

























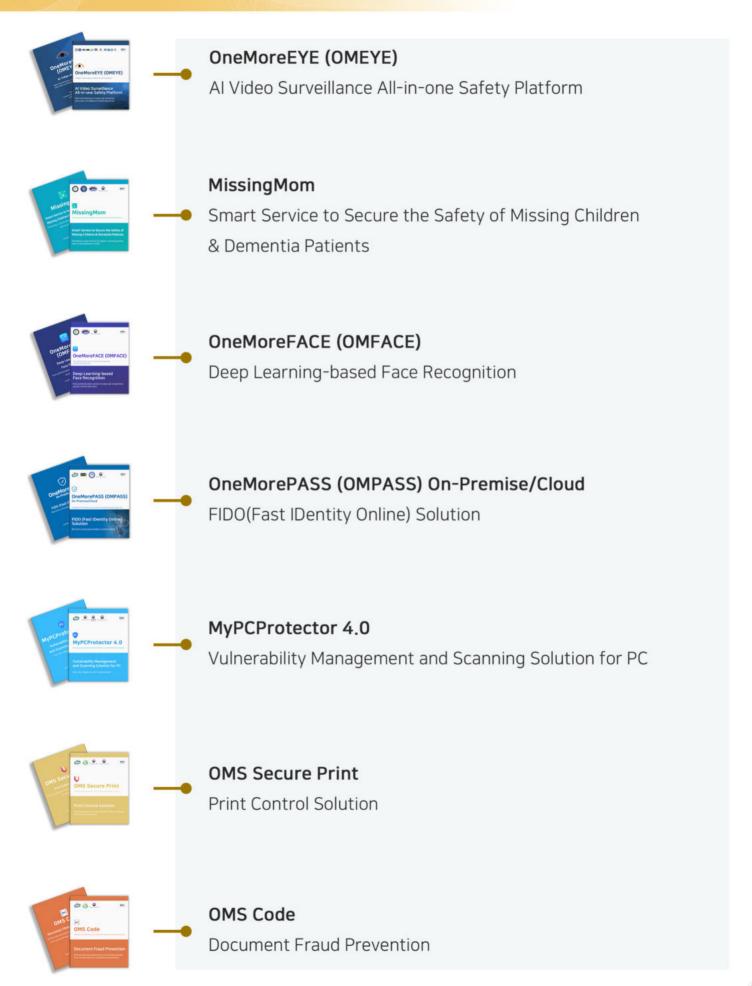


# SOLUTION GUIDEBOOK

We will run towards the goal of becoming a "Global Unicorn Company" that provides customer-centric innovative technologies in the field of "Information Security and Artificial Intelligence"



## **Contents**





# OneMoreEYE (OMEYE)

## Al Video Surveillance All-in-one Safety Platform

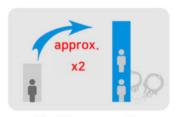
Real-time location detection, route map animation, and smart surveillance monitoring service

# OneMoreEYE (OMEYE) 000 = = = 00 · 200 · om OneMoreEYE (OMEYE) Al Video Surveillance All-in-one Safety Platform

#### OMEYE Awards & Certifications



## □ Necessity of Introducing



# of increase in crimes against polices



# of reported missing persons every year in Korea



# of increase in CCTVs against standards

## □ Problems of Existing Solutions







1 hour-long video









Accuracy



Event-based surveillance

## □ Technical Approach

# Smart Centralized Surveillance (Fast Search) Tracking Target - Face Recognition (Face mask on/off) - Person Re-Identification (Body shapes, clothes, shoes, etc.) People Smart Centralized Surveillance (Fast Search) Accuracy 99.98% (Mask On:98.45%) Rank 1 (99%) Within Rank 5 (99.8%) (Re-ID for Top 5 Candidates)

#### Smart Selective Surveillance



Detect events automatically for people
(loitering, trespassing, falling, overcrowding, counting, jaywalking, etc.),
vehicles (intrusion, illegal parking, license plate, etc.),
and other events (fire, smoke, hard hat, abandonment, SOS hand signal etc.)



