

GeoEye

Corporate Overview

For the JACIE Civil Commercial Imagery Evaluation
Workshop

Presented by William Schuster, COO

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About GeoEye

- **GeoEye is the world's largest operator of commercial imagery satellites**, formed as a result of ORBIMAGE's acquisition of Space Imaging in January 2006
- Core Capabilities
 - High resolution imagery from our remote-sensing satellites
 - Advanced geospatial imagery processing capability and an extensive image archive
 - International network of regional ground stations to directly task, receive and process high resolution imagery
- GeoEye delivers high quality satellite imagery and products to better map, measure and monitor the world



Company Offerings

- Extensive Commercial Satellite Imagery Archive
 - Combined archive: 278 million sq km as of March 2007
- Select Imagery Applications
 - National Security & Intelligence
 - Online Mapping / Search Engines
 - Homeland Defense
 - Air and Marine Transportation
 - Oil & Gas and Mining
 - Insurance & Risk Management
- Value-Added Production Facility
 - Fused images, digital elevation models (DEMs), land-use classification maps
 - World class facilities in St. Louis, MO, Thornton, CO, and Dulles, VA
- Satellite Minutes
 - Direct customer tasking and downlinking
- Ground Stations
 - Infrastructure / Upgrades
 - Operations, maintenance and training



Frankfurt Airport,
Germany



Mt. Saint Helens, WA



Niagara Falls, NY

Advanced Production Services

Product Type	Spec Available	Source Materials	Mono/Stereo Imagery	Applications
1. Control Generation (Geopositioning)	Yes	I, M, O, Q, S	M/S	<ul style="list-style-type: none"> Prerequisite for All Product Generations
2. CIB = Controlled Image Base (at 1m and 5m)	Yes	D, I, M, O, Q, S	M	<ul style="list-style-type: none"> Positioning Navigation Simulation Mission Rehearsal
3. DTED = Digital Terrain Elevation Data	Yes	I, M, O, Q, S	S	<ul style="list-style-type: none"> Visibility/Obstruction Simulation Trafficability, Etc.
4. FFD = Foundation Feature Data	Yes	D, I, M, O, Q, S, V	M/S	<ul style="list-style-type: none"> Planning/OPS Cross County Movement Ordinance Delivery, etc.
5. DPPDB = Digital Point Positioning Data Base	Yes	I, M, O, Q, S	S	<ul style="list-style-type: none"> Targeting Ordinance Delivery

D – Digital Terrain Elevation Data (DTED)
 I – IKONOS imagery
 M – Metric Support Data (MSD)
 O – OrbView-3 imagery

Q – QuickBird imagery from DigitalGlobe
 S – SPOT 1,2,4 imagery
 V – Vector Product Format Data (VPFD)

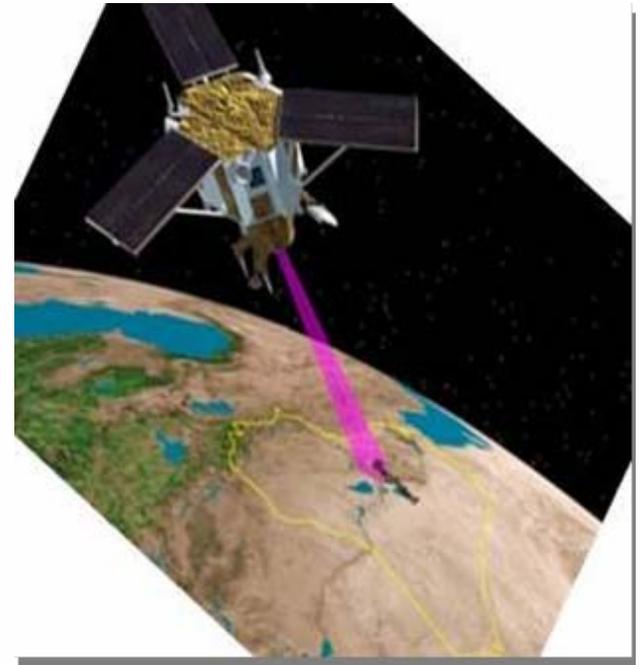


Customers

- GeoEye is a vendor of choice and trusted supplier for providing high-quality commercial satellite imagery to:
 - U.S. Government
 - National Geospatial-Intelligence Agency [NGA]
 - Department of Agriculture
 - Fed-Civil Agencies
 - Foreign Governments
 - Strategic International Customers
 - Global Resellers
 - Commercial Customers
 - Online Mapping / Search Engines

