

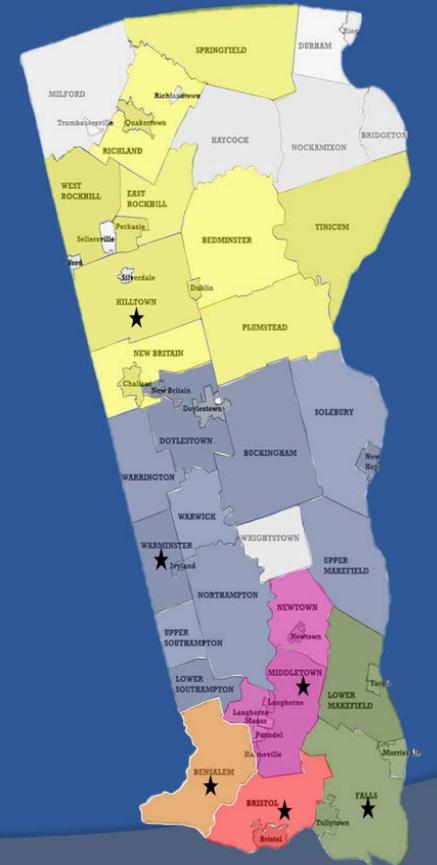
Solving Crime Through Local DNA Databases & Rapid

Frederick Harran
Director

Bensalem Township Police Department
Bucks County, Pennsylvania

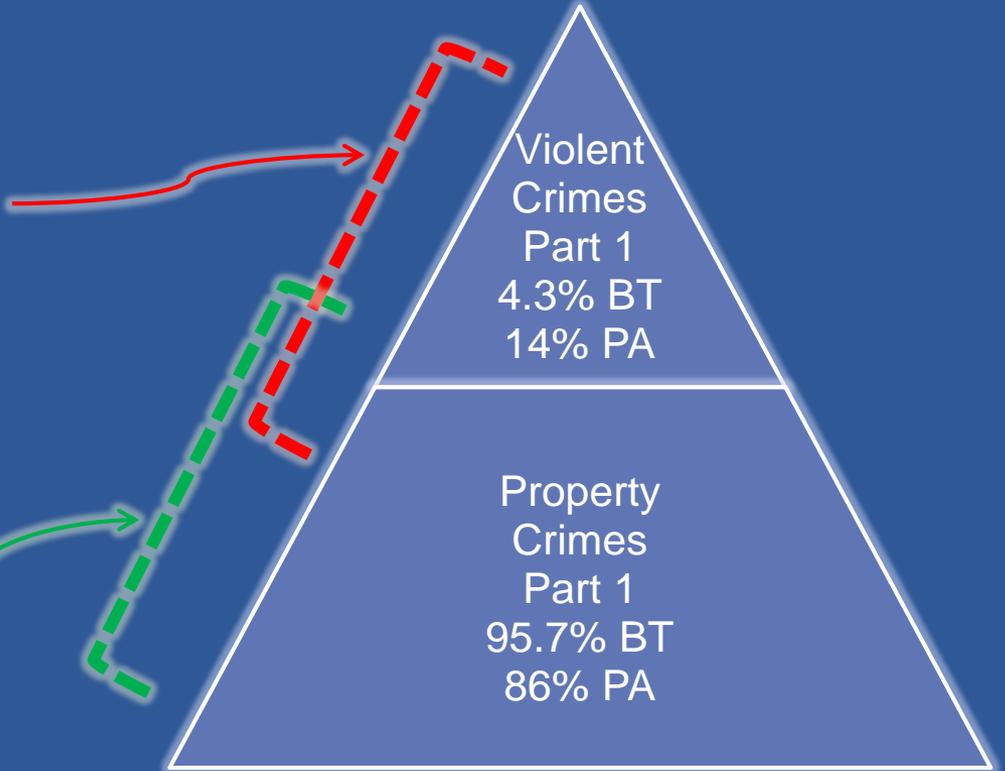
Bucks County, Pennsylvania

- Population 626,000/1.4 Million
 - Suburban / Urban
 - Borders Philadelphia, Trenton & Allentown
 - 604 Square miles
 - 54 Municipalities in Bucks County
- 39 Departments
 - 800 sworn officers



Complement Services from Government Forensic Labs

**Government
DNA LABS**



**BodeHITS™
Local Agencies**



History of the Bensalem/Bucks Local DNA Database

- First presented with the concept in Fall of 09
 - Were previously unaware of the potential for use of DNA in property crimes
 - Unaware of the ability to create a local database
 - Visited Florida Police Departments
 - Had implemented a local database 3 years previously
- Bensalem Police Department database 2010
- 16 Bucks County Departments 2014
- Bucks County (39 PD's) June 1,2015
- March 2017 On Line with **RAPID**



Focus of Program

- All sworn personnel trained in processing scenes for DNA with emphasis on narcotics and property crimes
- Adoption of new philosophy using DNA as an investigative tool
- Officers & Investigators play the biggest roles in collections



First Hit

- A constructive possession case where a glassine baggie containing approximately 30 vials of crack was discovered in the rear of the transport van. Five suspects were being Transported to HQ and it was unknown who discarded the baggie of crack. The DNA of actor was matched to the DNA swabbed from the exterior of the baggie.



“BLIND HIT”

- Cases being BLIND HITS where no other investigative leads available
- At the time of the crime being reported zero solvability
- Case remained “active UCR” with no follow-up
- Only factor leading to arrest or closure was DNA



12-03215, 12-08133 (2 BLIND HITS)

- Both of these cases were residential burglaries where force was used to gain entry into the residence.
- The first of these occurred on February 1, 2012 and a Officer collected a cigarette butt as evidence from the scene.
- The second burglary occurred on March 15, 2012 and a Detective swabbed the rock that was used to smash one of the windows to gain entry.
- Detectives interviewed Adam Bickel after he was arrested by Bristol Township for committing a burglary. Bickel denied involvement in any burglaries that occurred in Bensalem but provided a sample of his DNA.
- The DNA of Bickel was match to the DNA obtained from both the rock and cigarette.



GUILTY PLEA 2yr. – 5yr.

Effectiveness of Turnaround Time

BLIND HIT - This was unsolved residential burglary with no investigative leads. The actor gained access to the house by throwing a brick paver through the window. Detective processed the scene and swabbed blood that was located inside the house. The DNA from the blood was a match to the DNA of a suspect we previously collected DNA from when he was arrested for a warrant. Other than the DNA match there was no tie to the suspect. He was later interviewed and confessed to the burglary.