## □ Key Points

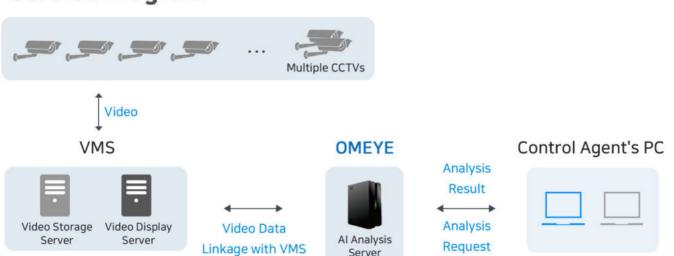
- •No CCTV Replacement

  (Applicable to any existing environment)

  •Smart Selective Surveillance

  (Reduces control agents' intense workload & reliance)

## □ Service Diagram



## □ Important Screen and Operational Scenario

Real-time detection and route map animation on the selected people or vehicles

#### Select Targets









by uploading pictures

by entering license plate number

#### Select Areas

#### Select Conditions



Select Candidate Targets



Real-time Detection for Live Monitoring



Animate Map Route



#### **Download Results**



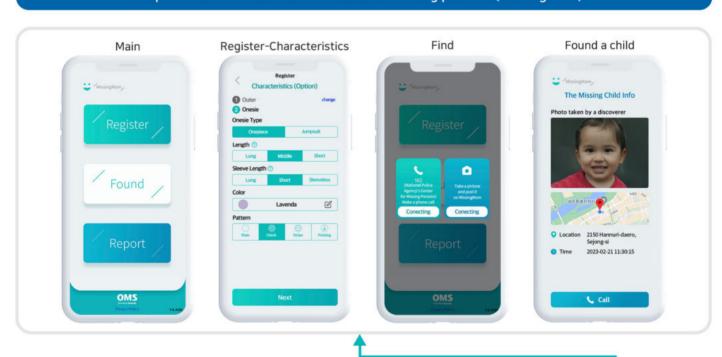
#### Smart Surveillance Service (Event Monitoring)

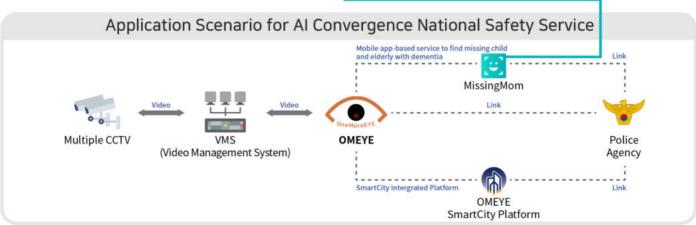




- ·Applied fully verified AI Algorithm by KISA K-ICTC certification
- -Detect events automatically for people (loitering, trespassing, falling, overcrowding, counting, jaywalking, etc.), vehicles (intrusion, illegal parking, license plate, etc.), and other events (fire, smoke, hard hat, etc.)
- ·Available to set the region of interest (ROI) in the CCTV video to be detected.
- ·Display thumbnails of the events and play the video.
- ·Available to check and search the surveillance history.
- ·Boost user convenience by applying user policy or default policy, fixed camera, etc.

#### Optional linked service: fast search for missing persons (MissingMom)











## Smart Service to Secure the Safety of Missing Children & Dementia Patients

Providing a smart service to report a missing person fast via smartphone or kiosk





## □ Key Points

- ·Software performance and quality are fully certified by KISA, TTA, and KOLAS
- (Acquired accredited certification for self-developed face recognition model (OMFACE) by TTA V&V)
- Smart city living lab service

(Service applied with face recogntion to find missing people that enables active participation of citizens)

·Simple report

(Simple report via registration of wearing information and face/body image)

·Establishment of an efficient system for guaranteed civil safety

(Reduce costs through intelligent service of guaranteed civil safety)

## □ Necessity of Introducing



- ·It is urgent to prepare measures regarding the public safety from the increasing number of reports of missing people such as children, dementia patients, intellectual, autistic, mentally disabled, etc.
- ·As of 2022, the number of annual reports for missing children and elderlies with dementia is approximately 50,000 cases in Korea according to the statistics of the National Police Agency

