Delivering Location with the Call Using NENA i3 Architecture

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Agenda

- Definitions - Getting on the Same Page
- Legacy Selective Routing
- The Role of the ECRF - Emergency Call Routing Function
- NENA i3 Architecture and Workflow in Production
- OSP Location Based Routing
- GIS Rules of the Road
- Your Questions

Definitions

Tabular Routing

- An unofficial industry term to describe the routing a 9-1-1 based on caller's phone number or wireless caller pseudo number. NENA does not formally define this term.

SRDB - Selective Router Database

- Tabular collection of telephone number records with associated ESN as derived from the MSAG.

Geospatial Routing

- The use of an ECRF (Emergency Call Routing Function) and GIS (Graphic Information System) data to route an emergency call to the appropriate PSAP.

Location Based Routing

- The use of the caller's location information (location of caller's device) to determine the recommended jurisdictional PSAP to route a 9-1-1 call to.

Database – Landline

MSAG Database

Street Name	Low	High	Community	O/E	ESN
CLWD VLG CT	4203	4207	MY COUNTY	O	101
CLWD VLG CT	4202	4210	CITY B	E	103
COACHMAN AV W	2900	4799	CITY A	B	102

ALI Database

TN	Address	Community	Name	ESN
813-555-1234	4205 CLWD VLG CT	MY COUNTY	PUBLIC, J Q	101
813-555-4321	4208 CLWD VLG CT	CITY B	SMITH, JANE	103
813-555-6789	3214 COACHMAN AV W	CITY A	JONES, MARY	102

Selective Router Database

TN	ESN
813-555-1234	101
813-555-4321	103
813-555-6789	102

Database – Wireless

MSAG Database

Street Name	Low	High	Community	O/E	ESN
ABC WIRELESS CALL	-	-	MY COUNTY	B	201
ABC WIRELESS CALL	-	-	CITY A	B	202
ABC WIRELESS CALL	-	-	CITY B	B	203

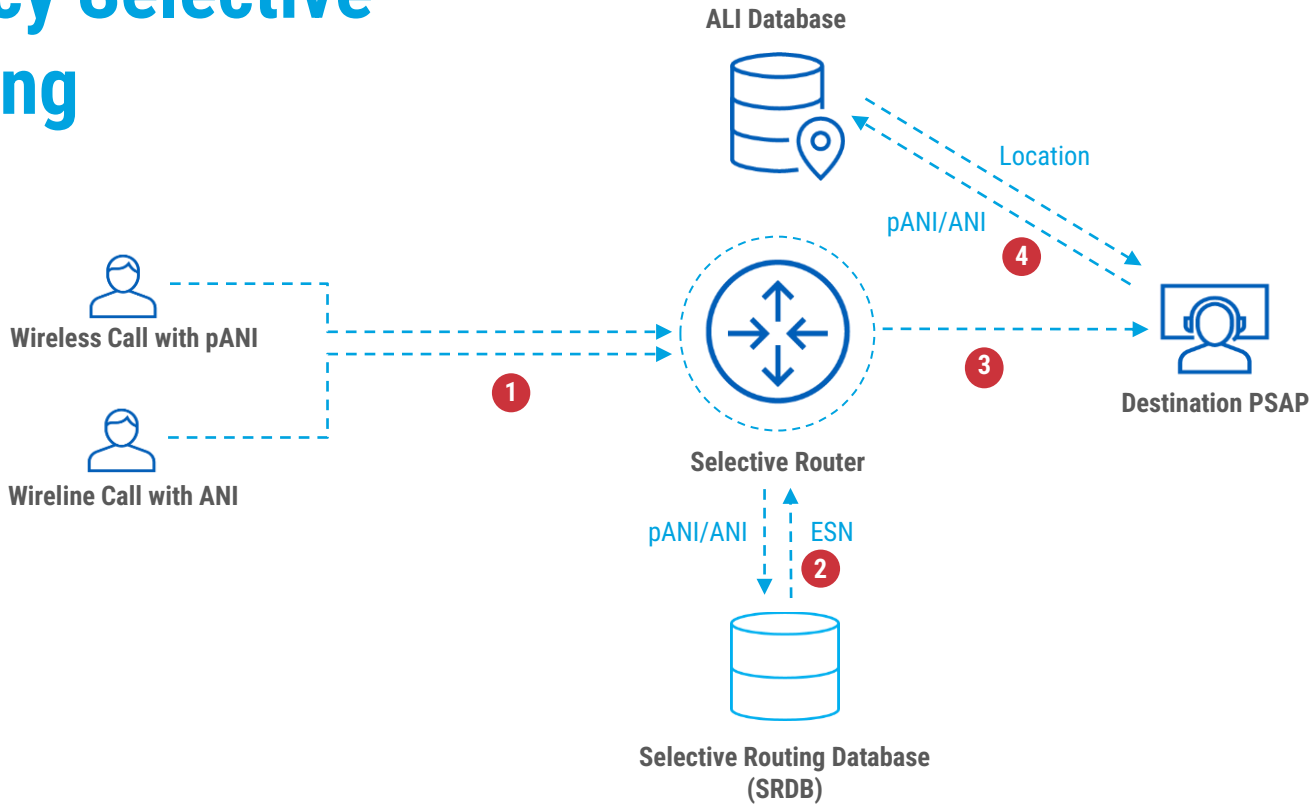
ALI Database – Shell Records

TN	Address	Community	Name	ESN
813-511-1001	ABC WIRELESS CALL	MY COUNTY	ABC WIRELESS	201
813-511-1011	ABC WIRELESS CALL	CITY A	ABC WIRELESS	202
813-511-1016	ABC WIRELESS CALL	CITY B	ABC WIRELESS	203

