

Buying a Digital Camera



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Session Goals

To provide an individual considering the purchase of a digital camera an understanding of:

- key digital camera features
- thoughts on the value of those features
- suggestions on how to make the final selection and purchase

Agenda

- Camera Features Discussion
- Digital Cameras Overview
- Suggestions on a Selection Process
- Sources of Information
- Closing Comments
- Q&A

The “Ideal” Camera

- Auto Focus
- Focus Tracking
- Multiple Focus Sensors
- Complete Exposure Control: Manual, Full Auto, Shutter Priority, Aperture Priority, Program Shift
- Exposure Bracketing
- Exposure Bias adjustment
- Wide range of lens/focal lengths
- Image Stabilization Capability
- Image Metadata
- 9 frames per second
- External Flash with lots of Controls
- Custom configurations

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- White Colour Balance
 - Optical view finder
 - Multi-format image storage
 - Fast Image Storage
 - Low Sensor Noise
 - “Full” 35mm frame sensor
 - Sensor dust removal

Digital Cameras

- A new photographic format; NOT a replacement for film (though that the de facto result!)
- Digital SLR's: \$900+
 - Interchangeable lenses
 - “Virtually ALL” of the features
 - “higher performance” features
- Point & Shoot/All in One:
 - Built in flash, wide to telephoto zoom lens, Autofocus, more and better features based on price
 - High End: \$450-\$700
 - Middle: \$300-\$500
 - Everything Else: \$200-\$350

Digital SLR's

- Digital SLR's: \$900+
 - Interchangeable lenses
 - Virtually all of the “ideal” features
 - “Higher performance” features (least shutter lag and storage times)
 - Sensor Size:
 - Olympus 4/3's (17.3mm x 13mm) 2X factor
 - Everyone else APS-C (~23.6mm x 15.8mm) 1.5X factor
 - Exception: Canon makes full frame 35mm sensor (36mm x 24mm)
 - 8 MP and up
 - Canon, Nikon, Sony, Olympus, Sigma, Pentax, Fujifilm, Samsung, ...
 - Note the Pentax K1000D (digital)!!!



Point & Shoot “High End”

- Point & Shoot/All in One:
 - High quality non-interchangeable wide to telephoto zoom lens, 6-10 MP sensor, shorter shutter and storage time
 - Many of the other “ideal” features
 - Smaller and lighter than DSLR’s
 - Price: \$450-\$700
 - Almost all APS-C; some 4/3’s



Point & Shoot

“Middle & Low End”

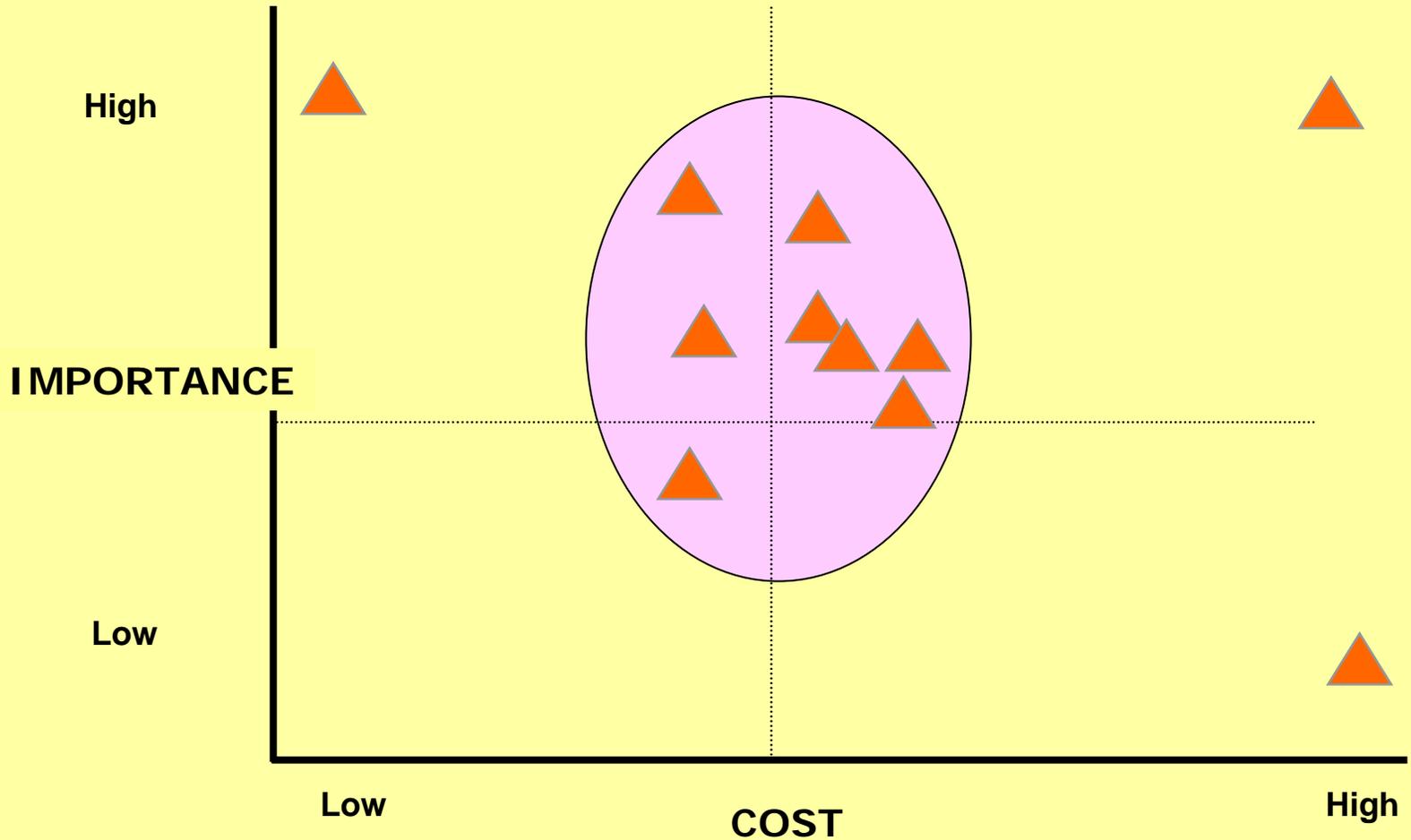
- Point & Shoot/All in One:
 - Non-interchangeable wide to telephoto zoom lens, 4-6 MP sensor (lens and sensor lower quality)
 - Some of the other “ideal” features
 - Very small and compact
 - Almost all APS-C
 - Middle: \$300-\$500 (“better” features)
 - Low End: \$200-\$350
 - APS-C



