IDN EPP Extension

for the .movistar TLD

CORE Internet Council of Registrars

1. Schema Definition (Formal Syntax)

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

<schema targetNamespace="http://xmlns.corenic.net/epp/idn-1.0"
    xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
    xmlns:eppcom="urn:ietf:params:xml:ns:eppcom-1.0"
    xmlns="http://www.w3.org/2001/XMLSchema">

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      domain name extension schema for internationalised domain names
      processing for the .tld registry.
    </documentation>
  </annotation>


  <!-- child elements found in EPP commands -->

  <element name="check"  type="idn:checkType"/>
  <element name="create" type="idn:createType"/>
  <element name="update" type="idn:updateType"/>

  <!-- child elements of the <check> command -->
  <complexType name="checkType">
    <sequence>
      <choice>
        <element name="lang" type="language"/>
        <element name="script" type="idn:scriptType"/>
      </choice>
    </sequence>
  </complexType>

  <!-- child elements of the <create> command -->
  <complexType name="createType">
    <sequence>
      <choice>
        <element name="lang" type="language"/>
        <element name="script" type="idn:scriptType"/>
      </choice>
      <element name="variants" type="idn:variantListType"/>
    </sequence>
  </complexType>

  <!-- child elements of the <update> command -->
  <complexType name="updateType">
    <sequence>
      <element name="add" type="idn:variantListType" minOccurs="0"/>
      <element name="rem" type="idn:variantListType" minOccurs="0"/>
    </sequence>
  </complexType>


  <!-- child response elements -->

  <element name="infData" type="idn:respDataType"/>

  <!-- response elements -->
  <complexType name="respDataType">
    <sequence>
      <choice>
        <element name="lang" type="language"/>
        <element name="script" type="idn:scriptType"/>
```

```
      </choice>
      <element name="variants" type="idn:variantListType"/>
    </sequence>
  </complexType>


  <!-- common types -->

  <!-- a script code according to ISO 15924 -->
  <simpleType name="scriptType">
    <restriction base="token">
      <minLength value="3"/>
      <maxLength value="4"/>
    </restriction>
  </simpleType>

  <!-- a list of variants of a domain name -->
  <complexType name="variantListType">
    <sequence>
      <element name="nameVariant" type="eppcom:labelType"
        minOccurs="0" maxOccurs="10"/>
    </sequence>
  </complexType>

</schema>
```

2. Examples

In the following examples, "C:" represents lines sent by an EPP client and "S:" represents lines returned by the .movistar Registry EPP server.

2.1. EPP <check> Command

2.1.1. Example <check> command with language tag:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
C:  <command>
C:    <check>
C:      <domain:check xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
C:        <domain:name>example.movistar</domain:name>
C:      </domain:check>
C:    </check>
C:    <extension>
C:      <idn:check xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0">
C:        <idn:lang>zh</idn:lang>
C:      </idn:check>
C:    </extension>
C:    <clTRID>O168899153_1332496264546</clTRID>
C:  </command>
C:</epp>
```

2.1.2. Example <check> command with script tag:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
C:  <command>
C:    <check>
C:      <domain:check xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
C:        <domain:name>example.movistar</domain:name>
C:      </domain:check>
C:    </check>
C:    <extension>
C:      <idn:check xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0">
C:        <idn:script>Latn</idn:script>
C:      </idn:check>
C:    </extension>
C:    <clTRID>O168899153_1332496264546</clTRID>
C:  </command>
C:</epp>
```

2.2. EPP <info> Command

2.2.1. Example <info> response with language tag and empty list of variants:

```
S:<?xml version='1.0' encoding='UTF-8'?>
S:<epp xmlns='urn:ietf:params:xml:ns:epp-1.0'
S:    xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
S:    xsi:schemaLocation='urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd'>
S:  <response>
S:    <result code='1000'>
S:      <msg lang='en-US'>Command completed successfully</msg>
S:    </result>
S:    <resData>
S:      <domain:infData xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'
S:          xsi:schemaLocation='urn:ietf:params:xml:ns:domain-1.0
S:          domain-1.0.xsd'>
S:        <domain:name>example.movistar</domain:name>
S:        <domain:roid>D123456789</domain:roid>
S:        <domain:status s='active'/>
S:        <domain:registrant>abc123</domain:registrant>
S:        <domain:contact type='admin'>def456</domain:contact>
S:        <domain:contacttype='tech'>ghi789</domain:contact>
S:        <domain:ns>
S:          <domain:hostObj>ns1.example.net</domain:hostObj>
S:          <domain:hostObj>ns2.example.net</domain:hostObj>
S:        </domain:ns>
S:        <domain:clID>registrar</domain:clID>
S:        <domain:crID>registrar</domain:crID>
S:        <domain:crDate>2010-09-08T07:06:05.0Z</domain:crDate>
S:        <domain:exDate>2012-09-08T23:59:59.0Z</domain:exDate>
S:        <domain:authInfo>
S:          <domain:pw>secret</domain:pw>
S:        </domain:authInfo>
S:      </domain:infData>
S:    </resData>
S:    <extension>
S:      <idn:infData xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
S:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
S:          idn-1.0.xsd">
S:        <idn:lang>zh</idn:lang>
S:        <idn:variants/>
S:      </idn:infData>
S:    </extension>
S:    <trID>
S:      <svTRID>ZYX-99958</svTRID>
S:    </trID>
S:  </response>
S:</epp>
```

2.2.2. Example <info> response with script tag and empty list of variants:

