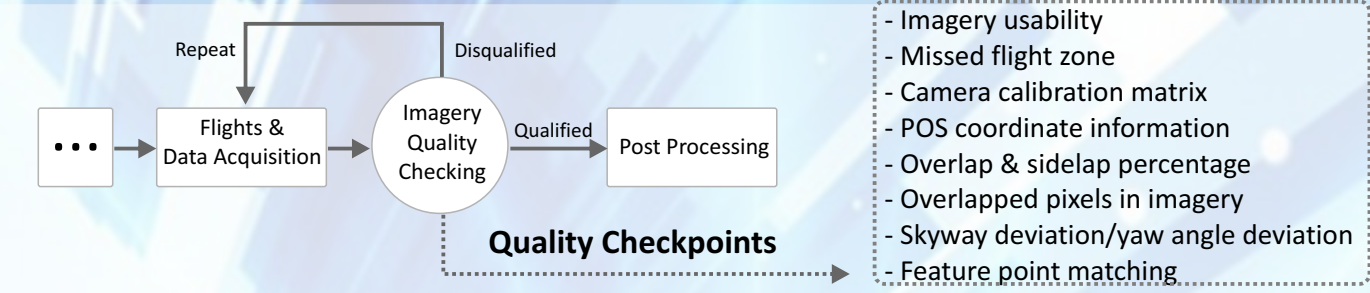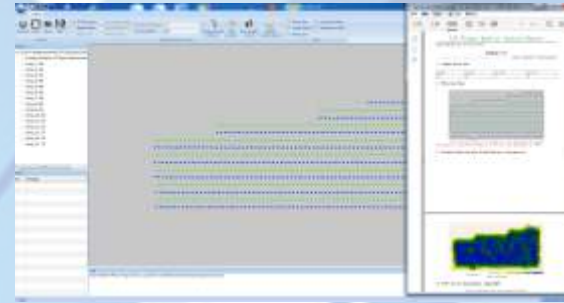## HIGHLIGHTS

✈ SkyPhoto-QC

◆ Designed for checking the qualifications of acquired aerial images for post processing
◆ Perfect to be used the first time after drone flights during fieldwork
◆ A time-saving and high-efficiency solution for both UAV pilots and post-processing handlers

Quality Checkpoints

- Imagery usability
- Missed flight zone
- Camera calibration matrix
- POS coordinate information
- Overlap & sidelap percentage
- Overlapped pixels in imagery
- Skyway deviation/yaw angle deviation
- Feature point matching

Flow: ··· → Flights & Data Acquisition → Imagery Quality Checking → (Qualified) → Post Processing; (Repeat / Disqualified)

✈ SkyPhoto-lite mosaicKing

- Specified for non-professional mapping purposes
- Camera self-calibration enabled to guarantee the output quality
- Several times faster than regular production, up to 2,000 images per hour
- Engineered to immediate response and full view expectation
- Precise distance or area calculation available in panoramagram

Cycle: 1 Flights & Data Acquisition → 2 Imagery Collection → 3 System Import → 4 Fast Mosaic → 5 Output Export

