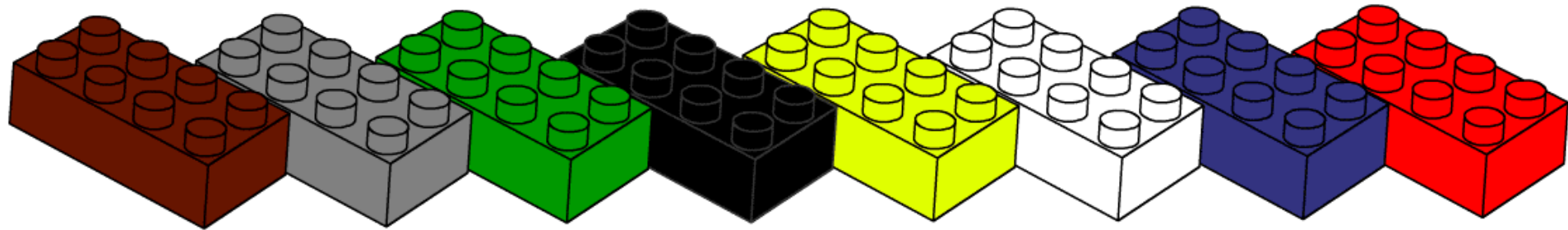


LEGO

Animations

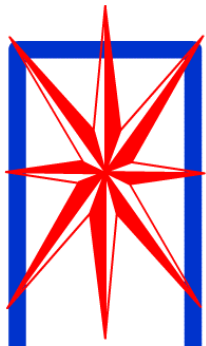


Todd S. Thuma

BricksWest Animation

Festival





Welcome

- ❖ What is an Animation?
- ❖ What equipment do I need?
- ❖ Where do I start?
- ❖ Where do I view examples and other people's work?
- ❖ What advanced techniques can I learn?

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Animations are...

❖ Stop-Motion

- A single frame or still image placed in an order with hundreds of other frames of still images and displayed in rapid succession to imply movement between frames.

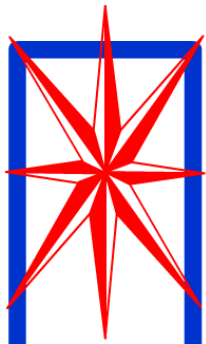
❖ Computer Generated

- The computer generation of still images stitched together without the laborious process of manually generated stop-motion frames

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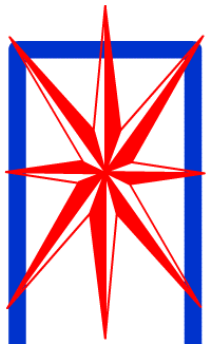
Stop-Motion Animation

- ❖ Frames per second (fps)
 - 24 fps film
 - 30 fps television (NTSC)
 - ✓ 2 fields per frame = interlaced
 - 12 fps the human eye perceives as distinct still images being displayed
 - 18 fps the human eye cannot perceive the distinct still images being displayed

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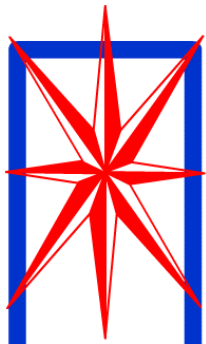
Stop-Motion Animation

- ❖ Called Stop-Motion because each frame is a Polaroid of an instance of action, that is carefully and meticulously created by moving objects in the field of view fractions of a centimeter.
- ❖ Not hard to do with LEGO Bricks and other LEGO pieces
- ❖ More difficult with clay and other materials.

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Equipment needed for Stop-Motion

❖ Image storage device

➤ Still Camera

✓ Film

✓ Digital

➤ Motion

✓ Film

✓ Video

▪ Analog

▪ Digital

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Most Popular Equipment

❖ Digital Video Camera

- Greatly reduced expense
- Integrates easily with computer
 - ✓ Firewire, i.Link, IEEE1394
 - ✓ Tape not necessary

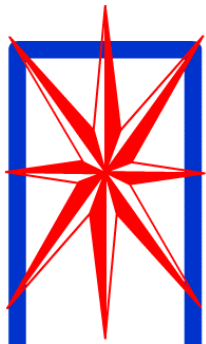
❖ Analog Video

- Less expensive than digital
- Requires a analog to digital card for importing video

