

HI-TARGET

Surveying the world, Mapping the future.

Mobile Mapping System for Road Reconstruction and Expansion

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Marketing Director



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- 02** Artificial measurement vs MMS Measurement
- 03** Highway projects overview + MMS workflow
- 04** Hi-Target MMS

01

The introduction of Hi-Target

Hi-Target Overview



Established in 1999



Guangzhou HQ



Stock code:300177

16

Subsidiaries

28

Branches

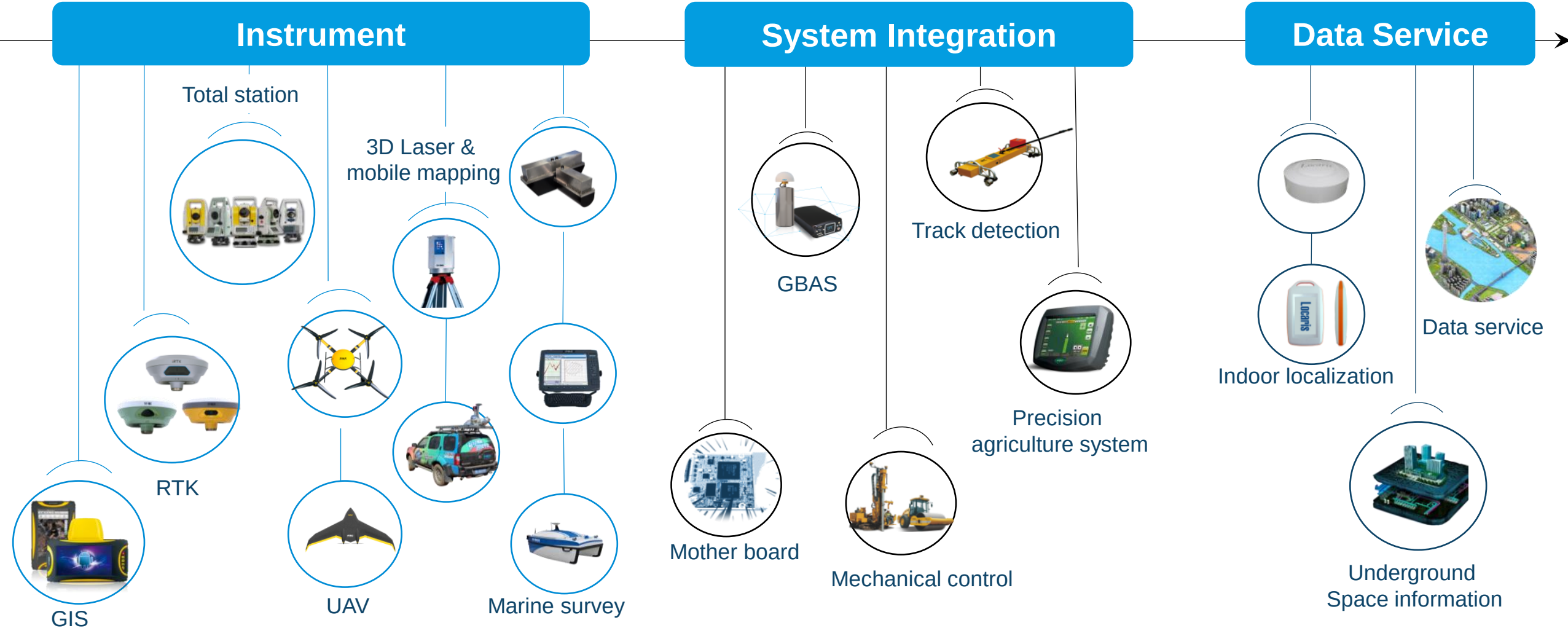
100+

Partners

2000

Staff

Enrich the Business Layout



02

Traditional measurement & MMS measurement comparison

Point by point

VS

Mobile Mapping System

1.01 million points
per second





Tradition VS New Tech

	RTK	MMS	Comment
Data logging efficiency	5km/day	100km/day	Final results of LiDAR data up to 1 - 2cm
Acquire point	Vertical interval 20m, 6 points per sqm	Horizontal and vertical spacing up to 5cm	
Number of feature points	1,500	Point cloud	
Result type	Feature points	Point cloud Features: (Points, lines, polygons along with images) & road modeling	

