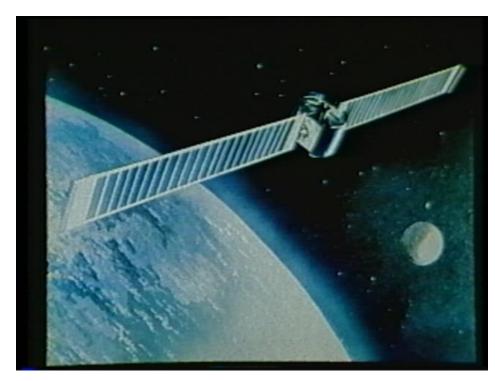
# Where we've been.. And where we're going

George Thoma

### **NASA's ATS-6 Satellite**



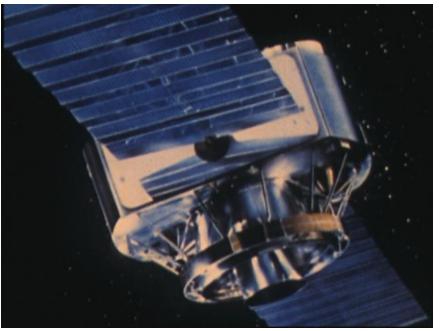
## **Communications Technology Satellite (CTS)**



**Footprint: Fort Yukon to Bethesda** 

Ku Band (12-14GHz)
Small antenna for earth station





## 10-foot antenna, rural Alaska



#### **Telemedicine via satellite**



2-way broadcast quality video

Audio, data

## **Broadcast studio at NLM/Lister Hill Center**



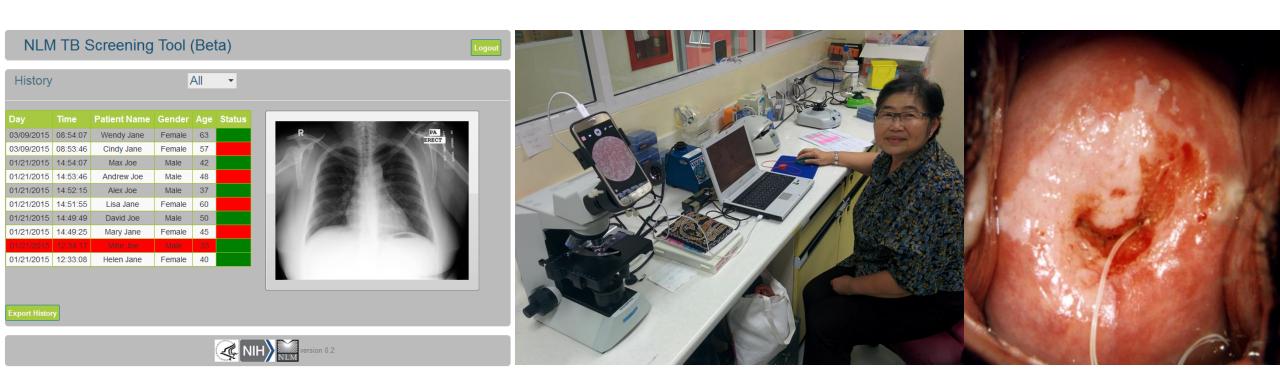
## Distance learning, conferences – NIH to sites in West and Alaska



#### Does the project

- Help diagnose/screen for diseases (especially in resource limited areas)?
- Create efficiencies in NLM's core mission?
- Bring NLM's historic treasures to a wider audience?
- Help people in any way, e.g., in the midst of a mass disaster?

- Help diagnose/screen for diseases (especially in resource limited areas)?
  - Automate the detection and localization of TB or cardiomegaly in CXR
  - Automate the detection of malaria from RBC in blood smear images
  - Automate the detection of cervical cancer in colposcopic and histology images



