

Stream Ciphers

CSCI283/172 Fall 2008

GW

Example: one-time pad

$$P = C = \mathbf{Z}_2^n$$

$$d_K = e_K(x_1, x_2, \dots, x_n) = (x_1 + K_1, x_2 + K_2, \dots, x_n + K_n) \text{ mod } 2$$

Problems?

One-time pad is best

- But key too long to be practical
- Can we use a pseudo-random key then, which would be generated from a short truly random string?