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Securing the Border – Challenges and Solutions

While the United States Border Patrol has changed dramatically since its inception more than 75 years ago, its primary mission remains unchanged: to detect and prevent the illegal entry of aliens into the United States. Together with other law enforcement officers, the Border Patrol helps maintain borders that work - facilitating the flow of legal immigration and goods while preventing the illegal trafficking of people and contraband.

The Border Patrol is specifically responsible for patrolling nearly 6,000 miles of Mexican and Canadian international land borders and more than 2,000 miles of coastal waters surrounding the Florida Peninsula and the island of Puerto Rico. Agents work around the clock on assignments, in all types of terrain and weather conditions, as well as isolated communities throughout the United States.

Underlying that definition, however, are debates over the virtual fence, the amount of money allocated to securing the border, including the number of border patrol agents and constructing physical barriers.

In a recent speech, Department of Homeland Security (DHS) Secretary Janet Napolitano admitted, "The Southwest border states have endured more than their share of challenges, yet you do not need to live along the border to feel that frustration. All across the country, Americans want secure borders and for immigration laws to be enforced fairly and effectively."

The Virtual Fence

The "Virtual Fence" project, which was touted as "the most technologically advanced border security initiative in American history," and which would secure a 28-mile area, did not work as planned or meet the needs of the U.S. Border Patrol. It was to be designed and implemented by The Boeing Company of Chicago, IL.

The virtual fence was to complement a physical fence that eventually will include 370 miles of pedestrian fencing and 300 miles of vehicle barriers. It included nine mobile towers, radar, cameras, and vehicles retrofitted with laptops and satellite phones or handheld devices. They were to be linked to a near-real-time, map-like projection of the frontier that border patrol agents could use to track targets and direct law enforcement resources.

However, the project really never got off the ground: for example, problems with the project included Boeing's use of inappropriate commercial software, designed for use by police dispatchers, to integrate data related to illicit border-crossings.

Forced to go back to the drawing board, Boeing officials said they now expect to complete the first phase of the virtual fence's deployment – roughly 100 miles near Tucson and Yuma, AZ and El Paso, TX – by the end of 2011, instead of by the end of 2008.

Staffing the Border

The quantity of border patrol agents needed to effectively secure the borders has also been an issue of contention. Law enforcement in border states and throughout the country face a tall order when it comes to border-related crime and smuggling.

According to Secretary Napolitano, the Border Patrol is better staffed and more strategically deployed today than ever before. Since 2004, the number of agents has doubled from about 10,000 to 20,000 today. "We've deployed more U.S. Immigration and Customs Enforcement personnel than ever before to work strategically on investigations, intelligence, and inter-agency task forces to combat smuggling and human trafficking," she said.

DHS has also deployed more technology to detect smugglers and their cargo. More airplanes, helicopters, more unmanned aerial vehicles working the border, and for the first time, DHS is screening 100 percent of southbound rail shipments for illegal weapons, drugs, and cash. In terms of infrastructure, the 652 miles of fencing that Congress asked Homeland Security to build is nearly complete. The remaining six miles are expected by the end of the year.

According to Napolitano, apprehensions of illegal crossers, the best indication of how many are crossing, are at a fraction of their all-time high. They were down 23 percent last year from the year before. Last year, seizures of cartel-related contraband rose significantly across the board. DHS seized 14 percent more illegal bulk cash, 29 percent more illegal weapons, and 15 percent more illegal drugs than the year before.

The border could see an additional 1,200 U.S. Border Patrol agents, more than 500 U.S. Customs and Border Protection officers and other initiatives after a bill was approved recently by the U.S. House of Representatives.

The \$701 million included in the emergency spending measure represents one of the largest ever infusions of federal funding for border security programs. The bill was approved a month after President Barack Obama's administration requested the funding to seal holes along the porous U.S.-Mexico border while also announcing it would send 1,200 National Guard troops to beef up security.

About 235 of the troops are slated for the Rio Grande Valley under the current plan, where they will assist in reconnaissance and as analysts. More than 500 troops will be sent to Arizona beginning in August.

Border Security Solutions

While efforts are underway to increase the amount of staff patrolling the border, their efforts are not as effective unless they have the proper technology. Often, the border is a barely discernible line in uninhabited deserts, canyons, or mountains. The Border Patrol utilizes a variety of equipment and methods to accomplish its mission in such diverse terrain. Electronic sensors are placed at strategic locations along the border to detect people or vehicles entering the country illegally. Video monitors and night vision scopes are also used to detect illegal entries. Agents patrol the border in vehicles, boats, aircraft, and afoot. In some areas, the Border Patrol even employs horses, all-terrain motorcycles, bicycles, and snowmobiles; recently adding air surveillance capabilities by deploying unmanned aerial vehicles (UAV).

Thermal imaging cameras and other surveillance equipment help border control professionals meet the demands they face at night and in other poor visibility conditions. Cameras can be integrated into a border security scheme with radars and other sensors in a “slew-to-cue” mode.

DHS depends on Moog QuickSet’s products to prevent and investigate illegal movements across our borders, including the smuggling of people, drugs, cash and weapons.

The demand for high performance day/night surveillance is pressing for smaller, smarter, less expensive products. At the same time, the environments in which imaging products must function are increasingly hostile. Responding to this demand, Moog QuickSet developed the GeminEye™ modular imaging system. GeminEye not only embraces high performance in a small package, it is designed to be configured for different applications.

Based on our new QPT-LT dual side-mount positioner, it can be configured with single or dual camera blocks, for day, night or day/night capability. Various wavelength band sensors and illuminator modules are available. In designing GeminEye, Moog QuickSet queried its extensive customer base, formed over thirty years in the security industry, for a “clean-sheet” specification of all salient characteristics needed.