Narcotics - Possession with Intent to Deliver Cases:

- This was a traffic stop conducted by officers where a hidden compartment was later located. Twelve kilograms of cocaine were recovered in the compartment. Officers obtained a buccal swab from the driver, which later matched the DNA obtained from one of the kilograms found in the trap. **Guilty plea**



PECO Theft Map: Developing Links



“Since January 2014, PECO technicians have responded to several customer power outages in the Bucks County area. PECO technicians discovered PECO-owned transformers were accessed and damage caused to the secondary underground cables.” – PaCIC, March 12, 2014



DNA Link

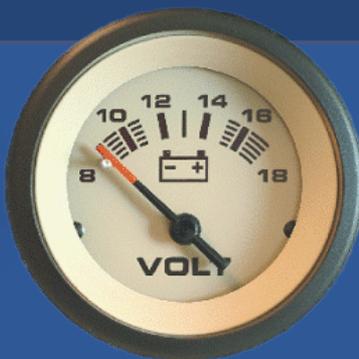
**January 2, 2014:
450 Winks Lane,
Bensalem, PA 19020**

Plastic water bottle left at scene was processed for DNA and a full male profile came back (14-00097)



**February 11, 2014:
Ivylnd, PA
(Northampton Patrol)**

DNA from volt meter matched the profile from the water bottle recovered (14-00097)

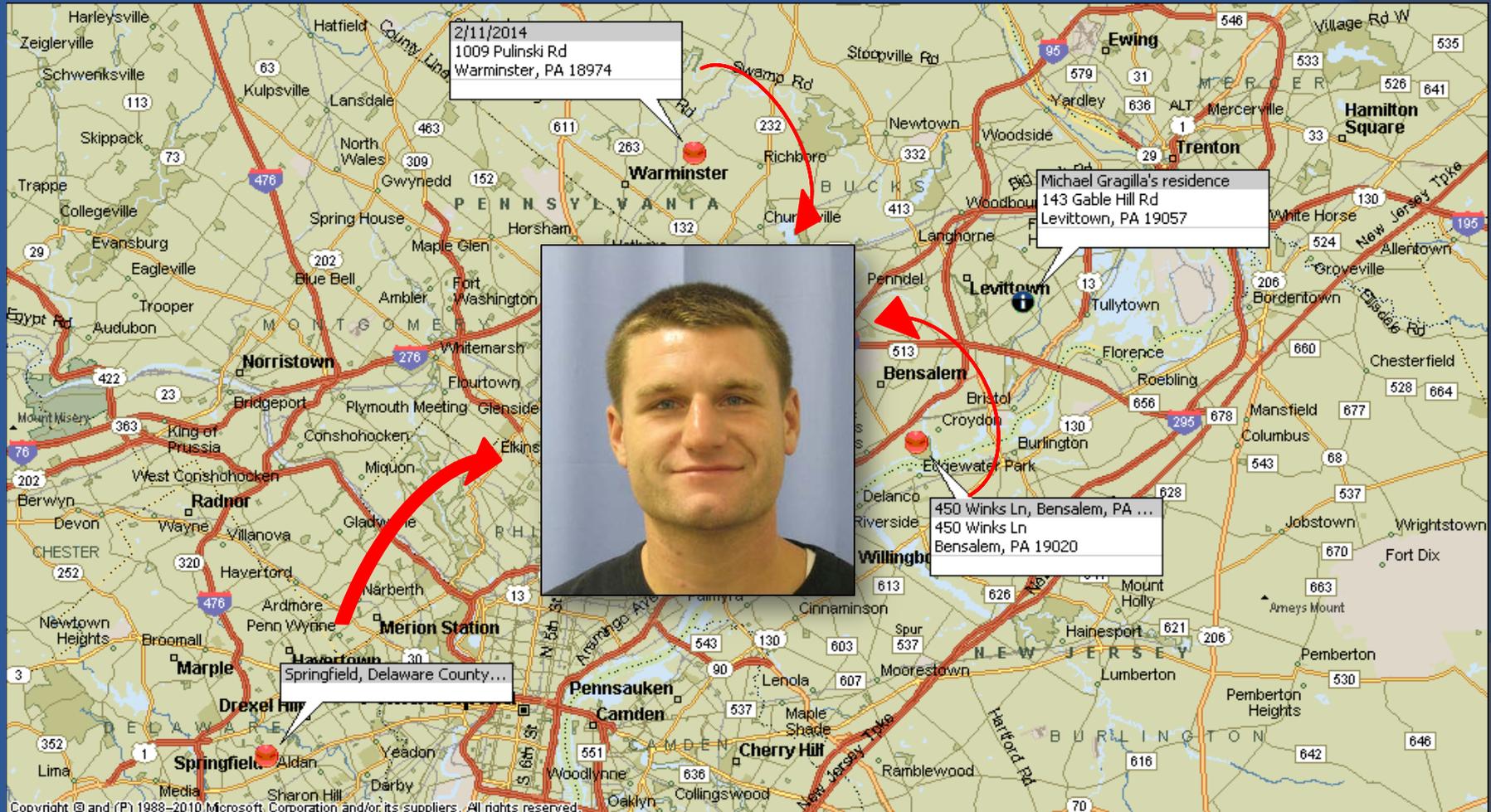


**March 25, 2014:
Springfield, Delaware
County, PA**

DNA from gloves and hardhat matched the volt meter from (14-07199) and the water bottle from (14-00097)



DNA Linking suspect to incident



Case Example # 1

Possession with Intent to Deliver

- Investigation into the sale of prescription pills at local motel
- Numerous items relating to the sale and distribution of narcotics and prescription pills
- DNA swabs of pill bottles and packaging
- DNA swabs match the DNA of the suspected dealer



Case Example # 2

Residential Burglaries Closed by Arrest

- Two residential burglaries committed with same M.O. (forced window)
- Burglaries were over a month apart
- DNA was collected from a discarded cigarette at one scene and the rock used to smash the window on the other
- DNA obtained from the items was a match to the suspect

➤ Suspect admitted to **opioid addiction**



Case Example # 3

Arrest and Seizure of 12 Kilograms of Cocaine

- Officers conduct a traffic stop in area of Lincoln Hwy
- During consent search Officer discover a hidden compartment
- Occupants denied knowledge of compartment and provided DNA
- Search of compartment revealed 12 kilograms of cocaine
- DNA from one of the kilograms matched the driver



Case Example # 4

Major Vehicle Theft Investigation

- Multijurisdictional thefts of work vans and tools
- Over 30 vans stolen in nine month period
- Suspect arrested and DNA provided matched DNA from some of the recovered vehicles
- \$500,000 worth of recovered stolen tools recovered
- Suspect admitted to **opioid addiction**

