National Park Service
U.S. Department of the Interior

Remote Sensing in the National Park Service

Mike Story
NRPC OIME
(303) 969-2746
Mike_Story@nps.gov

Outline

- NPS in general
- History of RS in NPS
- Present plans
- Partnerships and Projects

National Park Service

- 388 Park units
- Over 84 million acres
- 7 Regions
- 32 I&M Networks

National Park Service

History of Remote Sensing in the NPS

- Early 1990's
  - Remote Sensing Branch
    - Dr Maury Nyquist
  - Component of the GISD
  - Park specific projects
  - Training
  - Support (Parks and Regions)
  - National representation

History of Remote Sensing in the NPS

- GISD and RS Branch moved to NBS and USGS
- Remote Sensing was still present in some Regions and Parks
- Re-developing RS capabilities and expertise through GISD and I&M Program

Plans for Remote Sensing in the NPS

- Train personnel in fundamentals
- Data acquisition, archiving and distribution
- Application development
- Partnership development

Ongoing Partnerships and Projects

- Training
  - NASA partnership has resulted in 2 classes at FWS NCTC and two 1 day classes at GIS conference
  - Forest Service partnership has resulted in ability to utilize training classes at RSAC
  - Further development and implementation of training opportunities

Partnerships and Projects

- MRLC partnership
  - Provides base of TM imagery for applications
  - Provides scale appropriate Land Cover data
  - Will provide Land Cover change for monitoring

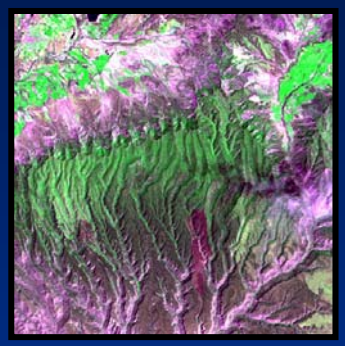
Partnerships and Projects

- NAIP Partnership
  - Assures coverage of NPS units with current 1 meter DOQQs

Partnerships and Projects

- Fire Severity mapping and Fire Atlas
  - USGS EDC

Periodic and Up-to-Date Information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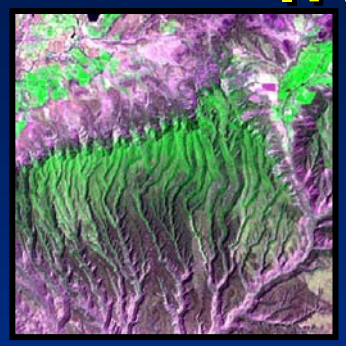
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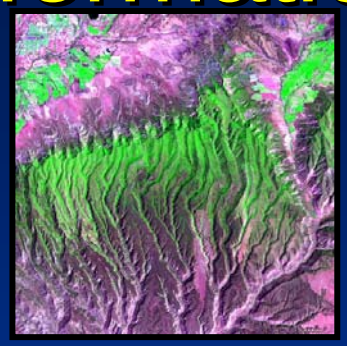
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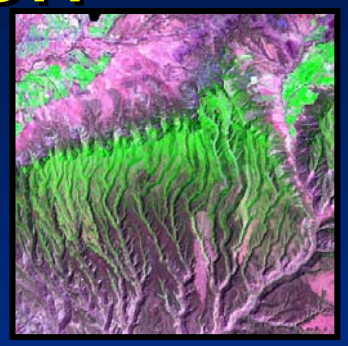
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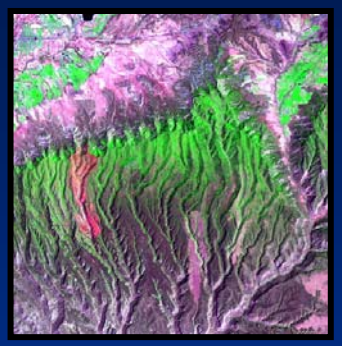
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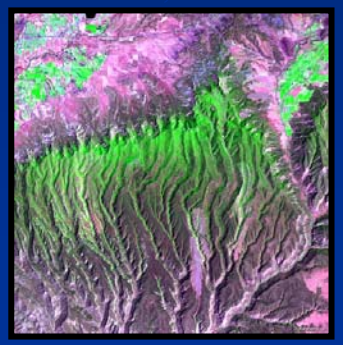

