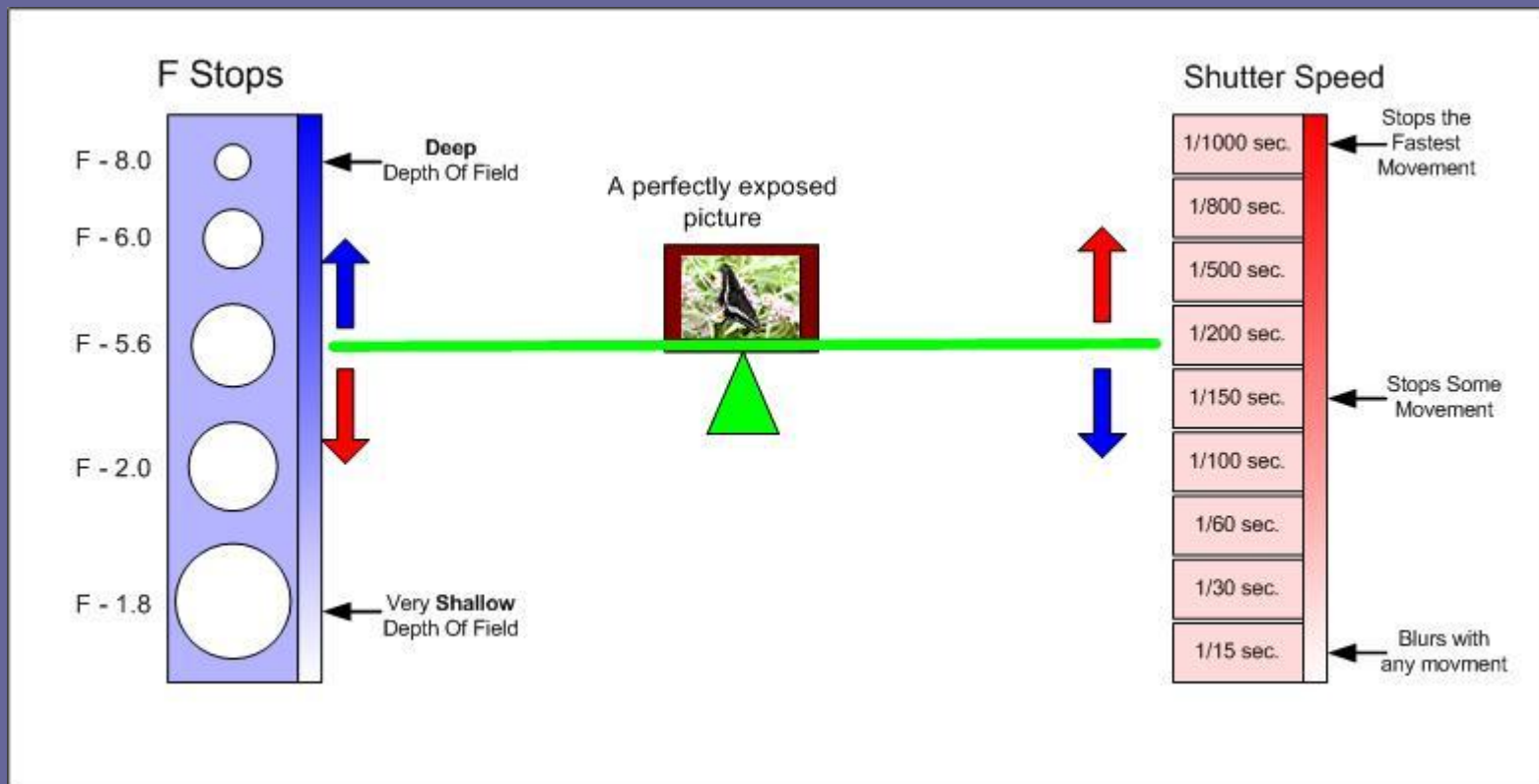


**Keeping images sharp and  
in focus**

When learning to control sharpness, the first goal is to get pictures sharp when you want them sharp. If your photos aren't as sharp as you want them to be, you are probably experiencing one of the following effects:

## • Depth of Field.

If your central subject is sharp but the background or foreground is less so, you probably didn't use a small enough aperture to get the depth of field you wanted.



## Camera Movement.

If the image is blurred all over, with no part sharp, the camera moved during the exposure. Some dots appear as lines and edges blur as the image is "painted" onto the moving image sensor.

