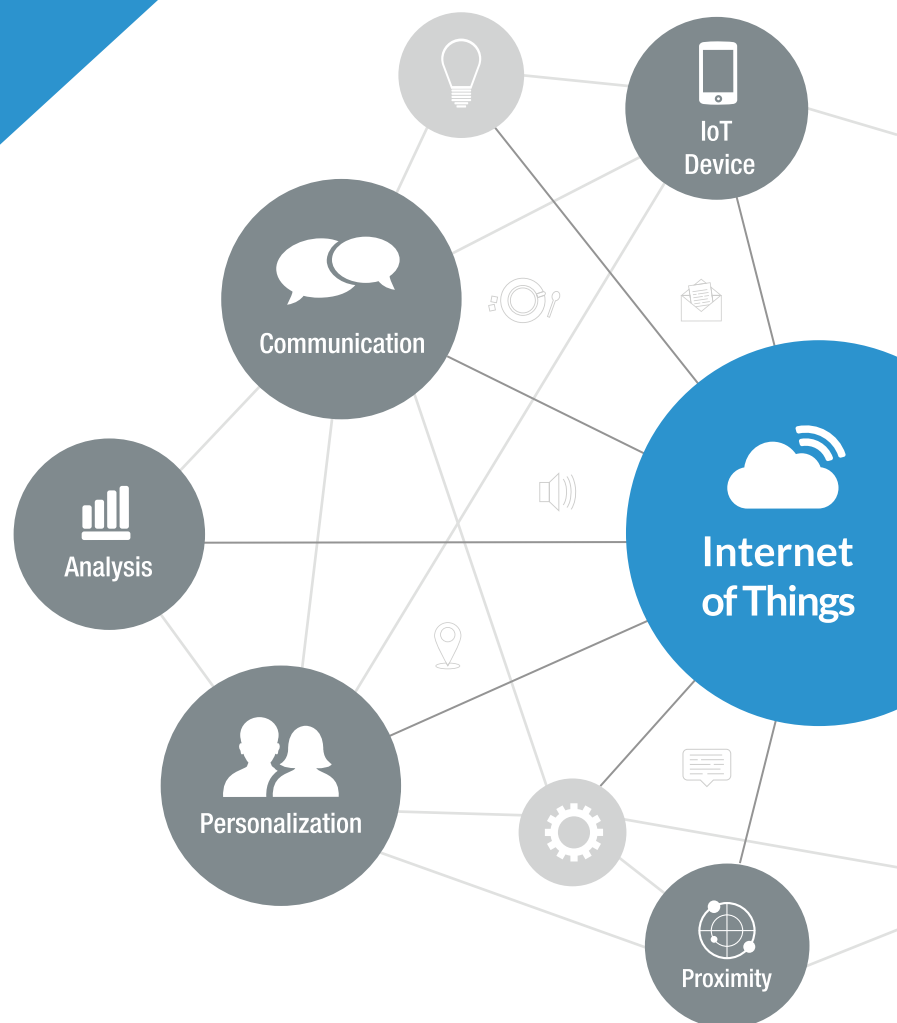# iCIGNAL IoT

20X Faster Dev.

