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    Extensible Provisioning Protocol (EPP) Domain Name Mapping Extension for
                      Strict Bundling Registration
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Abstract

   This document describes an extension of Extensible Provisioning
   Protocol (EPP) domain name mapping for the provisioning and
   management of strict bundling registration of domain names.
   Specified in XML, this mapping extends the EPP domain name mapping to
   provide additional features required for the provisioning of bundled
   domain names.

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1. Introduction

   Bundled domain names are those which share the same TLD but whose
   second level labels are variants, or those which has identical second
   level labels for which certain parameters are shared in different
   TLDs. For example, Public Interest Registry, request to implement
   technical bundling of second level domains for .NGO and .ONG. So we
   have two kinds of bundled domain names. First one is in the form of
   "V-label.TLD" in which the second level labels (V-label) are variants
   sharing the same TLD; Second one is in the form of "LABEL.V-tld" in
   which the second level labels(LABEL) are same ending with the
   different TLDs (V-tld);

   Bundled domain names normally share some attributes. There are three
   types of bundling. First one is strict bundling, which requires all
   bundled names to share many same attributes. When creating,
   updating, or transferring of any of the bundled domain names, all
   bundled domain names will be created, updated or transferred. Second
   one is partial bundling, which requires that at least the bundled
   domain names if registered should be registered by the same
   registrant. Third one is relax bundling, which has not specific
   requirements to the domain registration. This document mainly focus
   on strict bundling names registration.

   For the name variants, some registries adopt the policy that variant
   IDNs which are identified as equivalent are allocated or delegated to
   the same registrant. For example, the specified registration policy
   of Chinese Domain Name (CDN) is that a registrant can apply an
   original CDN in any forms: Simplified Chinese (SC) form, Traditional
   Chinese (TC) form, or other variant forms, then the corresponding
   variant CDN in SC form and that in TC form will also be delegated to
   the same registrant. All variant names in the same TLD contain same
   attributes.

   The basic Extensible Provisioning Protocol (EPP) domain name mapping
   [RFC5731] provides the domain name registration one by one. It does

not specify how to register the strict bundled names which share many
same attributes.

In order to meet above requirements of the strict bundled names
registration, this document describes an extension of the EPP domain
name mapping [RFC5731] for the provisioning and management of bundled
names.This document is specified using the Extensible Markup Language
(XML) 1.0 as described in [W3C.REC-xml-20040204] and XML Schema
notation as described in [W3C.REC-xmlschema-1-20041028] and
[W3C.REC-xmlschema-2-20041028].

The EPP core protocol specification [RFC5730] provides a complete
description of EPP command and response structures. A thorough
understanding of the base protocol specification is necessary to
understand the extension of mapping described in this document.

This document uses lots of the concepts of the IDN, so a thorough
understanding of the IDNs for Application (IDNA, described in
[RFC5890], [RFC5891], and [RFC5892]) and a thorough understanding of
variant approach discussed in [RFC4290] are both required.

2. Terminology

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
"SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this
document are to be interpreted as described in [RFC2119].

uLable is defined in [RFC 5890]. uLabel is expressed in this document
as a number of characters with the format of U+XXXX where XXXX is a
UNICODE point.

"b-dn-1.0" in this document is used as an abbreviation for
urn:ietf:params:xml:ns:b-dn-1.0.

In examples, "C:" represents lines sent by a protocol client and "S:"
represents lines returned by a protocol server. Indentation and
white space in examples are provided only to illustrate element
relationships and are not a REQUIRED feature of this specification.

XML is case sensitive. Unless stated otherwise, XML specifications
and examples provided in this document MUST be interpreted in the
character case presented to develop a conforming implementation.

3. Definitions

The following definitions are used in this document:

   o Registered Domain Name (RDN), represents the valid domain name
     that users submitted for registration by the first time.

   o Bundled Domain Name (BDN), represents the bundled domain name
     produced according to the bundled domain name registration policy.

[4]. Overview

Domain registries have traditionally adopted a registration model
whereby metadata relating to a domain name, such as its expiration
date and sponsoring registrar, are stored as properties of the domain
object. The domain object is then considered an atomic unit of
registration, on which operations such as update, renewal and
deletion may be performed.

