#### WELCOME

# Committee on Earth Observation Satellites subcommittee on IR and Visible Optical Sensors

Wednesday, May 9, 2012

Lewis F. Brown, Ph.D.

Dean of Engineering



## **Overview**

# **Brief Facts & History of:**

- South Dakota
- Land-Grant Universities
- SDSU
- College of Engineering

# **South Dakota**

### **South Dakota Facts:**

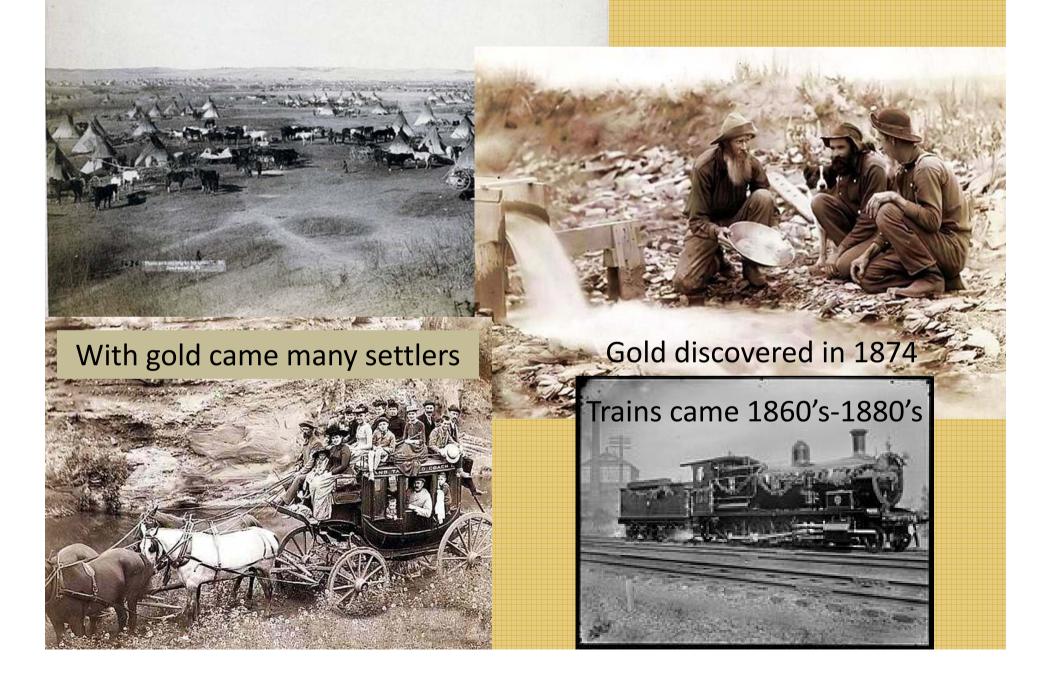
- area: 75,896 sq mi (16<sup>th</sup>)
- population: 800,000 (46<sup>th</sup>)
   (≈ 10 people/sq mi)
- statehood: 1889 (40<sup>th</sup>)

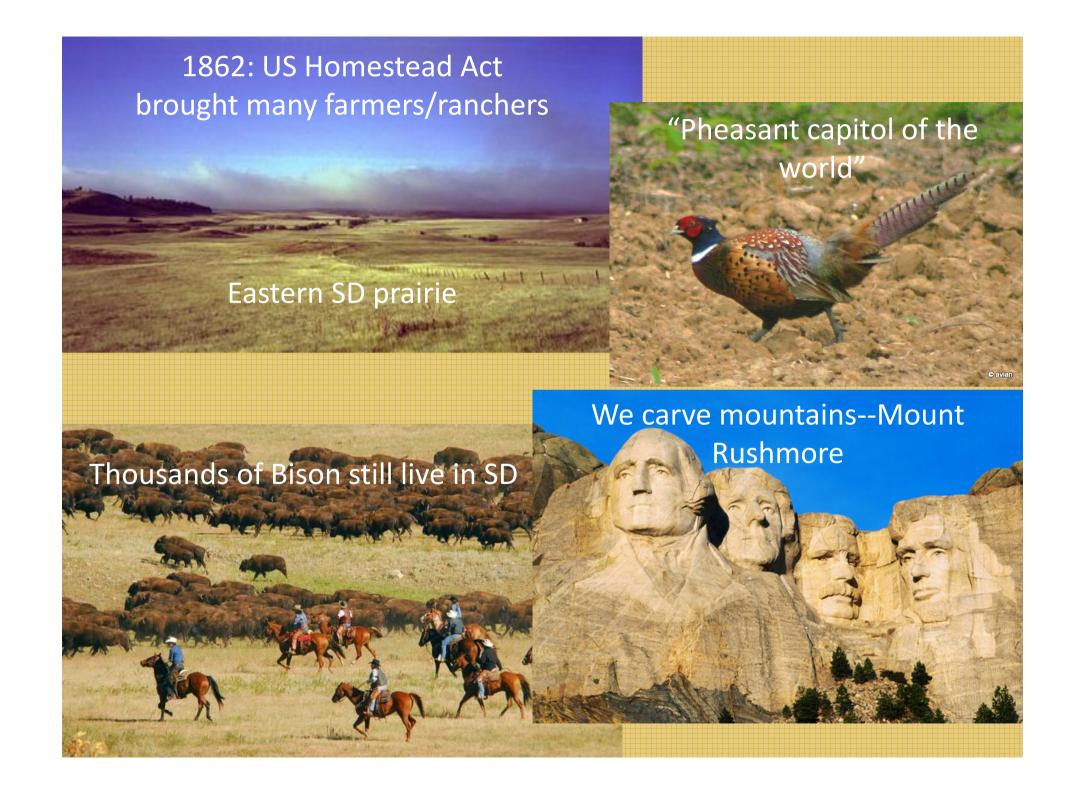
#### **Business/Economy:**

- Agriculture
- Manufacturing
- Service (retail, finance, health care)
- Tourism



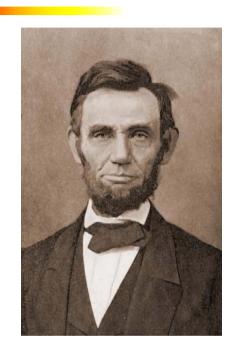
#### Native Americans: our first residents





# **Land-Grant Universities**

- Morrill Act of 1862 signed by President Abraham Lincoln to establish a "land-grant college" in every state/territory in USA
- Purpose: to provide broad access to <u>public</u> education in practical areas of importance to the United States (agriculture, "mechanical arts" and others)



- A common 3-part mission was established for all landgrant institutions: (1) teaching, (2) research, (3) outreach
- All states/territories of the U.S. have a land-grant
   university today—same 3-part mission remains today

## **SDSU Facts**

- South Dakota's land-grant university started in 1881:
  - Agriculture
  - Engineering
  - Physics
  - Pharmacy
- Many changes since 1881, but today:
  - 7 academic colleges; 12,725 Students
  - BS, MS Ph.D. programs
  - Extensive research in many diverse areas
  - Extensive outreach/service to SD, USA and the world



# **College of Engineering Facts**

- 6 departments, 8 majors
- BS, MS, Ph.D. programs
- 1,665 students (86% undergrad., 14% grad.)
- Primary research areas:
  - Satellite image calibration and validation
  - Alternative energy/power technologies
  - Transportation structures
  - Materials science—nanoscsale to macroscale
  - Water quality and water treatment





