CONTENTS

"Intelligent XR Platform" Business Model

Stage 1_XR Device Service	Stage 2_ Advanced AI Backend Technology	Stage 3_ Data Services
~ 2023 (1:1 Interface, B2G Model)	2024 (1:N Interface, B2C Model)	2025 ~ (Expansion into B2C integrated solutions)
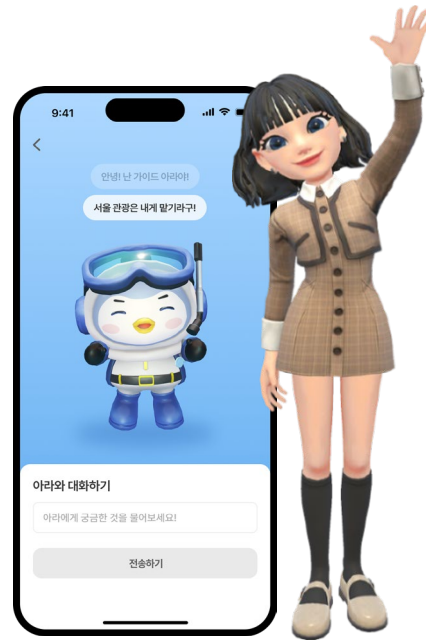
| 1. SKY BORA   2. PLAY BORA | Consumer payment module (B2C) integration | AI-driven backend data services |

Intelligent XR convergence platform services, integrating online and offline

01
Company Overview

Company Name	Awesomepia Co., Ltd. (Established: March 11, 2015)
CEO	Munho, Min
Number of Employees	16 (As of February 2025), Key management details are on the official Awesomepia website (www.awesomepia.kr)
Major Product	• Intelligent XR Devices (XR BORA) • XR Service Platform (MetaLive) • Hybrid Beacon Solution
Major Shareholder	Lotte Group ⟨Daehong Communications⟩, Korea SMEs and startups Agency and others
Registered Address	(Headquarter) 2F, 27, Seolleung-ro 93-gil, Gangnam-gu, Seoul, Republic of Korea (Branches) Daejeon,Ulsan,Jeju
Awards	• InnoBiz Certification, Seoul-Small-Giant company, Best Employer Award, R&D Lab. • BORA : Ministry of Science and ICT Designated as an Excellent and Innovative R&D product, National Procurement Service Innovative Products, Ministry of SMEs and Startups Pilot Purchase Product Certification
Prizes	• 2024 Seoul Award Excellence Product Certification (BORA, Seoul Economic Promotion Agency) • 2024 Awarded the 2025 New Technology Development Award (BORA, Korea Election Voters Federation) • 2023 Governor's Prize, Seoul (Metaverse Platform and Intelligent XR) • 2023 Minister's Award (By Korean Ministry of SMEs and startups) • 2023 Best Korean Small-Giant company, Grand Prize (Innovative Product XR System Division) • 2022 Governor's Prize, Gyeonggi-Do • 2021 Minister's Award for Applied Tech. (By Korean Ministry of SMEs and startups) • 2021 Best Korean Small-Giant company, Grand Prize (Innovative Product, Metaverse)

• 5

Major Projects (Completed)
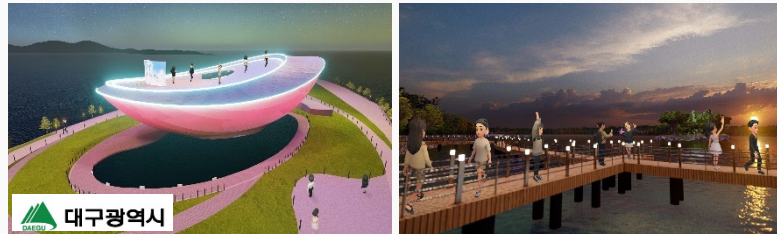
Metaverse Trip to Daegu & concert (Daegu Odyssei Project)

