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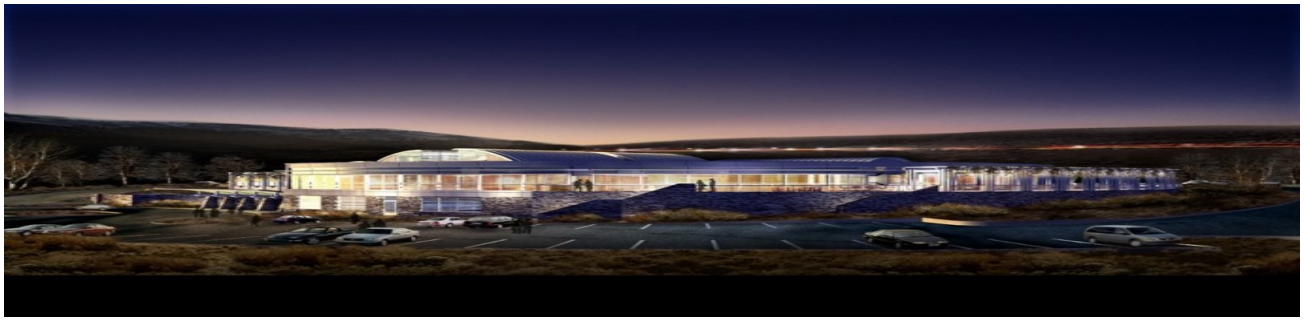
COVID-19 Heat Detection Technology Protocol
As
Applied to the GIL-2001 2DLV Controlled Access Portal System

Corporate Executive Summary



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New York State Certified
Service-Disabled Veteran-Owned Business

License# 181720

NEW YORK STATE OF OPPORTUNITY.

Certified Minority Business Enterprise (MBE)
#64996

THE PORT AUTHORITY OF NY & NJ

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Executive Summary

The world today is so highly interconnected, a contagion that can quickly spread diseases can lead to an epidemic; pandemic as a worst case scenario. However, there are ways to prevent its spread in order to improve public safety. Since the most likely and common way for the virus to spread is through human contact where an infection is already present, there are efforts to effect ways of detecting a viral presence in places and spaces where human beings are bound to interact and possibly engage in physical contact. In the past, the screening process required a thorough checkup of every individual regardless of whether they are sick or not. It can be a long and tedious process, so other techniques have been explored to make the process more effective and efficient. ***2M* Corporation** (authorized distributor) has teamed with its security and safety affiliate, ***Security Defense Systems Worldwide, Inc. (SDSW)*** to adapt SDSW's patented controlled access portal for COVID-19 known environmental invasion, early detection in public settings by monitoring elevated human heat tracings. The ***GIL-2001 2DLV*** is originally an SDSW security & defense system and the only security door system certified for Ballistics and Forced Entry by ***U.S. Department of State (DOS),*** tested and certified by ***Department of Homeland Security (DHS), Transportation Security Administration (TSA),*** and approved by ***Federal Aviation Administration (FAA)*** as an unmanned entry and egress system.

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GIL-2001 2DLV Adaptive Development Approach Summary

Use of cameras and sensors provides the technology to help institutions, facilities, and any environment, to provide a controlled access screening of individuals more quickly. Using infrared sensors as heat scanners with camera systems, the presence of the virus won't be confirmed, but it can detect whether the individual is a risk. This is by detecting the body temperature in the target at the port of entry. Infrared sensors can sense body heat in humans and animals. With a visioning system that includes a camera and display, it can reveal information. If the sensor detects a target to have a high temperature, it will be a cause for concern. According to numerous studies:

" Elevated human body temperature, or fever, is often a reliable indicator of many serious infections".

Those individuals can be denied entry and isolated for testing and further observation. These heat scanners should be used to screen all individuals in general, not just those that may have a heightened risk profile (elderly, visible underlying physical challenges, etc.).

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Detecting Body Heat

Infrared light is emitted from the human body in the form of heat. We cannot see it with the naked eye since it emits light at a different wavelength. On the electromagnetic spectrum, there is a wide range of frequencies from low frequency radio waves to high frequency gamma rays. The part of the spectrum that we can see falls under visible light. In theory, the more heat a body radiates the more infrared light can be detected.

