

It's a Small World After All



Dennis Govoni

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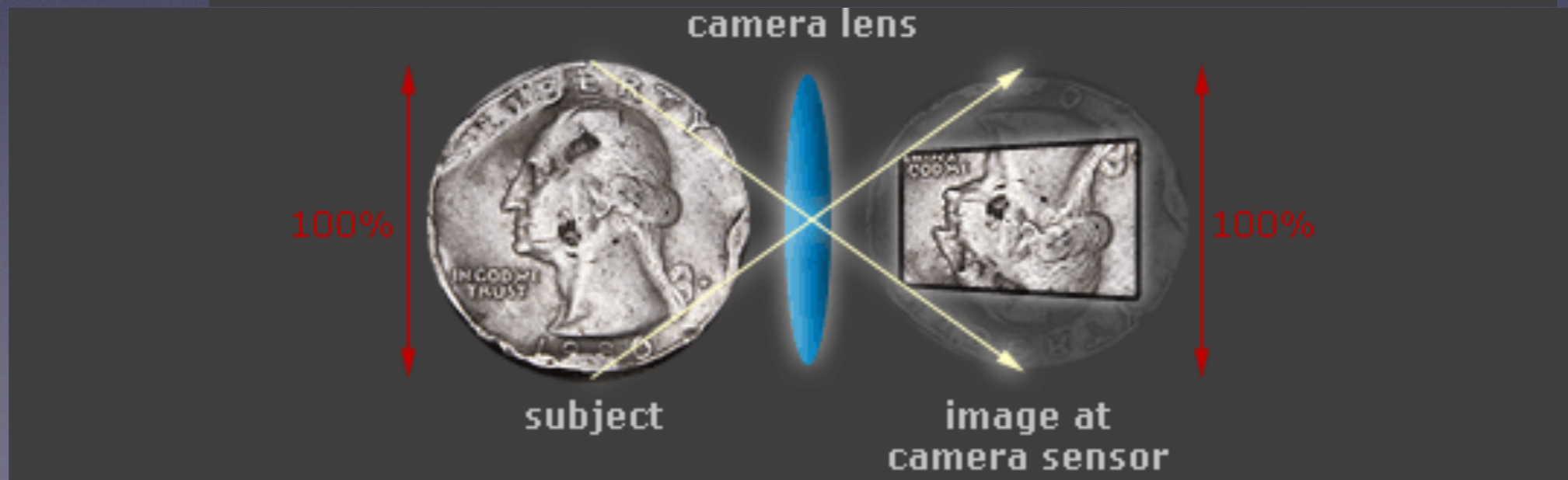
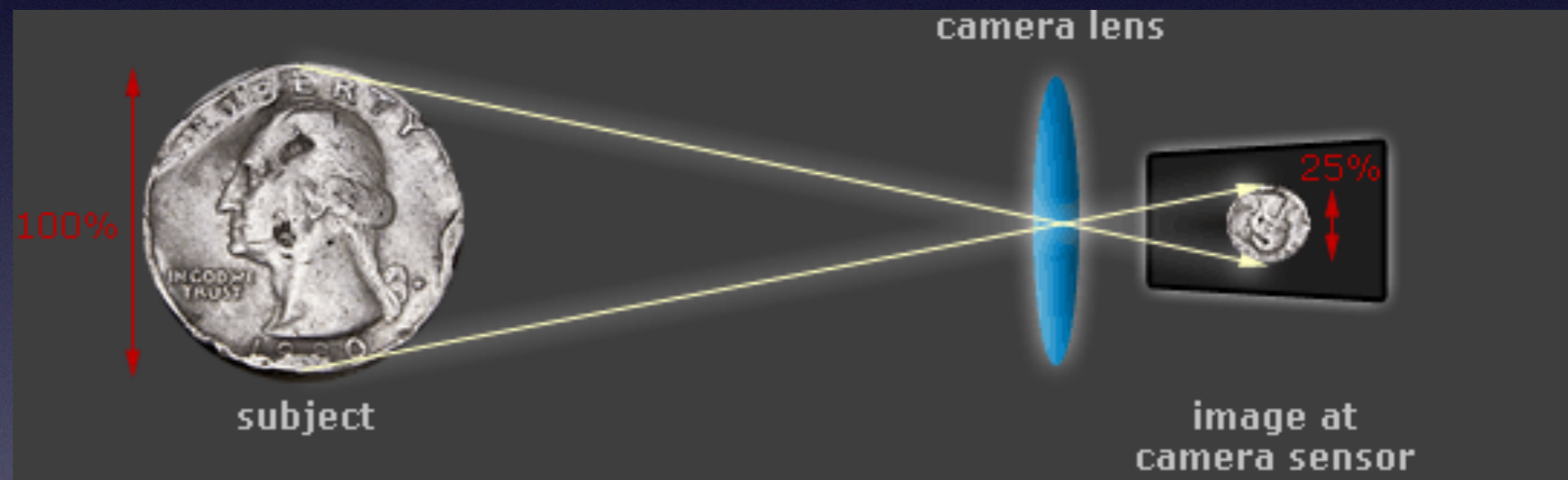
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Topics