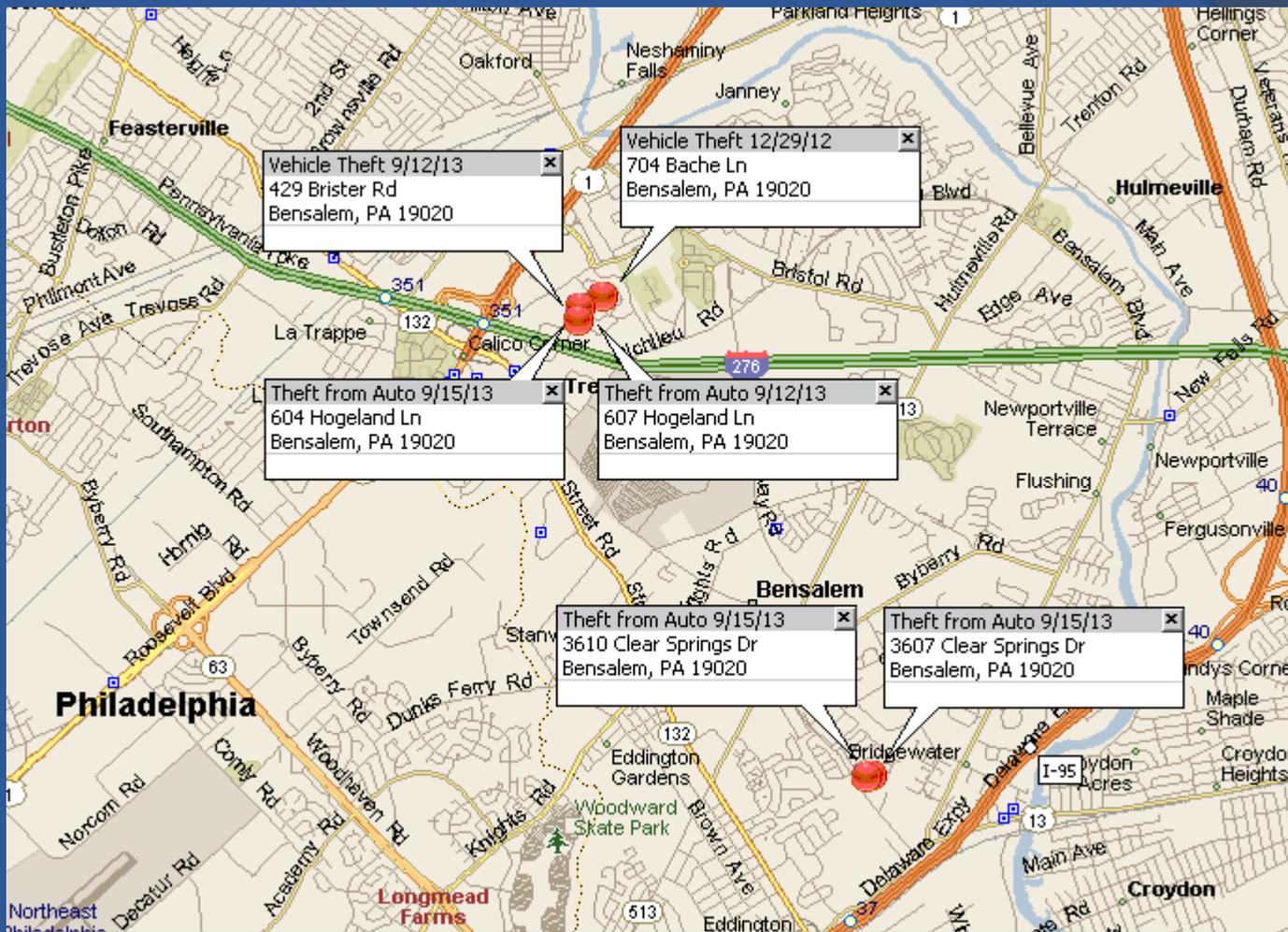


Case Example # 5

Multijurisdictional Burglary Investigation

- 13 commercial burglaries of pizza shops
- Blood collected from multiple scenes
- Surveillance photograph of female actor
- Female arrested exiting pizza shop burglary
- Suspect arrested previous month and provided DNA
- Suspect's DNA matched the DNA collected from multiple scenes which lead to a full confession
- Suspect admitted to **opioid addiction**



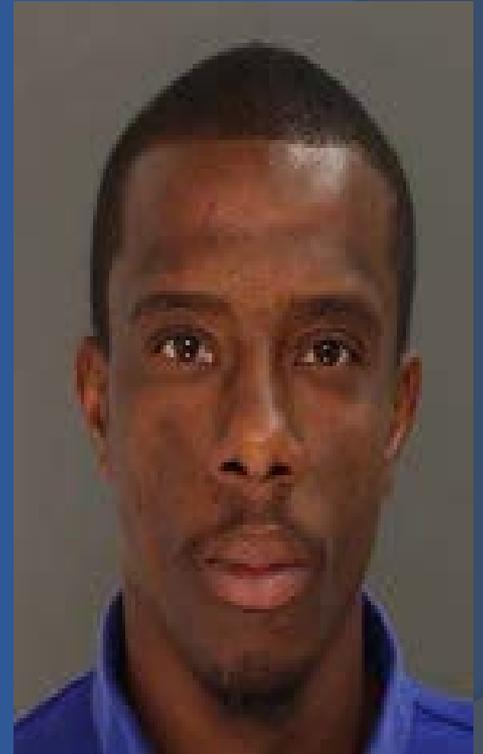


Multiple BLIND HITS which lead to the CLEARANCE OF 18 CASES TOTAL - This investigation involved multiple theft from vehicles and a vehicle theft. Detectives obtained DNA from a suspect with a [search warrant](#) once he was developed as a person of interest in one of the cases. Once the suspect's DNA was entered into the DNA database, multiple DNA matches were made to ten active investigations. DNA was recovered from vehicles and discarded items.



14-21086, 14-21185, 14-22139 (BLIND HIT), 14-22140, 14-22140

- These were institutional vandalism, arson incidents that occurred at local cemeteries.
- In all the incidents, gravesite American flags, veteran flag holders, and gravesite decorations were removed from gravesites.
- These items were then placed in a pile and burned. DNA was collected by a Detective from one of the burnt flag sticks which matched Anthony Carter, who had been previously stopped by a Detective for a suspicious occurrence.



No gloves, No holsters

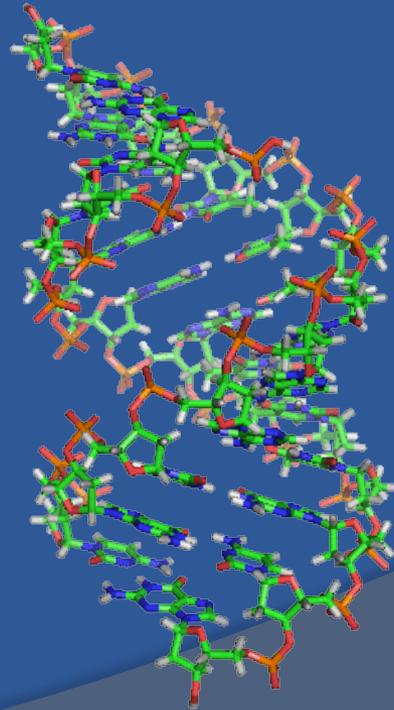


Swabbing Weapons for DNA



Collection Protocols

- Suspect Collections with **Consent**
 - DA's office approved
- Evidence Collections
- Evidence Triage



Individual Consent Waiver

I, _____, freely and voluntarily consent to provide a DNA swab sample to only be used for the purpose of criminal investigations. I have been advised that I have a right to refuse permission to obtain the sample at any time. ***I have also been advised that if I provide a sample, I may have it removed from the database upon my request.*** If I do refuse, I know the Officer may apply for a search warrant or court order prior to obtaining the samples. I know that any evidence seized may be used against me in a criminal prosecution.



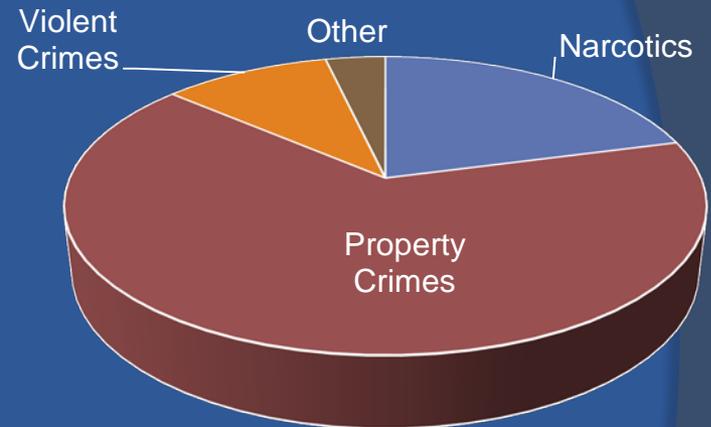
Program Statistics After Six Years

- Total number of reference and evidence profiles in database
 - Approximately 21,500+
 - 12,000+ reference profiles
 - 9,500+ evidence profiles
 - 1600+ plus Hits
 - COUNTY 2600 profiles
 - 300 **Cross Agency Hits**
- Results have played a role in over 550 criminal investigations to date



Breakdown of 550+ Investigations Involvin DNA Hits

- Narcotics
- Property Crimes
- Violent Crimes
- Other



- Cases involved handguns where DNA was obtained from the gun and matched the suspect.



