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**GIVEN IMAGING'S CAMERA BILL Harvard Case Solution & Analysis**



**Aspects:**  
 - Low cost  
 - High resolution  
 - Small size  
 - High speed

**What is the problem?**  
 - The camera lens is made of glass and is very expensive to produce. The lens is also very fragile and can be easily damaged.

**What is the solution?**  
 - The camera lens is made of plastic and is much cheaper to produce. The lens is also much more durable and can withstand more wear and tear.

**Production:**

Originated and created by Given Imaging, a medical engineering company in Yokneam, Israel

**Raw Materials Used:**  
 - Plastic  
 - Glass  
 - Metal  
 - Rubber

**Production Assembly:**

2 assembly lines in a "sterile, anti-static clean room" with only approved employees wearing proper gear allowed to enter.

**Employees' Facilities:**  
 - Clean room  
 - Anti-static clothing  
 - Sterile environment

**Zarlink Semiconductor:**

- Designed a unique ultra-power radio frequency transmitter
- Custom ICs for control circuit
- Transmits the information relays it to the Data Recorder in the doctor's office

**Energy Holdings:**  
 - Provides the 2 silver oxide coin cells to operate the PicoCam

**Alison Fecton:**  
 - The camera lens is made of plastic and is much cheaper to produce. The lens is also much more durable and can withstand more wear and tear.

**Data Recorder and Wristwatch:**  
 - The camera lens is made of plastic and is much cheaper to produce. The lens is also much more durable and can withstand more wear and tear.

**Energy Holdings:**

- Located in St. Louis, MO
- Provides the 2 silver oxide coin cells to operate the PicoCam
- "Designed for low drain use over long periods of time"

**Platinum Material:**

- 2 energy storage silver-oxide coin cells
- Polyethylene film
- Lithium Micro-processor
- Light sensors
- 2 infrared LEDs
- LED light
- Micro-processor
- Radio Frequency Transceiver Chip

**Challenges:**  
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 - High resolution  
 - Small size  
 - High speed

**Pico of PicoCam:**  
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**After Math:**  
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**Fun Fact**

The PillCam is the first endoscopy procedure approved in the world

**How it works:**

Patient wears a belt with a Data Recorder attached to it. Once swallowing the plastic coated capsule, the camera takes up to 14 images per second to the Data Recorder which collects the images and are downloaded to the RAPID software on the workstation computer for the doctor to view.

# GIVEN IMAGING'S CAMERA PILL Harvard Case Solution & Analysis

**What is the PillCam?**

The PillCam is a microscopic camera located within a capsule that takes images of a person's colon or esophagus.



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**Materials  
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# *Given Imaging*

