EVWHS FOR PGC USERS

Webinar Training

pgc

DigitalGlobe

A **MAXAR** COMPANY

How to access high-resolution satellite imagery directly online

OUTLINE:

Basic training for PGC Users to utilize EnhancedView Web-Hosting Service (EVWHS) provided by Maxar's DigitalGlobe and the National Geospatial-Intelligence Agency.

Background Information

- PGC Introduction
  - Products & Services, NextView License
- DigitalGlobe Overview
  - About Sensors, EGD, EVWHS

Live Demo

- Navigation Controls
- Bookmarks & Alerts
- Search & Ordering
- Useful Links

PGC Introduction

The Polar Geospatial Center is a polar science and logistics support organization at the University of Minnesota with core funding provided by the National Science Foundation's (NSF) Office of Polar Programs (OPP).

MISSION

- Domain and institutional knowledge to solve a broad range of polar geospatial problems

- Access to sub-meter commercial satellite imagery for the Antarctic and Arctic and the expertise to task, manage, process, and deliver high-level, value-added products

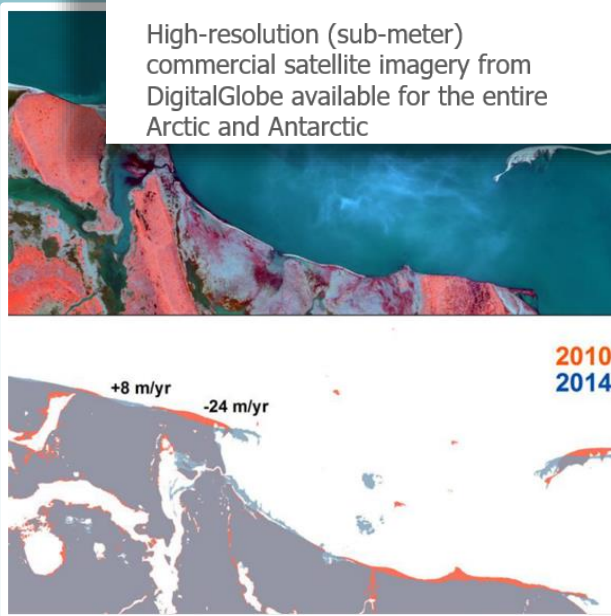- Educational courses and online material to transfer PGC's knowledge and experience to the community

PGC Products & Services

Satellite Imagery

High-resolution (sub-meter) commercial satellite imagery from DigitalGlobe available for the entire Arctic and Antarctic

Terrain Models

High-resolution Digital Elevation Models (DEM) derived from Stereoscopic DigitalGlobe imagery

Digital Maps

Historical and custom map products for logistics planning, field site selection, publications, reference, etc.

Geospatial Support

Advanced solutions and expertise for novel or challenging remote sensing and geospatial problems

PGC.UMN.EDU

PGC website provides exhaustive information about PGC: background, data, services, news, and tutorials.

Check out our growing online Guides section

pgc.umn.edu/guides

NextView License

LICENSE TERMS

- Imagery available for a U.S. Government purpose only (civilian researchers, contractors included)
- Derived Products (e.g. DEMs, NDVI, feature extraction) are <u>not</u> subject to the license, but must include acknowledgement
- Must not compete with the "commercial interest" or share publicly

USER REQUIREMENTS

- Supply proper copyright and acknowledgement
- Use for the intended purpose (project) only while actively funded

PGC'S ROLE

- Provide the imagery to NSF-OPP actively-funded researchers & contractors
- Provide approachable reference documentation (e.g. PGC Acknowledgement Policy, Imagery Eligibility, Usage Guidelines guides online)
- Coordinate "Public Release" approval with NGA (required)

DigitalGlobe Overview

IKONOS®	QuickBird®	WorldView-1®	GeoEye-1®	WorldView-2®	WorldView-3®
.82 meter resolution	.65 meter resolution	.50 meter resolution	.46 meter resolution	.46 meter resolution	.31 meter resolution
9 m CE90	23 m CE90	<4 m CE90	<3.5 m CE90	<3.5 m CE90	<3.0 m CE90

CURRENTLY IMAGING IN ORBIT

AVAILABLE VIA DIGITALGLOBE ARCHIVE through G-EGD

About:
DigitalGlobe, Inc., is a commercial satellite imagery company founded in 2001 and merged into the Maxar Technologies family in 2017. They are currently headquartered in Westminster, CO

Imagery Specifications:
- Resolution of 32-50 cm panchromatic and 1.2-2 m multispectral
- 4 and 8 multispectral bands in visible and near-infrared
- 17 km wide images up to 100 km long (postage stamps vs strips)
- Polar orbiting satellites with ~100 min orbits

Source: DigitalGlobe, Inc.