## □ Operational Scenario : Family





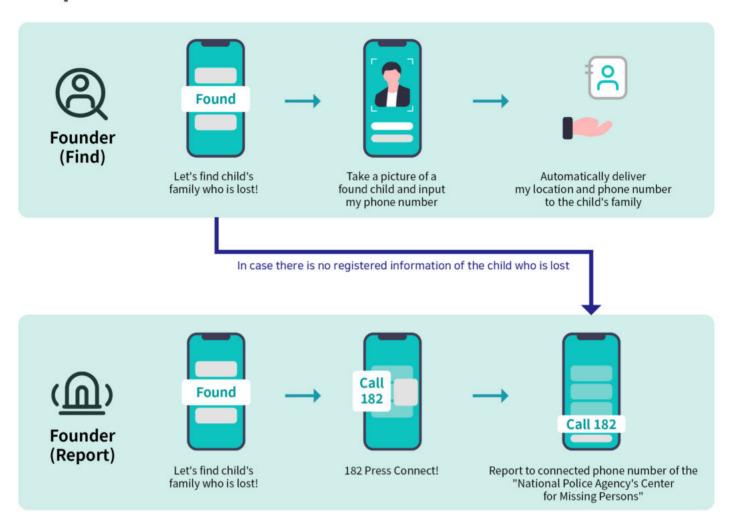




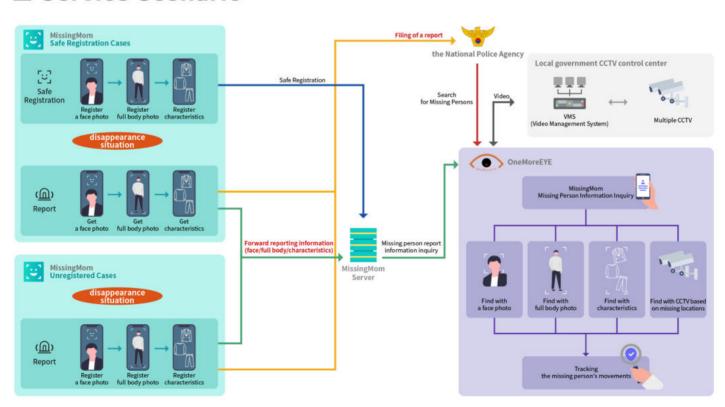
Tracking and visualizing the person's movement path from CCTV video via OneMoreEYE



## □ Operational Scenario : Founder



## □ Service Scenario



## □ Important Screen

Main



Find



Register-Characteristics



Found a child





# OneMoreFACE (OMFACE)

## **Deep Learning-based Face Recognition**

Face authentication service to easy use of payment, access control and more





## □ Key Points

·High facial recognition accuracy rate of 99.98% based on the test of K-NBTC from KISA

(Face recognition works even with changes in lighting, pose, expression, and accessory (Also works with a 'Mask'))

·Secured service trust

(Acquired the accredited ceritication of K-NBTC test about facial recognition algorithm performance from KISA)

·Real-time processing

(Processing time of user authentication is less than 1 second based on 100,000 face DB)

·Support cameras from 640\*480, Windows, Linux, Android and IOS

(Requires even low hardware and supports for various operating systems)

· Available to apply on various services

(Applying to access control, attendance management, medical appointment, E-TEST, image processing system, ERP, video conferencing solution, etc.)

## □ Performance Test Results

Accruacy rate of face recognition with change in lighting, pose, expression, and accessory



#### Tested out 4,250,000 times through K-NBTC



**Lighting Recog Rate** 

100%



**Expression Recog Rate** 

99.92%



Pose Recog Rate

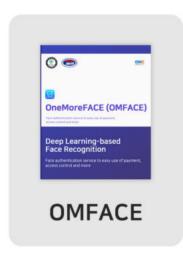
100%



Accessory Recog Rate

100%

## □ Service Application







## MissingMom

Smart Service to Secure the Safety of Missing Children & Dementia Patients

Providing a smart service to report a missing person fast via smartphone or kiosk



#### **OMEYE**

Al Video Surveillance All-in-one Safety Platform

Real-time detection, route map animation, and smart surveillance monitoring service





# OneMorePASS (OMPASS)

On-Premise/Cloud

Website

## FIDO (Fast IDentity Online) Solution

biometric and passwordless authentication



#### **▶** Certifications



## □ Necessity of Introducing



- · Increasing demand for user authentication technology that guarantees strong security and user convenience
- Perfectly solves the risk factors of password authentication according to FIDO standard authentication method based on public key



