

Applications of SuperMap GIS Enhanced by AI & Big Data

Bill Li

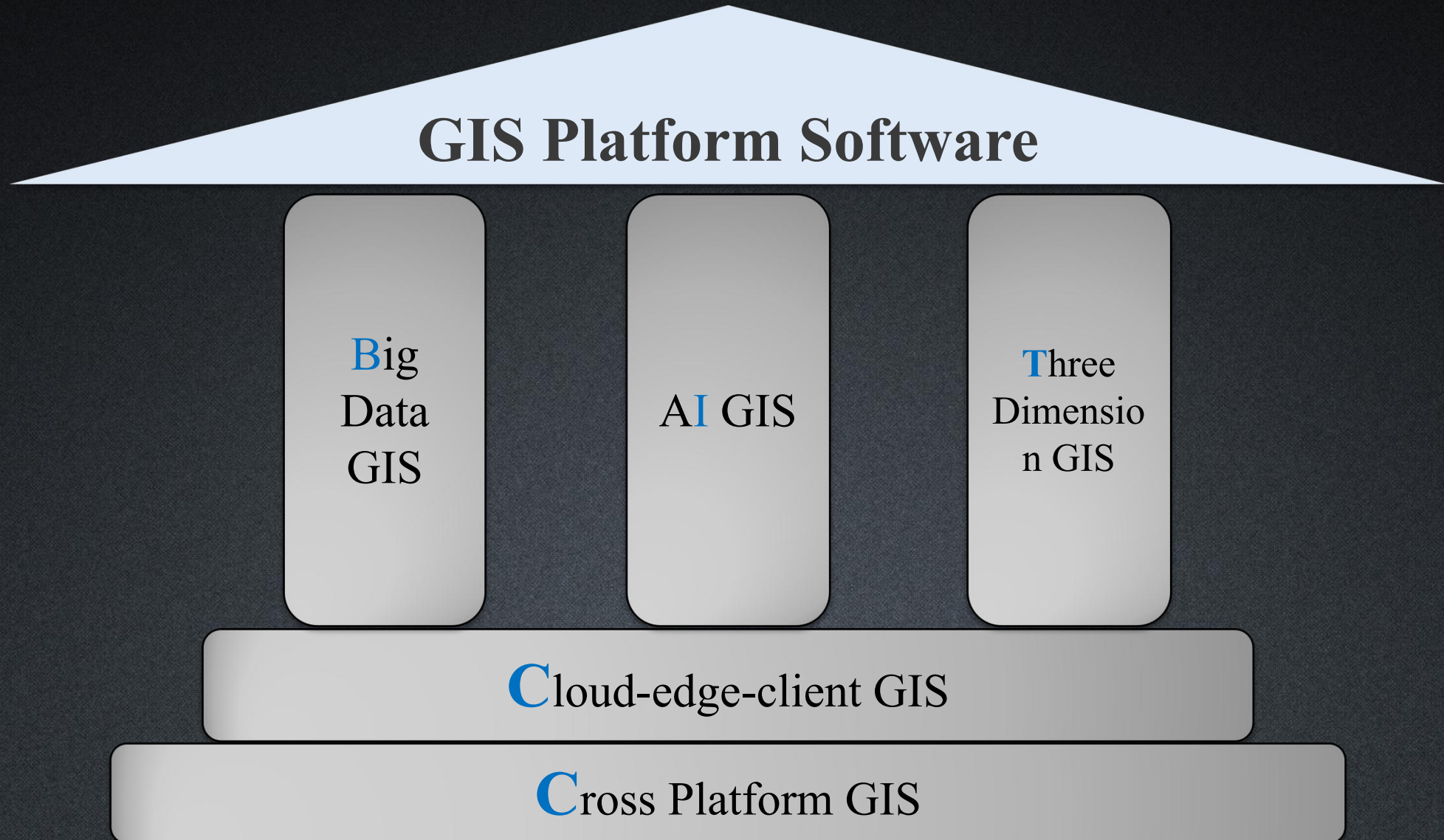
Technical Support Engineer

SuperMap Software Co., Ltd

Content

- Brief Introduction of SuperMap Technologies
- Big Data Enhances Smart City
- AI Helps in Object Detecting
- Big Data+AI Improves Data Processing

