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
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.";
}