Bundled names, brought about the need for multiple domain names to be
registered and managed as a single package. In this model, the
registry typically accepts a domain registration request (i.e. EPP
domain <create> command) containing the domain name to be registered.
This domain name is referred to as the RDN in this document. As part
of the processing of the registration request, the registry generates
a set of bundled names that are related to the RDN, either
programmatically or with the guidance of registration policies, and
place them in the registration package together with the RDN.

The bundled names share many same properties, such as expiration date
and sponsoring registrar, by sharing one domain object. So when
users update any property of a domain object within a bundle package,
that property of all other domain objects in the bundle package will
be updated at the same time.

[5]. Requirement for Bundling Registration of Names

The bundled names whether they are in the form of "V-label.TLD" or in
the form of "LABEL.V-tld" should share some parameter or attributes
assoicated with domain names. Typically, Bundled names will share
the following parameters or attributes:
o Registrar Ownership
o Registration and Expiry Dates
o Registrant, Admin, Billing, and Technical Contacts
o Name Server Association
o Domain Status
o Applicable grace periods (Add Grace Period, Renewal Grace Period,
Auto-Renewal Grace Period, Transfer Grace Period, and Redemption
Grace Period)

Because the domain names are bundled and share the same parameters or attributes, the EPP command should do some processing for these requirements:

o When performing a domain check, either BDN or RDN can be queried for the EPP command, and will return the same response.

o When performing a domain info, either BDN or RDN can be queried, the same response will include both BDN and RDN information with the same attributes.

o When performing a domain Create, either BDN or RDN will be accepted. If the domain name is available, both BDN and RDN will be registered.

o When performing a domain Delete, either BDN or RDN will be accepted. If the domain name is available, both BDN and RDN will be deleted.

o When performing a domain renew, either BDN or RDN will be accepted. Upon a successful domain renewal,both BDN and RDN will have their expiry date extended by the requested term. Upon a successful domain renewal, both BDN and RDN will conform to the same renew grace period.

o When performing a domain transfer, either BDN or RDN will be accepted. Upon successful completion of a domain transfer request, both BDN and RDN will enter a pendingTransfer status. Upon approval of the transfer request, both BDN and RDN will be owned and managed by the same new registrant.

o When performing a domain update, either BDN or RDN will be accepted. Any modifications to contact associations, name server associations, domain status values and authorization information will be applied to both BDN and RDN.

6. Object Attributes

This extension defines following additional elements to the EPP domain name mapping [RFC5731]. All of these additional elements can be got from <domain:info> command.

6.1. RDN

The RDN is an ASCII name or an IDN with the A-label [RFC5890] form. In this document, its corresponding element is <b-dn:rdn>. An optional attribute "uLabel" associated with <b-dn:rdn> is used to represent the U-label [RFC5890] form. An optional boolean "activated" attribute, with a default true value, is used to indicate the presence of the label in the zone file.

For example: <b-dn:rdn uLabel="U+5B9E""U+4F8B".example> xn--fsq270a.example</b-dn:rdn>

6.2. BDN

The BDN is an ASCII name or an IDN with the A-label [RFC5890] form
which is converted from the corresponding BDN. In this document, its
corresponding element is <b-dn:bdn>. An optional attribute "uLabel"
associated with <b-dn:bdn> is used to represent the U-label [RFC5890]
form.

For example: <b-dn:bdn uLabel="U+5BE6""U+4F8B".example> xn--
fsqz41a.example</b-dn:bdn>

7. EPP Command Mapping

A detailed description of the EPP syntax and semantics can be found
in the EPP core protocol specification [RFC5730]. The command
mappings described here are specifically for use in provisioning and
managing bundled names via EPP.

7.1. EPP Query Commands

EPP provides three commands to retrieve domain information: <check>
to determine if a domain object can be provisioned within a
repository, <info> to retrieve detailed information associated with a
domain object, and <transfer> to retrieve domain-object transfer
status information.

7.1.1. EPP <check> Command

This extension does not add any element to the EPP <check> command or
<check> response described in the EPP domain name mapping [RFC5731].
However, when either RDN or BDN is sent for check, response SHOULD
contain both RDN and BDN information, which may also give some
explanation in the reason field to tell the user that the associated
domain name is a produced name according to some bundle domain name
policy.

