

## **El Paso Stop Stick Project**

### **1. Abstract:**

A team of Customs officers from the port of El Paso, Texas and representatives of Stop Stick, Inc. redesigned the Stop Stick device used by Customs officers to deter "port runners." Port runners accelerate through the port of entry with large loads of drugs (440-1100 lbs.) in their trunks. Their violent behavior often injures passengers in other vehicles, pedestrians and Federal officers. Port runners have been killed by Federal officers when they have driven their vehicles at them. Stop Sticks are deployed against them to deflate their vehicle's tires. Inspectors at the El Paso port of entry have about two years experience in using Stop Sticks and identified several deficiencies in the original design. In addition, smuggling organizations were adapting to their use by putting self-sealing tires on some of their vehicles.

The team changed the length and interior design of the Stop Stick. The new design causes a much quicker deflation of the port runner's tires. This results in more loads and drivers being apprehended in the port of entry area. They also changed the covering of the device to make it longer lasting in the harsh desert climate. The overall result has been a dramatic decline in the number of port running incidents. This makes for a safer environment for all the users of the El Paso port of entry. With the success of the El Paso prototype, the Customs Headquarters Office of Strategic Problem Solving purchased the new Stop Stick for other ports of entry along the Southwest border.

## 2. Description:

### A. Scanning

The Port of El Paso had experienced a drug smuggling method known as "port running" since early 1994. This method involved young drivers with 400-800 lbs. of marijuana or cocaine in their trunks entering El Paso, Texas across one of the bridges from Juarez, Mexico. They attempted to fit in with the millions of vehicles that passed through these bridges each year. However, if they were questioned or selected for more intensive examination, they would rapidly accelerate through the port of entry without regard for other vehicles or persons. Passengers in other vehicles, pedestrians and Federal officers were getting injured during these port running events. The port runners themselves were well paid by the smuggling organization. Customs instituted a series of changes in the layout of the ports of entry as well operational changes that attempted to deter the use of this method. These changes were called Operation Hard Line. This Operation began in 1995 and by 1997 it resulted in a decrease in port running events by over 50%.

One of the operational changes to deter port runners was the introduction of a device called a Stop Stick. This device is a triangular piece of cardboard covering a series of quills. It was invented by Ken Greves, a retired police officer, to assist officers in high speed chases. It is a light and handy device and is used by police agencies to cause a controlled deflation of a vehicles tires.

By 1996, our inspectors in El Paso had used the Stop Stick enough to recognize some deficiencies in its design. In addition, the smuggling organizations were adapting to the use of Stop Sticks by using self-sealing tires. Based on input from some of his officers, Chief Inspector

Ken Squires decided to assemble a team to look at the Stop Stick.

## B. Analysis:

The team identified several deployment deficiencies. They were:

1. The casing material was not strong enough to withstand continuous use and environmental elements. The heat and constant sunshine in the El Paso area degraded the cardboard covering.
2. The number of encased quills was not sufficient to cause rapid deflation of the tires. Vehicles could drive several miles before a tire was flat,
3. The diameter of the quills was not large enough to cause rapid deflation. The original quills were only about the diameter of a ball-point pen ink refill.
4. The effect of the Stop Stick can be neutralized by self-sealing tires. There had been several incidents involving vehicles with Gold Seal tires successfully defeating the efforts of our inspectors.
5. The Stop Stick was just the right height for our inspectors to use it to lean on. Aside from the professionalism aspect, this activity eventually weakened the sides of the device.

The team invited the owner and the president of Stop Stick, Inc to meet with them. They reviewed the findings of our inspectors. They agreed that the device was originally designed to be kept in a police cruiser's trunk. Analysis of port runner actions during Operation Hard Line indicated that the devices need to be accessible at various locations throughout a port of entry. Port runners sometimes accelerate before the primary inspection booths, sometimes at the inspections booths, and sometimes when approaching the intensive inspection area.

Consequently the devices were placed in handy locations outside. They might be leaning against the inspection booth, they might be laying alongside the Customs building or carried by inspectors roving among the traffic lanes. This constant exposure to the harsh desert environment of El Paso caused the outside covering to deteriorate.

The Stop Stick creators designed their device for deflating tires of vehicles traveling at highway speeds. They did not want to cause a catastrophic deflation of the tire which would cause the driver to lose control of the vehicle. Port runners accelerate from a stopped position or from less than 15 mph. A sudden deflation would not cause them to lose control of their vehicles. In addition, causing them to stop within the port of entry or just outside it would enable our officers to arrest the drivers. Using the original style Stop Stick allowed the drivers to drive some distance from the port. Our officers or the local police usually found the abandoned vehicle with the load still in the trunk but the driver would be gone.