03

Projects overview+ MMS workflow



Application of 3D Laser Products in Highway Reconstruction and Expansion

GNSS Device
IMU

Absolute Coordinate
and attitude

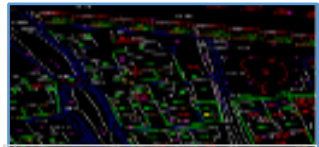
Laser Device
Panorama Camera

Point cloud

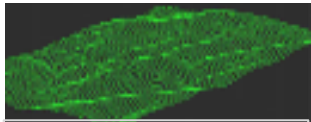
Panorama pictures

Data fusion

Basic post processing



Topography



Virtual 3D

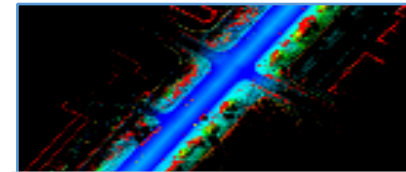


Real View

Deep post processing



Panorama pics



Point cloud

Project Overview



The highway in east of Delhi

This road has rugged road surface

This road will be converted from four lanes to six lanes

Preparation before Collection

Set the base station



Control points collection

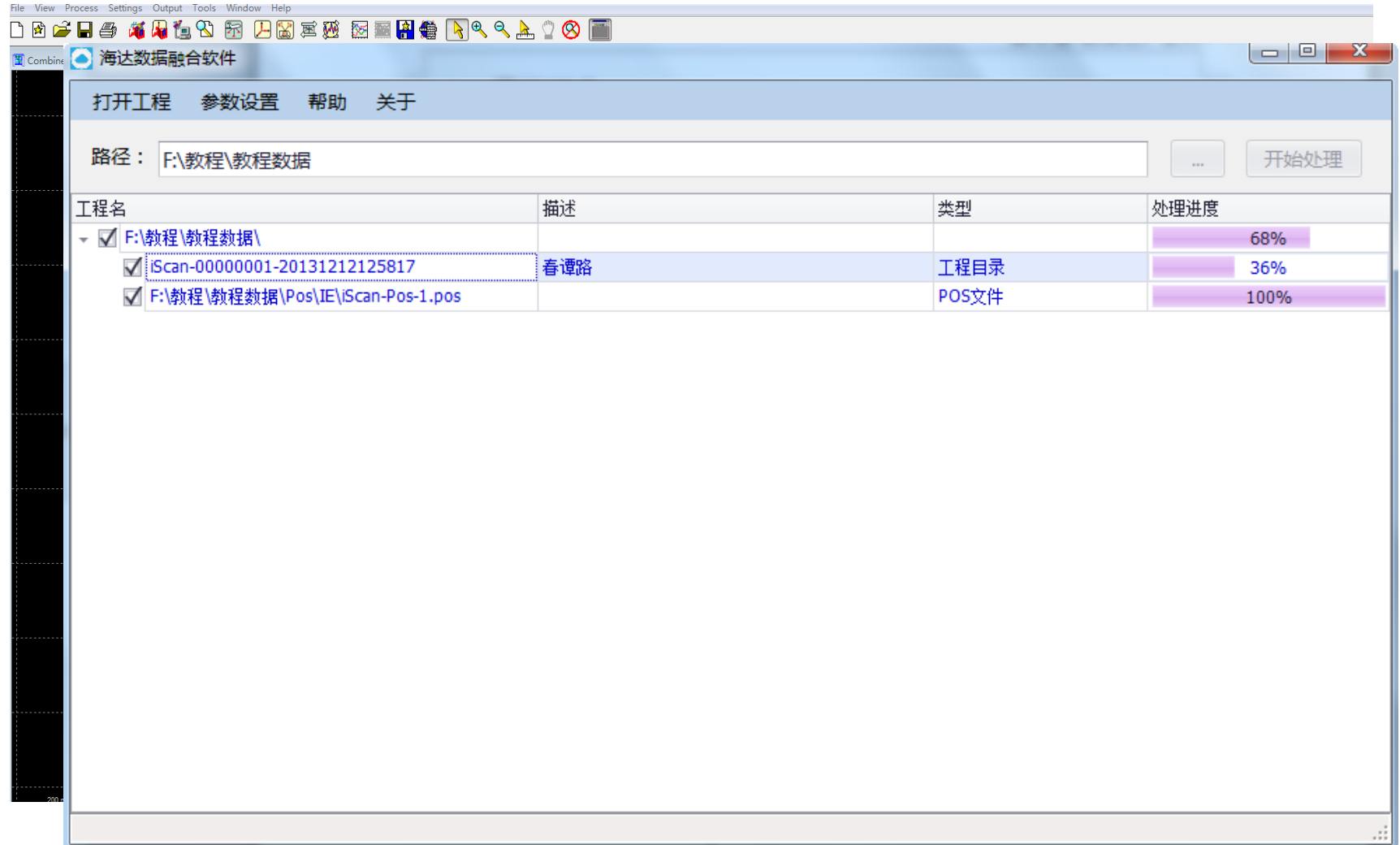


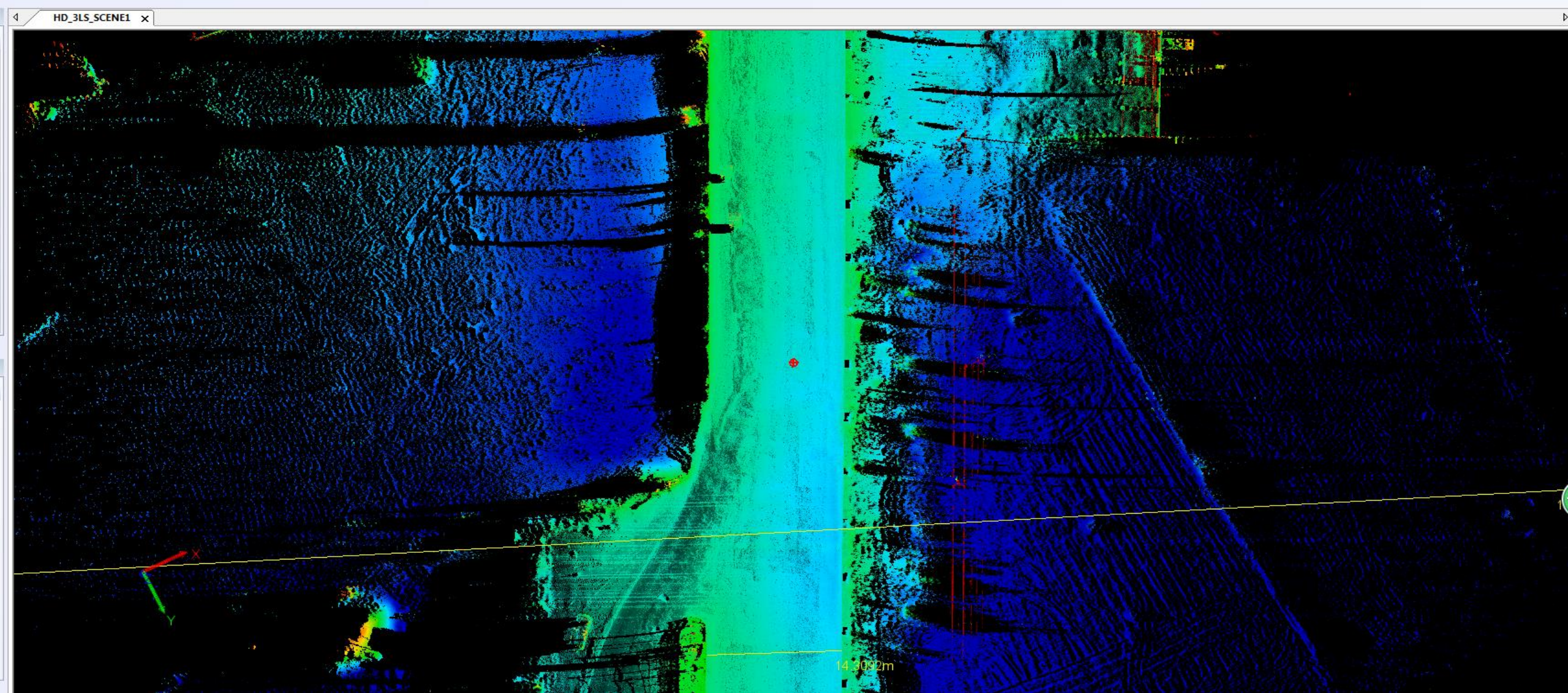
Data Collection---HiScan-S MMS



Data preprocessing

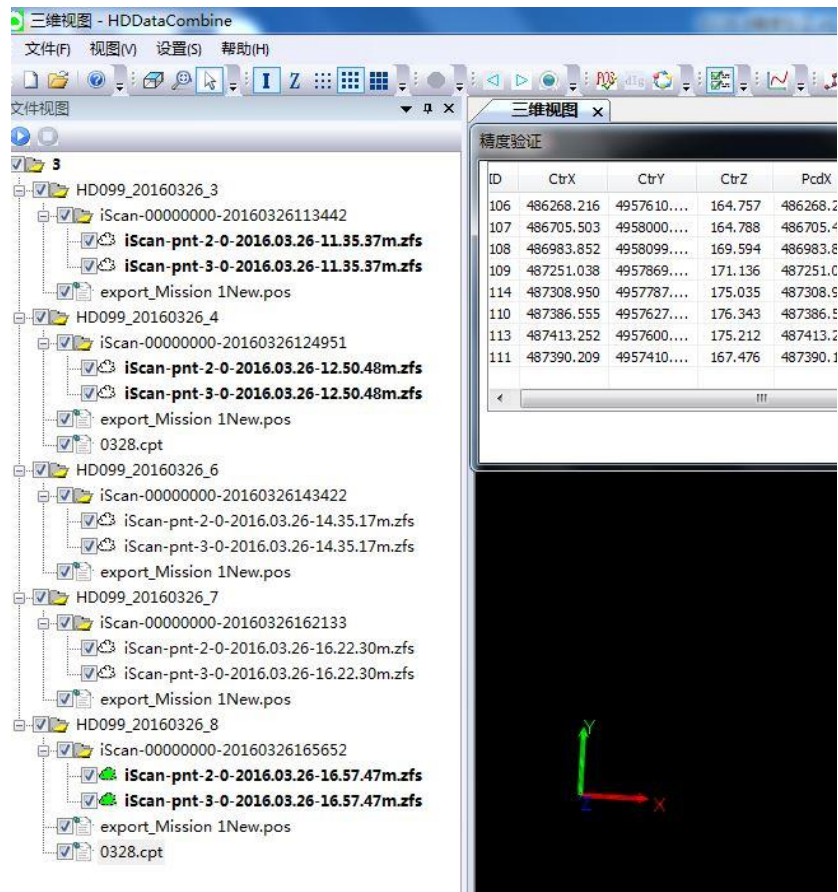
- ◆ POS solution
- ◆ Data fusion





High precision and high density point cloud data

Accuracy verification



HI-TARGET Accuracy Verification Report Surveying the World, Mapping the Future -Dehli 2017.05.10									
No	Points cloud coordinate			Control points coordinate			Residual Error		
	pX(m)	pY(m)	pZ(m)	cX(m)	cY(m)	cZ(m)	dX(m)	dY(m)	dZ(m)
11	689725.661	3145435.139	171.349	689725.666	3145435.156	171.337	0.005	0.017	-0.012
10	689855.827	3145230.069	171.867	689855.841	3145230.057	171.844	0.014	-0.012	-0.023