Crime Trends: Burglaries After Local DataBase (LDB)

- Bensalem Township

↓ 42%

- Bucks County:

↓ 14%

National Average:

↓ 4.5%



Crimes Continues to Decrease 2016

- Burglary 65%
- Robbery 51%
- Auto Theft 46%

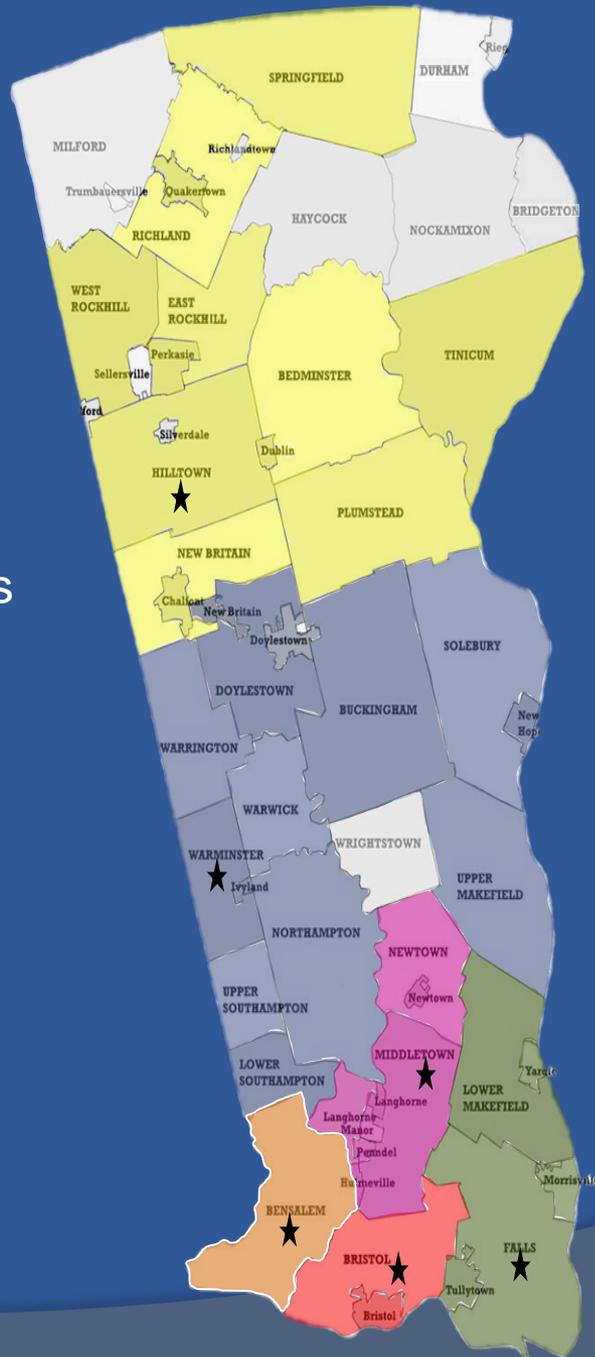


Crimes Continues to Decrease 2015-2016 Burglary

- Bucks County 25% Decrease
- Surrounding Counties Increase



Bucks County Regions





THE BUCKS COUNTY DNA DATABASE



July 3, 2015 Bensalem Township Police Department

Police respond to a report of a possible burglary in progress. Officers arrive to subsequently locate and arrest Michael Sarbocca and Ashley Brady. Both are charged with Trespass, Possession of Controlled Substances, False ID to Law Enforcement, and Theft by Unlawful Taking.

DNA reference samples from both subjects are sent to Bode Cellmark Forensics for processing, comparison, and entry into all profiles in the Bucks County DNA Database.



July 14, 2015 Falls Township Police Department

Police respond to a report of a residential burglary. Evidence showed that the actor(s) threw a rock through a window to gain entry. Three (3) handguns and electronics were stolen. A multi-tool was recovered from the scene which was left behind by the actor(s). The case was open, with no suspects.



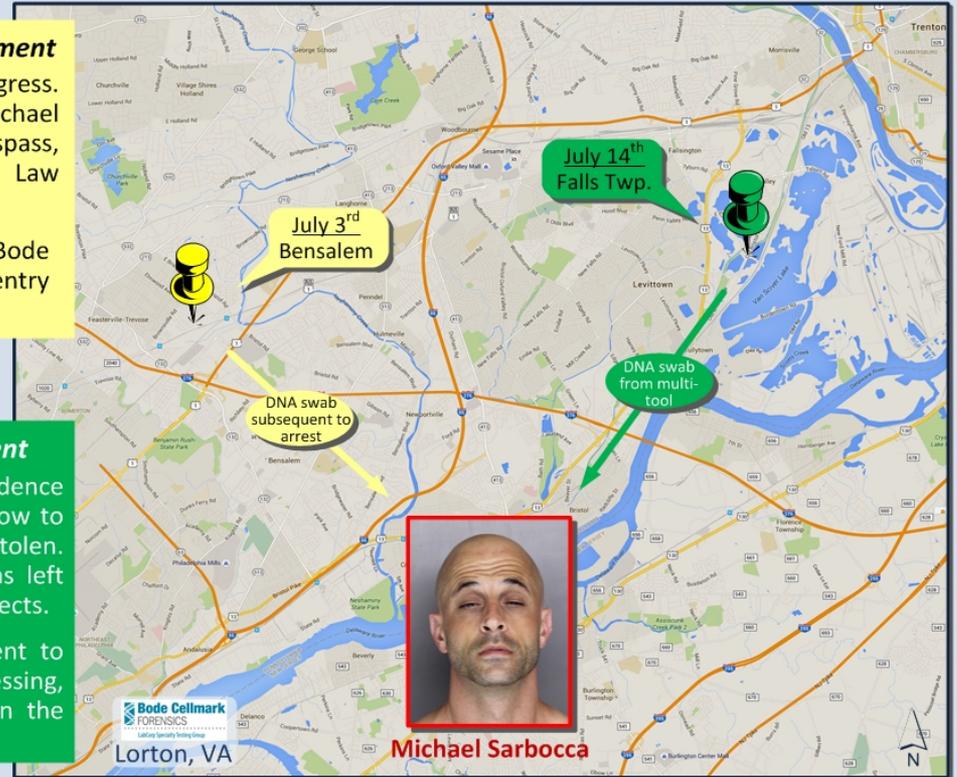
DNA swabs from the multi-tool were sent to Bode Cellmark Forensics for processing, comparison, and entry into all profiles in the Bucks County DNA Database.



August 2015

DNA Match

A Bode Cellmark Forensics report showed a hit / match between the known DNA sample of Michael Sarbocca and the DNA swab obtained from the multi-tool.



BUCKS COUNTY, PA





THE BUCKS COUNTY DNA DATABASE



May 12, 2015 Bensalem Township Police Department Police respond to a report of a residential burglary. Evidence indicates the actor entered the living room by breaking a window and cutting themselves upon entry. Officers obtained swabs of blood from the scene and submitted them to Bode Cellmark Forensics for processing, comparison and entry into all profiles in the Bucks County DNA Database.



Through investigation, Ian Dougherty, was developed as a suspect. A search warrant was obtained for his DNA and the reference sample was sent to Bode Cellmark Forensics, resulting in a hit / match for the blood found inside the residence.