mosaicKing best for,

◇ Power Line Inspection
◇ Immediate Analysis & Response
◇ Traffic Control & Management
◇ Resources Investigation & Documentation
◇ Urban Planning & Management
◇ City Component Updates
◇ Environmental Protection & Monitoring
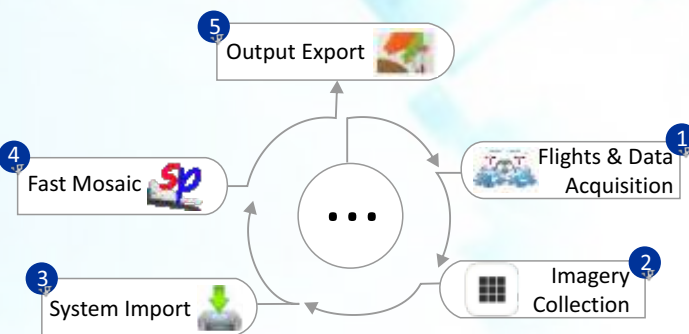
✈ SkyPhoto-advanced
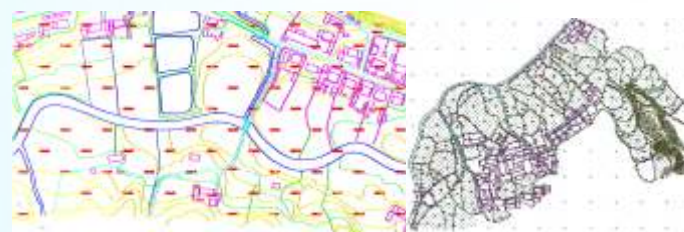
DLG (Digital Line Graph), one of the 4 modern digitized mapping productions, is a cartographic map feature represented in digital vector form.
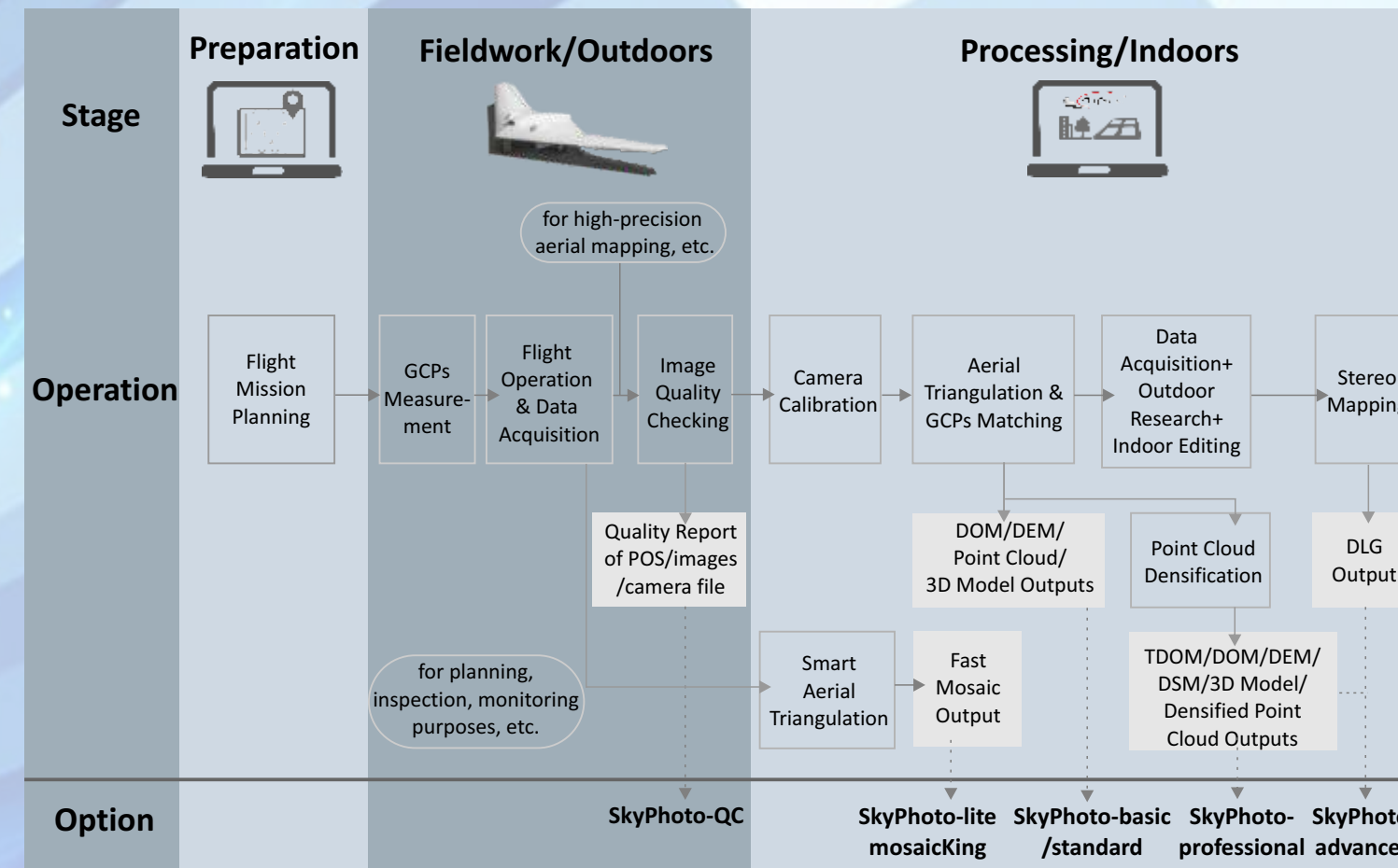
Being collected from geological survey maps and distributed in different scales, DLGs come in optional and Spatial Data Transfer Standard (SDTS) format and are topologically structured for use in mapping and Geographic Information System (GIS) applications. Handwheel and pedal are the typical tools for DLG production.

