

North Hills Community Association Public Safety Committee

Video Surveillance Workshop

11 February 2016

Presented by Barry Pilger

Resources from tonight's workshop will be available here:

www.barrypilger.com/nhca

These Powerpoint slides are there now.

I'll try to get a video up in a few days. It will be announced on Open Forum and Nextdoor.

My story...why I am doing this...

Tonight's Agenda:

- **Introduction: where does video fit into your overall security?**
- **Some video examples**
- **Installation: where**
- **The technology. A primer.**
- **System recommendations**
- **Installation: who and how**

Property crimes in Beat 13Y in past 3 years

Motor vehicle theft: 206

Residential/commercial burglaries: 148

Auto burglaries: 160

Burglaries/all other: 11

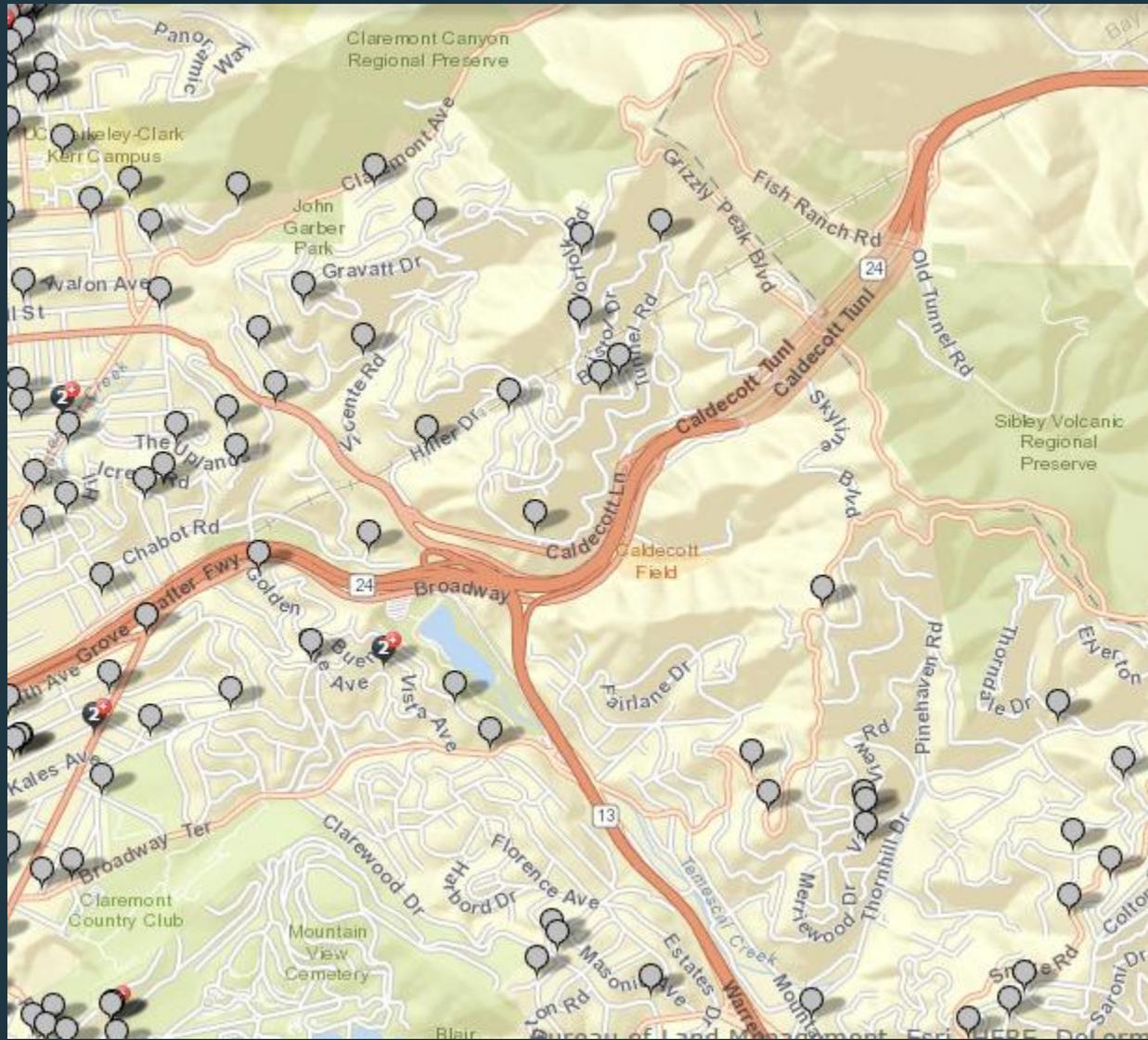
Total property crimes: 525

With ~3500 homes in 13Y, you have a **15% chance** over a three year period of being a victim of a property crime

13Y PC242 battery	110 STARVIEW CT 2/3/16 17:50
13Y PC459 BURGLARY - AUTO breakin	8079 BROADWAY TER 2/1/16
0:00	
13Y PC459 BURGLARY - AUTO breakin	1838 GRAND VIEW DR 2/2/16
13:00	
13Y PC459 BURGLARY - AUTO breakin	253 STONEWALL RD 2/2/16
12:00	
13Y PC459 BURGLARY - RESIDENTIAL	6622 SOBRANTE RD 2/2/16
14:12	
13Y PC459 BURGLARY - RESIDENTIAL	60 SPYGLASS HILL 2/5/16
17:55	
13Y PC459 PURSE-SNATCHING	6201 VIRGO RD 2/1/16 2:38
13Y PC484 (A) AUTO PARTS/ACCESS	187 DUNCAN WY 2/1/16
13:36	
13Y PC487 AUTO grand theft	6608 PINEHAVEN RD 2/2/16 9:30
13Y PC496 (A) OTHER	60 SPYGLASS HILL 2/5/16 17:55
recovery related to above	Spyglass burglary

And this report from last week! Crimes first week of February

The last six months. One gray dot = one residential burglary



Where does video fit in?

My assumptions:

- Alarm
- Know our neighbors
- Hardened your egresses
- Lighting at exterior
- Trim vegetation
- Use your garage
- Leave nothing in your cars

If you do all that, installing video surveillance is the next best step. If not, start with the above list.