- Tips on doing macro photography
- Challenges
- Focus Stacking

What is Macro Photography

- Technically an image taken at 1:1 (or greater)
- Closeup: 1:2-1:10
- Microphotography $>1:1$
- It's really a way to see and photograph a world people rarely perceive.
- A world of infinite details.



General Technical Tips

- Use Spot Meter
- Use a tripod or other steady support system
- Use a Remote Cable (or timer)
- Manual Mode focus; AF and continuous focus for moving subjects
- Check DOF with DOF Button or use Liveview
- Use Mirror Lockup; Mirrorless-use EF Curtain Shutter)
- Aperture - Closer you get the higher the f-stop to increase DOF (Keeping background blurred)
- Get sensor parallel to subjects requiring 100% in focus

Challenges

- Focal Length choice/Working Distance
 - Canon 100mm MFD=11.7 inches
 - Canon 180mm MFD=19.1 inches
 - Fujifilm 120mm MFD=17.72 inches (1:2)
- F-stop/Depth-of-field
- Backgrounds
- Light
- Motion (subject and camera)
- Point-of-View

Motion Sources

- Wind
- Camera Shake (hand-held)
- Mirror Slap
- Subject movement
- Earthquakes

Motion Control

- Tripod/Bean Bag
- Mirror Lockup (mirrorless use EF curtain shutter)
- Remote Cable or Timer
- Clamp
- Flash (try 1-2 stops reduction; also diffuse)
- Shutter Speed
- Use Live View

Focus Stacking

Why bother?

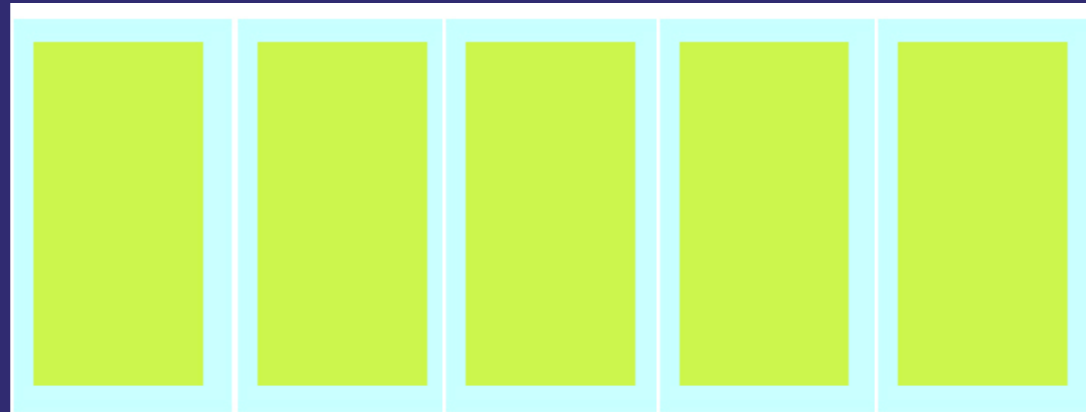
- Most important part of a subject in-focus while...
- Controlling background (in or out of focus)

