

Laboratorio 2

Esquemas de Detección y Corrección de Errores

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1. Emisor

Aplicación

```
andyfer004@MacBook-Air-de-Andy-2 app % ./sender_initial.py  
>> [APP] Mensaje a enviar: Hola Mundo Andy Davis
```

Figura 1: Aplicación del emisor

Presentación

```
>> [PRES] ASCII bits:  
0100100001101111011011000110000100100000010011010111010101101110011001000110111100100000100000101101110011001000  
1111001001000000100010001100001011101100110100101110011
```

Figura 2: Presentación del emisor

Enlace

```
>> [ENLACE] Código Hamming (7,4):  
10011001110000110011011111111001100111100110011010010101000000010011001010100011110100101110011000101101  
100110100110011001101111111010100000000100110011010011100110001011011001101001100000111100110010101000000010  
01100100110011001101001000111110011011001100100011111000011 0
```

Figura 3: Enlace del emisor

Ruido

Todo Completo

```

>> [NOISE] Tasa de error [0-1]: 0.02
>> [RUIDO] Bits volteados en pos: [83, 111, 152, 171, 184, 237]
>> [RUIDO] Trama ruidosa:
10011001110000110011011111111001100111100110011010101000000001001100101010000011110100101110011000101111
1001101001100110011011111110101000000101001100110111011100010110111011001100000111100110010101000000010
0110010011011100110110100100011111100110110011001100100011111000011 0

```

Figura 4: Ruido en la transmisión

```

andyfer004@MacBook-Air-de-Andy-2 app % ./sender_initial.py
>> [APP] Mensaje a enviar: Hola Mundo
>> [PRES] ASCII bits:
01001000011011110110001100001001000000100110101110101011011100110010001101111
>> [ENLACE] Código Hamming (7,4):
1001100111000011001101111111100110011110011001101010101000000010011001010100011110100111001100010110110011001100110111111 0
>> [NOISE] Tasa de error [0-1]: 0.05
>> [RUIDO] Bits volteados en pos: [18, 44, 49, 61, 66, 99, 110, 112, 115, 139]
>> [RUIDO] Trama ruidosa:
1001100111000011000101111111100110011110011011001010010101000001000100110010101000111101001100010100010111010011001100110111110 0

```

Figura 5: Esquema completo del emisor