NO TRIPOD

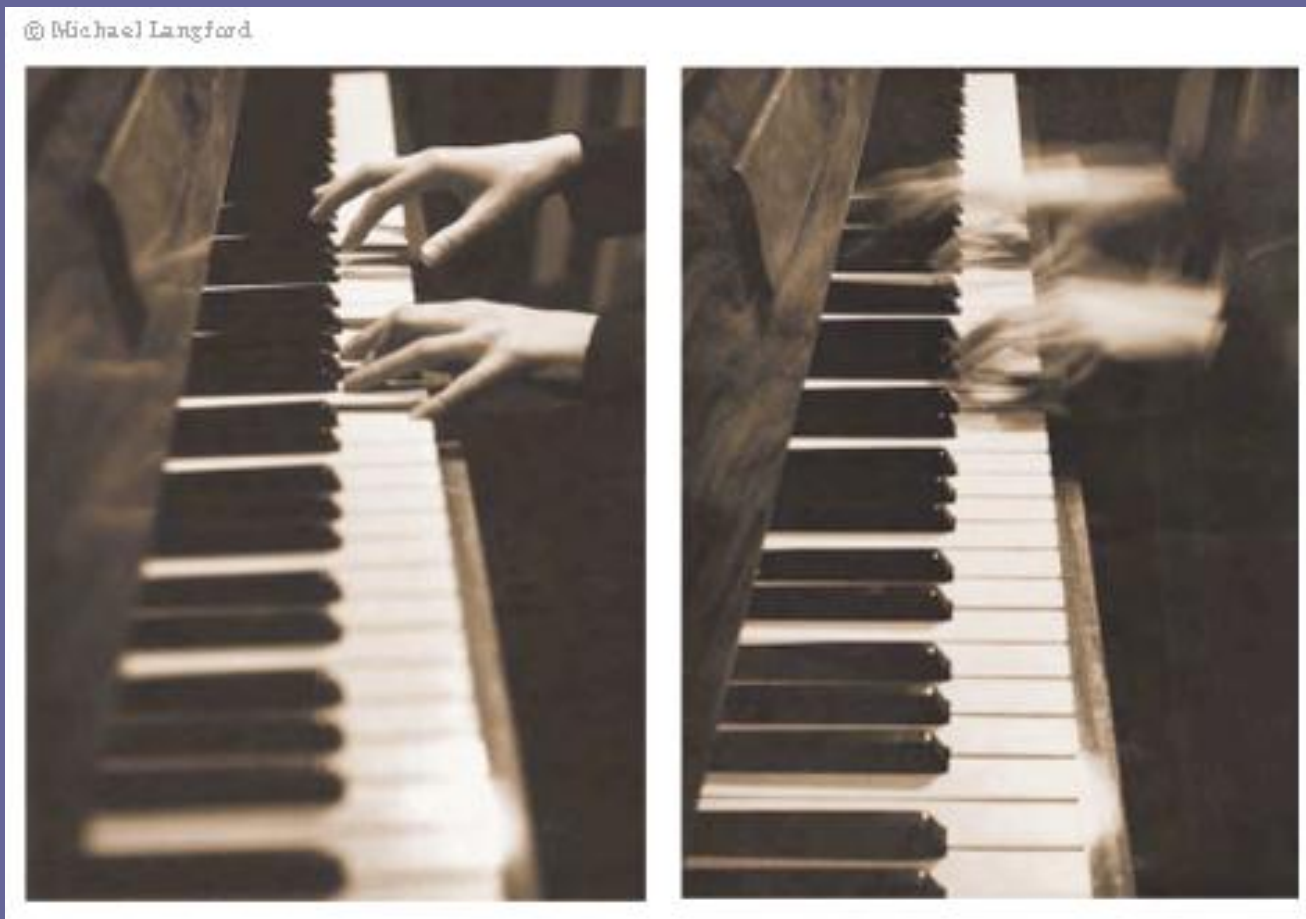


WITH TRIPOD



# Subject Movement.

When some of the picture is sharp but a moving subject appears blurred, the cause is too slow a shutter speed.





The shutter speed froze the central dancer but was slow enough to blur the others. This makes the central dancer the most important person in the photograph.

# How to Increase Sharpness of Moving Objects

# AUTOMATICALLY LOCKING ON TO A SUBJECT AND TRACKING MOVEMENT

Set camera to **AI-Servo or Continuous Tracking or Focus Tracking** (terminology based on camera make) so the automatic tracking system can keep a moving subject in focus.

