draft-ietf-payload-vp9-01

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-00 to -01 Changes

- Non-flexible Mode
  - Replaced GOF_IDX with Temporal ID.
    - TID was previously inferred from SS, causing issues if the SS was lost.

  - GOF_IDX now computed from Picture ID as:
    - GOF_IDX = (PicID - PicID$_{SS}$) % SSLength
    - Note that PicIDMax can be either 2^7 or 2^15.

- Flexible Mode
  - X bit and corresponding Extended P_DIFF field removed.
  - P_DIFF increased from 6 to 7 bits.

Non-flexible Mode

-01:   -00:

```
 0 1 2 3 4 5 6 7                                               0 1 2 3 4 5 6 7
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
 |I|P|L|F|B|E|V|-|  (REQUIRED)                                 |I|P|L|F|B|E|V|-|  (REQUIRED)
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
I:  |M|  PICTURE ID  |  (RECOMMENDED)                     I:  |M|  PICTURE ID  |  (RECOMMENDED)
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
M:  |  EXTENDED PID  |  (RECOMMENDED)                     M:  |  EXTENDED PID  |  (RECOMMENDED)
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
L:  |   T  |U|  S  |D| (CONDITIONALLY RECOMMENDED) L:  |GOF_IDX|  S  |D| (C. RECOMMENDED)
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
 |    TL0PICIDX   | (CONDITIONALLY REQUIRED)                   |   TL0PICIDX   | (C. REQUIRED)
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
V:  | SS            |                                     V:  | SS            |
 | ..            |                                            | ..            |
 +-+-+-+-+-+-+-+-+                                             +-+-+-+-+-+-+-+-+
```

Flexible Mode

-01:

```
0 1 2 3 4 5 6 7
+-+-+-+-+-+-+-+-+
|I|P|L|F|B|E|V|-|  (REQUIRED)
+-+-+-+-+-+-+-+-+
```

I:
```
|M|  PICTURE ID  |  (REQUIRED)
+-+-+-+-+-+-+-+-+
```

M:
```
|  EXTENDED PID  |  (RECOMMENDED)
+-+-+-+-+-+-+-+-+
```

L:
```
|   T  |U|  S  |D|  (CONDITIONALLY RECOMMENDED)
+-+-+-+-+-+-+-+-+
```

P,F:
```
|  P_DIFF     |N|  (CONDITIONALLY REQUIRED)
+-+-+-+-+-+-+-+-+
```

V:
```
|  SS          |
|  ..          |
+-+-+-+-+-+-+-+-+
```

-00:

```
0 1 2 3 4 5 6 7
+-+-+-+-+-+-+-+-+
|I|P|L|F|B|E|V|-|  (REQUIRED)
+-+-+-+-+-+-+-+-+
```

I:
```
|M|  PICTURE ID  |  (RECOMMENDED)
+-+-+-+-+-+-+-+-+
```

M:
```
|  EXTENDED PID  |  (RECOMMENDED)
+-+-+-+-+-+-+-+-+
```

L:
```
|   T  |U|  S  |D|  (C. RECOMMENDED)
+-+-+-+-+-+-+-+-+
```

P,F:
```
|  P_DIFF    |X|N|  (C. RECOMMENDED)
+-+-+-+-+-+-+-+-+
```

X:
```
|EXTENDED P_DIFF|  (OPTIONAL)
+-+-+-+-+-+-+-+-+
```

V:
```
|  SS          |
|  ..          |
+-+-+-+-+-+-+-+-+
```

Open Issues

- Support in-bitstream simulcast?

- Offer/Answer considerations.

- VP9 bitstream format description and citation.

- Update, or delete, RPSI/SLI section for VP9.

- Add text on FIR/LIR.