It is for this reason that infrared sensors are used for heat scanners. The sensors detect the amount of heat being emitted by its color. The color is actually not how it would appear in visible light, but more for the purpose of identifying the temperature of the body. Computer algorithms are used to generate a color palette that represents the scale in temperature. For example, the higher temperatures can be highlighted with a different color palette compared to lower temperatures. Developers create a color palette for normal temperature below 36–37° Centigrade (98–100° Fahrenheit). For temperatures above 37° Centigrade, having a different color will alert screeners.

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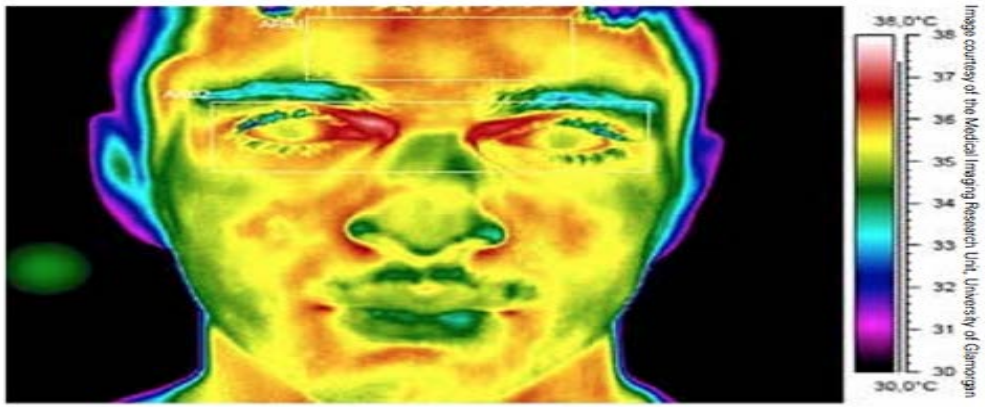
Thermographic Cameras

The device that makes heat detection in humans possible is the ***thermographic camera***. This is not something you can install by downloading an app. You need an actual thermographic camera (also marketed as thermal camera). Instead of the 400–700 nm (nanometer) range of visible light, thermographic cameras are sensitive to wavelengths from about 1,000 nm (1 μm) to about 14,000 nm (14 μm). These devices are not widely available at retail stores, but they can be ordered at specialty electronics stores or from online outlets. Most thermographic cameras are used for industrial, scientific, research and even law enforcement purposes. Infrared cameras are a type of thermographic camera that are available to consumers. There are products that can connect to a smartphone via a USB connection (micro USB or USB-C) using either Android or iOS for operation. While it is something cool to have, its applications are limited to the average user. ***It is more worth having if it will be used for an application that requires thermography (GIL-2001 2DLV Detection Application).***



FLIR IR cameras automatically detect elevated skin temperatures that may indicate a fever and underlying infection. Each camera's unique Automatic Temperature Compensator (ATC) adjusts for ambient conditions to minimize false readings. The color image, temperature scale, and alarm mechanism make it easy to decide when a person needs further examination.

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Practical Application

Since the Ebola and SARS outbreak, airports around the world have adopted stricter policies for screening. Not all airports use heat scanners on a daily basis, but when there are health emergencies like virus outbreaks, thermographic cameras are an effective tool. They have been found to be safe to use, as ***they do not emit any hazardous radiation that can affect human health***. Screening a passenger/pedestrian can also be assisted by analysis software that use AI, providing a way to help screeners identify at risk passengers/pedestrians.

Thermographic cameras do not detect the presence of the virus. They only detect high temperatures in passengers/pedestrians which show signs of fever or other medical conditions which can be further examined. Fevers are an indication of a viral infection, and it is good to detect this. That can significantly help screeners prevent the entry of high risk passengers/pedestrians who can affect the general population.

Since these systems are contactless, it also reduces the risk for screeners to contract the virus. This allows screeners to focus on identifying high risk passengers/pedestrians who are then referred to medical professionals on standby for further examination. This has proven to be an effective way of screening that provides a high level of safety. For a more robust discussion around workplace protocols go to the ***2M Library*** on our website www.2mcorporation.com and visit ***the COVID-19 OSHA 3990 publication***.

