

# A new camera system

EVIL = Electronic viewfinder interchangeable lenses

MILC = Multiple interchangeable lens camera

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- ▶ Major types of digital cameras
- ▶ How a compact camera works
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- ▶ Advantages/disadvantages of each
- ▶ How an evil camera works
- ▶ Advantages/disadvantages of evil \_

# Major types of digital cameras

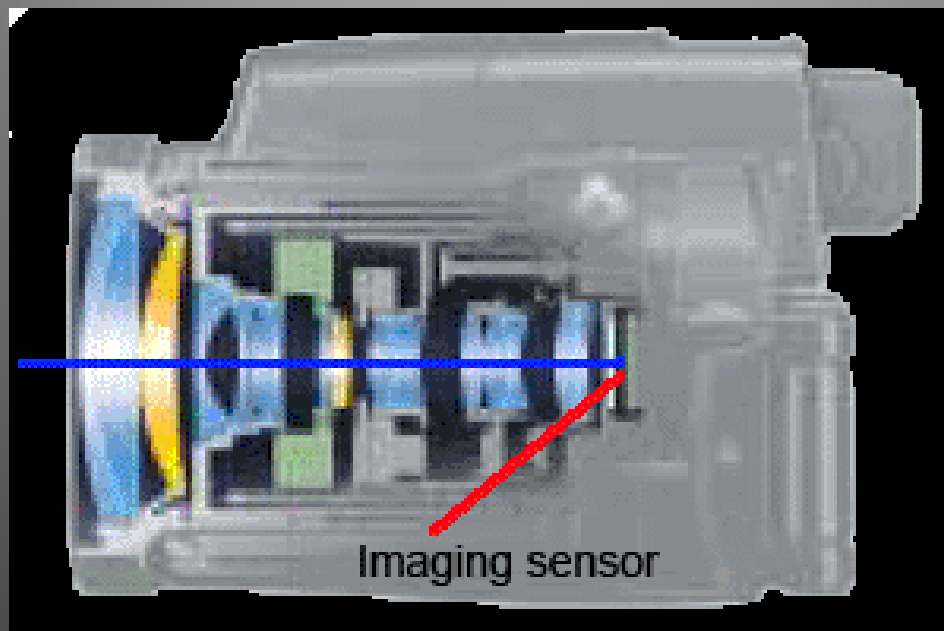
- ▶ Compact cameras
- ▶ Advanced cameras
- ▶ DSLR cameras
- ▶ EVIL or MILC cameras \_

# Compact cameras



- ▶ Small
- ▶ Light weight
- ▶ Fixed telephoto lens
- ▶ Controls: from fully automatic to manual
- ▶ "Scene" selector, movie mode
- ▶ Built-in flash
- ▶ Optical viewfinder rare
- ▶ Small image sensor
- ▶ Lower prices

# Compact cameras – light path



# Compact cameras – Image sensor



35 mm “full frame”  
36 x 24 mm  
864 mm<sup>2</sup>



1/1.8”  
7.18 x 5.32 mm  
35 mm<sup>2</sup>

# Compact cameras

## Pros:

- ▶ Very portable
- ▶ Easy to use
- ▶ Some manual control
- ▶ Photo knowledge not required
- ▶ Lowest cost

# Compact cameras

## Cons:

- ▶ Little control over camera ops
- ▶ Little control over image qualities
- ▶ Difficult close focusing  
with optical viewfinder
- ▶ Few accessories available
- ▶ Small image sensor
- ▶ Lowest image quality