```
S:<?xml version='1.0' encoding='UTF-8'?>
S:<epp xmlns='urn:ietf:params:xml:ns:epp-1.0'
S:    xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
S:    xsi:schemaLocation='urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd'>
S:  <response>
S:    <result code='1000'>
```

```
S:      <msg lang='en-US'>Command completed successfully</msg>
S:    </result>
S:    <resData>
S:      <domain:infData xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'
S:          xsi:schemaLocation='urn:ietf:params:xml:ns:domain-1.0
S:          domain-1.0.xsd'>
S:        <domain:name>example.movistar</domain:name>
S:        <domain:roid>D123456789-COM</domain:roid>
S:        <domain:status s='active'/>
S:        <domain:registrant>abc123</domain:registrant>
S:        <domain:contact type='admin'>def456</domain:contact>
S:        <domain:contacttype='tech'>ghi789</domain:contact>
S:        <domain:ns>
S:          <domain:hostObj>ns1.example.net</domain:hostObj>
S:          <domain:hostObj>ns2.example.net</domain:hostObj>
S:        </domain:ns>
S:        <domain:clID>registrar</domain:clID>
S:        <domain:crID>registrar</domain:crID>
S:        <domain:crDate>2010-09-08T07:06:05.0Z</domain:crDate>
S:        <domain:exDate>2012-09-08T23:59:59.0Z</domain:exDate>
S:        <domain:authInfo>
S:          <domain:pw>secret</domain:pw>
S:        </domain:authInfo>
S:      </domain:infData>
S:    </resData>
S:    <extension>
S:      <idn:infData xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
S:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
S:          idn-1.0.xsd">
S:        <idn:script>Latn</idn:script>
S:        <idn:variants/>
S:      </idn:infData>
S:    </extension>
S:    <trID>
S:      <svTRID>ZYX-99958</svTRID>
S:    </trID>
S:  </response>
S:</epp>
```

2.2.3. Example <info> response with language tag and domain name variants:

```
S:<?xml version='1.0' encoding='UTF-8'?>
S:<epp xmlns='urn:ietf:params:xml:ns:epp-1.0'
S:    xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
S:    xsi:schemaLocation='urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd'>
S:  <response>
S:    <result code='1000'>
S:      <msg lang='en-US'>Command completed successfully</msg>
S:    </result>
S:    <resData>
S:      <domain:infData xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'
S:          xsi:schemaLocation='urn:ietf:params:xml:ns:domain-1.0
S:          domain-1.0.xsd'>
S:        <domain:name>example.movistar</domain:name>
S:        <domain:roid>D123456789-COM</domain:roid>
S:        <domain:status s='active'/>
S:        <domain:registrant>abc123</domain:registrant>
S:        <domain:contact type='admin'>def456</domain:contact>
S:        <domain:contacttype='tech'>ghi789</domain:contact>
S:        <domain:ns>
S:          <domain:hostObj>ns1.example.net</domain:hostObj>
S:          <domain:hostObj>ns2.example.net</domain:hostObj>
S:        </domain:ns>
```