5 Technologies of GIS Platform Software(BitCC)



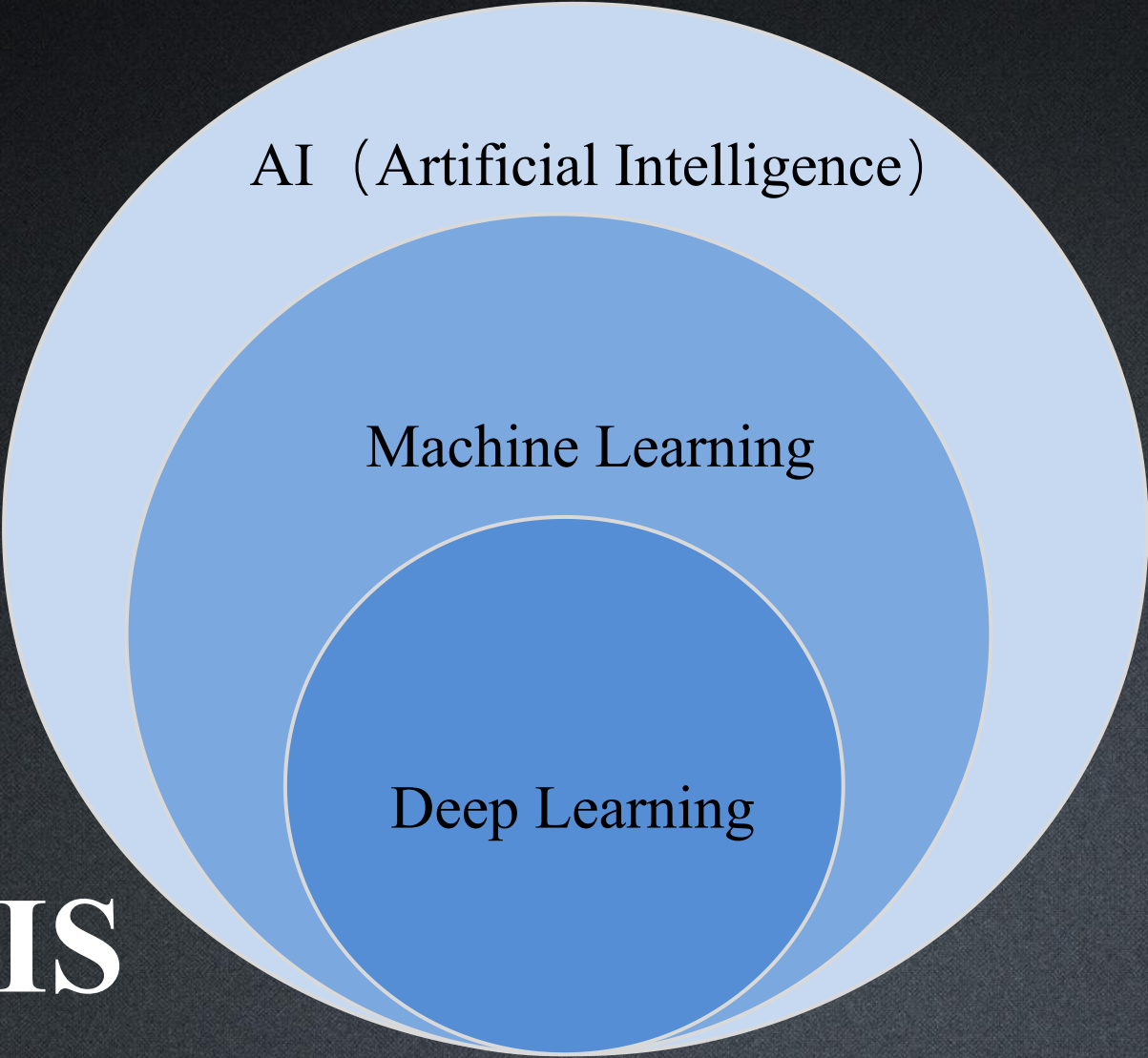
Big Data GIS



Cloud GIS

Big Data GIS
Support Technology

Cross-platform GIS



AI (Artificial Intelligence)

The diagram consists of three concentric circles. The outermost circle is light blue and labeled 'AI (Artificial Intelligence)'. Inside it is a medium blue circle labeled 'Machine Learning'. Inside that is a dark blue circle labeled 'Deep Learning'. This illustrates that Deep Learning is a subset of Machine Learning, which is a subset of Artificial Intelligence.