DigitalGlobe **G-EGD**
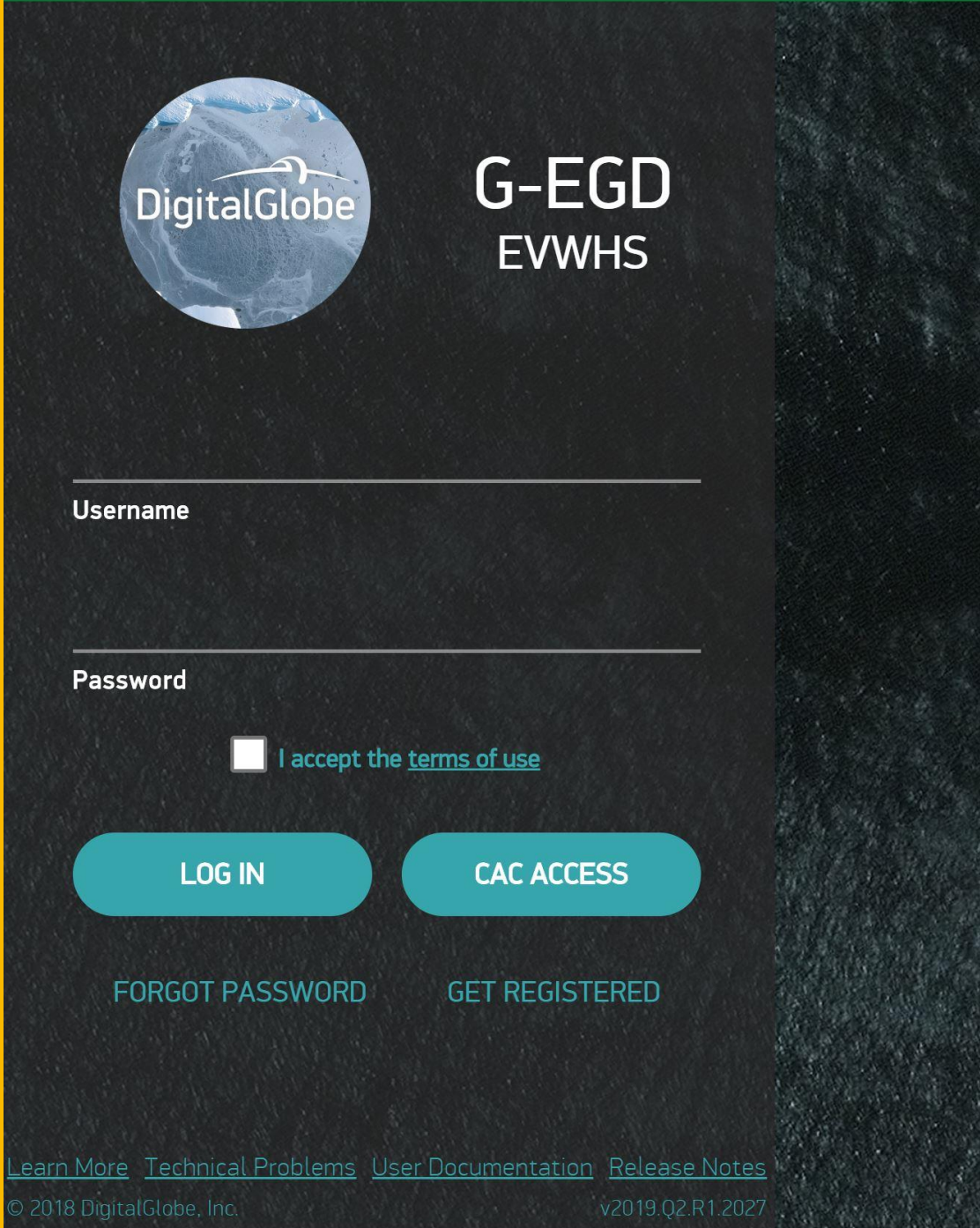## (Global Enhanced GEOINT Delivery)