#### Several Risks of Password Authentication

- ·Most users use less than 5 passwords
- ·Passwords are the leading cause of 80% of data loss
- ·More than 50% of users have never changed their passwords in 5 years
- Most users reuse the same password across multiple sites

## □ Next-Generation Integrated Authentication Solution

Resolves the inconvenience and anxiety of password methods Guarantees user convenience and security at the same time







## □ Advantages

#### ·User Convenience

Apply various authentication methods and manage integrated authentication lifecycle with this one OMPASS (mobile authentication device).

#### ·Completely Eliminate Security Vulnerabilities

Through the "passwordless login", complete removal of security vulnerabilities due to password use and management and also satisfy one's security compliance.

#### Compliance with International Standards

Comply with FIDO Alliance international standard based on public key.

## □ Specification Diagram

System Specifications

- ·Server: Windows, Linux (Intel Xeon 2GHz or higher, RAM 64GB, HDD 1TB or higher recommended)
- ·Client: Android, iOS



## □ Key Points

#### Various AuthN Methods

#### ·Various authentication methods can be expanded

Application of the latest various user authentication technologies based on public Key

#### User-selectable authentication

Supports various authentications such as Face Recog, Fingerprint Recog, PIN, Pattern, Windows Hello login, and more

#### **Customer-Centric Flexibility**

#### ·Customer-Centric Service

Provides an optimized service for the environment of customer needs through user integrated authentication app or SDK

#### ·Minimize Developing Time

Provides linking module (interface server) to minimize applying time and developing work

#### Optimized the Customer Environment

Supports UAF (Universal Authentication Framework) and U2F (Universal Second Factor)

#### Integrated authentication service

Possible to link web-based service, Windows client, Windows login, mobile app, Linux PAM, MaxOS client

#### **Enhanced System Security**

#### Secured Security

Conducted penetration testing through a professional white hacker team and completed security measures

#### **Enhanced Administrator Authentication**

Requires OMPASS authentication separately when accessing the admin page

#### IP Address Block from Unauthorized Access

Verifies user access country that can be set by an administrator

#### Prespond Strongly againt Phishing Attack

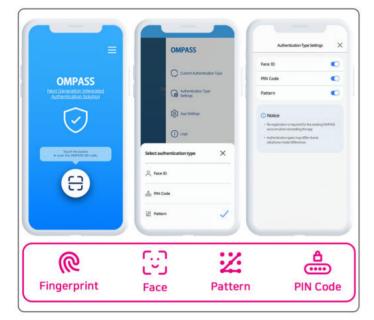
Verifies the user access device (or browser)

#### Reinforcement of Mobile Authentication Device Security

Verifies the jailbreak, forgery, and latest version of the user device

## □ Main Screen

#### **Mobile App**



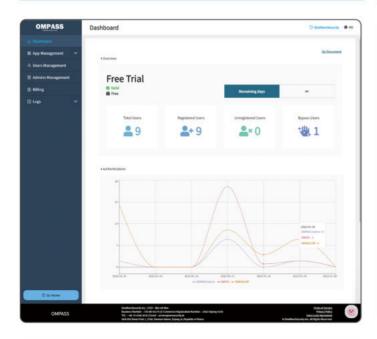
- Allows users to log in with mobile authentication devices
- Provide user selection row authentication methods

#### Windows Login



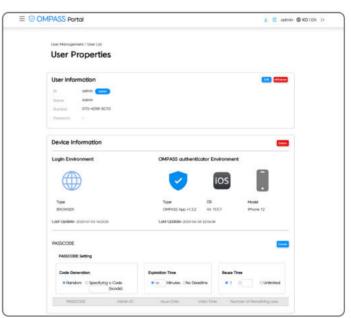
- Provides Windows login service
- Provides OTP authentication methods in an offline environment

#### **Admin Page**



- Provides dashboard functionality for administrators
- Provides application management, user management, and log management capabilities

#### Managing device properties



- Provides user and authentication device details management services
- Providing PASSCODE certification services for non-certified persons