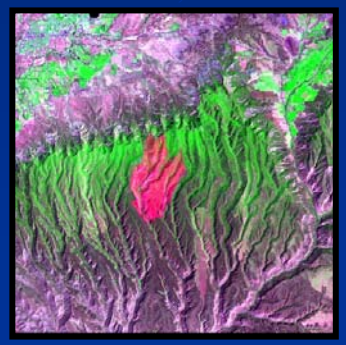

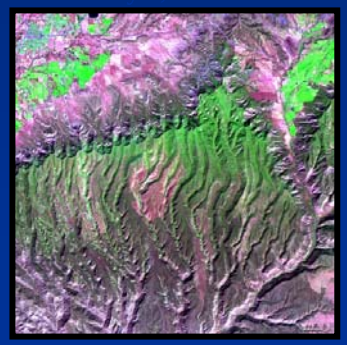

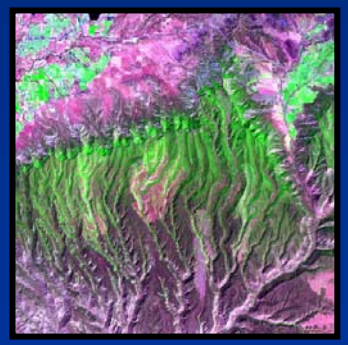

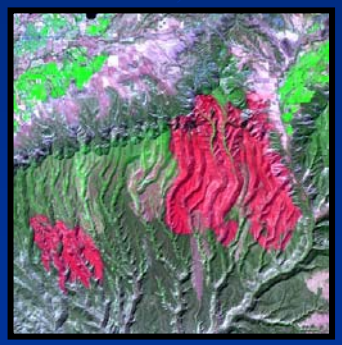

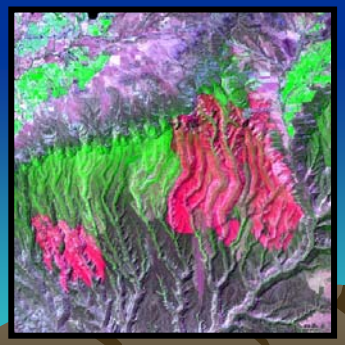
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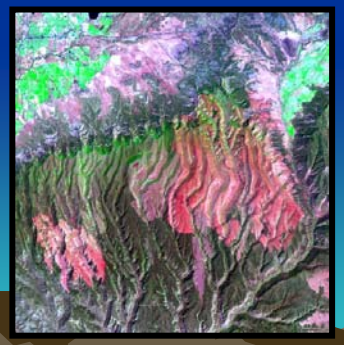
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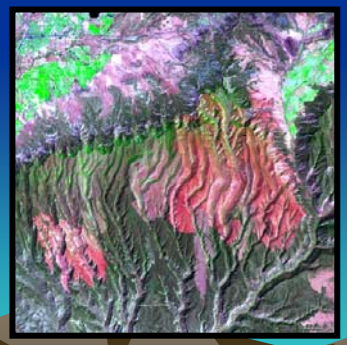
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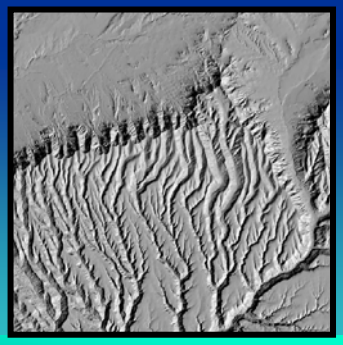
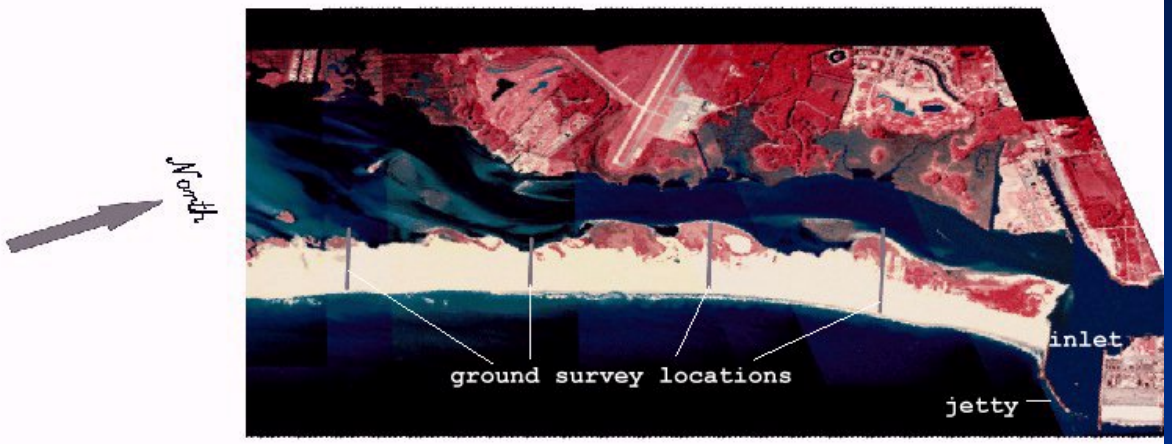