9	689853.698	3145185.607	171.793	689853.687	3145185.631	171.813	-0.011	0.024	0.02
8	689965.299	3145019.596	171.529	689965.302	3145019.592	171.508	0.003	-0.004	-0.021
7	689957.363	3144983.393	171.5	689957.372	3144983.41	171.503	0.009	0.017	0.003
6	690127.408	3144715.228	171.626	690127.402	3144715.224	171.607	-0.006	-0.004	-0.019
5	690105.552	3144698.644	171.565	690105.564	3144698.646	171.539	0.012	0.002	-0.026
4	690216.147	3144549.578	171.795	690216.139	3144549.563	171.783	-0.008	-0.015	-0.012
3	690214.353	3144495.65	171.892	690214.359	3144495.661	171.879	0.006	0.011	-0.013
2	690350.453	3144296.485	172.117	690350.448	3144296.506	172.09	-0.005	0.021	-0.027
1	690345.021	3144258.651	172.434	690345.022	3144258.693	172.433	0.001	0.042	-0.001
12	690517.869	3143986.666	173.202	690517.87	3143986.672	173.223	0.001	0.006	0.021
13	690643.562	3143721.9	174.752	690643.566	3143721.886	174.735	0.004	-0.014	-0.017
18	691290.15	3142258.719	181.839	691290.145	3142258.714	181.823	-0.005	-0.005	-0.016
AVG							0.001	0.006	-0.01
SD							0.007	0.016	0.015
RMSE							0.007	0.017	0.018

Accuracy verification

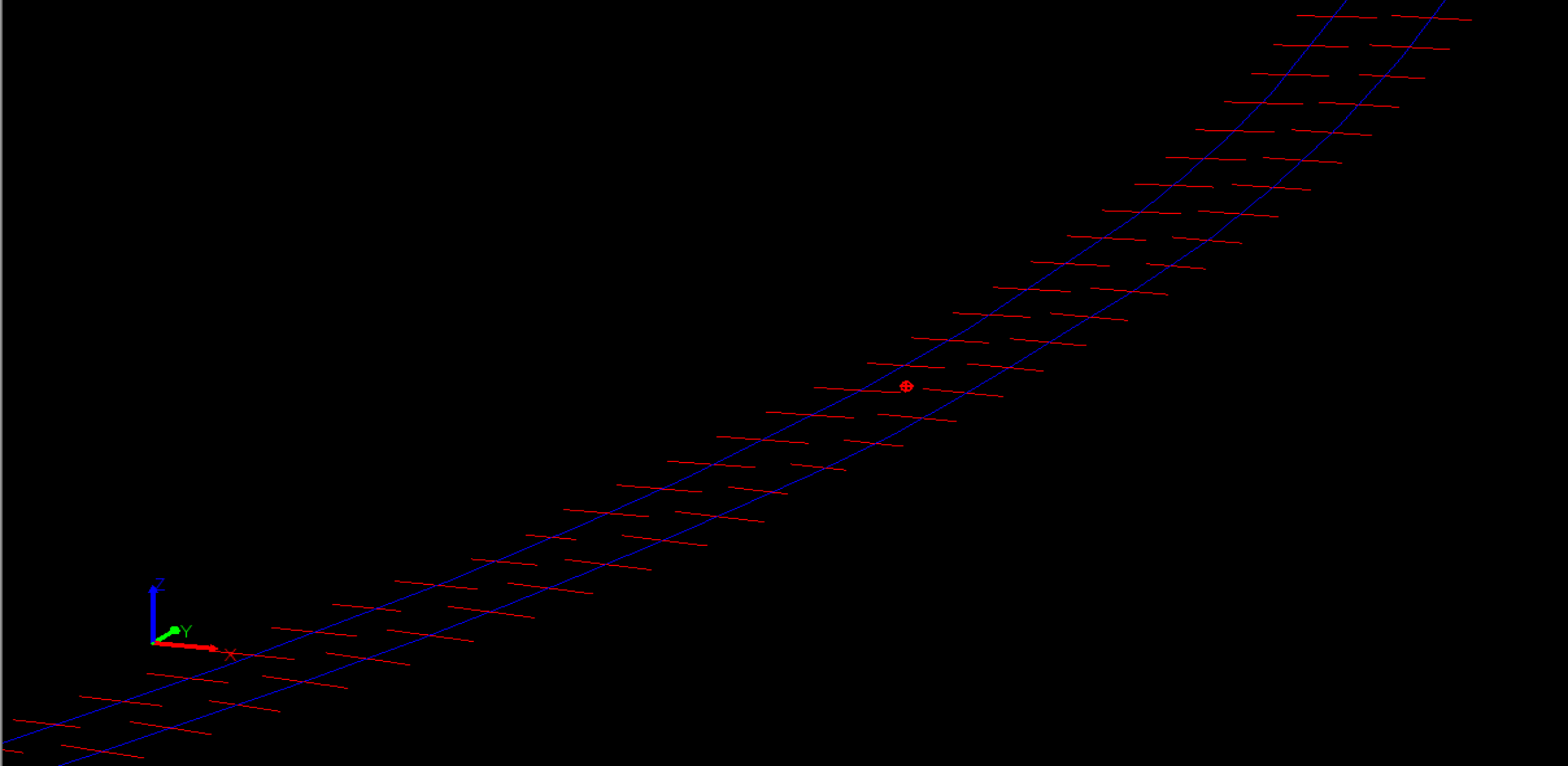
HI-TARGET <i>Surveying the World. Mapping the Future</i> Accuracy Verification Report -Dehli 2017.05.10									
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POS Rectification - Elevation correction

