



SPARKOZ

TN70 Product Brochure



BENEFITS:

TN70 ROBOT SCRUBBER

Overview:

Full autonomous floor scrubbing robot capable of navigating through complex, changing environments

Technical Capabilities:

- Full 360° laser sensor visibility
- Front, side and back hybrid 3-D sensors with 5m range
- Dynamic path planning and advanced obstacle avoidance logic
- 4 hours run-time and 4 hour fast charging time
- Large 70L tank capacity to maximise cleaning time, lower manpower and time needed to refill solution tank
- Separate clean + dirty water tanks, no filter issue
- Able to store up to 100 maps
- Easy to use interface: mapping and execution all done on touchscreen
- Slim design, 78cm squeegee width makes it ideal for most spaces
- Maximise productivity, solve labour shortage, reduce labour costs



SPECIFICATIONS:



Dimensions LxWxH	1120 x 580 x 1150
Weight	227kg
Cleaning Width	510mm
Squeegee Width	790mm
Brush Pressure	27kg
Pressure per unit area of brush g/cm ²	13.2
Clean Water Tank	70L
Recovery Tank	50L
Speed	Auto: 4km/h Manual: 4km/h
Coverage	2040 m ² /h
Gradient	6%
Voltage	DC24V
Working hours	4h
Charging Time	4h
Battery	Lithium-ion, 120Ah
Navigation	Visual + Laser
Sensor System	Panoramic monocular camera, LIDAR, 3D, Ultrasonic radar, IMU, Electronic Bumper