Handwheel & Pedal   DLG Production

WORKFLOW

Stage	Preparation	Fieldwork/Outdoors		Processing/Indoors		
Operation	Flight Mission Planning	GCPs Measurement	Flight Operation & Data Acquisition → Image Quality Checking	Camera Calibration → Aerial Triangulation & GCPs Matching → Data Acquisition+ Outdoor Research+ Indoor Editing	Stereo Mapping	
			Quality Report of POS/images /camera file	DOM/DEM/ Point Cloud/ 3D Model Outputs → Point Cloud Densification	DLG Output	
		for planning, inspection, monitoring purposes, etc.	Smart Aerial Triangulation → Fast Mosaic Output	TDOM/DOM/DEM/ DSM/3D Model/ Densified Point Cloud Outputs		
Option		SkyPhoto-QC	SkyPhoto-lite mosaicKing	SkyPhoto-basic /standard	SkyPhoto-professional	SkyPhoto-advanced

for high-precision aerial mapping, etc.

Option	SkyPhoto-QC	SkyPhoto-lite mosaicKing	SkyPhoto-basic	SkyPhoto-standard	SkyPhoto-professional	SkyPhoto-advanced
Definition	Pre-process QC	Fast mosaic	Basic functions	Standard functions	Full functions	Extra DLG productions
Camera Calibration	X	X	√	√	√	√
Aerial Triangulation Export	X	X	√	√	√	√
GCPs Input Adjustment	X	X	√	√	√	√
Point Cloud Densification	X	X	X	X	√	√
Volume/Area Calculation in Densified Point Cloud	X	X	X	X	√	√
Precise DEM Editing	X	X	X	X	√	√
TDOM Export	X	X	X	X	√	√
DLG Mapping	X	X	X	X	X	√
Output Types	Quality Report of POS/imageries/ camera file	Orthomosaic	Orthomosaic/DOM/ DEM/DSM/Point Cloud	Orthomosaic/DOM/ DEM/DSM/Point Cloud	Orthomosaic/DOM/DEM/ DSM/TDOM/Densified Point Cloud/Simple 3D Model	Orthomosaic/DOM/DEM/ DSM/TDOM/DLG/Densified Point Cloud/Simple 3D Model
Time Use Limitation	Lifetime	Lifetime	1 full year	Lifetime	Lifetime	Lifetime
Software Dongle	Required	Required	Required	Required	Required	Required
Upgrade Option	X	X	√	√	√	Top edition already
Upgrade Direction	No more upgrade	No more upgrade	Upgradeable to Standard/Pro./Adv.	Upgradeable to Pro./Adv.	Upgradeable to Adv.	Top edition already
Trial Edition	Available	Available	X	X	Available	X
Functional Level	★★	★★☆	★★★	★★★☆	★★★★	★★★★★

KOLIDA — Professional's Choice

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Tel: +86-20-22139033   Fax: +86-20-22139032
Email: export@kolidainstrument.com   market@kolidainstrument.com
http://www.kolidainstrument.com

SkyPhoto

A PROFESSIONAL DESKTOP SOLUTION FOR AERIAL PHOTOGRAMMETRY

KOLIDA — Professional's Choice

SKYSOLUTIONS

A Professional Desktop Solution for Aerial Photogrammetry

SKYSOLUTIONS

Co-developed with some professionals from Wuhan University, ranking top in Asia's geo-spatial industry area and academic field