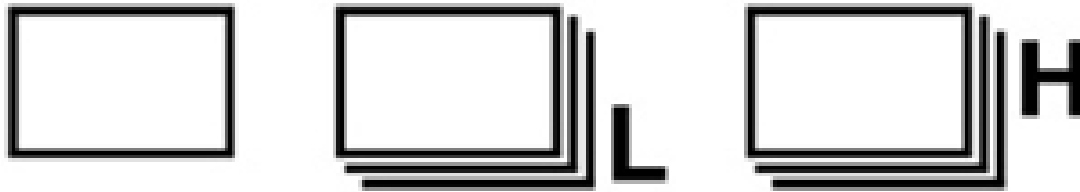




Half pressing shutter button the camera will lock on and then automatically track the subject.

**YOU STILL NEED A HIGH SHUTTER SPEED TO FREEZE THE IMAGE EVEN THOUGH THE AF HAS BEEN “TRACKING” THE SUBJECT.**

# Burst Shooting-Focus Modes



*Single drive mode is shown by a simple rectangle (left).*

*Continuous drive mode stacks several rectangles together (centre and right). 'L' and 'H' denotes low and high continuous shooting modes (EOS digital cameras only).*

# Depth of Field (Re-visited)



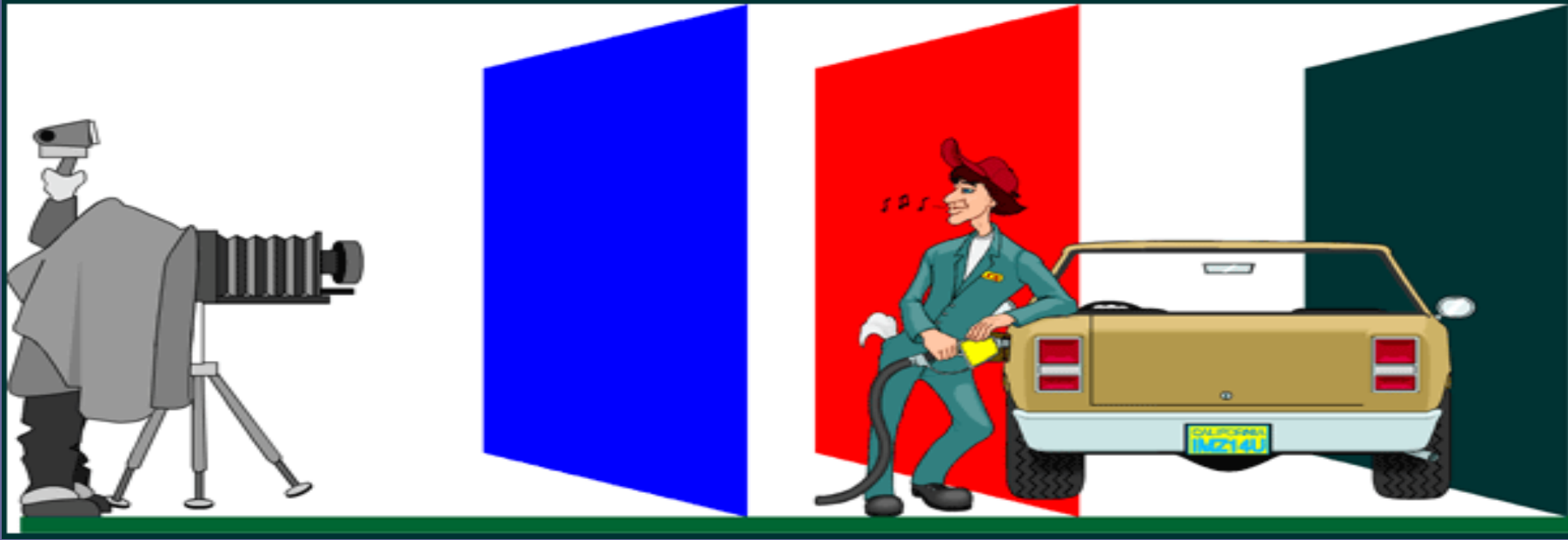
Imagine the part of the scene on which you focus as a flat plane (much like a pane of glass) superimposed from one side to the other of a scene, so that the plane is parallel to the back of the camera or the image sensor. Objects falling exactly on this imaginary plane will be in **critical focus**, the sharpest part of your picture.

This plane of critical focus is a very shallow band and includes only those parts of the scene located at identical distances from the camera. As you point an autofocus camera at objects nearer or farther away in the scene, the plane of critical focus moves closer to or farther from the camera. As the plane moves, various objects at different distances from the camera come into or go out of critical focus.

