LISP MIB

draft-schudel-lisp-mib-00

Beijing IETF - LISP WG

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Problem Statement

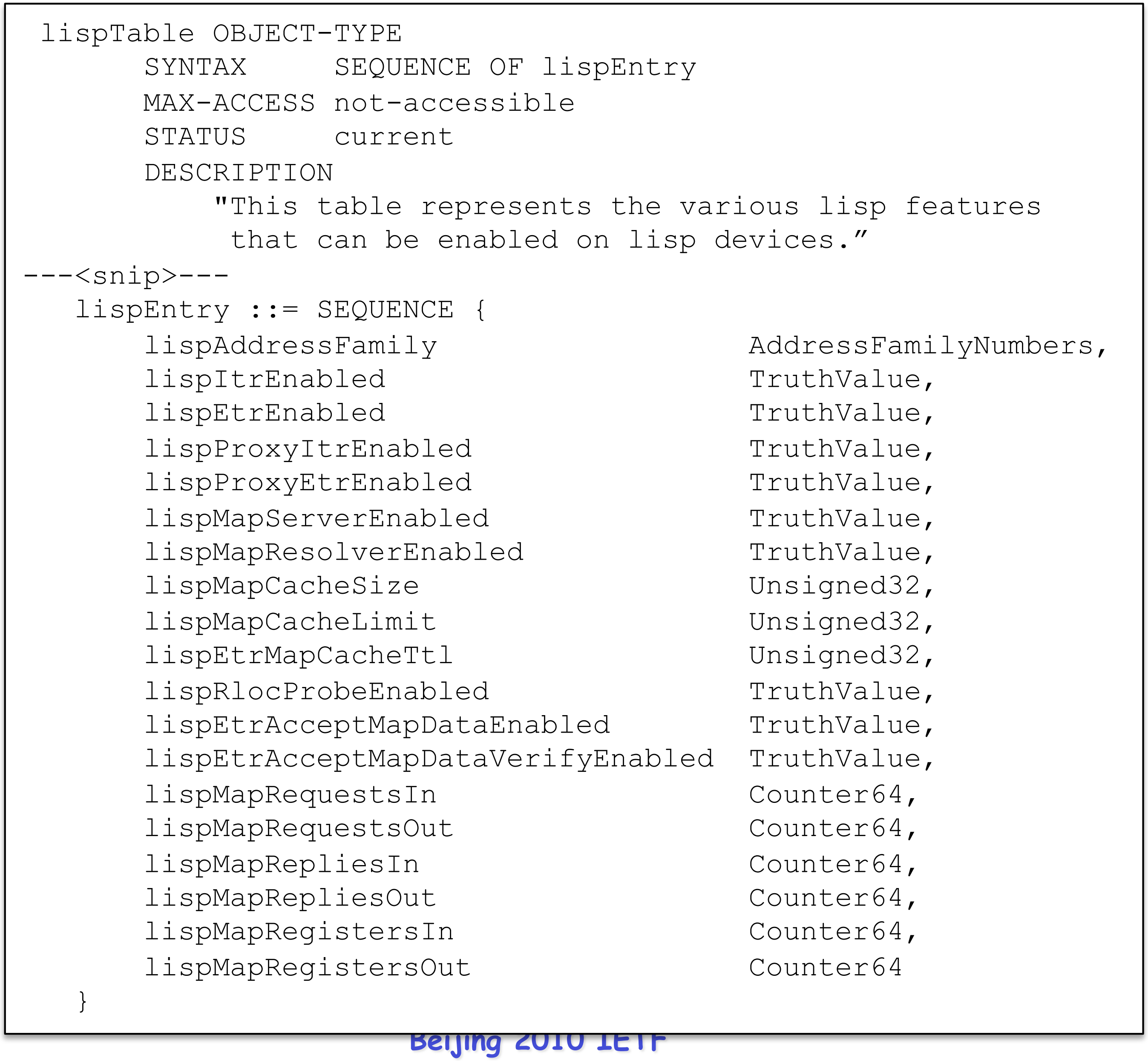
- Define the LISP MIB
  - One MIB covering all LISP Devices
    - xTR, MS, MR, PxTR
    - ALT routers use BGP and routing table MIB for EID-prefix routes
- Requirements
  - Track LISP device "configuration"
    - LISP features and attributes configured on the device
  - Track current LISP Table "values" such as:
    - Map-Cache and Mapping-Database entries
    - LISP site registration entries
  - Track current operational "statistics" such as:
    - Packet encapsulation and decapsulation

