优频科技
URadio Systems

Wi-Fi IOT & Locating Platform

Suzhou URadio Systems Co., Ltd.

CONTENT

COMPANY

OVERVIEW

PLATFORM

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APPLICATIONS

Part 1

[COMPANY]

ABOUT URADIO

- Founded in 2008 by 3 engineers, formerly worked in Lucent, Qualcomm, IBM in US
- Headquarters in Suzhou (90km from Shanghai)
- First in China to develop Wi-Fi RFID/RTLS (Real-Time Locating Systems)
- Wi-Fi IOT & RTLS design, solution and outsourcing

CERTIFICATIONS & AWARDS

- 7 invention patents and 17 software copyrights
- Certified high tech company in China
- ISO9001 and ISO27000 certification
- Top 10 RTLS Company Award in 2017 in China

PARTNERS

CISCO

HUAWEI

H3C
IToIP Solutions Expert

ZTE中兴

Alcatel·Lucent

ARUBA
networks

MOTOROLA

Ruckus
WIRELESS

MERU
NETWORKS

Ruijie
Networks
锐捷网络

Aerohive
NETWORKS

SUNDRAY
信锐技术

海康威视
HIKVISION

MINE SITE
TECHNOLOGIES

SIEMENS
西门子

HITACHI
Inspire the Next
日立

Part 2

[OVERVIEW]

Wi-Fi IOT

Reuse existing Wi-Fi	Faster data transfer time	Lower power consumption
Compatible with majority of AP vendors	No connection to AP required No roaming issues	Longer batter life up to years