GeoEye Growth

- GeoEye has grown from the smallest US commercial imagery satellite operator to the largest in the world in 5 years
- GeoEye is one of the fastest growing publicly traded companies in the defense and intelligence sector
 - Primary customers are defense and intelligence agencies of U.S. Government and foreign allies



Cost-Effective Defense

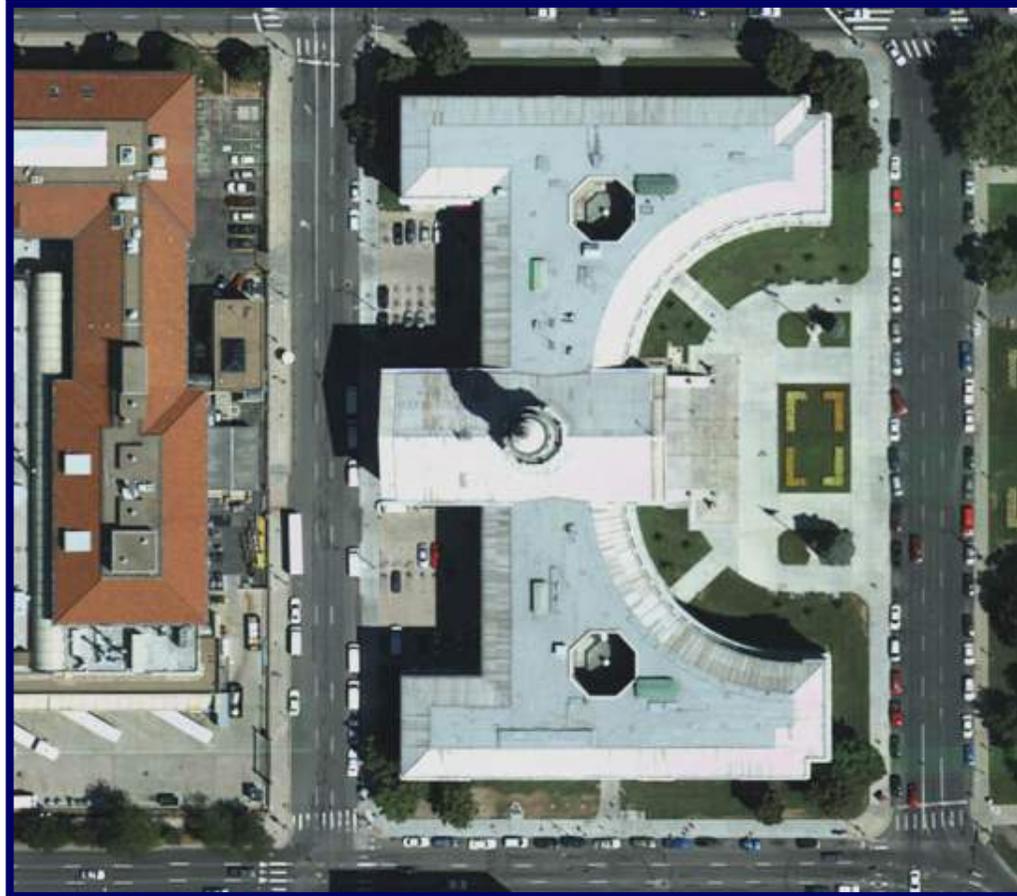
- GeoEye:
 - Operates satellites that provide critical information to policy-makers, intelligence services and war fighters
 - Derives half its revenue from international and commercial customers which off-sets costs of USG use our systems
 - US currently leads in commercial remote sensing technology and needs to maintain that edge
- Congressional support of commercial imagery industry is strong because it:
 - Increases American security
 - Protects American jobs
 - Offsets costs to the Government and taxpayer

GeoEye provides a cost effective mapping solution for the USG

GeoEye-1



Simulated GeoEye-1 High Resolution PAN Sharpened Image



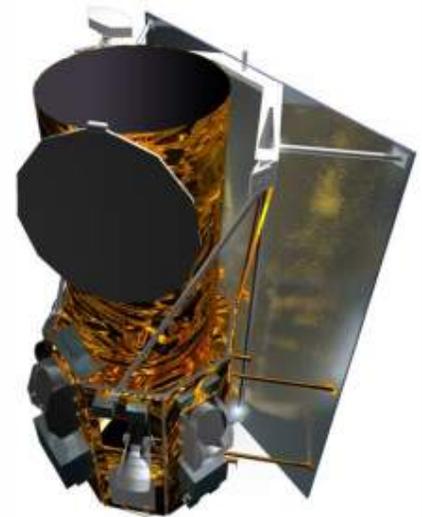
Denver City County Building

GeoEye-1

Our Next-Generation Satellite

- **Scheduled for launch 2007 with 7+ year design life**
- **GeoEye-1 incorporates next generation technology with proven IKONOS and OrbView-3 architecture**
 - Simultaneous 0.41 meter panchromatic and 1.65 meter multispectral imagery
 - Geolocation: designed for <3m accuracy without ground control
 - Best for any remote sensing satellite
- **Ground infrastructure already in place**
- **Collect up to 700,000 sq km/day in panchromatic mode (size of Texas) and 350,000 sq km/day in multispectral mode**

