

Broward Sheriff's Office Regional Communications

Presented by
Assistant Director Angela Mize



Agenda



Sheriff Scott Israel



Regional Communications Overview



911 Workflow Processes



Next Generation Projects

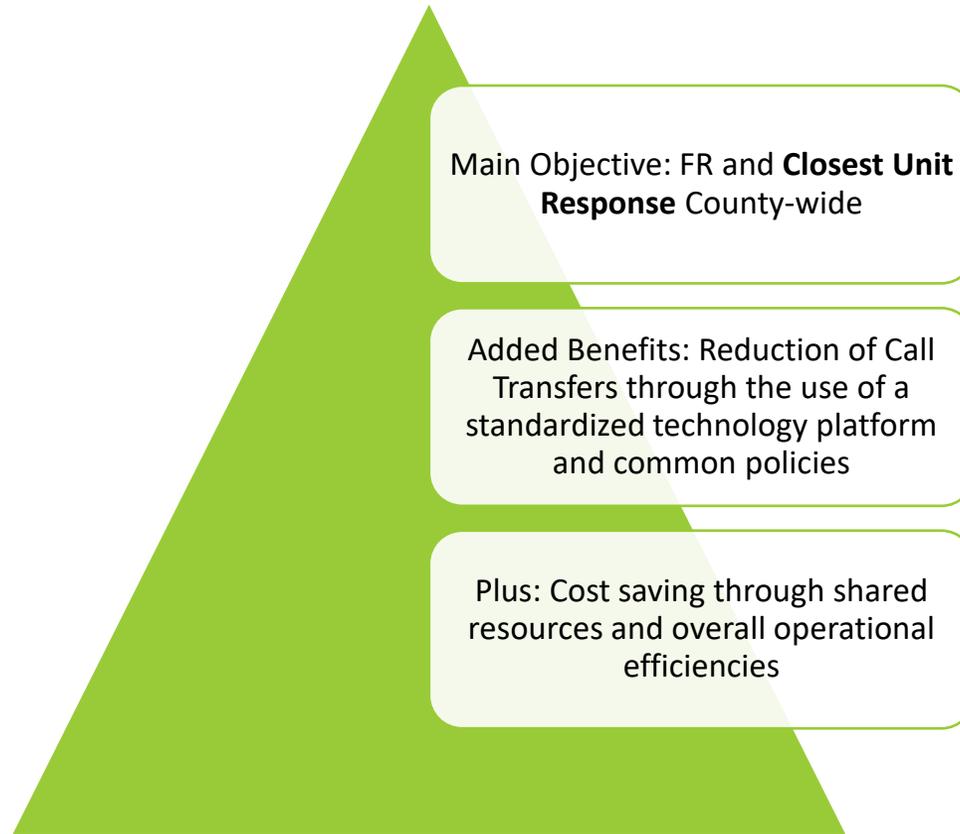
Regional Communications Overview

- How Regional Originated and Current Operating Structure
- Broward County Public Safety Answering Points (PSAPs)
- Regional Municipal Partnerships
- BSO Regional Communications Purpose
- Chain of Command Structure
- Training and Specialized Units
- Accreditation Standards
- Performance Achievements



Sheriff Scott Israel

Origins and Objectives of Regional Communications



BSO Regional Communications and Broward County

BSO Regional Communications

BSO Provides for:

- *Staffing*
 - *Hiring*
 - *Training and Development*
 - *Evaluation and Skills Assessment*
 - *Discipline (where appropriate)*
- *Continuing Dispatch Training and Certification Adherences*
- *Standard Operating Policy development, amendment, and retraction*
- *Overall Personnel Management*
- *Quality Assurance/Improvement*
- *Public records Compliance*
- *Accreditation Compliance*
- *Budgetary Projections and Fiscal Management*