```
S:        <domain:clID>registrar</domain:clID>
S:        <domain:crID>registrar</domain:crID>
S:        <domain:crDate>2010-09-08T07:06:05.0Z</domain:crDate>
S:        <domain:exDate>2012-09-08T23:59:59.0Z</domain:exDate>
S:        <domain:authInfo>
S:          <domain:pw>secret</domain:pw>
S:        </domain:authInfo>
S:      </domain:infData>
S:    </resData>
S:    <extension>
S:      <idn:infData xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
S:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
S:          idn-1.0.xsd">
S:        <idn:lang>de</idn:lang>
S:        <idn:variants>
S:          <idn:nameVariant>dummy.movistar</idn:nameVariant>
S:          <idn:nameVariant>wrong.movistar</idn:nameVariant>
S:        </idn:variants>
S:      </idn:infData>
S:    </extension>
S:    <trID>
S:      <svTRID>ZYX-99958</svTRID>
S:    </trID>
S:  </response>
S:</epp>
```

2.3. EPP <create> Command

2.3.1. Example <create> command with language tag and empty list of variants:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
C:    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
C:    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:  <command>
C:    <create>
C:      <domain:create xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:          xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0
C:          domain-1.0.xsd">
C:        <domain:name>example.movistar</domain:name>
C:        <domain:period unit="y">1</domain:period>
C:        <domain:ns>
C:          <domain:hostObj>ns1.example.net</domain:hostObj>
C:          <domain:hostObj>ns2.example.net</domain:hostObj>
C:        </domain:ns>
C:        <domain:registrant>abc123</domain:registrant>
C:        <domain:contact type="admin">def456</domain:contact>
C:        <domain:contact type="tech">ghi789</domain:contact>
C:        <domain:authInfo>
C:          <domain:pw>secret42</domain:pw>
C:        </domain:authInfo>
C:      </domain:create>
C:    </create>
C:    <extension>
C:      <idn:create xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
C:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
C:          idn-1.0.xsd">
C:        <idn:lang>zh</idn:lang>
```

```
C:        <idn:variants/>
C:      </idn:create>
C:    </extension>
C:    <clTRID>abc-00042</clTRID>
C:  </command>
C:</epp>
```

2.3.2. Example <create> command with script tag and empty list of variants:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
C:    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
C:    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:  <command>
C:    <create>
C:      <domain:create xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:          xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0
C:          domain-1.0.xsd">
C:        <domain:name>example.movistar</domain:name>
C:        <domain:period unit="y">1</domain:period>
C:        <domain:ns>
C:          <domain:hostObj>ns1.example.net</domain:hostObj>
C:          <domain:hostObj>ns2.example.net</domain:hostObj>
C:        </domain:ns>
C:        <domain:registrant>abc123</domain:registrant>
C:        <domain:contact type="admin">def456</domain:contact>
C:        <domain:contact type="tech">ghi789</domain:contact>
C:        <domain:authInfo>
C:          <domain:pw>secret42</domain:pw>
C:        </domain:authInfo>
C:      </domain:create>
C:    </create>
C:    <extension>
C:      <idn:create xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
C:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
C:          idn-1.0.xsd">
C:        <idn:script>Latn</idn:script>
C:        <idn:variants/>
C:      </idn:create>
C:    </extension>
C:    <clTRID>abc-00042</clTRID>
C:  </command>
C:</epp>
```

2.3.3. Example <create> command with language tag and domain name variants:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
C:    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
C:    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:  <command>
C:    <create>
C:      <domain:create xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:          xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0
C:          domain-1.0.xsd">
C:        <domain:name>example.movistar</domain:name>
C:        <domain:period unit="y">1</domain:period>
```

```
C:        <domain:ns>
C:          <domain:hostObj>ns1.example.net</domain:hostObj>
C:          <domain:hostObj>ns2.example.net</domain:hostObj>
C:        </domain:ns>
C:        <domain:registrant>abc123</domain:registrant>
C:        <domain:contact type="admin">def456</domain:contact>
C:        <domain:contact type="tech">ghi789</domain:contact>
C:        <domain:authInfo>
C:          <domain:pw>secret42</domain:pw>
C:        </domain:authInfo>
C:      </domain:create>
C:    </create>
C:    <extension>
C:      <idn:create xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
C:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
C:          idn-1.0.xsd">
C:        <idn:lang>de</idn:lang>
C:        <idn:variants>
C:          <idn:nameVariant>dummy.movistar</idn:nameVariant>
C:          <idn:nameVariant>wrong.movistar</idn:nameVariant>
C:        </idn:variants>
C:      </idn:create>
C:    </extension>
C:    <clTRID>abc-00042</clTRID>
C:  </command>
C:</epp>
```

2.4. EPP <update> Command

2.4.1. Example <update> command adding and removing domain name variants:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
C:    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
C:    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:  <command>
C:    <update>
C:      <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:          xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0
C:          domain-1.0.xsd">
C:        <domain:name>example.movistar</domain:name>
C:        <domain:chg/>
C:      </domain:update>
C:    </update>
C:    <extension>
C:      <idn:update xmlns:idn="http://xmlns.corenic.net/epp/idn-1.0"
C:          xsi:schemaLocation="http://xmlns.corenic.net/epp/idn-1.0
C:          idn-1.0.xsd">
C:        <idn:add>
C:          <idn:nameVariant>silly.movistar</idn:nameVariant>
C:          <idn:nameVariant>right.movistar</idn:nameVariant>
C:        </idn:add>
C:        <idn:rem>
C:          <idn:nameVariant>dummy.movistar</idn:nameVariant>
C:          <idn:nameVariant>wrong.movistar</idn:nameVariant>
C:        </idn:rem>
C:      </idn:update>
C:    </extension>
```

```
C:     <clTRID>abc-00042</clTRID>
C:   </command>
C:</epp>
```