Wi-Fi IOT ADVANTAGES

Wi-Fi Networks

■ One Network for all

Support data, voice, video, locating and IOT applications in one network

■ Standard protocols

Easy to maintain and upgrade

■ Fewer equipments

No gateway needed for IOT devices

■ Indoor LBS

Support indoor accurate locating functions

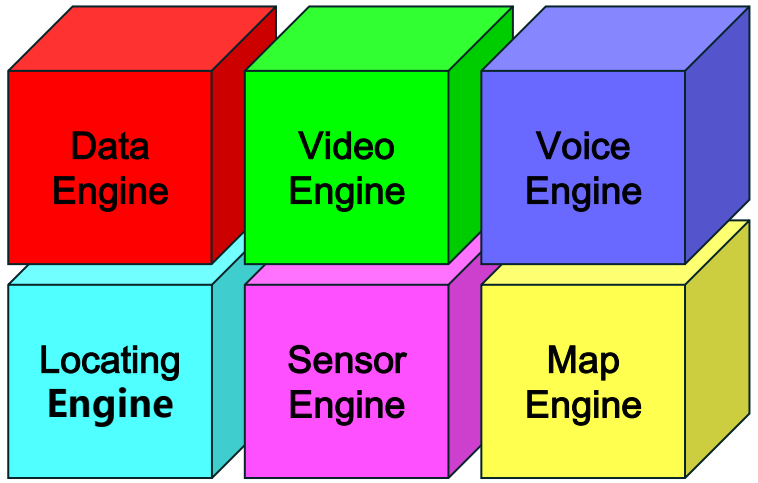
COMPONENTS

Data Collection

IOT & Locating Platform

Application Systems

Phones
Camera
RFID
GPS
Sensors
Ultra Red



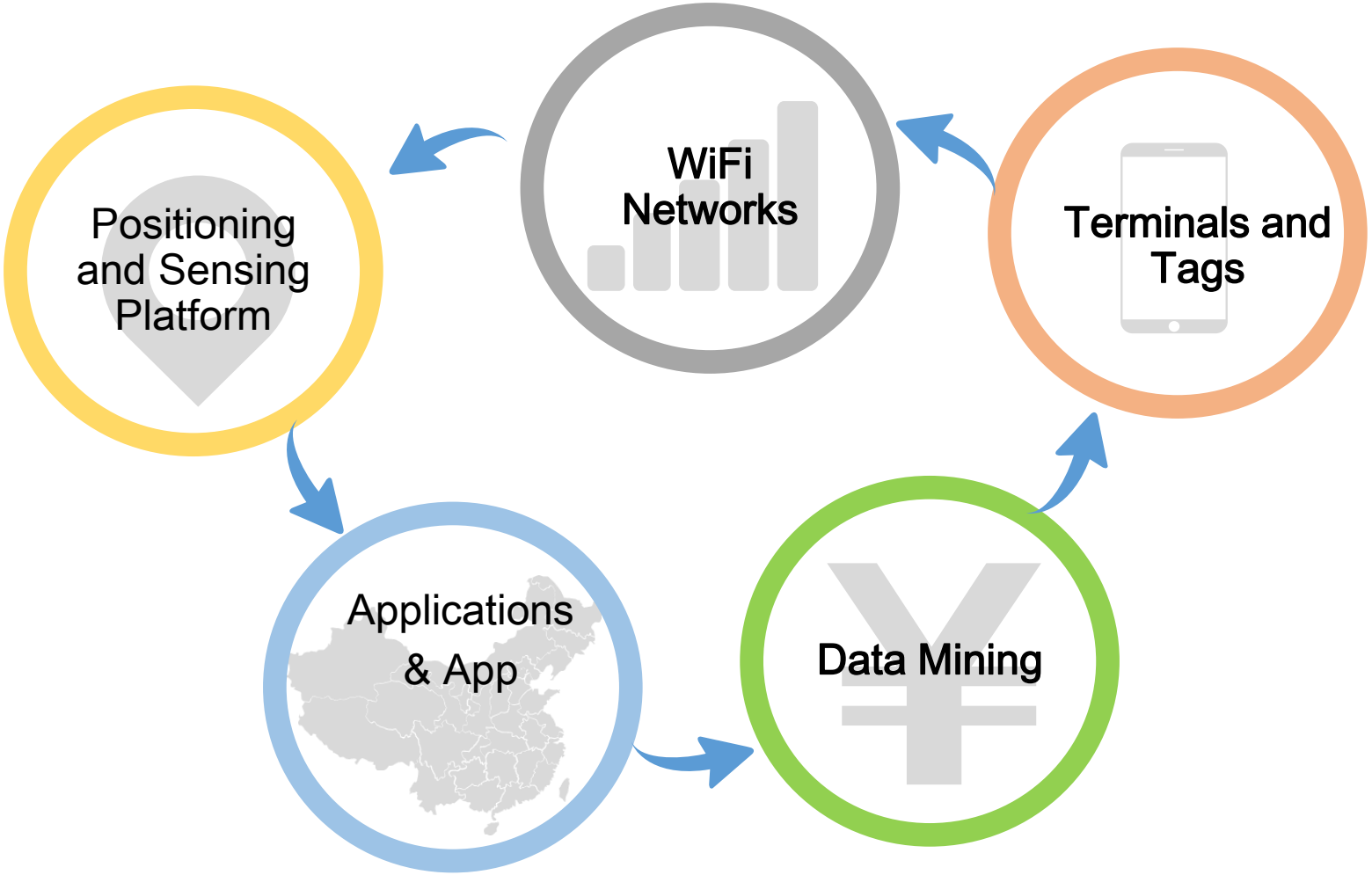
BI
CRM
MES
HIS
ERP
APPs