Broward County

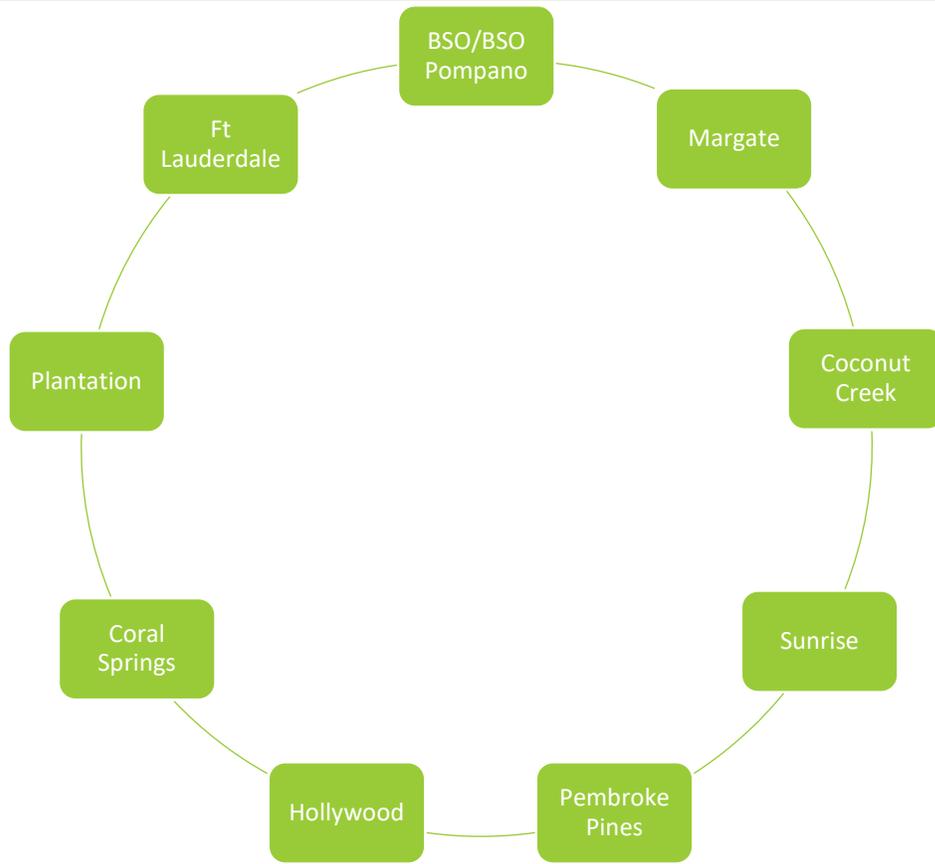
Office of Regional Communications and Technology

ORCAT Provides for:

- ***All Regional Technology Platforms***
 - *CAD*
 - *VIPER*
 - *County Radio*
 - *Recording Systems*
- *Maintenance of all Technology (Hardware/Software)*
- *Initiating all Technology Upgrades*
- *Procurement for New Technology, New or Advanced Applications, Software, etc.*
- *Provisioning/Programming of all systems utilized by the Regional System*
- *Overall System Funding (both Operating and Technology)*
- *Governance/Oversight of the System*

Broward County Public Safety Answering Points (PSAPs)

Pre-Consolidation = Prior to 2013



Consolidation = 2013 to Present



BSO Regional
(29 Municipalities)



Coral Springs
(Single Municipality)



Plantation
(Single Municipality)

Regional Municipal Partners

3 PSAPs managed under BSO Regional Communications providing for DLE and FR Services:

- **Coconut Creek (North)**

- Municipal/District Partners (10): Coconut Creek, Margate, **Tamarac, North Lauderdale, Parkland*, Pompano Beach**, Lighthouse Point, Sea Ranch Lakes, **Lauderdale by the Sea, Deerfield Beach**

- **Sunrise (Central)**

- Municipal/District Partners (12): **Weston, Cooper City**, Sunrise, Fort Lauderdale, Wilton Manors, Lauderhill, **Unincorporated Broward, FLHIA, Port Everglades, Oakland Park, Lauderdale Lakes, Dania Beach**

- **Pembroke Pines (South)**

- Municipal/District Partners (6): Hallandale Beach, Hollywood, Miramar, Pembroke Pines, Davie, Southwest Ranches, **West Park, Pembroke Park**

