“Keeping Up with Today’s Technology Isn’t Good Enough”

Eddie L. Reyes
9-1-1 Director | Prince William County, VA
2021 SEARCH Symposium on Justice Information Technology, Policy and Research

July 13, 2021
St. Louis, MO
TELEGRAM
SPECIAL

EJAGD3 9444 E33 DEC 9 71 (30)LA437
L EJ48 NL PD TBDPJ SUNNYVAL CALIF 5
RICHARD W VAELE ASSOC ADMIN LAW ENFORCEMENT ASSISTANCE ADMIN
US DEPT OF JUSTICE
WASHDC

CRIMINAL FINGERPRINTS WERE TODAY SUCCESSFULLY TRANSMITTED VIA
THE PROJECT SEARCH EXPERIMENTAL SATELLITE SYSTEM FROM THE LOS
ANGELES COUNTY SHERIFF DEPARTMENT TO THE CALIFORNIA DEPARTMENT
OF JUSTICE AND FROM THERE TO THE FLORIDA DEPARTMENT OF LAW
ENFORCEMENT. BOTH FACSIMILE AND VIDEO FINGERPRINT IMAGES WERE
SENT THROUGH THE SATELLITE LINKS. THE RECEIVED FINGERPRINTS
ARE OF HIGH QUALITY AND WE ARE PROCEEDING TO EXPERIMENT WITH
THE EQUIPMENT PARAMETERS AS PLANNED. I BELIEVE THIS EVENT TO
BE A MAJOR STEP FORWARDING IN THE APPLICATION OF ADVANCED TECHNOLOGY
TO UP-GRADING LAW ENFORCEMENT

PAUL WORMELI PROJECT SEARCH CO-ORDINATOR.
Speaking of History
In Context

• Governance
• Standards
• Policy
• Training
• Information Sharing
• Integrated Justice Enterprise,
• Evidence-Based Decision-Making
• Privacy and Civil Liberties Protections
Evolution of Criminal Justice Technology
Where the Rubber Meets the Road

* Voice and Data is Still King!
* Call Volume Increasing
* Personnel Decreasing
Radio Systems Getting More Advanced

MISSION-CRITICAL DESIGN

- Channel selector
- On/off/volume control
- Digital microphones
- Accessory connector
- Touch screen
- Display sleep/wake and home button
- Secure/clear switch
- ABC zone switch
- ViQi button
- Speaker
- Push-to-talk button
- NFC antenna
- 3x programmable buttons
- Battery
FirstNet Momentum

- 80+ dedicated deployable network assets, including three Flying COWs™ and one Aerostat
- 160+ unique apps in the FirstNet App Catalog
- 750+ asset deployments for planned and emergency events in 2020
- 210+ FirstNet Ready™ devices
- 2M+ FirstNet connections
- 15,000+ public safety agencies and organizations subscribed

Source: https://about.att.com/story/2021/fn_expands.html

*These numbers have not been validated by the FirstNet Authority*
So What are the Statistics?

- About 44% of the U.S. population now lives in states that have legalized recreational marijuana
- Marijuana-related violence has been cited in the sharp increases in homicides and shootings
- Gun violence exponentially higher in 2020 & 2021
- 23,200 firearms-related deaths in 2021:
  - 10,600 due to homicide
  - 12,606 due to suicide

(***source gunviolencearchive.org***
## GVA - Six Year Review

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths - Willful, Malicious, Accidental</td>
<td>12,418</td>
<td>13,537</td>
<td>15,112</td>
<td>15,679</td>
<td>14,789</td>
<td>15,208</td>
</tr>
<tr>
<td>Suicides by Gun</td>
<td>21,386</td>
<td>22,018</td>
<td>22,938</td>
<td>23,854</td>
<td>24,432</td>
<td>PENDING</td>
</tr>
<tr>
<td>Injuries - Willful, Malicious, Accidental</td>
<td>22,779</td>
<td>27,033</td>
<td>30,666</td>
<td>31,265</td>
<td>28,233</td>
<td>29,501</td>
</tr>
<tr>
<td>Children [age 0-11] Killed or Injured</td>
<td>603</td>
<td>695</td>
<td>671</td>
<td>733</td>
<td>670</td>
<td>692</td>
</tr>
<tr>
<td>Teens [aged 12-17] Killed or Injured</td>
<td>2,318</td>
<td>2,695</td>
<td>3,140</td>
<td>3,256</td>
<td>2,869</td>
<td>3,068</td>
</tr>
<tr>
<td>Mass Shooting</td>
<td>269</td>
<td>335</td>
<td>382</td>
<td>346</td>
<td>337</td>
<td>417</td>
</tr>
<tr>
<td>Murder-Suicides</td>
<td>624</td>
<td>530</td>
<td>549</td>
<td>608</td>
<td>621</td>
<td>614</td>
</tr>
<tr>
<td>Defensive Use [DGU]</td>
<td>1,531</td>
<td>1,393</td>
<td>2,001</td>
<td>2,107</td>
<td>1,888</td>
<td>1,547</td>
</tr>
<tr>
<td>Unintentional Shootings</td>
<td>1,605</td>
<td>1,969</td>
<td>2,202</td>
<td>2,039</td>
<td>1,662</td>
<td>1,837</td>
</tr>
</tbody>
</table>