# MyPCProtector 4.0

## Vulnerability Management and Scanning Solution for PC

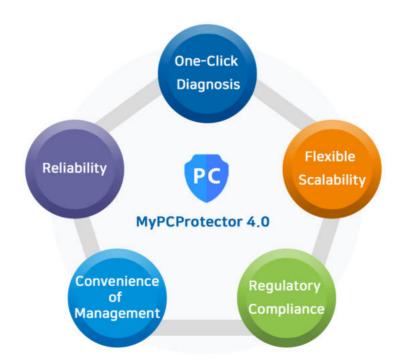
One-click diagnosis and measurement





## □ MyPCProtector 4.0

OMSMyPCProtector 4.0 provides PC security vulnerability diagnosis and its solution that allows the endpoint security to be operated in the most secured status against security threats on the user's PC. ! Most security incidents start from vulnerable PCs of internal users with low security awareness.



## □ Advantages



- · One-click PC vulnerability check
- Forced PC vulnerability check and measuring function provided (measures unable to terminate)
- · Provides easy measureable UI (automating function is provided)
- · Provide a guidance into specific measures



- · Official council member of My PC Protector
- Acquired the Certification Level 1(=1st grade) of Good Software(GS), the Certificate of Software Quality from the Telecommunications Technology Association(TTA)



- · Provide statistics and reporting data on PC inspection results
- · Provide intuitive dashboard function
- · No need for separate customizing
- · Provides agent automated integrity check function
- · PC status can be checked at all times through widget service



· Compliance with the Cybersecurity Diagnosis Day



- · Addition of administrator-defined checklists can be created
- · Possible to support network blocking through "S-Capsule" linkage
- Support linking to third-party solutions

## □ Important Screen





#### User's PC Check



#### User's PC Check Result



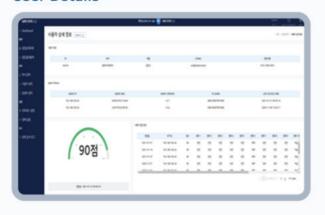
#### Dashboard (Server)



#### Widget



#### **User Details**



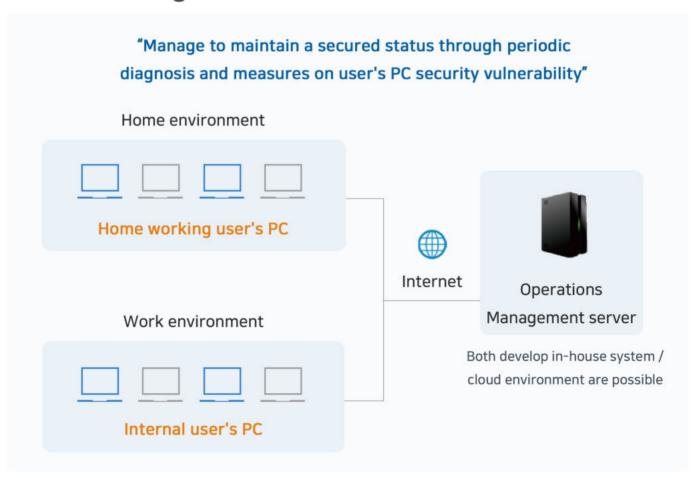
#### **Results Report**



## □ Key Points

Functions	Characteristics		
Vulnerability Check & Measure	·One-click diagnosis and measurement for 16 types of vulnerability including the "Cyber Security Diagnosis Day" checklist ·Possible to force inspection according to the schedule (monthly/weekly/daily) policy through central management (cannot be terminated) ·Display the inspection results for each list as something like safe/vulnerable so that users can be intuitively understand		
Result Analysis	Provide individual evaluation report and detailed history Provide informations on overall/departmental evaluation/inspection rate and top 5/bottor top 5 of departmental rating, and provide a function to download the result report		
Management	Support linking with HR databases and other security solutions     PC status can be checked at all times through widget service     Automatic inspection of client program to verify forgery or falsification (security enhancement)		

## □ Service Diagram





# **OMS Secure Print**

## **Print Control Solution**

Track management for personal information protection and data loss prevention





## □ Advantages

It is urgent to solve the print security problem, which is a blind spot for information leakage.

OMS Secure Print is a powerful print control solution that can track illegal printouts.



