Computer Networks: Bit Stuffing with FLAGS

Original Data: 01010111111010000000101111101
Bit Stuffing Process:
1. **Data from Upper Layer:**

01010111111010000000101111101

2. **Stuffed Data (Sender's End):**

01111110 0101011111101010000001011111**0**101 **01111110**

3. **Frame Sent:**

01111110 — HEADER — 0101011111101010000001011111**0**101 — HEADER — **01111110**

4. **Frame Received (Receiver's End):**

01111110 — HEADER — 0101011111101010000001011111**0**101 — HEADER — **01111110**

5. **Un-Stuffed Data:**

01010111111010000000101111101

Explanation: - FLAG (**01111110**) is added at the beginning and end of the frame. - **0** (in red) are the stuffed bits, inserted after every five consecutive 1's. - The stuffing process ensures that the bit pattern of the FLAG doesn't appear in the data. - At the receiver's end, stuffed 0's are removed to recover the original data.