A lens can only bring objects at a single distance from the camera into critically sharp focus. But if you look at photographs, you can see a considerable area of the scene from near to far that appears sharp. Even though theoretically only one narrow plane is critically sharp, other parts of the scene in front of and behind the most sharply focused plane appear acceptably sharp.

This area in which everything looks sharp is called **depth of field (DOF)**.

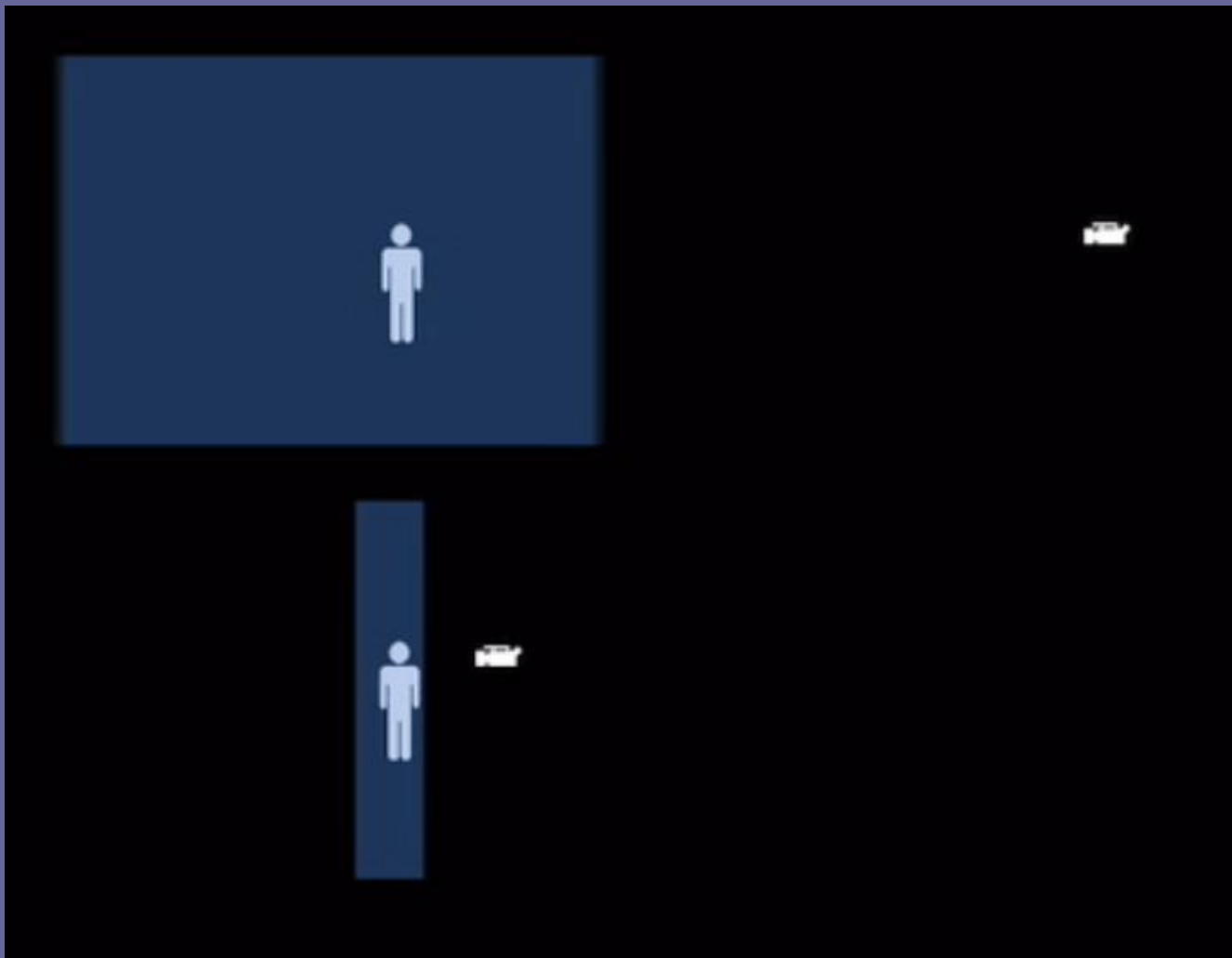
Objects within the depth of field become less and less sharp the farther they are from the plane of critical focus. Eventually they become so out of focus that they no longer appear sharp at all.



