Yang data model

- Added a compression feature (useful for *delay tolerant*)
- Clarify description ?

```
                                                    +  feature compression {
                                                    +    description "SCHC compression capabilities are taken into account";
                                                    +  }
                                                    +
   feature fragmentation {                             feature fragmentation {
-    description                                    +    description "SCHC fragmentation capabilities are taken into account";
-      "Fragmentation is usually required only at the transportation
-      level.";
-      // DB: what does this mean?
```

Interleaved SCHC fragments

- *the support for interleaved fragmented packet transmission is not described in the yang model. Do we need it? The DTag size (T) is an indication that interleaving might be supported or not, but a profile might want to specify e.g. that interleaving 3 packets is mandatory, while T==2 says that up to 4 packets could be interleaved.*

- Good discussion for the group, we try to implement just what is defined in RFC8{7|8}24, do you introduce more specific and useful information in the model?

- Maximum-window-size => max-window-size
- Added max-interleaved-frames
  - Default = 1 : can be used for slow start ?
- Retransmission Timer for AoE et AA

```
908 -     leaf maximum-window-size {
909           type uint16;
910           description
911 -           "By default 2^wsize - 1";
912       }
913       leaf retransmission-timer {
914         type uint64 {
915           range "1..max";
916         }
917         description
918           "Duration in seconds of the retransmission timer.";
919       }
```

```
912 +
913 +     // SCHC fragmentation protocol paramters
914 +
915 +     leaf max-window-size {
916           type uint16;
917           description
918 +           "By default, if not specified 2^w-size - 1. Should not exceed
919 +           this value.";
920       }
921 +     leaf max-interleaved-frames{
922 +       type uint8;
923 +       default "1";
924 +       description
925 +         "Maximum of simultaneously fragmented frames. Maximum value is
926 +         2^dtag-size";
927 +     }
928 +
929       leaf retransmission-timer {
930         type uint64 {
931           range "1..max";
932         }
933 +       when "derived-from(../fragmentation-mode, 'fragmentation-mode-ack-on-error') or
934 +             derived-from(../fragmentation-mode, 'fragmentation-mode-ack-always') ";
935         description
936           "Duration in seconds of the retransmission timer.";
937       }
```

Ack period

- *- I'm unclear that ack-behavior in the Yang model captures the intention of RFC8724. The description of ack-behavior-after-All0 says that an ACK is expected after an All-0, and the description of ack-behavior-after-All1 says that an ACK is expected after an All-1, but the two are not exclusive, while ack-behavior cannot be equal to both. Likewise ack-behavior-always is described like an ACK is expected after every fragment, I think it wanted to say after every window. These pertain to different fragmentation modes (Ack-on-Error and Ack-Always).*

- May be the term always is not well chosen and need more explanation, It is more the ack are sent when the L2 allowed it.

```
655 -   identity ack-behavior-always {
656         base ack-behavior-base-type;
657         description
658 -         "Fragmentation expects Ack after sending every fragment.";
659 -         // DB: better comment neeeded. They are not accurate as is.
660     }
661
```

```
657 +   identity ack-behavior-by-layer2 {
658         base ack-behavior-base-type;
659         description
660 +         "Layer 2 defines when to send an Ack.";
661     }
662
```

Window size

- *WINDOW_SIZE [RFC8724] is incorrectly described as maximum-window-size (Yang model). The window_size is the max tile index + 1, while the max window size is 2^M-1*

- The goal was to limit the maximum value for FCN and not always having 2^M-2

```
// SCHC Frang header format

leaf dtag-size {
  type uint8;
  default "0";
  description
    "Size in bit of the DTag field (T variable from RFC8724).";
}
leaf w-size {
  when "not(derived-from(../fragmentation-mode,
                         'fragmentation-mode-no-ack'))";
  type uint8;
  description
    "Size in bit of the window field (M variable from RFC8724).";
}
leaf fcn-size {
  type uint8;
  mandatory true;
  description
    "Size in bit of the FCN field (M variable from RFC8724).";
}
leaf rcs-algorithm {
  type rcs-algorithm-type;
  default "schc:rcs-RFC8724";
  description
    "Algoritm used for RCS. The algorithm spedifies the RCS size";
}

// SCHC fragmentation protocol paramters

leaf max-window-size {
  type uint16;
  description
    "By default, if not specified 2^w-size - 1. Should not exceed
    this value.";
}
leaf max-interleaved-frames{
  type uint8;
  default "1";
  description
    "Maximum of simultaneously fragmented frames. Maximum value is
```

Penultimate tile

- *Appendix D says that a profile, if Ack-on-Error is used, must define "if the penultimate tile of a SCHC Packet is of the regular size only or if it can also be one L2 Word shorter". I haven't found such information in the Yang model. Shall it be? Or is it part of a priori knowledge from the profile? I would assume that this would depend on the tile size, therefore vary by rule, therefore should be in the Yang model*

- For me there was not option, it is always done.

DTAG lifetime

- *similarly, the "lifetime of DTag at the receiver" is not in the Yang model. Shall it be? Or is it part of a priori knowledge from the profile?*

- I don't catch this point, isn't it linked to inactivity timer?