**Most Advanced
Commercial
Imaging Satellite in
the World**



G040533-002

GeoEye-1

Highest Performance Available In The Commercial Market

Image Quality	
Bands	1-Panchromatic Band 4-Mulitspectral Bands
Best PAN NIIRS	5.5
PAN GSD at Nadir	0.41m
MS GSD at Nadir	1.65m
Collection Capacity	
Swath Width @ Nadir	15.2 km
Daily MS Area (sq km)	350,000
Daily PAN Area (sq km)	700,000
Daily PAN Number of Points	520 - 2400
Geolocation	
CE90 Mono Accuracy (No Ground Control)	designed for < 3m
Orbit	
Altitude (km)	684 km
	Polar Orbit – Sun Sync
Equator Crossing	10:30 AM

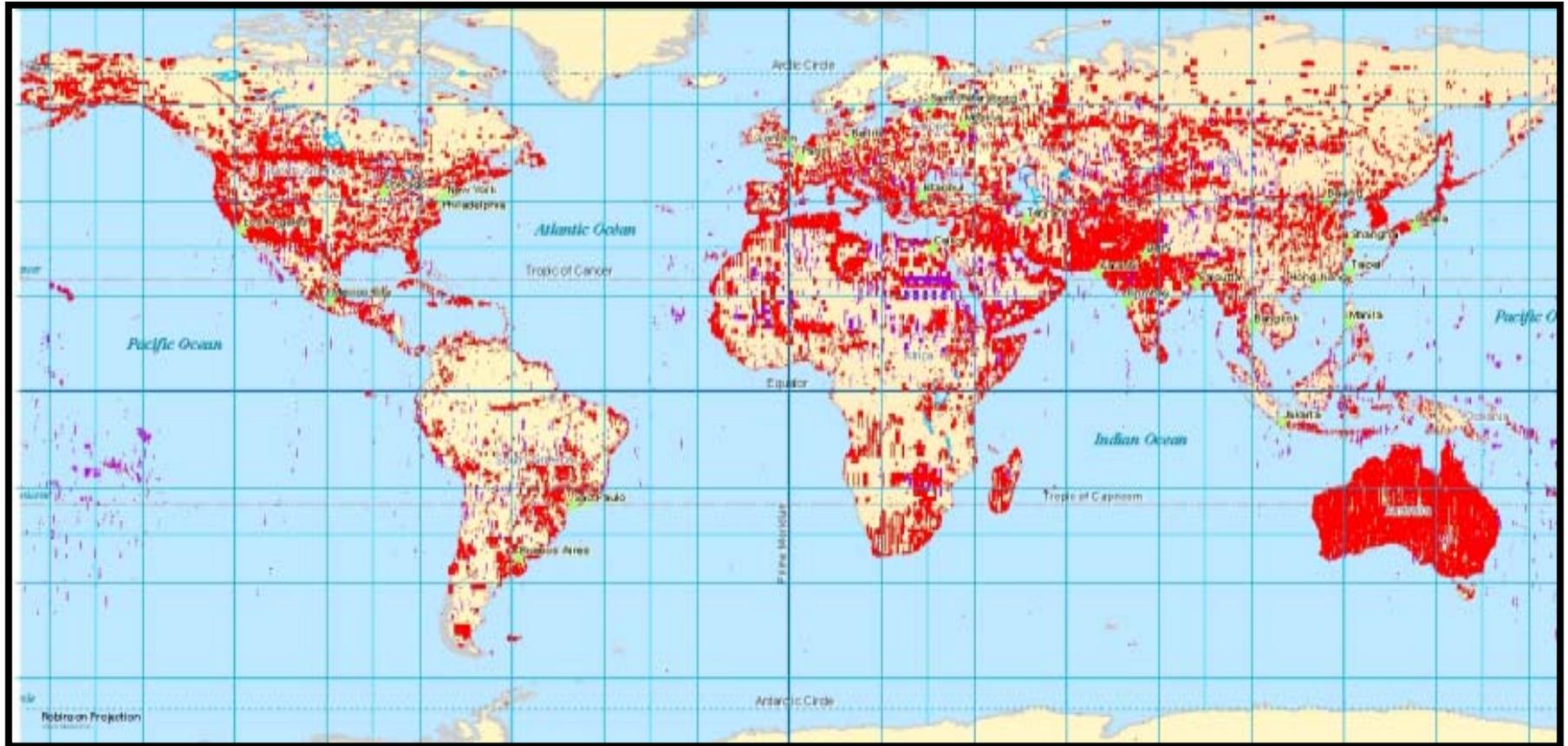
Only NextView satellite with Color Imagery