Why ²M Corporation ?

- Exclusive Distributorship Agreement with Security Defense Systems Worldwide, Inc to market the ***GIL 2001 2DVL Controlled Access Portal System***
- Established distribution channel to facilitate the travel of goods and services from the manufacturer to end users
- Management of all key development/delivery/installation steps internally
- Partnership approach to end user requirements
- Experience and working relationships with General Contractor, Sub-contractor, Vendor, Design Professional, and sub consultant communities across many jurisdictions
- Carrier of all industry requisite General Liability, Professional Liability and Workers Compensation insurances to indemnify all project related stakeholders for risk management purposes
- We stand behind every unit we source

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Historical Client Relationships (Partial)

Client:	Installation:
Citibank - Englewood, NJ	Data Center Main Entrance
NYC Dept of Corrections – Brooklyn House of Detention	Two (2) Main Entrance Locations
NYC Dept of Corrections – Manhattan House of Detention	Main Entrance
NYC Dept of Corrections – Rikers Island	Four (4) Main Entrance Locations
NYC Dept of Corrections – Queens House of Detention	Main Entrance
US Dept of State, Justice Department – Washington DC	Main Entrance
Federal Reserve Bank – Dallas, TX	Employee Entrance
Federal Reserve Bank – Pittsburg, PA	Vault Entrance
FBI Headquarters, JEH Building – Washington DC	Visitors Entrance
Northrup Grumman – Chesterfield, VA	Employee Entrance
Northrup Grumman – Lebanon, VA	Employee Entrance
Savvis (formerly Exodus) – Irvine, CA	Main Entrance
US Dept of State – Rabat Embassy	Main Entrance
US Dept of State – Egypt Embassy	Main Entrance
US Dept of State – Jordan Embassy	Main Entrance
White Sands Missile Base – White Sands, New Mexico	Control Room

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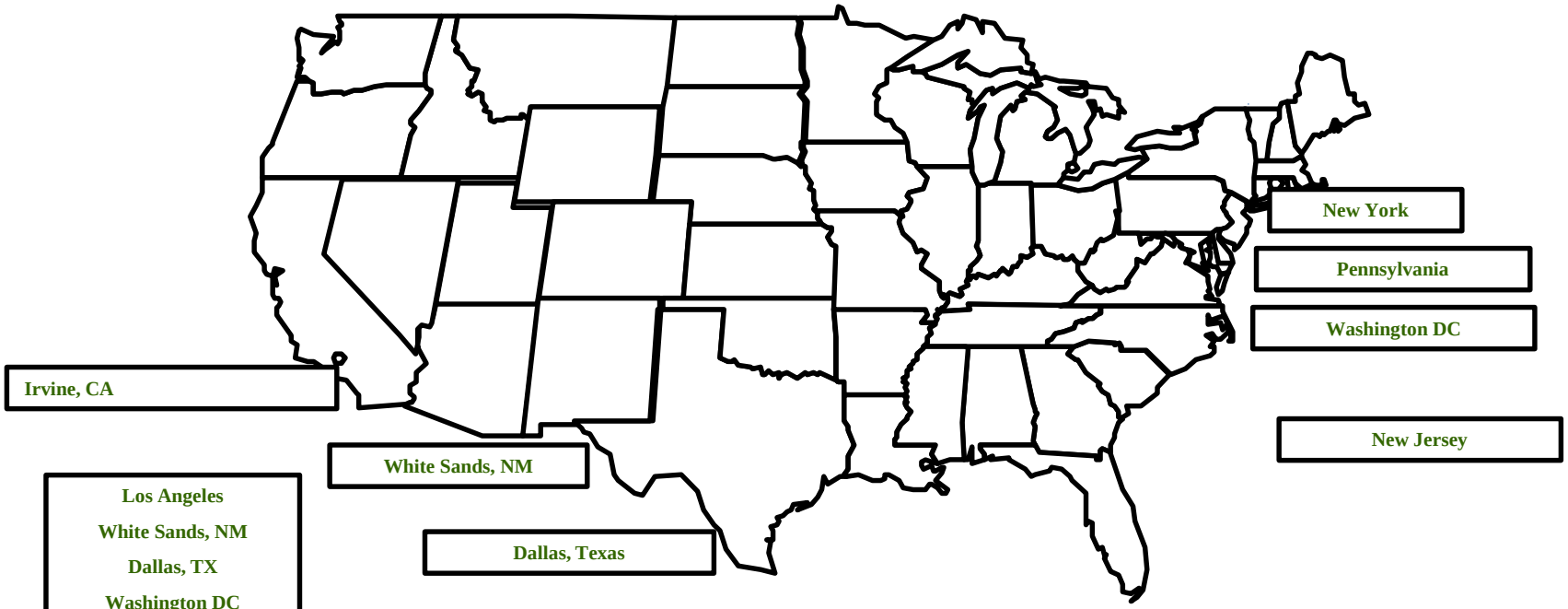
Past Project Locations