Seomun market, Suseong lake, Daegu Museum, 83 Tower, etc.,

Implementation of 12 tourist destinations in Daegu

Mental Wellness VR

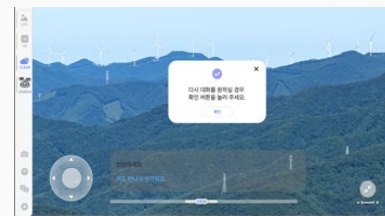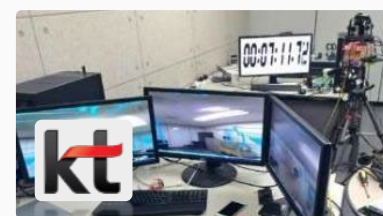Pyeongchang Winter Olympics AR game

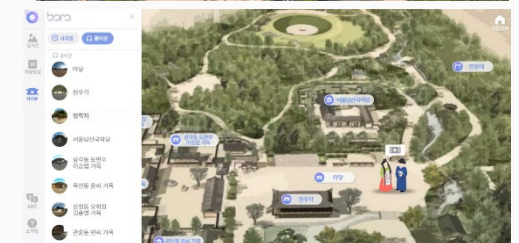VR documentary, Jeju Haenyeo for Google

Development of a Demo Environment for Object Recognition Technology

Developed NIPA AI Chatbot *XR Telescope applied sample image

Korea's First Low Latency 360 VR Live Streaming Technology Development: Achieving 0.7 Seconds Latency(Delivery to KT)

MetaCity: Meta Tourism (MSICT, Seoul)

Myeong-dong, Namsangol Hanok Village

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INSTALLATION

- Over 10 million users annually using our XR BORA.
- Scheduled to be installed and begin operation in April at Namsan N-Seoul Tower (B2C model)

Lotte World Tower EBC

Seoul Sky Observatory

Seoul

Hanok Village, Namsan-Gol

Lotte World Tower EBC

Jaemirang, Myoung-Dong

Animation Center, Seoul

Ani Picnic / Comics Cafe

Seoul Sky Observatory

Lotte World Aquarium

Dora Observatory

Gyounggi-Do

Dora Observatory, Paju

Unification Observatory, Odusan

Aegibong peace Eco Park

Typhoon Observatory, Yeoncheon

Busan X the Sky

Busan

Golden Noeul Bridge

Korea Youth Work Agency

BUSAN X the SKY

Korea Hydro & Nuclear Power

Streaming Service

Incheon, Changwon, Jeju, Gongiu, Mokpo, Busan Unification Center

End Island Observatory

Incheon

End Island Observatory, Baengnyeongdo Island

Woosok University

Jeonju

Woosuk University

Apsan Observatory

Daegu

Apsan Observatory

High1 Resort

Gangwon-do

High1 Resort

Tokyo NEUU

Japan

NEUU, Tokyo Shinjuku

02

Key Products & Services

Intelligent XR Platform BORA

Local information by AI guide

XR Local Guide/ Time Machine / History Culture / Selfie Transmission /
Digital Guestbook / Live streaming

SKY BORA B2C model

Lotte world Tower Seoul Sky

- Lotte World Tower Seoul Sky : 4 units installed and in operation

- Existing Marketing Materials
  - Average number of visitors to Seoul Sky for 3 years: 1.3 million per year

LOTTE WORLD TOWER

Photos using Bora

- Photos of BORA installed on the 118,120th floor of Seoul Sky

- Installation Photo

- Provide QR code photo download after taking a selfie

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PLAY BORA B2C model

Lotte world Tower(B1) Aquarium

■ Lotte World Aquarium: 2 units installed and in operation

▪ Existing Marketing Materials

Average number of visitors to the aquarium for three years:
->1.2 million per year

Existing XR Interaction Device Operation Case:
-> None, we are the first.