## Traceability of illegal printouts

| Watermark for hiding information / 2D barcode



# Personal information (keyword) setting-based printout control

| Prevents illegal leakage by inserting watermark in printout



## Print log/statistics function

| Convenient statistical information provision and printout's content verification

## □ Key Points

## ♦ Invisible digital Watermark/2D Barcode

- · It is possible to trace illegal printouts through the application of watermark which has hidden information
- · Through injection of high-density 2D barcode, it is possible to obtain detailed informations such as the title of the printout and the user who printed it out.
- · Possible to track generator of the printouts whenever acquire printiout images of illegally leaked out.
- · Immediate verification of illegal printouts is possible through mobile app

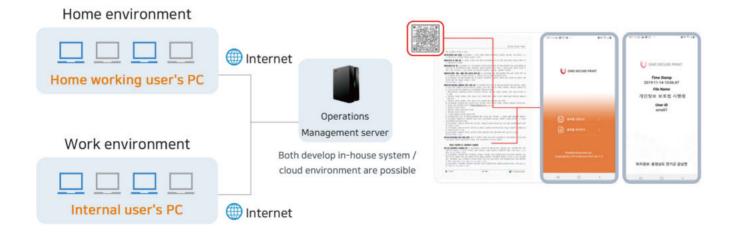
## Personal information (keyword) setting-based printout control

- · Print control is possible according to detection criteria of the important information
- Manage logs separately and notify to administrator when any documents containing important informations print

## Convenient statistical information provision and printout's content verification

- · Statistics for the number of prints by user/period
- · Statistics for violation of personal information (keyword) by user/period
- · Extraction of top users in violation of the number of prints/personal information(keyword)
- · Save and check the raw data of the printouts

## □ Service Diagram





# **OMS Code**

## **Document Fraud Prevention**

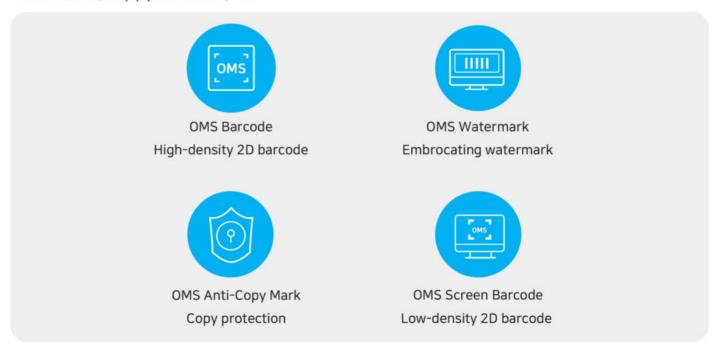
2D barcode and watermark for preventing forgery and counterfeiting of certificates and licenses



## 

## □ Application Scenario

**OMS Code** can be applied to various domains such as certificate forgery verification, book voice conversion, activation, expiry date, inventory management, fintech, healthcare, copy protection, etc.



## □ Key Points

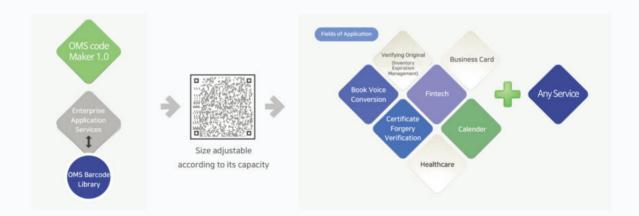
## OMS Barcode (High-density 2D barcode)

# | High-density 2D barcode with the world's largest data insertion in 300dpi environment

- · Information stored in high-density 2D barcodes can be printed out to screen and voice through mobile app
- · Data encryption / decryption via KCMVP crypto module
- · Optimized solution that can help the visually impaired and elderly people to improve accessibility of information (compliance with the Broadcasting and Communication Standards (KCS.KO-06.0181))

Generation

Barcode generation using Windows PC-only applications
 (OMS Code Maker) or libraries



Detection

- Easy acquisition via mobile app (Android·iOS)
   (provided with OMS mobile app or library)
- · Acquire OMS barcode displayed on printout and monitior screen