Wide-angle 3D-ToF camera

- Self-developed wide-angle 3D TOF module



High frame rate
45FPS



High Accuracy
~2cm Recognition accuracy



Super sensitive
~20ms Reaction time



Wide viewing angle
135° Large field of view

High-speed lidar



High speed
900rpm



Long range
50m Extremely long distance



High accuracy
0.125 degree



1D-lidar



High accuracy
Light spot <1cm



Anti-interference
808nm IR



Monocular panoramic camera



Full view

210° Large field of view, zero dead angle and efficient path planning



Many goals

~1,000 Simultaneous tracking of massive landmarks



High precision

~mm positioning accuracy



Sparkoz Robot control platform



AI computing power

3 trillion operations per second



ARM architecture

Small size, low temperature, power consumption reduced by more than 50%

Self-developed sensor matrix realizes microsecond time synchronization

Self-developed lidar and vision fusion positioning algorithm

Self-developed Snapdragon 845AI robot control platform

Self-developed wide-angle 3D TOF module

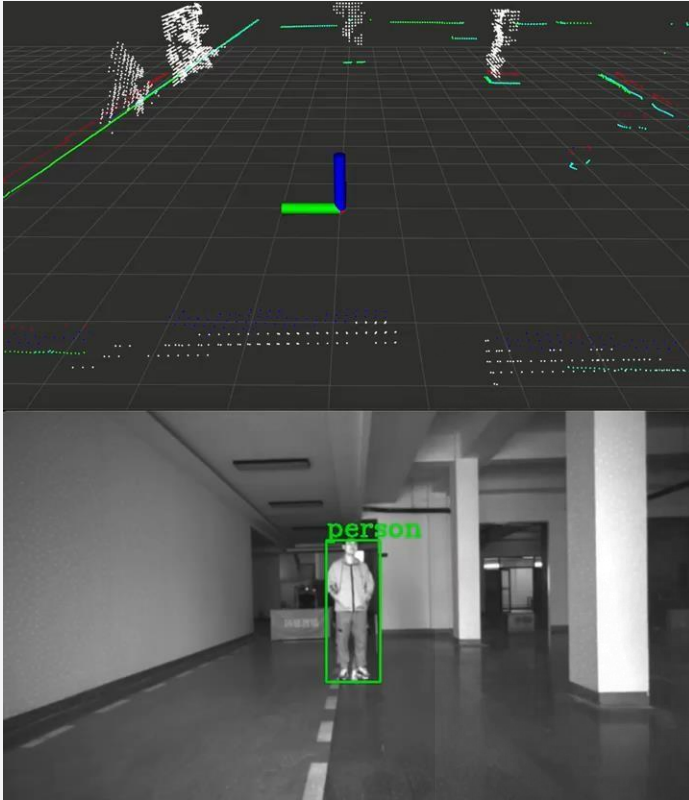
Self-developed SPAD dTOF lidar

11

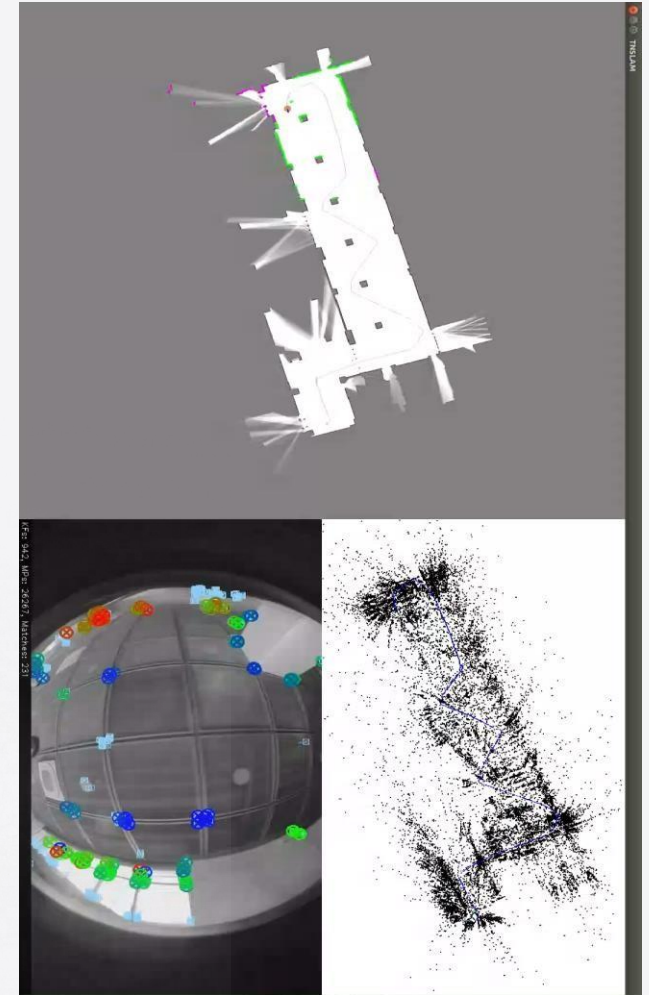
Perception System

10 categories, 40+ Sensors Matrix Collaboration

Mapping & Localization System

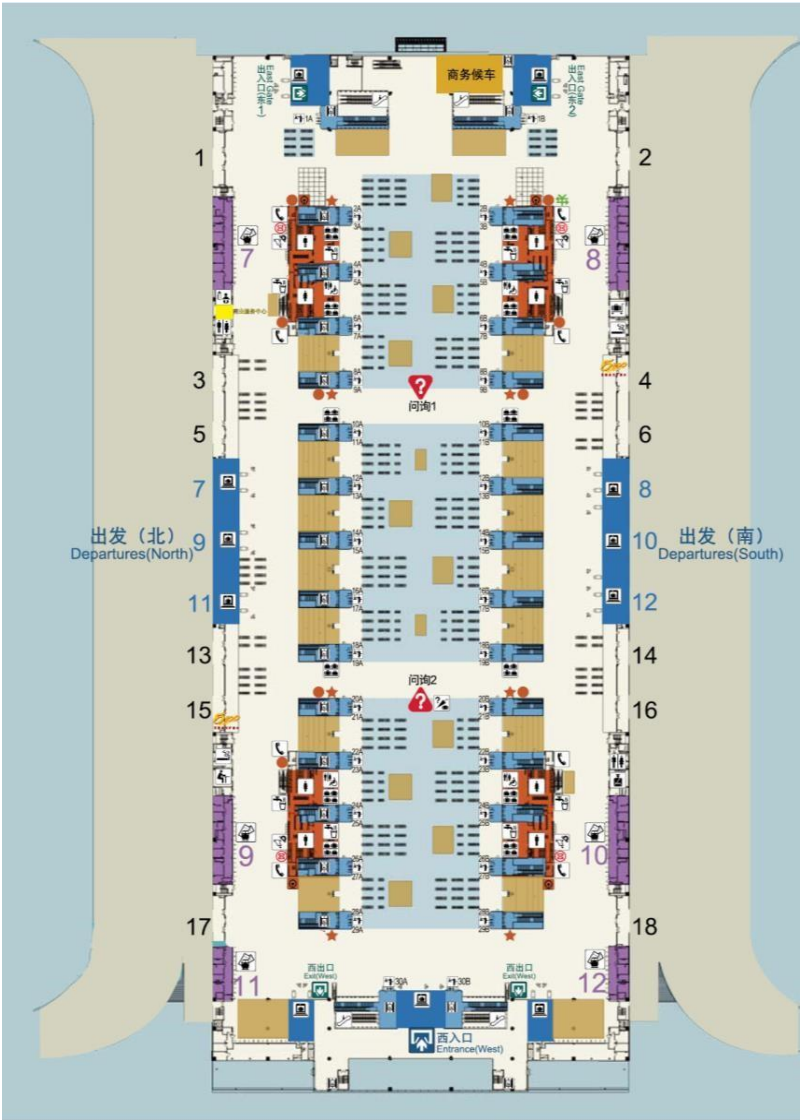
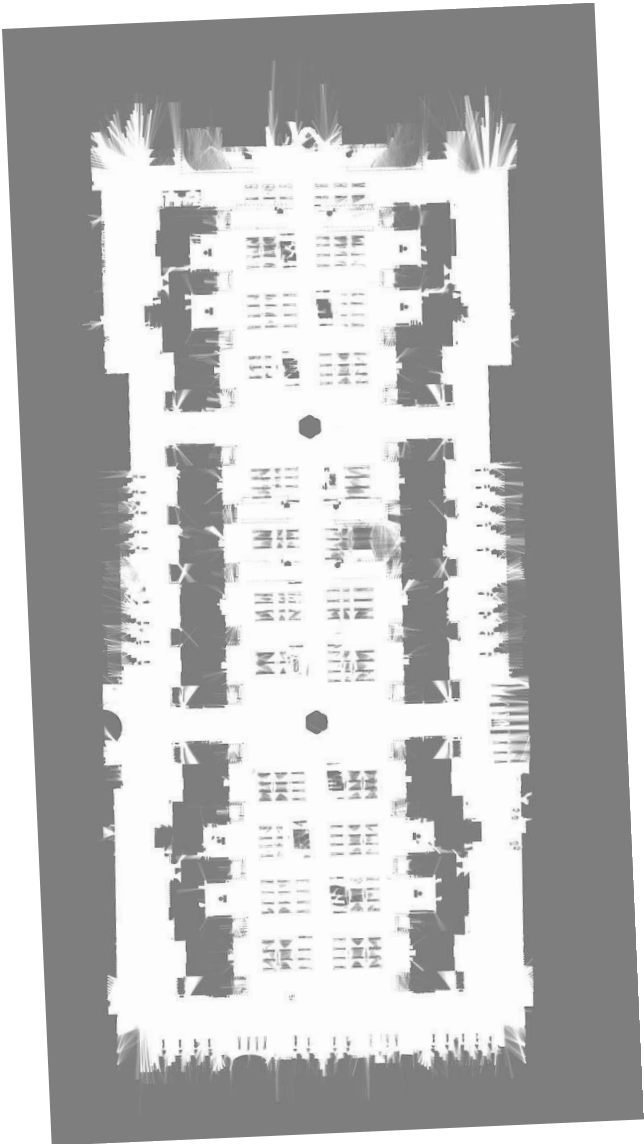


360° visibility and advanced obstacle avoidance with wide-angle 3D ToF array.