Ten meter DEM

Mesa Verde National Park Fire Atlas by USGS EROS Data Center

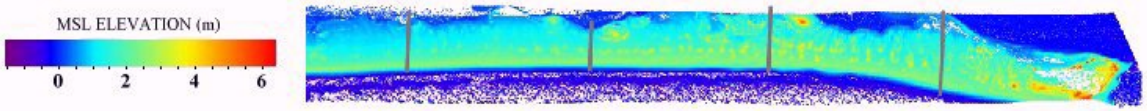
Partnerships and Projects

- Coastal LIDAR projects with EAARL
  - NASA (Wayne Wright)
  - USGS (John Brock)
- Coastal change
- Vegetation Structure
- Coral Reef mapping

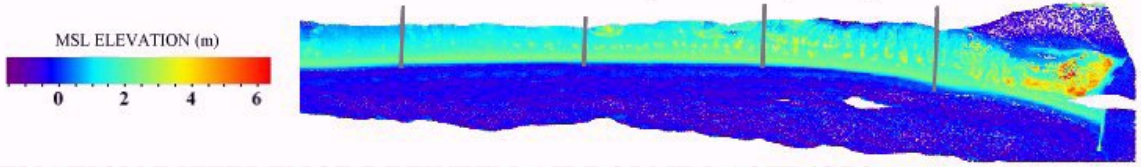
AIRBORNE PHOTOGRAPHIC SURVEY, 1993



AIRBORNE LASER/GPS ELEVATION SURVEY (November 27, 1995)



AIRBORNE LASER/GPS ELEVATION SURVEY (October 9, 1996)