Selective Router Database

TN	ESN
813-511-1001	201
813-511-1011	202
813-511-1016	203

Legacy Selective Routing



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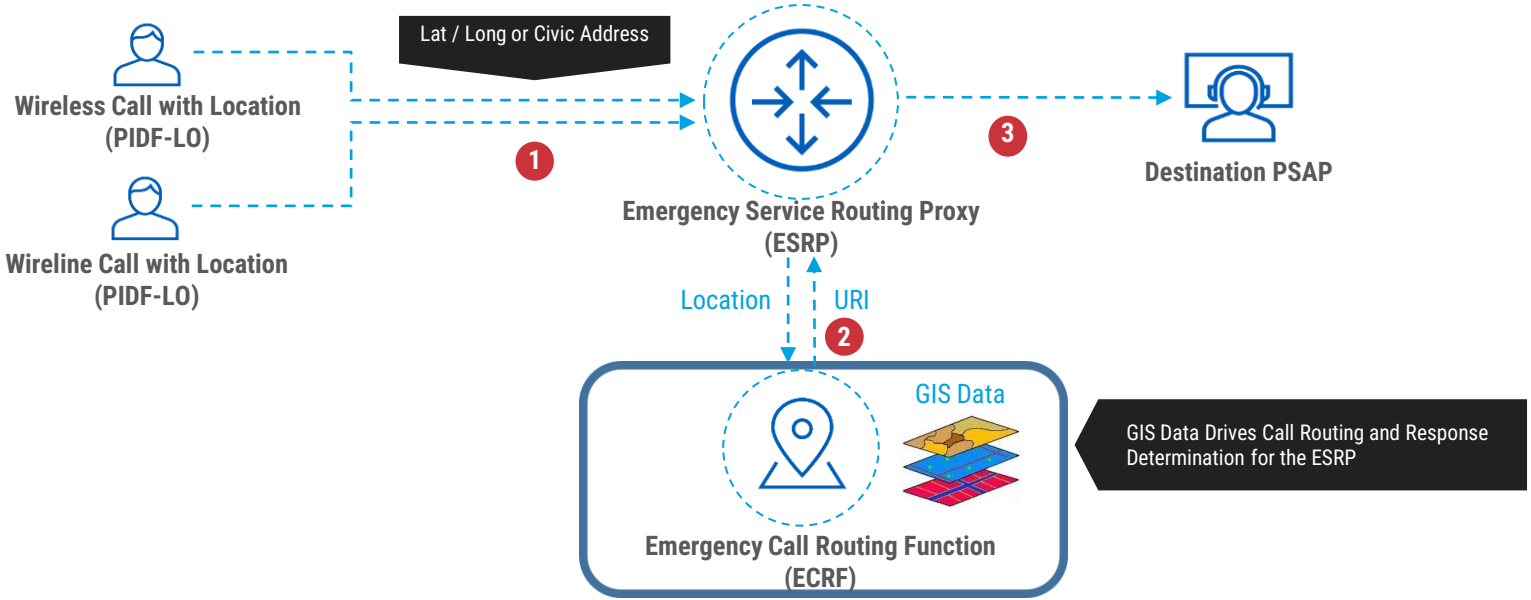
i3 End-State - ECRF

Originating Carrier Delivers Location with the Call



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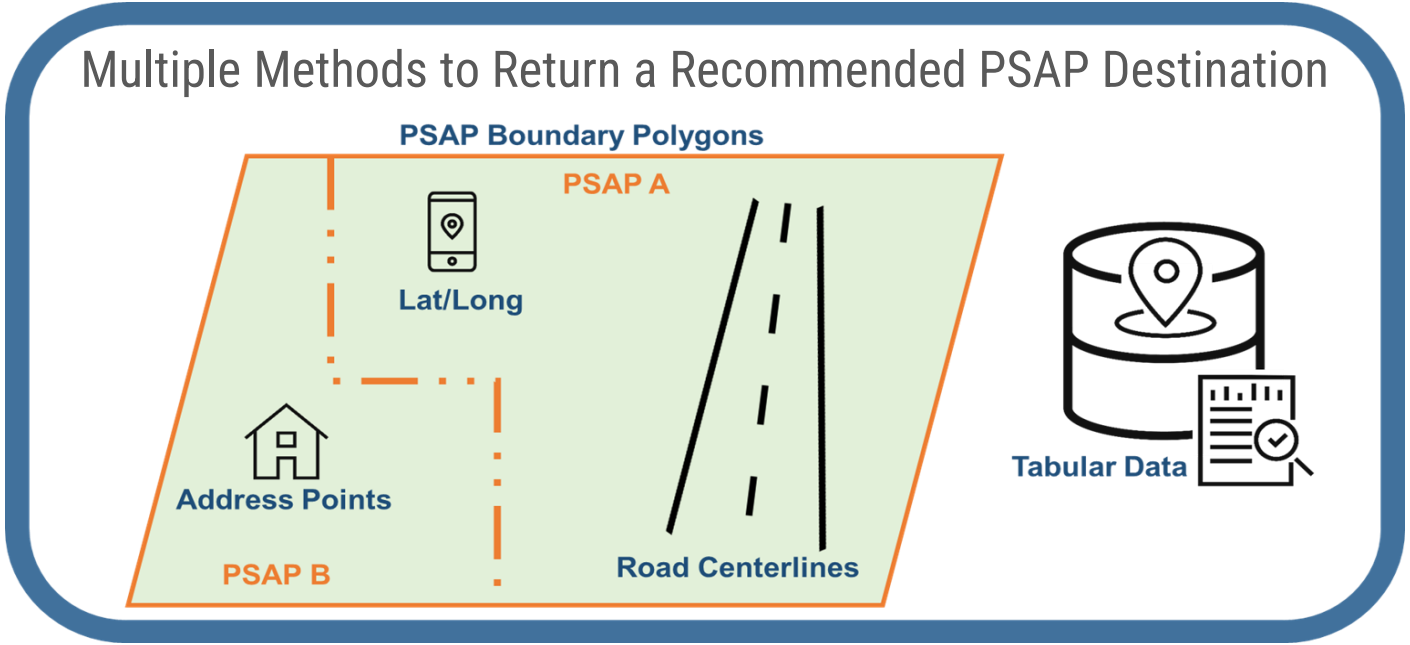
ECRF – Emergency Call Routing Function



