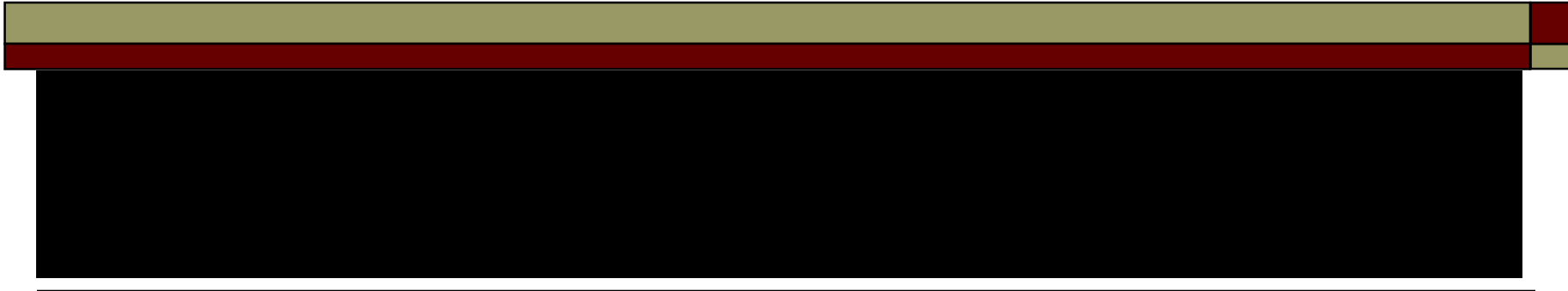


**PUBLIC SAFETY ANSWERING
POINTS (PSAPS) REAL-TIME TEXT
EDUCATION DAY**

October 2, 2018

**Panel: PSAP Model Infrastructure for
Real Time Text (RTT) Adoption**



Disclaimer: The opinions contained in this presentation are those of the panelists, and do not reflect the views of the Federal Communications Commission (FCC), FCC management, or FCC staff.



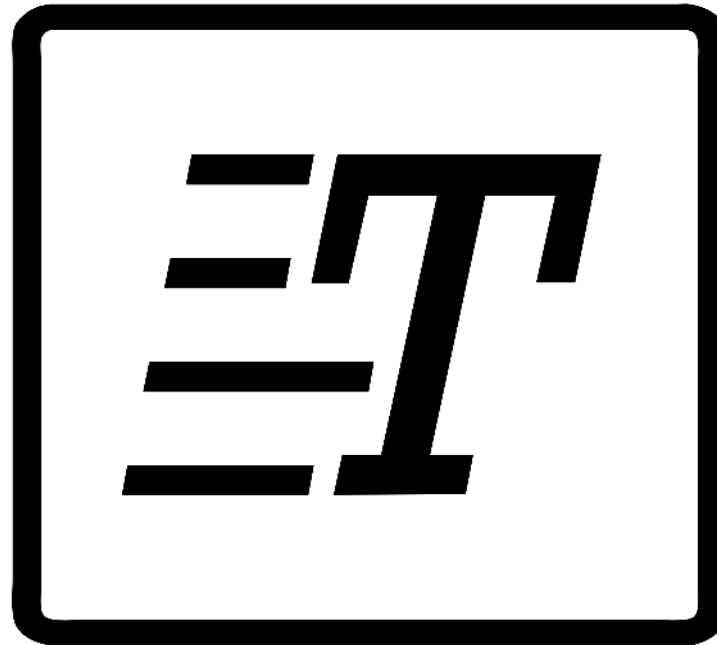
□ **Panelists**

- Mark Fletcher, Chief Architect, Worldwide Public Safety, Avaya
- Jeff Knighton, President, Hamilton Innovations
- Drew Morin, Director, Federal Cybersecurity Technology and Engineering Programs, T-Mobile
- Richard Muscat, Director of Regulatory Affairs, Bexar Metro 9-1-1 and Texas 9-1-1 Alliance
- John Snapp, Vice President of Technology, WEST

□ **Moderators**

- Nellie Foosaner, Attorney, and Rasoul Safavian, Senior Engineer, Public Safety and Homeland Security Bureau, FCC

WHAT IS RTT?



WHY IS RTT IMPORTANT?