LISP MIB Structure

- LISP MIB is composed of ten tables

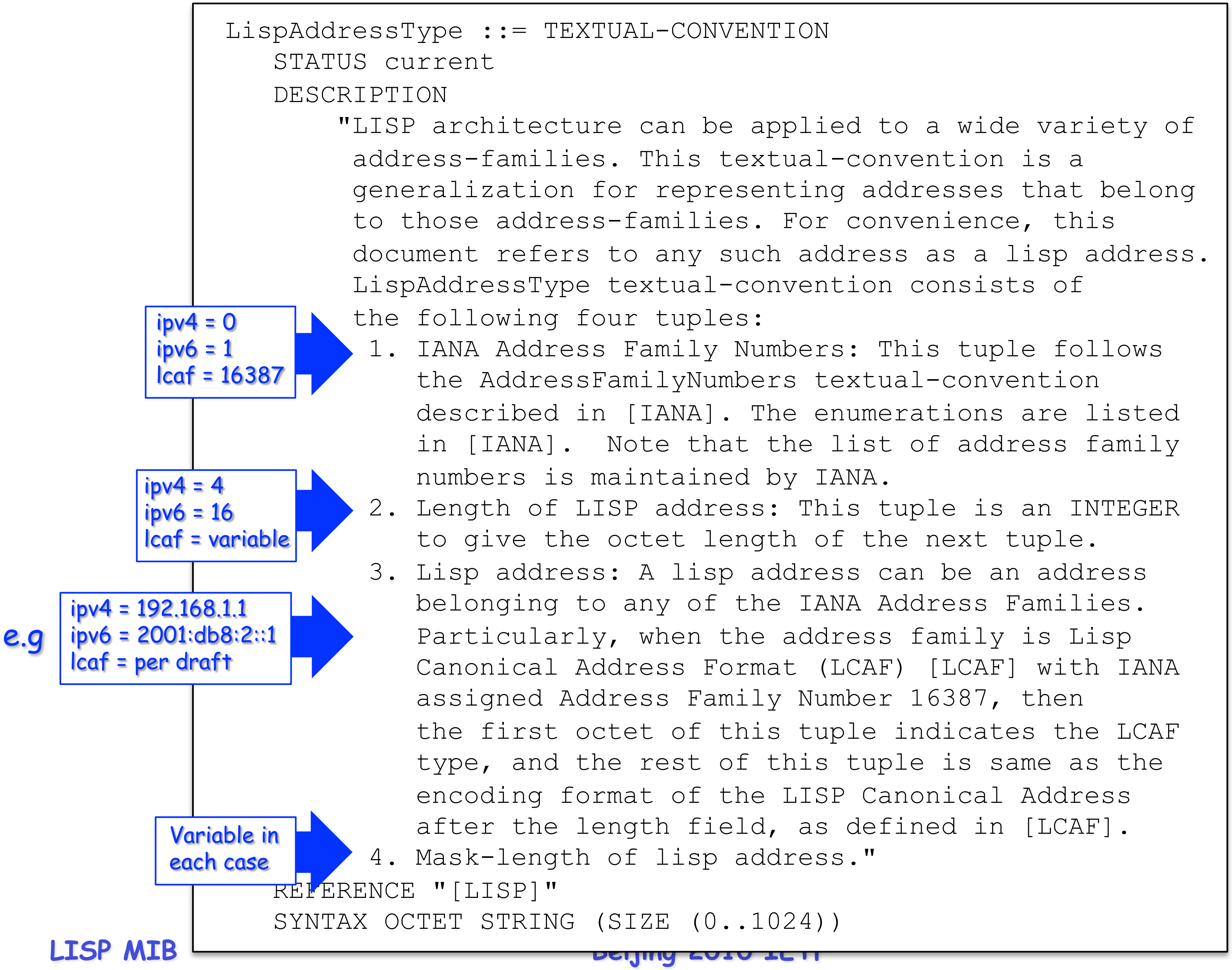
Lisp	Information representing the various lisp features that can be enabled on LISP devices
LispMappingDatabase	The EID-to-RLOC database that contains the EID-prefix to RLOC mappings configured on an ETR
LispMappingDatabaseLocator	The set of routing locators contained in the EID-to-RLOC database configured on an ETR
LispMapCache	The short-lived, on-demand table on an ITR that stores, tracks, and times-out and otherwise validates EID-to-RLOC mappings
LispMapCacheLocator	The set of locators per EID prefix contained in the map-cache table of an ITR
LispSite	Properties of each lisp site served by this device when configured as a Map-Server
LispSiteLocator	Properties of all locators per lisp site served by this device when configured as a Map-Server
LispMapServers	Properties of all Map-Servers this device is configured to use
LispMapResolvers	Properties of all Map-Resolvers this device is configured to use
lispUseProxyEtr	Properties of all Proxy ETRs this device is configured to use