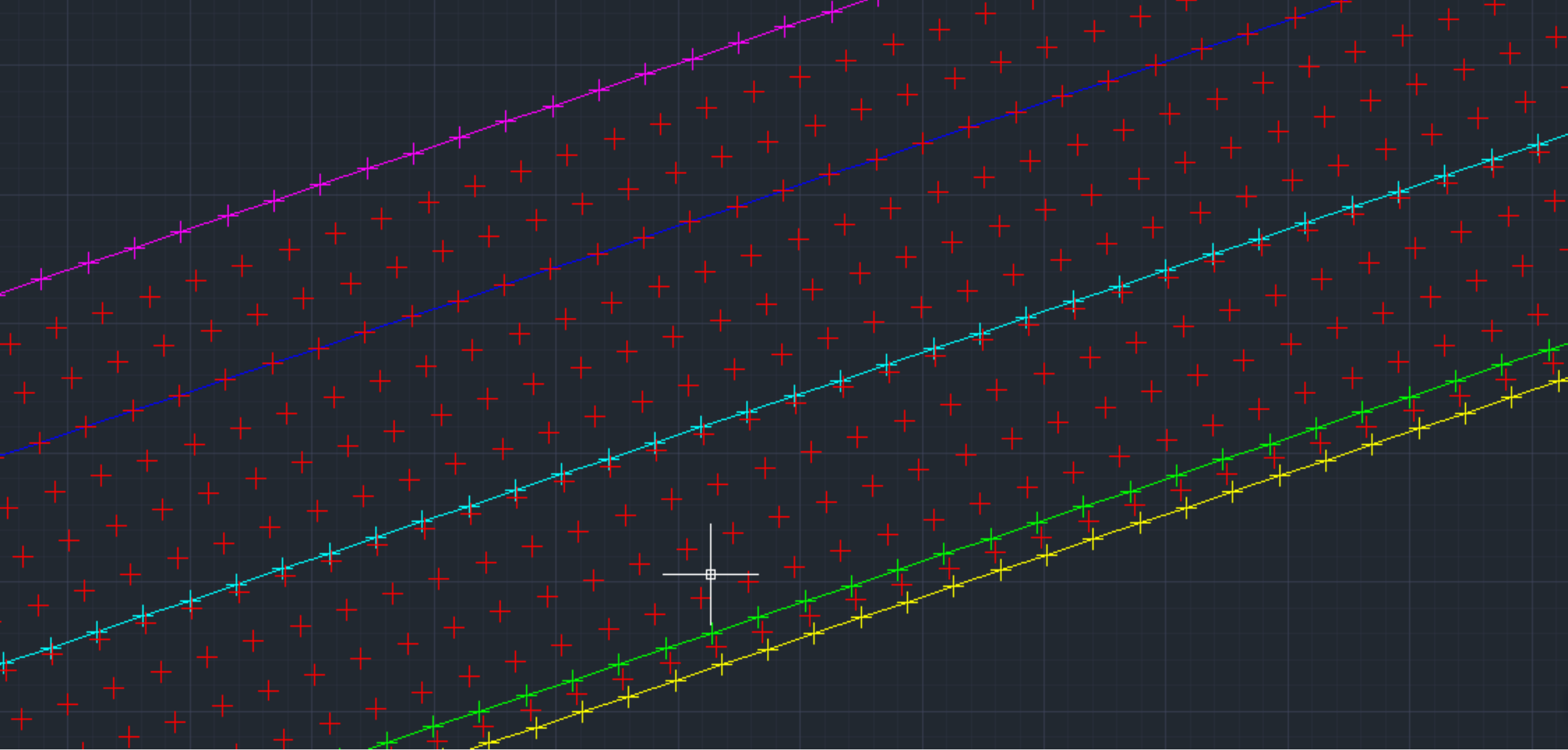
Elevation Accuracy Correction

Production data – Data extraction

Extraction of Road Cross Section



Data production –Cross and Vertical section

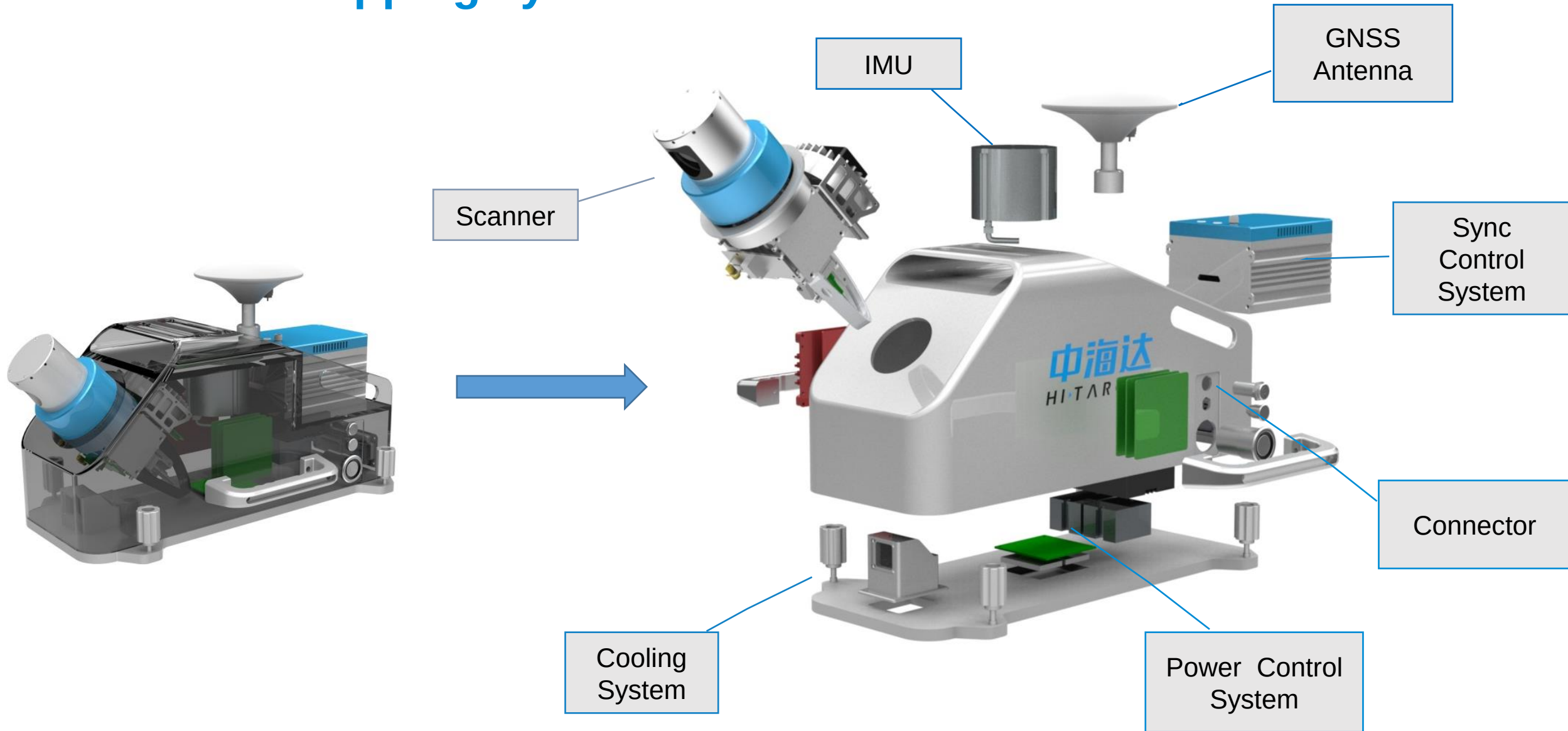


Production data- Road characteristic points and lines

03

Hi-Target Mobile Mapping System

►► Mobile Mapping system



Hi-Target Mobile Mapping system

With laser scanners, Inertial Measurement Unit, Distance Measurement Instrument on a platform to acquire accurate and precise spatial data, Mobile Mapping System is changing the way of surveying and Mapping.