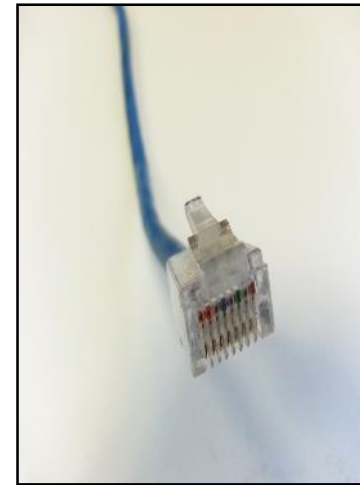
**Consumer
Perspective**



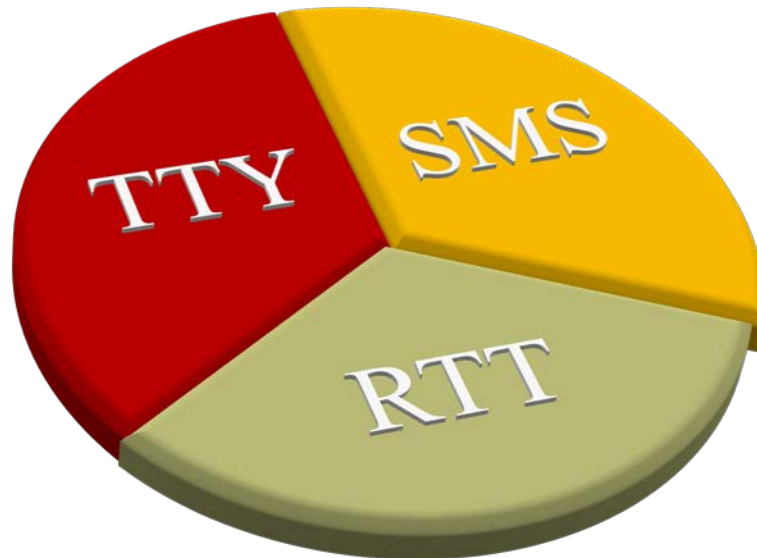
**PSAP
Perspective**



**Technology
Perspective**



WHAT ABOUT SHORT MESSAGE SERVICE (SMS) TEXT? WHAT'S THE DIFFERENCE?



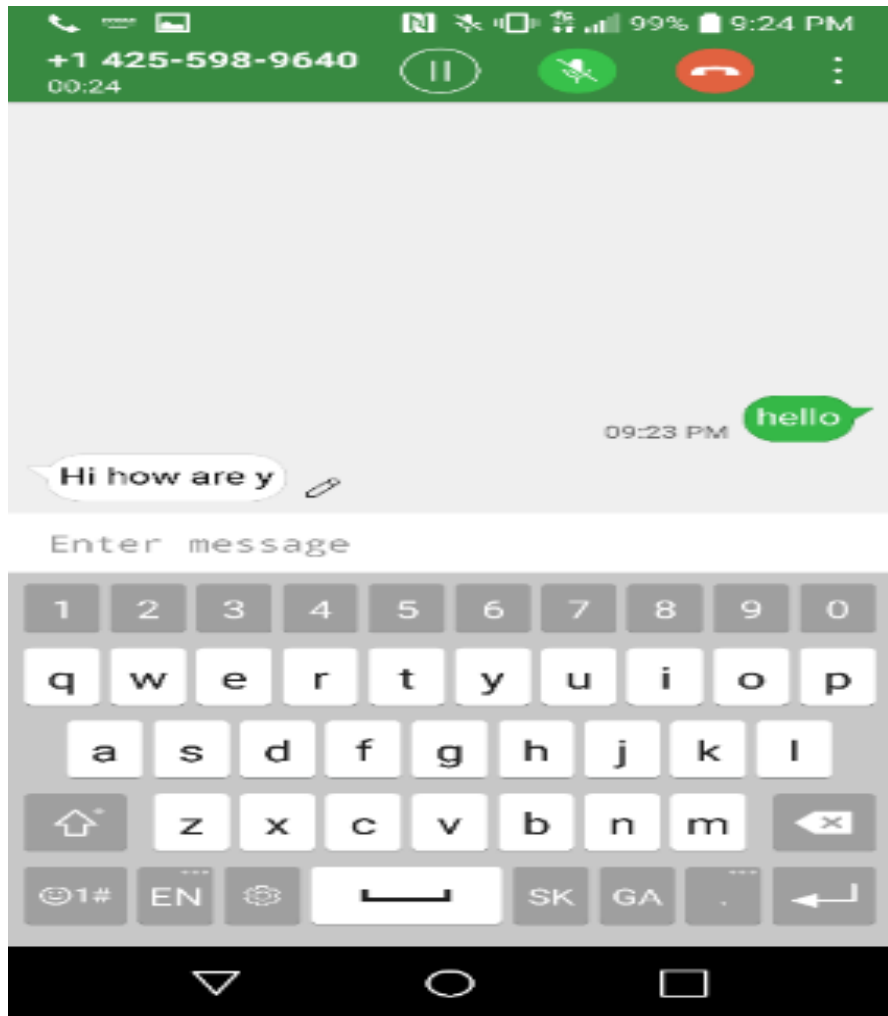


WHAT'S HAPPENING WITH RTT TODAY?



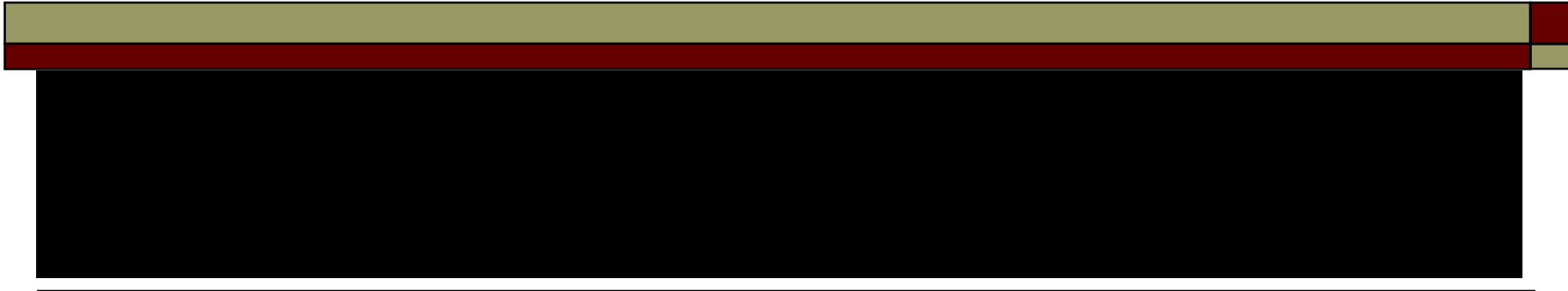
Differences apparent when comparing keyboards:

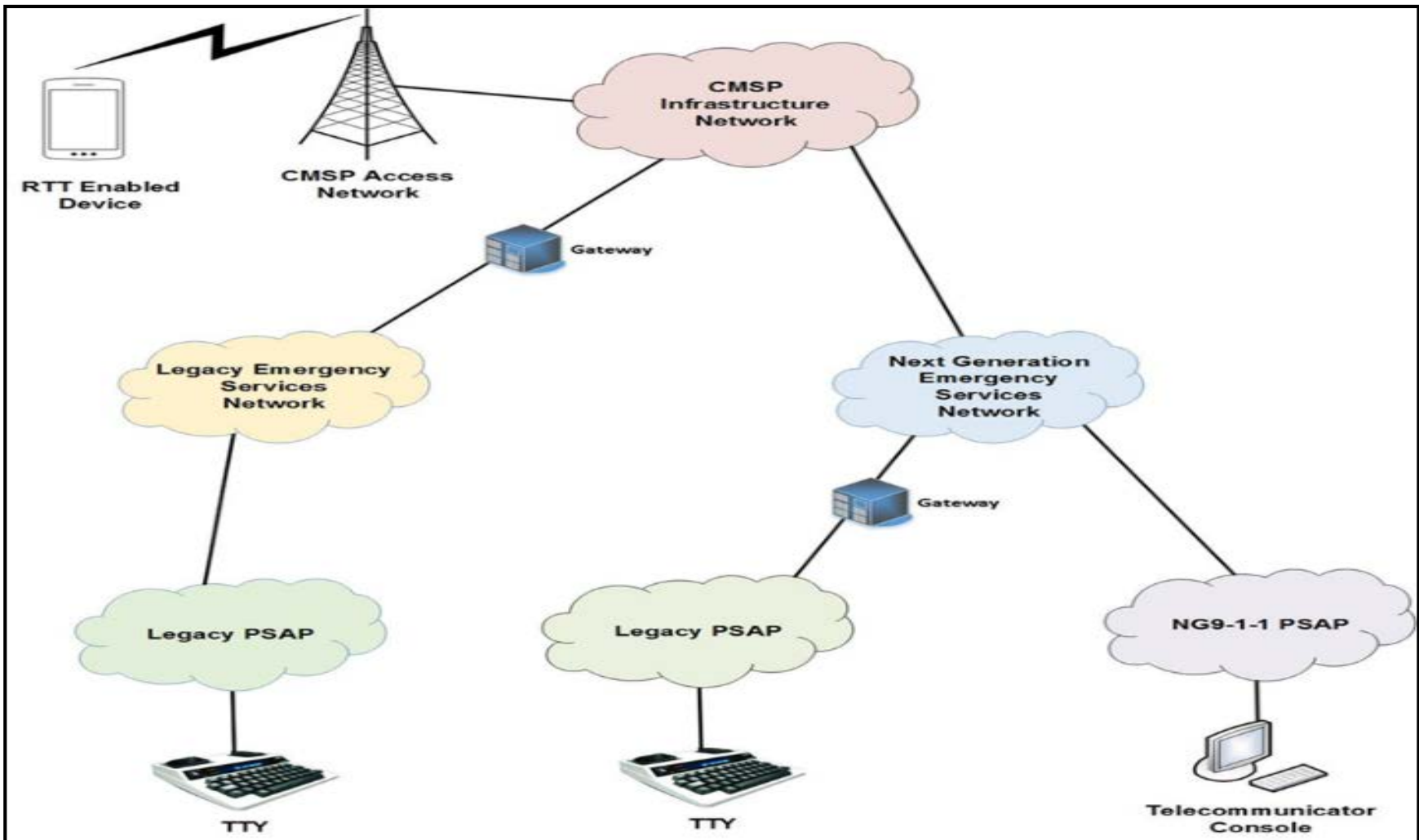
- Samsung took a “look forward” approach where “Enter” key closes the bubble and text suggestions are provided below the entry window
- LG models their keyboard after TTY and includes “SK” and “GA” keys



Different manufacturers envision end user enablement of Real Time Text differently. Some common elements include:

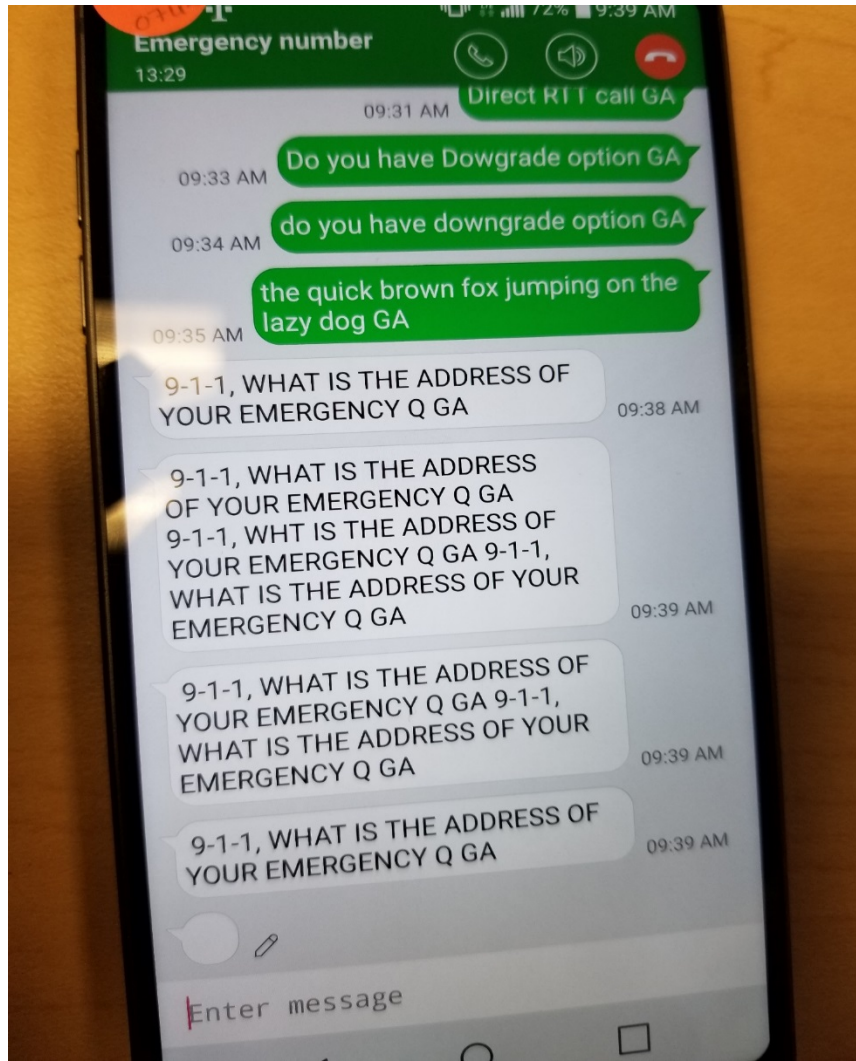
- Text “bubbles” as a common method to capture text in “thoughts”
- Keys to create/access emoji’s

- 
- **How will PSAPs Receive RTT?**
 - **Legacy Emergency Services Network**
 - **Next Generation Emergency Services Network**
 - **Next Generation Emergency Services Network in a Legacy PSAP**
 - **PSAP call back in Legacy PSAPs**





**WHAT WILL A RTT CALLER SEE
TODAY?**





WHAT WILL A PSAP SEE TODAY?



TTY

Caller
IDHIS IS A TEST, FROM ORY GA

QRUN 74
what is your phone number q ga

Fair C

Caller
B302061 GA

Gua

QRUN 74
what is your emergency q ga

Ka

Caller
WHEE ARE YOU

QRUN 74
what city q ga

Caller

Initial General Law Suspect Fire EMS American Sign

9-1-1, what is the address of your emergency Q GA

What city Q GA

What is the closest intersection Q GA

What is your emergency Q GA

Do you need police, fire, or ambulance Q GA

What is your phone number Q GA

What is your name Q GA

What is the problem Q GA

Stay next to your TTY...

Characters Pending: 0

Send

8/2/2018 2:21:28 PM

Alarms ABOUT

ALI RTX TTY

Tel. # 512 970-7066 Ext. VMBL

Caller VOIP CALLER Main # 211-1470

Address VOIP CALL, WEATHERFORD PD, TX

Exact ESN 655

Longitude +032.760264 Latitude -097.787396

Tell Tale VOIP CALLER VERIFY CALLER'S NUMBER VERIFY LOCATION

Redial 512-970-7066 SIP IP Phone

9-1-1 Admin INTERCOM

Play Record Stop Save/Unsave

HOOKFLASH Call Patch

Release CONF Transf HOLD

Active Calls History Calls Released Calls Call Query All (PSAP) Calls Abandoned Calls

Time	Line	Trunk/Line	C.State	Rec	Telephone
14:20:09	NG 911	NG 911-231	BUSY		682-208-7737
14:20:14	NG 911	NG 911-232	BUSY		512-970-7066

Agency List

All Agencies Clear Filters

Name	Type	Info1	Info2
1-800-AUREVAC	Medical	1-800-247-3822	
911 Transfers	911 Trans...		
Abilene Police Department	Law	1-325-673-8331	Jail
Addison PD	NG 911		
Admin	PCSO		
Aledo Fire Department	Fire	817-441-7284	Sta
All Saints Hospital	Medical	817-926-2544	
Allen PD	NG 911		

911 Transfers Tarrant CO Fire BlueMound LifeCare

Polson Control Volance NCTCOG 911 Weatherford Springtown

8/2/2018 2:45:07 PM

Alarms ABOUT

ALI RTX TTY

Tel. # 402 410-0215 Ext. WPH2

Caller VERIZON WIRELESS Main # 511-1018

Address 757 UPPER DENTON RD - PARKER COUNTY, TX

Exact ESN 394

Longitude +032.765382 Latitude -097.791516

Tell Tale WIRELESS CALLER - WAIT 30 REBID VERIFY CALLER'S NUMBER VERIFY LOCATION

Redial 402-410-0215 4024100215 on 911229

9-1-1 Admin INTERCOM

Play Record Stop Save/Unsave

HOOKFLASH Call Patch

Release CONF Transf HOLD

Active Calls History Calls Released Calls Call Query All (PSAP) Calls Abandoned Calls

TTY

Tx> THIS IS A TEST CALL

Rx> HELLO THIS A TEST CAL ON

Tx>

Rx> HELLO THIS A TEST CALL ON BIZ

Tx> WHAT IS YOUR NAME GCA

Rx> TDDDD YOU NEED FULL NAME?