Ideal for Area Collection (e.g., Mapping, Charting and Geodesy Search)

Best Available with No Ground Control

Capacity Over Land Optimized

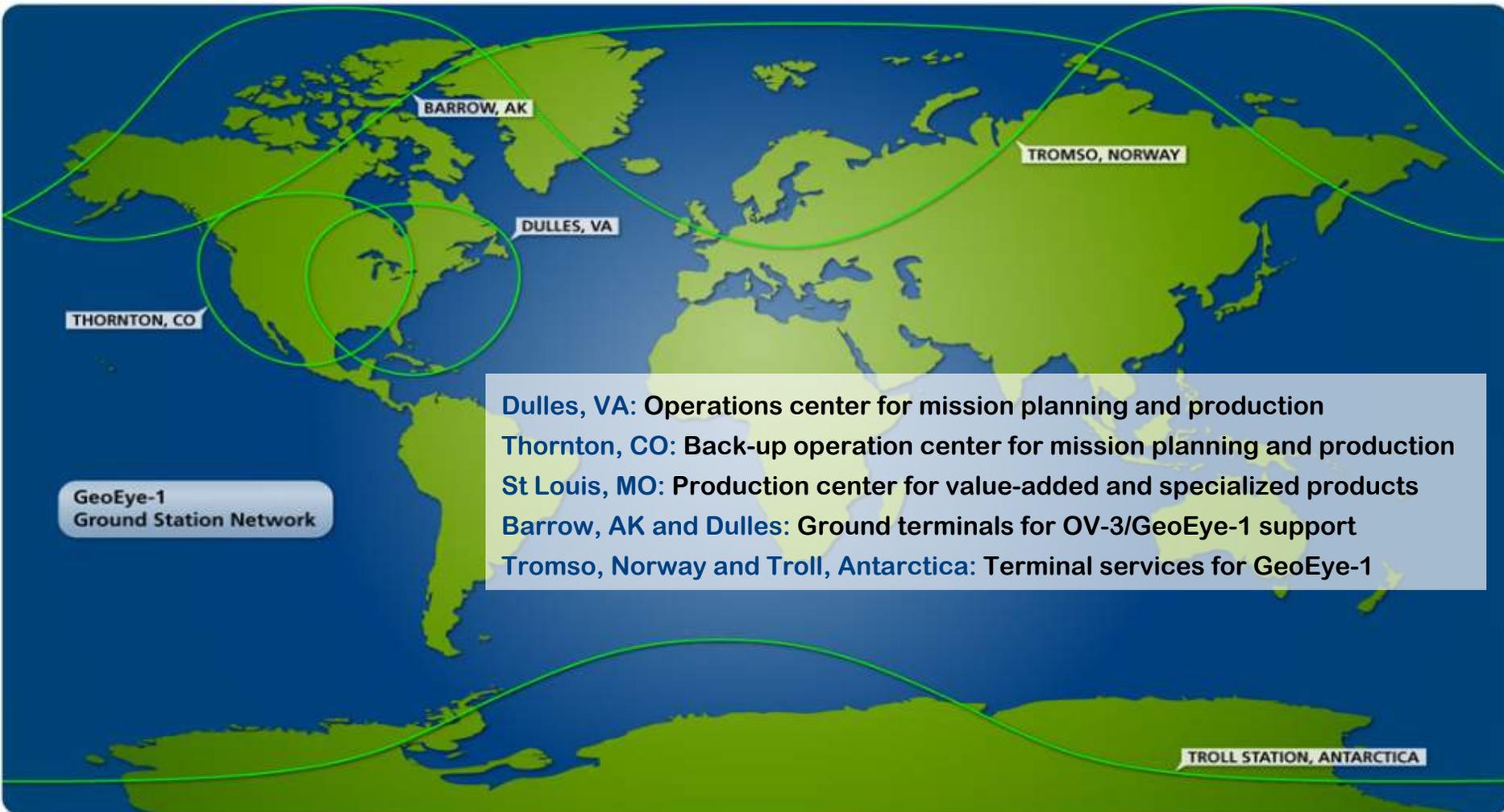
Largest Commercial Imagery Archive



GeoEye archive contains over 278 million sq km of imagery as of March 2007

GeoEye-1

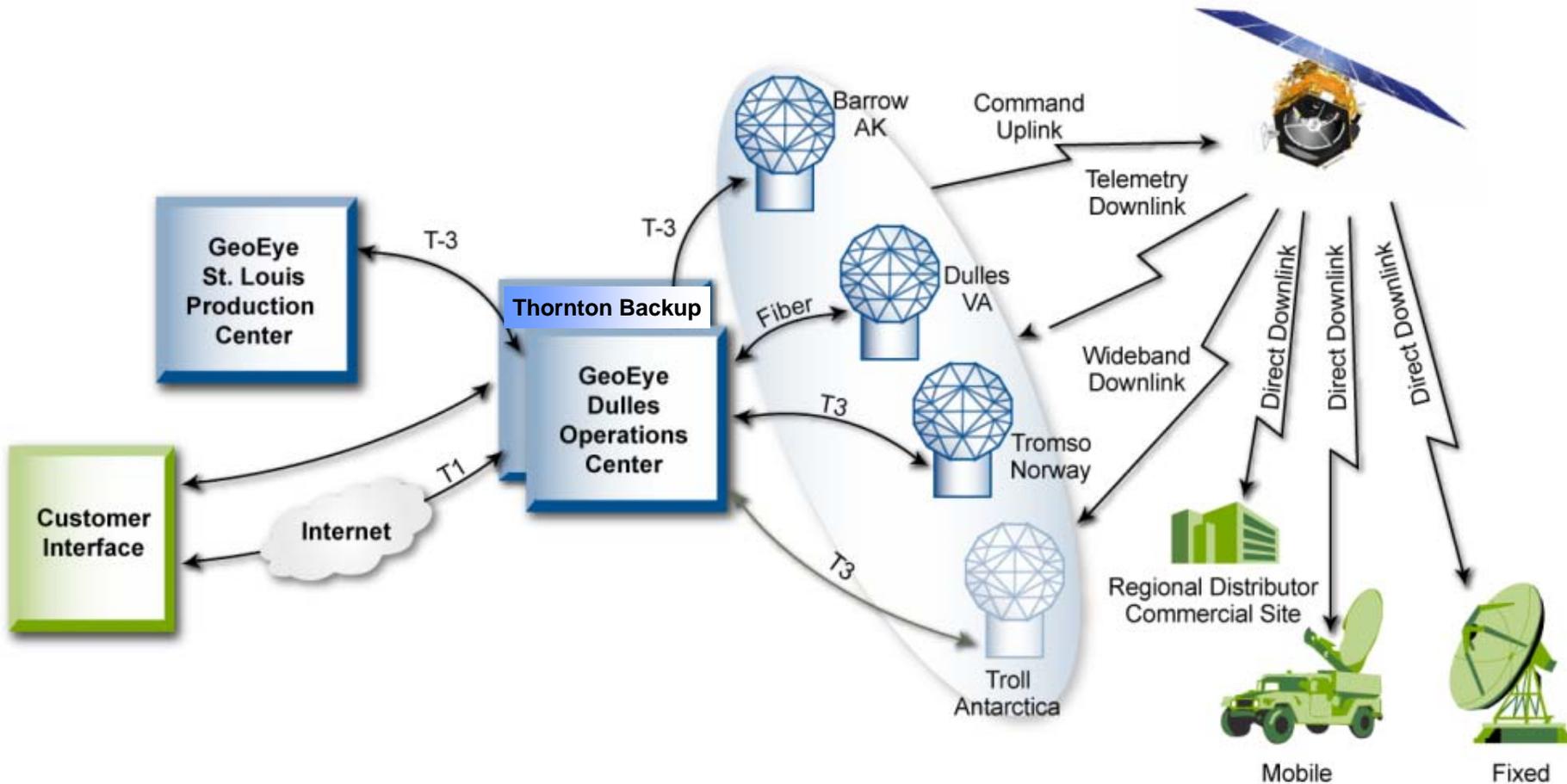
Ground Station Network



Imagery downlinked on every orbit due to ground station locations

GeoEye-1 System Architecture

Fully Redundant Space and Ground System Availability Exceeds 98%



Best-In-Class GeoEye-1 Team



- Prime contractor and lead systems integrator



- 100% mission success rate—on budget



- 40 years of space heritage with 100% mission success



- Greater than 98% success rate for Delta II



- Proven experience in ground stations



- Leading provider of collection planning tools and systems



KONGSBERG

- Operating strategically located ground stations worldwide



GeoEye-1 Area Collection and Revisit

- Excellent revisit and area collection
- GeoEye-1 provides superior tasking agility and collection rates
- Up to 2,400 Pan mono point targets per day – scenario dependent