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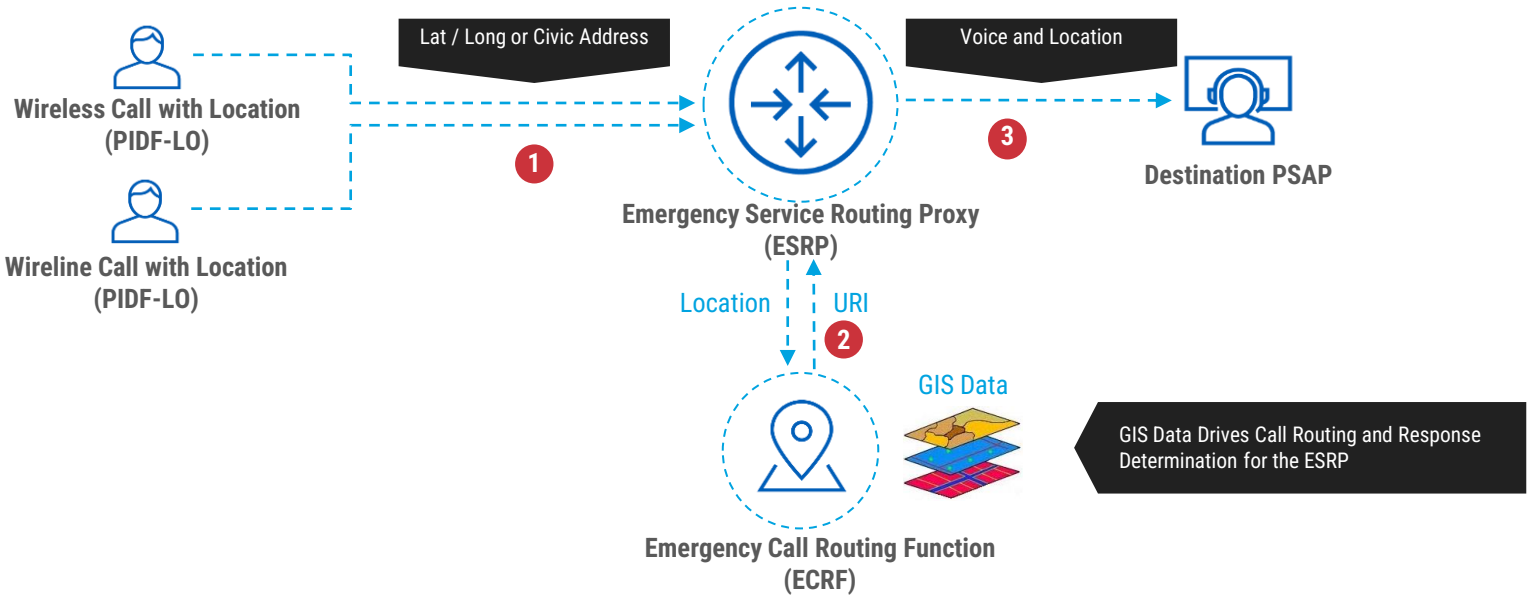
i3 End-State