Tx> STAY NEXT TO YOUR TTY

Tx> CALL BEING TRANSFERRED

Buffered

Baudot ASCII HCO VCO

911 Transfers Tarrant CO Fire BlueMound LifeCare

Polson Control Volance NCTCOG 911 Weatherford Springtown

NENA Non-Mobile Wireless Service Interaction Information Document
NENA-INF-018.1-2017, February 16, 2017

Figure 3³

AT&T WPH2 911 Call versus Wi-Fi 911 Call – PSAP Display Example

The figure displays two side-by-side screenshots of a PSAP ANI (Automatic Number Identification) display. The left screenshot shows a standard wireless call, and the right screenshot shows a Wi-Fi call. Red circles highlight differences between the two displays, and yellow callouts explain these differences.

Left Screenshot (Wireless Phase 2 911 Call):

- ANI: [Empty]
- ESN: [Empty]
- Phone Display: [Empty]
- CPN: [Empty]
- Buttons: Request ALI, Refresh ALI, Release Call, Answer 9-1-1, Call History
- Display: S2- 202 ESN=282 67
(815) 566-6485 09:04 10/20/2015
SXL03127
AT&T-W SECTOR-QF 515C5
(830) 511-4122 WPH2
WIRELESS-BEXAR CO TX
- Customer Name: ATTMO
- ALT#= TELCO=ATTMO
- X=-98.5556459 CNF=068
- Y=29.58593487 UNC=9
- WIRELESS CALLER
- VERIFY CALLERS NUMBER
- VERIFY CALLERS LOCATION

Right Screenshot (Wi-Fi 911 Call):

- ANI: (210) 211-3487
- ESN: 00000
- Phone Display: a= 210-211-3487 to
REOC 911
- Buttons: Request ALI, Refresh ALI, Release Call, Answer 9-1-1, Call History
- Display: S2- 202 ESN=052 23
(815) 566-6485 10:58 10/20/2015
911
SADDLETREE CT
(210) 211-3487 VMBL
SHAVANO PARK TX
- VoIP ESN: 00000
- Registered Address: SADDLETREE CT
- New COS: VMBL
- New NENA Company ID: ATTSP
- Wireline Equivalent ELTs: SHAVANO PARK, SHAVANO PARK FD, SHAVANO PARK EMS
- AT&T WiFi Calling: AT&T WiFi Calling

Wireless Phase 2 911 Call ANI Display at the PSAP

Wi-Fi 911 Call ANI Display at the PSAP when in proximity of registered 911 address