Machine Learning

Deep Learning

AI+GIS



New Generation of Three Dimensional GIS

New Generation of 3D GIS Application

WebGL

VR

3D Printing



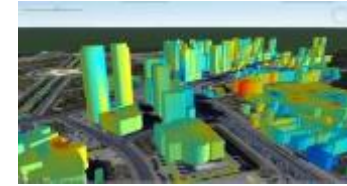
Oblique Photogrammetry



BIM/CIM



Point Cloud



3D Field



3D Terrain



Manual Modeling



Symbolic 3D Scene



Underground Pipeline

2D & 3D Integration Technology

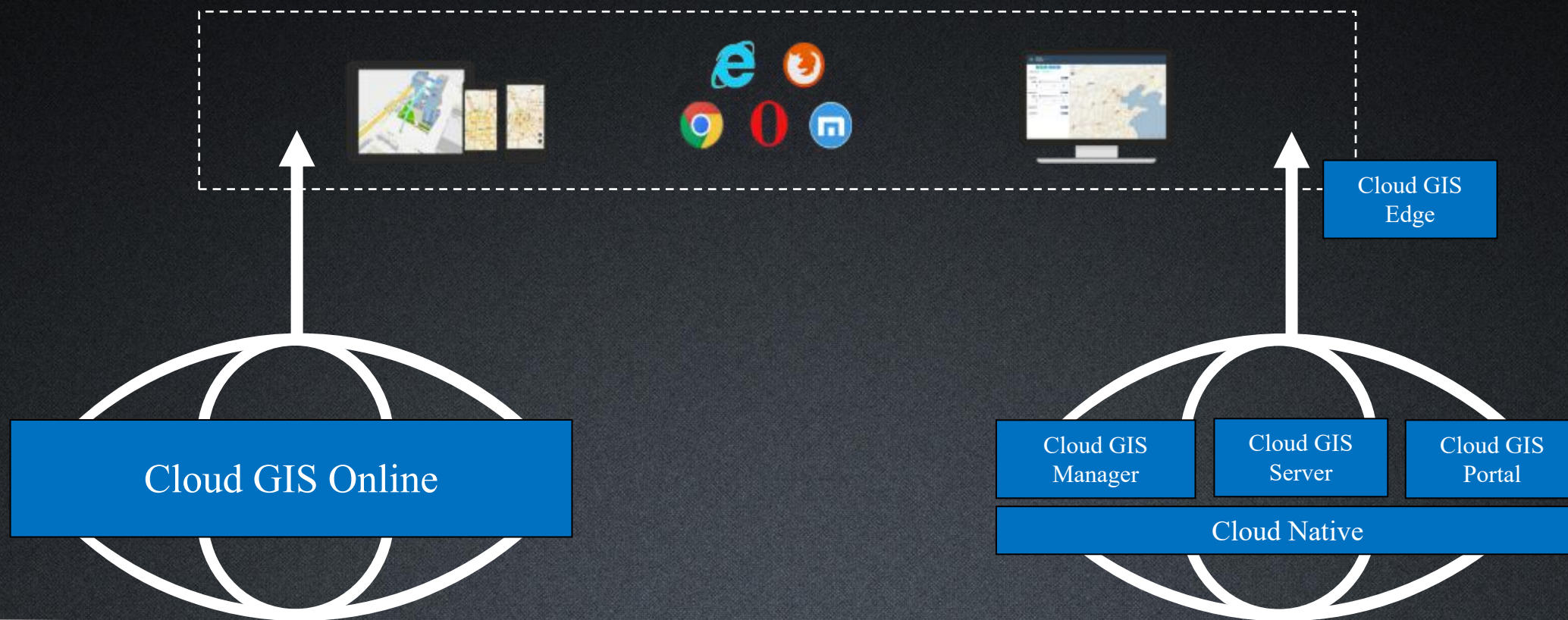
data model

scene construction

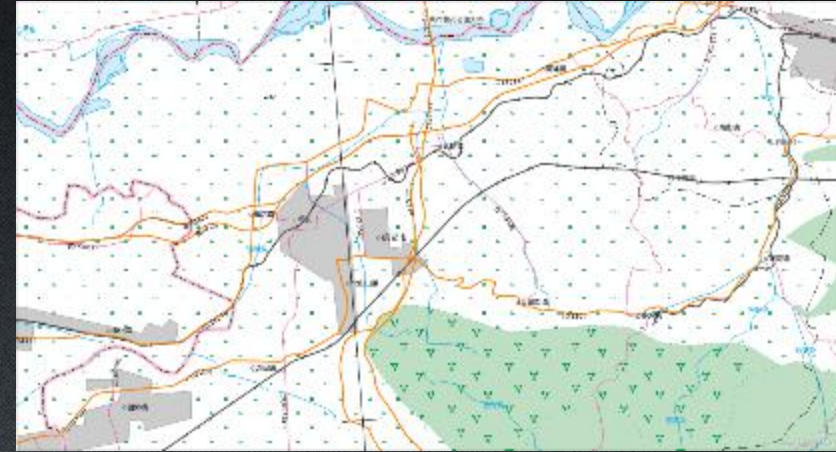
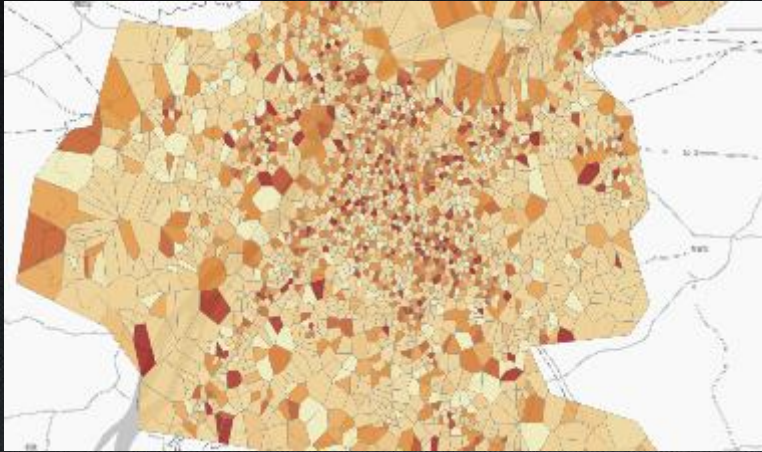
spatial analysis

software form

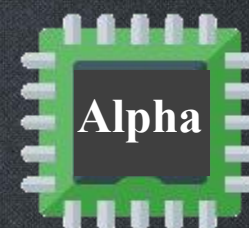
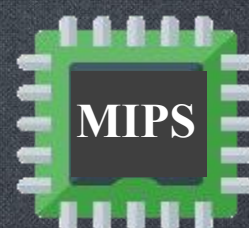
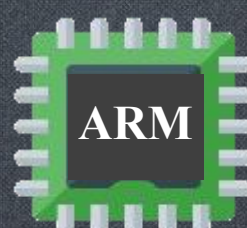
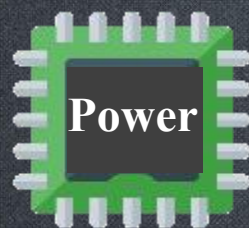
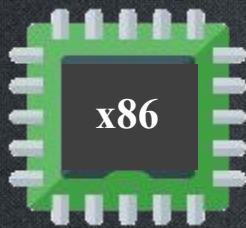
Cloud & Terminal Integration GIS



Cross-platform GIS



SuperMap GIS



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How to Make a City “Smart”?