Devices

Modules

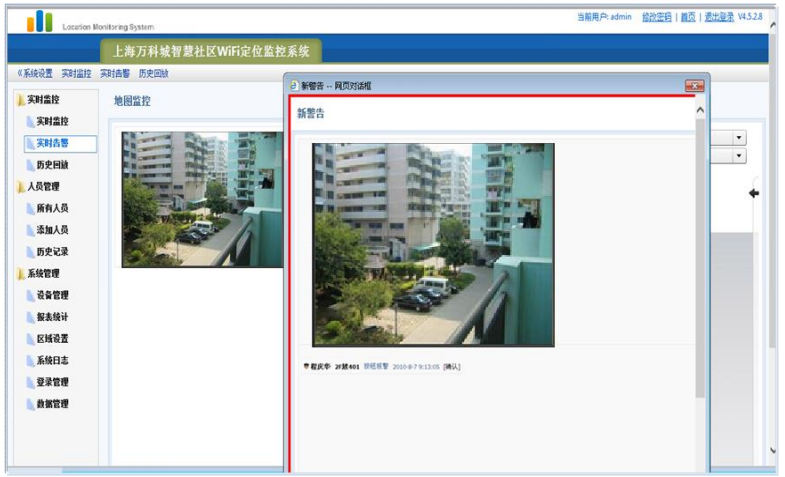
API

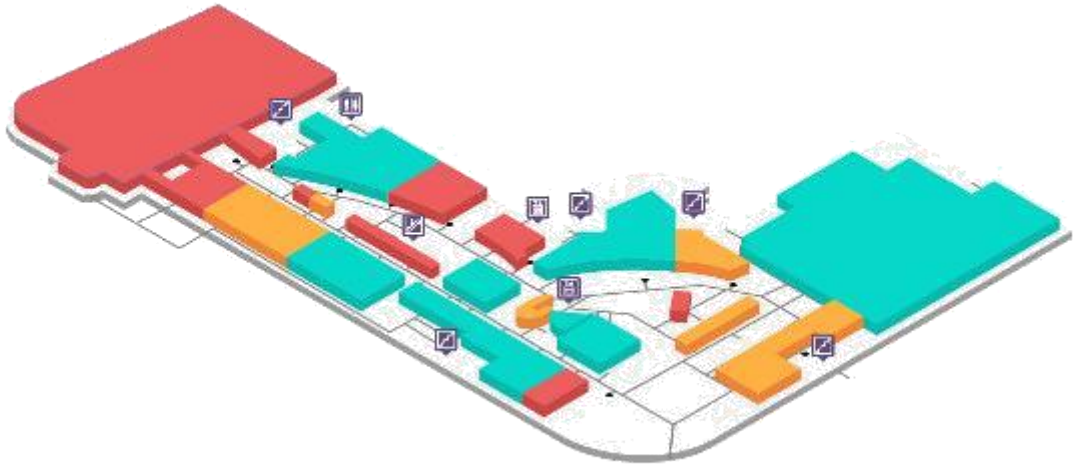
PRODUCTS


WiFi Networks
Terminals and Tags
Positioning and Sensing Platform
Applications & App
Data Mining

FUNCTIONS

- **Map**: objects shown on electronic maps
- **Locating**: High accuracy locating algorithms
- **Sensor data**: Sensor data collection and analysis
- **Video**: Video camera association with location
- **Voice**: Voice communications
- **Data analysis**: Location based data analysis
- **Mobile APP**