BSO Regional Communications Purpose

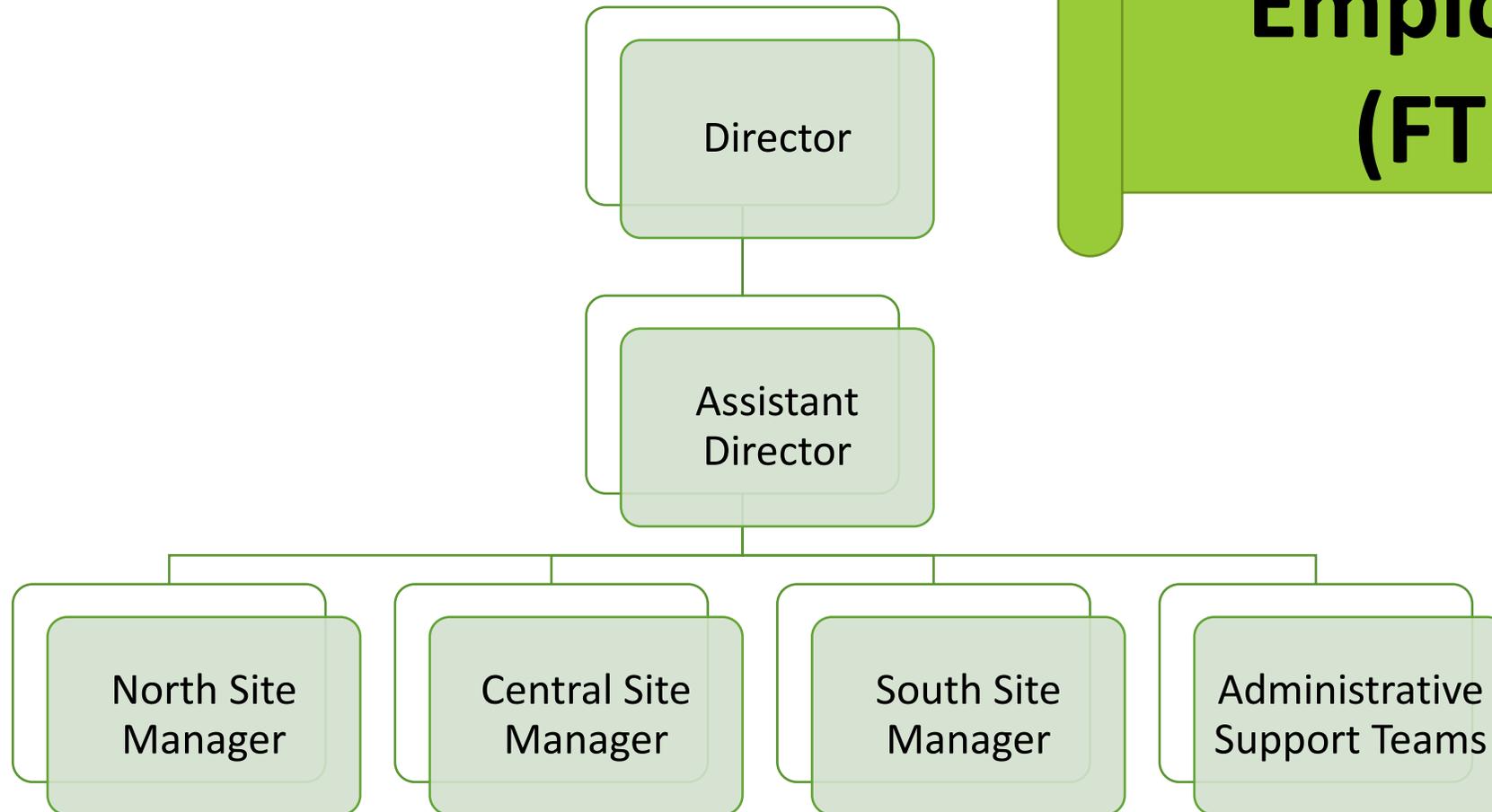
Mission Statement

“The Communications Division’s mission is to provide the highest level of professional public safety dispatch services to the customers served by the agency.”

BSO Regional Communications Task List:

- Over 2 million inbound calls (911 and Non-Emergency) processed annually
 - *Equating to over 5500 calls daily*
- Full DLE and F/R Dispatch services*
- Full tactical support, county-wide resource allocation, and tri-county communication
- Teletype query and confirmation services
- Emergency Medical Dispatch (Pre-Arrival) services
- County Warning Point

Chain of Command Structure



**447 Full Time
Employees
(FTEs)**

Training Academy – New Hire Introduction

In-House Academy – South PSAP Training Room

- 12 Week Program
- 2 Written Examinations (80% Passing)
- 1 Department of Health State Examination
- Training Incorporates:
 - Computer Aided Dispatch (CAD)
 - VIPER Telephone and functionality
 - Standard Operating Procedures
 - **IAED (EMD) Compliance**
 - County-wide geography (DLE and FR)
 - Classification/Codes/Interrogation Strategies
- Certifications Acquired: *Department of Health State Certification, EMD, CPR, APCO Telecommunicator and Fire Services, CJIS, ICS Command Structure, CIT*



Continuing Dispatch Training and Specialized Units

- In Service Training Courses and Continuing Dispatch Education
 - 24 Hours annually
 - In Service Training Programs
 - Roll Call Training
 - Read/Sign Acknowledgements
 - Individualized Training Initiatives (as warranted)
 - Simulation Drills/Tabletop Exercises focusing upon Critical Incident/Mass Casualty Scenarios
 - Post Incident Analysis Reviews
- Specialized Programs and Units
 - SWAT Dispatcher Program
 - Duty Officer Mentorship Program
 - Communications Training Officer Program
 - Specialized Units:
 - Quality Assurance
 - EMD Quality Assurance
 - Training
 - Audio Evidence



Accreditation Standards Achieved

- Commission for the Accreditation of Law Enforcement Agencies (**CALEA**)
Communications Accredited
- International Academy of Emergency Dispatch ACE (Accredited Center of Excellence)
- Association of Public-Safety Communications Officials (APCO)
Project 33 Certified
- Certified as a State of Florida Department of Health
Telecommunicators Training Program



Performance Achievements

“All PSAPs shall be staffed with an adequate number of answering positions to ensure that a minimum of 90% of voice calls shall be answered within 10 seconds of call arrival at the PSAP.”

