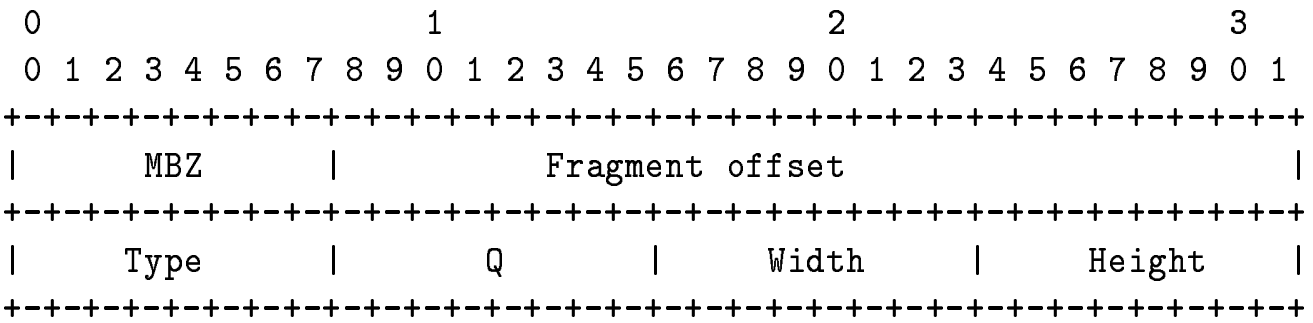
JPEG over RTP

Packet format:

- Fixed header in every packet, after RTP header and options




```
       Type = Index into a table of predefined JPEG parameters
      Width = Width of input in 8-pixel blocks
     Height = Height of input in 8-pixel blocks
          Q = Quality factor (0-100 = std, >100 = custom)
```

- The replacement of bit fields by a single type field allows encoding more information in a small space and implementors do not have to deal with the cross product of all possible variations of the bit fields defined in previous drafts.
- The RTP content field is 26 (JPEG). The RTP sync bit is used as end-of-frame. The RTP timestamp is in units of 65536Hz.

JPEG over RTP, cont.

- The data following the header is an entropy coded JPEG stream as defined in the JPEG standard. JPEG markers are defined to be 0xFF bytes in the data stream. Any 0xFF byte generated by the entropy coder is followed by a "stuffed" 0x00 byte (as per section B.1.1.5 of the JPEG standard).
- Types of 0-127 are to be predefined by profiles. Type 0 is defined as YUV 4:2:2, square pixels, 16x8 MCU, standard Huffman table. Type 1 is the same except YUV 4:1:1.
- Types 128-255, and non-standard Q tables, are described via the session protocol.

Issues

We punted on the following issues:

- Interlaced video.
- Restart codes (allowing decoding of partial frames). Some hardware does not support restart codes, so for maximum interoperability, type 0 packets contain no restart codes.
- The session protocol used to define nonstandard JFIF types and Q tables.
- These will be fully specified before the profile is finalized but we wanted to get experience with what we could do easily