Current Manual Recent

(210) 415-1017

A4- 115 ESN=010 99
(210) 415-1017 15:15 09/26/2018
24618

ARROW CANYON

(210) 211-3542 VMBL

SAN ANTONIO TX

JAMES MCDANIEL

ALT#= TELCO=ATTSP

X=-98.4960150 CNF=068

Y=29.63701486 UNC=21

SAN ANTONIO POLICE

SAN ANTONIO FIRE

SAN ANTONIO EMS



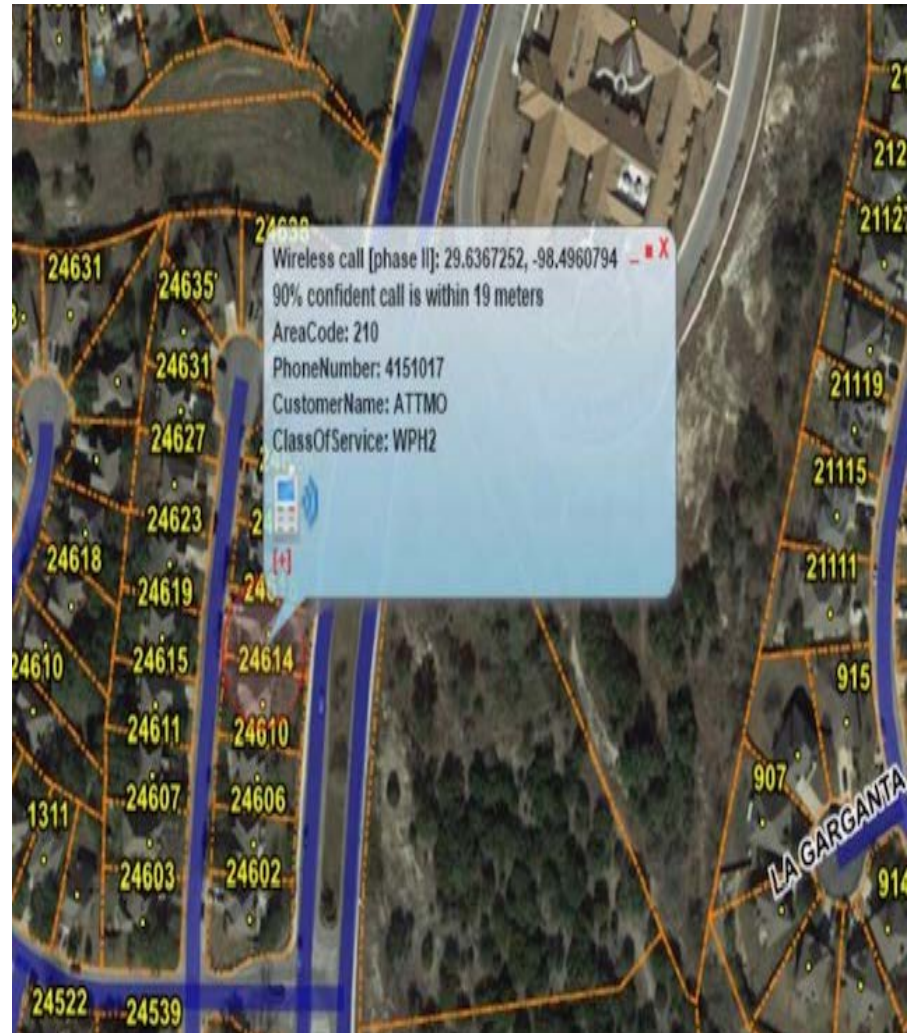
(210) 415-1017

A4- 115 ESN=287 70
(210) 415-1017 09:26 09/28/2018
04014

AT&T-N SECTOR-QF 482D6
(830) 511-4214 WPH2
WIRELESS-SAN ANTONIO TX

