

# RAID Stolen Vehicle Recovery

Performance Improvement Partners, Inc. (PIP) is seeking opinions, suggestions, and a partner who wants to help reverse a social virus negatively impacting the lives of millions every year, including loss of life in some cases, even though the tools to attack this problem already exist.

Vehicle theft has been with us for 100 years. In the early years, it was not a plague but annual losses are now \$4+ billion per year. Our roads are full of vehicles costing as much as a nice house did just 30 years ago. Such vehicles are coveted by many as a status symbol, so vehicle theft naturally runs wild. There's a worldwide market for stolen vehicles with counterfeit VIN's.

PIP has patented a Rapid Access Information Database (RAID) system to substantially improve stolen vehicle recovery. Survey feedback from 350+ Law Enforcement (LE) contacts indicates RAID should quickly improve vehicle theft arrests from its paltry 12% level, per FBI data. RAID also complies with the Supreme Court's 2012 ruling on the individual's right to privacy.

**No Effective System Exists: The Bad guys WIN 88% of the time!** With a mere 12% stolen vehicle arrest rate, should not every alternative be explored? Per FBI data, 689,527 vehicles were stolen in 2014, 1 every 46 seconds, at a replacement cost of \$4.5 billion. The losses have been the same for the last 5 years. We have hit a brick wall! How many families could be fed, clothed and sheltered on this wasted \$4.5 billion per year? About 21,000 thefts involved carjacking, with related personal injury and/or death plus \$millions in property damage. The systems EXISTS to use a vehicle's GPS to aid recovery but it often takes hours or days to get an automaker's GPS location assistance to LE. Event reporting indicates such aid rarely works due to disjointed systems, inefficiencies, inadequate information, and poor training.

**The PROBLEMS:** 1) The Supreme Court banned LE from using GPS data without approval. 2) Widespread system delays and inefficiencies prevent LE from getting existing stolen vehicle GPS location aid within the FBI defined 1-2 hour recovery window before stolen vehicles are "gone" via chop shop, hide-away, border/state line crossing, GPS disconnect, etc.

**PROPOSAL:** 1) Create a LE dedicated "nationwide contact portal", perhaps via internet, to "simultaneously" query ALL 20+ (automaker and aftermarket) GPS database owners (DBO) to procure GPS location details for LE support within 10 minutes of an "authorized" LE agency's request. This aligns with the wishes of 99% of 37,400+ survey respondents so far to use their vehicles GPS for rapid recovery if a theft occurs; 2) Owners pre-approve GPS location details be provided to LE right after a theft; and, 3) Work with the GPS DBOs to streamline and system store all access and approval steps required for providing LE assistance after owner's recorded approval when reporting a theft. Thus, the 2012 Supreme Court ruling prohibiting LE use of GPS without owner approval or a court order is satisfied and the GPS DBOs retain all control.

Many RAID system aspects have been explored. POINT+CLICK any topic below to go there:

- [Key reasons why currently available methods do not work](#)
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The following conveys the aspects PIP explored over the last 2 year. Many security entities and individuals contributed to what follows. This overview should provide the ability to say “RAID has merit” because victims get immediate help and current DBOs retain control.