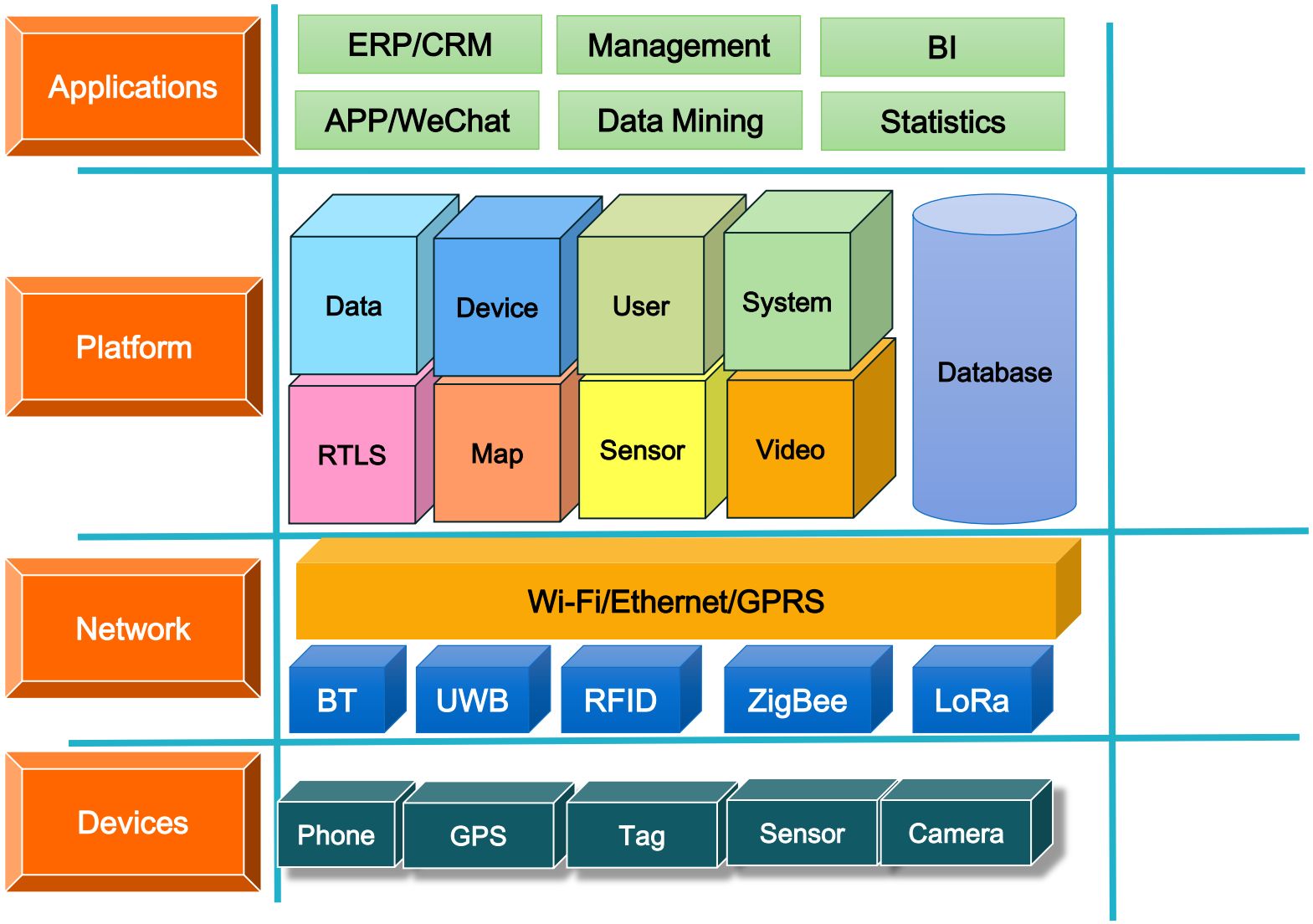




Part 3

[PLATFORM]

PLATFORM ARCHITECTURE



LOCATING ENGINE

- Locating algorithm is based on Wi-Fi signal strength (RSSI), and combines with RIFD and Blue Tooth technologies.
- Locating accuracy can achieve at 3-10 meters, and 1 meter at some points
- Can support thousands of position calculations simultaneously, and upscale with multiple engines

MONITORING POSITION & STATUS

- Objects (associated with Wi-Fi tags or phones) shown on the electronic maps with alarm status
- Objects' moving traces shown on the map
- Trace one object by automatically switching different maps
- Objects flash when there are alerts
- Click to check object detail information