Originating Carrier Delivers Location with the Call



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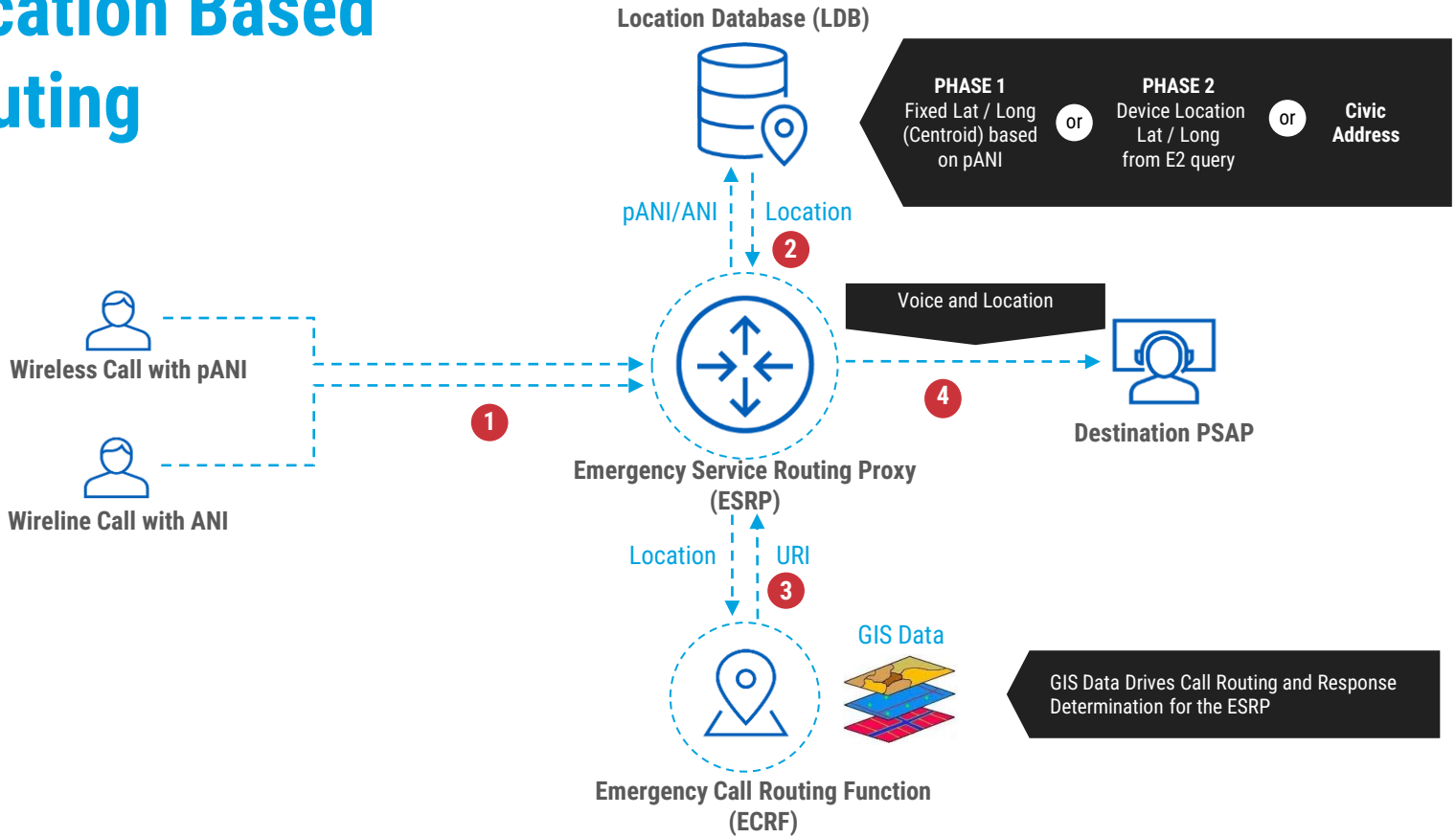
Location Based Routing



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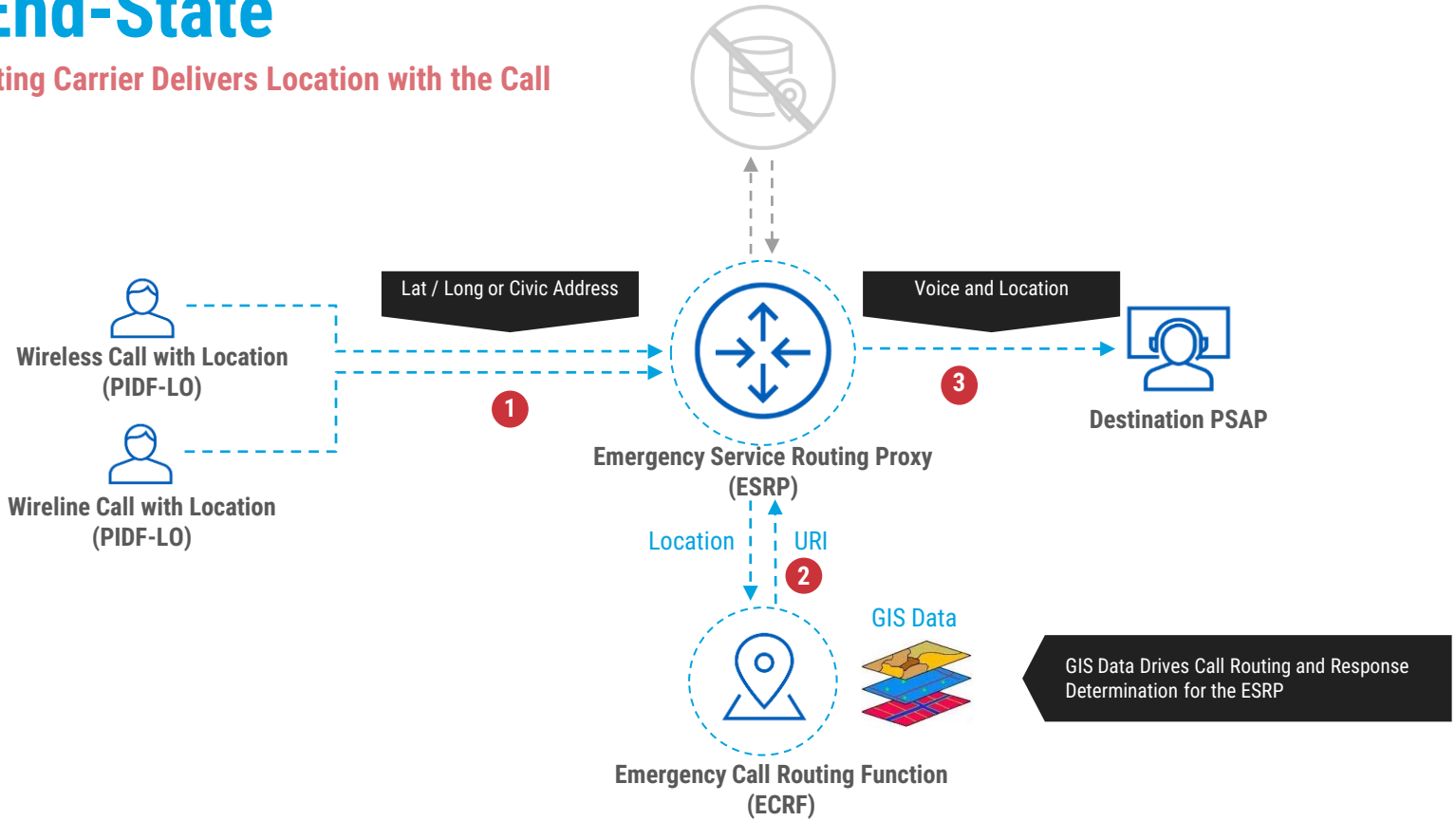
i3 End-State