LOTTE WORLD TOWER

Photos using Play bora

■ Photos of activities such as picking up marine wastes, decorating water tanks, and taking pictures with the most popular fishes

■ Provide download content/photos used through QR report after experience

11
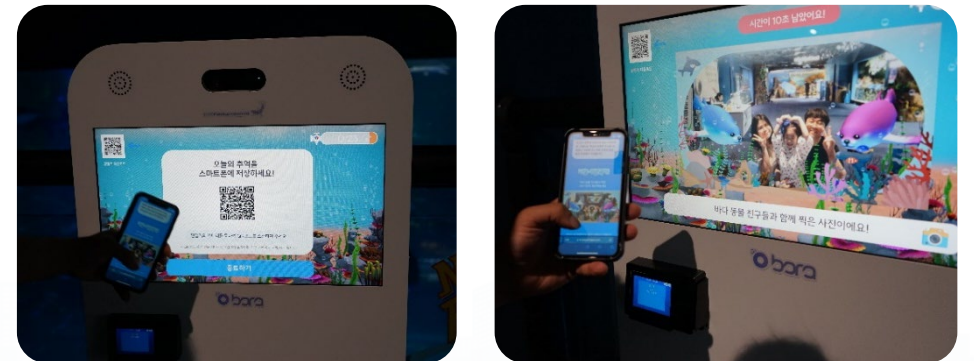
AI Integrated Control Solution via CMS Server

CMS Main Screen

Monitoring by Installation Location

Data Analysis by Installation Location
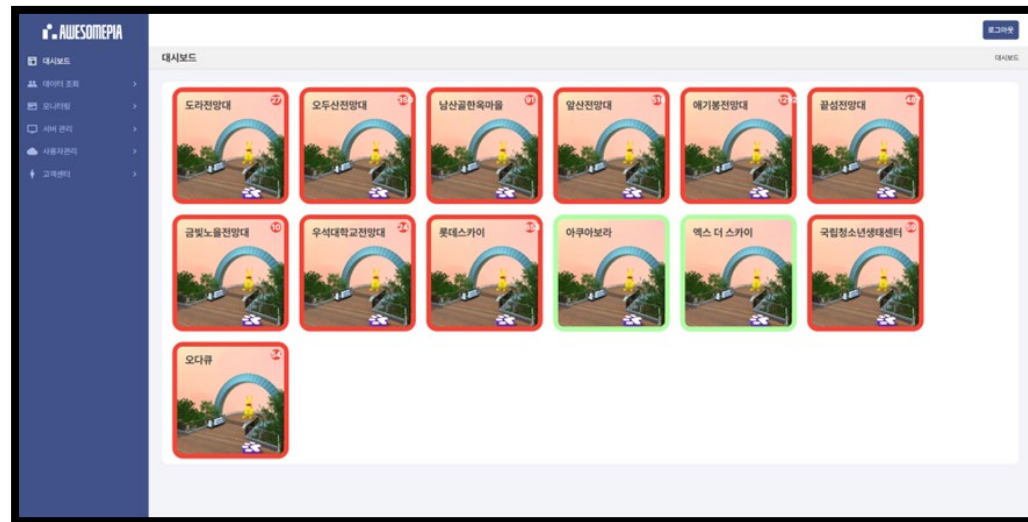
Solution Components

