MOTORIZED LAPAROSCOPY

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WHAT IS LAPAROSCOPY?

- Type of surgery
- Fiberoptic camera
- Purposes:
  - Identify Internal Bleeding
  - Guide Surgery
  - Diagnose Fertility Problems
WHY MOTORIZE IT?

• Shaky Picture
• Hard for Surgeon to Direct
• Movements to the picture are inverted

GRAPHIC PICTURE WARNING
WHAT'S THE GOAL?

Laparoscopy in the operating room: The proposed system

- Attach laparoscope to hub for motorized control
- Compatible with existing laparoscopes (challenge?)

Anchor to bed

Controls
WHAT WE'VE DESIGNED
MOTORS WE PLAN TO USE

• Stepper Motor
• High Accuracy/Micro Step Count
• Coded with Arduino
• 3 total, plus one special in the Hub
MANNEQUIN FOR TESTING

- Actual Hands-On Experience for Surgeon
- Used for doctors to practice abdominal surgeries
- Laparoscopic cover or Open abdomen, for different levels of experience
NEXT STEPS

- Find appropriate foot pedals
- 3D Print Components for Assembly
- Start programming motors