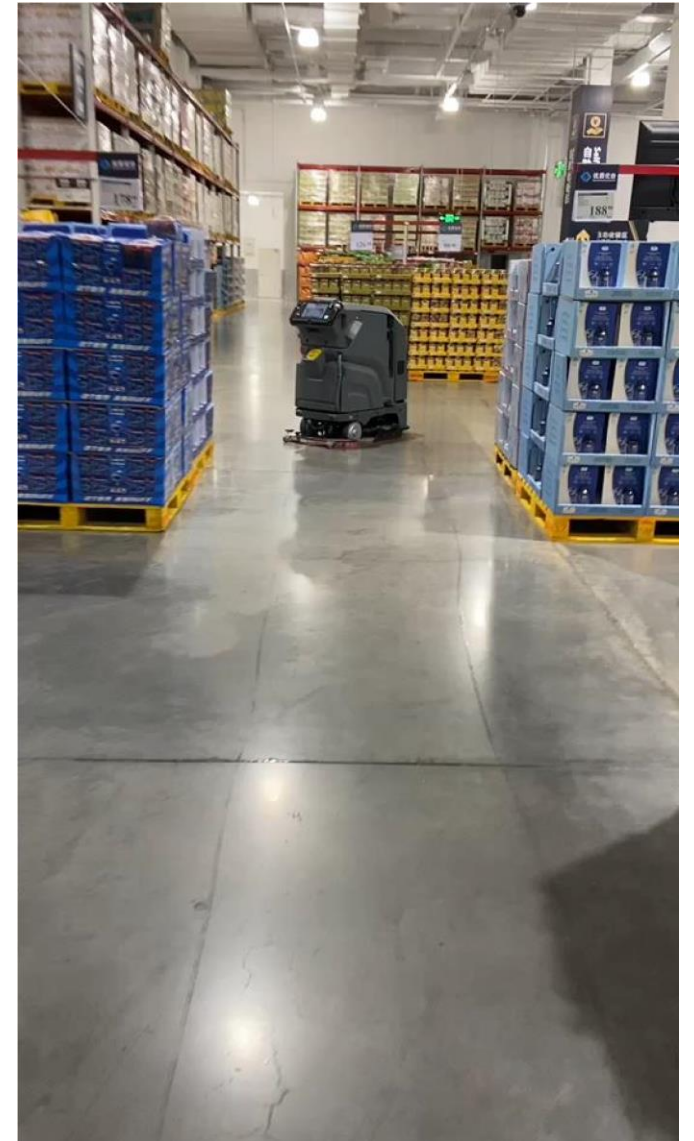
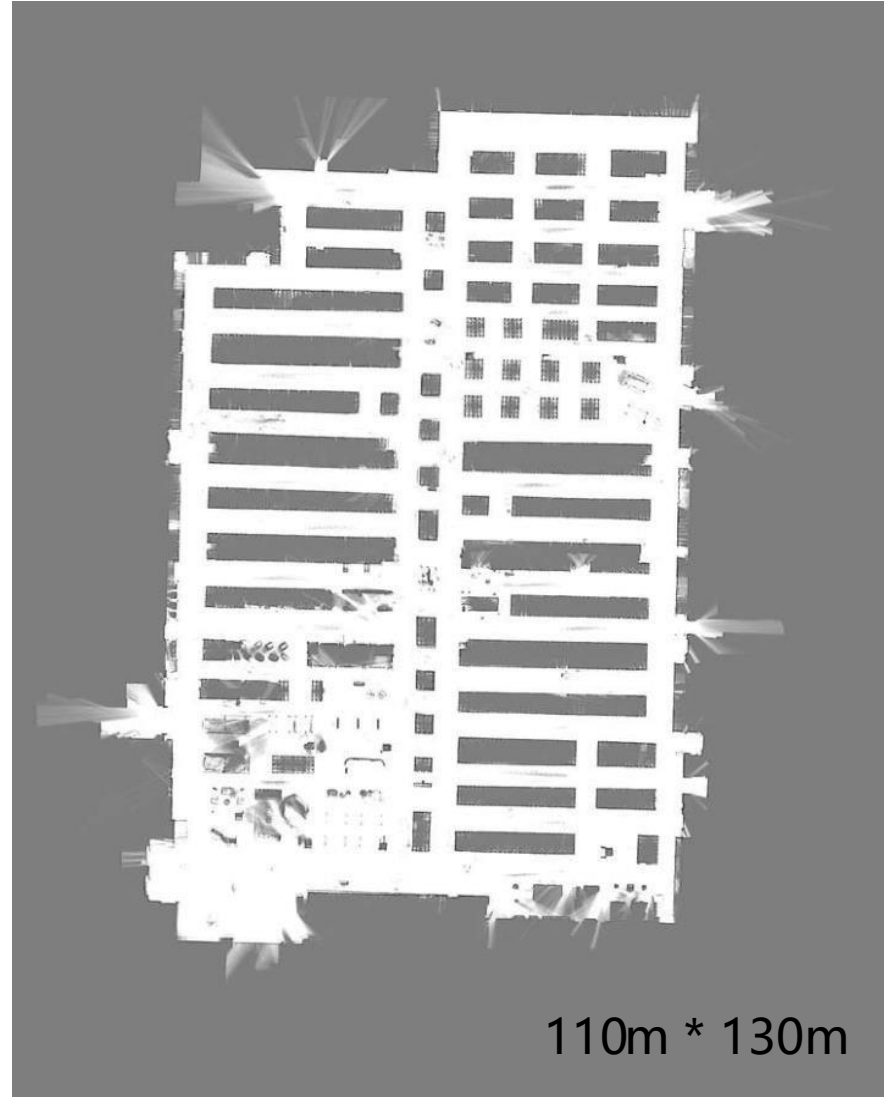
More reliable localization with self-developed lidar + vision dual fusion system

