



NG9-1-1 and Its Impacts

MACRUC

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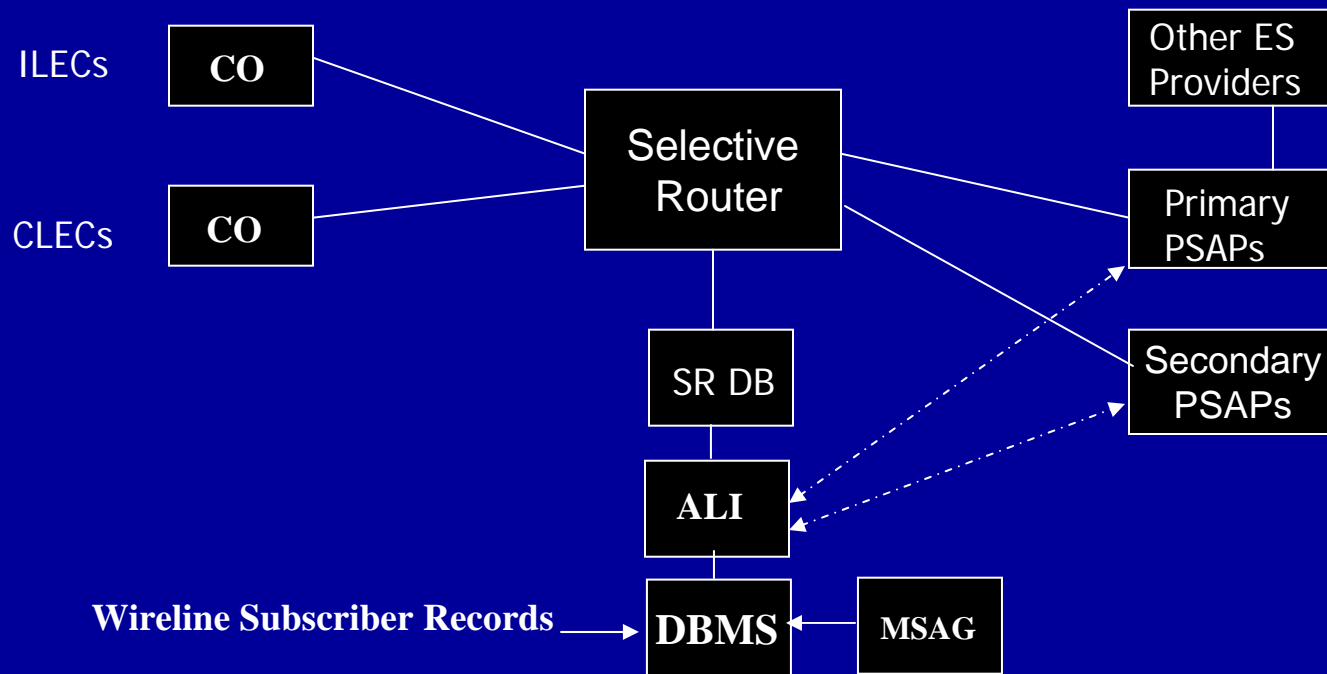
Hershey PA



E9-1-1 Components (for wireline)