### C. Response:

The five man team of Customs officers and representatives from Stop Stick redesigned the device. They changed the shape and length of the tube. They changed the end caps to cause the tool to land right side up no matter how it was thrown. They changed the size, shape and layout of the quills. They also changed the exterior coating to make it sun-resistant. They also made it shorter so that inspectors would not be able to lean on it.

The team discussed various options on the design of the tube but felt that the new design had the best features. The new tube, they called it the "Terminator", has quills that are sharper and much larger in diameter than the original ones. The new quills are 5/8 of an inch in diameter and the tops are cut at a 45 degree angle. The cardboard case is coated with a different kind of

plastic coating. The end caps have a rounded side and a flat side which causes the device to land up right every time it is thrown under the tires of a car.

The team evaluated the design with the desire for rapid deflation as their primary criteria. They also wanted it to last in the weather, maintain its light weight and ease of handling, and cost approximately the same as the original design. The original Stop Stick had helped reduce port running incidents by about 50% over two years. However, the officers wanted to further reduce the incidents and at the same time raise the percentage of port runners that were arrested. They felt this new design would accomplish both goals. The Stop Stick manufacturer was delighted to have the opportunity to work with Customs in this problem solving environment. Their technical people were very responsive in creating a prototype from the teams design.

Before Customs would agree to purchase a supply of the Terminators, the El Paso port and Stop Stick, Inc. tested the prototype. On May 13, 1996, they performed a controlled test of the prototype using various size tires on a 1995 Chevy Corsica seized from a drug smuggler. The vehicle was similar in size and weight to the types of vehicle commonly used by port runners. They also loaded 200 lbs of weight into the trunk. The standards used in the test were:

1. The tire must deflate in 150 ft - which is the approximate distance from the primary booths to the start of the exit.
2. The tire must deflate in less than 5 seconds - which is the approximate time it takes to accelerate to the exit.

The test results were that deflation occurred in 34-43 feet and in 2.31-2.43 seconds. Deflation occurred at speeds of 15-20 mph with no loss of control. As a result of the test and the team's recommendation, Customs ordered a supply of these new Stop Sticks. They were distributed in the Fall of 1996 to the El Paso port of entry and to ports of entry along the

Southwest border.

#### D. Assessment:

The introduction of the redesigned Stop Stick had the desired effect on port running in El Paso. The port runner events at the El Paso bridges for 1997 are

Jan = 12	May = 5
Feb = 6	Jun = 2
Mar = 6	Jul = 2
Apr = 5	

In 1995, there were often 30-35 port runner incidents each month in El Paso. The combination of Operation Hard Line structural and operational changes and the development and deployment of the Terminator Stop Stick have reduced what was once a violent smuggling method to a rare occurrence. Over 90% of the vehicles that have a new device deployed against them are stopped within the port area. Sometimes the drivers escape back to Mexico on foot but about 50% are captured and arrested. As an example, the inspectors seized 412 lbs. of marijuana and 729 lbs. of marijuana respectively in the two July events. They also arrested both drivers, one of whom was dressed as a nurse. The same results were achieved all along the Southwest border. Port running incidents declined in all locations. In January 1997, there were 30 incidents border wide and in July there were only 14.

We will continue to monitor port running incidents as one measure of our effectiveness on the Southwest border. We also try to determine what impact this closing off of a smuggling method is having on the drug smuggling organizations in Mexico. It appears from an analysis of our seizures that the organizations are having to go to greater lengths and expense to conceal

their loads. They are using more gas tanks concealments and other type of deep concealment in commercial trucks.

### 3. Agency and Officer Information

1. This problem solving initiative was adopted by the Customs Service when it proved successful in El Paso. We purchased 200 of the new Stop Sticks and distributed them to ports all along the Southwest border.
2. The Customs team members received a one-day training course in Customs Strategic Problem Solving (SPS) techniques. The manufacturer's representative had not been trained.
3. There is a national award program within Customs that rewards teams for problem solving efforts. This team was one of the award winners for this year.
4. Strategic Problem Solving examples within Customs are used during the one-day training session. These examples as well as a pocket guide on the steps are provided to all SPS teams.
5. There is usually a problem when only some of the team members have been trained in SPS techniques. Since deterrence and displacement are deemed to be successful outcomes of a problem solving effort it sometimes takes some time for law enforcement people to change mental gears to consider alternatives to seizure and arrest.
6. The Customs Headquarters Office of Strategic Problem Solving committed \$30,000 for 200 redesigned Stop Sticks. This national office funds equipment requests and travel expenses when the local port or investigative office cannot.

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