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module ieee802-dot1ae-types {
  yang-version 1.1;
  namespace "urn:ieee:std:802.1AE:yang:ieee802-dot1ae-types";
  prefix dot1ae-types;

  organization
    "Institute of Electrical and Electronics Engineers";
  contact
    "WG-URL: http://grouper.ieee.org/groups/802/1/
    WG-EMail: stds-802-1@ieee.org
    Contact: IEEE 802.1 Working Group Chair
    Postal: C/O IEEE 802.1 Working Group
    IEEE Standards Association
    445 Hoes Lane
    P.O. Box 1331
    Piscataway
    NJ 08855-1331
    USA

    E-mail: STDS-802-1-L@LISTSERV.IEEE.ORG";
  description
    "Common types used within dot1ae modules";

  revision 2019-05-09 {
    description
      "Updates based upon comment resolution on draft TBD ";
    reference
      "IEEE 802.1AE-2018, Media Access Control (MAC) Security.";
  }

  typedef sec-an-type {
    type uint8 {
      range "0..3";
    }
    description
      "A 2 bit number that is concatenated with a MACsec Secure Channel
      Identifier to identify a Secure Association. Indicates an
      Association Number (AN) assigned by the Key Server for use with
      the key number for transmission.

      Each SC is comprised of a succession of SAs, each with a different
      SAK, identified by a Secure Association Identifier (SAI) comprising
      an SCI concatenated with a two-bit AN. The SAI is unique for SAs
      used by SecYs participating in a given CA at any instant.";
    reference
      "IEEE 802.1X-2010 Clause 9.8, Clause 9.16";
  }

  typedef sec-pn-type {
    type uint64;
    description
      "This is the Packet Number. It may be a 32 bit or a 64 bit
      unsigned value. A monotonically increasing value that is
      guaranteed unique for each MACsec frame transmitted using
      a given Secure Association Key (SAK).";
    reference
      "IEEE 802.1X-2010 Clause 9.8, Clause 9.16";
  }

  typedef sec-sci-type {
    type binary {
      length "8";
    }
    description
      "The Secure Channel Identifier is 8 bytes (SCI). The SCI is
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        an 8 octet binary number, where the first 6 octets represents the MAC
        Address (in canonical format), and the next 2 octets represents
        the Port Identifier.";
    reference
        "IEEE 802.1X-2010 Clause 7.1.2, Clause 9.16";
}

typedef sec-eui64-type {
    type uint64;
    description
        "A 64 bit Identifier.";
}

typedef sec-key-identifier-type {
    type string {
        length "32";
    }
    description
        "The keyIdentifier is an octet string, whose format and
        interpretation depends on the key agreement protocol in use. It
        does not contain any information about the SAK other than that
        explicitly chosen by the key agreement protocol to publicly identify
        the key. If MKA is being used, it is the 128-bit Key Identifier
        (KI) specified by IEEE Std 802.1X encoded in an octet string as
        specified by that standard.";
}
}
```