Railway Station

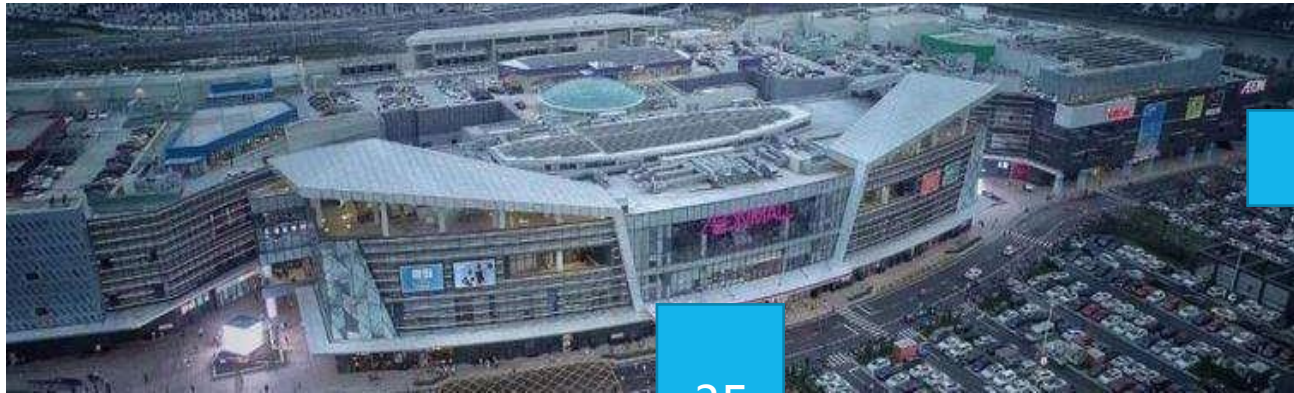




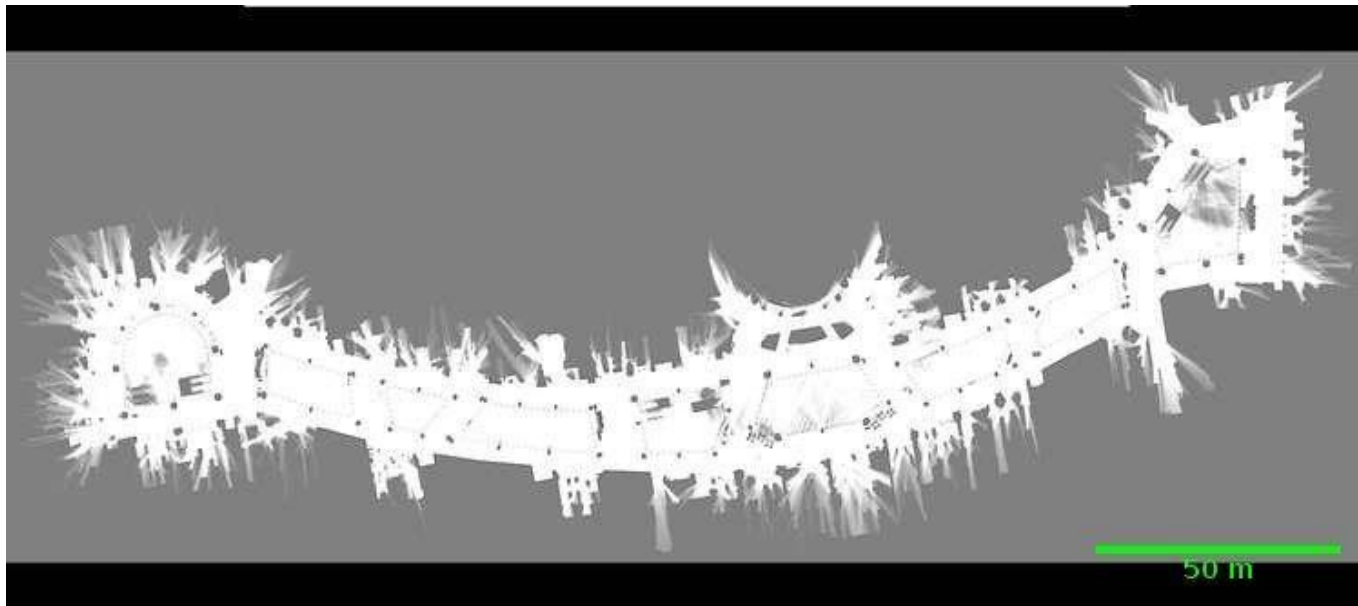
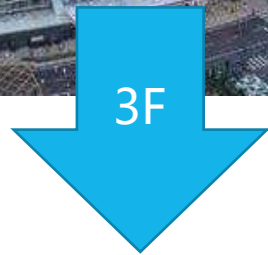
Retail Store