Vehicle



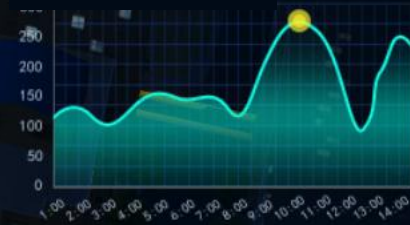
- 今日围栏预警 0 (辆)
- 今日未登记预警 13 (辆)
- 未获取GPS车辆 41 (辆)



AQI



Population



Cases



AI Video



Public Issues



二维 三维

Case
Car Accident
2020-03-27 17:15:37



SuperMap

Cases



AI Video



Public Issues



二维 三维



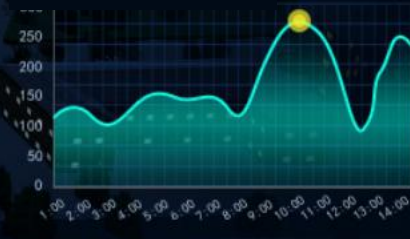
Vehicle



AQI



Population



SuperMap

Cases



AI Video



Public Issues



二维 三维

Traffic Offence

车 牌 号: [模糊] 预警时间: 2020-03-20 11:54:23
抓拍地点: [模糊]

案卷详情 实时画面 历史画面



Vehicle



今日围栏预警 0 (辆)

今日未登记预警 13 (辆)

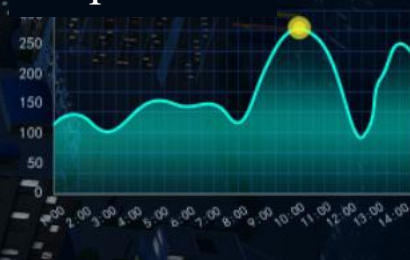
未获取GPS车辆 41 (辆)