Source: Florida Emergency Communications Number E911 State Plan

BSO Regional Communications Achievement:

- **Average 911 Call Answer Time: 1.8 seconds**
- Goal Achieved – All days minus 1 since January 1st, 2018
- >99.4% Compliance to Standard



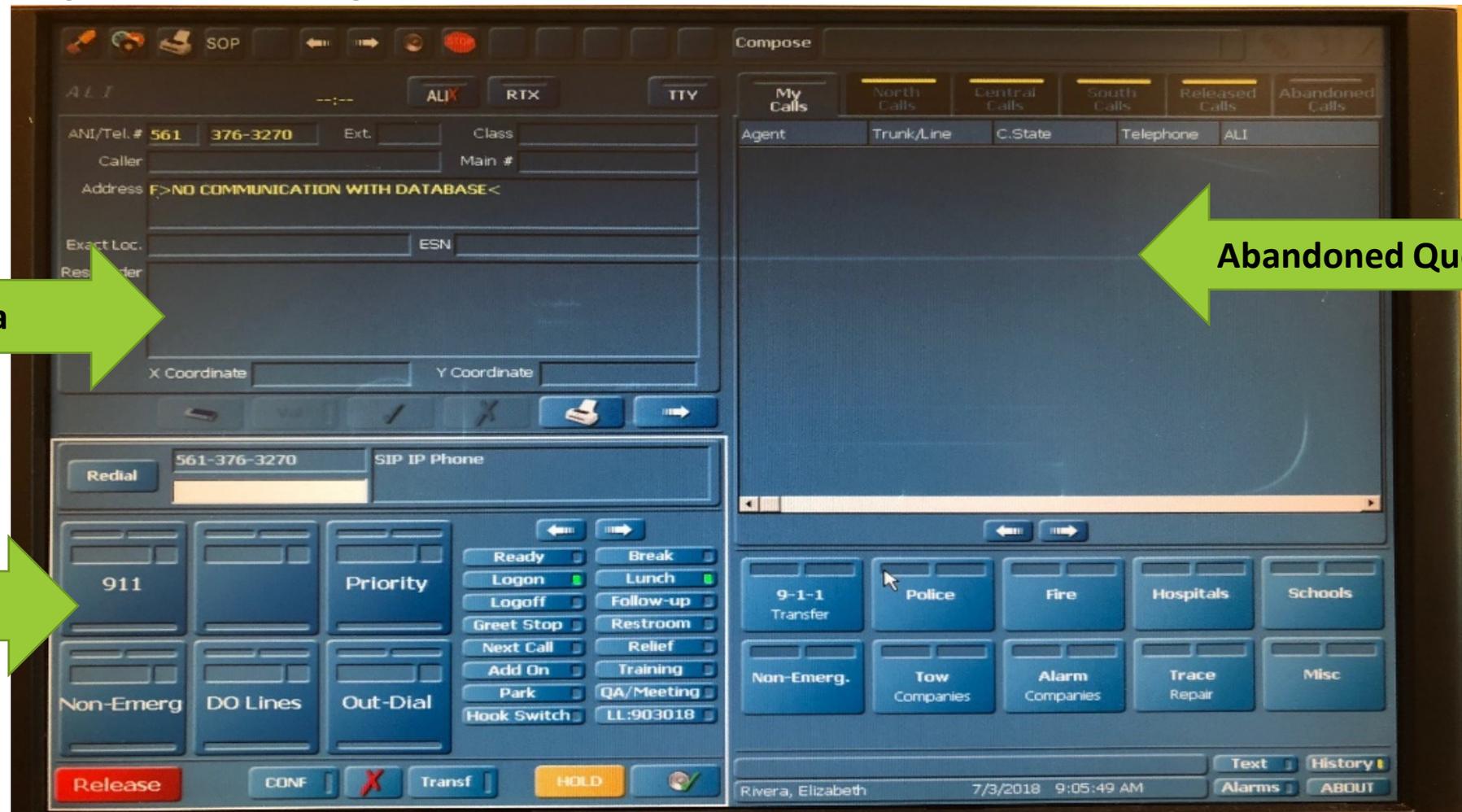
**Recognized
Best Practice**

911 Workflow and Processes

- VIPER Presentation
- 911 Call Delivery via ACD
- ANI/ALI Display
- Cellular vs Landline Calls
- WRLS vs WPH2 Cellular
- Common 911 Misconceptions and Truths
- Call Interrogation and Event Creation
- 911 Interrogation Misconceptions and Truths
- Specialized Areas and Independent PSAPs
- Non Regional PSAPs and the Need for Call Transfers
- Parkland – Unique City in the Regional System