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Important Equipment Considerations

❖ Video Camera

- Remote for starting stopping recorder
- Eliminates touching camera and potentially moving it

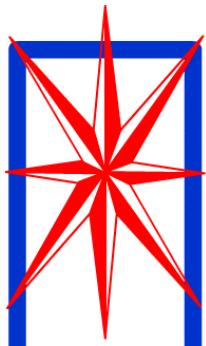
❖ Lenses

- Close-up / Macro
- Telephoto
- Wide/Angle

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Equipment needed for Stop-Motion

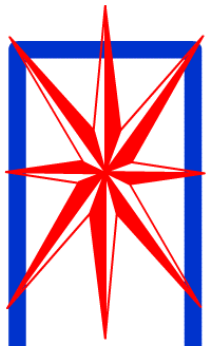
❖ Tripod

- Multiple positions, many angles, across room
- Leave camera in position and return to set-up after a break
- Absolute necessity in low light situations

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Equipment needed for Stop-Motion

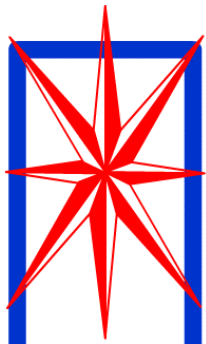
❖ Lighting!

- LEGO Pieces shine!
- Bare bulbs mean bright spots on the plastic bricks
- Light boxes – no direct lighting
- Filters
- Temperature of light = color
- White balance!

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Equipment needed for Stop-Motion

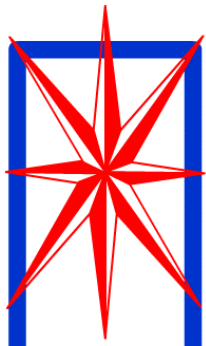
❖ Software (or Processing Lab)

- Almost any video editing or timeline based software
- Specialized stop-motion software
 - ✓ Stop Motion Pro
 - <http://www.stopmotionpro.com/>

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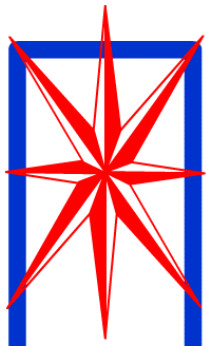
Where do you start?

- ❖ Story
- ❖ Shot list
- ❖ Story Board
- ❖ Audio
- ❖ Build sets
- ❖ Assemble equipment
- ❖ Shoot the video

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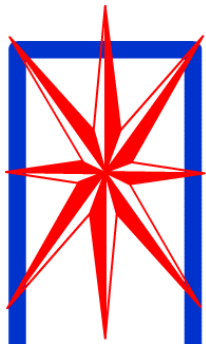
Story

- ❖ Absolutely essential to the animation and/or the film
- ❖ KISS IT!
 - Keep It Simple Stupid
- ❖ Details in the story lead to details in the video
- ❖ Story determines the sets, audio, actors, etc.

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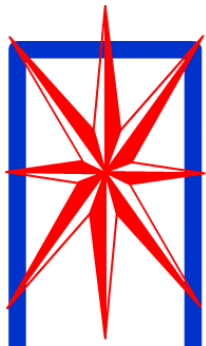
Shot list

- ❖ The true art of the motion picture or animated media is in how the story is told through pictures
- ❖ Weaving those pictures into a movie or video is technically difficult but ultimately achievable and do-able
- ❖ Mood, tempo, and “art” are created in a film by deciding how to “shoot” a particular scene

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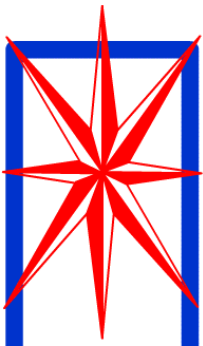
Story Board

- ❖ Pairs the shot list with the dialogue
 - Essential for making certain audio specific cues are matched visually both in action and in speaking
- ❖ Rotoscoping
 - Using frames of video or film to trace the sequence of action from one frame to another.
 - Also used to animate speaking movements of the mouth with animated character movements