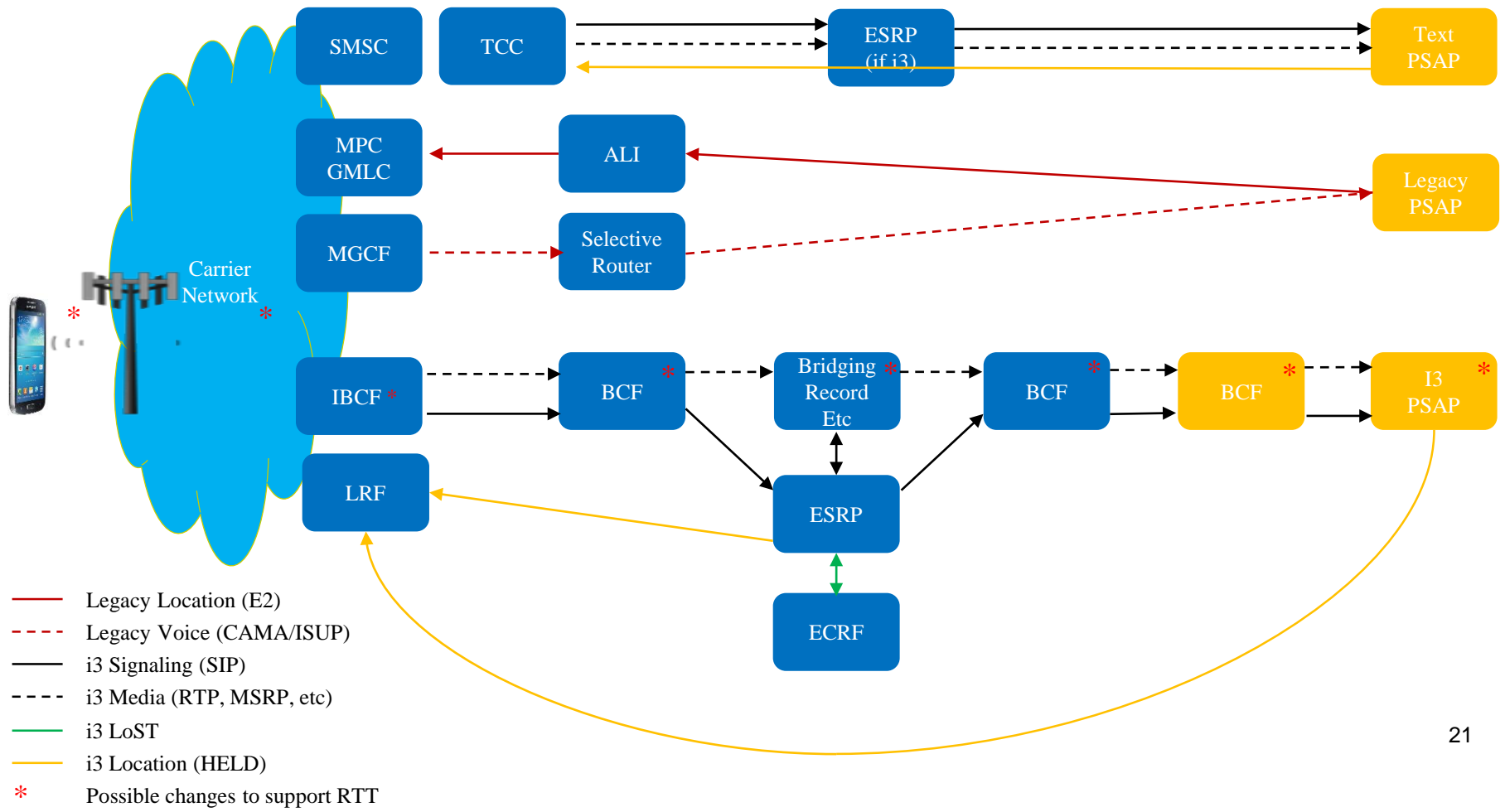
ATTMO
ALT#= TELCO=ATTMO
X=-98.4961867 CNF=090
Y=29.63682174 UNC=19

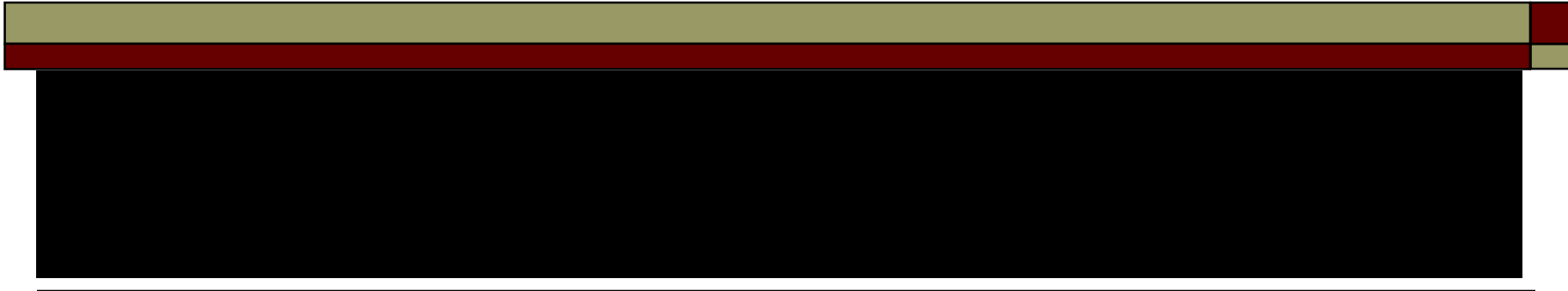
WIRELESS CALLER
VERIFY CALLERS NUMBER
VERIFY CALLERS LOCATION





RTT THROUGH AN ESINET



- 
- **Additional Complexity**
 - **Legacy Network Gateway – Non i3 Carriers**
 - **Legacy PSAP Gateway – Non i3 PSAPs**
 - **Mid-call RTT Upgrades**
 - **TTY / RTT Transfers**
 - **Dialogs on transfers**
 - **UE/CPE Compatibility / Testing**

