or considerations are made available to all registrars on substantially similar terms and subject to substantially similar conditions;

   b.   register domain names in its own right, except for names registered through an cxDA accredited registrar; provided, however, that CoCCA may (a) reserve names from registration pursuant to Section 2.6 of the Agreement and (b) may withhold from registration or allocate to CoCCA up to one hundred (100) names pursuant to Section 3.2 of Specification 5;

2.   Nothing set forth herein shall: (i) limit cxDA from conducting investigations of claims of CoCCA 's non-compliance with this Code of Conduct; or (ii) provide grounds for CoCCA to refuse to cooperate with cxDA investigations of claims of CoCCA 's non-compliance with this Code of Conduct.

3.   Nothing set forth herein shall limit the ability of CoCCA or any Registry Related Party, to enter into arms-length transactions in the ordinary course of business with a registrar or reseller with respect to products and services unrelated in all respects to the TLD.

4.   CoCCA may request an exemption to this Code of Conduct, and such exemption may be granted by cxDA in cxDA's reasonable discretion, if CoCCA demonstrates to cxDA's reasonable satisfaction that (i) all domain name registrations in the TLD are registered to, and maintained by, CoCCA for the exclusive use of CoCCA or its Affiliates, (ii) CoCCA does not sell, distribute or transfer control or use of any registrations in the TLD to any third party that is not an Affiliate of CoCCA , and (iii) application of this Code of Conduct to the TLD is not necessary to protect the public interest.

SPECIFICATION 9

REGISTRY PERFORMANCE SPECIFICATIONS

1. **Definitions**

   1.1 **DNS**. Refers to the Domain Name System as specified in RFCs 1034, 1035, and related RFCs.

   1.2 **DNSSEC proper resolution**. There is a valid DNSSEC chain of trust from the root trust anchor to a particular domain name, e.g., a TLD, a domain name registered under a TLD, etc.

   1.3 **EPP**. Refers to the Extensible Provisioning Protocol as specified in RFC 5730 and related RFCs.

   1.4 **IP address**. Refers to IPv4 or IPv6 addresses without making any distinction between the two. When there is need to make a distinction, IPv4 or IPv6 is used.

   1.5 **Probes**. Network hosts used to perform (DNS, EPP, etc.) tests (see below) that are located at various global locations.

   1.6 **RDDS**. Registration Data Directory Services refers to the collective of WHOIS and Web-based WHOIS services as defined in Specification 4 of this Agreement.

   1.7 **RTT**. Round-Trip Time or RTT refers to the time measured from the sending of the first bit of the first packet of the sequence of packets needed to make a request until the reception of the last bit of the last packet of the sequence needed to receive the response. If the client does not receive the whole sequence of packets needed to consider the response as received, the request will be considered unanswered.

   1.8 **SLR**. Service Level Requirement is the level of service expected for a certain parameter being measured in a Service Level Agreement (SLA).

2. **Service Level Agreement Matrix**

	Parameter	SLR (monthly basis)
DNS	DNS service availability	0 min downtime = 100% availability
	DNS name server availability	≤ 432 min of downtime ($\approx 99\%$)
	TCP DNS resolution RTT	≤ 1500 ms, for at least 95% of the queries
	UDP DNS resolution RTT	≤ 500 ms, for at least 95% of the queries
	DNS update time	≤ 60 min, for at least 95% of the probes
RDDS	RDDS availability	≤ 864 min of downtime ($\approx 98\%$)
	RDDS query RTT	≤ 2000 ms, for at least 95% of the queries
	RDDS update time	≤ 60 min, for at least 95% of the probes
EPP	EPP service availability	≤ 864 min of downtime ($\approx 98\%$)

	EPP session-command RTT	≤ 4000 ms, for at least 90% of the commands
	EPP query-command RTT	≤ 2000 ms, for at least 90% of the commands
	EPP transform-command RTT	≤ 4000 ms, for at least 90% of the commands

CoCCA is encouraged to do maintenance for the different services at the times and dates of statistically lower traffic for each service. However, note that there is no provision for planned outages or similar periods of unavailable or slow service; any downtime, be it for maintenance or due to system failures, will be noted simply as downtime and counted for SLA purposes.

3. **<u>DNS</u>**

3.1 **DNS service availability**. Refers to the ability of the group of listed-as-authoritative name servers of a particular domain name (e.g., a TLD), to answer DNS queries from DNS probes. For the service to be considered available at a particular moment, at least, two of the delegated name servers registered in the DNS must have successful results from "**DNS tests**" to each of their public-DNS registered "**IP addresses**" to which the name server resolves. If 51% or more of the DNS testing probes see the service as unavailable during a given time, the DNS service will be considered unavailable.

3.2 **DNS name server availability**. Refers to the ability of a public-DNS registered "**IP address**" of a particular name server listed as authoritative for a domain name, to answer DNS queries from an Internet user. All the public DNS-registered "**IP address**" of all name servers of the domain name being monitored shall be tested individually. If 51% or more of the DNS testing probes get undefined/unanswered results from "**DNS tests**" to a name server "**IP address**" during a given time, the name server "**IP address**" will be considered unavailable.