Originating Carrier Delivers Location with the Call



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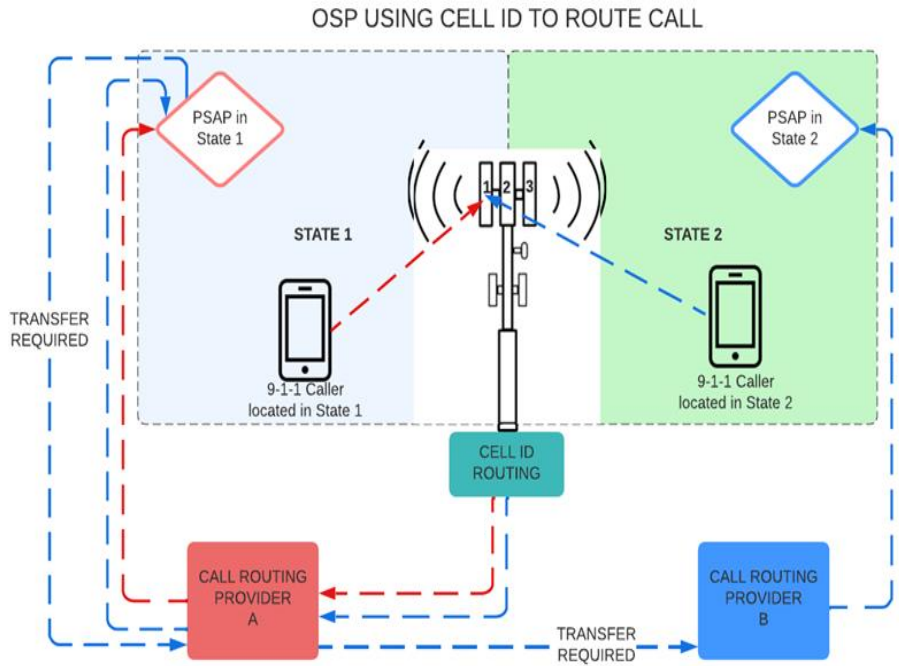
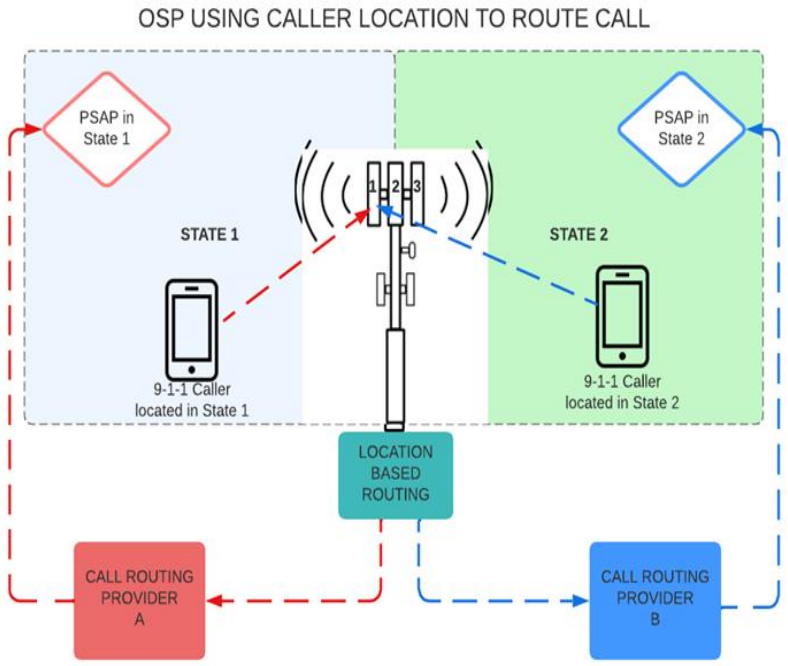
OSP Location Based Routing