VIPER Telephone System



ANI/ALI Data

Abandoned Queue

Inbound Trunks

Automatic Call Distribution (ACD)

- All inbound calls to Regional Communications are ACD driven
 - Keys to ACD:
 - Trunks are distributed priority based (911, Alarm, Priority, Non-Emergency)
 - Inter-trunk distribution is based upon longest in queue
 - All calls are presented to the Longest Idle Operator
 - Calls will move around all three PSAPs finding an available operator
 - ACD ensures complete efficiency and shared resource use
- Calls disconnected prior to answer will display in an Abandoned Call List
- Operators have a visual presentation of these calls to redial the caller

ANI/ALI – The Driver of 911 Calls

- **ANI = Automatic Number Identifier**
- **ALI = Automatic Location Identifier**
- **Key Features of ANI/ALI:**
 - ALL 911 calls will have a ANI/ALI call details in an E911 (Enhanced 911) System
 - ANI/ALI will be the driving force behind which PSAP is receiving the inbound 911 call
 - The type of telephone used to dial 911 (landline, cellular, VOIP) will result in significant differences in the quality of ANI/ALI information and the accuracy of which PSAP receives the call

Landline vs Cellular

- Landline 911 Calls
 - Landline provides clear location information
 - PSAP delivery is based upon the ESN (Emergency Service Number) associated with the address, and is extremely reliable
 - Landline ANI/ALI also provides for correct emergency response services for DLE and FR
- Cellular 911 Calls
 - Based upon the location of the caller at the time of call
 - PSAP delivery dependent upon the tower site “hit” and the delivery associated with that position on the tower
 - One tower can be pointed towards two different PSAPs based upon the position

ANI/ALI Landline vs Cellular Callers

Landline

Caller Information

Caller Name: [REDACTED]
Location: 2821, SOMERSET DR, LAUDERDALE LAKES, FL
Phone Number (CPI): (954) 677-0106

Call Information

Customer Name: [REDACTED]
Location: 2821, SOMERSET DR, LAUDERDALE LAKES, FL
APT A-316
Community: LAUDERDALE LAKES
State: FL
Class of Service: RESD
ESN: ESN=3
Tell Tale (ESN Detail): LEC:BELSO
PD BROWARD SHERIFF
FD LAKES-37
RES LAKES-37
Phone Number (ALI): (954) 677-0106
Main Phone Number: 677-0106

Cellular

Caller Information

Caller Name: T-MOBILE USA
Location: 2930, Taft St, Hollywood, FL
Phone Number (CPI): (954) 213-5892

Call Information

Customer Name: T-MOBILE USA
Location: 2930, Taft St, Hollywood, FL
Community: Hollywood
State: FL
Class of Service: WRLS
ESN: ESN=513
Tell Tale (ESN Detail): ALT# 954-213-5892 LEC:TMOB
WIRELESS CALL
QUERY CALLER FOR LOCATION
QUERY CALLER FOR PHONE # -080.167664 +26.025291
Phone Number (ALI): (954) 213-5892
Main Phone Number: 511-0735
X Coordinate: -080.167664
Y Coordinate: +26.025291

WRLS vs WPH2 Cellular Data

- Inbound cellular calls can be delivered as WRLS (Phase 1) or WPH2 (Phase 2)
- Phase 1 - WRLS
 - Phase 1 data will provide the location of the cellular tower delivering the call – not the caller.
 - Phase 1 data will need to be “re-bid” to ascertain GPS location
 - Re-bidding can take 25-30 seconds before updated, valid data is received
- Phase 2 – WPH2
 - Phase 2 data will provide a GPS based *estimation* of the caller
 - Typically reliable, however WPH2 is unable to ascertain exact location of caller in: high-rise buildings, multi-complex units, large foot-print complexes (schools, shopping malls, etc)