May 13, 2015 Buckingham Township Police Department Police respond to a report of a residential burglary. Evidence shows that the actor(s) made entry through a window. Officers swabbed the inside of the window frame for touch DNA. The case was open, with no suspects.

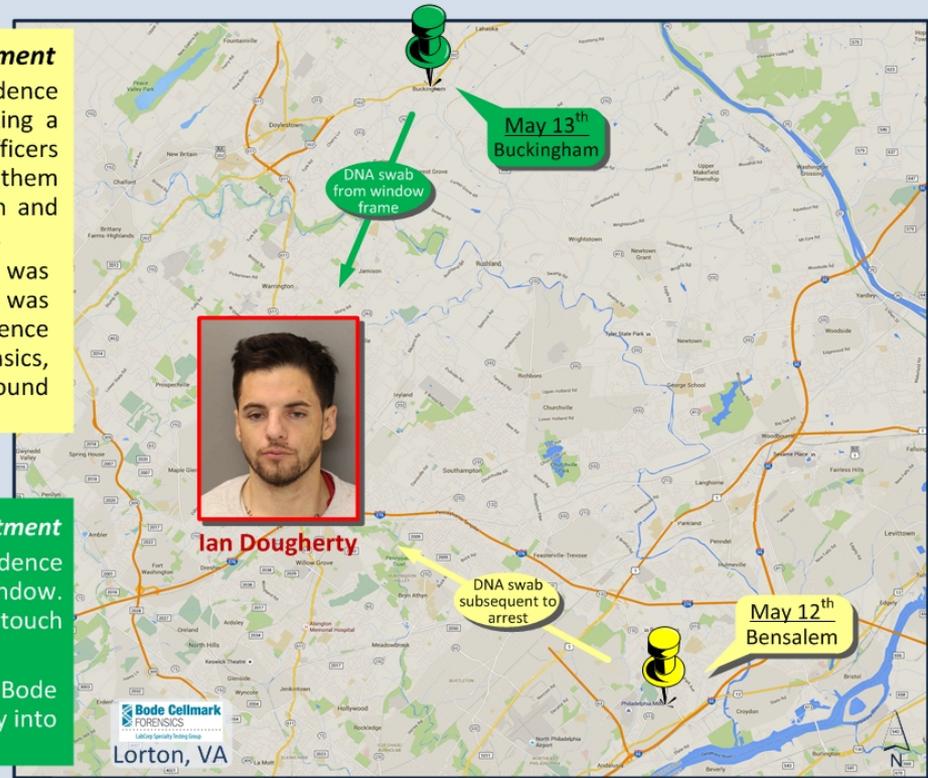
DNA swabs from the window frame were sent to Bode Cellmark Forensics for processing, comparison, and entry into all profiles in the Bucks County DNA Database.



August 2015

DNA Match

A Bode Cellmark Forensics report showed a hit / match between the known DNA reference sample of Ian Dougherty and the DNA swab obtained from the window frame.



BUCKS COUNTY, PA





THE BUCKS COUNTY DNA DATABASE



May 19, 2015 Bensalem Township Police Department

Police arrest Jonathan Fineman for being in possession of a stolen vehicle from New Jersey. Subsequent to his arrest, a DNA reference sample is collected.

The subject's DNA reference sample is sent to Bode Cellmark Forensics for processing, comparison, and entry into all profiles in the Bucks County DNA Database.



June 8, 2015 Lower Gwynedd Twp. Police Department

Lower Gwynedd police request the assistance of the Bensalem Twp. police regarding an active residential burglary investigation which occurred on May 11, 2015. Lower Gwynedd officers recovered a jewelry box with blood on it from the crime scene. Bensalem police swab the jewelry box for DNA.

DNA swabs from the jewelry box were sent to Bode Cellmark Forensics for processing, comparison, and entry into all profiles in the Bucks County DNA Database.

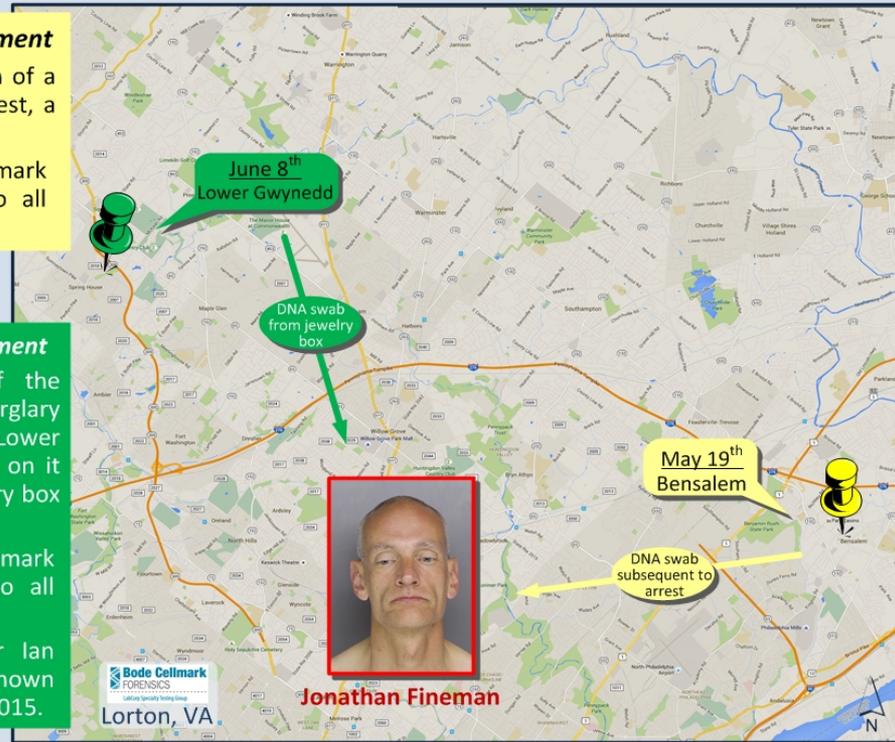
Lower Gwynedd investigators suspect serial burglar Ian Dougherty as being responsible for this case, as he is known to be active in the Philadelphia metro area during May 2015.



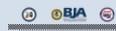
September 2015

DNA Match

A Bode Cellmark Forensics report showed a hit / match between the known DNA reference sample of Jonathan Fineman and the DNA swab of the jewelry box. Lower Gwynedd is advised that Ian Dougherty is NOT the actor in their June 8th burglary.