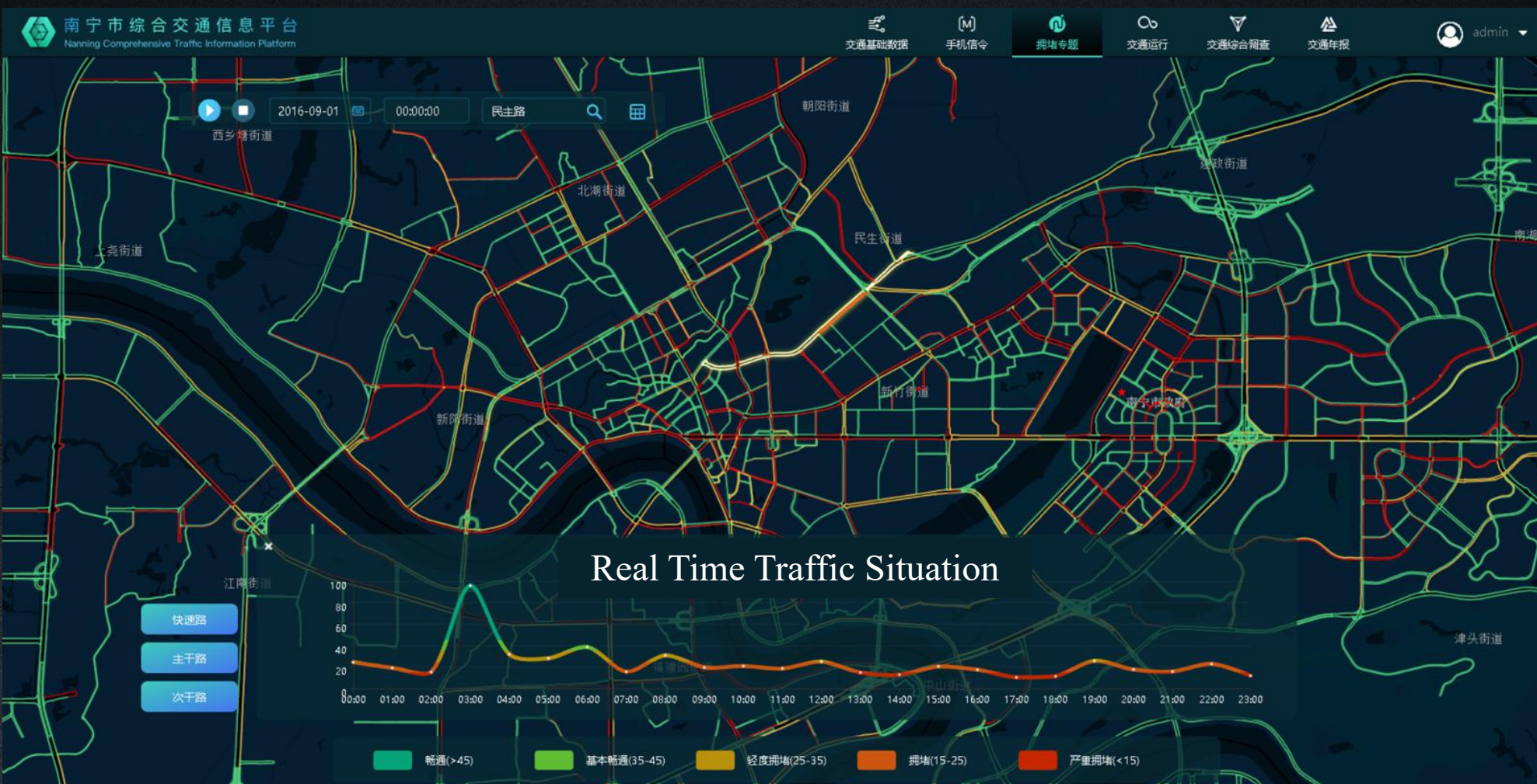
AQI



Population



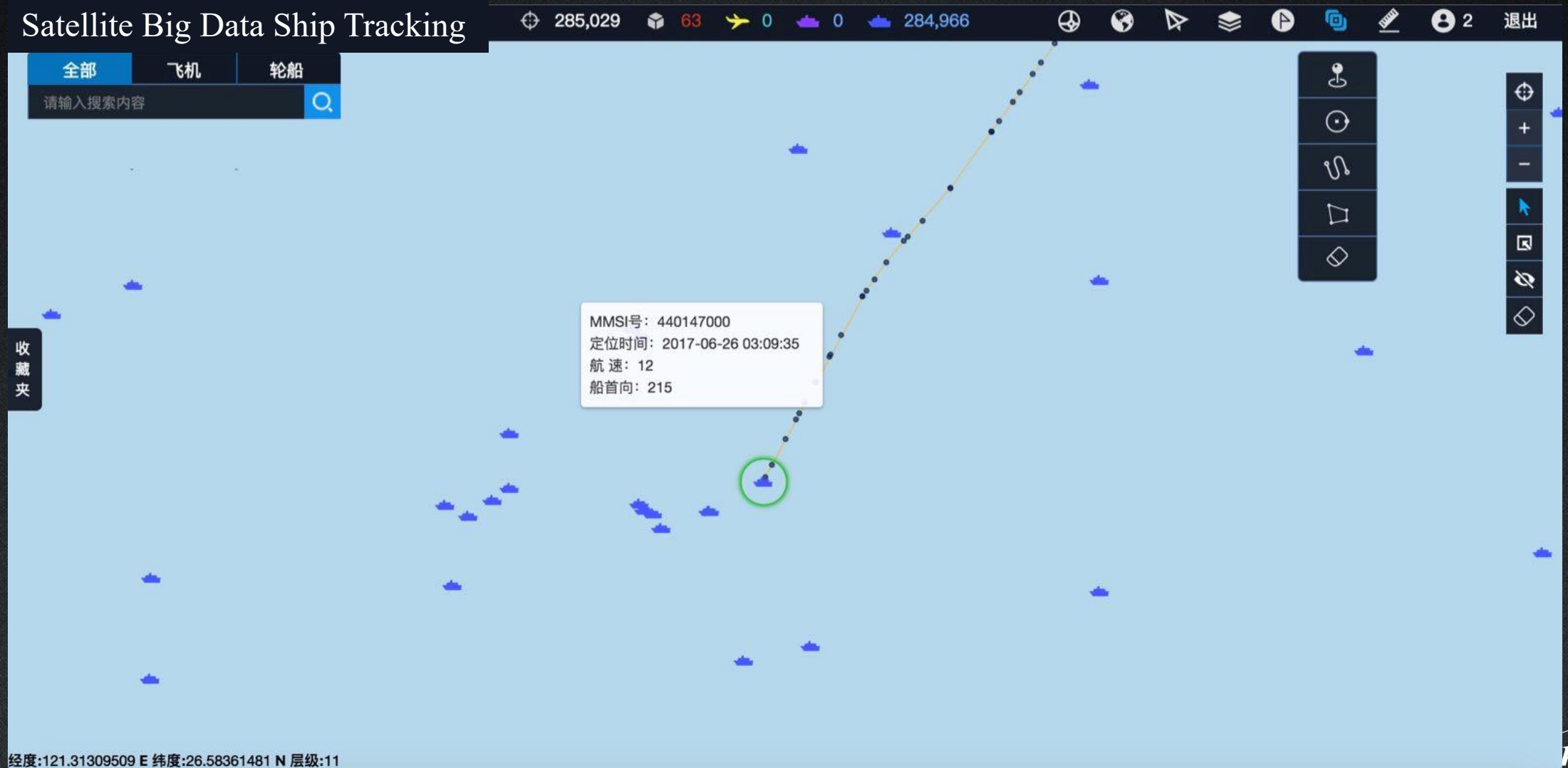
SuperMap

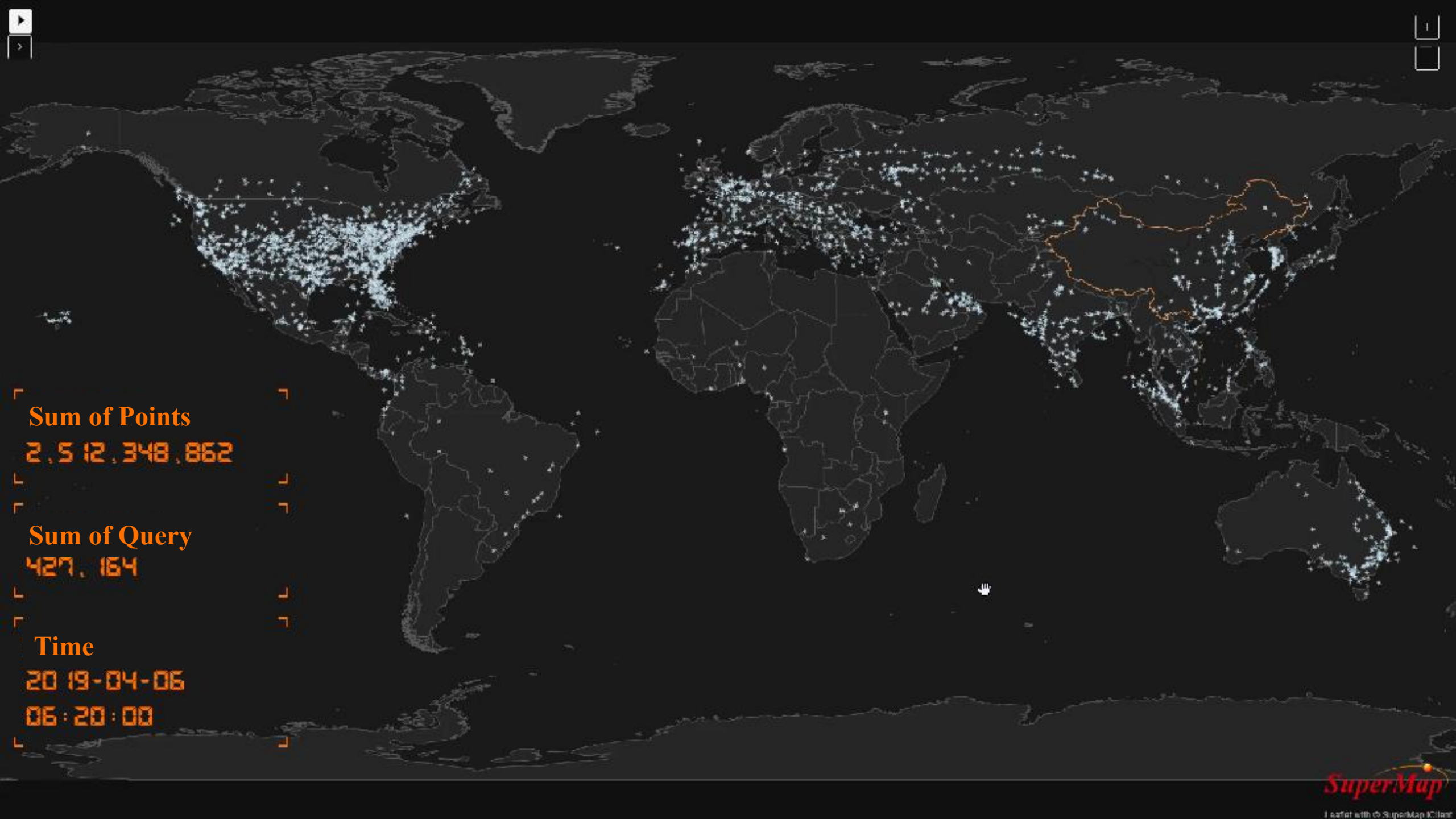


City 3D Traffic Simulation



Ship Big Data System





Sum of Points

