# This is not a Fiction Anymore!

KEUSUNG SECURITY thinks your safety.

We used 3D real-time image mapping so that we could improve the checkerboard screen of CCTV systems.

VRS is the most future-oriented CCTV system, monitoring every movement of targets.

### We Think Your Safety

Visit www.kssecurity.co.kr for more information. or call 031-707-3800 (+82-31-707-3800 for international call).

















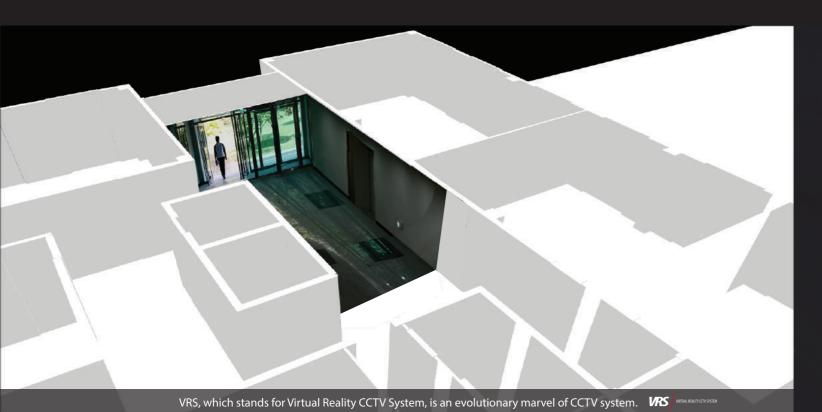


We offer perfect security solution for fire and life-safety. VRS:Virtual realiy auto-patrol surveilance system









We tried to answer "How can we improve the checkerboard screen of CCTV systems?", and developed VRS as the answer to the question.

### **CCTV** image mapping

-If you input 3D blueprints, a monitor shows results.
-Standardized blueprints which have different file structures.
-Optimized monitor rendering speed
-Optimized for 3D engines including Culling

## **Navigation System**

VRS can set patrol zones and automatically patrol 3D virtual space. VRS can control access and display fire sensor data.

### **3D map Rendering**

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#### A Process of Mapping in 3D Virtual Space



First, decoded camera images are loaded to memory
Then, each loaded frame is recorded in texture images in real time.
Peaks of mesh that compose 3D virtual space are converted into 2D space in observers' point of view.
2D coordinates are converted into UV coordinates for texture mapping.
Texture images are mapped in mesh, using UV coordinates.

#### **Core Technology**

Rendering 3D virtual space onto monitors
Setting and controlling users' viewpoints
Setting and controlling virtual CCTV in 3D virtual space
Loading and printing out CCTV images
Applying a video to texture, a image used in virtual space
Mapping video texture from the point of CCTV view in 3D virtual space
Setting camera moving routes and operating automatically

#### **System Block Diagram**