HiScan-S



HiScan-C



HiScan-STM

HiScan-S High accuracy MMS



Up and down



High accuracy



High density

HiScan-S MMS

Technical Specification

Maximum Measuring range

119m*2 sides

Scanning frequency

1.01 million points/sec

Scanning speed

200HZ

Scanning angle

360°view

Panoramic resolution

30 million pixels

Absolute accuracy

Up to 1-2cm

Data storage

480G

HiScan-C MMS

(Laser scanner made by Hi-Target)



HiScan-C MMS

Main specification

Maximum Measuring range

500m* 2 sides

Scanning frequency

500, 000/1,000,000 points/sec

Scanning speed

200HZ

Scanning angle

360°

Panoramic resolution

30 million pixels

Absolute accuracy

Up to 5cm

Data storage

480G

Application



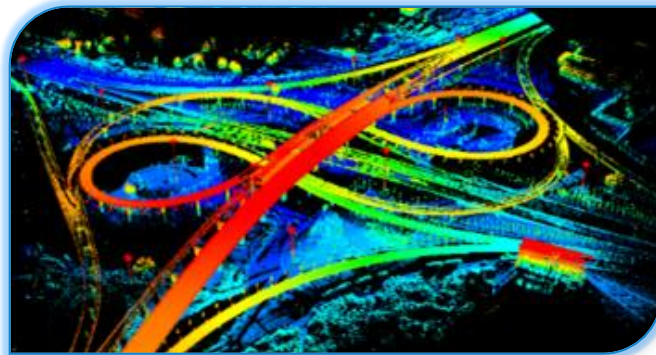
Internet
Panorama



Digital landscape



Digital city management



Digital transportation



Digital waterway and Coastal

THANKS

HI-TARGET

Surveying the world, Mapping the future.



For further information , please visit the website or Facebook.