

GIS Preparation for NG911



"Building sustainable capabilities across all phases of Emergency Management in Kansas through selfless service"

Topics

- GIS in an Enhanced 911 (E911) Environment
- GIS in a Next Generation 911 (NG911) Environment
- GIS Standards
- Attribute Discussion
- Mapping Issues Discussion
- Conclusions



Kentucky NG911 Study

“Unlike the previous stages of 9-1-1 services that were centrally focused on the geography and operations of a single PSAP, NG9-1-1 necessitates the development and implementation of a seamless set of lines and polygons that span entire states and regions.”

The Commonwealth of Kentucky, August 1, 2009, NG9-1-1 Standards Report



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Kentucky NG911 Study

“To be successful, there will need to be a highly accurate set of street centerlines and jurisdictional boundaries that are coordinated on a statewide level.”

The Commonwealth of Kentucky, August 1, 2009, NG9-1-1 Standards Report



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Kentucky NG911 Study

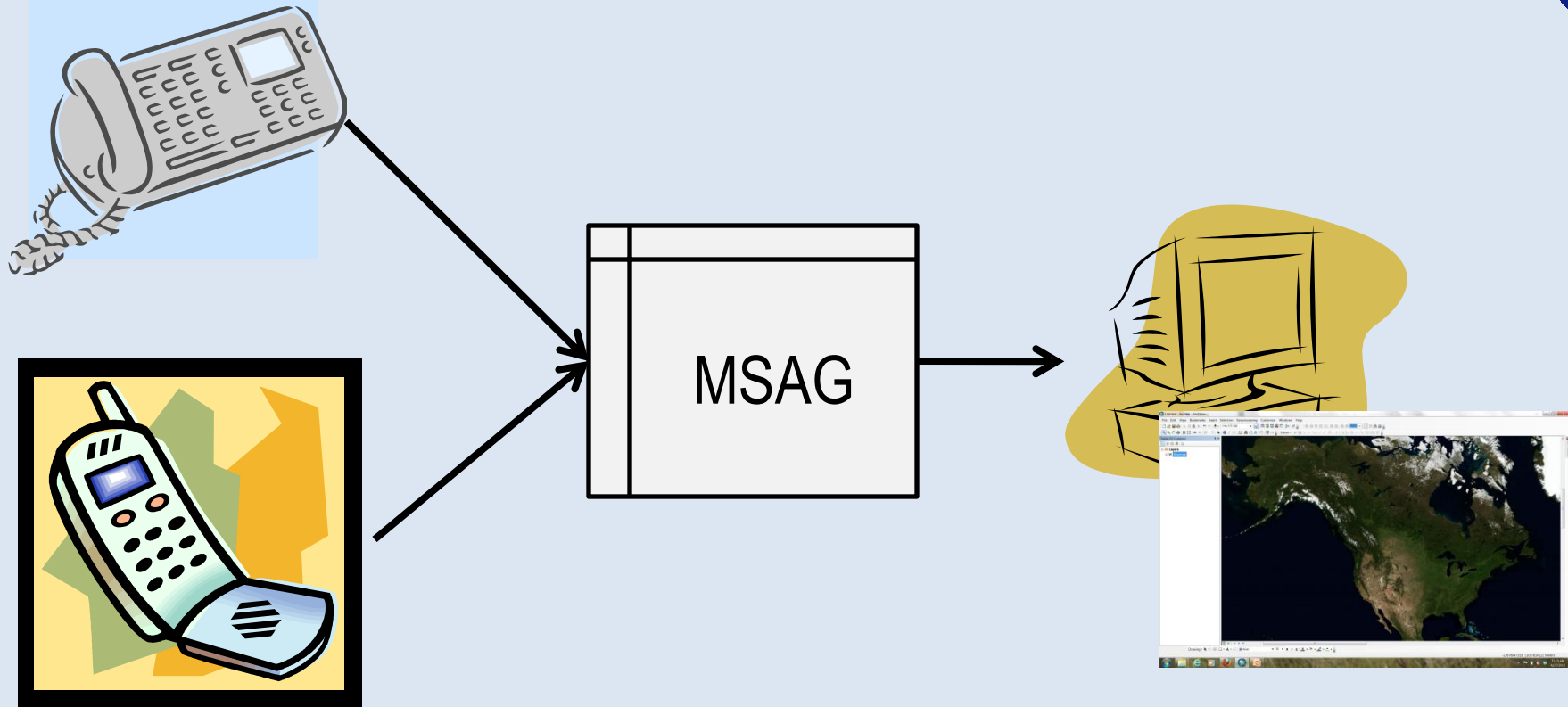
“The PSAP’s will continue to have a central focus on the geographical features with their jurisdiction... Their critical responsibility however, is to recognize that their datasets are no longer standalone – they are part of a much larger mosaic that collectively represents their state and/or region.”