Example: Lisp



```
 lispTable OBJECT-TYPE
       SYNTAX      SEQUENCE OF lispEntry
       MAX-ACCESS not-accessible
       STATUS      current
       DESCRIPTION
           "This table represents the various lisp features
            that can be enabled on lisp devices.”
---<snip>---
   lispEntry ::= SEQUENCE {
       lispAddressFamily                  AddressFamilyNumbers,
       lispItrEnabled                     TruthValue,
       lispEtrEnabled                     TruthValue,
       lispProxyItrEnabled                TruthValue,
       lispProxyEtrEnabled                TruthValue,
       lispMapServerEnabled               TruthValue,
       lispMapResolverEnabled             TruthValue,
       lispMapCacheSize                   Unsigned32,
       lispMapCacheLimit                  Unsigned32,
       lispEtrMapCacheTtl                 Unsigned32,
       lispRlocProbeEnabled               TruthValue,
       lispEtrAcceptMapDataEnabled        TruthValue,
       lispEtrAcceptMapDataVerifyEnabled  TruthValue,
       lispMapRequestsIn                  Counter64,
       lispMapRequestsOut                 Counter64,
       lispMapRepliesIn                   Counter64,
       lispMapRepliesOut                  Counter64,
       lispMapRegistersIn                 Counter64,
       lispMapRegistersOut                Counter64
   }
```

Example: one more



```
LispAddressType ::= TEXTUAL-CONVENTION
   STATUS current
   DESCRIPTION
       "LISP architecture can be applied to a wide variety of
        address-families. This textual-convention is a
        generalization for representing addresses that belong
        to those address-families. For convenience, this
        document refers to any such address as a lisp address.
        LispAddressType textual-convention consists of
        the following four tuples:
         1. IANA Address Family Numbers: This tuple follows
            the AddressFamilyNumbers textual-convention
            described in [IANA]. The enumerations are listed
            in [IANA].  Note that the list of address family
            numbers is maintained by IANA.
         2. Length of LISP address: This tuple is an INTEGER
            to give the octet length of the next tuple.
         3. Lisp address: A lisp address can be an address
            belonging to any of the IANA Address Families.
            Particularly, when the address family is Lisp
            Canonical Address Format (LCAF) [LCAF] with IANA
            assigned Address Family Number 16387, then
            the first octet of this tuple indicates the LCAF
            type, and the rest of this tuple is same as the
            encoding format of the LISP Canonical Address
            after the length field, as defined in [LCAF].
         4. Mask-length of lisp address."
   REFERENCE "[LISP]"
   SYNTAX OCTET STRING (SIZE (0..1024))
```

ipv4 = 0
ipv6 = 1
lcaf = 16387

ipv4 = 4
ipv6 = 16
lcaf = variable

e.g
ipv4 = 192.168.1.1
ipv6 = 2001:db8:2::1
lcaf = per draft

Variable in each case

Working Group Status

- MIB's useful even for experimental protocols
- Proposing lisp-mib draft as a working group document
- Comments?