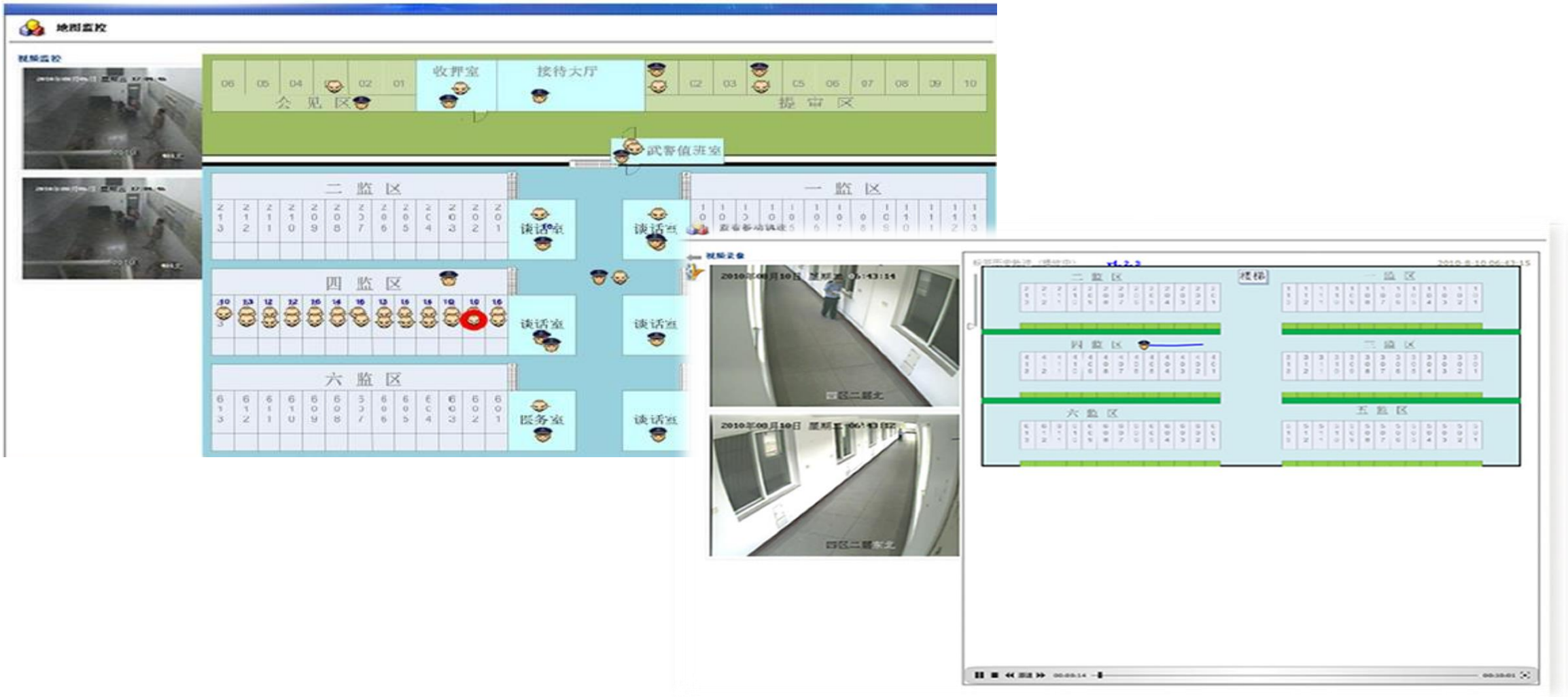
ALERTS

- Out of boundary
- Disappeared
- Button pushed
- Low battery
- Motion detection
- No movement too long
- Exceed the limit of number persons in a zone
- Fall alert

MAP FUNCTIONS

- Map size adjustment
- Map switch
- Zone information
- Device positions shown on the map
- Show video associated with the positon
- Show alerts for various sensors and devices

VIDEO SHOWN BY POSITIONS



STATISTICS

- Zone stats by time and positions
- Route stats
- Time spent by positions

进出统计报表

进出统计报表

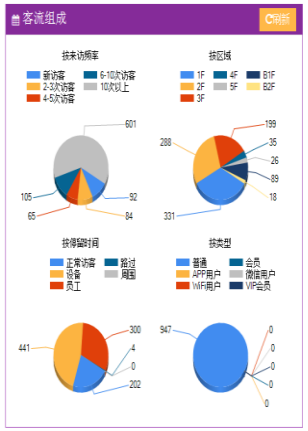
导出Excel

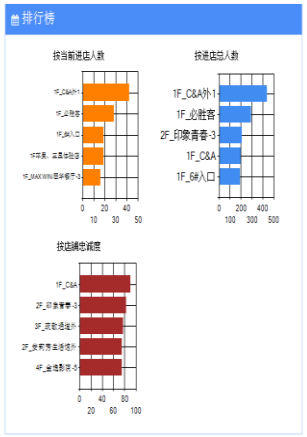
从[2015年05月07日00时00分]到[2015年06月03日23时59分]