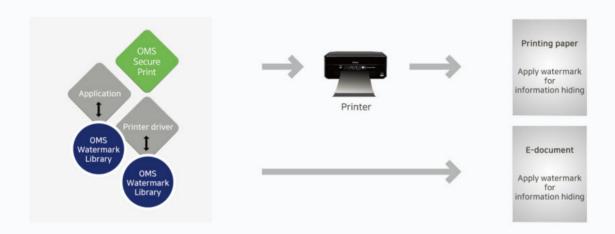
## OMS Watermark (Embrocating Watermark)

#### | Watermark for hiding information with invisibility (whole embrocating method)

- · The mobile app allows you to acquire hidden informations in the watermark when shooting anywhere in the printout.
- · Applicable to various services such as printout generator tracking, certificate forgery verification, activation, security paper export history management, etc.

Generation

 Apply watermark when printing through OMS print control solution or dedicated library



Detection

- Easy acquisition via mobile app (provide with OMS mobile app or library)
- · Acquire OMS Watermark displayed on printout and monitor screen



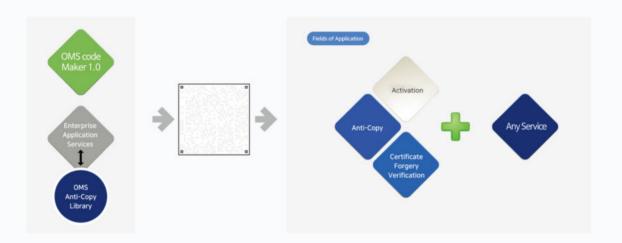
## ♦ OMS Anti-Copy Mark

#### | Determine whether to copy through the naked eye or mobile app

· Apply it to various services such as verifying the original, activation, certificate forgery verification, etc.

Generation

· Apply Anti-Copy Mark using OMS Code Maker



Detection

 Easy acquisition via the naked eye or mobile app (provided with OMS mobile app or library)





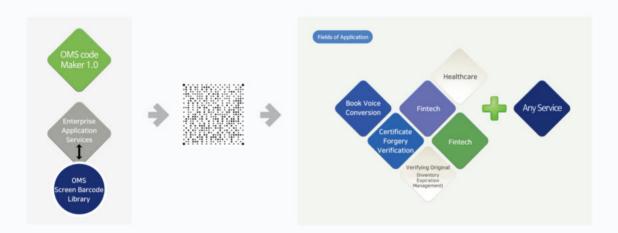
## ♦ OMS Screen Barcode (Low-Density 2d Barcode)

#### | Low-density 2D barcode optimized for screen environment

- · Information stored in low-density 2D barcodes can be acquired through mobile app
- · Applicable to various services such as user authentication, certificate forgery verification, book voice conversion, activation, expiry date, inventory management, fintech, healthcare, etc.

Generation

Generate the barcode using Windows PC-only applications
 (OMS Code Maker) or libraries



Detection

- · Easy acquisition via mobile app (Android·iOS) (provided with OMS mobile app or library)
- · Acquire 'OMS Watermark' displayed on printout and monitior screen



# Certifications

## **Product Certificate**



OMEYE v1.0 KISA K-ICTC Certificate (Loitering, Intrusion, Abandonment)



OMEYE v1.0 KISA K-ICTC Certificate



OMEYE v1.0 KISA K-ICTC Certificate (Loitering, Intrusion, Falldown) (Loitering, Intrusion, Queueing/Counting)



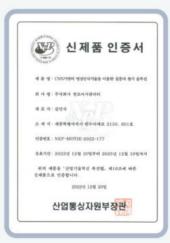
OMEYE v1.0 **Excellent Information Security Technology Certificate** 



OMEYE v1.0 KISA K-ICTC Certificate



OMEYE v1.0 **Excellent Product** (Loitering, Intrusion, FireDetection) of Public Procurement Service



OMEYE v1.0 New Excellent Product (NEP) Certification



**OMEYE Smart City Platform** TTA Certificate



Certificate of Designation of Innovative Product by PPS OMEYE v1.0, MissingMom v1.0



OMPASS v1.0 FIDO Alliance International Certification



OMPASS v1.0 **Cloud Computing Certification** 



OMFACE v2.0 KISA K-NBTC Certificate









OMFACE v1.0 KISA K-NBTC Certificate

OMEYE v1.0

OMPASS v1.0

My PC Protector 4.0 TTA GS 1st Grade Certificate TTA GS 1st Grade Certificate TTA GS 1st Grade certificate