GeoEye-1 at 684km Altitude

<i>Avg* Target Revisit (days)</i>	<i>Max Daily PAN Mono Area Collected (km²)</i>	<i>NIIRS</i>	<i>Max GSD (m)</i>	<i>Off Nadir Angle (deg)</i>
8.3	305,000	5.5	0.42	10
2.8	425,000	5.2	0.50	28
2.1	537,000	5.0	0.59	35
1.5	790,000	4.7	0.75	43

* 40 Degree Latitude Target

GeoEye-1 exceeds NGA NextView contract requirements



GeoEye-1 Accuracy: Latest Generation Technology Employed



- **High accuracy star trackers from Ball Aerospace**
 - Used on US Government satellite systems
 - Only commercial satellite to use this technology
- **Monarch GPS receiver**
 - Best available on market with 1M accuracy
 - More accurate than older technology Viceroy receiver
- **Litton Scaleable Inertial Reference Unit (SIRU) Gyros**
 - High precision, low drift rates



State-of-the-art technologies previously flown only on USG intelligence satellites

Sensor Performance

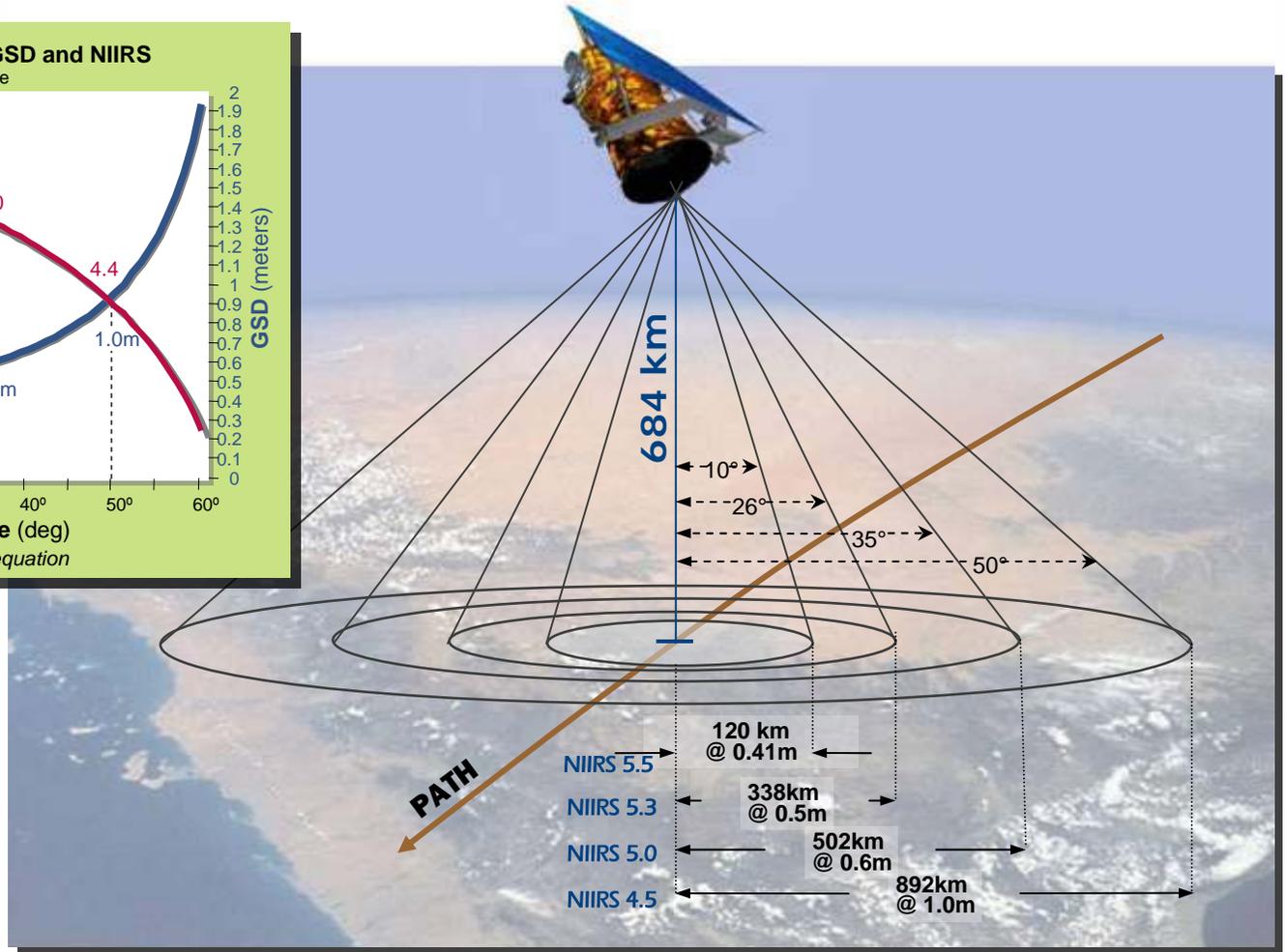
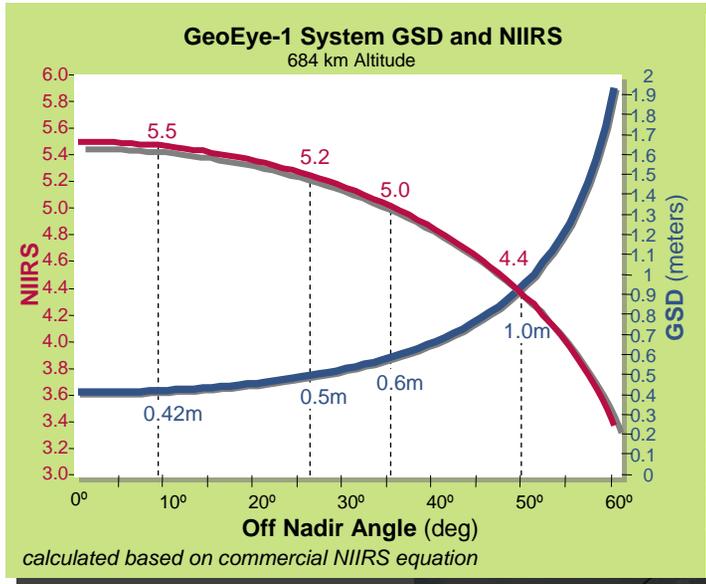
GeoEye Sets the Industry Standard