The near and far limits of depth of field are shown here as two planes (blue and black),

Notice that depth of field is not evenly divided. At normal shooting distances, about one-third of the depth of field is in front of the plane of critical focus (toward the camera), and two-thirds is behind it (away from the camera). When the camera is focused very close to an object, the depth of field becomes more evenly divided





Distance of camera to subject alters DOF

# To Control Depth of Field

switch to aperture preferred mode or Manual  
and select a **small aperture** for **great depth of  
field**

or a **large** aperture for  
**shallow depth of field**

## DEPTH OF FIELD (DOF)

**THE LARGER** the aperture is open (**small f-stop number**) the shallower or smaller the DOF



## DEPTH OF FIELD (DOF)

**THE SMALLER** the aperture is open (**large f-stop number**) the deeper or larger the DOF



focused at infinity



50mm f/2

focused at 1.5 ft



50mm f/2

2 ft, 28mm f/2.8



8 ft, 135mm f/2.8





Here the greatest possible depth of field was used to keep everything sharp from the fighter's needle nose to the background.

# Using Selective Focus







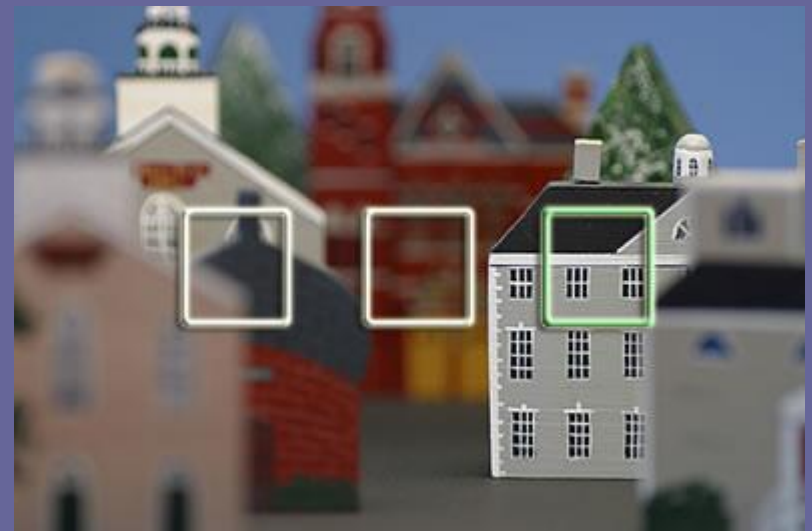
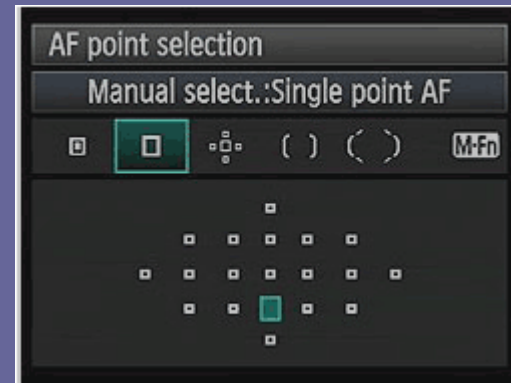
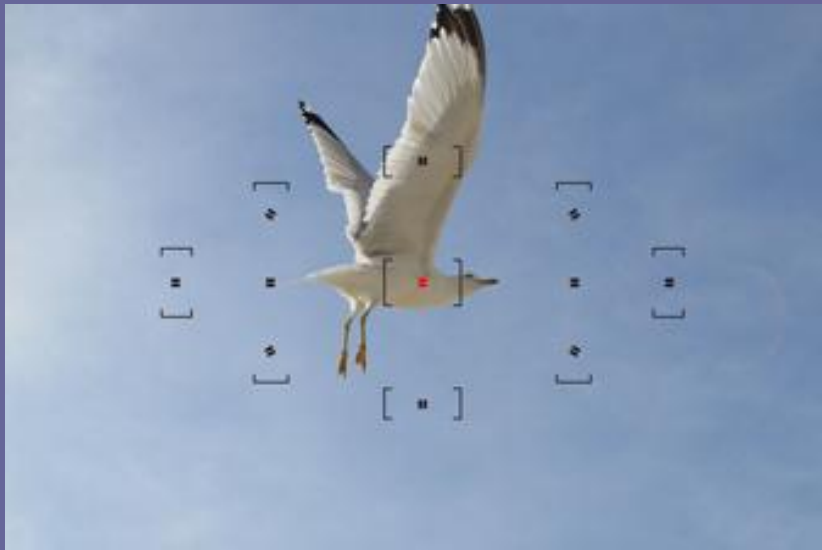
using selective focus to overcome lack of depth of field