2,512,348,862

Sum of Query

427,164

Time

2019-04-06

06:20:00



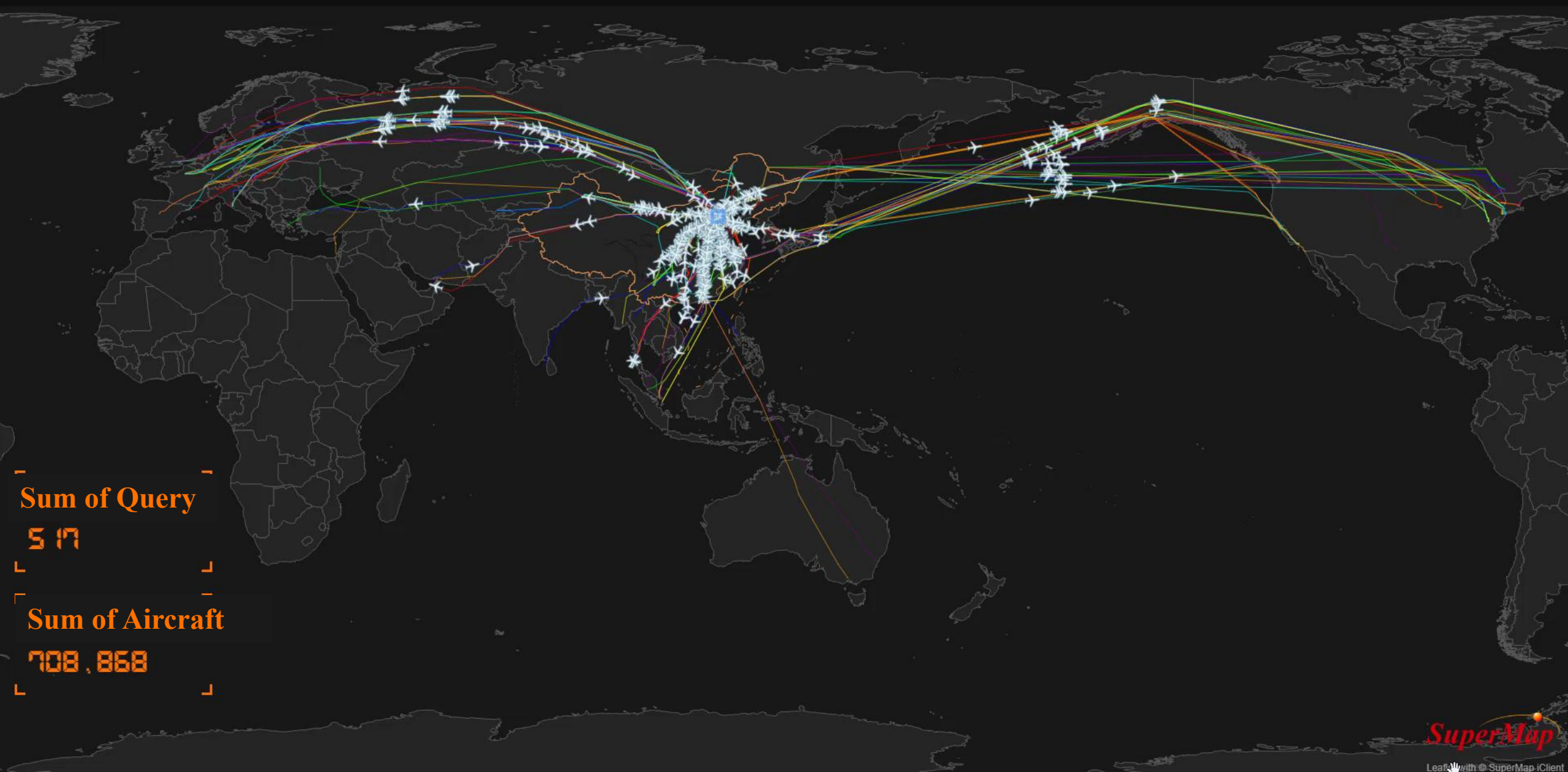
2019-04-01

12:00

15分钟



绘制



Sum of Query

517

Sum of Aircraft

708,868

What Did Big Data Do for Us?