## **Key reasons why currently available methods do not work:**

1. The technology for an effective solution has been around for over 15 years but competing factions claiming to provide stolen vehicle recovery are “doing their own thing” and not working effectively. Most vehicle makers have vehicle theft recovery methods but their methods are inefficient with too much red tape causing ineffectiveness too. Their methods are tuned to their vehicle models and only support owners paying an annual subscriber fee.
2. Manufacturers’ theft recovery practices follow by-the-numbers process steps and several information handoffs before LE gets tracking support. One DBO program requires a police report be filled out, submitted, and recorded prior to beginning GPS tracking. This can take several hours or even days in some cases. Another manufacturer will not activate its stolen vehicle services until the police confirm a vehicle was “actually” stolen, i.e., physically gone. These practices can be streamlined and still preserve every individual’s privacy rights.
3. Add-on systems like LoJack are costly, only effective within a 3-5 miles radius, require special LE in-cruiser equipment, and can easily have the signal jammed. These methods are slow, often too late to engage, can readily be defeated, and only provide remedial action for those who install special in-vehicle equipment and pay the high subscriber fee.
4. Many of the 15+ aftermarket add-on GPS units are a module which plugs into the vehicle’s under-dash diagnostic port and can be readily removed because of its visibility and easy access. These work best for fleet movement monitoring but add little as a theft deterrent.
5. Insurance companies do not seem to actively “push” fixing theft recovery methods. Their industry-wide profits from the 182 million “comprehensive” insured vehicles yield \$28+ billion versus the \$4 billion incurred annual replacement costs reduced by owner deductibles. Comprehensive sales growth THRIVES on the “fear” that only 12% of thefts lead to arrests.
6. Organized Crime Elements (OCE) such as gangs and ethnic groups focus on vehicle thefts because they know police presently lack “rapid” location and tracking capabilities:
  - Several hundred thousand medium to high priced stolen vehicles are “exported” every year because: a) hide-away exported vehicles in cargotainers are transported at the cost of common freight only; b) stolen vehicles can readily get re-registered in other countries due to inadequate government controls; and, c) legal vehicles imported under controlled conditions can include an import tax as high as 50% of the combined total of shipping cost + vehicle cost vs illegal vehicles at freight cost only in a shipping container.
  - A “thriving” worldwide black market network exists for medium to high end vehicle parts. Component parts and assemblies from such vehicles are worth more in total than the new vehicle price due to: a) high priced OEM replacement parts; b) stolen vehicles yield "free" parts - it's all profit; and, c) underpaid illegal aliens harvest the parts.

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## Key aspects related to an effective RAID vehicle theft recovery system:

RAID could recover many thousands of stolen vehicles (having an active GPS) yearly across the US. Online data suggests multi-millions of vehicles presently have an active GPS from the manufacturer or the 15+ aftermarket sources existing today. GM's OnStar alone was active on about 25 million vehicles by 2009, just one of the seven manufacturers with built-in GPS.

1. ARRESTS will improve! 326 responses from 392 surveyed Police, Troopers, Sheriffs, etc. indicated: a) 65% estimated theft recoveries would range from 31% to 60% (34% more "optimistically" expect over 60%) if GPS location was known within 10 minutes after a 911 theft call; b) conversely, 75% NEVER had a GPS aided recovery so far; and, c) only 5% recall any DBO assistance received in the first 2 hours -- the FBI defined "recovery window."
2. Vehicle manufacturers' theft recovery services are an "also ran" feature within their Navigation/ Communication Option (NCO) package. Point-to-point directions, hands free two-way communication, in-vehicle audio and video entertainment, and vehicle maintenance reminders are the key focal aspects for which the vehicle owner pays \$150-\$300 each year.
3. Where RAID implementation in a state or municipality is planned for LE support, methods should be defined to provide RAID access to a lookup file containing each state registered vehicle's license number, indications of GPS aboard and its legal owner or authorized agent having filed a pre-approved tracking if stolen, or who can approve GPS tracking, etc
4. Establish direct access support commitments with each GPS manufacturer and aftermarket provider for supplying immediate GPS location details for a RAID confirmed authorized LE assistance request for stolen vehicle tracking after confirming an owner or authorized agent's "consent to track if stolen" is on file or pursue immediate consent via cell phone, etc.
5. Define a plan to provide LE support via direct RAID recording and tracking of the multi-millions of functional GPS vehicles where the annual \$150-\$300 NCO subscription was dropped or was not transferred at a vehicle re-sale. With GM's OnStar and likely other manufacturers too, even if the NCO is not paid yearly, the GPS signal remains active. Most manufacturers install NCO units with GPS in all medium to high end models at production, since the GPS module only costs about \$10; and, the navigation subscription at \$150-\$300 per year might be renewed later as vehicle usage changes and/or vehicle resale occurs.
6. With the average age of US vehicles at about 10 years and automakers reportedly installing GPS on-board since OnStar began in 1997, one can expect that millions of vehicles with active, built-in but unmonitored GPS signals likely exist across the US. These were the GPS options included in new cars but not owner activated via subscription after the 90 day free trial. These potentially millions of vehicles could possibly have their GPS signature directly monitored by RAID at the owner's request without the vehicle manufacturer's assistance.
7. Some internet sources suggest the Event Data Recorder "black box" scheduled for all vehicles starting in 2014 may include an "always on" GPS signature. If so, millions of new GPS active vehicles will be produced each year. Potentially, these vehicles might have their GPS signature directly monitored by RAID without vehicle manufacturer's assistance.

