Bask

clear;

clc;

b = input('Enter the Bit stream \n ');

%b = [0 1 0 1 1 1 0];

n = length(b);

t = 0:.01:n;

x = 1:1:(n+1)\*100;

for i = 1:n

for j = i:.1:i+1

bw(x(i\*100:(i+1)\*100)) = b(i);

end

end

bw = bw(100:end);

sint = sin(2\*pi\*t);

st = bw.\*sint;

subplot(3,1,1)

plot(t,bw)

grid on ; axis([0 n -2 +2])

subplot(3,1,2)

plot(t,sint)

grid on ; axis([0 n -2 +2])

subplot(3,1,3)

plot(t,st)

grid on ; axis([0 n -2 +2])

Bfsk

clear;

clc;

b = input('Enter the Bit stream \n ');

%b = [0 1 0 1 1 1 0];

n = length(b);

t = 0:.01:n;

x = 1:1:(n+1)\*100;

for i = 1:n

if (b(i) == 0)

b\_p(i) = -1;

else

b\_p(i) = 1;

end

for j = i:.1:i+1

bw(x(i\*100:(i+1)\*100)) = b\_p(i);

end

end

bw = bw(100:end);

wo = 2\*(2\*pi\*t);

W = 1\*(2\*pi\*t);

sinHt = sin(wo+W);

sinLt = sin(wo-W);

st = sin(wo+(bw).\*W);

subplot(4,1,1)

plot(t,bw)

grid on ; axis([0 n -2 +2])

subplot(4,1,2)

plot(t,sinHt)

grid on ; axis([0 n -2 +2])

subplot(4,1,3)

plot(t,sinLt)

grid on ; axis([0 n -2 +2])

subplot(4,1,4)

plot(t,st)

grid on ; axis([0 n -2 +2])

Fs=1;

figure

%pburg(st,10)

periodogram(st)

Bpsk

clear;

clc;

b = input('Enter the Bit stream \n ');

%b = [0 1 0 1 1 1 0];

n = length(b);

t = 0:.01:n;

x = 1:1:(n+1)\*100;

for i = 1:n

if (b(i) == 0)

b\_p(i) = -1;

else

b\_p(i) = 1;

end

for j = i:.1:i+1

bw(x(i\*100:(i+1)\*100)) = b\_p(i);

end

end

bw = bw(100:end);

sint = sin(2\*pi\*t);

st = bw.\*sint;

subplot(3,1,1)

plot(t,bw)

grid on ; axis([0 n -2 +2])

subplot(3,1,2)

plot(t,sint)

grid on ; axis([0 n -2 +2])

subplot(3,1,3)

plot(t,st)

grid on ; axis([0 n -2 +2])

Qpsk

clear;

clc;

b = input('Enter the Bit stream \n ');

%b = [0 1 0 1 1 1 0];

n = length(b);

t = 0:.01:n;

x = 1:1:(n+2)\*100;

for i = 1:n

if (b(i) == 0)

b\_p(i) = -1;

else

b\_p(i) = 1;

end

for j = i:.1:i+1

bw(x(i\*100:(i+1)\*100)) = b\_p(i);

if (mod(i,2) == 0)

bow(x(i\*100:(i+1)\*100)) = b\_p(i);

bow(x((i+1)\*100:(i+2)\*100)) = b\_p(i);

else

bew(x(i\*100:(i+1)\*100)) = b\_p(i);

bew(x((i+1)\*100:(i+2)\*100)) = b\_p(i);

end

if (mod(n,2)~= 0)

bow(x(n\*100:(n+1)\*100)) = -1;

bow(x((n+1)\*100:(n+2)\*100)) = -1;

end

end

end

%be = b\_p(1:2:end);

%bo = b\_p(2:2:end);

bw = bw(100:end);

bew = bew(100:(n+1)\*100);

bow = bow(200:(n+2)\*100);

cost = cos(2\*pi\*t);

sint = sin(2\*pi\*t);

st = bew.\*cost+bow.\*sint;

subplot(4,1,1)

plot(t,bw)

grid on ; axis([0 n -2 +2])

subplot(4,1,2)

plot(t,bow)

grid on ; axis([0 n -2 +2])

subplot(4,1,3)

plot(t,bew)

grid on ; axis([0 n -2 +2])

subplot(4,1,4)

plot(t,st)

grid on ; axis([0 n -2 +2])