Differences in Cellular ANI/ALI Data

Phase 1 WRLS Data

Caller Information	
Caller Name:	T-MOBILE USA
Location:	2930, Taft St, Hollywood, FL
Phone Number (CPI):	(954) 213-5892
Call Information	
Customer Name:	T-MOBILE USA
Location:	2930, Taft St, Hollywood, FL
Community:	Hollywood
State:	FL
Class of Service:	WRLS
ESN:	ESN=513
Tell Tale (ESN Detail):	ALT# 954-213-5892 LEC:TMOB WIRELESS CALL QUERY CALLER FOR LOCATION QUERY CALLER FOR PHONE # -080.167664 +26.025291
Phone Number (ALI):	(954) 213-5892
Main Phone Number:	511-0735
X Coordinate:	-080.167664
Y Coordinate:	+26.025291

Phase 2 WPH2 Data

Caller Information	
Caller Name:	AT&T MOBILITY
Location:	6680, NW 17TH AV - E, FORT LAUDERDALE, FL
Phone Number (CPI):	(631) 953-1817
Call Information	
Customer Name:	AT&T MOBILITY
Location:	6680, NW 17TH AV - E, FORT LAUDERDALE, FL
Community:	FORT LAUDERDALE
State:	FL
Class of Service:	WPH2
ESN:	ESN=451
Tell Tale (ESN Detail):	ALT# 631-953-1817 LEC:ATTMO WIRELESS CALL QUERY CALLER FOR LOCATION QUERY CALLER FOR PHONE # -080.165112 +26.210053
Phone Number (ALI):	(631) 953-1817
Main Phone Number:	319-8132
X Coordinate:	-080.165112
Y Coordinate:	+26.210053

911 Misconceptions and Truths:

- 911 Operators do not have the same technology nor reliability that private industry enjoys, however, most callers do not realize that fact
- 911 Operators must rely upon the voice direction of the caller whenever possible
- Technology designed to locate a caller is dependent upon a number of factors, and can be either untimely or unreliable
- **Over 80% of all inbound 911 calls nationwide are from cellular phones**



Creating the Event in CAD

PremierOne CAD Client

Console Edit Work Area Utilities Help ||

16:06:39

Tuesday, July 03, 2018

General Persons Vehicles Scheduling

Prev Assoc Query Haz Attach

▶ Previous Location Check (0)
▶ Previous Persons Check (0)
▶ Previous Vehicles Check (0)

View Incid

View Incid

16:05:39] DLE ADV SAFE FOR FR TO
ENTER FOR INCIDENT # 00003626

L0218070300000296 32T 825 E
DANIA BEACH BLVD
02/2B3

16:02:53 Incident Updated
Apt/Unit: 234()

+ Priority Notification (1)

Location

Location L/L Query

City Subdiv

Building Floor Apt/Unit Verify

Zip Code

Cross Strs Map It

Loc Name At Loc

Description

Incid Type Agency Type

Mod Circum Priority

Comments

Priority Comment

Caller

First Middle

Last Phone () - ext

Address Map It

City Bldg Apt/Unit

Contact? Yes ANI/ALI

Source 0-NON 911 CA# Class: ESN:

Agency ID A Sec. B

Disposition Comments

Dispatch

Preempt No Create 1 Incidents Alerting

Regional E911 Operators will:

- Obtain and verify the location of occurrence (ANI/ALI data)
- Confirm the phone number
- Determine the reference of the call
- Generate the CAD event and continue interrogation
- **CAD sends call to correct dispatcher based upon geographical zoning associated with address**
- Dual Based Calls (DLE vs FR)
 - **DLE interrogation is the highest priority interrogation**
 - CAD will prompt for dual call creation (DLE and FR simultaneously) based upon classification
 - Medical calls follow EMD protocols
 - SOP directs to conditions such as: *remaining landline, silent interrogation, foreign language speakers, TTY usage, and critical event interrogations.*



Best Practices – Emergency Call Creation



National Fire Protection 1221 (NFPA)

7.4.2.2 - “Emergency alarm processing.....shall be completed within 90 seconds 90 percent of the time and within 120 seconds 99 percent of the time”.

This performance benchmark pushes for call creation as soon as a valid/verified address and reference is ascertained, with the operator, then, remaining landline for additional updated information.