# Advanced cameras



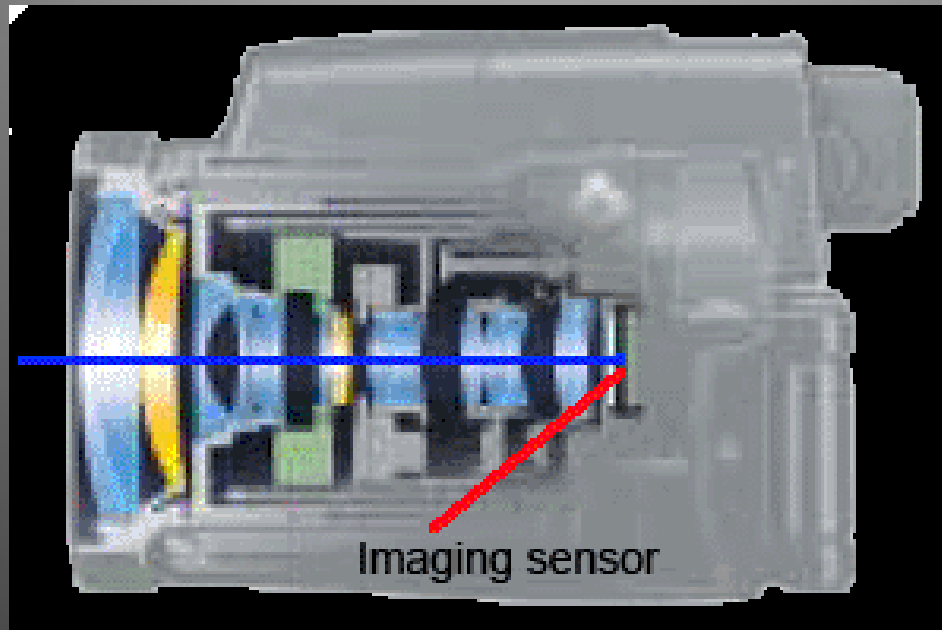
- ▶ Larger than compact
- ▶ Heavier
- ▶ Fixed higher-quality telephoto lens
- ▶ Controls: from fully automatic to manual
- ▶ More scene selections, higher quality movie mode

# Advanced cameras



- ▶ Electronic viewfinder plus LCD
- ▶ Accepts accessories and add-ons including converter lenses, filters, remote controls and external flashes
- ▶ Small image sensor
- ▶ Higher prices