Digital Camera Selection “Process”

1. Establish a budget
2. Make a list of cameras
3. Identify Key Features
4. Compare Features
5. Digital Memory
6. Batteries
7. Read the Manual
8. Look and Handle the Cameras
9. Consider Who Makes the Digital Camera
10. Make a Selection

What is the Value to YOU?



1 - Establish a Budget

- Set a \$ Limit; feature creep is insidious
- Do NOT forget Memory; include the cost of additional memory in your budget
- Reconsider budget ONLY if you cannot find the features you consider important within your established budget
- It is always less expensive to spend a little more and buy what you want the first time rather than make the wrong choice and buy twice!

2 - Make a list of cameras

- Put together a list of cameras in your price range to evaluate
- Look on the web
- Look at magazines

3 - Key Features to Consider

Example:

- **Camera Features**

- Zoom Range
 - More Wide is better than more telephoto
 - Digital Zoom is NOT 'real' zoom
- Auto Focus Speed
- Shutter Lag Time
- Storage Lag Time
- Burst Exposure Mode
- Flash Cycle Time

- **Digital Sensor Issues**

- Sensor Pixel Size
- Color Balance
- Sensor Noise
- Output Formats

- **Other Features**

- Manual Exposure
- Bracket Mode
- Stabilization
- Optical viewfinder
- Size
- See "ideal" features list

4 - Compare Features

- Look at the photography you do and decide what features are most important
- List and compare features
 - Those that do matter
 - Those that do not
 - Make your decision based only on the features that you deem are important
- **BUY THE CAMERA THAT FITS YOUR NEEDS!!!!**

5 - Digital Memory

- Don't forget Memory as a factor
- What kind of memory (CF, SD, Stick, ...)
- How fast of memory (Type I, II, ...)
- How much memory
 - \$ (Memory is now very inexpensive; the higher the performance memory the higher the price)
 - Capacity versus convenience
 - Remember camera output format dramatically impacts memory storage capacity

6 - Batteries

- Digital Camera have a ravenous appetite for electrical power
- Camera Displays make the situation even WORSE!
- Camera features used impact battery life
- Avoid proprietary when possible; recommend AA's
- Battery technology differs
 - In use lifetime
 - Storage life
- When looking at AA's, consider rechargeable NiMH's with disposable lithium backup

7 -Read the Manuals Before Buying

- Camera Manuals are available on-line; typically in .pdf format
- Download and read for more details on features and performance
- Great source of detailed information prior to buying

8 - Physically Handle the Cameras

- Go to a store and handle the Camera
 - Confirm features act as you “think” they do
 - Evaluate actual performance
 - Layout of controls
 - Size
 - Feel
 - “Test Drive”

9 – Consider Who Makes the Digital Camera

- Camera makers are more focused on “camera features”
- Non-camera makers have more “non-camera” features
- Digital Camera Marketplace in in flux; long term is the camera maker going to be around?
- Where is the camera in its “lifetime”? (new, mid-life, old, going out of production)

10 – Make a Selection

- Use the web and shop on-line for best price
- Consider Pop Photo check marked sources
- Check out Costco
- **BE SURE** to understand the return policy
- Watch Shipping and Handling fees
- US Warranty
- Extended warranties versus insurance

Review

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Good Sources of Information

- The WEB (e.g. Kodak Web Site: Taking great pictures)
- Camera Magazines – tend to focus on photography
NOT technology
 - Popular Photography
 - Outdoor Photographer
 - Shutterbug
- Digital Photographic Magazines – tend to focus on
technology more than photography
 - PC Photographer
 - Photo Techniques

A Final Thought:

- Cameras **DO NOT** take pictures;
Photographers take pictures
- Photography is a SKILL
(Skill = Knowledge + Experience)
- Study RTD (Read the directions)!
- Practice Makes Perfect; Take lots of pictures,
critically review them, apply the lessons learned

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Seminar Schedule

(2nd Saturday of every Month)

Date	Description
8-12-06	Digital Photography Fundamentals (the basics)
9-9-06	How to Pick a Digital Camera (criteria for selection)
10-14-06	Session on Digital Cameras (Vendor Presentation)
11-11-06	Exposure and Lighting for Digital Cameras
12-9-06	Image Viewing Fundamentals
1-13-07	Digital Editing Software (Vendor Presentation)
2-10-07	Digital Camera Picture Taking (how to get a good digital image)
3-10-07	Printing Digital Images (Vendor Presentation)
4-14-07	Good Pictures (Summary of previous sessions)