Only 5 Days You Need
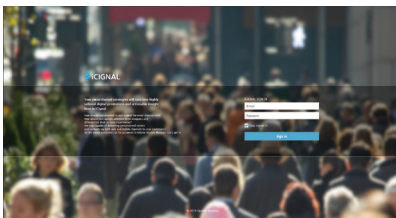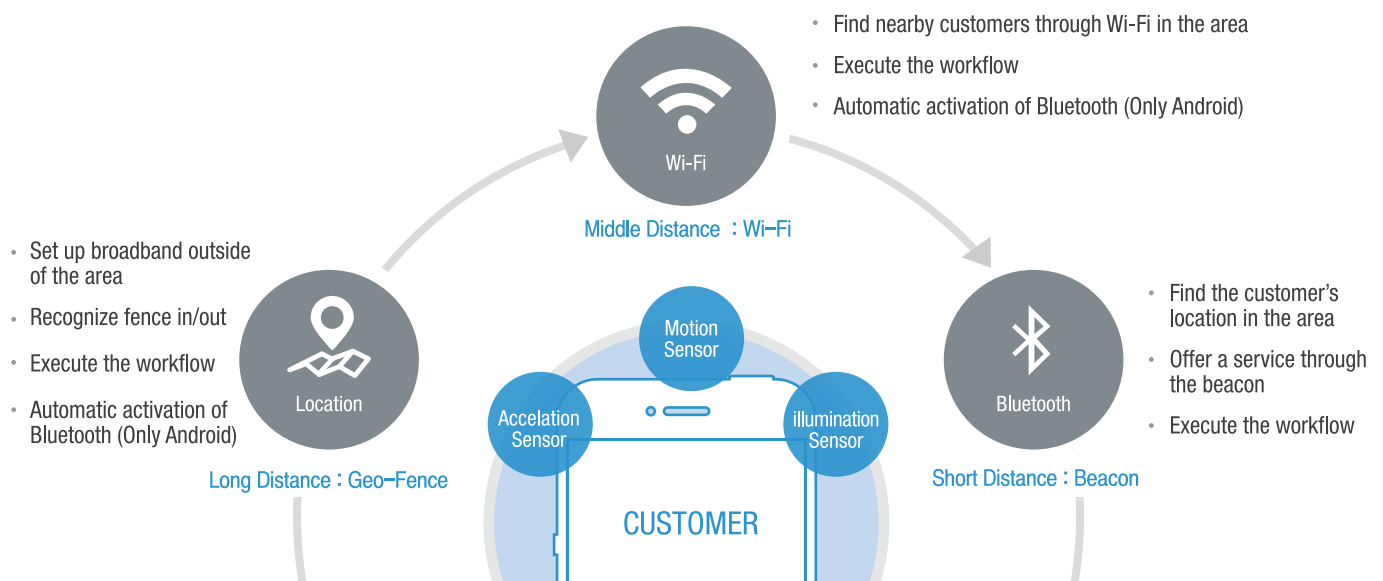IoT Management Solution

Communication

IoT Device

Analysis

Internet of Things

Personalization

Proximity
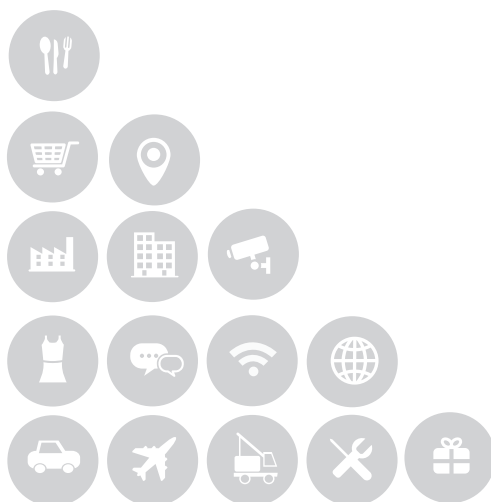
iCIGNAL IoT

Capturing Sensor and Act by Rule Engine in Real-Time

iCIGNAL IoT Function

Middle Distance : Wi-Fi

- Find nearby customers through Wi-Fi in the area
- Execute the workflow
- Automatic activation of Bluetooth (Only Android)

Wi-Fi

Long Distance : Geo-Fence

- Set up broadband outside of the area
- Recognize fence in/out
- Execute the workflow
- Automatic activation of Bluetooth (Only Android)

Location

Short Distance : Beacon

- Find the customer's location in the area
- Offer a service through the beacon
- Execute the workflow

Bluetooth

Motion Sensor

Accelation Sensor

illumination Sensor

CUSTOMER

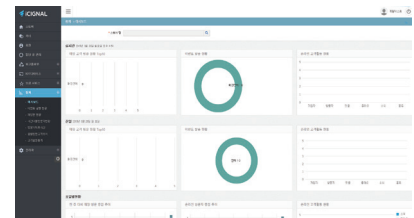
- Store Management : Manage the offline branches
- IoT Device Management : Beacon , Beacon Group, Geo-Fence, Wi-Fi
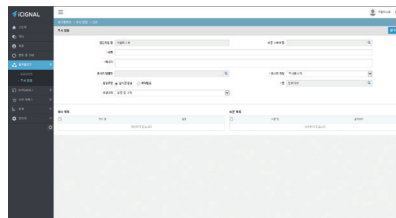
- Work-Flow : Manage the corresponding execution of each IoT Device
    - Schedule : Set up schedule of IoT business process
    - Segment : Designate the event target
    - Rule Engine : Manage entry/exit distance
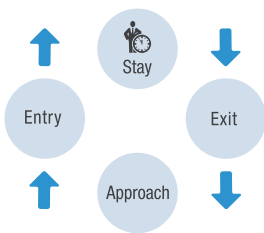   - TASK : Manage contents to be executed

