

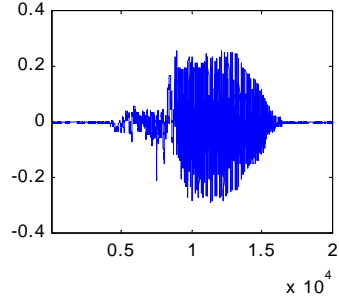
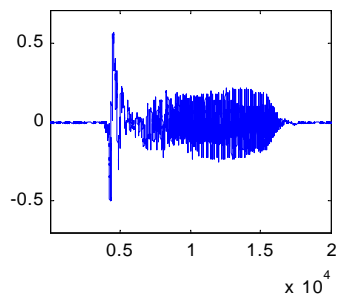
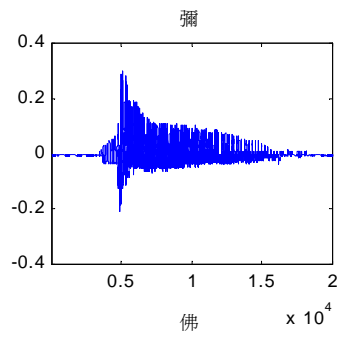
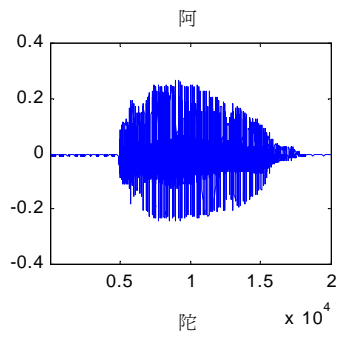
「阿彌陀佛」音聲的頻譜分析

南台科大 趙春棠

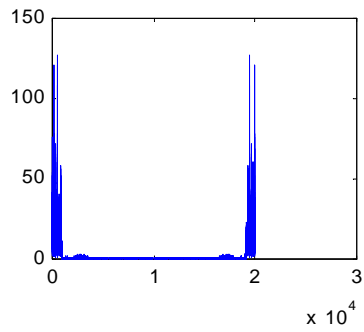
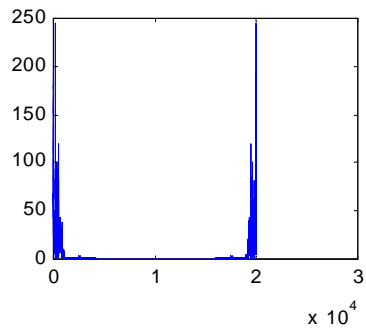
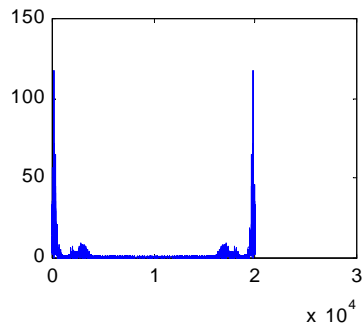
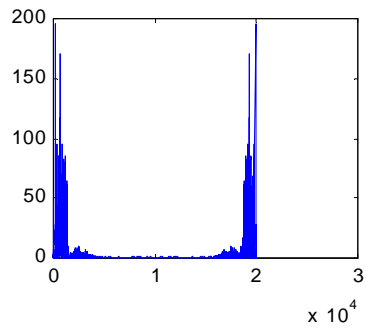
```
clear; clf;
[Y1,FS1,NBITS1]=wavread('a.wav',[6000 26000]); % Step2
[Y2,FS2,NBITS2]=wavread('me.wav',[10000 30000]);
[Y3,FS3,NBITS3]=wavread('to.wav',[17000 37000]);
[Y4,FS4,NBITS4]=wavread('fo.wav',[5000 25000]);
t=1:1:20001;
figure(1);
subplot(2,2,1); plot(t,Y1); title('阿'); axis([1,20000,-0.4,0.4]);
subplot(2,2,2); plot(t,Y2); title('彌'); axis([1,20000,-0.4,0.4]);
subplot(2,2,3); plot(t,Y3); title('陀'); axis([1,20000,-0.7,0.7]);
subplot(2,2,4); plot(t,Y4); title('佛'); axis([1,20000,-0.4,0.4]);
figure(2); % Step3
FY1=fft(Y1,20001); MFY1=abs(FY1);
FY2=fft(Y2,20001); MFY2=abs(FY2);
FY3=fft(Y3,20001); MFY3=abs(FY3);
FY4=fft(Y4,20001); MFY4=abs(FY4);
subplot(2,2,1); plot(t,MFY1);
subplot(2,2,2); plot(t,MFY2);
subplot(2,2,3); plot(t,MFY3);
subplot(2,2,4); plot(t,MFY4);
figure(3); % Step4
t=1:1:10001;
subplot(2,2,1); plot(t,MFY1(1:10001,1)); title('阿');
axis([1,10001,0,200]);
subplot(2,2,2); plot(t,MFY2(1:10001,1)); title('彌');
axis([1,10001,0,150]);
subplot(2,2,3); plot(t,MFY3(1:10001,1)); title('陀');
axis([1,10001,0,250]);
subplot(2,2,4); plot(t,MFY4(1:10001,1)); title('佛');
axis([1,10001,0,150]);
```

Step1: 分別錄製 a.wav me.wae to.wav fo.wav

Step2: 先利用 wavread.m 繪出初步時域圖，再選擇 [N1 N2] 間之點描繪即可



Step3: 利用 FFT 做頻譜分析



Step4: FFT 取一半點數繪圖即可