# MOVING THE FOCUS POINT

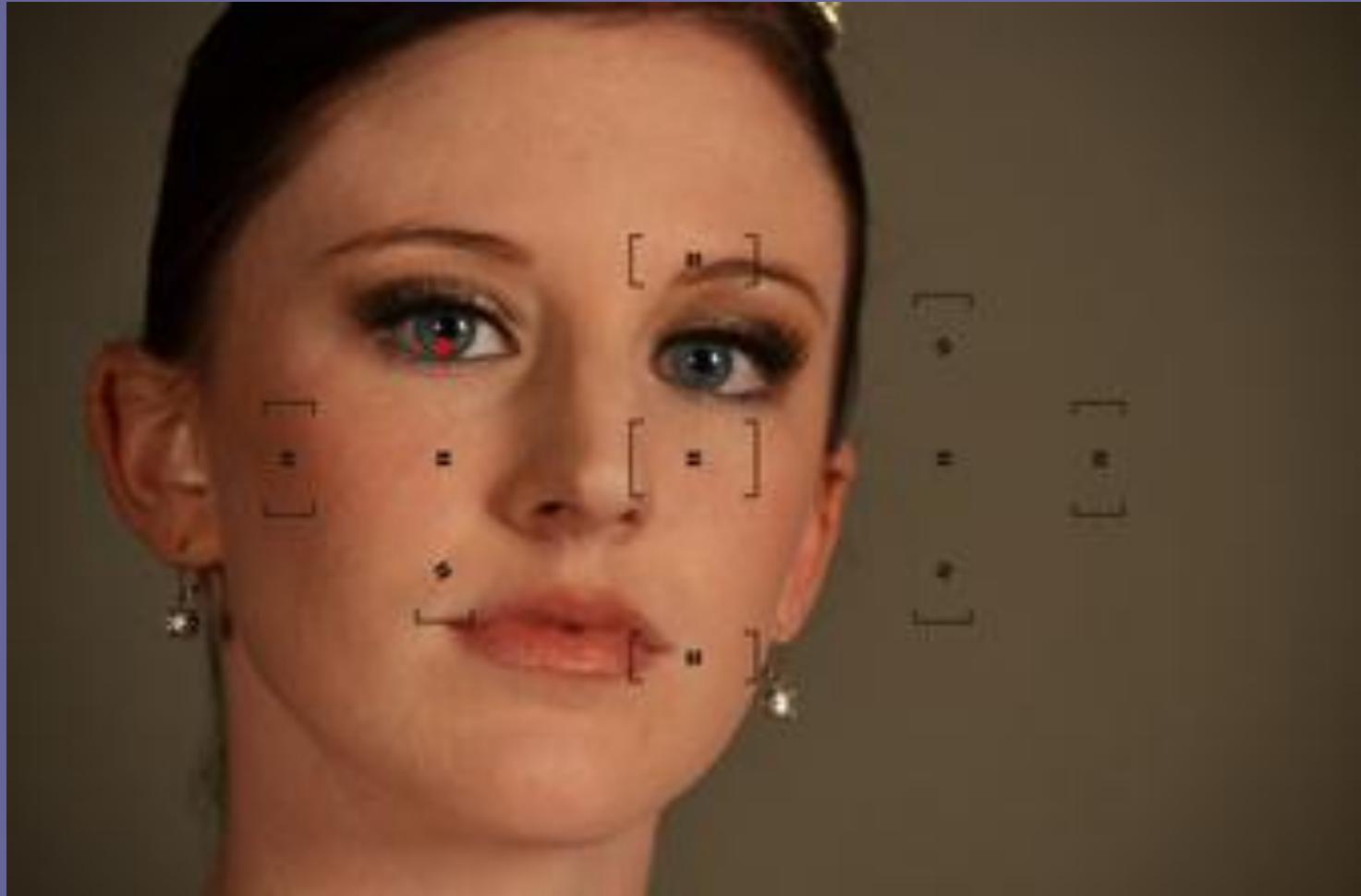








8888 F8.8 MF 0000





# Face Recognition



# Conveying the Feeling of Motion



This where you use AI-Servo or Continuous Tracking or Focus Tracking (terminology based on camera make) plus panning