Originating Calls

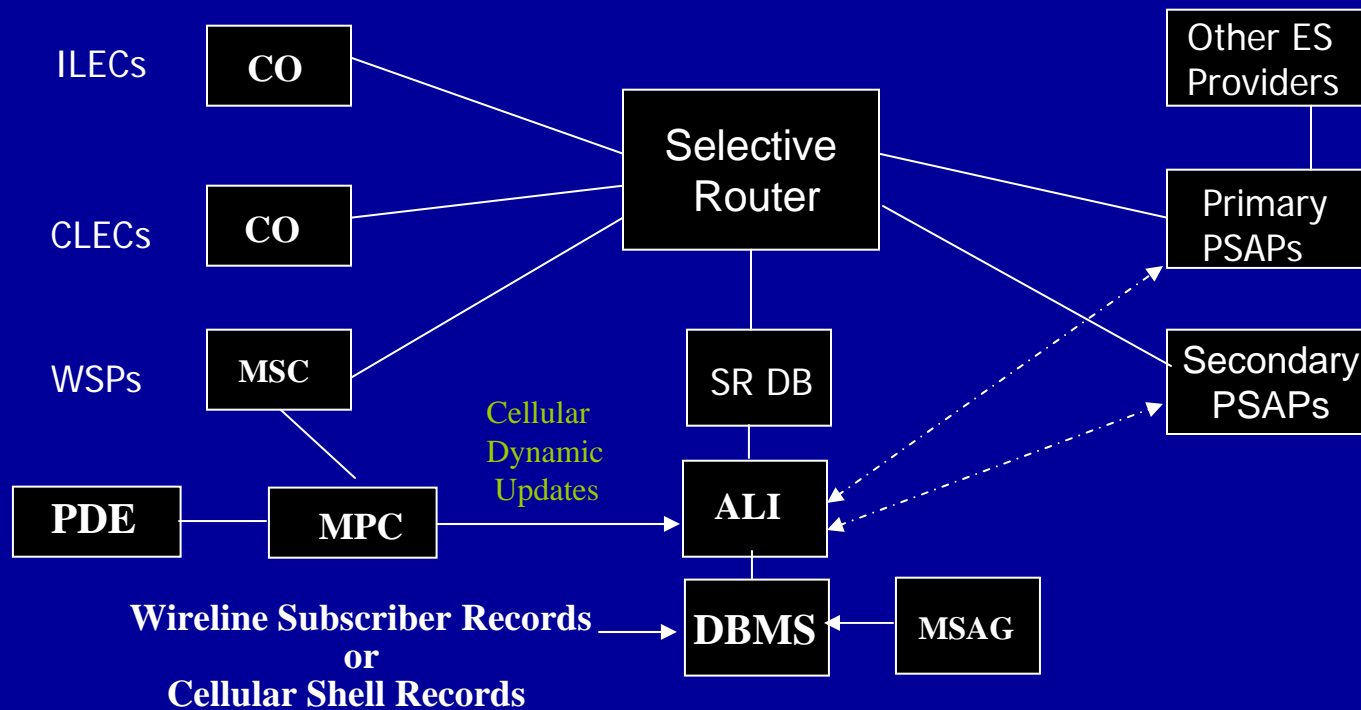
Emergency Service Providers



Add Cellular E9-1-1 Components

Originating Calls

Emergency Service Providers

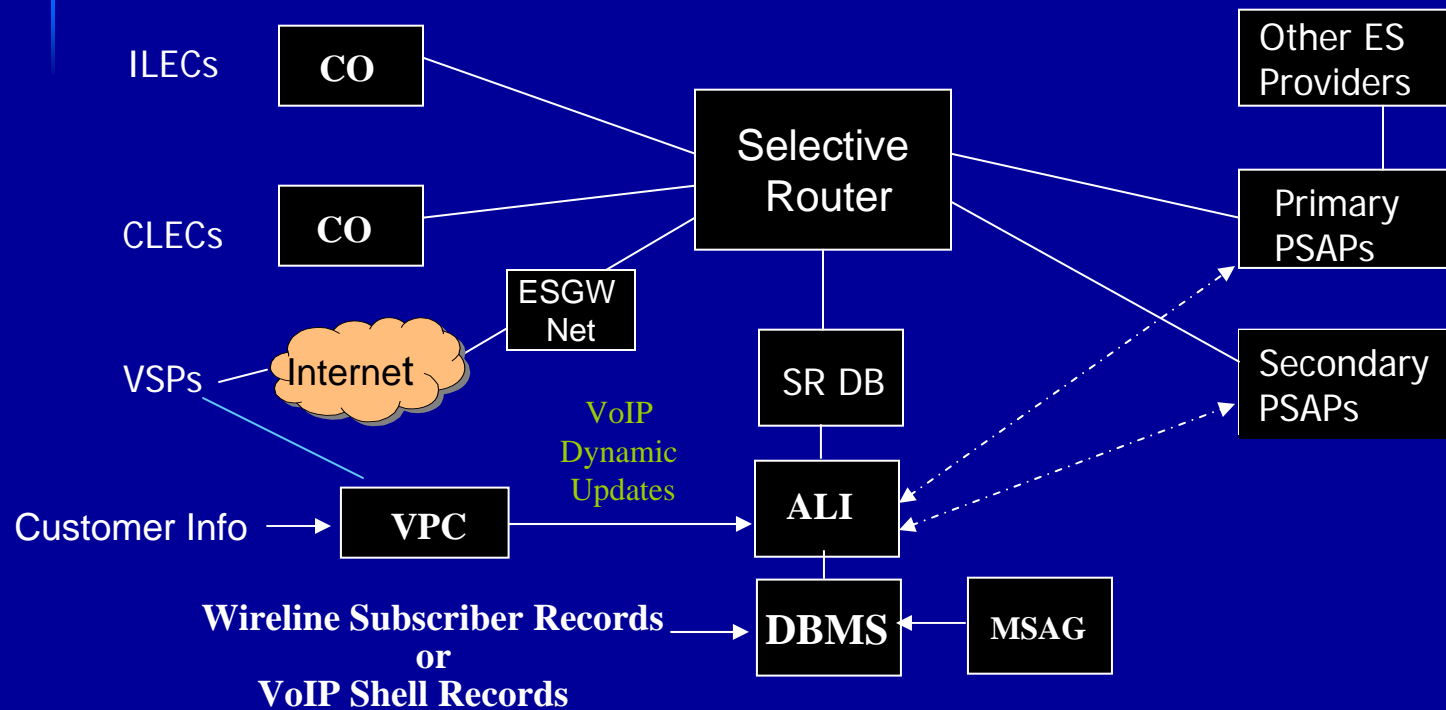


Difficult and costly to integrate new call or messaging sources, and the corresponding data needs

Adapt for VOIP - E9-1-1 Components

Originating Calls

Emergency Service Providers



Difficult and costly to integrate new call or messaging sources, and the corresponding data needs



E9-1-1 vs NG9-1-1

- Complex analog trunking and data network
- Class 5 switch for Selective Router
- Translation based control
- Limited to voice calls
- Data bandwidth 20 char
- Complex Emergency Gateway Network for VoIP
- Custom interfaces for each service type

- Engineered, managed IP network (ESInet)
- IP software selective routing function
- GIS and database controls
- Voice, text, video, telemetry
- Bandwidth unlimited
- Direct handling of Internet sourced calls
- Standard IP interface for all service types