<i>Performance Parameter Orbit</i>	<i>GeoEye-1</i>	<i>NextView SOR</i> proposed
Altitude (km)	684 km	No specific value
<i>Image Quality</i>		
Bands	1-PAN Band 4-MSI Bands	PAN Band Sufficient MSI Bands
PAN GSD at Nadir	0.41m	0.5m (T)/.25(O)
MSI GSD at Nadir	1.64m	2.0m (T=O)
<i>Geolocation</i>		
CE90 Accuracy (No Ground Control)	<3m	SOR ANNEX value
<i>Collection Capacity</i>		
Swath Width @ Nadir	15.2 km	No specific value
Scene Size (km ²)	231 km ²	No specific value
Max Nadir PAN Mono Area Collect Rate	125 km ² /sec	70 km ² /sec (T) 119 km ² /sec (O)
Days to Collect 1-Deg Cell (30° Tilt; 30° Lat)	5 Days	No specific value
PAN Point Target Rate (50 km Spacing)	1,100 km ² /min 5 Points/min	No specific value

GeoEye exceeds 100% of NextView's threshold requirements



GeoEye-1 Quality: Superior even beyond 50° Off Nadir Angle

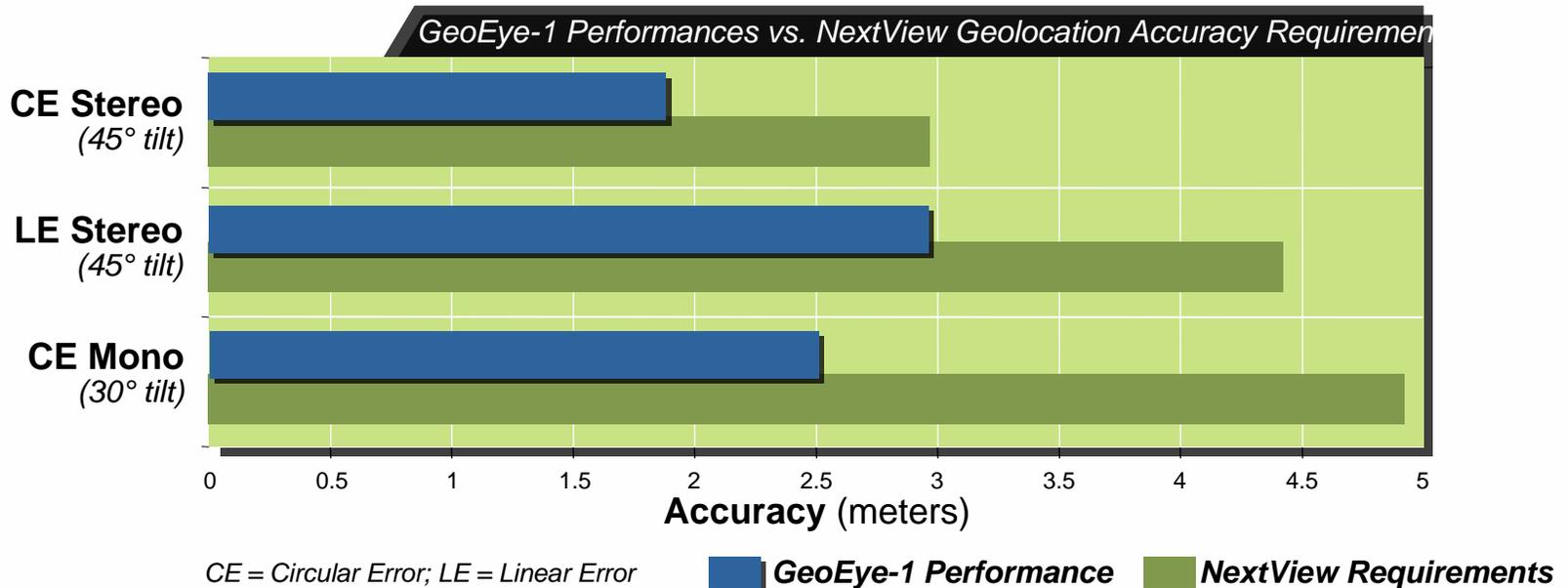


Achieves NIIRS 5.5 Off Nadir

GeoEye-1 Metric Accuracy:

Best Available Commercial Geolocation Design

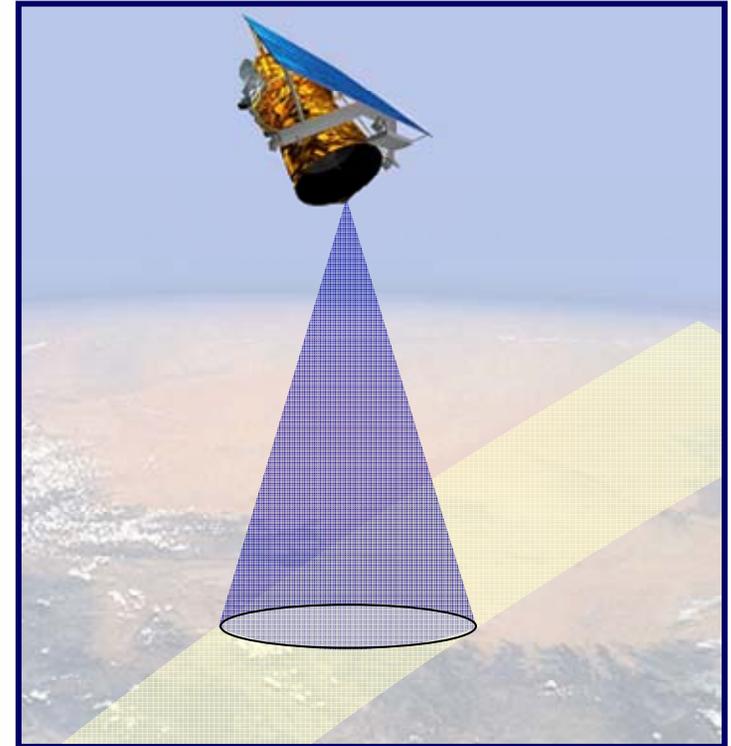
- System geolocation accuracy performance using only ancillary data produced by the satellite
 - No ground control points or other external data sources required
 - Single look mono and stereo



GeoEye-1 exceeds NGA geolocation accuracy requirements

Benefits of GeoEye-1 Approach

Features	Benefits
Proven spacecraft and design	<ul style="list-style-type: none">• Risk significantly reduced to implement upgrades to regional affiliates
Best-in-class GeoEye-1 team	<ul style="list-style-type: none">• Most advanced commercial earth imaging satellite
Uses best available sensors	<ul style="list-style-type: none">• Increased performance and reduced schedule to implement and test subsystems
Delta II launch vehicle	<ul style="list-style-type: none">• Proven performance launch reduces risk of launch failure



The GeoEye-1 program has the highest performance at the lowest risk

Thank You!