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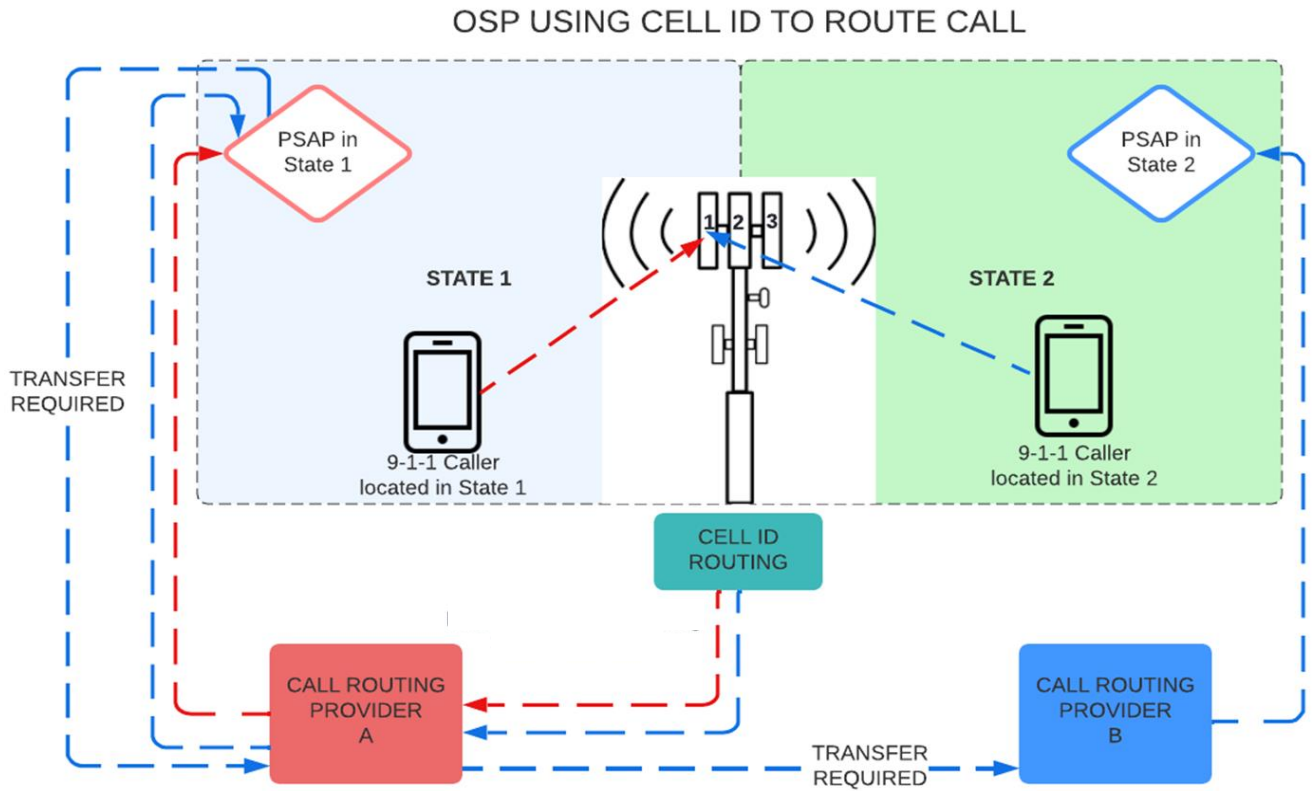
OSP Location Based Routing



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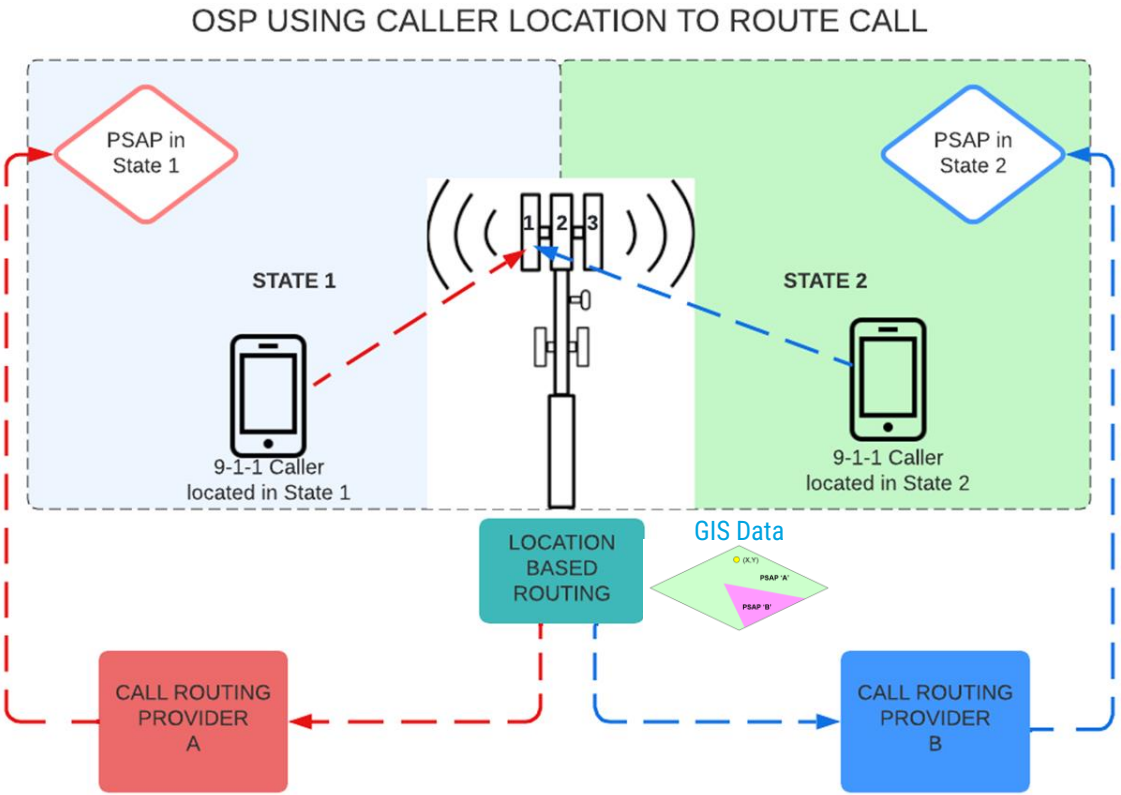
OSP Location Based Routing