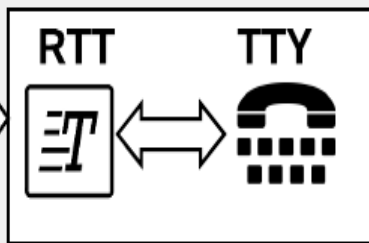


RTT AND TTY INTERWORKING TODAY

Device



Carriers

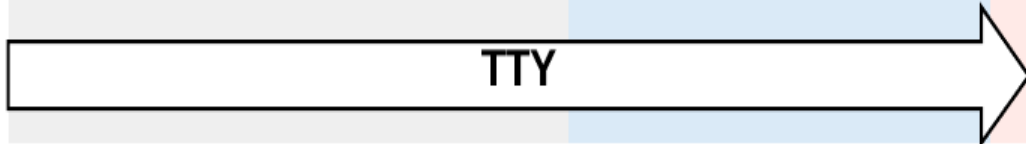


ESINet

Legacy PSAP



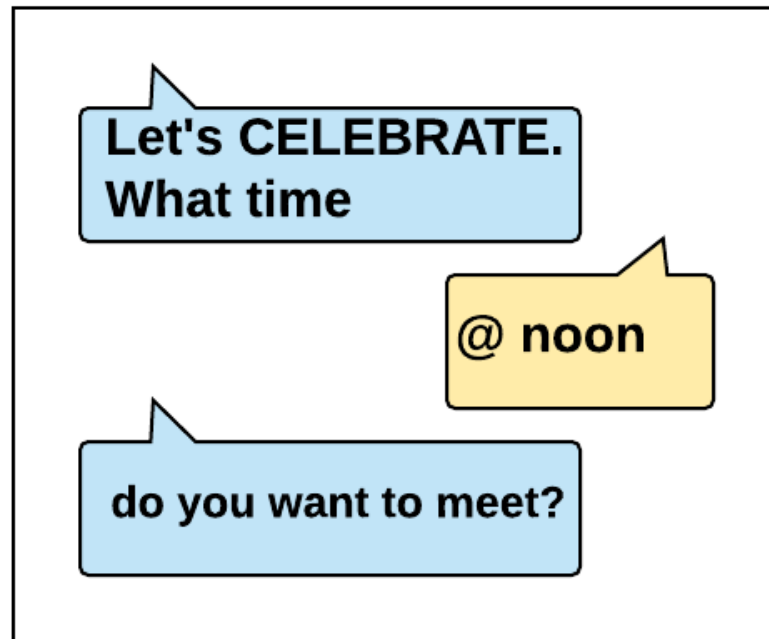
9-1-1





RTT VS. TTY

Real Time Text



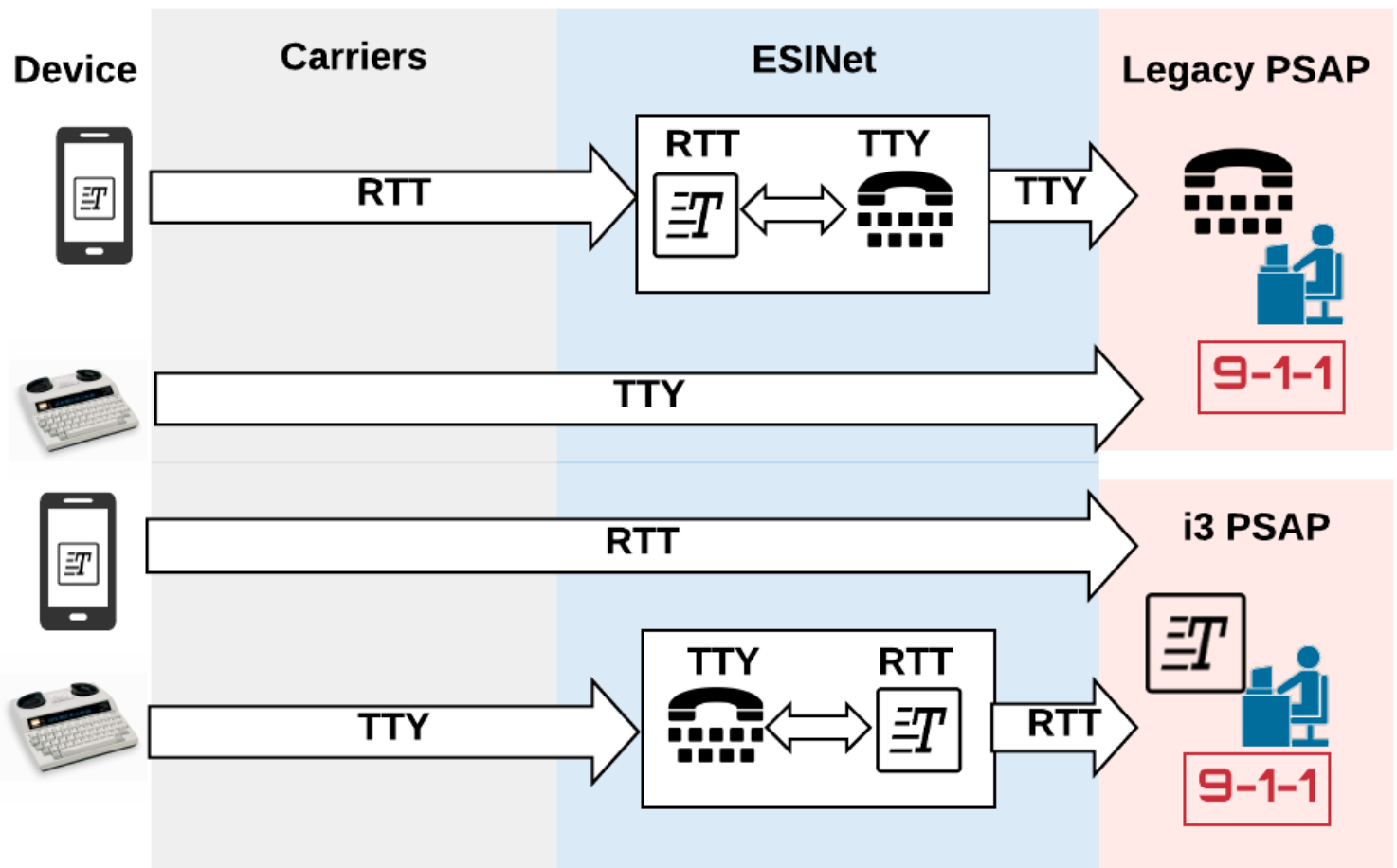
TTY

LET'S CELEBRATE.
WHAT TIME DO YOU WANT
TO MEET QQ GA

NOON GA



RTT-TTY INTERWORKING WITHIN ESINET



RTT to TTY Interworking

- ❑ Allows all RTT-capable wireless phones to dial 911 today and have successful text communications.
- ❑ Allows wireless carriers, ESInet providers, and PSAPs to “phase out” RTT to TTY Interworking incrementally
- ❑ Not intended as a long term industry solution, as end-to-end RTT provides a better consumer experience, and RTT to TTY Interoperability can add complexity to the communication
- ❑ Challenges arise when an ESINet has to manage both Legacy PSAPs and i3 PSAPs



□ **What Should PSAPs Do?**

- Talk to your vendors about their plans for RTT integration.
- Consider implementing text solution that includes support for direct RTT.
- The goal of RTT is to make 9-1-1 directly accessible to everyone.

<https://www.nena.org/news/news.asp?id=418990>

Volunteers Sought for Real-Time Text Readiness Work Group

Sunday, September 16, 2018 (0 Comments)

Posted by: Chris Nussman

 Share |    

The FCC provided its Report and Order (R&O) regarding the transition to Real-Time Text (RTT) in late 2016 identifying a requirement for Tier 1 wireless carriers to provide at least one RTT capable handset option by December 31, 2017. In general, traffic generated by RTT capable handsets will be converted by the wireless carrier to TTY so legacy PSAPs can receive the call using legacy TTY devices through either E9-1-1 or transitional NG9-1-1 systems. As a service to be requested, currently there is no process to determine if a wireless carrier is RTT capable in a serving area, to verify that a NG9-1-1 PSAP is capable of receiving native RTT, and there is no criteria or method for the PSAP to notify the wireless carriers of their readiness.

Volunteers are sought to participate in the PSAP Guidelines for RTT Readiness Work Group. While no specific knowledge is necessary to join the work group, subject matter experts from the PSAP, carrier, accessibility, CPE, and network provider communities are desired to ensure the best understanding of industry needs for the creation of proper implementation guidelines.

The PSAP Guidelines for RTT Readiness Work Group plans to meet Fridays at 11AM Eastern, starting on October 5. [Click here to join.](#)