



Fighting Crime In Kent County

Bustin' Bad Guys with GIS



Kent County, Michigan



County Population: 608,000

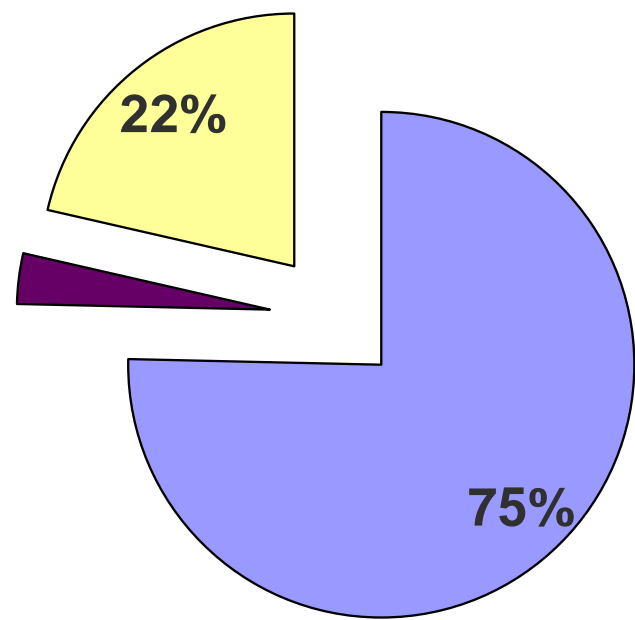
County Seat: Grand Rapids





Budget

2014 Operating Budget - \$310,000



■ Personnel ■ Professional Development ■ Maintenance

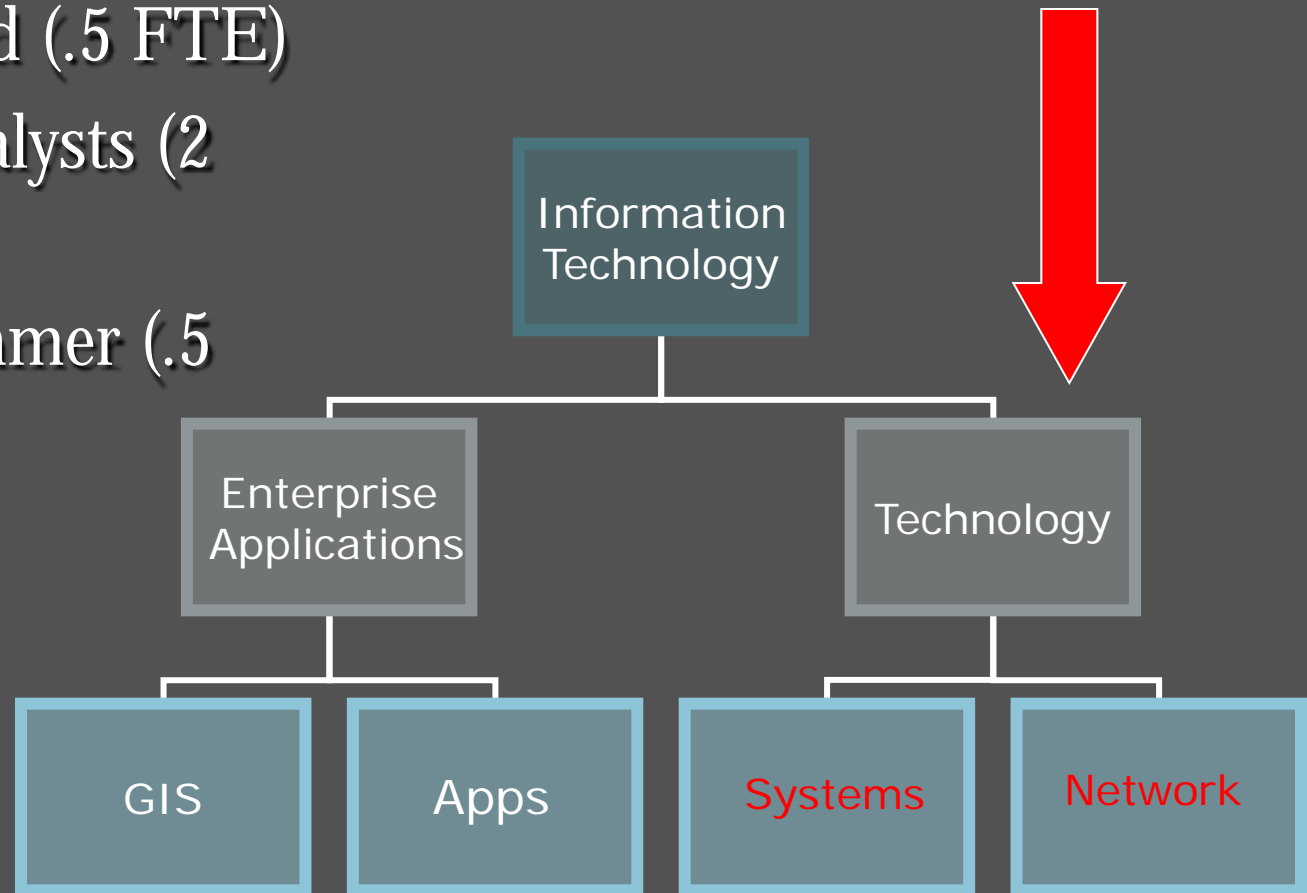


Our Team

GIS Staffing

- Team Lead (.5 FTE)
- 2 GIS Analysts (2 FTE)
- 1 Programmer (.5 FTE)

"With a little help from our friends"





Environment

▣ Platform

- ArcGIS 10.1

▣ Applications

- ArcGIS Server Standard Enterprise 10.1
- Silverlight API
- ArcGIS Models
- Python
- ArcGIS Online
- ArcGIS Collector App
- IOS & Android Mobile Apps



The Murder



Does anyone in this room NOT have a cell phone?





Cell towers are EVERYWHERE!





Major Cases Involve Numerous Entities





More suspects and victims =
more cell carriers.

metroPCS.
Wireless for All.

Sprint

T Mobile

verizon



Case Background

Authorities alleged Karl Cotton traveled to Grand Rapids on March 5, 2011, for a drug deal with Ante "Black" Webb, whose brother, Louis Chevis, was dating Jamie Powell. Cotton met Webb at a gas station on 28th Street and the group proceeded on to Walker, where Powell's apartment was located.

At some point during the deal, Cotton was robbed of about \$5,000. Webb left the apartment through a bedroom window and shots were fired while Cotton was still inside.

Police found Powell face-down in a pool of blood on her bathroom floor. She was pronounced dead at the scene. Police believed she had no involvement in the drug deal.



The Evidence

Assistant Prosecutor Robin Eslinger on Friday acknowledged that little physical evidence exists in the case. The doors in Powell's apartment were of such material that good fingerprints were never found. There was no DNA evidence placing Cotton at the scene.