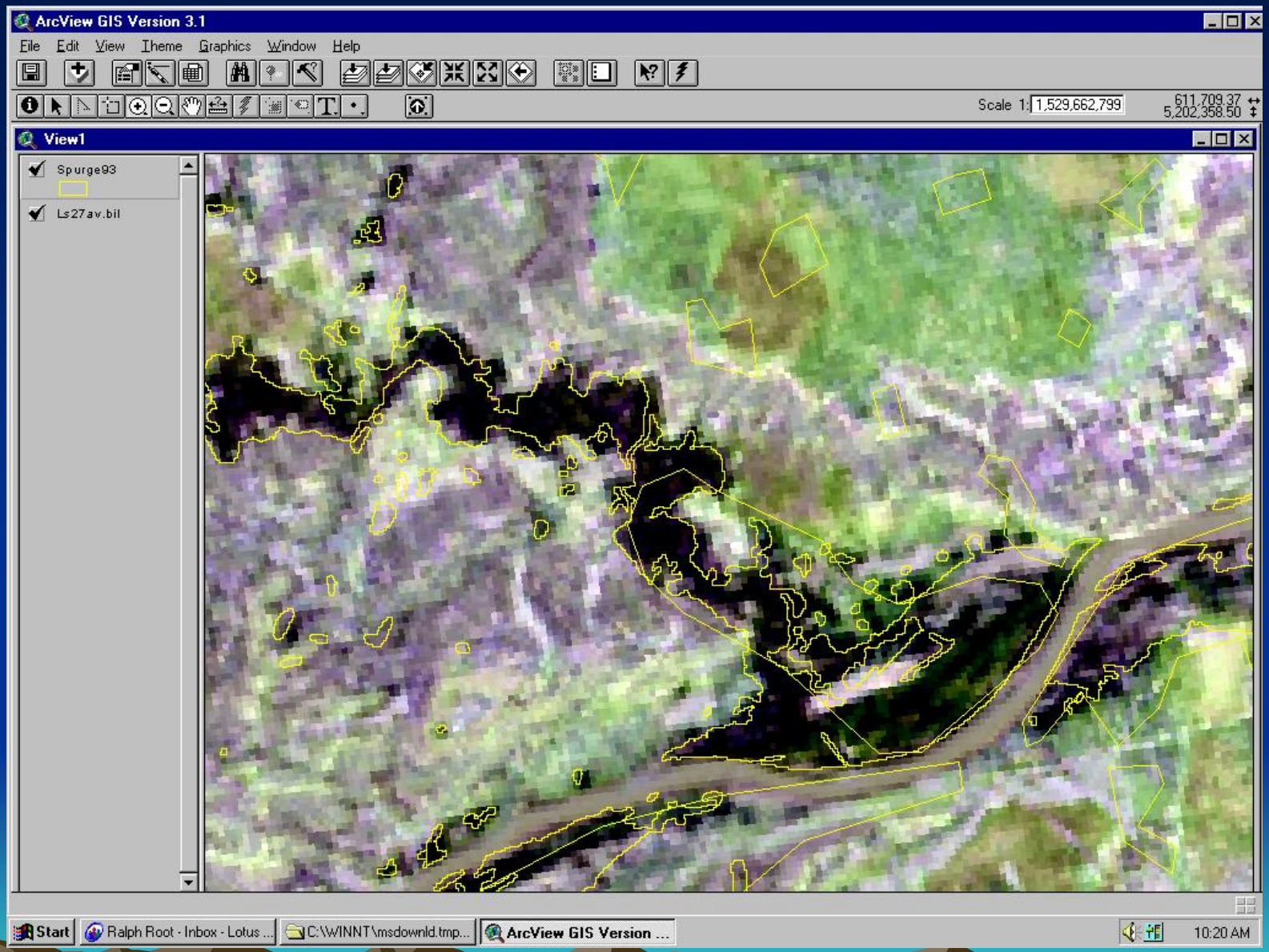


ELEVATION DIFFERENCE BETWEEN AIRBORNE LASER/GPS SURVEYS OF November 27, 1995 and October 9, 1996

