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**Title:** Semantics for skipped macroblocks in spatial scalability  
**Purpose:** Proposal

This document provides additional text for section 6.1.6.1 of the video working draft, version 4.2 28th April 1993, on skipped macroblocks. The purpose of this text is to define skipped macroblocks in the case of spatial scalability. The complete text of 6.1.6.1 is repeated here for clarity. Additions are highlighted by a left hand bar.

**6.1.6.1 Skipped Macroblocks**

Definition of skipped macroblocks is compatible with MPEG-1.

- In all cases, a skipped macroblock is only the result of a prediction, and all DCT coefficients are considered to be zero.
- In I-frame pictures or field pictures, if picture spatial extension data is not present for a picture then all macroblocks are coded and there are no skipped macroblocks. The syntax element *macroblock\_address\_increment* is always equal to "1", except for the first macroblock of a slice, in which case it indicates the horizontal position of the slice.
- In I-frame pictures or field pictures, if picture spatial extension data is not present for a picture then skipped macroblocks are allowed. These are predicted from a spatially co-sited lower layer block.
- In P-frame pictures, a skipped macroblock is defined to be a frame-based predicted macroblock with a reconstructed frame motion vector equal to zero.
- In P-field pictures, a skipped macroblock is defined to be a field-based predicted macroblock with a reconstructed field motion vector equal to zero. The reference field for the prediction is the same parity field.
- In B-frame pictures, a skipped macroblock is defined to be a frame-based predicted macroblock with differential frame motion vector(s) equal to zero. The type of prediction (forward, backward or averaged) is the same as the prior macroblock.
- In B-field pictures, a skipped macroblock is defined to be a field-based predicted macroblock with differential field motion vector(s) equal to zero. The type of prediction (forward, backward or averaged) is the same as the prior macroblock. The reference field(s) for the prediction is (are) the same parity field(s).
- In B-frame or field pictures, a skipped macroblock shall not follow an intra-coded macroblock.
- In P-field and B-field pictures, a skipped macroblock shall have the same prediction weight as the prior macroblock.
- In P-frame and B-frame pictures, a skipped macroblock shall have the same prediction weights as the prior macroblock.

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