Example <check> Response   for   an authorized client:

```
S:<?xml version="1.0" encoding="UTF-8" standalone="no"?>
S:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
S:      <response>
S:        <result code="1000">
S:              <msg>Command completed successfully</msg>
S:        </result>
S:        <resData>
S:              <domain:chkData
S:               xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
S:        <domain:cd>
S:                <domain:name avail="1">
S:             xn--fsq270a.example</domain:name>
S:        </domain:cd>
S:        <domain:cd>
S:                <domain:name avail="1">
S:             xn--fsqz41a.example</domain:name>
S:                <domain:reason>This associated domain name is
S:           a produced name
S:                based on bundle name policy.</domain:reason>
S:        </domain:cd>
S:               </domain:chkData>
S:        </resData>
S:        <trID>
S:              <clTRID>ABC-12345</clTRID>
S:              <svTRID>54322-XYZ</svTRID>
S:        </trID>
S:      </response>
S:</epp>
```

7.1.2. EPP <info> Command

This extension does not add any element to the EPP <info> command
described in the EPP domain mapping [RFC5731]. However, additional
elements are defined for the <info> response.

When an <info> command has been processed successfully, the EPP
<resData> element MUST contain child elements as described in the EPP
domain mapping [RFC5731]. In addition, the EPP <extension> element
SHOULD contain a child <b-dn:infData> element that identifies the
extension namespace if the domain object has data associated with
this extension and based on its service policy. The <b-dn:infData>
element contains the <b-dn:bundle> which has the following child
elements:

o   An <b-dn:rdn> element that contains the RDN, along with the
    attributes described below.

   o An OPTIONAL <b-dn:bdn> element that contains the BDN, along with
      the attributes described below.

   The above elements contain the following attributes:

   o An optional "uLabel" attribute represents the U-label of the
      element.

   Example <info> Response for   an authorized client:

   S:<?xml version="1.0" encoding="UTF-8" standalone="no"?>
   S:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
   S: <response>
   S: <result code="1000">
   S: <msg>Command completed successfully</msg>
   S: </result>
   S: <resData>
   S: <domain:infData
   S: xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
   S: <domain:name>xn--fsq270a.example</domain:name>
   S: <domain:roid>58812678-domain</domain:roid>
   S: <domain:status s="ok"/>
   S: <domain:registrant>123</domain:registrant>
   S: <domain:contact type="admin">123</domain:contact>
   S: <domain:contact type="tech">123</domain:contact>
   S: <domain:ns>
   S: <domain:hostObj>ns1.example.cn
                </domain:hostObj>
   S: </domain:ns>
   S: <domain:clID>ClientX</domain:clID>
   S: <domain:crID>ClientY</domain:crID>
   S: <domain:crDate>2011-04-03T22:00:00.0Z
                       </domain:crDate>
   S: <domain:exDate>2012-04-03T22:00:00.0Z
                       </domain:exDate>
   S: <domain:authInfo>
   S: <domain:pw>2fooBAR</domain:pw>
   S: </domain:authInfo>
   S: </domain:infData>
   S: </resData>
   S: <extension>
   S: <b-dn:infData
   S: xmlns:b-dn="urn:ietf:params:xml:ns:b-dn-1.0">
   S: <b-dn:bundle>
   S: <b-dn:rdn uLabel="U+5B9E""U+4F8B".example
   S: >xn--fsq270a.example</b-dn:rdn>
   S: <b-dn:bdn uLabel="U+5BE6""U+4F8B".example
   S: >xn--fsqz41a.example</b-dn:bdn>

```
S:                    </b-dn:bundle>
S:                 </b-dn:infData>
S:           </extension>
S:           <trID>
S:                 <clTRID>ABC-12345</clTRID>
S:                 <svTRID>54322-XYZ</svTRID>
S:           </trID>
S:        </response>
S:</epp>
```

<info> Response for the unauthorized client has not been changed,see
[RFC5731] for detail.

An EPP error response MUST be returned if an <info> command cannot be
processed for any reason.

7.1.3. EPP <transfer> Query Command

This extension does not add any element to the EPP <transfer> command
or <transfer> reponse described in the EPP domain mapping [RFC5731].

7.2. EPP Transform Commands

EPP provides five commands to transform domain objects: <create> to
create an instance of a domain object, <delete> to delete an instance
of a domain object, <renew> to extend the validity period of a domain
object, <transfer> to manage domain object sponsorship changes, and
<update> to change information associated with a domain object.