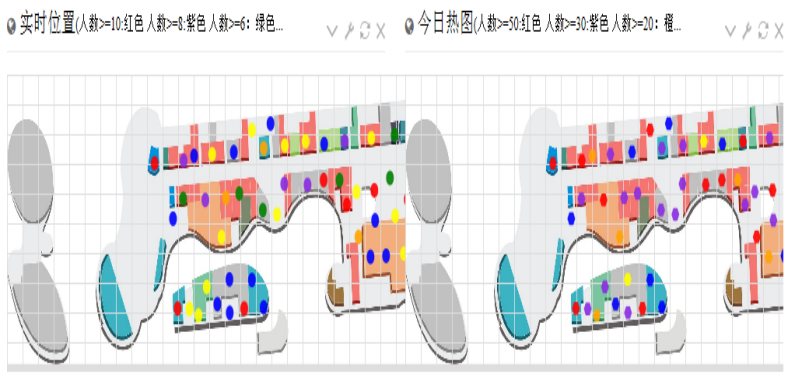
人员姓名	编号	分组	进入区域时间	消失或离开时间	停留时间
李红喜	0001	人员	2015-5-15 18:34:59	2015-5-15 18:36:05	1分6秒
	0001	人员	2015-5-15 18:40:14	2015-5-15 18:41:48	1分34秒
	0001	人员	2015-5-15 18:43:09	2015-5-15 18:43:37	28秒
	0001	人员	2015-5-15 18:44:54	2015-5-15 18:46:31	1分37秒
	0001	人员	2015-5-15 18:47:39	2015-5-18 9:37:53	2天14时50分14秒
	0001	人员	2015-5-18 9:39:17	2015-5-18 9:39:45	28秒
	0001	人员	2015-5-18 9:41:01	2015-5-18 9:45:37	4分36秒
	0001	人员	2015-5-18 9:47:01	2015-5-18 9:47:28	27秒
	0001	人员	2015-5-18 9:49:52	2015-5-18 9:50:51	59秒
	0001	人员	2015-5-18 9:52:11	2015-5-18 9:54:26	2分15秒
	0001	人员	2015-5-18 9:57:09	2015-5-18 9:57:33	24秒
	0001	人员	2015-5-18 9:58:54	2015-5-18 9:59:22	28秒
	0001	人员	2015-5-18 10:01:28	2015-5-18 10:02:45	1分17秒

LBS DATA ANALYSIS

- Visitors moving trend
- Average stay time
- New and old visitors
- Visitors enter store
- Visitors distribution
- Exact match by MAC







MOBILE APP SDK (H5)

- Current position on the map
- Search for destination
- Show the routes
- Navigation
- Contents push by positions

Part 4

[PRODUCTS]

AP/Wi-Fi Locator

Wi-Fi Locator:

- Scan Wi-Fi devices, such as Wi-Fi tags, Wi-Fi phones, PDA, laptops;
- Report alert, sensor data;
- Report RSSI;
- Support hundreds of devices scan simultaneously.

Indoor URL1600-R
Size: Φ180*H60 mm
Weight: ~ 290g

Outdoor URL1600-F
Size: 232*206*42mm
Weight: ~350g

I/O	**1×10/100/1000M Ethernet, RJ45**
Wireless	**802.11 b/g/n MIMO 2×2**
Frequency	**802.11 b/g/n 2.412～2.472 GHz**
Antenna	**Embedded 2.4GHz 4dBi**
Output Power	**20 dBm**

Locating Beacons

Wired Locating Beacon

In order to get higher locating accuracy, locating beacons are installed for better results

Wireless Locating Beacon

Low Frequency Exciter

- Each exciter has an unique ID
- Wi-Fi tag is awaken in the cover zone
- Exciter requires electronic wire
- Antenna can cover 1-5 meter
- Tags have longer battery usage

BLE iBeacons

- iBeacons periodically broadcast signal with unique IDs
- No wire required to install
- Accuracy is about 1-3 meter
- Battery lasts 2-4 years
- Tags have shorter battery usage

Indoor Exciter
URWA-I
200*109*40mm

Outdoor Exciter
URWA-F
200*110*44mm

URT630
95*40*20mm

URT630-F
72*45*22mm

WI-FI BADGE

- Work under Wi-Fi covered area
- SOS push button
- Low battery alert, rechargeable
- Options for motion detection, fall alert
- Integrated with IC card

URT270-CA	**Normal Wi-Fi module**
URT270-C	**Low power module with LF**
URT270-CB	**Low power module with BLE**
URT270-CS	**Low power module**

Size	86*56*8.5mm
Battery	1000mAh
Charge	Micro USB
Weight	~40g

WI-FI CALL STATION

- No wire required to install
- Alerts go through Wi-Fi
- Cancel or confirmation button
- Water proof

