INFINITE ACCESS TO SATELLITE DATA FOR SMART CITY

Dr Sukanta Kumar Jena
Head – China, HK & SEA
11th April 2018
Background

1. Damaged/Missing
2. Lightly/moderately rusty / with debris
3. Rusty/Slack

1. No visible/quantifiable deterioration or damage
Background
Background
Background
Background
New Problem

SCENARIO OF MONITORING PROBLEM

- Real time Investigation
- Land Encroachment and Changes Over a certain period
- Recent Satellite Image
- Features Boundary Detection
- Features Land Information
Large area monitoring

Make smart Decision

Analysis

Daily Dataset

Visualize (2D & 3D)

Reporting Application and Dashboard
Large Area Monitoring

- Optical Image
- SAR Active Radar
Infinite continuous supply of data
Infinite continuous supply of data
Infinite continuous supply of Analysis
Temporal analysis
General Image analysis

Example of Water Detection Overview

Load Image

Level 1 Segmentation

Level 2, 3 Segmentation

Analyse Class Separation

Knowledge-Based Classification

Export Classify Vector

Transform satellite image data into geospatial information (GIS)
Water Boundary and its surrounding

Optical Image

Boundary delineation and land classification depending on features target
Water Boundary and its surrounding

SAR Kompsat 5 Active Radar
Boundary Change

Change from Water to Land

Change from Land to Water
The inclusion of the NIR band considerably improves Deforestation discrimination.
Change Detection
3D Visualization on all datasets
Side by Side comparison
Auto Notification
Auto Notification
Highlight to location
Highlight to location
Integration to other system
Integration to other system
Image Analysis
Image Analysis
Application

- Housing Provision
- Traffic Management
- City Infrastructure
- Law Enforcement
- Zoning and Urban Planning
- Carbon footprint & Pollution
- Security
Thank you
sukanta.jena@cyient.com

Thanks to Cyberhawk and Skymap Global for their support to this presentation