The Commonwealth of Kentucky, August 1, 2009, NG9-1-1 Standards Report



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GIS in an E911 Environment



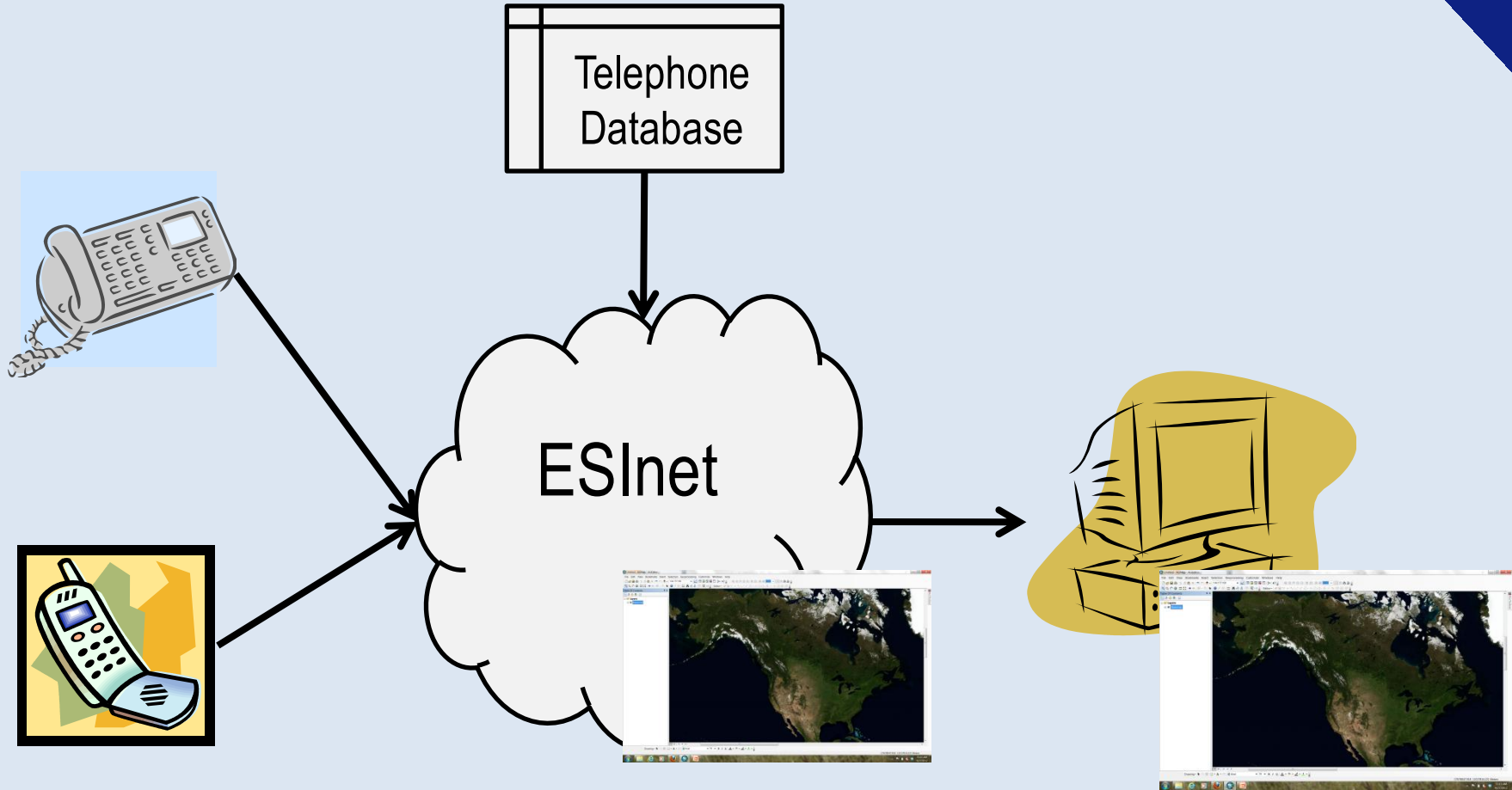
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E911 GIS Layers

