LAMPIRAN

KODE PROGRAM

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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%            Estimasi Sinyal Broadband dan Sinyal Narrowband           %%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

clear;
close all;
clc;

t=1:1256;
f1=20; f2=10 ; f3=5;
a1=1; a2=-3; a3=3,5;
x=a1*sin(2*pi*f1*t)+a2*sin(2*pi*f2*t)+a3*sin(2*pi*f3*t);
% load('rmn3t.mat');
% x=rmn3t;

signal = x;

% Model untuk broadband
sinyal_lebar(1)=signal(1);
sinyal_lebar(2)=signal(2)+0.55.*signal(1);

% Estimasi sinyal broadband
for k=3:length(signal)
    sinyal_lebar(k)=signal(k)+0.55.*signal(k-1)+0.15.*signal(k-2);
end;

figure(1);
plot(spek_sinyal_lebar,'r');grid;hold on;
plot(estimasi_sinyal_lebar),grid;
legend('Spektrum sebenarnya','Estimasi spektral')
Xlabel('frekuensi(Hz)')
Ylabel('amplitude')
```

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% Model untuk narrowband
sinyal_sempit(1)=signal(1);
sinyal_sempit(2)=signal(2) + 1.5857.*signal(1) + 1.6408.*sinyal_sempit(1);
sinyal_sempit(3)=signal(3) + 1.5857.*signal(2) + 0.9604.*signal(1) ...
   + 1.6408.*sinyal_sempit(2)- 2.2044.*sinyal_sempit(1);
sinyal_sempit(4)=signal(4) + 1.5857.*signal(3) + 0.9604.*signal(2) ...
   + 1.6408.*sinyal_sempit(3)- 2.2044.*sinyal_sempit(2) + ...
   1.4808.*sinyal_sempit(1);

for m=5:length(signal)
   sinyal_sempit(m)=signal(m) + 1.5857.*signal(m-1) + 0.9604.*signal(m-2) ...
      + 1.6408.*sinyal_sempit(m-1)- 2.2044.*sinyal_sempit(m-2) + ...
      1.4808.*sinyal_sempit(m-3) - 0.8145.*sinyal_sempit(m-4);
end;

% Estimasi sinyal narrowband
for m=3:length(signal)
   sinyal_sempit(m)=signal(m)+0.55.*signal(m-1)+0.15.*signal(m-2);
end;

figure(2);
plot(spek_sinyal_sempit,'r');grid; hold on;
plot(estimasi_sinyal_sempit),grid;
legend('Spektrum sebenarnya','Estimasi spektral')
Xlabel('frekuensi(Hz)')
Ylabel('amplitude')
```