Common E911 Interrogation Misconceptions and Truths

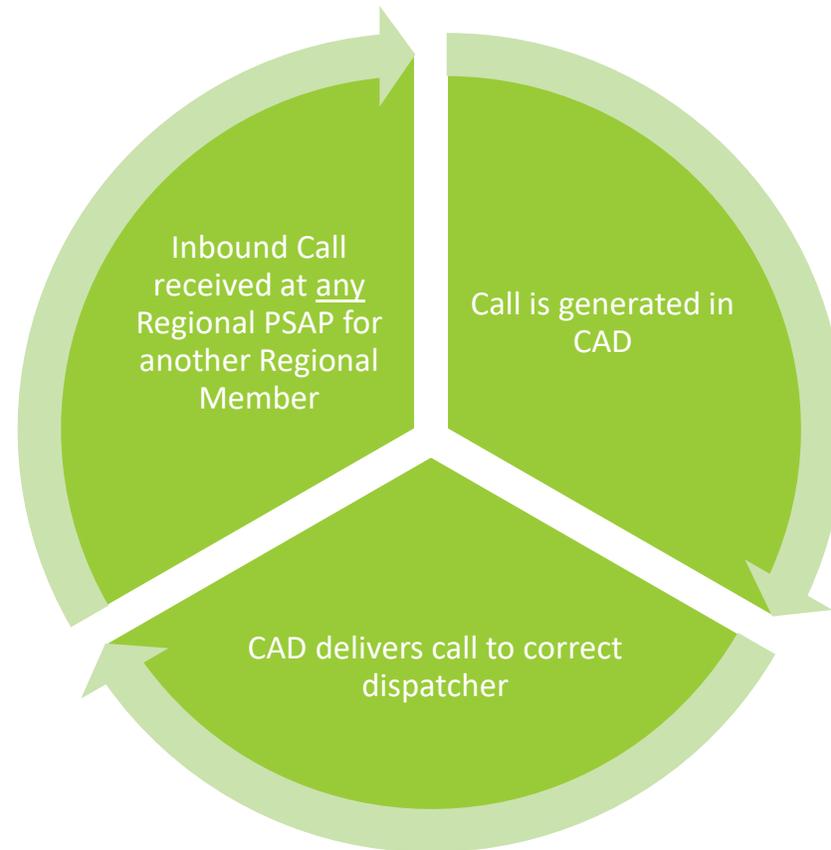
- For critical events, a E911 Operator will remain landline for the duration of the call until such time that emergency responders arrive on scene
- Most callers falsely assume that the operator's continued interrogation delays call assignment
- In larger PSAPs, the 911 Operator is not the same employee who dispatches units, which further influences the caller's perception
- All inbound calls of any kind that belongs within the Regional System are created by the PSAP receiving the call. There is no transfer as the Regional System operates all jurisdictions/municipalities on the same platform

Specialized Areas

- Some municipalities contract DLE services from one agency, and FR from another.
 - Examples:
 - Tamarac – DLE with BSO / FR with City of Tamarac
 - North Lauderdale – DLE with BSO / FR with City of North Lauderdale
 - Wilton Manors – DLE with Wilton Manors / FR with City of Fort Lauderdale
- Regardless, if DLE and FR are managed by Regional Communications, there is no call transfer or delay in call creation, regardless of which PSAP answers in the inbound call

This is one of the keys to the efficiencies and benefits of Regional 911

Regional Call Processing Workflow



Non-Regional PSAPs

- There are two Non-Regional Primary PSAPs in Broward County
 - Coral Springs
 - Plantation
- If a call is received by Regional for Coral Springs or Plantation, the caller must be *transferred* to that PSAP
- If a call is received by Coral Springs or Plantation for Regional, the caller must be *transferred* to Regional
- Cellular based 911 phone calls are most susceptible to this type of mis-route due to the location of the tower in which the call is processed resting on a jurisdictional border

Why Call Transfer?

- *Non Regional PSAPs do not operate on the same CAD platform as the Regional PSAPs*
- There is no opportunity to share data electronically via a computerized system
- What does call transfer require?
 - Confirmation of location of occurrence to realize call belongs in another PSAP
 - Transfer of caller to that PSAP
 - Call announcement by first PSAP to second announcing the transfer
 - Releasing the caller to communicate with the new PSAP
 - **Typical Call Transfer Duration adds 30 seconds to processing time in 95% of the occurrences – NFPA 1221 7.4.4**