Eslinger pegged much of the case on cell phone records, which show Cotton exchanged calls with those involved in the drug deal and was in the area of Powell's apartment at the time she died.

Authorities learned Cotton opened a new cellular phone account one day after the killing and then provided that new number to his probation agent. He denied having the old number.

Why? Eslinger questioned: "Because it was linked to the homicide."



How GIS got involved

- County Prosecutor called "I was given your name by..."
- Lead detective from City of Walker had technical details of case
- Cell phone records of 4 suspects were provided
- I mapped the data, then compared my findings with detective's 'hypothesis'



The Cell Phone Data

Call Initiation Time	Duration (sec)	Type	Forwarded	911	Called PTN	Calling PTN	Originating Cell Site	Y	X	Terminating Cell Site
12:23:00 PM	13	Outbound	No	No	(616) 322-2480	(269) 519-7137	NMI5506R_IC28_Baret, (DETR-1) 632 61622	42.914945	-85.752796	NMI5506R_IC28_Baret, (DETR-1) 632 61622
12:26:00 PM	34	Outbound	No	No	(616) 322-2480	(269) 519-7137	NMI5506R_IC28_Baret, (DETR-1) 632 61622	42.914945	-85.752796	NMI5506R_IC28_Baret, (DETR-1) 632 61622
12:29:00 PM	8	Inbound	No	No	(269) 519-7137	(616) 322-2480	NMI2546R_ICM21_I196, (DETR-1) 634 61576	42.908298	-85.778899	NMI5506R_IC28_Baret, (DETR-1) 632 61622
12:51:00 PM	11	Outbound	No	No	(616) 322-2480	(269) 519-7137	NMI5278R_IC196IAlpn, (DETR-1) 626 24423	43.014692	-85.684558	NMI5278R_IC196IAlpn, (DETR-1) 626 24423
13:27:00 PM	171	Inbound	No	No	(269) 519-7137	(269) 519-8386	NMI2502R_ICNewZelnd, (DETR-1) 634 45599	42.792008	-86.020423	NMI1932R_ICCntrClub, (DETR-1) 634 45548
14:19:00 PM	29	Inbound	No	No	(269) 519-7137	(269) 519-8386	MI5361S_ICESStJo_1, (DETR-1) 633 45985	42.071337	-86.43411	NMI5361S_ICESStJo_1, (DETR-1) 633 23205