	URT560-L
Wireless	Wi-Fi
Size	86*86*13mm
Battery	About 2 years

WI-FI MOTION DETECTOR

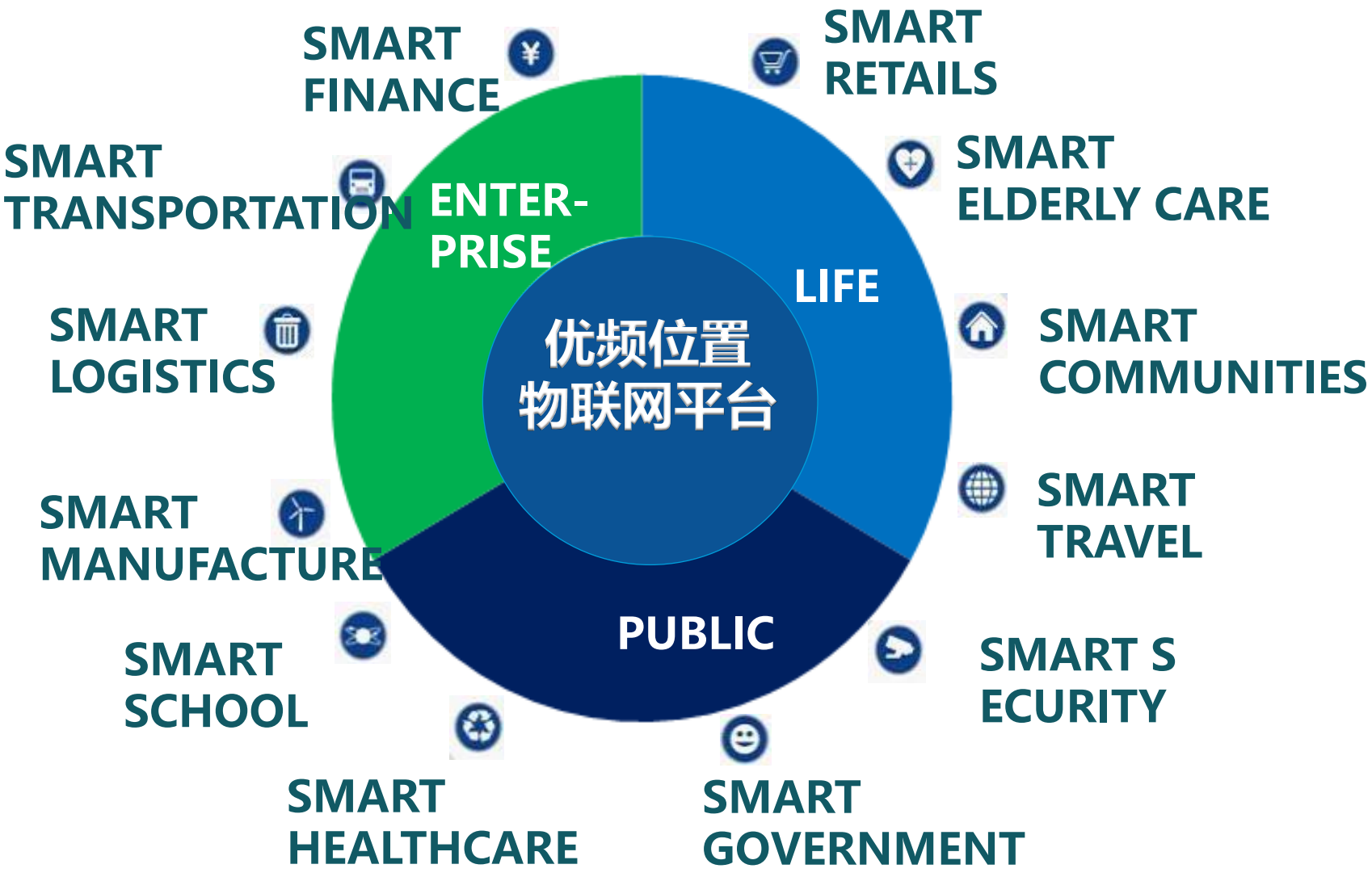
- More accurate detection,
- Faster response time
- 9-12V power supply
- 2.4G Wi-Fi communication