① AI-powered rare video detection & video archive

② CMS remote management

③ AI chatbot service utilizing collected data

④ Data archive for tourist sites & individual users

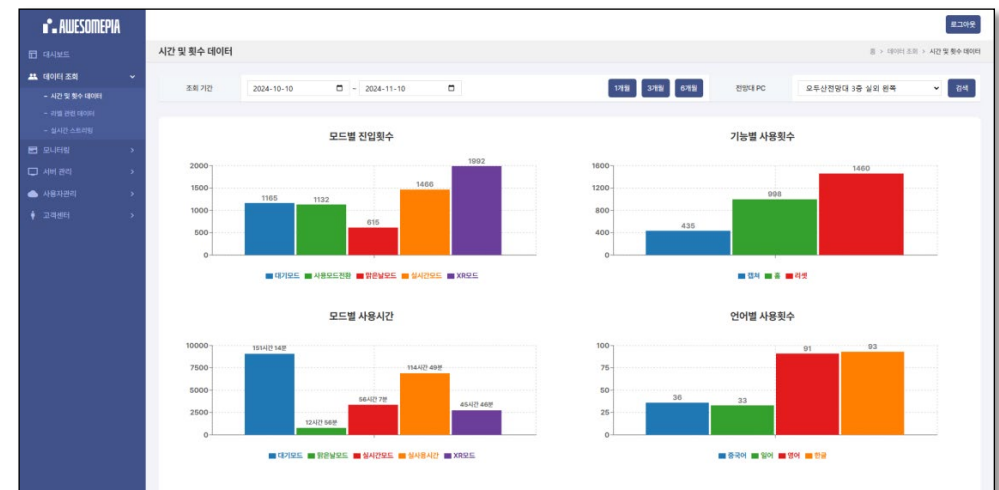# Development and Service of Hybrid Beacon Solution "HiBea"
(Launched in Inje-gun, September 2024)

HiBea Overview

[Target Market for the Beacon Solution Service "HiBea"]

■ Regional Festivals / Exhibitions / Smart Cities

National Regional Festivals: Targeting a total of 1,200 festivals annually

Exhibitions: Targeting exhibition halls at COEX, KINTEX

Safety Management through Personnel measurement

50% Reduction in On-site Government Personnel

■ Fandom Platform (Concerts, Pop-up Stores)

– Pop-up Stores : Targeting major corporations including Hyundai and others, in addition to entertainment companies

– Concerts: Beacon Solutions, Cheer Beacons, etc.
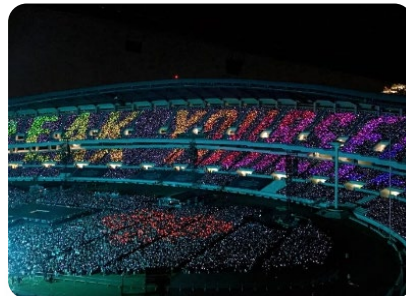
Safety Management Solution

Media Coverage (Electronic Times)

전자신문

오썸피아, 강원 인제군에 지역축제 필수 앱 '하이비' 공급

입력 2024.09.30. 오전 11:09   기사원문

박두호 기자   TALK

추천   댓글

하이비 로고

인공지능(AI) 기반 확장현실(XR) 기술기업 오썸피아가 강원도 인제군과 전국 지역축제 참가인원을 카운팅하는 앱 솔루션 '하이비' 공급 계약을 체결했다.

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"AI-based XR BORA Platform Service" (Currently providing live data service to the Ministry of Unification)

BORA Live Data Streaming Service

Expansion of services to national local government tourism information centers (367 locations), major highway rest areas operated by large corporations

Jeju, Busan, Jeollanam-do, Changwon,

Gyeongsangnam-do, Chungcheongnam-do,

Incheon Unification Education Center

Future Mobile Expansion Business

Festival Information	Cultural Tourism Information
Live Streaming	Remote Control Services

03

Global Business

XR BORA, attracting global attention

Japan
Odakyu Electric Railway
(A major company listed on the Tokyo Stock Exchange)

Installation in Tokyo
Odakyu Electric Railway, located in Shinjuku Ward, Tokyo
Completed installation in NEUU, a representative XR experience facility.
(Installation and pilot operation of XR Experience Center)

Vietnam
Lotte Town Hanoi

Confirmation of entering Lotte Town in Hanoi
Lotte Town, which has an average of 1 million visitors per month
At the Aquarium and Lotte Center Hanoi Sky Observatory
XR BORA B2C Model Installation Confirmation

Dubai
Atlantis Group affiliates

Completed MOU for Atlantis Group affiliates
Through MOUs with local companies, Dubai's Burj Khalifa/ The View at the Palm/ Sky View Observatory, etc are discussing installation of XR BORA

Business Status in Japan

XR BORA Sales Promotion Agreement Signed
(Odakyu Electric Railway)

Completed an agreement with Odakyu Electric Railway

Plan to install XR BORA in multiple regions in Japan, supporting effective promotion and marketing strategies tailored to the Japanese business market.