When theses commands have been processed successfully, the EPP
<resData> element MUST contain child elements as described in the EPP
domain mapping [RFC5731]. This EPP <extension> element SHOULD
contain the <b-dn:bundle> which has the following child elements:

o An <b-dn:rdn> element that contains the RDN, along with the
   attributes described below.

o An OPTIONAL <b-dn:bdn> element that contains the BDN, along with
   the attributes described below.

The above elements contain the following attribute:

o An optional "uLabel" attribute represents the U-label of the
   element.

7.2.1. EPP <create> Command

This extension defines additional elements to extend the EPP <create>
command described in the EPP domain name mapping [RFC5731] for
bundled names registration.

In addition to the EPP command elements described in the EPP domain
mapping [RFC5731], the <create> command SHALL contain an <extension>
element. The <extension> element SHOULD contain a child
<b-dn:create> element that identifies the bundle namespace and the
location of the bundle name schema.

Example <create> command:

```
C:<?xml version="1.0" encoding="UTF-8" standalone="no"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
C:     <command>
C:        <create>
C:             <domain:create
C:              xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
C:               <domain:name>xn--fsq270a.example</domain:name>
C:               <domain:period unit="y">2</domain:period>
C:               <domain:registrant>123</domain:registrant>
C:               <domain:contact type="admin">123</domain:contact>
C:               <domain:contact type="tech">123</domain:contact>
C:               <domain:authInfo>
C:                     <domain:pw>2fooBAR</domain:pw>
C:               </domain:authInfo>
C:             </domain:create>
C:        </create>
C:        <extension>
C:             <b-dn:create
C:              xmlns:b-dn="urn:ietf:params:xml:ns:b-dn-1.0">
C:            <b-dn:rdn uLabel="U+5B9E""U+4F8B".example>
C:                   xn--fsq270a.example</b-dn:rdn>
C:             </b-dn:create>
C:        </extension>
C:        <clTRID>ABC-12345</clTRID>
C:     </command>
C:</epp>
```

When an <create> command has been processed successfully, the EPP
<creData> element MUST contain child elements as described in the EPP
domain mapping [RFC5731]. In addition, the EPP <extension> element
SHOULD contain a child <b-dn:creData> element that identifies the
extension namespace if the domain object has data associated with
this extension and based on its service policy. The <b-dn:creData>
element contains the <b-dn:bundle> element.

Example <create> Response for an authorized   client:

```
S:<?xml version="1.0" encoding="UTF-8" standalone="no"?>
S:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
S:     <response>
S:       <result code="1000">
S:             <msg>Command completed successfully</msg>
S:       </result>
S:       <resData>
S:             <domain:creData
S:              xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
S:               <domain:name>xn--fsq270a.example</domain:name>
S:               <domain:crDate>1999-04-03T22:00:00.0Z</domain:crDate>
S:               <domain:exDate>2001-04-03T22:00:00.0Z</domain:exDate>
S:             </domain:creData>
S:       </resData>
S:       <extension>
S:             <b-dn:creData
S:              xmlns:b-dn="urn:ietf:params:xml:ns:b-dn-1.0">
S:               <b-dn:bundle>
S:                     <b-dn:rdn uLabel="U+5B9E""U+4F8B".example
S:                      >xn--fsq270a.example</b-dn:rdn>
S:                     <b-dn:bdn uLabel="U+5BE6""U+4F8B".example
S:                      >xn--fsqz41a.example</b-dn:bdn>
S:               </b-dn:bundle>
S:             </b-dn:creData>
S:       </extension>
S:       <trID>
S:             <clTRID>ABC-12345</clTRID>
S:             <svTRID>54322-XYZ</svTRID>
S:       </trID>
S:     </response>
S:</epp>
```

   <create> Response for the unauthorized client has not been
   changed,see [RFC5731] for detail.

   An EPP error response MUST be returned if an <create> command cannot
   be processed for any reason.

7.2.2. EPP <delete> Command

   This extension does not add any element to the EPP <delete> command
   described in the EPP domain mapping [RFC5731]. However, additional
   elements are defined for the <delete> response.

   When a <delete> command has been processed successfully, the EPP
   <delData> element MUST contain child elements as described in the EPP

domain mapping [RFC5731]. In addition, the EPP <extension> element
SHOULD contain a child <b-dn:delData> element that identifies the
extension namespace if the domain object has data associated with
this extension and based on its service policy. The <b-dn:delData>
element SHOULD contain the <b-dn:bundle> element.