# Advanced cameras – light path



# Advanced cameras – Image sensor



35 mm “full frame”  
36 x 24 mm  
864 mm<sup>2</sup>



1/1.8”  
7.18 x 5.32 mm  
35 mm<sup>2</sup>

# DSLR cameras



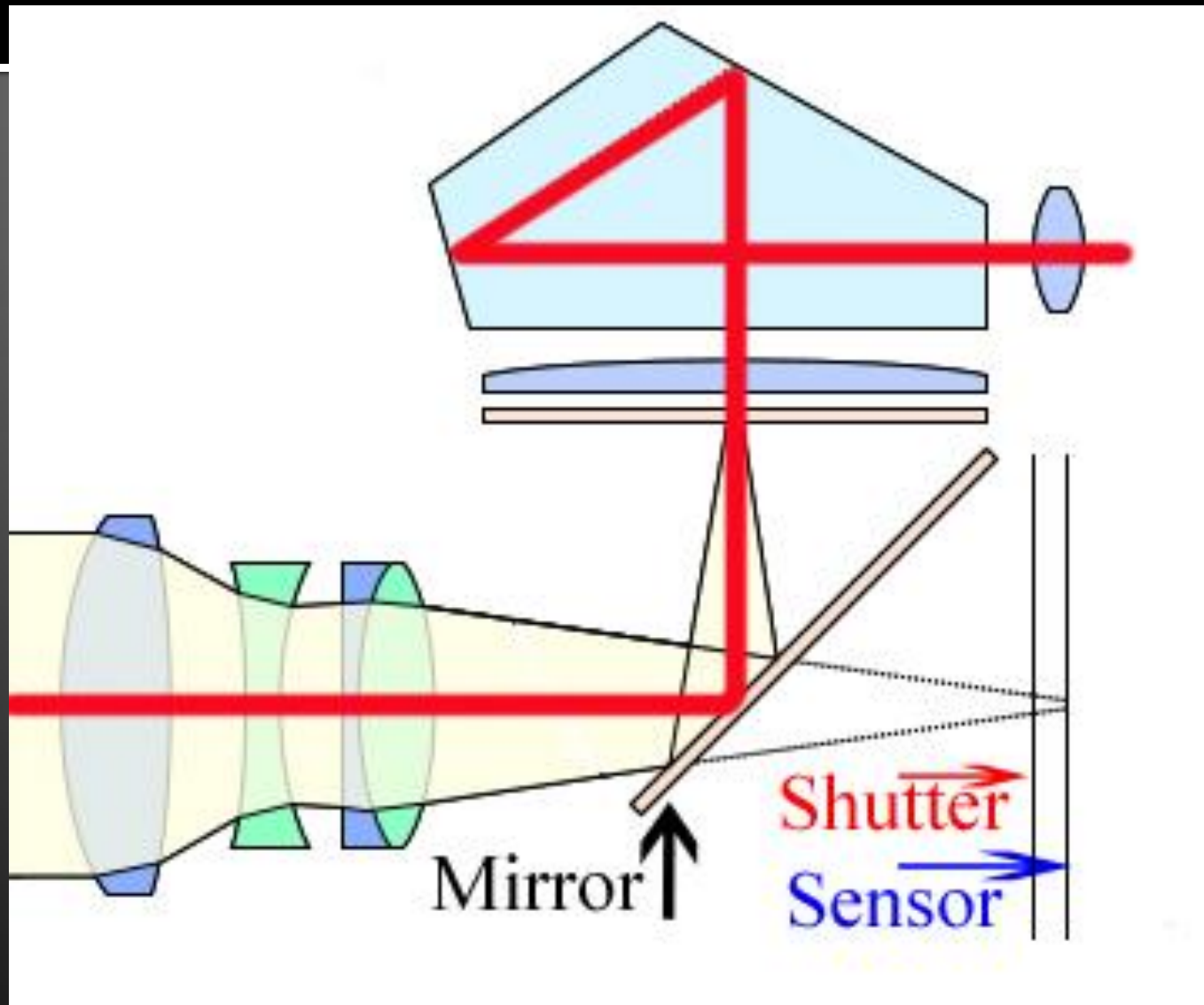
- ▶ Larger & heavier still
- ▶ You see what sensor sees + Live View
- ▶ Interchangeable lenses of all focal lengths
- ▶ Controls: from fully automatic to manual
- ▶ Higher quality, exposure, focussing, etc. systems

# DSLR cameras

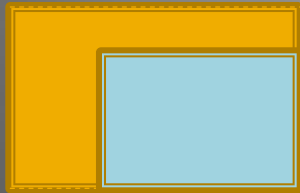


- ▶ Fewer or no scene selections, higher quality movie mode
- ▶ Accepts accessories and add-ons
- ▶ Optical, accurate viewfinder + Live View
- ▶ Larger image sensor
- ▶ Higher prices

# DSLR cameras – light path



# DSLR cameras – Image sensor



35 mm "full frame"  
36 x 24 mm  
864 mm<sup>2</sup>

APS-C  
23.6 x 15.7 mm  
370 mm<sup>2</sup>

# DSLR cameras

## Pros:

- ▶ Good control over camera ops
- ▶ Good control over image qualities
- ▶ Very good image quality
- ▶ Many lenses available
- ▶ Many accessories available
- ▶ Auto modes available