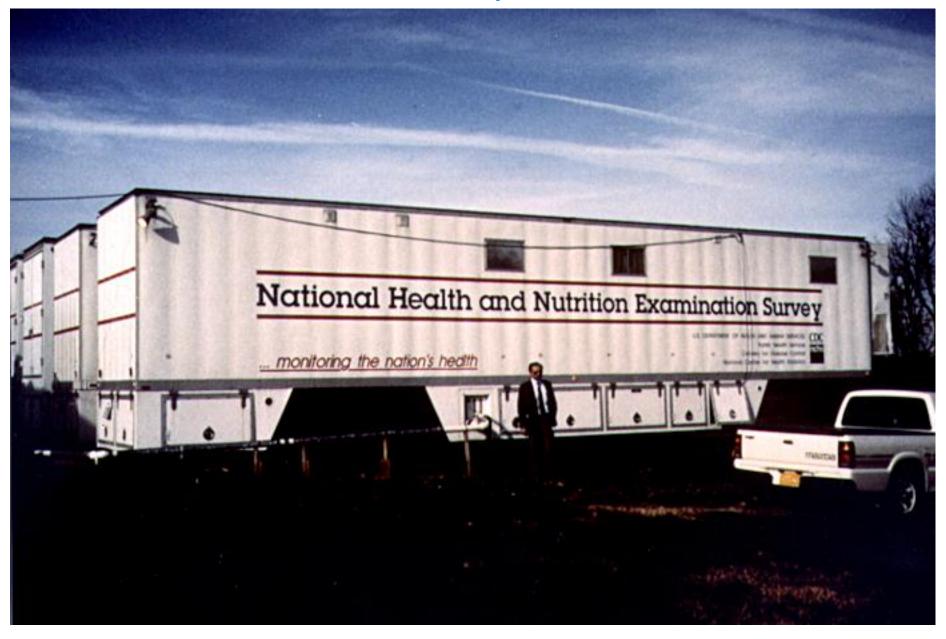
## **Spine Images**

Earliest foray into medical images ~1992





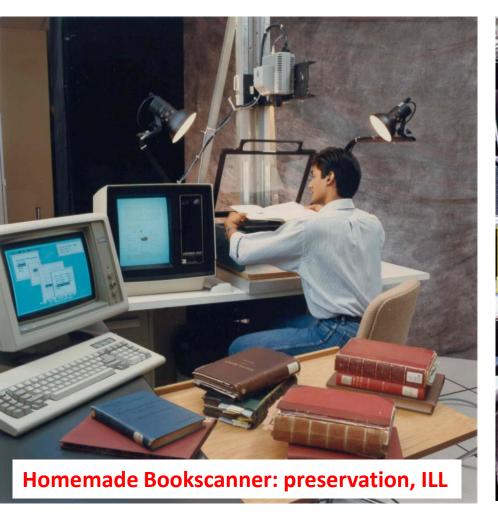
### **CDC/NCHS** Tractor trailers parked near Chester, PA



## **Inside the trailers**



Create efficiencies in NLM's core mission?





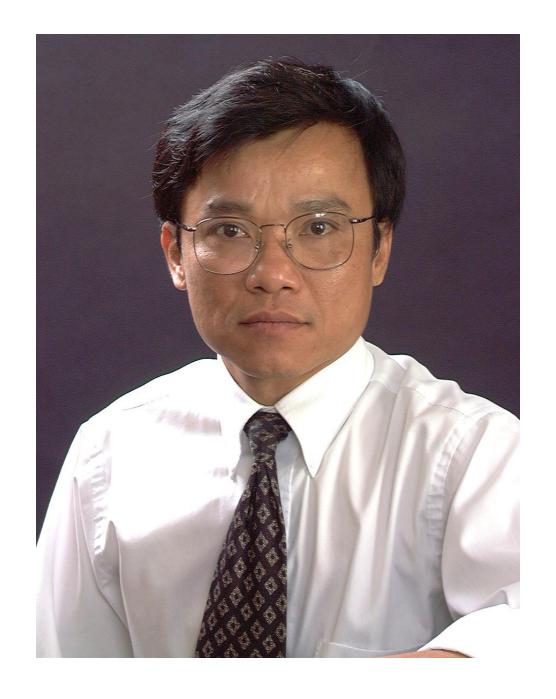
• Create efficiencies in NLM's core mission?



## MARS System ~1995

Automated extraction of bibliographic data in medical articles to build MEDLINE citations

Machine learning, image processing



Daniel Le, Ph.D.

US Patent 5,592,572 January 7, 1997

Automated portrait/landscape mode detection on a binary image

Bring NLM's historic treasures to a wider audience?