BUCKS – MONTGOMERY COUNTY, PA



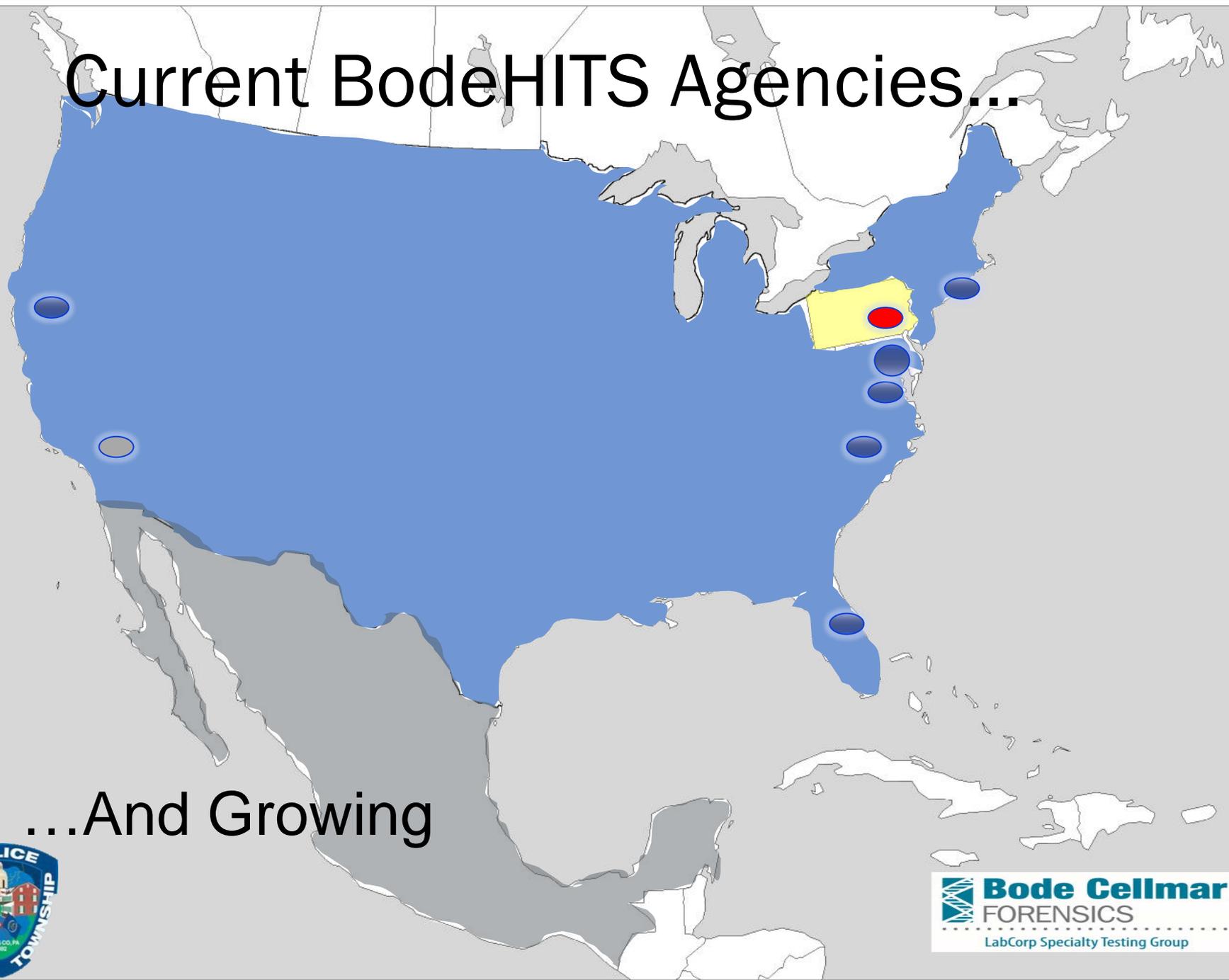
BodeHITS: Regional Solution



- Custom Solution
- Multi-Jurisdiction
- Multi-County
- (Or individual agency)



Current BodeHITS Agencies...



...And Growing





NAME: CHRISTOPHER SHAMIR ELDRIDGE
DATE OF BIRTH: 12/16/1983

09/23/2006

Subject, Christopher Eldridge, is arrested and convicted of carrying a firearm w/o a license in Phila.; DNA obtained and put on file with CODIS.

06/12/2011

Rape is reported in Atlantic City, NJ. Rape Kit is completed

06/15/2011

Rape Kit submitted to NJ State Lab.

11/08/2011

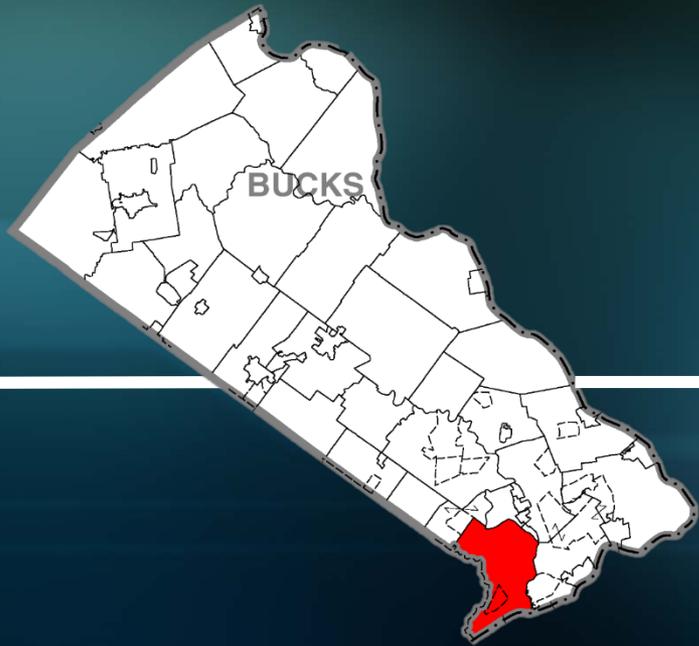
CODIS hit from Rape Kit to subject, Christopher Eldridge. Victim does not return calls or correspondence from assigned detective and case stalls. The assigned detective subsequently retires before the victim is located and Eldridge can be arrested

05/13/2015

Atlantic City, NJ case is reopened after contact is made with the victim. The victim was unsure if she wanted to proceed with the case since so much time has passed. The newly assigned detective responds to Bensalem seeking a consensual DNA sample from Eldridge.

06/16/2015

Atlantic City, NJ Detective is advised by the victim that she does not wish to pursue the case.



10/03/2015

Rape is reported in Bensalem, PA. Rape kit is completed; sent to the State Lab; Additional DNA evidence sent to Bode.

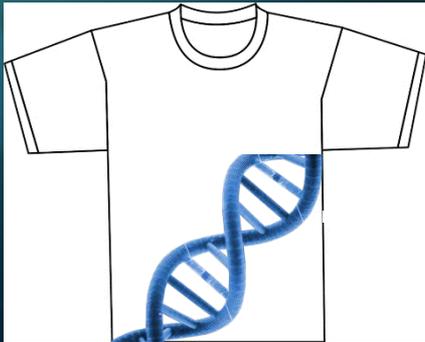
10/07/2015



Subject, Christopher Eldridge, is developed as a suspect and charged with Rape for Bensalem Incident.

10/21/2015

Bensalem Township PD received results from Bode Cellmark Forensics linking the defendant and victim's DNA to significant items related to the crime scene; specifically:



A stain on the victim's shirt tested positive for semen which matched the suspect Eldridge.



Christopher Eldridge



DNA swabs of handcuffs that were recovered from suspect Eldridge's residence matched the rape victim.





NAME: CHRISTOPHER SHAMIR ELDRIDGE

DATE OF BIRTH: 12/16/1983

09/23/2006

DNA obtained and put on file with CODIS

06/15/2011

Rape Kit submitted to NJ State Lab

05/13/2015

Atlantic City, NJ case is reopened

10/21/2015

BODE HIT

06/12/2011

Rape is reported in Atlantic City, NJ.

11/08/2011

CODIS hit from Rape Kit to subject

10/03/2015

Rape is reported in Bensalem, PA.

4/7/2016

PSP Results

William Bratton

“Knowing your assailant will be caught is a lot less comforting to a citizen than the confidence they won’t be attacked in the first place”



What's Next ?