Los Angeles
White Sands, NM
Dallas, TX
Washington DC
Pennsylvania
New York City
New Jersey

National Experience – Regional Delivery

The GIL - 2001 - 2DLV Access Control System

SDSW'S ENTRANCE DOOR SYSTEMS have been tested by government and private industry. The high quality design, un-paralleled construction and state-of-the-art technology provides and maintains a high level of security and monitoring. The system is fully programmable and comes with:

*Standard Weapons Detection
*Level III Bullet Resistive Glass
*Unidirectional & Independent Electronic Controls
*Applied Infrared Thermography for Coronavirus Screening

The advanced ***GIL – 2001 - 2DLV Security Portal*** can be integrated with any existing access control system as well as building maintenance systems (BMS).

Operation:

The Entry Access to the system can be fully customized for:

*Key Pad
*Motion Detect
*Magnetic Swipe
*Card/Palm Read
*Locked or unlocked default
*Out or In Chamber Activation
*Voice/Facial/Fingerprint Recognition
*Multi Tiered Security Clearance Access

Weapons Centric Access Control – Single Entry Protocols:

What makes the system unique is that it will not allow passage and/or placement of weapons/explosive devices past the weapons detection feature or through the ***GIL Electronic Detector System*** as well as through our patented ***Dynamic Software System***. The "System" will detect weapons/explosive devices that weigh as little as 3 ounces and can recognize a weapon/explosive devices if left on the floor or is attached to the doors, ceiling, or inner walls.

Life Safety Controls:

Intercoms, alarm programs and the control program pad are part of the ***GIL-2001 Security Portal System*** standard feature package. Attachments such as cameras, card readers, palm readers and fingerprint pads can be easily attached to the door structures or laterally as some installs have mandated. The ***GIL-2001-Security Portal System*** can be outfitted with drop bolts for positive locking of the system portal to prevent forced opening of the wing doors. The system can be connected to C-4 fire alarm systems as well as any state-of-the-art alarm system.

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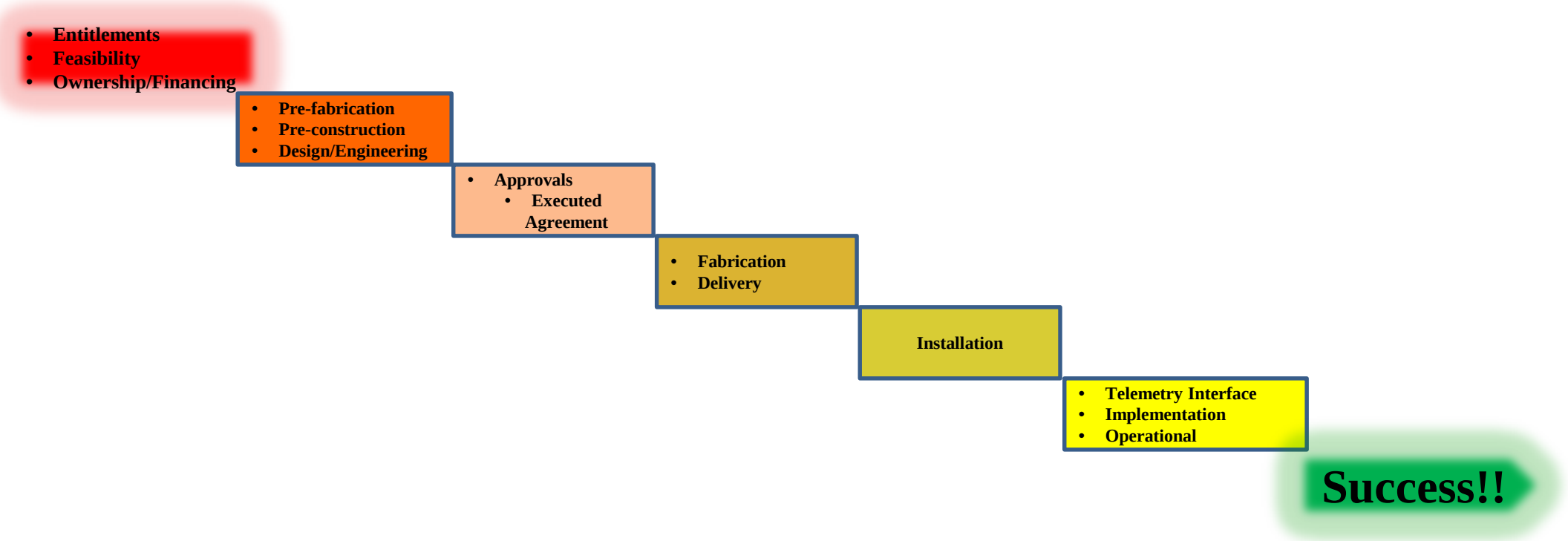
GIL-2001 2DLV Adaptive/Operational Process