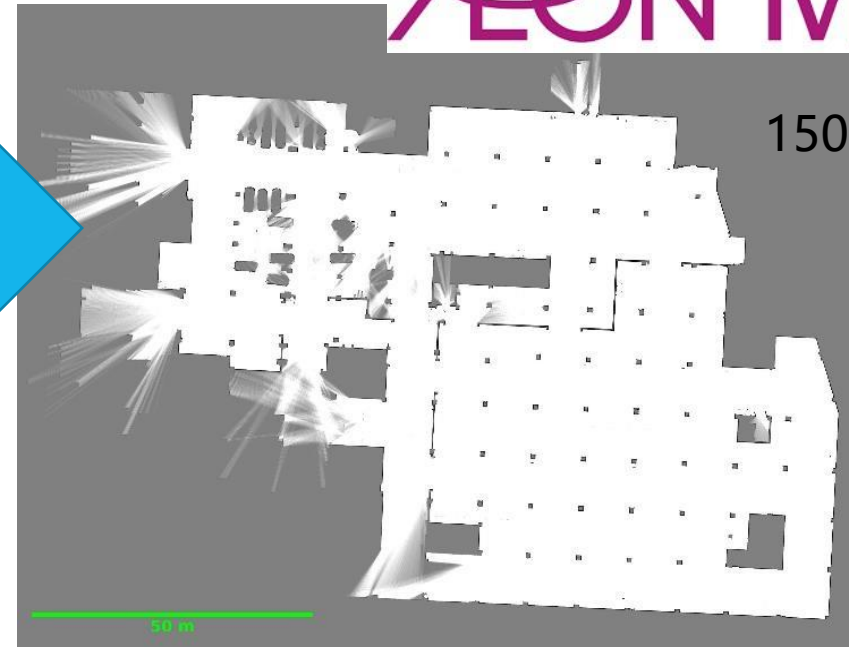
Shopping Mall



280m * 120m



-1F



AEON MALL

150m * 120m



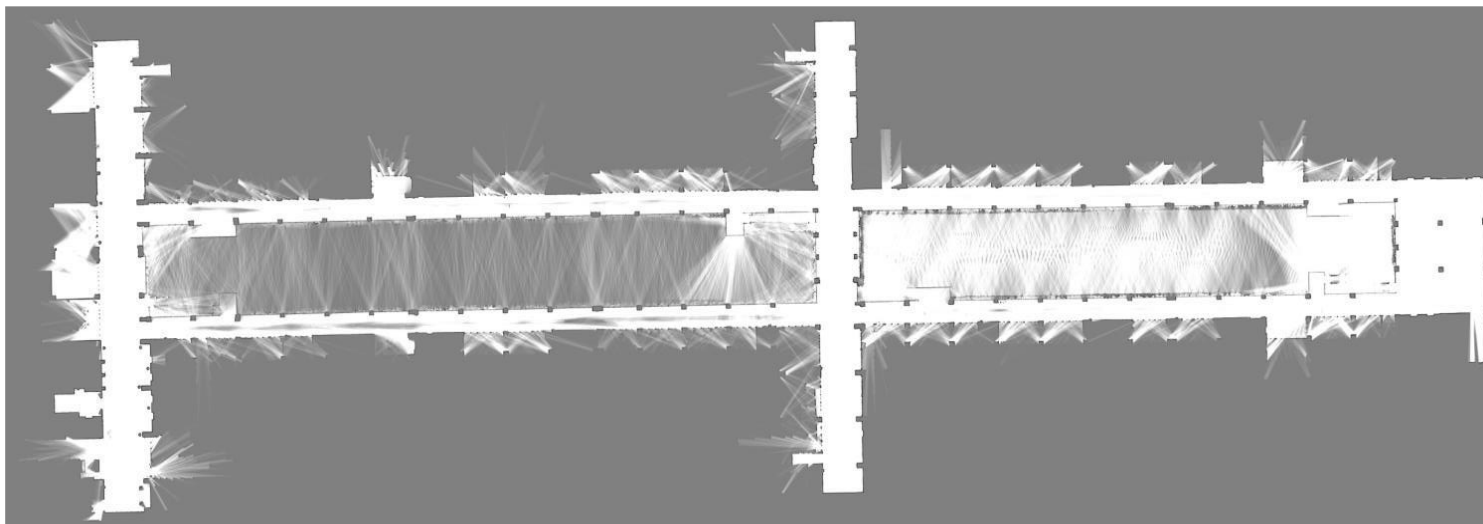
Airport



青岛胶东国际机场
QingDao JiaoDong International Airport



Office Building



300 m * 100
m



SPARKOZ

Better Cleaning with Robot Scrubbers