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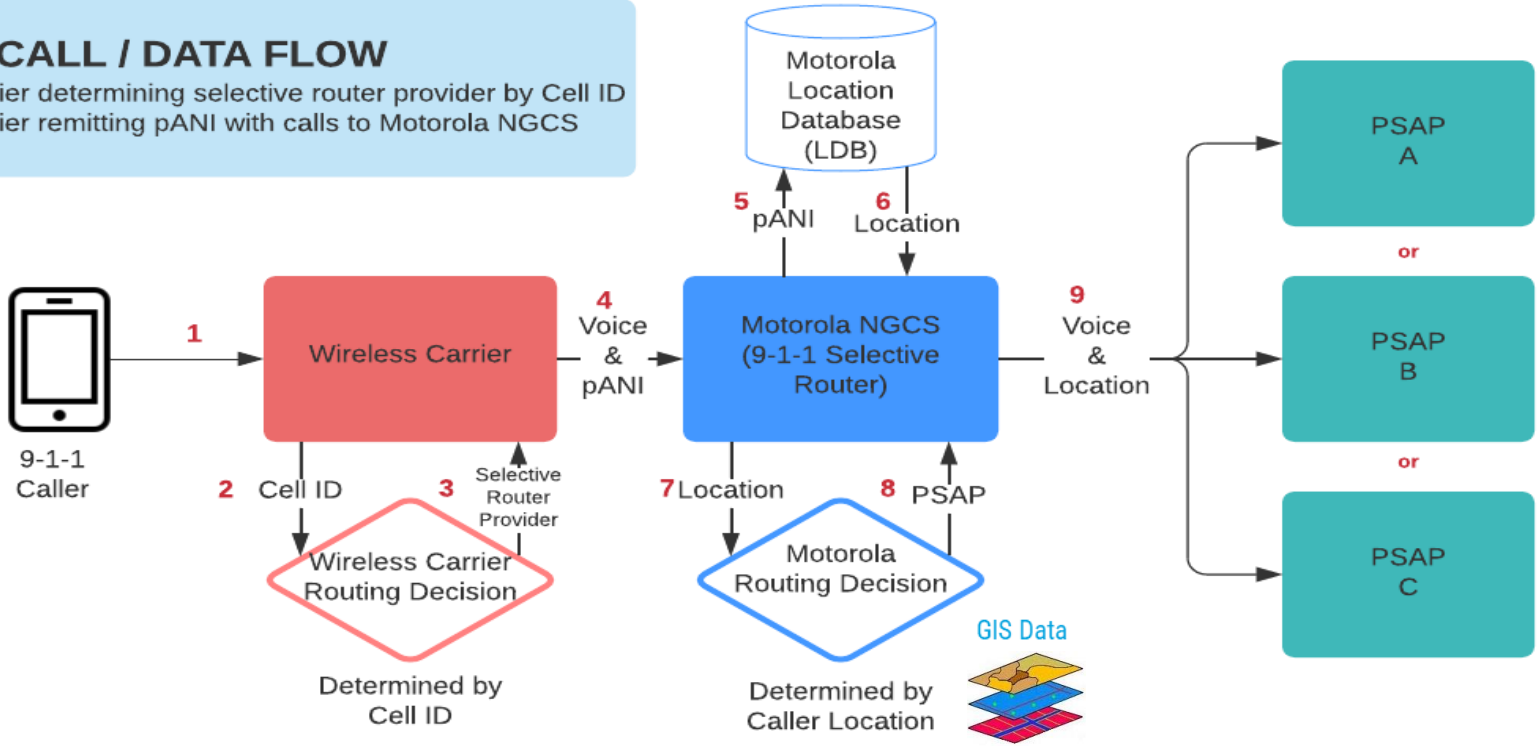
OSP Location Based Routing

CURRENT CALL / DATA FLOW

Wireless carrier determining selective router provider by Cell ID
Wireless carrier remitting pANI with calls to Motorola NGCS



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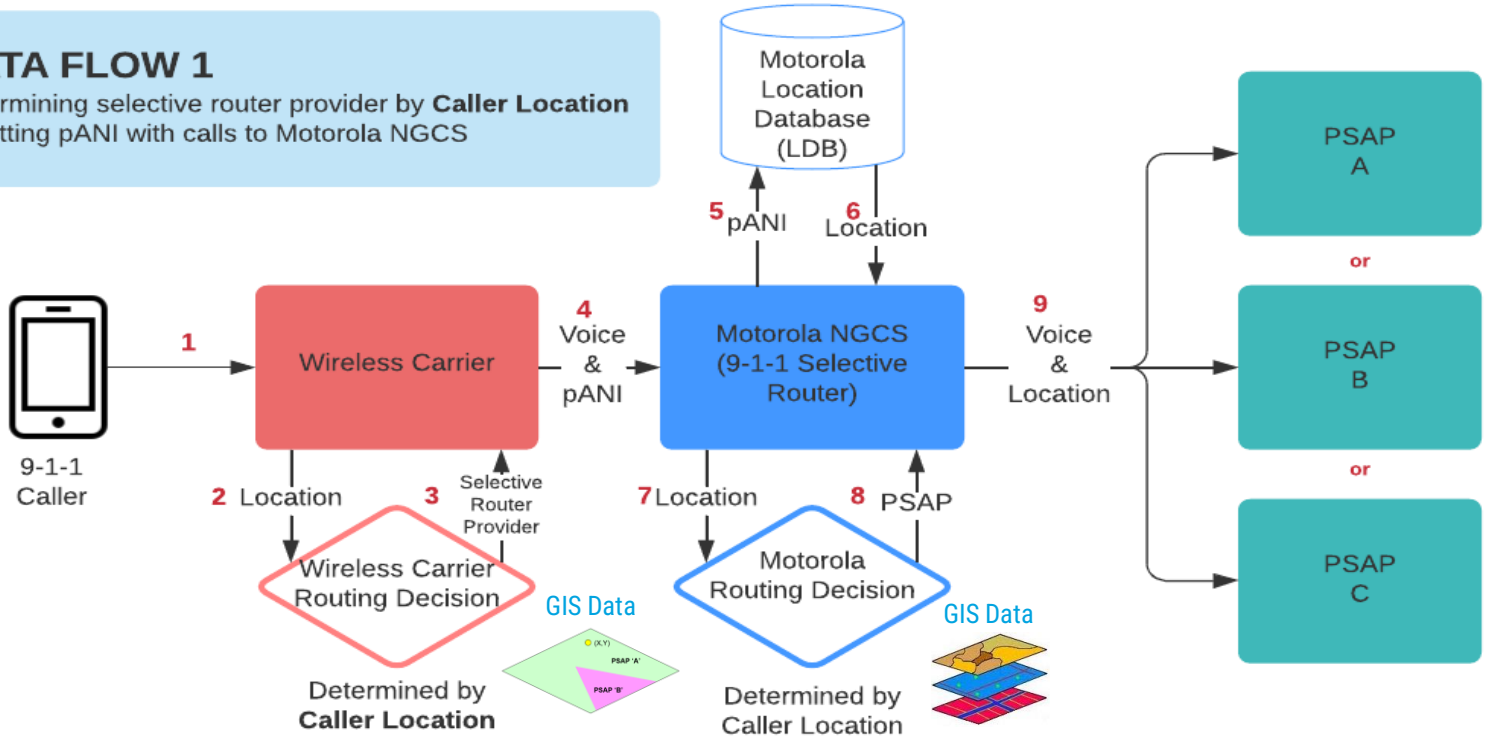
OSP Location Based Routing

