# Video Codec Requirements and Evaluation Methodology

**draft-ietf-netvc-requirements-03**

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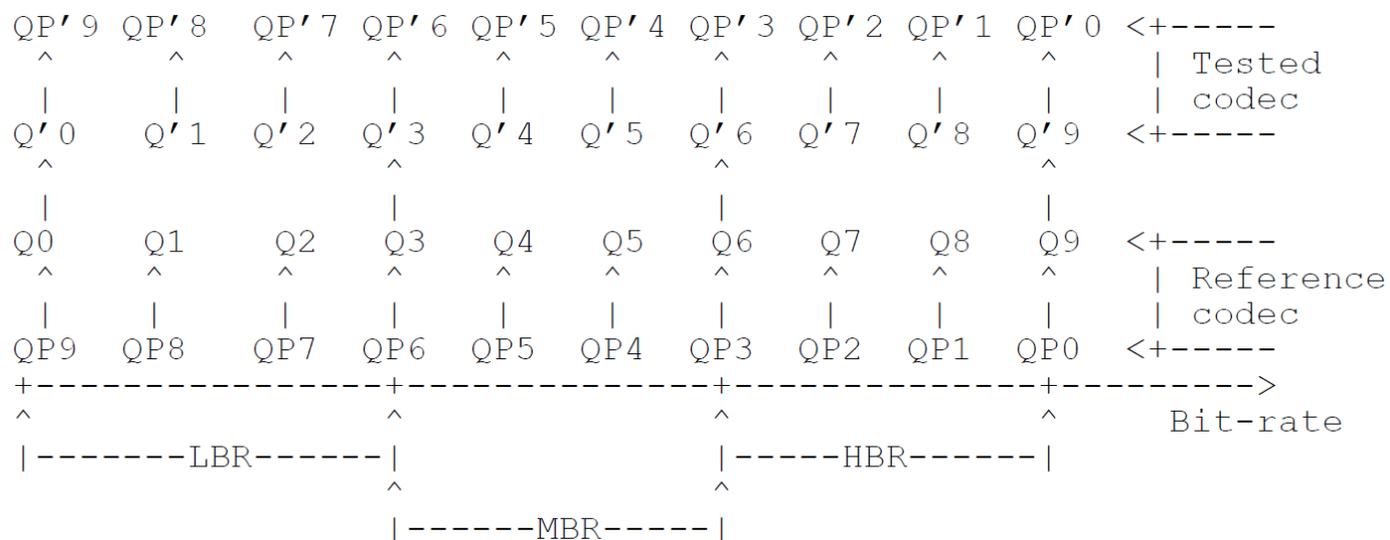**Jose Alvarez (Huawei Technologies)**

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# Contents

- **An overview of applications** ← **No changes**

- **Requirements** ← **Changed**

- **Evaluation methodology** ← **Changed**

# Requirements

- **General requirements** ← **No changes**

- **Basic requirements** ← **Changed**
    - The bitstream specification should support independently decodable sub-frame units similar to slices or independent tiles. It should be possible for the encoder to restrict the bit-stream to allow parsing of the bit-stream after a packet-loss and to communicate it to the decoder.

- **Optional requirements** ← **No changes**

# Compression performance evaluation

- **The number of QP-points was reduced up to 10**
  - initially, it was 12
- **Quality alignment was simplified**
  - Now, it is performed just for 4 QP-points

```
QP'9 QP'8   QP'7 QP'6 QP'5 QP'4 QP'3 QP'2 QP'1 QP'0 <+-----
 ^         ^    ^    ^    ^    ^    ^    ^    ^    ^   | Tested
 |         |    |    |    |    |    |    |    |    |   | codec
Q'0      Q'1  Q'2  Q'3  Q'4  Q'5  Q'6  Q'7  Q'8  Q'9 <+-----
 ^              ^              ^              ^
 |              |              |              |
Q0      Q1    Q2   Q3   Q4   Q5   Q6   Q7   Q8   Q9  <+-----
 ^       ^    ^    ^    ^    ^    ^    ^    ^    ^     | Reference
 |       |    |    |    |    |    |    |    |    |     | codec
QP9    QP8   QP7  QP6  QP5  QP4  QP3  QP2  QP1  QP0  <+-----
+----------------+--------------+--------------+--------->
 ^                ^              ^              ^      Bit-rate
 |-------LBR------|             |-----HBR------|
                  ^              ^
                  |------MBR-----|
```

- **MS-SSIM-based quality assessment is performed only for luma**

# Conclusions

- The authors tried to take into account all the received comments

- **We recommend to adopt this document as an RFC**

Thank You