Number of Deaths, Injuries, Children, Teens killed/injured [actual numbers]
Mass Shooting, Murder-suicides, Defensive Use, Unintentional Shooting [number of incidents]
Suicide numbers supplied by CDC End of Year Report [actual numbers]

@gundeaths
www.gunviolencearchive.org
www.facebook.com/gunviolencearchive

©2020 - GUN VIOLENCE ARCHIVE
NUMBER OF DEATHS IN 2021

January 1 - July 10, 2021

gunviolencearchive.org
Mental Health Crisis In the US

- 1 in 5 U.S. adults experience mental crisis(s) each year
- 1 in 20 U.S. adults experience serious mental crisis(s) each year
- 50% of all *lifetime* mental illness begins by age 14, and 75% by age 24
- 1 in 4 people shot by police are suffering from some form of mental health illness and are typically in a crisis at the time of the event
- Municipalities across the US have expedited programs where mental health clinicians work closely with law enforcement and 9-1-1 to minimize officer involved shootings
Cyber & Ransomware Attacks

• Global ransomware attacks have increased 41 percent since the beginning of the year and 93 percent year-over-year
• Top-of-mind for all organizations today
• Attacks have become more sophisticated and its impact increasingly detrimental
• The likelihood of getting all data back after paying is slim. In 2021, only 8% of companies that paid recovered all their encrypted files
Artificial Intelligence & Machine Learning Require Useful Digital Information
Artificial Intelligence (AI)

• Machine learned intelligence
• Examples include
  – social media platforms
  – speech recognition and translation software
  – training simulators
• Getting better every day
• Many applications already have less error rate than human intelligence
• Lack of understanding, poor/no policy can give AI bad name when used inappropriately
• Can certainly lead to human complacency and decreased human investigative skills
Examples of Digital Information

- BWC video
- In-car video (ICV or “dash cams”)
- Automated license plate reader (LPR) images and data
- Closed circuit TV camera video files:
  - Law enforcement
  - Transportation, public works, and other government agencies
- Helicopter, airplane, and drone photos and videos
- Crime scene photos and videos
- Computer files – includes CAD, RMS, incident management software
- Data Files
- Photos and video from the public
  - Witness photos and video
  - Security photos and video
  - Media photos and video
Future Integrated Criminal Justice Systems

• Single vendor integrated systems
  – Some system vendors are moving towards integrated digital data
    • BWC vendors
    • CAD/RMS vendors
    • Crime scene management vendors
  – It is not clear whether:
    • Vendors will succeed in developing a fully integrated system
    • Law Enforcement will accept a single fully integrated system

• Federated Systems
  – Tools that will link the various disparate systems to form a virtually integrated system
  – LInX –Law Enforcement Information Exchange may be a model
    • LInX connects systems across hundreds of law enforcement agencies to facilitate investigative data searches
Standards, Policy, Training, Transparency
Days of not sharing information are over!
Days of sharing hardcopy information are over!
2013 – Boston Bombing - 50TB of data collected
2017 – Las Vegas Mass Shooting 1PB
January 6, 2021 Capital Insurrection 10-100 PB
Social Media Plays Significant Role in Criminal Justice
Our data is going to the cloud!

YOU'RE PRETTY NEW TO CLOUD STORAGE, AREN'T YOU?
Billions of wirelessly interconnected devices will communicate directly
Internet of Things for First Responders

Augmented Reality
Body-worn Video
Helmet Cam Live Stream
Drones
Heads-up Display on SCBA
Remote Speaker plus Voice-to-Text
LMR & LTE Devices

FIRSTNET™
Built with AT&T

In-vehicle routers, telematics, computers and other technology

Biometric Sensors
Indoor Location Tracker

Heavy use of IoT in Emergency Medical Services

Images: Motorola via http://www.gadget.co.za/meet-futurcopp-the-vr-policeman-of-tomorrow/
http://ttmag.mdm-publishing.com/application-firstground-intelligence/
Location Accuracy for 9-1-1 & First Responders

Metropolitan Beacon System with 3D Geolocation Capabilities

NEXTNAV
Technology Policy

Universal Principles

- Specification of Use
- Policies and Procedures
- Privacy and Data Quality
- Data Minimumization and Limitation
- Performance Evaluation
- Transparency and Notice
- Security
- Data Retention, Access and Use
- Auditing and Accountability
Contact Information:
Eddie L. Reyes
9-1-1 Director
Prince William County, VA
703-792-7146
ereyes@pwcgov.org