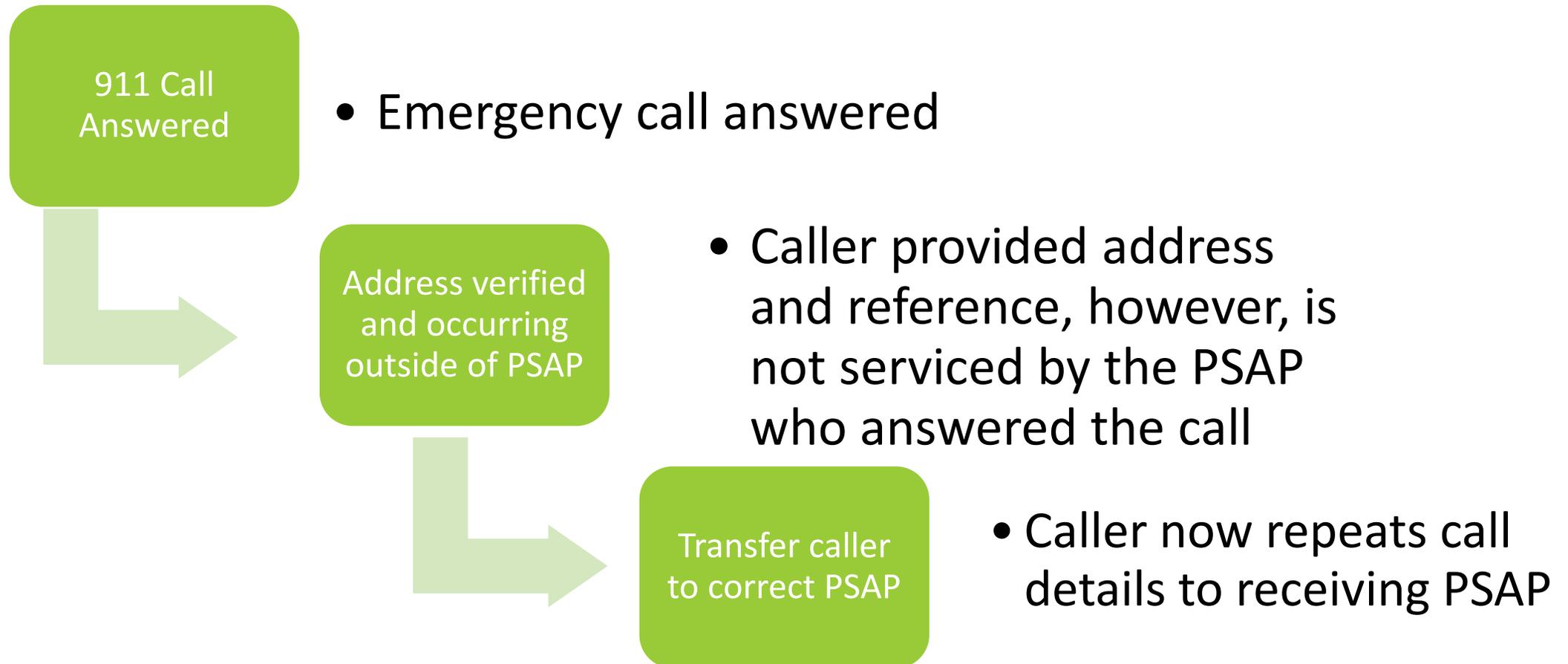
Best Practices – Transferring Callers



National Emergency Number Association:

“When emergency calls need to be transferred to another PSAP, the Telecommunicator will transfer the call without delay. The Telecommunicator will advise the caller “Please do not hang up; I am connecting you with (name of agency)”. The Telecommunicator should stay on the line until the connection is complete and all pertinent information has been relayed to the answering PSAP”.

Call Transfer Workflows





Parkland

Parkland Individuality

- 911 Distribution
 - Landline 911 calls go to Regional
 - Cellular 911 calls go to Coral Springs (Independent)
 - Call transfers are an absolute certainty within this city **routinely**
- Parkland's DLE and FR contractual service providers
 - DLE is served by BSO
 - FR is served by Coral Springs

Coral Springs utilizes an independent CAD system, which is not associated or linked to the Regional CAD system – so data cannot be electronically shared

Cell Phone 911 Call Processing for Parkland

911 Caller
needs **DLE only**
answered by
Coral Springs

Caller is
transferred to
Regional

CAD event is
generated by
Regional (CS
takes no action)

911 Caller needs **FR
only** answered by
Coral Springs

Caller is transferred
to Regional

CAD event
generated by Coral
Springs and
Regional (with Coral
Springs as Primary)

Landline Phone 911 Call Processing for Parkland (FR)



Dual DLE/FR 911 Call Processing for Parkland



Parkland Individuality

- Workflow process is based upon memorization and manual recall
- Multiple points of failure possible
- Disparate interrogation processes and policies between both PSAPs can further complicate the interrogation and workflow
- Matter introduced to Parkland City Management to recommend amendments to call distribution and workflow since 2014 with no resolution to date

Next Generation Projects

- Next Generation Projects



Future of BSO Regional Communications

- Adoption of Emergency Fire Dispatch protocols
- Adoption of Emergency Police Dispatch Protocols
- Text 2 911 workflow processing
- Next Generation P25 Radio System deployment
- Gatekeeper Fire/Rescue dispatch solution (*proposed)