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Audio

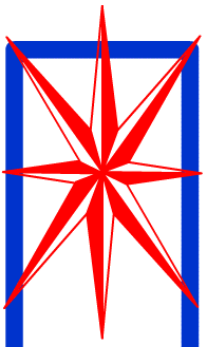
- ❖ Without Audio, Video is dead
- ❖ Do not underestimate the importance of audio.
- ❖ Typically, speaking parts for animations is recorded first and animation follows, permits rotoscoping
- ❖ Sound tracks follow after the first round of editing and match the sequence of action on the screen

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Exception is music videos where the visuals are keyed to the audio



Building Sets

- ❖ Perhaps the best part of doing LEGO Animations
- ❖ Set list generated from shot list and story board
- ❖ Be certain to film all scenes involving a set before “striking” the set

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Assemble the Equipment

❖ Camera

➤ Tape – enough blanks

➤ Cable long enough

❖ Software

❖ Tripod

❖ Lighting

❖ Accessories

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Assemble the Equipment

- ❖ Start or install software
- ❖ Connect hardware
- ❖ Trouble shoot
- ❖ Re-boot
- ❖ Re-install operating system
- ❖ Re-boot
- ❖ Re-format hard drive
- ❖ Trouble shoot
- ❖ Begin filming
- ❖ Repeat steps above



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Assemble the Equipment

❖ Lighting

- What looks bad in reality might look good on film or video and vice versa
- Have an external monitor to check lighting

❖ Light from ?

- Front, Back, Side, Directly above

❖ Lighting effects

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Where do I view other people's work?

❖ Group Sites

➤ Lego Studios Official Web Site

✓ <http://www.lego.com/eng/studios/default.asp>

➤ BrickFilms

✓ <http://www.brickfilms.com/>

➤ Cool Brick Movies

✓ <http://www.coolbrickmovies.com/>

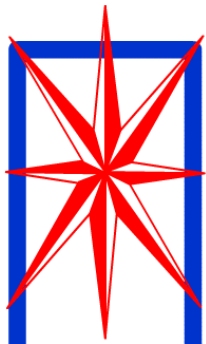
➤ Bricklinkz Movies

✓ <http://links.brickz.net/movies>

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Where do I view other people's work?

❖ Individuals

- Animated Brick Showcase - Greg Perry
✓ <http://www.lugnet.com/~250/brickmation/>
- Bluntmation – Nate Burr
✓ http://www.geocities.com/different_wings/index.htm
- Bricks-In-Motion - Thomas Foote
✓ <http://www.bricksinmotion.com/>
- Brick-Tastic Films – Nick Maniatis
✓ <http://www.geocities.com/nmaniatis/bricktastic/bricktastic.htm>

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Where do I view other people's work?

❖ Individuals

➤ Lightdog Films – Marc Leidy

✓ <http://home.earthlink.net/~lightdog/animation/anim.html>

➤ Marc's Movie Page - Mark Atkin

✓ <http://babs.cs.umass.edu/~atkin/movies/>

➤ Shooting Bricks – Doug James

✓ <http://www.shootinbricks.com/>

➤ Yellowhead Studios - Stefan van Zwam

✓ <http://www.stack.nl/~stefanz/lego/>

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Where do I learn advanced techniques?

❖ LUGNET Newsgroup
Publishing.Cinema

➤ <http://news.lugnet.com/publish/cinema/>

❖ Jason Rowaldt

➤ <http://www.brickfilms.com/film101.html>

➤ <http://www.brickfilms.com/film102.html>

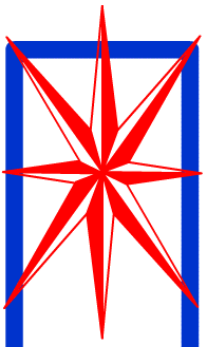
❖ Seth Rotkin

➤ <http://www.coolbrickmovies.com/community/tutorials/>

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Where do I learn advanced techniques?

- ❖ The Art of Stop-Motion Animation
 - <http://pharosproductions.com/aosma/smhome.html>
- ❖ Stop-Motion Animation
 - <http://www.stopmotionanimation.com>
- ❖ Claymation Page
 - <http://clay.s5.com/>

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