Sales- related Media Day Held
(Odakyu Electric Railway)

### Successfully held a media day at NEUU

Invited major Japanese media representatives to the XR BORA demonstration and announced sales plans.

Selected as a Tenant at KTSC Tokyo
(Korea Tourism Organization)

Completed the move-in at the Tokyo Tourism Business Support Center

Provided opportunities for networking, shared facilities, and infrastructure, which will be beneficial for the Japanese market.
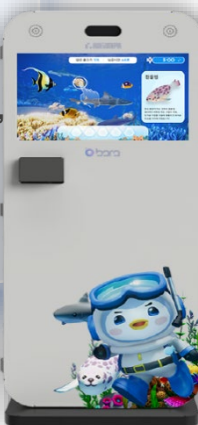
Participated in International Exhibitions

Tourism Expo Japan 2023

Promoting XR BORA in the Global Market

Participated in Japan's largest tourism exhibition, with 150,000 visitors and over 1,280 tourism companies from 70 countries, to promote XR BORA in the global market.

KTSC 3rd DemoDay with Startup JAPAN

Participation in Investor Meetings and Pitching Contest in Japan

Participated in investor meetings and a pitching contest at KTSC 3rd DemoDay, which provides opportunities for startups from Korea and Japan to understand each other's markets and collaborate.

GITEX GLOBAL 2024

Participation in Global IT and Technology Exhibition

Participated in the global-scale IT and technology exhibition, GITEX GLOBAL 2024, and attended the Korea-China-Middle East O.I Summit event, conducting investment meetings with representatives from Emirates companies.

04

Proprietary Technologies & Patents

01   Proprietary technology

R&D Building and managing a professional, reliable system

Software Engineering

Hardware Engineering

AWESOMEPIA

Virtual Integration Solutions(XR + AI)

Content Management System(CMS)

R&D

Operation of corporate research institute and development department

Mechanical and circuit design

Internal environment automatic control system

Media Server

USER
Remote Control

Optical module

IoT device development
(Sensors, motors, and fan tilt)

- Acquisition of hybrid beacon technology in the first half of 2024
(Key technology for Starbucks Siren Order)

