Remote Sensing in UNISEC Global

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Afternoon, July 3rd

Members

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Discussion

User Demand for RS

- Water management
  - ✓ Desert: Sahara desert, Arabia desert
  - ✓ Semi-arid: Sicily, South Spain, Portugal
  - ✓ Penetrating the ground to observe water and integrate to real-time monitoring
- Pipeline
  - ✓ Leakage detection, Thermal imaging is using
- Agriculture
  - ✓ Palm tree in Desert Oasis, Sicily, Pine tree in Japan
  - ✓ Insects on plants, Grape in France
  - ✓ Harvesting monitoring, frost monitoring
- Railway
- Vessel tracking: Sicily, Gulf Cooperation Council
- Fishery
  - ✓ Fishery monitoring, Ice distribution
- Disaster Prediction
  - ✓ Earthquake prediction is possible?
- E-learning
  - ✓ Remote sensing image is a good digital data for education.
  - ✓ To demonstrate the practical application of space technology to everyday life

Discussion

Remote sensing software

- Too expensive, translation
- ESA develops free software
- Education is needed

New Platforms

- Planetlabs
  - ✓ Random observation
  - ✓ Many satellites
- Large satellite
- Constellation
  - ✓ Great power by combination of small and large satellites

Remote Sensing in UNISEC Global

Sultan Hasan AlSultan

(Akira Iwasaki)

Morning, July 3rd

Topics in Remote Sensing Group

- Introduction

- Remote Sensing Applications
  - ✓ Train network infrastructure monitoring
  - ✓ Water use management
  - ✓ E-learning program
  - ✓ Energy saving program
  - ✓ Monitoring GCC border and security

    Gulf Cooperation Council
  - ✓ Disaster monitoring

- Discussion

- Summary

Our Mission

Earth remote sensing is a promising space mission that contributes to monitor disasters, environment and so on. Since most of nano-satellites carry cameras that observe earth images. Increase in nano-satellites during the last decade will enable more frequent earth observation, which has been required many remote sensing data users. However, the characteristics of cameras are quite different among nano-satellites. Furthermore, geometric and radiometric calibrations are needed for data utilization.

The Remote Sensing Data User Group intends to develop the methodology to use cameras on board nano-satellites for remote sensing research. Discussion of software toolboxes will be also carried out, which makes a way to expand data utilization of remote sensing data obtained by nano-satellites. To extend our corporation in UNISEC-Global, individual research areas and research themes are discussed.

Railroad in Tokyo

Railroad in U.S.A.

Railroad in Fukushima

1st
Landsat
Mar 15

2nd
Hodoyoshi
Mar 15

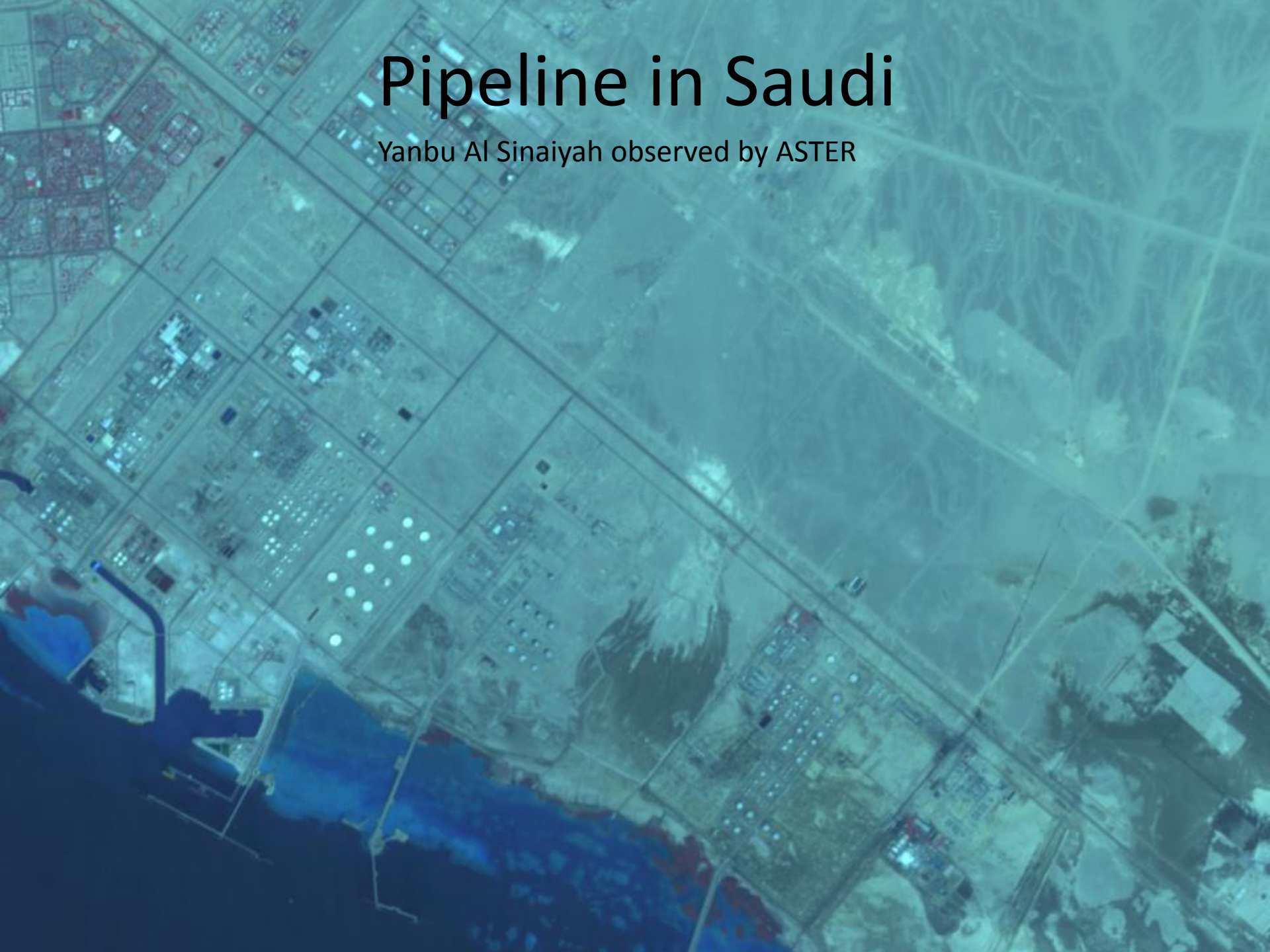
3rd
Roadmap

Pipeline in Saudi

Yanbu Al Sinaiyah

Pipeline in Saudi

Yanbu Al Sinaiyah observed by ASTER



Types of Pipeline