3.3 **UDP DNS resolution RTT**. Refers to the **RTT** of the sequence of two packets, the UDP DNS query and the corresponding UDP DNS response. If the **RTT** is 5 times greater than the time specified in the relevant **SLR**, the **RTT** will be considered undefined.

3.4 **TCP DNS resolution RTT**. Refers to the **RTT** of the sequence of packets from the start of the TCP connection to its end, including the reception of the DNS response for only one DNS query. If the **RTT** is 5 times greater than the time specified in the relevant **SLR**, the **RTT** will be considered undefined.

3.5 **DNS resolution RTT**. Refers to either "**UDP DNS resolution RTT**" or "**TCP DNS resolution RTT**".

3.6 **DNS update time**. Refers to the time measured from the reception of an EPP confirmation to a transform command on a domain name, until the name servers of the parent domain name answer "**DNS queries**" with data consistent with the change made. This only applies for changes to DNS information.

3.7 **DNS test**. Means one non-recursive DNS query sent to a particular "**IP address**" (via UDP or TCP). If DNSSEC is offered in the queried DNS zone, for a query to be considered answered, the signatures must be positively verified against a corresponding DS record published in the parent zone or, if the parent is not signed, against a statically configured Trust Anchor. The answer to the query must contain the corresponding information from the Registry System, otherwise the query will be considered unanswered. A query with a "**DNS resolution RTT**" 5 times higher than the corresponding SLR, will be considered unanswered. The possible results to a DNS test are: a number in milliseconds corresponding to the "**DNS resolution RTT**" or, undefined/unanswered.

3.8 **Measuring DNS parameters**. Every minute, every DNS probe will make an UDP or TCP "**DNS test**" to each of the public-DNS registered "**IP addresses**" of the name servers of the domain name being monitored. If a "**DNS test**" result is undefined/unanswered, the tested IP will be considered unavailable from that probe until it is time to make a new test.

4. **RDDS**

4.1 **RDDS availability**. Refers to the ability of all the RDDS services for the TLD, to respond to queries from an Internet user with appropriate data from the relevant Registry System. If 51% or more of the RDDS testing probes see any of the RDDS services as unavailable during a given time, the RDDS will be considered unavailable.

4.2 **WHOIS query RTT**. Refers to the **RTT** of the sequence of packets from the start of the TCP connection to its end, including the reception of the WHOIS response. If the **RTT** is 5-times or more the corresponding SLR, the **RTT** will be considered undefined.

4.3 **Web-based-WHOIS query RTT**. Refers to the **RTT** of the sequence of packets from the start of the TCP connection to its end, including the reception of the HTTP response for only one HTTP request. If CoCCA implements a multiple-step process to get to the information, only the last step shall be measured. If the **RTT** is 5-times or more the corresponding SLR, the **RTT** will be considered undefined.

4.4 **RDDS query RTT**. Refers to the collective of "**WHOIS query RTT**" and "**Web-based- WHOIS query RTT**".

4.5 **RDDS update time**. Refers to the time measured from the reception of an EPP confirmation to a transform command on a domain name, host or contact, up until the servers of the RDDS services reflect the changes made.

4.6 **RDDS test**. Means one query sent to a particular "**IP address**" of one of the servers of one of the RDDS services. Queries shall be about existing objects in the Registry System and the responses must contain the corresponding information otherwise the query will be considered

unanswered. Queries with an **RTT** 5 times higher than the corresponding SLR will be considered as unanswered. The possible results to an RDDS test are: a number in milliseconds corresponding to the **RTT** or undefined/unanswered.

4.7   **Measuring RDDS parameters**. Every 5 minutes, RDDS probes will select one IP address from all the public-DNS registered "**IP addresses**" of the servers for each RDDS service of the TLD being monitored and make an "**RDDS test**" to each one. If an "**RDDS test**" result is undefined/unanswered, the corresponding RDDS service will be considered as unavailable from that probe until it is time to make a new test.

5.   <u>**EPP**</u>

5.1   **EPP service availability**. Refers to the ability of the TLD EPP servers as a group, to respond to commands from the Registry accredited Registrars, who already have credentials to the servers. The response shall include appropriate data from the Registry System. An EPP command with "**EPP command RTT**" 5 times higher than the corresponding SLR will be considered as unanswered. If 51% or more of the EPP testing probes see the EPP service as unavailable during a given time, the EPP service will be considered unavailable.

5.2   **EPP session-command RTT**. Refers to the **RTT** of the sequence of packets that includes the sending of a session command plus the reception of the EPP response for only one EPP session command. For the login command it will include packets needed for starting the TCP session. For the logout command it will include packets needed for closing the TCP session. EPP session commands are those described in section 2.9.1 of EPP RFC 5730. If the **RTT** is 5 times or more the corresponding SLR, the **RTT** will be considered undefined.

5.3   **EPP query-command RTT**. Refers to the **RTT** of the sequence of packets that includes the sending of a query command plus the reception of the EPP response for only one EPP query command. It does not include packets needed for the start or close of either the EPP or the TCP session. EPP query commands are those described in section 2.9.2 of EPP RFC 5730. If the **RTT** is 5-times or more the corresponding SLR, the **RTT** will be considered undefined.