OMS Secure Print v1.0

OMS Code v1.0

S-Capsule v1.0

Certificate of Designation of Innovative Procurement Product on Venture Nara by PPS

## TTA GS 1st Grade certificate TTA GS 1st Grade certificate TTA GS 1st Grade certificate

## **Company Certificate**



**Excellent Technology Evaluation Company** Certificate



Venture Company Certificate



G-PASS Company Certificate



Start-up Company Certificate



Inno-Biz Certificate



Direct Production Confirmation Certificate



KRX Startup Market(KSM) Certificate



Corporate Research Institute Accreditation

## **Awards & Registrations**



Minister Award of the Ministry of Commerce Industry and Energy (Contribution to national industrial development through commercialization of new technologies)



Minister Award of the Ministry of Science and ICT (Information Security Merit)



Minister Award of the Ministry of Science and ICT (Information Security Product Innovation Contest)



KINPEX 2022 KBIZ Awards Winner



Minister Award of the Ministry of Science and ICT (Excellent Company)



WSCE 2022 Awards Winner



Gangseo-gu Smart City Idea Competition Awards Winner



OMEYE v1.2 Copyright Registration



OMEYE Smart City Platform Copyright Registration



OMEYE v2.0 Copyright Registration



OMEYE v1.0 Copyright Registration



OMS Secure Print v1.0 Copyright Registration











OMS Code v1.0 S-Capsule v1.0 MyPCProtector 4.0 MissingMom v1.0 OMPASS v1.0 OMFACE v1.0 Copyright Registration Copy

# **Patents**

Nation	Name of invention R	egistration Numbe
Germany	Device and Method for Providing Missing Child Search Service Based on Face Recognition Using Deep Learning	11 2021 004 252.1
Germany	APPARATUS AND METHOD FOR TRACKING MISSING PERSON BASED ON ATTRIBUTE	11 2022 000 061.9
Republic of Korea	APPARATUS AND METHOD FOR TRACKING MISSING PERSON BASED ON ATTRIBUTE	10-2022-0147011
PCT	APPARATUS AND METHOD FOR TRACKING MISSING PERSON BASED ON ATTRIBUTE	PCT/KR2022/017439
United States of America	APPARATUS AND METHOD FOR TRACKING MISSING PERSON BASED ON ATTRIBUTE	18/009,560
UK	APPARATUS AND METHOD FOR TRACKING MISSING PERSON BASED ON ATTRIBUTE	2218660.5
Republic of Korea	Al-based illegal parking management method and device	10-2022-0120845
UK	Device and Method for Providing Missing Child Search Service Based on Face Recognition Using Deep Learning	2213332.6
PCT	Method and apparatus for providing personal protection alarm	PCT/KR2022/006361
Republic of Korea	Method and apparatus for providing personal protection alarm	10-2545383
United States of America	Apparatus and method for providing missing child search service based on face recognition using Deep-Learning	17/606,590
Republic of Korea	Server for tracking missing children and deep learning based tracking method for moving routes of missing children from its server	10-2305038
PCT	Apparatus and method for providing missing child search service based on face recognition using Deep-Learning	PCT/KR2021/010589
Republic of Korea	Server for tracking missing children and deep learning based tracking method for moving routes of missing children from its server	10-2270899
Germany	Method and apparatus for preventing illegal outflow of electronic documents	15171427.6
Republic of Korea	Method and apparatus for video recognition	10-2020-0064978
Republic of Korea	Method and apparatus for registering face and pose for face recognition	2018-0146791
Republic of Korea	Method and apparatus for preventing illegal leakage of electronic documents by self-response	10-1781970
United States of America ex	Information insertion method, information extraction method, and information extraction device using point-based information that are strong against geometric distor	9710872 tion
United States of America	Method and apparatus for preventing illegal outflow of electronic documents	14/736144
Republic of Korea	Method and apparatus for preventing illegal leakage of the electronic documents	10-1599740
Republic of Korea	Method and apparatus on removable storage medium control for preventing data leakage	10-1460297
Republic of Korea	Method and apparatus for checking PC security	10-0961180
Republic of Korea	Method and system for checking PC security	10-0862617