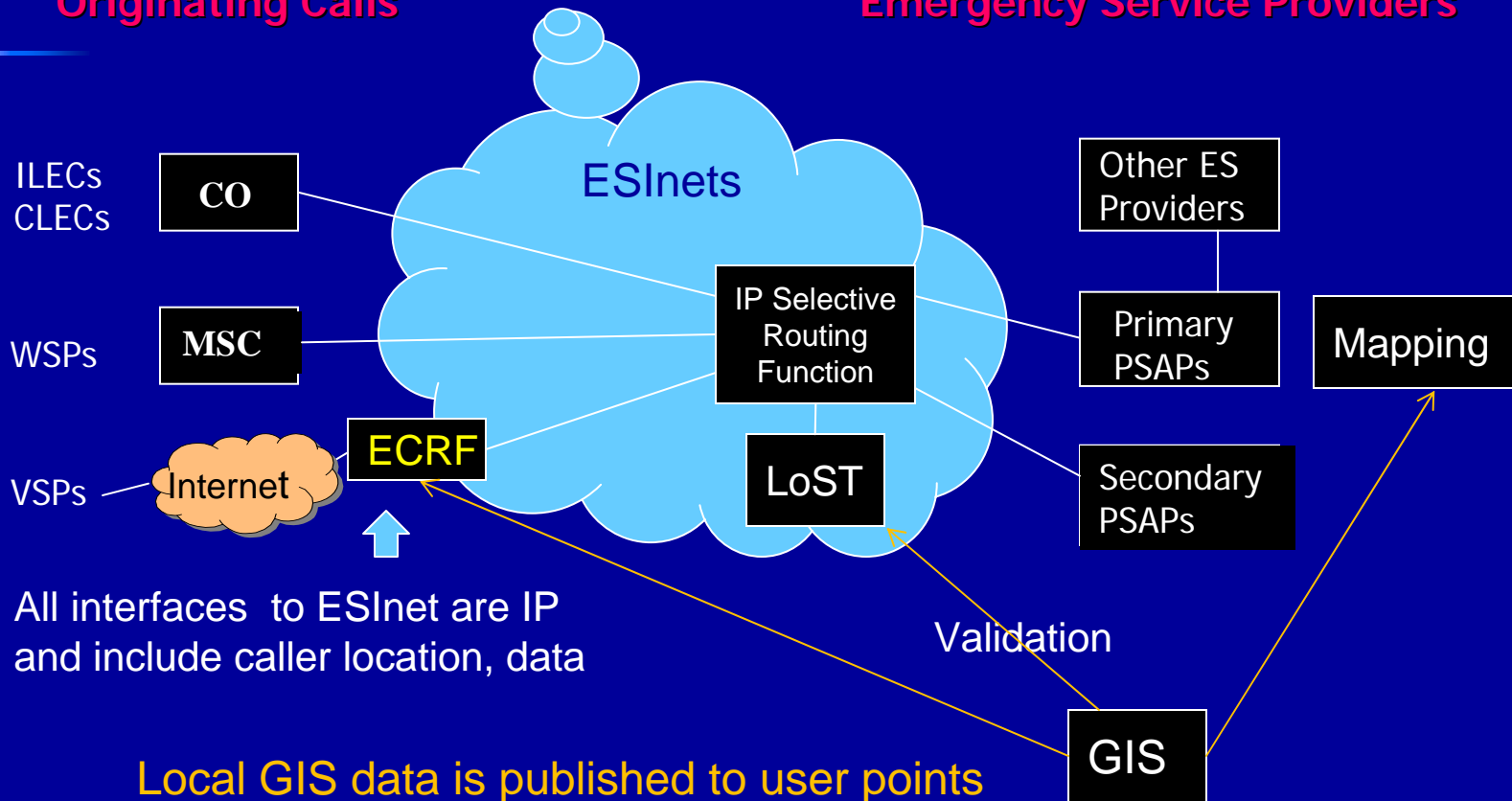
Long term NG9-1-1 Components



(simplified)