- Process big quantity of data
- Process real time data
- Integrate multiple data source
- Update data easily
-

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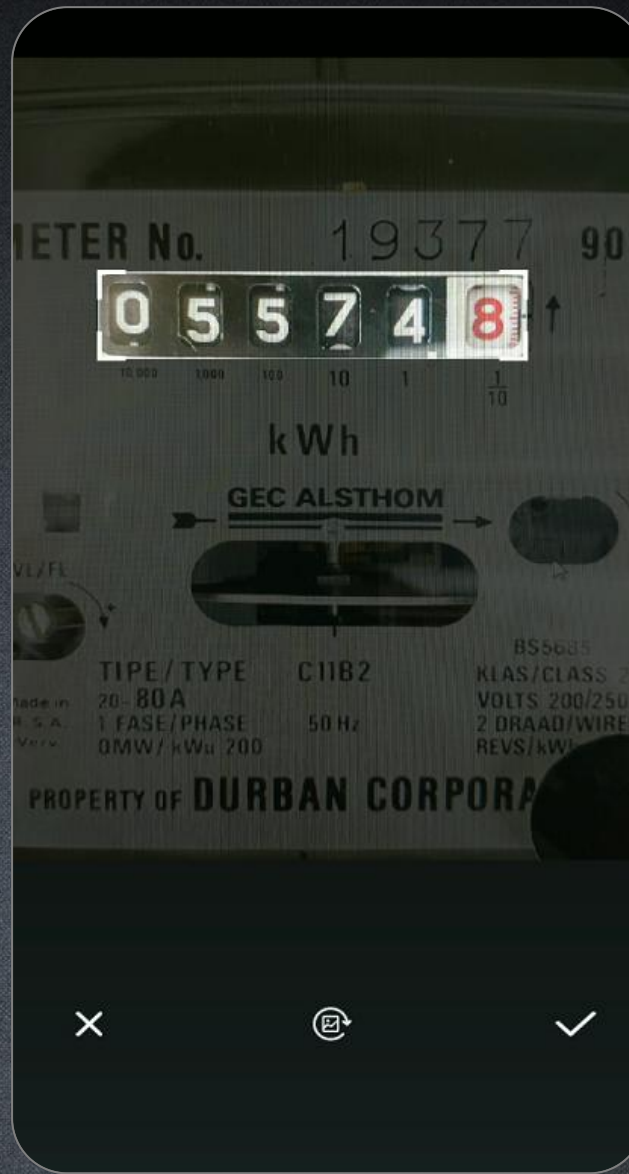
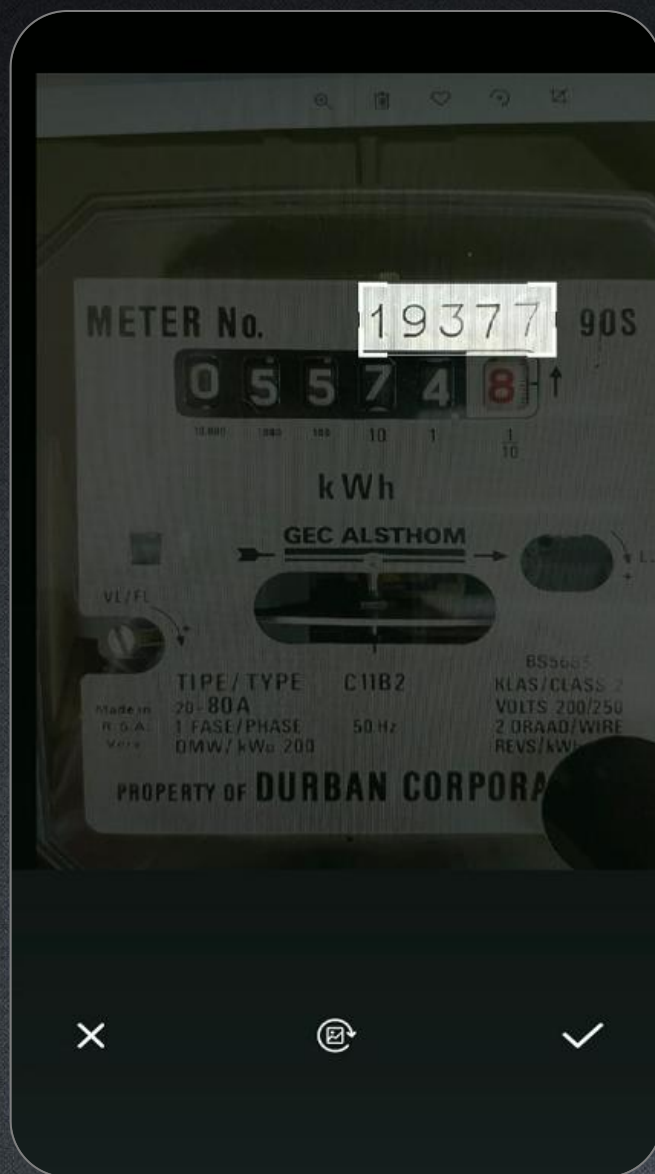
**How Can
We Count
Number of
Objects?**

Object Detection: Palm Trees



How Can We Input Number Into Digital System?