- Factory operation and in-house hardware development
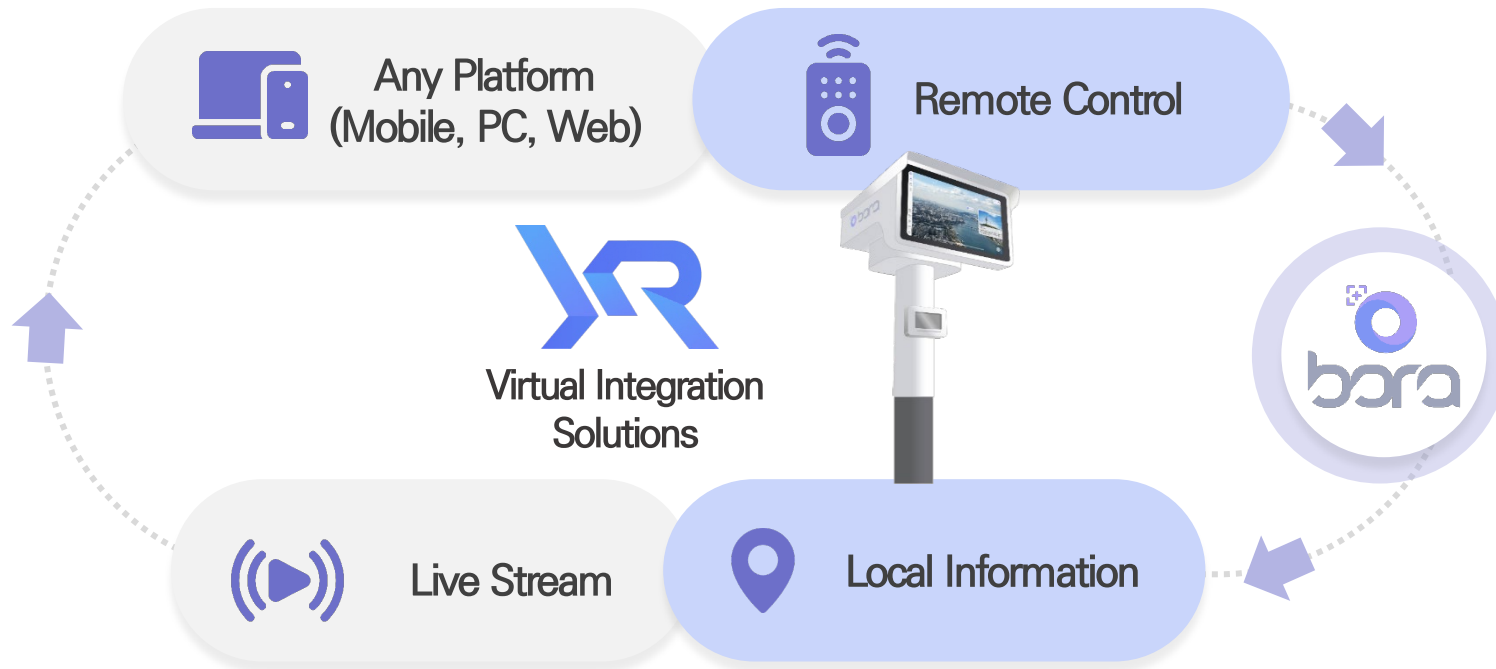- Customization by installation location and use case

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02   R&D Key technologies

Mobile remote control service for users "Remote BORA"

- The goal is to allow users to remotely control BORA's real-time video to view the desired locations.
- Content is provided using a virtual camera machine technology for panorama videos.

Currently holding patents related to virtual camera machines

Any Platform (Mobile, PC, Web)

Remote Control

Virtual Integration Solutions

bora

Live Stream

Local Information

특허증
CERTIFICATE OF PATENT

특 허   제 10-2523493 호
Patent Number

출원번호   제 10-2021-0094125 호
Application Number

출원일   2021년 07월 19일
Filing Date

등록일   2023년 04월 14일
Registration Date

발명의 명칭   Title of the Invention
가상 카메라 머신을 이용한 콘텐츠 제공 시스템 및 방법

특허권자 Patentee
등록사항란에 기재

발명자 Inventor

위의 발명은 「특허법」에 따라 특허원부에 등록되었음을 증명합니다.
This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Korean Intellectual Property Office.

2023년 04월 14일

특허청
Korean Intellectual Property Office

특허청장
COMMISSIONER,
KOREAN INTELLECTUAL PROPERTY OFFICE
이 인 실

QR코드로 현재기준 등록사항을 확인하세요

02 R&D Key technologies

User mobile remote control service "Remote BORA" concept video

03   Certification and Patents
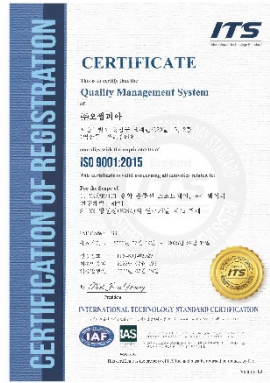
Patent and major technology

Innovative
R&D product.

KC Cert.

