Can you see what they’re hiding?

The BIS-WDS® GEN 2 Can!
Millimeter Wave Object Detection and People Screening System

Brijot®
Imaging Systems, Inc.
Imaging a safer world®
Is it practical to screen everyone that enters—or exits—your facility, without affecting the efficiency of your operations?

Do you know what your visitors, workforce, passengers, or spectators, are concealing past your metal detectors, bringing onto your transit system, into your stadiums, or are taking out the door with them? Is your security staff forced to guess who is hiding something without stopping and questioning each one? The Brijot BIS-WDS® GEN 2 System will allow you an easier way to know who to search and pinpoint where to look!

Brijot Imaging Systems, Inc. is proud to introduce the BIS-WDS® GEN 2—the next generation cutting edge object detection and people screening technology. System features include full-motion, real-time passive millimeter wave imaging capabilities. Empowering you to detect concealed threats sooner, minimize loss prevention more effectively, and virtually pat down and screen people in areas that you have not been able to search them before.

Brijot’s standoff passive millimeter wave imaging system offers security and loss prevention officials a quick and discrete method for detecting suspicious hidden items...whether they’re explosives, weapons, contraband, stolen electronics, or other items. The GEN 2 also reveals hidden liquids and gels. Brijot’s millimeter wave imaging solution is the most effective high-throughput people screening system available today to effectively detect these potential threats.

What is the BIS-WDS® GEN 2?
Brijot’s GEN 2 technology is composed of a real-time Radiometric Scanner that images electromagnetic millimeter wave energy, an integrated full-motion video camera, on-board computer, and sophisticated, intelligent video detection engine. Using the GEN 2 value-added detection engine’s capability your security screeners will automatically be alerted and can easily pinpoint concealed objects without intrusive, time-consuming, personnel-intensive and potentially dangerous physical searches, while allowing security screeners and law enforcement officers to perform “virtual” pat downs from a distance without direct contact. Brijot provides an effective means to manage threats before they become harmful incidents.

How does it work?
The system’s passive Radiometric Scanner can detect concealed objects by distinguishing between the millimeter wave energy naturally emitted by the human body and the energy of the concealed objects even when they’re hidden beneath clothing. It accomplishes this without radiating subjects, or posing health risks even to those persons with pacemakers, or pregnant women. Deployed as an stand-off application it will not cause claustrophobia and is a safe and discrete screening solution for all. Further, Brijot’s millimeter wave sensors do not image anatomical details, thus protecting passenger privacy.

Feature Highlights:
• Detects concealed objects in as little as 0.5 second
• Subjects walk through the screening area when deployed in two-camera configurations
• Anatomical details are not revealed thereby eliminating personal privacy issues
• Completely passive system—no transmission of radiation or energy of any kind
• Seamless integration facilitating remote operation and administration of man-traps
• Monitoring & detection displayed to the operator in real-time
• Provides standoff detection of large explosives, liquids, gels, and other ferrous and non-ferrous items.
Applications
Used alone or as part of a comprehensive, multi-layered security solution, choose Brijot’s proven reliability to achieve your security goals. Deploy the system as part of a high-security entrance portal, integrate it with existing devices such as X-Ray or metal detectors and find the items they are missing. Or use the GEN 2 to monitor your exits—you can even remotely image unattended locations. The GEN 2 is a must for any place where protection of life or loss prevention demands knowing which people are concealing hidden items—and pinpoint where they’re hiding them.

Standoff Bomb and Weapon Detection: Protection from the threat. There is no need to put security staff or military personnel at arm’s length from danger in high risk areas. Operated remotely, the GEN 2 can detect explosives or weapons and trigger a “lock-down” event, holding the suspect within a secure area. In today’s high security environment, Brijot’s imager adds an extra layer of protection, isolating the threat and alerting security personnel that a potential danger is approaching.

Airport/High Security Transportation Hubs: See what you’re missing! Some locations—like airports and other critical transportation hubs, have already invested in security screening technologies like X-ray machines, metal detectors, and added security staff. But those technologies can’t see explosive materials, liquids and gels, or thick packets of currency. GEN 2 can be integrated into your existing security strategy, and by imaging subjects in motion, it can be used to direct subjects into secondary screening lanes for further investigation, focusing security efforts and eliminating profiling or ineffective random screening.

Government Buildings/High-Security Hotels: Broaden counter-terrorism measures! Terrorism is one the greatest threats to the safety and security of public and private buildings such as federal office buildings, hotels and many national icons. The best defense to safeguard your facility, organization and operations is “detection” that enables an immediate “assessment” for the proper “reaction.” With Brijot’s GEN 2 millimeter wave technology you have full-motion, real time imaging capabilities which allow you to safeguard property and lives effectively. GEN 2 can be positioned at a distance from security personnel and operated remotely to protect them from the threat posed by suicide bombers.

Loss Prevention: Stem the tide of product shrinkage! Loss prevention personnel will find the GEN 2 invaluable in identifying hidden objects exiting a facility. The system can image metals, wood, electronic devices, bottles of liquor… even fresh or frozen foods! Managers and security personnel can pat down employees virtually without physical contact. Event logging functionality records the detection, providing ideal documentation in the event of an employee termination or theft prosecution.