RapidHIT[®]



 **integenX[®]**

 **Bode Cellmark**
FORENSICS
.....
LabCorp Specialty Testing Group

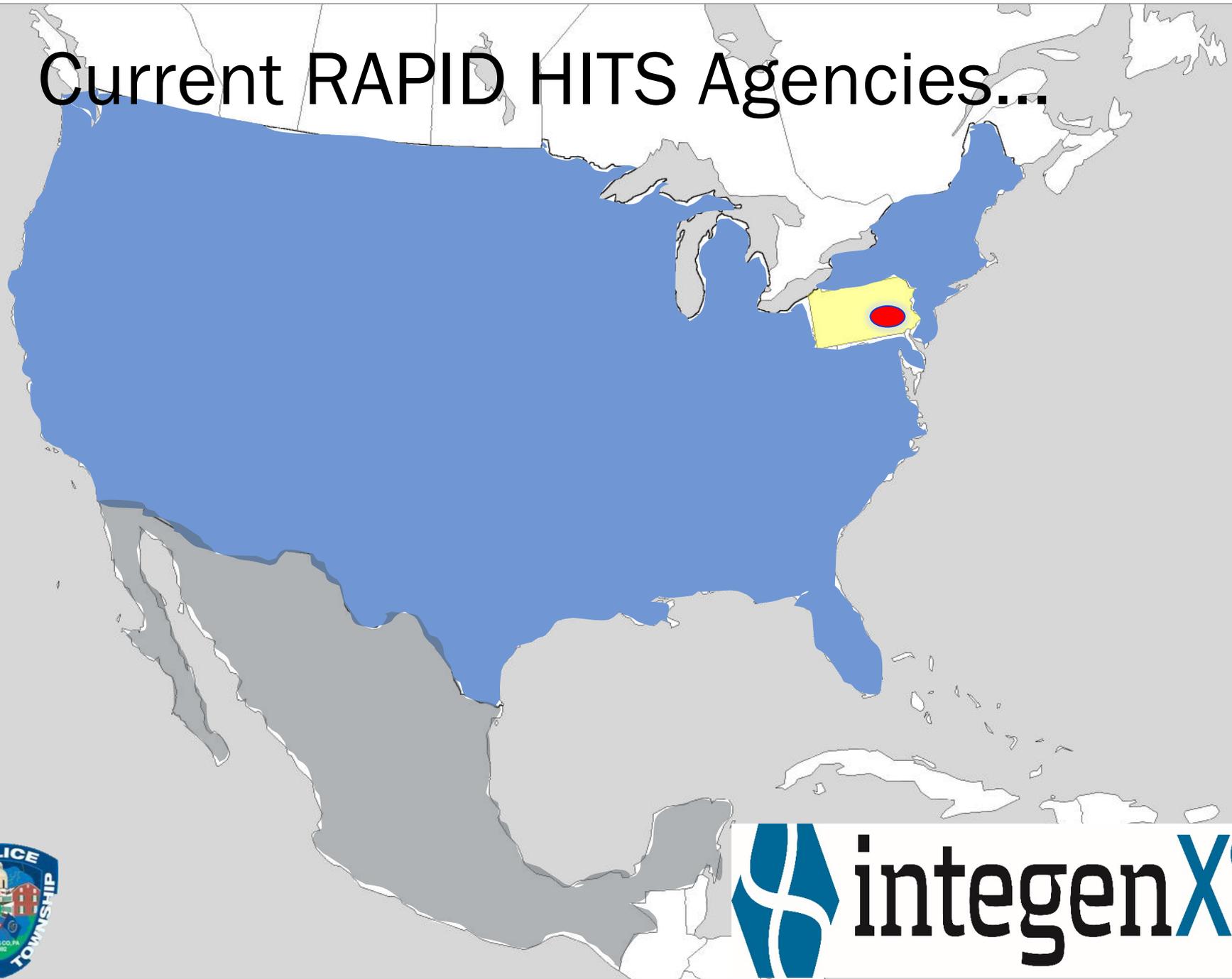
Rapid DNA

- 90 Minute
- Search 3 Minutes
- Criminals OFF the Street

NOW



Current RAPID HITS Agencies...