ISO 9001

PCT Patented

Pilot Purchase Product
Certification

National Procurement
Service Venture startup product

XR technology

- Ministry of Science and ICT Designated as an Excellent and Innovative R&D product.
- National Procurement Service Innovative Products
- Ministry of SMEs and Startups Pilot Purchase Product Certification

Securing technological exclusivity and competitive advantage through patent management
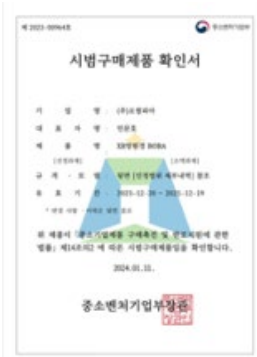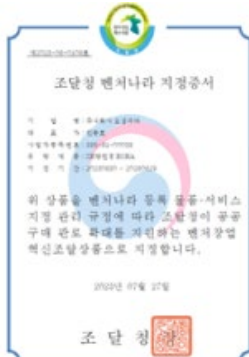
Utilize R&D results and enhance technology credibilityR&D

- 10 domestic patents (15 applications) and 3 trademarks
- ISO 9001 certification, KC certification, and IP44 rating secured

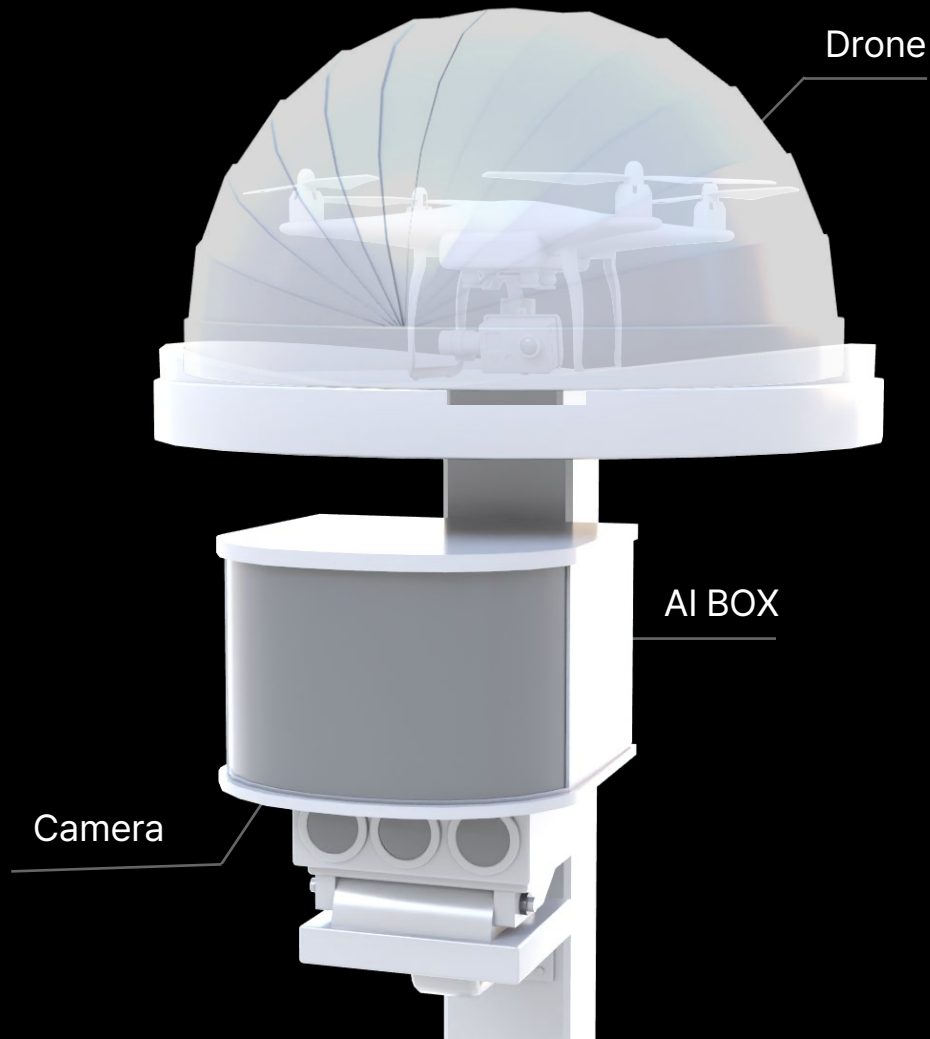PCT international patents and Japanese domestic patents filed for international expansion