- Analysis : Analysis and statistics of IoT business execution

Contactless Payment

Customer Management

Indoor Information

Check in Coupon

Proximity Marketing

Analysis ZMOT

## Features

Event Control

Stay

Entry

Exit

Approach

- Combine customer's interests and location info
- Execute event according to entry, approach, stay and exit events
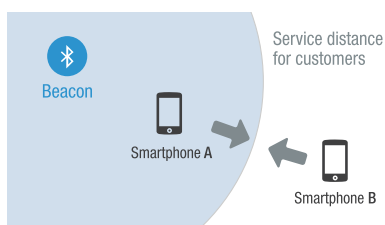
Beacon Signal Interference

Beacon2

Beacon1
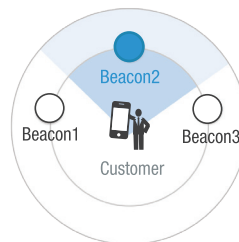
Beacon3

Customer

- Control the signal interference between beacons
- Sector of sensors are supported

Rule-based Workflow

Submitter → Task → decision — No → Task → Task
   Yes
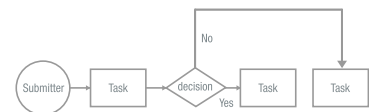
- Real-time applying any change without additional distribution of app. and server
- Personalized marketing combined with customer segment

Signal Strength Difference

Beacon

Service distance for customers

Smartphone A

Smartphone B

- Signal metadata DB
- Algorithm to control the signal strength differences of each smartphone

Minimize Battery Consumption

Beacon scan (O)

Beacon scan (X)

Beacon zone

Exit from the beacon zone
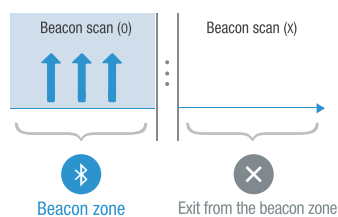
- Explore of beacon signal only when the beacon signal exists
- Decrease the use of smartphone CPU
- Minimize the battery consumption (0.04% per hour)

Patented Solution

- Patent of system/technology for beacon wireless base service
- 13 patented technologies

Various Industries with IoT System

Retail
- Coupon/Stamp Reward
- Membership Card
- Product Information

Vehicle
- Waiting Time
- Issuing Ticket
- Membership Card

Distribution
- Warehousing & Release
- Anti-theft
- Analysis of Movement

Health Care
- Note Precautions
- Registration / Payment
- Smart Check Condition

Leisure
- Indoor Navigation
- Missing Child Prevention
- Access Card

Food Service
- Self Payment
- e-Leaflets / Menu
- Reservation

Digital Plant
- Industry 4.0
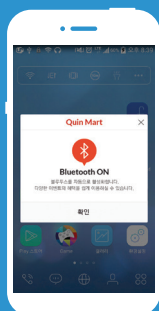- Smart Factory
- M2M Techniques

Education
- Classroom Location
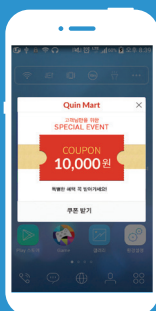- Preview & Review
- Attendance Check

Building / Security
- Temperature, Humidity, etc.
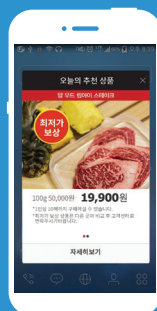- Motion, Heat, IR Sensing
- CCTV, LED, etc.

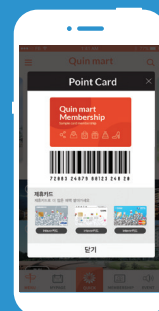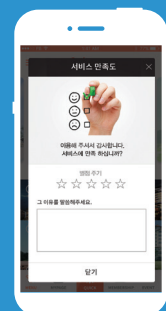# Use-case in Retail industry

Geo-Fence → Discount Coupon → Product Recommendation → Time Sale for in-store customers → Mobile point card → Feedback from customers

Personalized O2O

Providing the optimized smart consumption culture according to each customers' movement by integrating with CRM

QuinTet
The World Class CRM Provider