NEW CALL / DATA FLOW 1

Wireless carrier determining selective router provider by **Caller Location**
Wireless carrier remitting pANI with calls to Motorola NGCS



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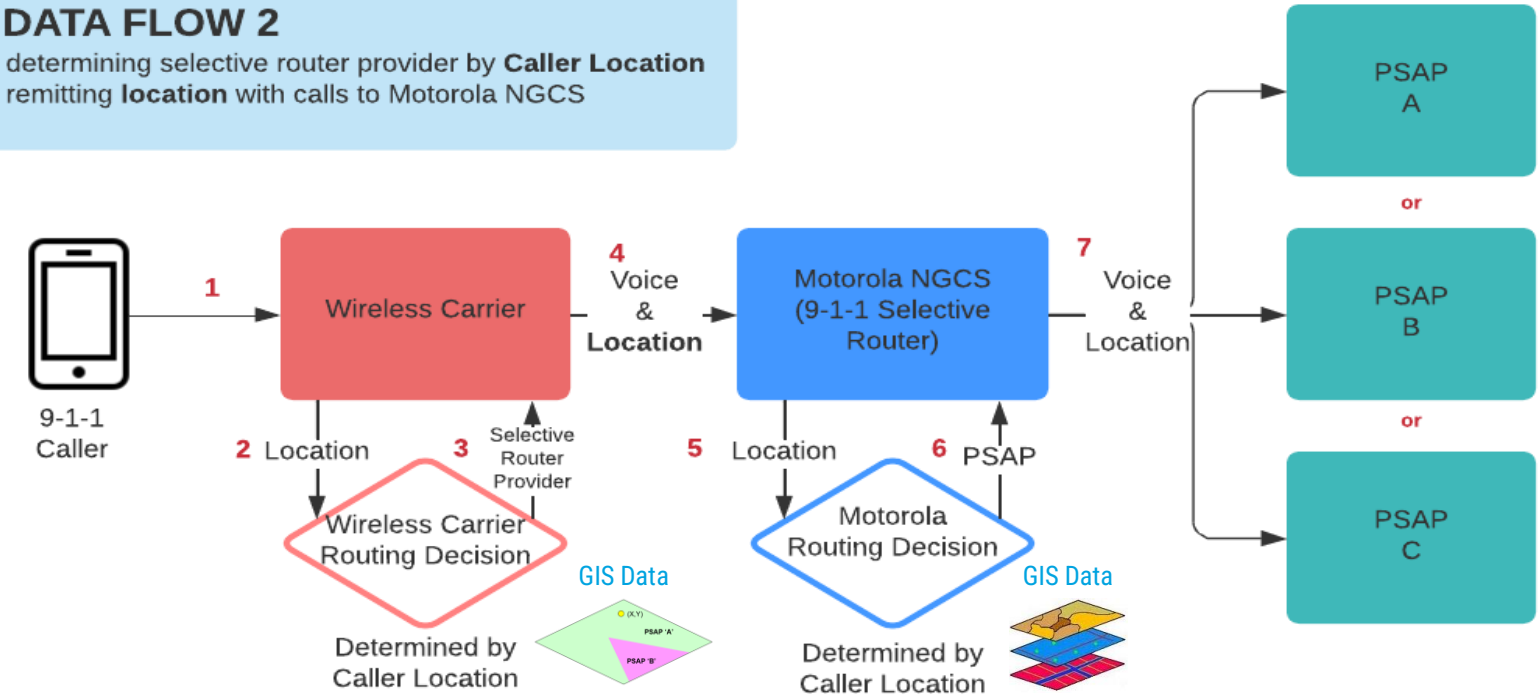
OSP Location Based Routing

NEW CALL / DATA FLOW 2

Wireless carrier determining selective router provider by **Caller Location**
Wireless carrier remitting **location** with calls to Motorola NGCS



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GIS Rules of the Road

GIS data requires experience and good management practices.

- Key GIS data types MUST be built, provisioned and Maintained for NG9-1-1.

Review and QC GIS data

- All GIS data used for NGCS purposes should be thoroughly vetted before use.

GIS data changes over time

- The use of an ECRF (Emergency Call Routing Function) and GIS (Geographic Information System) data to route an emergency call to the appropriate PSAP.

Errors in GIS data must be corrected expeditiously

- NG9-1-1 GIS data management expectations is that any identifed errors associated with GIS data should be addressed within three (3) business days.

National standards are essential to success

- Following the NENA NG9-1-1 GIS Data Model standard, and other GIS related guidance, is essential to facilitate data quality dependability and interoperability between governments.

We are now in ‘Transition’, moving towards ‘End State’

- No database will ever be perfect, and we will be in a transition state for some time, shorter for some locations and longer for others.

QUESTIONS?