A sophisticated solution with remarkable accuracy, flexibility, usability and productivity

Designed for transforming low-altitude aerial images or satellite imageries into digitized outputs

A highly-integrated system with modularized functionalities and intellectualized settings

Engineered to meet the demands of both specialists and beginners

A variety of specialized options for diverse marketing purposes

FEATURES

Smart Aerial Triangulation

The fast matching of feature points is very little restricted and quite friendly to tough cases with poor overlapping percentage, skyway deviation or sparse textures.

Sample

Optimized Matching Principle

The Semi Global Matching of Pyramid Hierarchical Principle (PH-SGM) plus the global optimization strategy contributes to feature points matching by pixels, layers, or images at high speed.
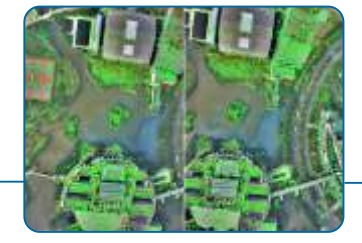
Camera Calibration Module
(tailored to high precision mapping)

An individual module for camera calibration, including system calibration and self-calibration, is perfect to deal with projective distortions and acquire spatial 3D information of the correlative 2D object coordinates.

Intelligent GCP Matching

The system automatically predicts the locations of all other GCPs after the 4 corner points are manually matched, from which you might go straight forward instead of spending much time finding the GCP marks from the original images.

Compatible Data Formats

A variety of the impressive deliverables (.tif/.dxf/.dat/.xyz/.las/.obj/.wrl/...) are available, which are compatible to other professional mapping/GIS/VR/BIM/IDS software (AutoCAD, 3DMax, Civil3D, Revit, ReCap, Infraworks, etc.) popular on the market.

esri · QGIS · AUTODESK · Google Earth · Global Mapper · CloudCompare · euclideon · inpho · erdas · PATB

DLG Mapping Production

The DLG module in SkyPhoto-advanced is particularly developed for line graphic mapping productions, which are demanded to keep the geo-spatial interrelationship and related property information of all elements.

Systematic & Integrated Approach

The software offers a one-stop solution of generating consistent and accurate orthomosaic, point cloud, DEM, DSM, DOM, TDOM, DLG, etc. that all you need for data productions.

Extremely Fast Computation

A novel algorithm and multi-core parallel processing method comes up with efficiency optimization for the digitized productions, especially suitable for mass data.
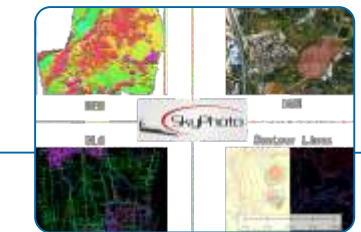
True DOM Output

TDOM, modeled from the rectified DSM, presents more comprehensive and precise geo-referenced information to better demonstrate the true terrain and ground objects. The software can output TDOMs after point cloud densification, yet no manual corrections are required.

Interactive Operation Performance

The outputs are further editable for refined effects as the system provides plenty of human-computer interactive interfaces, like DEM/DOM edit, etc.

System Requirements		Desktop	Laptop
Operating System		64-bit Win7/Win10 Professional Edition	
Recommended Configuration	CPU	64-bit Intel multi-core processor, i7 or E series	
	RAM	16 GB or above	
	Hard Disk	2 TB or above	1 TB or above
	Graphics Card	NVIDIA GeForce GTX 750 or above	NVIDIA Quadro Series (preferable) / NVIDIA GeForce GTX 960M or above
Minimum Configuration	CPU	64-bit Intel multi-core processor, i5 series	
	RAM	8 GB	
	Hard Disk	1 TB	500 GB
	Graphics Card	NVIDIA GeForce GTX 480	NVIDIA GeForce GT 940Mx

OUTPUTS

Contour Lines

DEM

DSM

Point Cloud

3D Model

Orthomosaic

DOM

TDOM

DLG