- NGA sponsored program

- Generates millions of square kilometers of DigitalGlobe sub-meter satellite imagery products

- U.S. Government uses and purposes

- Began in 2009 as the Rapid Delivery of Online GEOINT (RDOG)

DigitalGlobe **EVWHS**
(EnhancedView Web-Hosting Services)

- Subscription service for EGD users to access DigitalGlobe sub-meter satellite imagery via web-based application

- Quickly and easily view, analyze and download DG data

- Access to over 900 million square kilometers of content, including DG archive

- Over 1 million square kilometers of new imagery coverage is added daily (often less than one hour from satellite acquisition!)

DigitalGlobe

G-EGD
EVWHS

_____
Username

_____
Password

☐ I accept the terms of use

LOG IN   CAC ACCESS

FORGOT PASSWORD   GET REGISTERED

Learn More   Technical Problems   User Documentation   Release Notes

Image Strips

- Global Daily Intake is 800-1,000 strips per day

- Cloud cover 50% equatorial, 35% elsewhere

- Typical delivery timeline

  Sometimes less than 15 minutes

  65% < 3 hours

  88% < 6 hours

  99% < 18 hours

Orthomosaics

- ¼ - full geocells

- UTM WGS84

- Cloud cover 5% or better

EVWHS CONTENT
Product Specs & Timelines

Accuracy

- Without Ground Control Points = CE90 at 6.429 m

- With Ground Control Points = CE90 at 4.054 m

DEMs Used

- SRTM90 (moving to SRTM30)

- USGS NED 30 m over CONUS & AK, NED 10 m over HI

- InterMap World30m, ASTER-based, north of 60°

WV Product Summary

Core Products	Accuracy Specifications			Processing			Geographic Availability
	CE90/LE90	RMSE	NMAS Scale	Radiometrically & sensor corrected	Georectified	Orthorectified	
System-Ready (Basic)	5 m*	2.3 m*	N/A	X			Worldwide
System-Ready (Basic stereo pair)	5 m*/5 m	2.3 m	N/A	X			Worldwide
View-Ready (Standard)	5 m*	2.3 m*	N/A	X	X		Worldwide
View-Ready (Ortho Ready Standard)	5 m*	2.3 m*	N/A	X	X		Worldwide
View-Ready (Ortho Ready Stereo)	5 m*/5 m	3.3 m	N/A	X	X		Worldwide
Map-Ready (Map Scale Ortho)	4.2 m	2.0 m	1:5,000	X		X	Worldwide, limited to fine DEM coverage (SRTM + USGS NED)
Map-Ready (Map Scale Ortho)	10.2 m	4.8 m	1:12,000	X		X	Worldwide, limited to fine DEM coverage (SRTM + USGS NED)
Map-Ready (Map Scale Ortho)	25.4 m	11.8 m	1:50,000	X		X	Worldwide, limited to fine DEM coverage (SRTM + USGS NED)