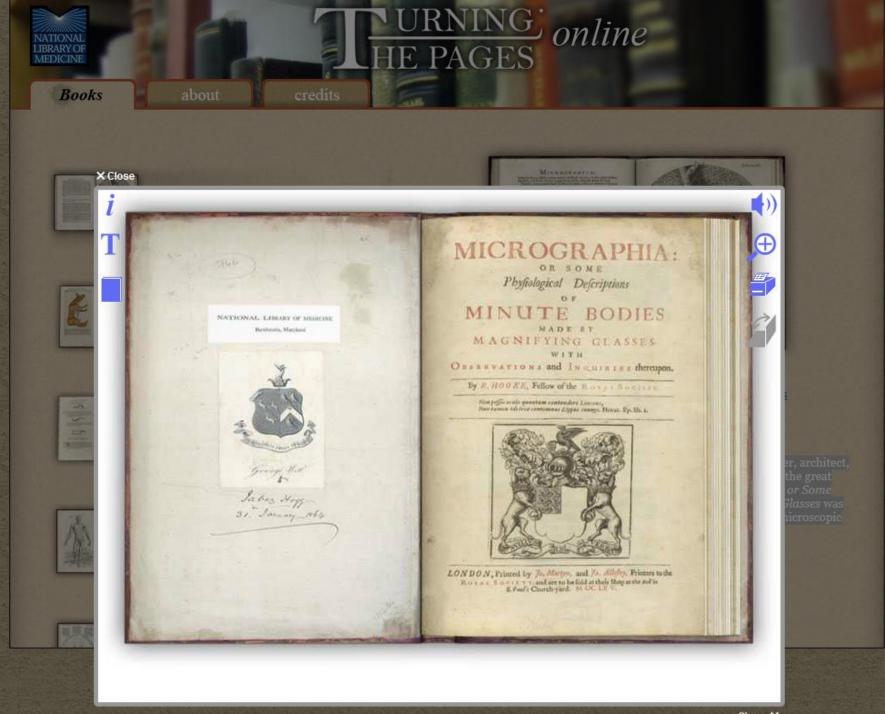


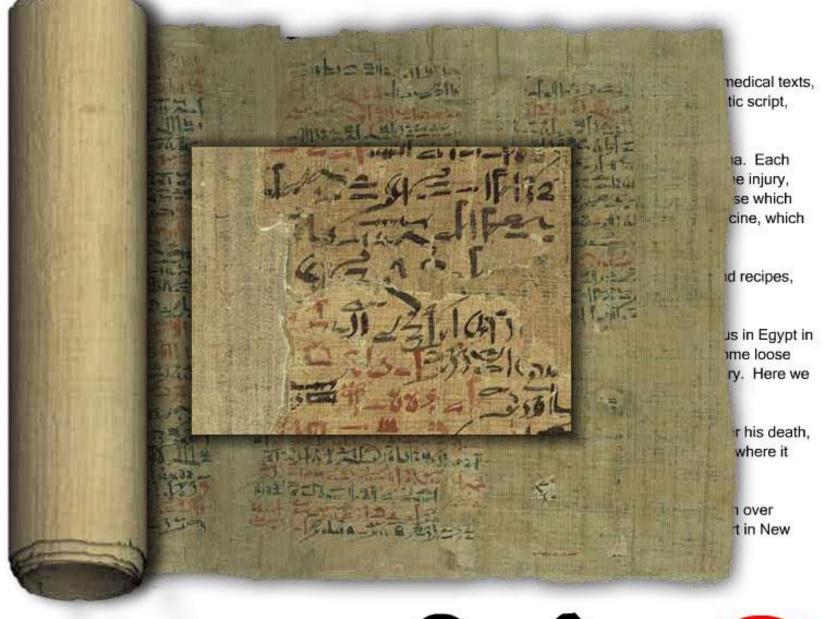


TTP Website

TTP on the iPad

TTP Kiosk



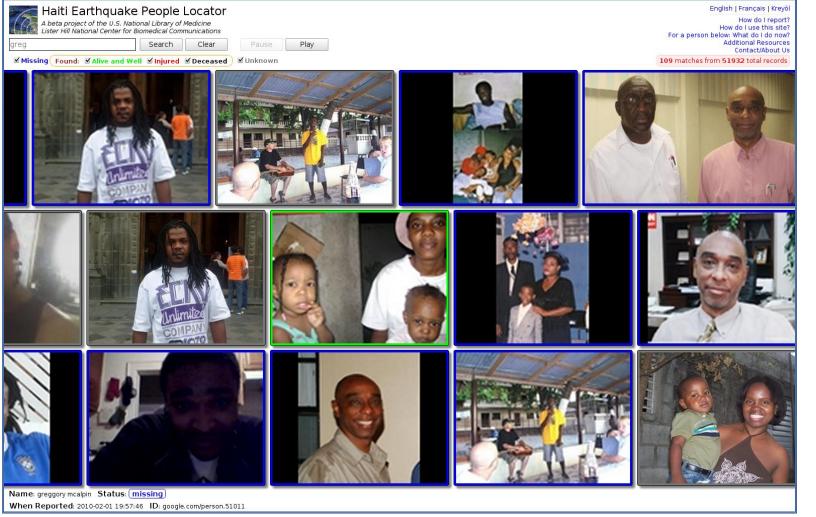








Help people in any way, e.g., in the midst of a mass disaster?



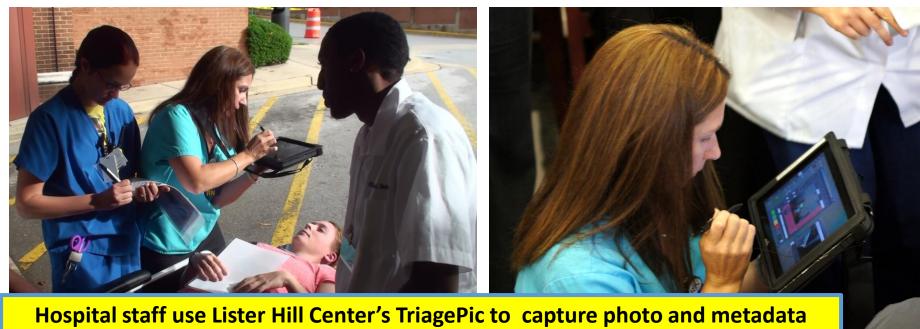
**NLM People Locator** 

>50 earthquakes, floods, tsunamis

First used in Haiti 2010

## TriagePic used for family reunification





## To be passed on to the next longest serving staff member – Dr. Craig Locatis



## Live long and prosper!



And boldly go where no man has gone before..

## Live long and prosper!



And boldly go where no man has gone before..