The GIL - 2001 - 2DLV Access Control System

TECHNICAL DATA

DIMENSIONS	59” DIAMETER X 94” HEIGHT
WEIGHT	2,650 IBS +/-
GLASS	BALLISTICS RESISTANCE LEVEL III = 28mm
ENTRY WIDTH	32”- MEETS ADA COMPLIANCE
VOLTAGE	120V/220V USA
FREQUENCY	60 Hz USA -- 50Hz WORLD
BACK UP BATTERY LIFE	4 HOURS
PASS-THRU SPEED	10 SEC CYCLE – 1 PERSON/CYCLE - 6 PERSONS/MIN/UNIT
OPERATIONAL TEMPERATURE	-10º C - +55º C
EMERGENCY	DOOR OPEN UNDER ANY CONDITIONS. ELECTRIC & MANUAL EMERGENCY RELEASE TO NON SECURED SIDE
PASS-THROUGH DIRECTION	AUTHORIZED EMPLOYEE ENTRANCE/EXIT
STANDARD FEATURES	DYNAMIC SOFTWARE TO PREVENT ACCESS BY EITHER PERSONS OR OBJECTS FROM A NON SECURED TO SECURED SIDE. SELF MANAGEMENT SYSTEM THROUGH MAIN CONSOLE NWITH EVENT PRINTING CAPABILITY. ALL PROCESS PARAMETERS SET FROM MANAGEMENT TERMINAL PROGRAMMABLE OPERATION UP TO 200 EVENTS. INTERCOM SYSTEM/VOICE MESSAGES/ACTIVE & PASSIVE PNEUMATIC EDGES. BULLET RESISTIVE GLASS

The GIL - 2001 - 2DLV Access Control System

CERTIFICATIONS

US PATENT No.	6,472,984
US PATENT No.	6,724,304
FEDERAL AVIATION ADMINISTRATION (FAA) APPROVED	UNMANNED ENTRY & EGRESS SYSTEM
DEPARTMENT OF HOMELAND SECURITY TESTED & CERTIFIED	BALLISTICS & FORCED ENTRY
TRANSPORTATION SECURITY ADMINISTRATION (TSA)	BALLISTICS & FORCED ENTRY
US DEPRARTMENT OF STATE	BALLISTICS & FORCED ENTRY
SELECTED BY:	*FBI HEADQUARTERS *US DEPARTMENT OF JUSTICE *US DEFENSE CEETA *PORT AUTHORITY NEW YORK/NEW JERSEY *NEW YORK STATE DEPARTMENT OF MENTAL HEALTH *UBS - PAINE WEBBER *CITIBANK NA *EXODUS A CABLE & WIRELESS SERVICE *BURLINGTON NORTHERN – SANTA FE RAILROAD *DEUTSCHE BANK

Notes