Video example 1: Mailbox thief caught, now doing time



Video example 2– this one had stolen plate

Sep 30 2014 01:47:15 AM



Installation

- Where to install cameras

Your garage is a good place to start

- Hardware easily placed there
- Can probably get an internet connection to the garage
 - If not hard wired, consider using powerline adapter or wifi extender
- Cameras wires are easy to run along garage walls
- Cams placed above garage doors can cover much of the real estate that a perp might use to access your property

Downslope ideas: start with your garage



Upslope ideas



Townhouse



Level lot ideas – more area to cover



License plate cameras



Technology: a primer

First topic: Resolution

Definitions:

D1 (lowest cheapo resolution, worthless)

960H (passable quality)

HD (often expressed 720p or 1080p,
serious image definition)

D1 resolution .3 megapixels

Mar 10 2015 08:27:25 AM



D1

960h .48 megapixels

Mar 10 2015 08:28:19 AM



HD 720 .9 megapixel

Mar 10 2015 08:31:04 AM



HD 1080p 2.1 megapixels

Mar 10 2015 08:32:48 AM



The details

- Two types of systems
 - Analog (including new HD): D1, 960H, 720p
 - Digital/IP (internet protocol) 720p up to 5 megapixels
- Hard wired (every camera needs a home run)
 - Some wireless options with IP systems
- License plate reading (LPR)

Analog Systems

- **Swann** is the preferred vendor. We have tried Lorex, Night Owl, Q-See, and a cheapo system available on Ebay. Swann has great support, has an advanced graphical user interface. Documentation written by native English speaker.
- Resolution limited to 700 TVL (.48 megapixel)
- Must be 960h (not D1 resolution), more on resolution later
- Uses BNC coaxial cable
- Every camera must be hard wired to the recording device (DVR)

Swann **Analog**
system now
for sale on
Costco.com

8 CHANNELS | 4 CAMERAS | 1TB HARD DRIVE | 720p



Swann 8-Channel HD Analog
DVR 1TB HDD, 4 720p
Cameras with 82' Night
Vision
\$229.99