# DSLR cameras

## Cons:

- ▶ Bulky
- ▶ Expensive
- ▶ Extensive photo knowledge required to operate well

# EVIL or MILC cameras



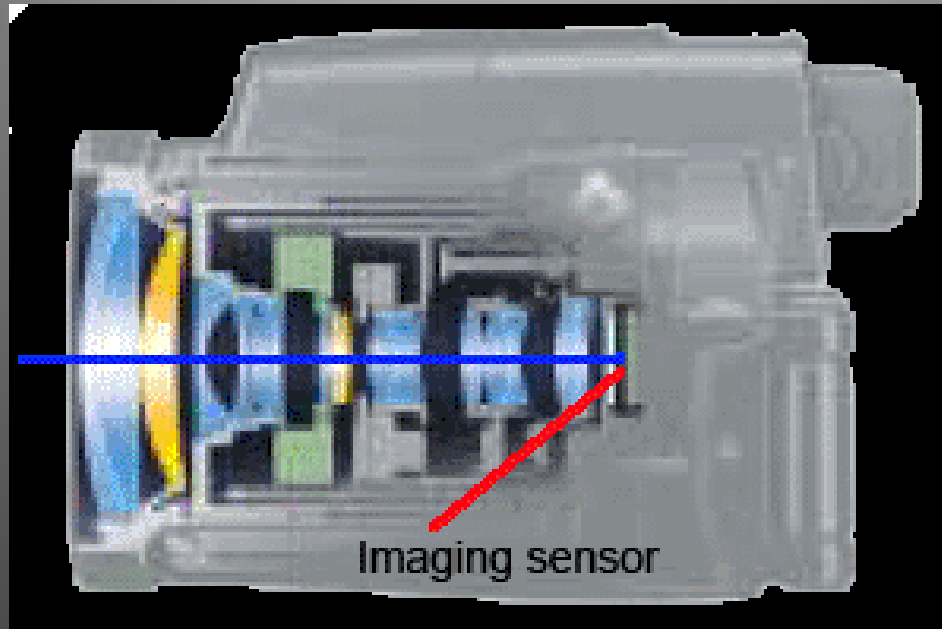
A cross between a compact camera and a DSLR

# EVIL or MILC cameras

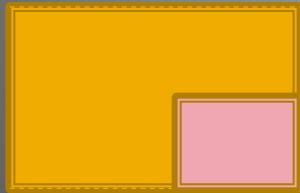
A cross between a compact camera and a DSLR:

- ▶ Smaller, lighter than a DSLR
- ▶ Larger than a compact
- ▶ No mirror
- ▶ Interchangeable lens
- ▶ Electronic viewfinder + LCD
- ▶ Smaller sensor than DSLR, larger than compact

# EVIL / MILC – light path



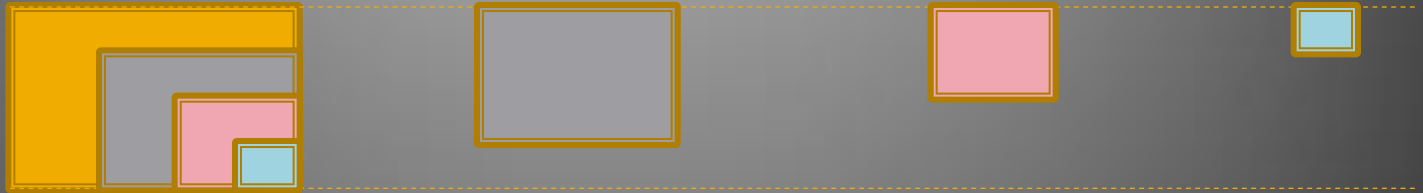
# EVIL / MILC – Image sensor



35 mm “full frame”  
36 x 24 mm  
864 mm<sup>2</sup>

Four Thirds System  
17.3 x 13 mm  
225 mm<sup>2</sup>

# EVIL / MILC – Image sensor



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APS-C  
23.6 x 15.7 mm  
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Four Thirds System  
17.3 x 13 mm  
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1/1.8"  
7.18 x 5.32 mm  
35 mm<sup>2</sup>

# EVIL / MILC cameras

## Pros:

- ▶ Less bulky than DSLRs
- ▶ Good control over camera ops
- ▶ Good control over image qualities
- ▶ Interchangeable lenses available
- ▶ Some accessories available
- ▶ Auto modes available

# EVIL / MILC cameras

## Cons:

- ▶ Evs suffer under bright light & motion
- ▶ Limited selection of lenses available
- ▶ Much bulkier than compact cameras
- ▶ Sensor runs all the time
- ▶ Image quality less than DSLR  
due to smaller lenses and sensors
- ▶ Expensive
- ▶ Extensive photo knowledge  
required to operate well

# EVIL / MILC cameras

Questions?

Comments?