Example <delete> response:

```
S:<?xml version="1.0" encoding="UTF-8" standalone="no"?>
S:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
S:     <response>
S:        <result code="1000">
S:              <msg>Command completed successfully</msg>
S:        </result>
S:        <extension>
S:              <b-dn:delData
S:               xmlns:b-dn="urn:ietf:params:xml:ns:b-dn-1.0">
S:                <b-dn:bundle>
S:                      <b-dn:rdn uLabel="U+5B9E""U+4F8B".example>xn--
fsq270a.example</b-dn:rdn>
S:                      <b-dn:bdn uLabel="U+5BE6""U+4F8B".example>xn--
fsqz41a.example</b-dn:bdn>
S:                </b-dn:bundle>
S:              </b-dn:delData>
S:        </extension>
S:        <trID>
S:              <clTRID>ABC-12345</clTRID>
S:              <svTRID>54321-XYZ</svTRID>
S:        </trID>
S:     </response>
S:</epp>
```

An EPP error response MUST be returned if a <delete> command cannot
be processed for any reason.

7.2.3. EPP <renew> Command

This extension does not add any element to the EPP <renew> command
described in the EPP domain name mapping [RFC5731]. However, when
either RDN or BDN is sent for renew, response SHOULD contain both RDN
and BDN information. When the command has been processed
successfully, the EPP <resData> element MUST contain child elements
as described in the EPP domain mapping [RFC5731]. This EPP
<extension> element SHOULD contain the <b-dn:renData> which contains
<b-dn:bundle> element.

7.2.4. EPP <transfer> Command

This extension does not add any element to the EPP <transfer> command described in the EPP domain name mapping [RFC5731]. When the command has been processed successfully, the EPP <resData> element MUST contain child elements as described in the EPP domain mapping [RFC5731]. This EPP <extension> element SHOULD contain the <b-dn:trnData> which contains <b-dn:bundle> element.

7.2.5. EPP <update> Command

This extension does not add any element to the EPP <update> command described in the EPP domain name mapping [RFC5731]. When the command has been processed successfully, the EPP <resData> element MUST contain child elements as described in the EPP domain mapping [RFC5731]. This EPP <extension> element SHOULD contain the <b-dn:upData> which contains <b-dn:bundle> element.

8. Formal Syntax

An EPP object name mapping extension for bundled names is specified in XML Schema notation. The formal syntax presented here is a complete schema representation of the object mapping suitable for automated validation of EPP XML instances. The BEGIN and END tags are not part of the schema; they are used to note the beginning and ending of the schema for URI registration purposes.

```
BEGIN
<?xml version="1.0"     encoding="UTF-8"?>

   <schema targetNamespace="urn:ietf:params:xml:ns:b-dn-1.0"
           xmlns:b-dn="urn:ietf:params:xml:ns:b-dn-1.0"
           xmlns:epp="urn:ietf:params:xml:ns:epp-1.0"
           xmlns:eppcom="urn:ietf:params:xml:ns:eppcom-1.0"
           xmlns="http://www.w3.org/2001/XMLSchema"
           elementFormDefault="qualified">

   <!--
   Import common element types.
   -->
   <import namespace="urn:iana:xml:ns:eppcom-1.0"
   schemaLocation="eppcom-1.0.xsd"/>
   <import namespace="urn:iana:xml:ns:epp-1.0"
   schemaLocation="epp-1.0.xsd"/>
   <annotation>
     <documentation>
           Extensible Provisioning Protocol v1.0
           Bundle Domain Extension Schema v1.0
```

```
      </documentation>
    </annotation>

    <!--
    Child elements found in EPP    commands.
    -->
    <element name="create" type="b-dn:createDataType"/>

    <!--
    Child elements of the <b-dn:create>    command
    All    elements must be present at    time of creation
    -->
    <complexType name="createDataType">
      <sequence>
          <element name="rdn" type="b-dn:rdnType"
           minOccurs="0" maxOccurs="unbounded" />
      </sequence>
    </complexType>


    <!--
    Child elements of the <b-dn:update>    command
    All    elements must be present at    time of creation
    -->

    <!--
    Child elements found in EPP    commands.
    -->
    <element name="infData" type="b-dn:trnDataType"/>
    <element name="delData" type="b-dn:trnDataType"/>
    <element name="creData" type="b-dn:trnDataType"/>
    <element name="renData" type="b-dn:trnDataType"/>
    <element name="trnData" type="b-dn:trnDataType"/>
    <element name="upData" type="b-dn:trnDataType"/>

    <complexType name="trnDataType">
      <sequence>
          <element name="bundle" type="b-dn:bundleType" />
      </sequence>
    </complexType>

    <!--
    <transfer> response    elements.
    All    elements must be present at    time of poll query
    -->
    <complexType name="bundleType">
      <sequence>
          <element name="rdn" type="b-dn:rdnType" />
```

```
            <element name="bdn" type="b-dn:rdnType"
                        minOccurs="0"   maxOccurs="unbounded" />

      </sequence>
    </complexType>

    <complexType name="rdnType">
      <simpleContent>
          <extension base="eppcom:labelType">
            <attribute name="uLabel" type="eppcom:labelType"/>

          </extension>
      </simpleContent>
    </complexType>

    <!--
    End     of schema.
    -->
    </schema>

    END
```

