EE215 Lab#5

Ch.28 Images, Movies, and Sound

1. **Image**

- **Run the following file**

_____Image Clown_____

```
>> load clown        % sample image
>> [r,c] = size(X); % pixel dimensions
>> figure('Units','Pixels','Position',[100 100 c r])
>> image(X)
>> set(gca,'Position',[0 0 1 1])
>> colormap(map)
```

_____Pepers.pnp_____

```
>>RGB = imread('peppers.png');
%Convert the image to grayscale.
>>I = rgb2gray(RGB);
%Display the grayscale image.
>>imshow(I)
_----------------------------------------------------------------------------
>>imshow('peppers.png');
```

2. Movies

- **Run the following file**

----------Movie----------

```
load handel.mat;
soundsc(y, 2*Fs);
```

```
figure(1)
 numframes=16;
 A=moviein(numframes); % create the movie matrix
set(gca,'NextPlot','replacechildren')
 axis equal % fix the axes
```

```
 for i=1:numframes
  plot(fft(eye(i+16)));
  A(:,i)=getframe;
 end
save movie.mat A % save the MATLAB movie to a file
 mpgwrite(A,jet,'movie.mpg'); % Convert the movie to MPEG format
 % Notice the MPEG file is about a quarter of the size of the MATLAB movie
file
 unix('mpeg_play movie.mpg') % Play the MPEG movie
```

----------End----------

```
% moviemaking example: rotate a 3-D surface plot
[X,Y,Z] = sphere(50);      % create data
surf(X,Y,Z,X)              % plot the sphere
axis vis3d tight off       % fix axes for 3D and turn off axes ticks, etc.
for k = 1:25               % rotate and capture each frame
    view(-37.5+15*(k-1),30)% change the viewpoint for this frame
    m(k) = getframe(gcf);  % add this figure to the frame structure array
end                        % end of loop
movie(gcf,m)               % play the movie in the existing figure window
```

2nd Movie

2. Sound

>>load gong.mat;

>>soundsc(y);

>>load handel.mat;

>>soundsc(y, 2*Fs);