What you have to manage

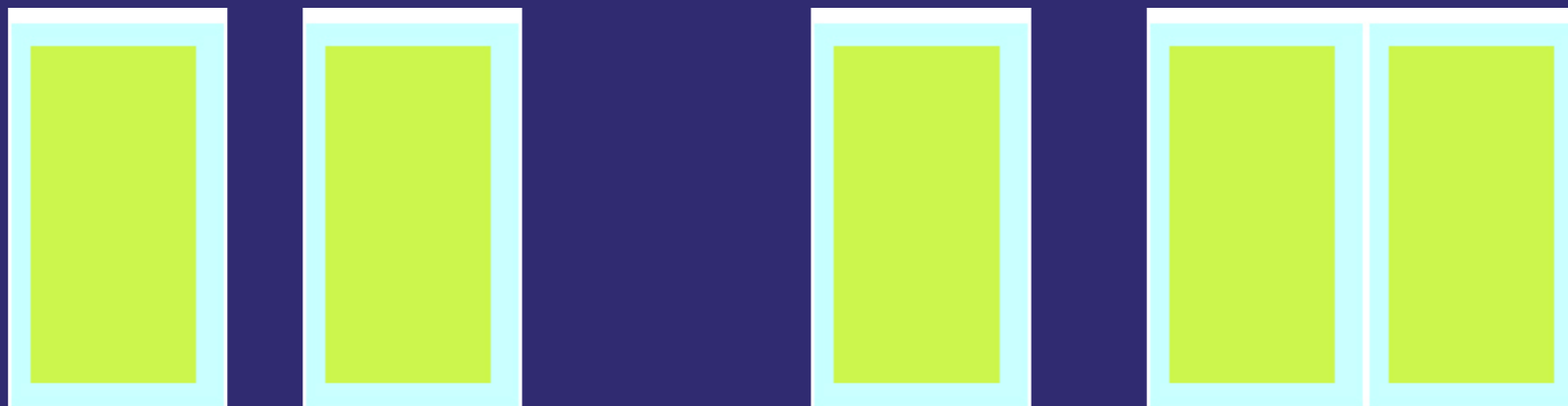
- Focal Length/Working Distance
- F-stop
- Incremental focus movements
- Number of images
- Subject stillness
- Background blur and contrast

Stacking Strategy

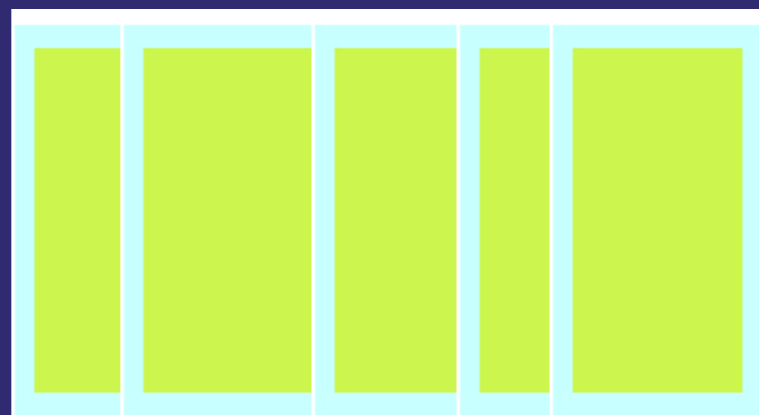
Ideal



Wrong



Realistic



Setup

- Pick Working Distance for subject
- Set Manual focus
- Pick f-stop
 - Focus on front of subject; take picture, check background—check exposure
 - Focus on back of subject; follow procedure above

Taking a stack

- Place hand in front of lens and take picture
- Focus front of subject and backoff until slightly out of focus
- Use small incremental steps and focus into and then through subject
- Best to overlap in-focused areas
- Take picture of hand again
- Rinse and repeat changing your incremental focus steps and/or f-stop.

Stacking Software

- Photoshop
- Helicon Focus
- Zerene....etc., etc.

Focus Stacking Steps

- From Lightroom
 - Select images
 - Edit in-> Open as layers in Photo Shop
- Photo Shop
 - File->Scripts->Load Files into Stack
 - Select files or a folder
- Select all layers from right side layers Panel
- Edit->Auto-align layers
 - Select “Auto”
- Edit->Auto-Blend Layers
 - Select “Stack”
- Layers->Flatten Image
- Crop as you see fit
- Save

Demo

Take Aways

- Setup at Home First
- Understand Your Lens' Capabilities - errors are less forgiving in macro photography
- ★ **Play with Working Distance, Background, DOF**
- Work the light - experiment with flash/LED lights and diffuser
- Different Subject Angles

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**Questions?
and
Thank You!**