.dbf file provided for each suspect by City of Walker Detective



Exhibit 1 – The Overview





Exhibit 2 - The Meetup @ 12:25pm



12-06545-FC





12-06545-FC

Exhibit 3 – Homicide at Old Orchard Apts @ 12:55pm





12-06545-FC



Exhibit 4 – 1 Suspect Fleeing @ 12:58pm



Lesson Learned: No 'Dead Guy' Symbols!



Exhibit 5: The Homicide Scene



12-06545-FC





STATE OF MICHIGAN
County of Kent

SUBPOENA

IN THE 17TH CIRCUIT COURT FOR
THE COUNTY OF KENT
180 OTTAWA AVE NW
GRAND RAPIDS MI 49503

The People of the State of Michigan
↓
KARL CORNELIOUS COTTON

Charge: HOMICIDE - OPEN MURDER - STATUTORY SHORT FORM

Date: 01/07/2013

Time: 8:30 am

To: BRODEY HILL
HOME ADDRESS C/O OFFICER BRANDYN HEUGEL

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NOTES

WITNESS INSTRUCTIONS:
Please report at the above time to the
Victim/Witness Unit located at 180 Ottawa
Ave. N.W, Suite 5400.

**PLEASE CALL (616) 632-5403 AFTER
5:30 PM THE DAY BEFORE YOUR CASE
IS SET TO DETERMINE WHETHER YOU
MUST APPEAR IN COURT.**

THANK YOU FOR YOUR COOPERATION,

[Signature]

Kent County Prosecutor

Circuit Court No.: 12-06545-FC
Prosecutor Case No.: 41 12 005862 99
Report No.: WA111875
Event Type: JURY TRIAL
Date of offense: 03/05/2011

HONORABLE MARK A TRUSOCK



YOU ARE HEREBY COMMANDED to appear personally before the
17TH Circuit Court
180 Ottawa Ave NW
Grand Rapids, MI 49503
**at the date and time above stated, then and there to give evidence
in the above entitled cause, on the part of the people. HEREIN FAIL NOT ON
PAIN OF THE PENALTY THAT WILL FALL THEREON.**

Issued at Grand Rapids, Michigan, on: Wednesday, February 27, 2013
By: Mary Hollinrake, County Clerk

Social Security Number Round Trip Mileage Payee
Approved for payment: _____ Date: _____
Dated: _____
Dated: _____
Server's Signature
Subpoenaed Officer's Signature

Witness Fee _____
Payment Description _____

The Subpoena



Corrections



Michigan.gov

2000 Capitol Building, Lansing, MI 48906



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BIOGRAPHICAL INFORMATION



MDOC Number: 488930

SID Number: 2373250P

Name: KARL CORNELIUS COTTON JR

Racial Identification: Black

Gender: Male

Hair: Black

Eyes: Brown

Height: 5' 10"

Weight: 170 lbs.

Date of Birth: 05/12/1987 (25)

Image Date: 7/31/2012

KARL CORNELIUS COTTON JR

MDOC STATUS

Current Status: Prisoner

Earliest Release Date: 05/30/2028

Assigned Location: [Michigan Reformatory](#)

Maximum Discharge Date: 09/18/2069

Security Level: IV

ALIASES

KARL COTTON

KARL CORNELIUS COTTON

MARKS, SCARS & TATTOOS

None



Contacts:

Brodey Hill, GISP & Janice Rockburn, GISP

Kent County IT-GIS

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Janice.Rockburn@kentcountymi.gov

Web: <http://www.accesskent.com/Departments/GIS/>