5.4   **EPP transform-command RTT**. Refers to the **RTT** of the sequence of packets that includes the sending of a transform command plus the reception of the EPP response for only one EPP transform command. It does not include packets needed for the start or close of either the EPP or the TCP session. EPP transform commands are those described in section 2.9.3 of EPP RFC 5730. If the **RTT** is 5 times or more the corresponding SLR, the **RTT** will be considered undefined.

5.5 **EPP command RTT**. Refers to "**EPP session-command RTT**", "**EPP query-command RTT**" or "**EPP transform-command RTT**".

5.6 **EPP test**. Means one EPP command sent to a particular "**IP address**" for one of the EPP servers. Query and transform commands, with the exception of "create", shall be about existing objects in the Registry System. The response shall include appropriate data from the Registry System. The possible results to an EPP test are: a number in milliseconds corresponding to the "**EPP command RTT**" or undefined/unanswered.

5.7 **Measuring EPP parameters**. Every 5 minutes, EPP probes will select one "**IP address**" of the EPP servers of the TLD being monitored and make an "**EPP test**"; every time they should alternate between the 3 different types of commands and between the commands inside each category. If an "**EPP test**" result is undefined/unanswered, the EPP service will be considered as unavailable from that probe until it is time to make a new test.

6. **Emergency Thresholds**

The following matrix presents the emergency thresholds that, if reached by any of the services mentioned above for a TLD, would cause the emergency transition of the Registry for the TLD as specified in Section 2.13 of this Agreement.

Critical Function	Emergency Threshold
DNS Service (all servers)	4-hour total downtime / week
DNSSEC proper resolution	4-hour total downtime / week
EPP	24-hour total downtime / week
RDDS (WHOIS/Web-based WHOIS)	24-hour total downtime / week
Data Escrow	Breach of the Registry Agreement as described in Specification 2, Part B, Section 6.

7. **Emergency Escalation**

Escalation is strictly for purposes of notifying and investigating possible or potential issues in relation to monitored services. The initiation of any escalation and the subsequent cooperative investigations do not in themselves imply that a monitored service has failed its performance requirements.

7.1 **Emergency Escalation initiated by cxDA**

Upon reaching 10% of the Emergency thresholds as described in Section 6 of this Specification, cxDA's emergency operations will initiate an Emergency Escalation with the relevant contact. An Emergency Escalation consists of the following minimum elements: electronic (i.e., email or SMS) and/or voice contact notification to CoCCA 's emergency operations department with detailed information concerning the issue being

escalated, including evidence of monitoring failures, cooperative trouble-shooting of the monitoring failure between cxDA staff and CoCCA , and the commitment to begin the process of rectifying issues with either the monitoring service or the service being monitoring.

If CoCCA declares an outage, as per its contractual obligations with cxDA, on services under a service level agreement and performance requirements, it will notify the cxDA emergency operations department.

8.   **Covenants of Performance Measurement**

    8.1   **No interference**. CoCCA shall not interfere with measurement **Probes**, including any form of preferential treatment of the requests for the monitored services. CoCCA shall respond to the measurement tests described in this Specification as it would to any other request from an Internet user (for DNS and RDDS) or registrar (for EPP).

    8.2   **cxDA testing registrar**. CoCCA agrees that cxDA will have a testing registrar used for purposes of measuring the **SLR**s described above. CoCCA agrees to not provide any differentiated treatment for the testing registrar other than no billing of the transactions. cxDA shall not use the registrar for registering domain names (or other registry objects) for itself or others, except for the purposes of verifying contractual compliance with the conditions described in this Agreement.

SPECIFICATION 10

PUBLIC INTEREST COMMITMENTS

1. CoCCA agrees to perform the following specific public interest commitments, which commitments shall be enforceable by cxDA.

a. CoCCA will include a provision in its Registry-Registrar Access Agreement that requires Registrars to include in their Registration Agreements a provision that binds Registrants to the cxDA Registrant Agreement as published at https://cxda.org.cx. The Registrant Agreement binds Registrants to the cxDA AUP which among other things, prohibits Registered Name Holders from distributing malware, abusively operating botnets, phishing, piracy, trademark or copyright infringement, fraudulent or deceptive practices, counterfeiting or otherwise engaging in activity contrary to applicable law, and providing (consistent with applicable law and any related procedures) consequences for such activities including suspension of the domain name.

b. CoCCA will conduct a proactive technical analysis on a continuous basis to assess whether domains in the TLD are being used to perpetrate security threats, such as pharming, phishing, malware, and botnets. CoCCA will maintain statistical reports on the number of security threats identified and the actions taken as a result of the periodic checks. CoCCA will maintain these reports for the term of the Agreement unless a shorter period is required by law or approved by cxDA, and will provide them to cxDA upon request.

c. CoCCA will operate the TLD registry in a transparent manner consistent with general principles of openness and non-discrimination by establishing, publishing and adhering to the cxDA registration policies.