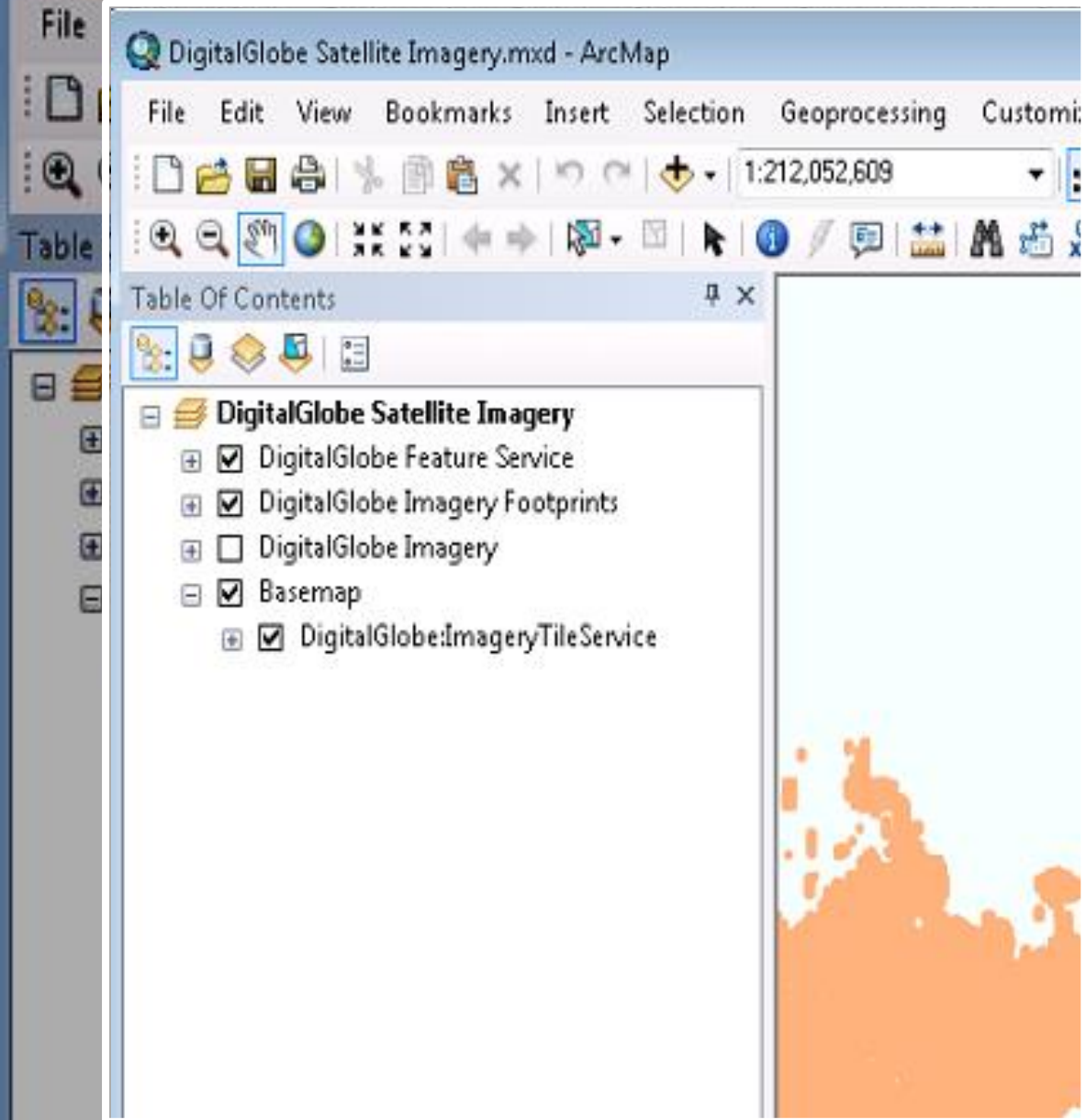Table 1: WorldView product summary

3rd PARTY Capabilities

OGC Services:

ESRI ArcMap, BAE GXP Explorer, Intergraph, GeoMedia, FalconView

Earth Services: GoogleEarth

USG Mobile Support

External Portal Integration

Source: DigitalGlobe, Inc.

EVWHS Account Registration

>> Account requests are made directly through DigitalGlobe (not PGC)

>> PGC serves as an access point for eligible PGC users (NSF-OPP or NASA Cryo)

LIVE DEMO

THANK YOU

Useful Links

PGC	https://www.pgc.umn.edu/
PGC Guides	https://www.pgc.umn.edu/guides/
PGC Commercial Imagery Usage Guidelines	https://www.pgc.umn.edu/guides/commercial-imagery/usage-guidelines/
PGC Acknowledgement Policy	https://www.pgc.umn.edu/guides/user-services/acknowledgement-policy/
PGC Citation & Publication Approval	https://www.pgc.umn.edu/guides/commercial-imagery/citation-and-publication-approval/
EVWHS Login	https://evwhs.digitalglobe.com
EVWHS User Documentation	https://gcs-docs.s3.amazonaws.com/EVWHS/Home.htm