

# **E-Learning Applications and Opportunities for Community-Based Healthcare**

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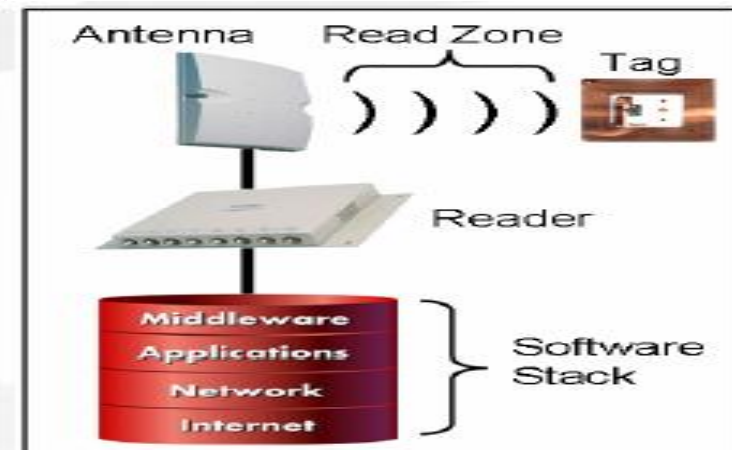
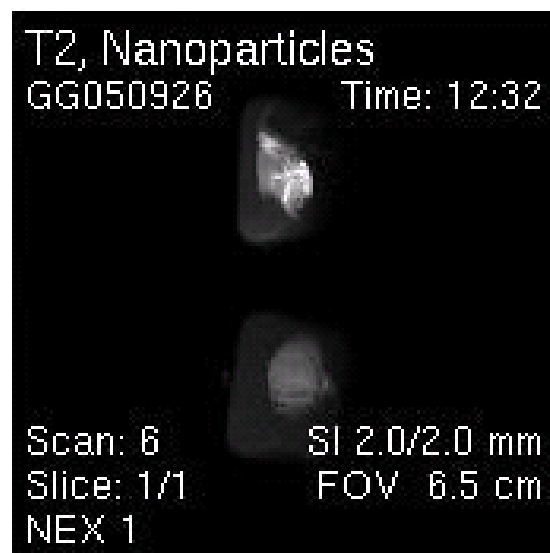
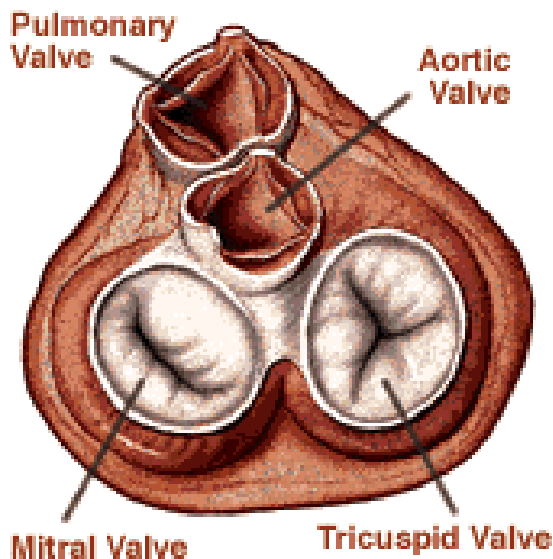
**Princeton University**

**Princeton, NJ**

**USA**

# The Health Challenges of Africa

- The Main Killers of People in Africa
  - Cardiovascular disease (The No. 1 killer today)
  - Cancer (will become the No. 1 killer by 2030)
  - Water borne diseases (Kills most children below 5)
  - Pulmonary diseases (problem of kerosene smoke)
  - Malaria, HIV and tuberculosis (receive most of the attention.....)



# The Mpala Clinic/Nomadic Peoples Trust

- The Mpala clinic is devoted to providing immunization and healthcare to about 322,000 people in Laikipia district of Kenya
- The clinic provides community-based medicine from a two room building at Mpala ranch
- It is operated by a group of nurses and a few doctors
- Mpala provides
  - Family planning
  - HIV/AIDS awareness
  - Immunization
  - Basic health services



# The Scope of The Mpala Clinic

- Laikipia is one of 71 districts in Kenya that consists largely of Samburu and Turkana communities
- The region is roughly the size of Wales
- Samburu is comparable in size to Israel
- Community-based medicine is used
- The Mpala crew visits 25 sites per month, administer 12,000 vaccines and treat 50,000 people per year
- Need to multiply this model across Africa and much of the developing world



# E-Learning Opportunities

- University of Phoenix platform is a good model for E-learning delivery
- Need to integrate with African learning centers
- Use continuing education E-learning strategies to enhance access to remote diagnostic centers e.g. programs that use cell phone based delivery of images to deliver images and patient data
- Need to train the trainers to assist with E-learning centers – potential role of Nelson Mandela Institutions (turn brain drain to brain gain)



# Context of AUST's Contributions to Pan African Centers of Excellence

- Address skills and knowledge gap in the area of science and technology
- Interdisciplinary energy education, research and development
- Initial focus on graduate programs that address African problems
  - Petroleum engineering
  - Materials science and engineering
  - Pure and applied mathematics
  - Computer science
  - Theoretical and applied physics

# Hybrid Approach and Current Interdisciplinary Programs at AUST

- In addition to the 5 current major disciplines, AUST is developing three new interdisciplinary programs in
  - Biological sciences and engineering (biomedical + food)
  - Business and public policy
  - Energy environmental engineering
- The goal is to develop these into interdisciplinary programs into world class programs that address African needs



# Summary and Concluding Remarks

- This talk presents some ideas on community-based E-healthcare
- Need to explore new technologies to address Africa's real challenges
- The challenges associated with limited resources can be partly addressed through E-strategies
- E-learning is a key to training the trainers, field experts and service center operators
- Potential model suggested for training the trainers (NMIs) and robust E-tools (University of Phoenix)



**THANK YOU!**