Analysis on Existing Adaptors
Existing Design: Endoscope-I

- Endoscope-I
  - [http://endoscope-i.com/index.html](http://endoscope-i.com/index.html)
  - £79.50 = $132.84
  - iPhone 4/4s/5
  - iPhone App exists
  - Not adequate for flexible endoscope
Component 1: Smartphone adaptor

Component 2: Locking ring

32 mm diameter recess for endoscope eyepiece

Camera aperture

Smartphone flexible grippers
Cons

• Sterilization?
  – Has FDA approval?
    • Could be class 1 device?
  – Possible method
    • Gloves? Covers?
    • How about endoscope camera on tower?
      – How is it sterilized?

• A phone fixed onto the end?
  – Ergonomically unnatural

• Price
  – Apple is much more expensive than Android

• Image size limitation due to screen size
  – Possible solution
    • Relay it to tablet
    • External camera
    • Use Tablet
Existing Design

• ClearSight
  – $400
  – Compatible to any phone
2. Place top edge of phone into spring-loaded clamps.
3. Turn over. Line up slider with camera lens & secure.
4. Press fit the telescope, then tighten until snug.
5. Check focus using the focus ring on telescope.
7. Record and save images using your smart phone.
Cons (clearsight)

- Poor resolution
  - why is it worse than endoscope-i?
2.19 Notes
Deliverables

• Minimum Deliverable
  – Proof of Concept for Android Tablet with Rigid Endoscope

• Expected
  – With Flexible Endoscope
  – Application: taking photo, export, better storing method...

• Maximum
  – Universal adaptor
  – Portable light source
Some selling points

• Android << Apple
• Battery, no external power needed
Background Research

• Sterilization
  – How does Dr. Mener sterilize it?