Originating Calls

Emergency Service Providers



State or Regional IP Networking, IP software services, GIS and database controls

Emergency Calling Routing Function is national level from Internet

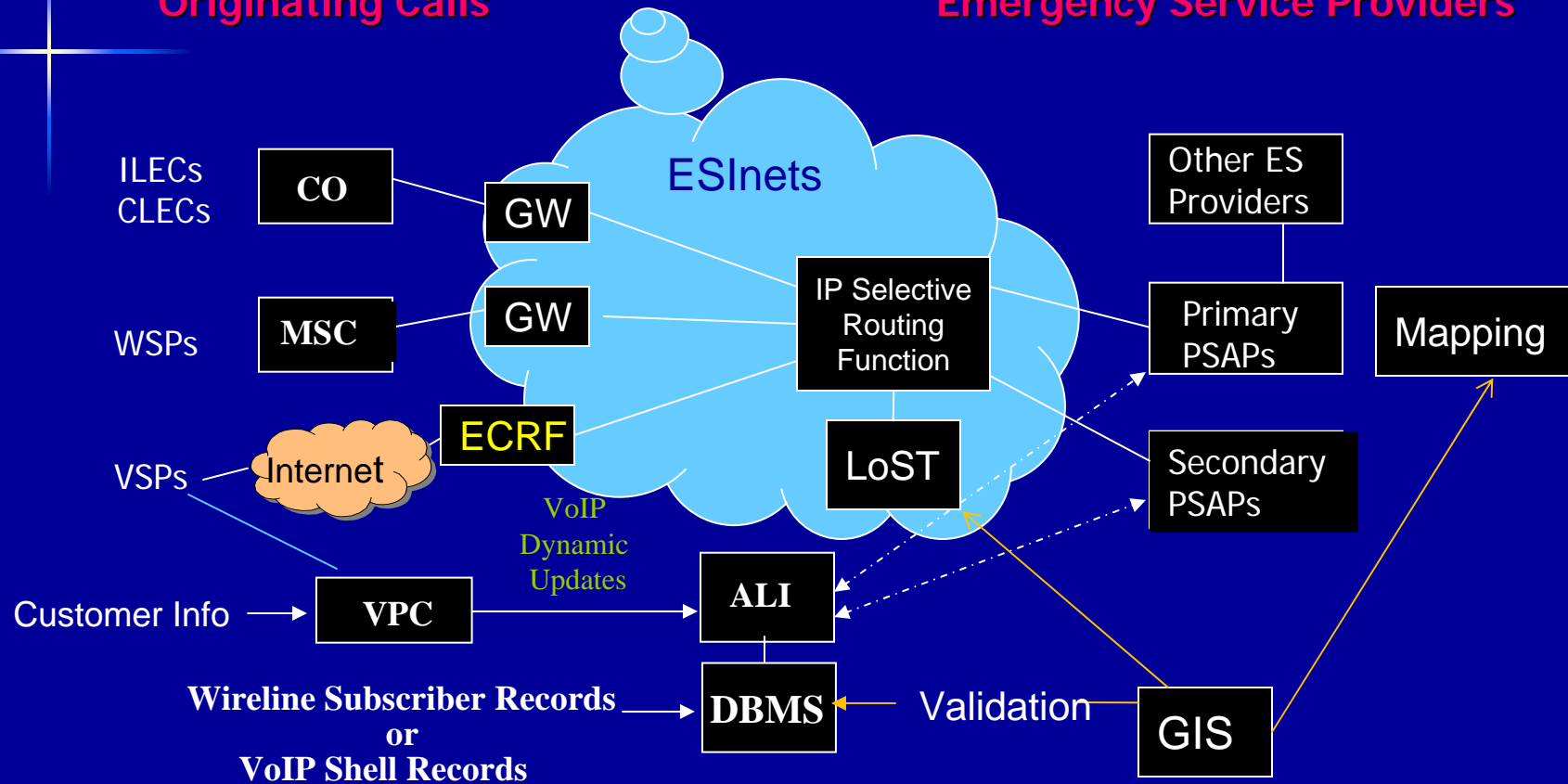
Transitional NG9-1-1



(simplified)

Originating Calls

Emergency Service Providers



State or Regional IP Networking, IP software services, GIS and database controls

Emergency Calling Routing Function is national level from Internet



The Nature of NG9-1-1

- Designed to support interoperability
- Designed with open standards
- Designed for and invites open competition by component through interface standards
- Causes a transition to competitive service provider environment
- Causes a need for regulatory (and legislative) change



The Nature of NG9-1-1

- As the telecomm industry moves more completely to IP as a base, more data, including the caller location, will come with the call, either from provider databases or from the handset itself
- This will further simplify NG9-1-1 operations
- Location validation will always be critical
- ESInets by state or sub-state region, linked together as a national set of NG9-1-1 systems



The Nature of NG9-1-1

More sophisticated 9-1-1 Authority control of how NG9-1-1 handles calls and data will be possible

- language preference, including ASL, can direct the call to an appropriate calltaker, or cause auto addition of interpreter
- Provision of telematics data, and auto priority of call in queue if high priority call
- Use of adjacent or distant PSAPs for disaster cases where normal PSAP(s) are not available
- Easy transfer of calls or data to other or distant locations



State Regulation Actions

- Be proactive – technology change won't wait
- Understand technology impacts
- Understand NG9-1-1 and its impacts
- Take action to identify and determine needed changes to support and enable NG9-1-1 and the larger emergency communications expansion

See NENA Policy Papers at: <http://www.nena.org/ng-partner-program/NG911-Transition-Policy-Maker-Blueprint>

- Work with NENA and others to revise regulations



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