AD500-06 Series
Detect area ：6m 8-12m
Size：119*71*42mm

Part 5

[APPLICATIONS]

APPLICATION AREAS



SMART COMMUNITIES

STAFF MANAGEMENT

VISITOR MANAGEMENT

PERSONAL SAFETY

ASSET MANAGEMENT

光荣与梦想
Fifth County
第五郡

山东东营爱家国际花园

万科® 水晶城

万科城
Dreamtown

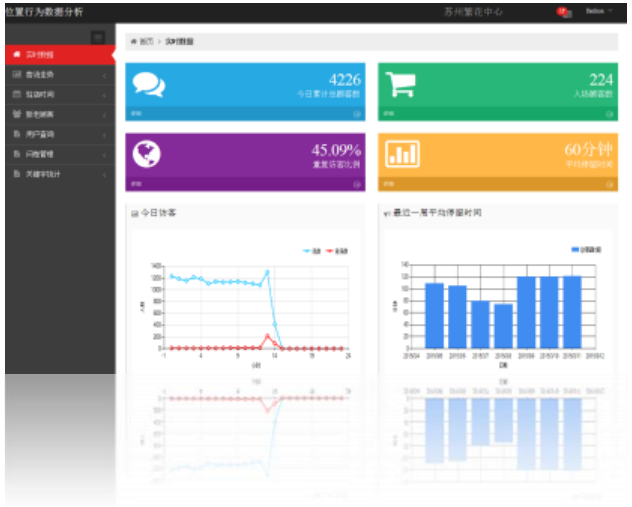
SMART SENIOR CARE

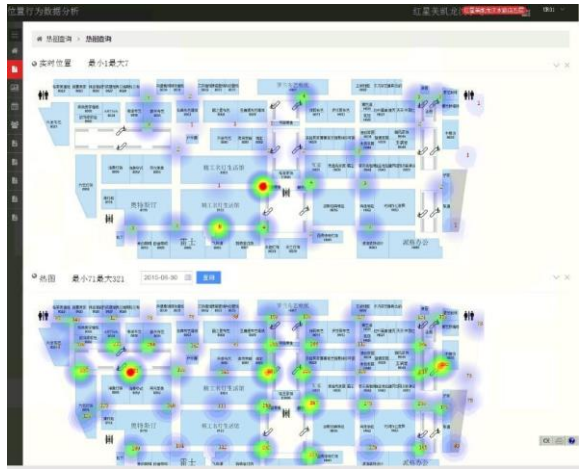
CUSTOMERS:

- WANKE
- TAI KANG INSURANCE
- TAI PING INSURANCE
- PING AN INSURANCE

SMART RETAILS

- Visitor traffic analysis
- Indoor navigation





SMART MUSEUM

- Visitor traffic analysis
- Indoor navigation

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重庆国际博览中心

广东省博物馆
GUANGDONG MUSEUM

中国—东盟博览会
www.CAEXPO.org
CAEXPO

成都博物馆 CHENGDU MUSEUM

武汉规划展示馆

厦门国际会展中心
XIA MEN GUO JI HUI ZHAN ZHONG XIN

SMART MANUFACTURE

白山发电厂

地鐵公司 MTR Corpration

JINCHUAN金川 金川集团股份有限公司 JINCHUAN GROUP CO., LTD.

CHINALCO 玉溪矿业 大红山铜矿

雅砻江水电 YALONG HYDRO

山西焦煤集团有限责任公司 SHANXI COKING COAL GROUP CO.,LTD.

MORE APPLICATIONS

- HOSPITALS
- SCHOOL
- PRISONS
- AIRPORT
- OFFICE CENTER

上海市徐汇区行政服务中心
SHANGHAI XUHUI DISTRICT ADMINISTRATIVE SERVICE CENTER

天津市胸科医院

张家界荷花机场

扬州市看守所
YANGZHOU PRISON

江苏省苏州监狱
JIANG SU SHENG SU ZHOU JIAN YU

四川工商职业技术学院

内蒙古伊金霍洛旗监狱

Thanks

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