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## Where's the beef? Expectations following a successful RAID launch:

1. Reverse the "Bad guys WIN 88%." LE access to RAID's portal should bring unsolved thefts under 60% in 3-5 years, deemed "under control" in 10 years as GPS presence and RAID access to GPS signatures grows. With 47+ million US vehicles having "paid" active NCO options today and another 97+/- million potentially having active GPS signals (without paid NCO) plus the potential of GPS in the black box vehicles, likely 75% of US cars and light trucks will have active GPS built-in by 2020 when about 265 million vehicle will exist. At \$4+ billion theft losses per year, with 21,000 thefts involving loss of life and untallied additional property damage, isn't it time effective ACTION like RAID is pursued?
2. In addition to the potential savings of \$billions per year nationwide, RAID could result in an untold number of lives being saved. The lives now being lost in carjacking incidents and innocent bystanders killed by fleeing vehicles. In addition, likely \$hundreds-of-thousands if not \$millions could also be saved in property damage avoidance due to prompt RAID action.
3. When RAID demonstrates initial, successful theft recovery effectiveness: a) vehicle owners with active GPS will progressively RAID register a "consent to track if stolen" approval; b) more idle manufacturer installed NOC options will likely be re-activated; c) manufacturer's may identify lower cost plans just covering active GPS monitoring for theft only where NOC subscriptions have been dropped; d) the existing "tarnished" image of manufacturers' low recovery success can be improved by RAID; e) RAID success could lead to designing tamper-proof GPS units where vehicles will not run if GPS tampering is sensed, perhaps with added cell phone control; etc. A reversal of the "Bad guys WIN 88%" trend CAN result.
4. Law Enforcement sees RAID as a DEFINITE POSITIVE where it now feels helpless:
  - With rapid RAID support after a theft, LE expects to intercept many observed vehicle thefts carried out by: a) individuals just out for a good time; b) those salivating over a muscle car they can't afford; and, c) a new gang member's initiation requirement; etc.
  - As a universal, rapidly accessible GPS resource, LE will optimize use of RAID in areas with Organized Crime Rings (OCR) and in border towns. Presently, getting GPS support hours or days after an OCR theft "rarely" leads to a recovery. If a theft is observed and RAID provides 10 minute GPS location information, little more can be done and still comply with the 2012 Supreme Court ruling. RAID's prompt response should help LE to get a location fix on many stolen vehicles before its built-in GPS can be disabled.
5. Initial RAID successes will promote utilization by other high theft municipalities and/or states and on to an inter-state or even a nationwide network communicating with the FBI's National Crime Information Center (NCIC) for intercepting fleeing stolen vehicles crossing state lines.
6. Demonstrated RAID success will lead to further developments in vehicle owner "real time" monitoring by cell phone, etc. When a vehicle should be parked but a cell phone alert to the owner indicates vehicle movement, LE can react immediately via a RAID assist, likely sent directly from the cell phone. This will be a real aid to reducing OCR vehicle theft successes.
7. RAID can aid LE in locating: a) teens who "borrow" the family car without permission; b) vehicles lost in floods; c) flood damaged vehicles moved to other states for dishonest resale;

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- d) bogus claims by vehicle owners claiming theft to get a replacement car via the insurance company; e) lawful intercept of suspected felons or terrorists fleeing an area; etc.
8. RAID can help in Emergency Responder (ER) events such as: a) aiding traveling seniors overdue or requesting help in a health emergency; b) recovering missing vehicles found in ravines after running off the road in a storm; c) locating snow storm stranded travelers; etc.
  9. With demonstrated RAID success, GPS usage could expand exponentially to include any self-powered entity, where the GPS is inseparably tied to the power control source, such as motorcycles, construction equipment, military equipment, airplanes, boats, snowmobiles, jet skis, etc. These could either be RAID monitored directly or utilize portal monitoring back to the GPS provider's database and even be triggered by owner's cell phone, PC, etc.
  10. RAID can go beyond the US to all of North America and even to developed nations around the world where previously stolen high value vehicles with functional GPS signatures could now be recovered, discouraging the export and bogus re-registration of US stolen vehicles.