Partnerships and Projects

- Leafy Spurge mapping at THEO
  - USGS and NASA
  - AVIRIS imagery

THRO-SU NASA AVIRIS PROJECT 6/24/98
"No man's land" lk south Hager, O'Neill, Root, Scheer
Transect S1P1T3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Start
Ralph Root - Inbox - Lotus ...
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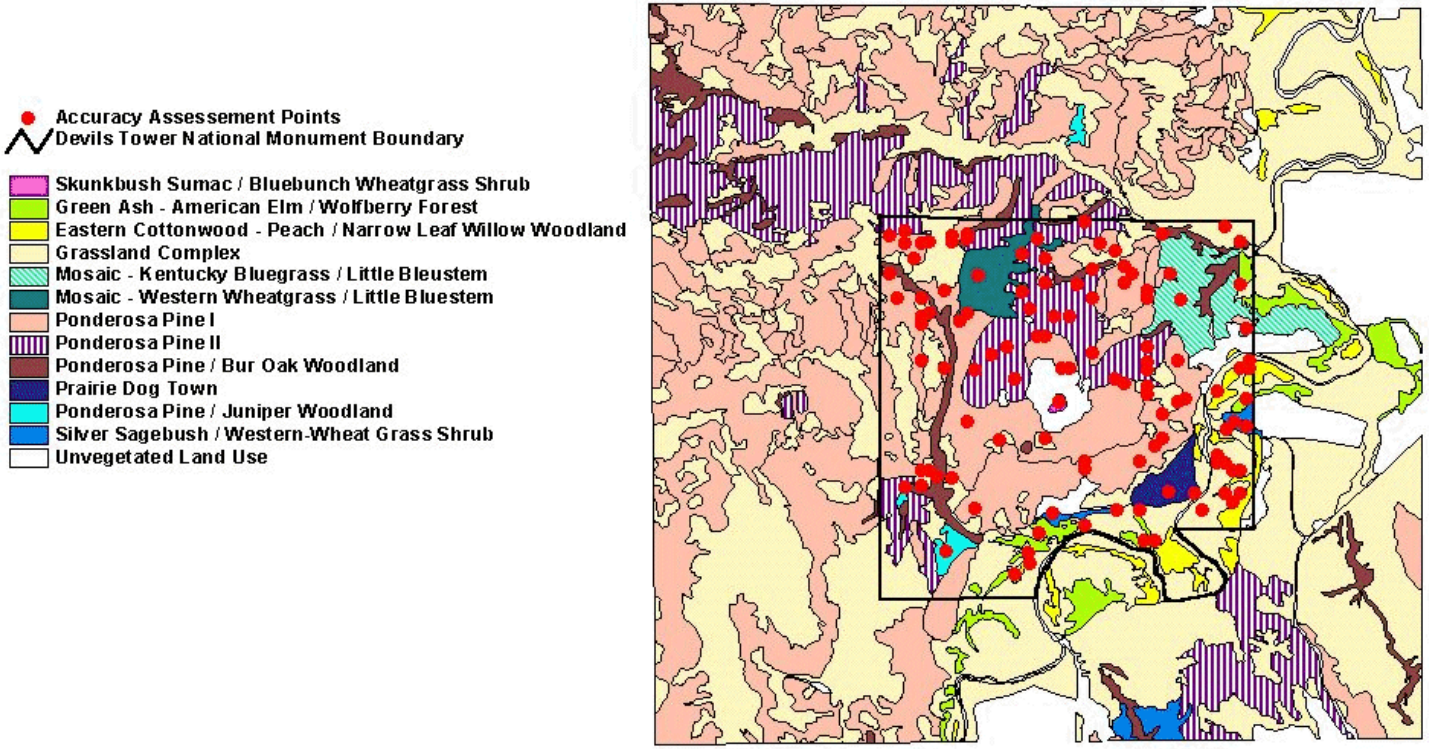
ArcView GIS Version ...
10:20 AM

Partnerships and Projects

- I&M Vegetation Mapping efforts
  - USGS (various centers)
  - BOR (Denver GIS office)
  - NatureServe
  - Other NGOs and Contracts

Devils Tower National Monument

Devils Tower National Monument Accuracy Assessment Points



Partnerships and Projects

- Alaska High res image maps
  - IKONOS imagery via USGS Commercial Remote Sensing Data Contract
- Alaska Vegetation Mapping efforts
  - Via various contracts at various scales

Partnerships and Projects

- Monitoring efforts
  - Variety of Partners
  - Variety of Applications
  - Developmental stage

Remote Sensing in the National Park Service

- Growing
- Dependent on partnerships
  - Thank you