Automatically Number Detecting



What did AI Do for Us?

- Reduce repetitive human work
- Reduce non-intelligent work
- Multiple data accessing in one time
- Improve work efficiency
-

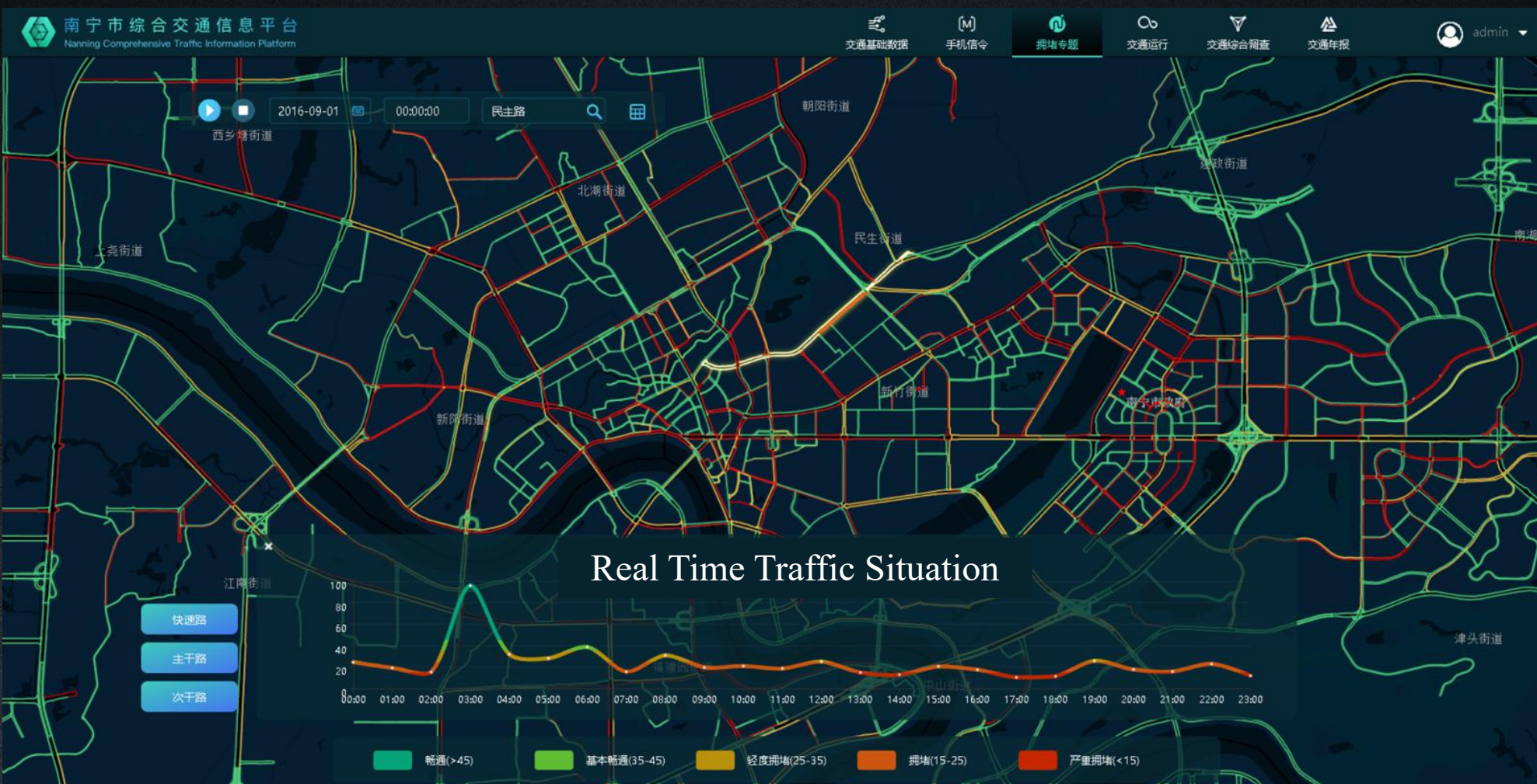
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How to Get 2D Map(Vector) Data in City Range?



Is It Possible to Get Dynamic Data?



How to Get Real Time Traffic Information

Data from Traffic
Police Department

Data from Mobile
Navigation Company

Provence Real Time Traffic Situation Monitoring

Crowd Level

3.974

Vehicle



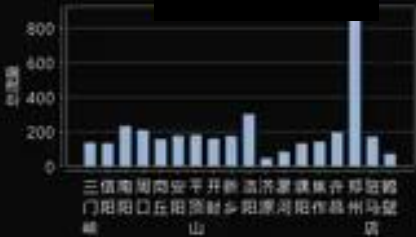
Bike



Human



Cities



Real Time

ID:591			
ID:649	区域焦作	车:9	非机动车:9
ID:693	区域信阳	车:9	非机动车:9
ID:621	区域信阳	车:9	非机动车:7
ID:110	区域郑州	车:8	非机动车:9
ID:878	区域	车:8	非机动车:9

Video



What Will Happen if We Combine Big Data and AI?

- Collect big quantity of data automatically
- Find valuable data from big quantity of data
- And...?

Thank You!