An FTO report for the Japanese market has been produced, confirming a very low risk of disputes

* Appendix

AI-powered Automatic Identification & Tracking Solution,
Scientific Border Control System for Defense: 'BORA'
Preparing for R&D and commercialization

Drone

AI BOX

Camera

Day/Night Surveillance System Setup

Composed of RGB cameras (day), IR cameras (night), and TOD thermal cameras

Accurate detection even at night through secondary and tertiary tracking systems

AI-based Automatic Location Tracking (AI solution available)

Tracking with wide-angle, zoom, and drone cameras

Fully automated identification & tracking, no manual operation required

Pan-Tilt Automation System Operation

Automated panning (horizontal rotation) and tilting (vertical rotation)

Organic anomaly tracking through pan-tilt operation of each camera

**Presentation at the Korean Society of
Defense Technology Conference
(October 31st)**

인공지능 기반의 복합화 자율경계 시스템에 대한 연구

A Study on the AI-based Complex Autonomous Surveillance System

윤경용[*,1]. 박기철[2]. 민문호[3]. 옥승현[3]. 신상욱[3]. 김민근[3]. 조성철[3]. 최윤지[3]

Andy Kyung-yong Yoon[*,1]. Ki-chul Park[2]. Munho Min[3]. Seunghyun Ok[3]. Sanguk Shin[3]. Sungcheol Jo[3]. Yoonj Choi[3]

[초   록]

은 일찍이 2006년부터 과학화 경계시스템을 도입하여 시범운영 했고 2016년까지 전체 GOP에 도입했음에도 불구하고 '노크귀 리발귀순' 등 경계실패를 반복하고 있다. 인공지능 기반이 아니기 때문에 완전한 과학화를 이루지 못한 것이다. 인공지능 기빈 순히 사람·동물을 구분하는 것을 넘어 자동 감지 인식 추적 다른 인근 인공지능 카메라와 자율 연계 추적, 드론과 자율 연계, 고 GPS가 아닌 영상기반의 객체 위치추적 알고리즘이 적용되어야 한다. 또한 고배율, 열화상 카메라 등이 자율적으로 객체를 할 수 있도록 하는 첨단 기능을 탑재한 시스템이 도입되어야만 반복적인 경계실패를 종식시킬 수 있다. 본 논문에서는 현재까 장 진보된 인공지능기반 복합 자율 경계시스템을 제안하고자 한다.

[ABSTRACT]

(주) 오썸피아

AWESOMEPIA

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info@awesomepia.kr
www.awesomepia.kr

Awesomepia Inc.

Headquarter	2F, 27, Seolleung-ro 93-gil, Gangnam-gu, Seoul, Republic of Korea
Branch Office	No.1266, 12th FL XR RND Center,136, Cheongsa-ro, Seo-gu, Daejeon
	Innovation Biz.Ctr, 406-21,Jongga-ro, Jung-gu, Ulsan
	2F, 89, Gwawonbuk 4-gil, Jeju-si, Jeju-do

■ Business Partners

DAEHONG LG HelloVision SK planet NAVER JAKGA COMPANY

thingsflow hellobot KRAFTON Owth |주|오트 ETRI 대한지리학회 The Korean Geographical Society 고려대학교구로병원 KOREA UNIVERSITY GURO HOSPITAL

ATLANTIS WIDE GAS AND PETRO TRADING LLC odakyu burpple ETT