Graphical User Interface
How easy is it to use? Brijot’s Graphical User Interface (GUI) is a simple, easy to understand tool for all operators—you can identify hidden objects without confusion or delay. With minimal training, a GEN 2 user can clearly identify and locate hidden objects in real-time by observing event icons and detection boxes on a full-motion video images. Each event’s video and passive millimeter wave images are digitally archived for later review, analysis, or evidentiary use. The JPEG images stored are millimeter wave images with no anatomical detail, ensuring personnel privacy is maintained.

Real-time Detection Engine
What’s that they’re hiding? Know sooner with our value-added detection engine, which identifies threats and concealed items on a subject in real-time—in as little as 0.5 second. The GEN 2 automatically alerts operators to the presence of very large objects—such as bombs—that could pose a serious threat. Indicator boxes pinpoint the precise area of hidden objects on the full-motion video and millimeter wave images. Displaying multiple detection events simultaneously, detection events can also serve as the “probable cause” that triggers secondary inspection events to examine an individual more closely.

Integration
What about my current systems? Good security often requires a multi-layered approach, incorporating a range of tools and carefully planned protocols, and the GEN 2 is designed to integrate seamlessly with other security systems. Each system has multiple inputs and outputs, and data can be accessed using the system’s Application Programming Interface (API), allowing the Brijot system to work in tandem with your existing or planned security technologies. Brijot’s system can be configured to trigger a “man-trap” application, locking out, or locking in individuals until you can identify what they’re hiding.
Innovative Detection/Screening Solutions

Everyday, Brijot’s cutting edge object detection/people screening system offers unsurpassed technology meeting security challenges in high threat environments. Brijot combines innovative engineering, quality materials, workmanship, outstanding customer service, and competitive pricing to bring you exceptional value. Brijot is a privately held USA Company, with corporate and training offices in Orlando, Florida. Brijot manufactures its system in an ISO 9000:2000 certified environment — another reason to select Brijot.

Functional Considerations

Standard deployment: Indoor and outdoor environments. Some indoor settings and all outdoor deployment may require environment altering as specified by certified implementation personnel.

Indoor deployment considerations: Ambient air temperature not to regularly exceed 26°C (80°F). Anomalous heat sources behind walls and beneath floors. Sources of energy including sky access and reflective interior surfaces.

Other deployment considerations: Traditional CCTV deployment considerations apply. Minimize saturation – Avoid facing system directly into sunlight (CCTV camera consideration) or at the sky (millimeter wave system component consideration). Though the radiometer can operate in low- or no-light settings, the integral CCTV component requires lighting the FOV for effective video imaging.

Features

Imaging capabilities: Metals, plastics, ceramics, composites, glass, liquids, gels, explosives, weapons, currency, tobacco goods, and wood—including those commonly used to construct weapons and explosive devices.

Minimum object size: Imaged pixel size: Approximately 5 cm x 5 cm (2 in x 2 in). Detection engine optimization: Approximately 7.6 cm x 12 cm (3.0 in x 5.0 in)

Large object detection: Program system’s detection engine to treat identification of large objects differently. Use system’s alarm utility to configure and trigger specific actions upon detection.

Simultaneous processing: Detection engine processes multiple simultaneous detections. GUI displays up to 3 detection or “Large Object” icons at a time and features a contiguous running event log.

Fully-integrated on-board computer: Pentium®-based processor enables stand-alone operation without external PC connection.

Microsoft Windows XP™ Operating System integrates with local area networks for remote viewing and control via GEN 2 Application Software and APIs.

Anti-tamper software: Applications actively prevent, detect and react to tampering and reverse engineering.

Imaging speed: MMW radiometer 4 to 12 frames per second (FPS); CCTV 30 FPS

Detection engine indications: Tri-colored box over location of detection on subject video image. Detection box features a black outside line, a white middle line and one of the following colors as the inside line, determined by the user-defined detection settings:

- Blue: D2 level detection (warning)
- Yellow: D1 level detection (alarm)
- Red: L large object detection

A corresponding tri-colored box also appears on the “Detection Status” area of the GUI with “D1,” “D2 “or “L ” detection status icons.

Specifications

Power supply: External Supply, 100 to 240 VAC, 47-63 Hz, 120 W; output 12 VDC, 10 A

Detector millimeter wave frequency: 80 to 100 GHz (90 GHz center frequency, 20 GHz bandwidth)

Operating temperature: 10°C to 50°C (14°F to 122°F)

Operating humidity: 0 to 100% RH condensing (outdoor use)

Dimensions (H x W x D): 83.8 cm x 34.5 cm x 34.9 cm (33.0 in x 13.5 in x 13.7 in) excluding mounting bracket

Weight: Net: approx. 39 kg (86 lbs) - excluding mounting bracket

Interfaces

Analog video output: NTSC or PAL, BNC connector

Monitor output: D-sub 15 (VGA) connector (1024 x 768 72 Hz default)

Control, setup and monitoring: 10/100 Ethernet, RJ45

Peripheral Interface: Two USB 2.0; two IEEE 1394a (FireWire)

Keyboard/Mouse: Combined PS/2-type mini-DIN connector

Discrete I/O: 10 Position Phoenix™ connector; three user-defined outputs (dry contact Form C relay) and two user-defined inputs (opto-isolated)

Audio: One 3.5 mm jack for LINE OUT; one 3.5 mm jack for MIC IN

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