## **RAID system funding, subsequent revenue sources, and future opportunities:**

Details defining multiple RAID financial scenarios are available upon request. There are many options for RAID funding and generating revenue, thus making the whole RAID concept a win for LE and a worthwhile endeavor to curb crime too.

In its simplest form, the initial thought is for a RAID listed GPS equipped vehicle to pay \$10 per year for immediate location aid being provided to LE by the GPS DBO. This would fund a national Rapid Access Information Database and permit a high percentage of the profits to go to funding needy causes such as soup kitchens, disabled vets, housing the homeless, etc.

## **SUMMARY:**

1. The "basic" GPS technology for vehicle recovery EXISTS (concept proven) but it takes hours, even days, to get automaker GPS aid to LE. Disjointed systems, inefficiencies, and poor training cause long delays. RAID resolves all such delays and handoffs beforehand by server storing all related information/approval steps to allow immediate DBO server to 911 server communications to speed LE support.
2. The public WANTS rapid LE recovery using on-board GPS in their vehicles: a) 99% of 37,400+ vehicle owners surveyed (so far) want their vehicle's GPS used for RAPID (10 min) location by GPS DBOs to support LE recovery; b) 89% would pre-authorize LE using their vehicles GPS if they report a theft. Auto industry data shows about 60% of US registered vehicles (140 mil.) have GPS. Since 2013, nearly 100% of cars have GPS.
3. ARRESTS will improve! With 83% of 392 surveyed LE professionals responding, 65% of these responses projected stolen vehicle recoveries ranging from 31% to 60% if GPS

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location was known within 10 minutes after a 911 theft call. Note that 34% more “optimistically” expect over 60% recovery, but let’s be realistic!

4. Should we not take all possible and practical actions to reduce the lives lost lives and physical harm from carjacking associated with vehicle thefts? Family units get crippled by the loss of a mother or father, perhaps the key wage earner, who lost their life in a carjacking. Untallied \$millions are lost to property damage associated with vehicle theft?
5. Estimates indicate about 60% of the present 243 million cars and light trucks already have GPS on-board. Virtually ALL new vehicles since 2013 have GPS built-in. As RAID based recovery via GPS expands, it will become a consumer driven requirement for ALL motorized vehicles well beyond just cars and trucks. Remote control via cell phone, etc. could drive the technology for including vehicle control and disabling in a future “smart” GPS designs.
6. Vehicle manufacturers’ theft recovery services are presently an “also ran” feature within their Navigation/ Communication Option (NCO) package. Point-to-point directions, hands free two-way communication, in-vehicle audio and video entertainment, and vehicle maintenance reminders are the key focal aspects for which the vehicle owner pays \$150-\$300 each year.

RAID’s proposed simultaneous checking of all DBOs potentially holding GPS signature data, confirming (or procuring) the owner’s permission to “track if stolen,” and providing LE immediate GPS location assistance is the surest way to start reversing the Bad Guys WIN 88% of the time.

Law Enforcement projections indicate RAID rapid location assistance could recover roughly 50% of stolen GPS equipped vehicles. With GPS being in the newer, more valuable vehicles, such a recovery level could save insurance companies about \$2.5 billion per year. How many struggling families could be housed and provided for with a sum of that magnitude? In addition to RAID’s vision of funding the needy, auto insurance companies might likewise be convinced to consider similar contributions from a portion of the loss avoidance through RAID recoveries.

We look forward to discussing the RAID rapid law enforcement support system with anyone who may be interested and/or who just wants to understand RAID better. More details and specifics can be found at [PerformancePartners.NET](http://PerformancePartners.NET) under the “[Rapid Tracking](#)” tab.

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