Swann **Analog**
system now
for sale on
Costco.com



Swann 8-Channel HD Analog
DVR with 2TB HDD, 8 1080p
Cameras with 100' Night
Vision
\$599.97

Internet Protocol (IP) systems

- Swann has a line of IP systems, roughly 4 x the cost of analog, but offer 1080p resolution (4x that of 960h)
- Usually hard wired (Cat5 or 6 cable) , but one can avoid running internet cables to every camera by using powerline adapters or wifi extenders, depending on quality of signal
- The least expensive alternative is using a Windows computer, on 24/7 and Sighthound software and Aote cameras purchased on Ebay (more later)

Swann **IP**
system now
for sale on
Costco.com



Swann 16-Channel HD IP NVR
with 3TB HDD, 8 3MP
Cameras with 115' Night
Vision
\$1,499.99

Swann IP
system now
for sale on
Amazon.com



Swann SWNVK-870854T-US NVR8-7085 720p
POE/1TB/4x NHD-806 Bullet Camera (White)

by Swann



17 customer reviews | 5 answered questions

List Price: ~~\$449.99~~

Price: **\$419.95** ✓ Prime

Swann **IP**
system now
for sale on
Amazon.com



Swann SWNVK-873008 NVR8-7300 8 Channel Network Video Recorder & 8 x NHD- 815 3MP Cameras (White)

by Swann

★★★★☆ ▾ 8 customer reviews

List Price: ~~\$1,349.99~~

With Deal: **\$1,069.95** ✓ Prime

You Save: \$280.04 (21%)

If this equipment is above your pay grade, install dummy cameras

Decoy or deterrent. They can be either.

- On Amazon.com (Amazon Prime) \$7.04 (with blinking light \$7.50)



If you **do** or **do not** install a camera system,
install a sign



NETGEAR N300 Wi-Fi Range Extender - Wall Plug Version (WN3000RP)

by Netgear

★★★★☆ 2,820 customer reviews | 659 answered questions

List Price: ~~\$89.99~~

Price: **\$41.24** ✓ Prime

You Save: **\$48.75 (54%)**

Wifi extender for
wifi connected cam



Powerline adapter for remote cam



Sponsored ⓘ

TP-LINK TL-PA4010KIT AV500 Nano
Powerline Adapter Starter Kit, up to
500Mbps

by TP-LINK

\$34.95 ~~\$69.99~~ ✓ Prime

Get it by **Friday, Feb 12**

Barry's top choice:

A home built, highly flexible system that runs off a laptop or desktop computer and can grow with your needs. It has intuitive software.

This system uses software from

www.Sighthound.com

Software cost:

\$60 for two cameras

\$250 for unlimited cameras

www.sighthound.com

Requirements:

Mac or Windows computer running 24/7

Any IP camera

Software: Sighthound.com

A little bit of technical know how. Pretty much any IT or internet/website professional or computer builder/hobbyist will be able to do this.

Installation

Recommended DIY steps:

1. Determine your objectives and needs
2. Buy your system
3. Do a table top assembly, familiarize yourself
4. Hire an installer to mount the cams and run the cables
5. Start with any electrician you know and trust My long time electrician installed two cams above a garage for \$300 and installed two cams in two separate parts of a house for \$400 for my neighbors
 - Be sure they are licensed contractors. Very important.

**Installers: I know both these guys. Licensed,
talented, experienced and good.**

ZM Electric

Zoran Mikerevic

925-250-6495

City 101

Michel Aguda

408-418-7122

www.city101.net

OK, I have a video of a crime, what do I do with it?

Get your video to the appropriate police.

They will view it and use it to support their efforts. Promise.

The more cameras there are on a given street, the more protected we are.

The Powerpoint for today's workshop

Links to resources on video resolution

Links to installation instructions for Sighthound based system using both cameras

IP Camera

IP LPR Camera

Are all available at:

<http://www.barrypilger.com/nhca>

I'll do my best to have a video of this workshop on the site in the next week