Process

Buccal
Swab

90 min
Process
Rapid

Xml. file up
loaded to
Data Base

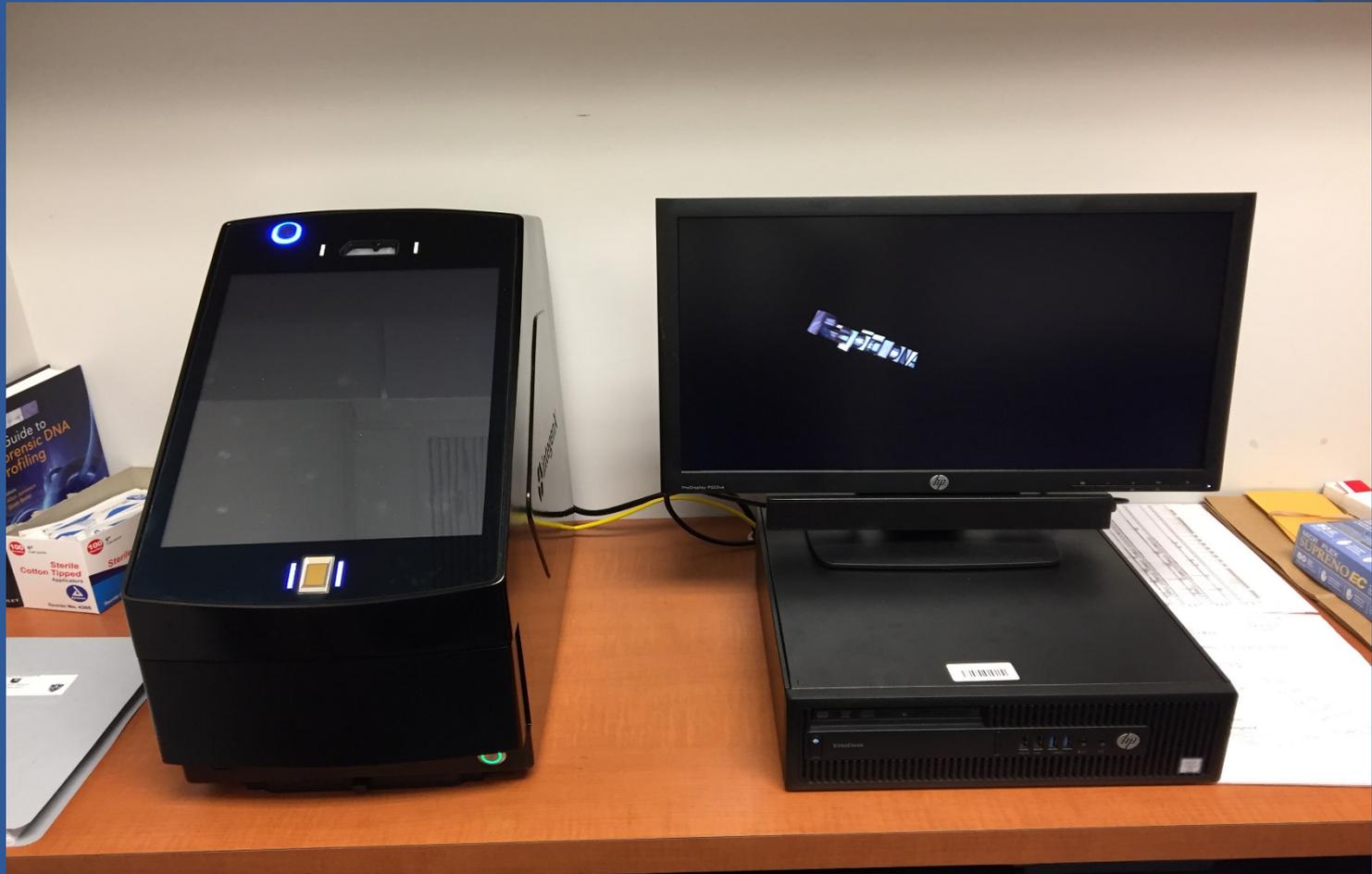




 **integenX[®]**

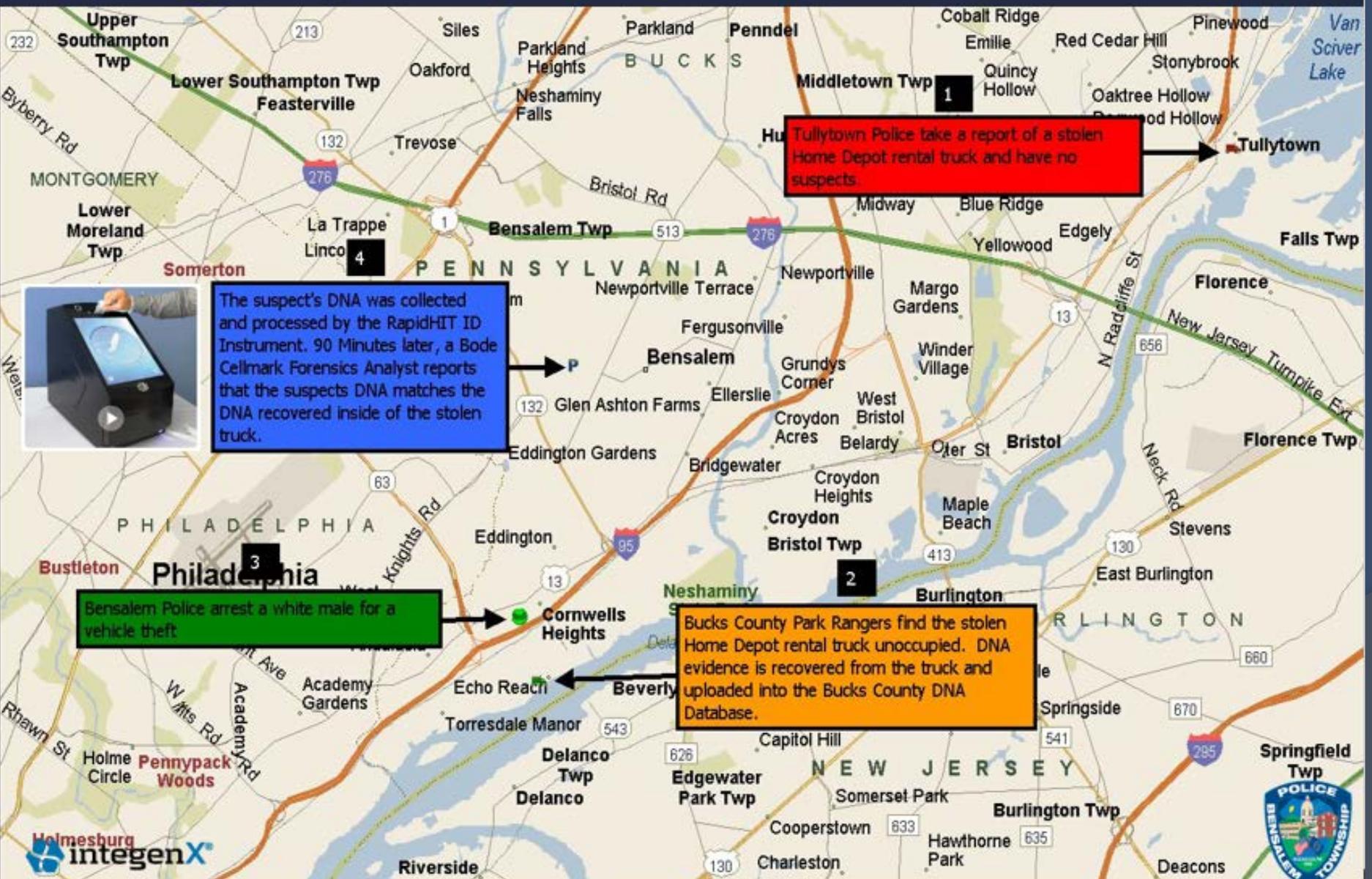








THE BUCKS COUNTY DNA DATABASE



1 Tullytown Police take a report of a stolen Home Depot rental truck and have no suspects.

4 The suspect's DNA was collected and processed by the RapidHIT ID Instrument. 90 Minutes later, a Bode Cellmark Forensics Analyst reports that the suspect's DNA matches the DNA recovered inside of the stolen truck.



3 Bensalem Police arrest a white male for a vehicle theft.

2 Bucks County Park Rangers find the stolen Home Depot rental truck unoccupied. DNA evidence is recovered from the truck and uploaded into the Bucks County DNA Database.





RapidHIT ID Cross-Agency DNA HIT Bucks County DNA Database

December 11, 2017 - Middletown Police Take a Report of a Retail Theft at the Giant Food Store, 168 N Flowers Mill Road, Langhorne PA 19047

MTPD collects DNA from the handle of a plastic shopping bag left behind by the actor when he fled. The DNA swab is submitted to Bode Cellmark for processing and entry into the Bucks County DNA Database.

May 19, 2017 - Bensalem Police arrest David Frascella for an in-progress retail theft at the Giant Food Store, 2721 Street Road, Bensalem PA 19020.

His DNA is collected and processed in 90 minutes using the integenX RapidHIT instrument and immediately uploaded into the Bucks County DNA Database for comparison.

In 2 minutes, an email notifies Bensalem PD that the DNA of David Frascella matches the DNA recovered from the retail theft in Middletown on December 11, 2016. MTPD is automatically notified of this DNA HIT.



RAPID

- Reference sample of Rape suspect EXCLUDED as profile on coffee cup and semen from victim...Charges withdrawn.
- Reference sample of 2 Suspects also EXCLUDED them as possible actors.



RAPID

- Reference sample of Burglary/Vehicle theft suspect, HIT to crack pipe in vehicle and blood on window entry point of home
- Reference sample of vehicle theft suspect, HIT to beer can and steering wheel of stolen vehicle.
- Reference sample of vehicle theft suspect, HIT to steering wheel of stolen vehicle.
- Reference sample of robbery suspect, HIT to DNA recovered from a gun used by the actor



RAPID

- Reference sample of suspect of (2) vehicle thefts, HIT to cigarette butts, wire cutters gatorade bottle, mountain dew bottle, gear shift and steering wheel of stolen vehicles(Tullytown and Bensalem PD)



July 5-13, 2017

◉ Quadruple Homicide



2017 Quadruple Homicide

Bucks County – Quadruple Homicide

- July 5th to 7th –Four young men go missing in Bucks County near Philadelphia, PA
- July 12th – BCF is contacted to test bloodstains originated from two of the victims
- July 13th – Human remains found on farm in 12.5' grave
- July 13th – DiNardo confessed to killing the four men with an accomplice, Sean Kratz.



What's Next ?

- **We need to rethink, reexamine, look at other ways, redo, look outside the box or whatever you want to call it.**



THANK YOU

- Fred Harran
- Director Bensalem Township Police
- 215-633-3710
- fharran@bensalempa.gov

