IEEE 802.11
Wireless Access Method and Physical Specification

Title: **Motion to Adopt FH PHY Packet Formatting**
                    to Minimize Data DC Offset

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Motion

I move that the FH PHY sub-group adopts the FH packet formatting method presented in submission 94/069 with 32-bit block sizes and stuffing/inversion beginning with the first block following the PLCP header.
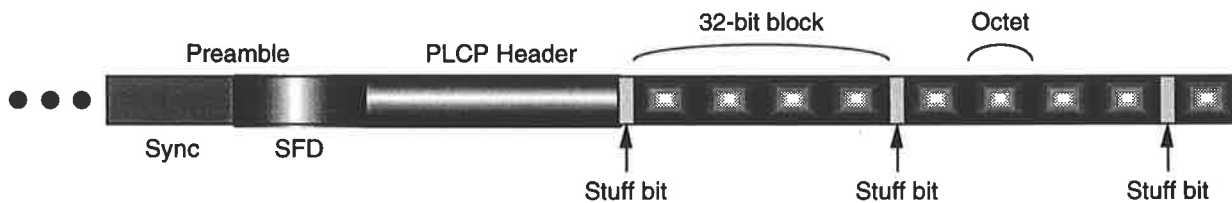
Details of Algorithm

Figure 1. Stuffing/Inversion Packet Formatting Illustration

```
Stuffing Algorithm:  If stuff bit = 1 = next block is inverted; 0 = not inverted

Input parameter: number_of_MPDU_bytes;              /* can be even or odd */
number_of_blocks_in_packet = truncate{(number_of_MPDU_bytes + 3) / 2 };
                /* no padding is necessary for number of bytes not multiple of 4 */
Nhdr = 32;                                          /* Number of bits in header */
Read in header {b(1),...,b(Nhdr)};                  /* b(1) is first bit in */
accum = 2 [Sum{b(1),...,b(Nhdr)}] - (Nhdr);         /* calculate bias in header */
Transmit {b(1),...,b(Nhdr)};                        /* no stuffing on header */

For n = 1 to number_of_blocks_in_packet
{
  b(0) = 0;                                         /* b(0) is the stuff bit */
  N = min(4, # of bytes remaining) * 8;       /* N= block size in bits */
  Read in next block {b(1),...,b(N)};              /* b(n) = 0, 1 */
  bias_next_block = 2 [Sum{b(0),...,b(N)}] - (N+1);  /* calculate bias with b(0) */
  If {[accum * bias_next_block > 0] then            /* if accum and bias of next
                                         block has the same sign, then invert block */

    {
        Invert {b(0),...,b(N)};
        bias_next_block = - bias_next_block;
    }
  accum = accum + bias_next_block;
  transmit {b(0),...,b(N)};                         /* b(0) is first bit out */
}
```

Figure 2. Stuffing/Inversion Packet Formatting Pseudo-Code