9. Internationalization Considerations

EPP is represented in XML, which provides native support for encoding
information using the Unicode character set and its more compact
representations including UTF-8. Conformant XML processors recognize
both UTF-8 and UTF-16. Though XML includes provisions to identify
and use other character encodings through use of an "encoding"
attribute in an <?xml?> declaration, use of UTF-8 is RECOMMENDED.

As an extension of the EPP domain name mapping, the elements, element
content described in this document MUST inherit the
internationalization conventions used to represent higher-layer
domain and core protocol structures present in an XML instance that
includes this extension.

10. IANA Considerations

This document uses URNs to describe XML namespaces and XML schemas
conforming to a registry mechanism described in [RFC3688]. IANA is
requested to assignment the following two URIs.

Registration request for the IDN namespace:

o URI: urn:ietf:params:xml:ns:b-dn-1.0

o Registrant Contact: See the "Author's Address" section of this
   document.

o XML: None. Namespace URI does not represent an XML specification.

Registration request for the IDN XML schema:

o URI: urn:ietf:params:xml:schema:b-dn-1.0

o Registrant Contact: See the "Author's Address" section of this
   document.

o XML: See the "Formal Syntax" section of this document.

11. Security Considerations

The object mapping extension described in this document does not
provide any other security services or introduce any additional
considerations beyond those described by [RFC5730] or those caused by
the protocol layers used by EPP.

12. Implementation Status

Note to RFC Editor: Please remove this section before publication.

o The Chinese Domain Name Consortium(CDNC) including CNNIC, TWNIC,
   HKIRC, MONIC, SGNIC and more have followed the principles defined
   in this document for many years.

o CNNIC and TELEINFO have implemented this extension in their EPP
   based Chinese domain name registration system.

o Public Interest Registry, has requested to implement technical
   bundling of second level domains for .NGO and .ONG. This means
   that by registering and purchasing a domain in the .ngo TLD, for
   example, the NGO registrant is also registering and purchasing the
   corresponding name in the .ong TLD (and vice-versa for
   registrations in .ong).

13. Acknowledgements

The authors especially thank the authors of [RFC5730] and [RFC5731]
and the following ones of CNNIC: Weiping Yang, Chao Qi. This draft
extends the draft draft-kong-epp-idn-variants-mapping to support both
forms of bundled names: V-label.TLD and LABEL.V-tld.

Useful comments were made by John Klensin, Scott Hollenbeck, Patrick
Mevzek and Edward Lewis.

14. Change History

   RFC Editor: Please remove this section.

14.1. draft-kong-epp-bundle-mapping: Version 00

   o EPP extensiton for bundled domain name registrations.

14.2. draft-kong-epp-bundle-mapping: Version 01

   o Change the proposed category from EXP to STD.

   o Add the section of Implementation Status.

   o Refine the text, and update the examples.

14.3. draft-kong-epp-bundle-mapping: Version 02

   o Refine the texts.

14.4. draft-ietf-regext-bundle-mapping: Version 00

   o accepted as WG document.

14.5. draft-ietf-regext-bundle-mapping: Version 01

   o make this document to focus on the restrict bundled domain name
      registration.

14.6. draft-ietf-regext-bundle-mapping: Version 02

   o Update the section of implementation status.

14.7. draft-ietf-regext-bundle-mapping: Version 03

   o This document is changed to informational category.

   o Refine the text.

15. References

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