- Street Centerlines (Required)
- Response Polygon (Sometimes Required/
Sometimes Optional)
 - Emergency Service Number (ESN), EMS, Fire, Law Enforcement
- Address Points & Orthophotography (Optional)



GIS in a NG911 Environment



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NG911 GIS Needs

- Required within the ESInet:
 - Street Centerlines
 - Site/Structure/Building (Address Points)
 - Emergency Service Boundaries
- “Provisioned” from the Dispatch Centers to the ESInet cloud



Existing GIS Standards

- Kansas Specific Standards
 - www.kansasgis.org
- NENA Standards
 - NG911 GIS Data Standard will be out for public review/comment within the next 30 days
 - www.nena.org



Known Issues between E911 and NG911 GIS Data

- Missing or Incomplete Attributes/Fields
 - Due to NOT being REQUIRED within a E911 system
- Feature Overlap/Gap/Duplication
 - Within and between jurisdictions
- MSAG – Centerline Discrepancies
- ALI/Telephone Number Listing – Address Point Discrepancies



Mapping Examples

- Overlaps
- Gaps
- Duplicate Features



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Mapping Issues - Overlap

ESN Boundary

Area "exists" in both counties

County A - Red line

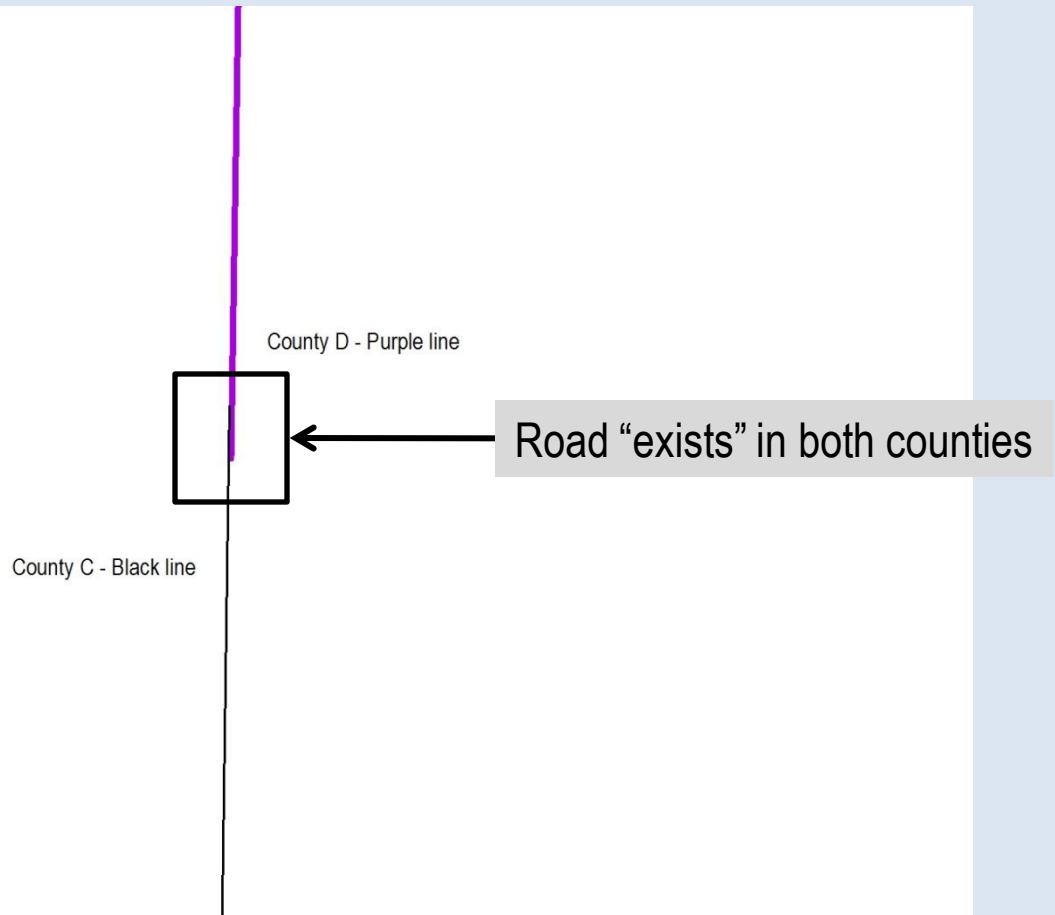
County B - Green line



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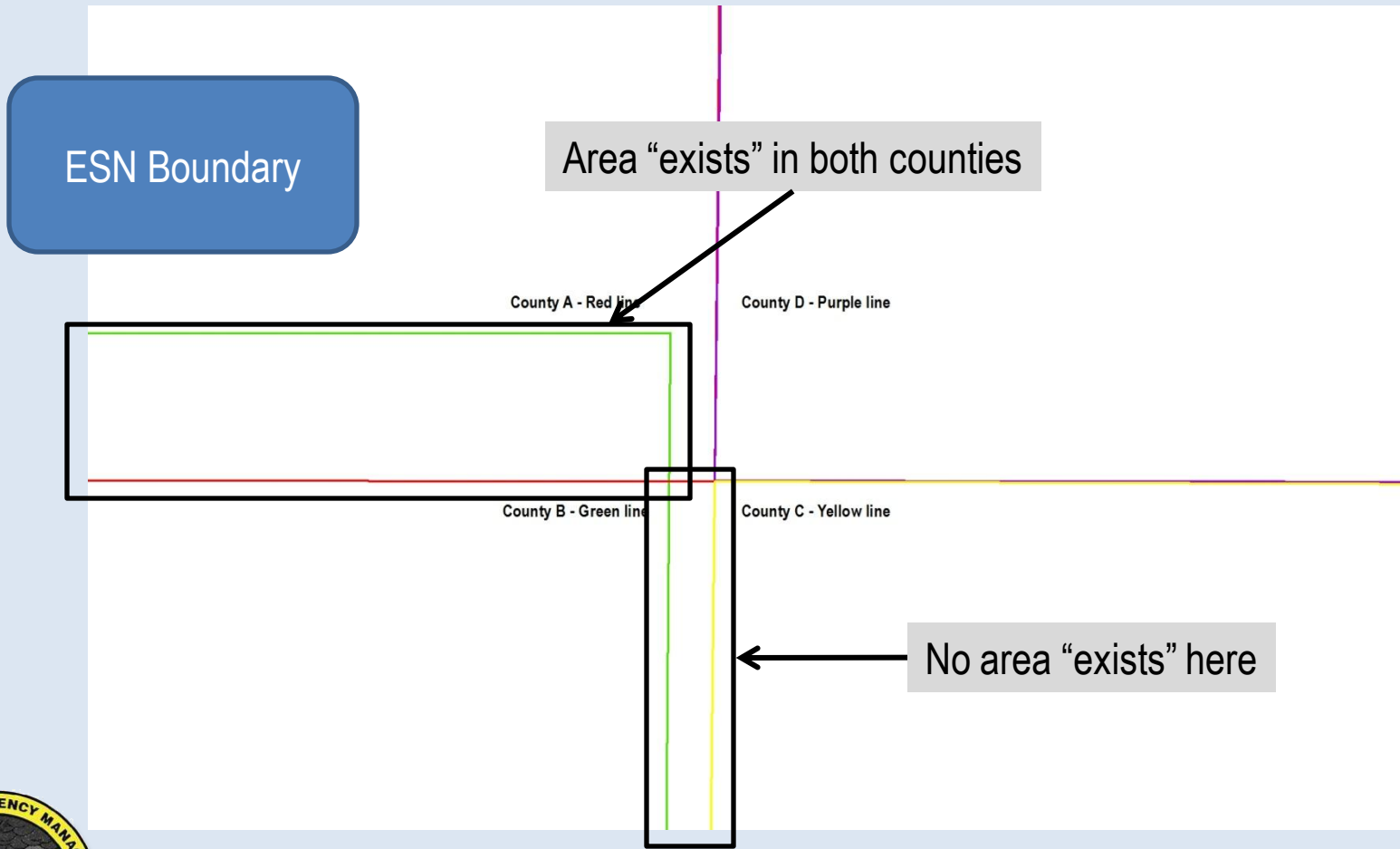
Mapping Issues - Overlap

Centerline



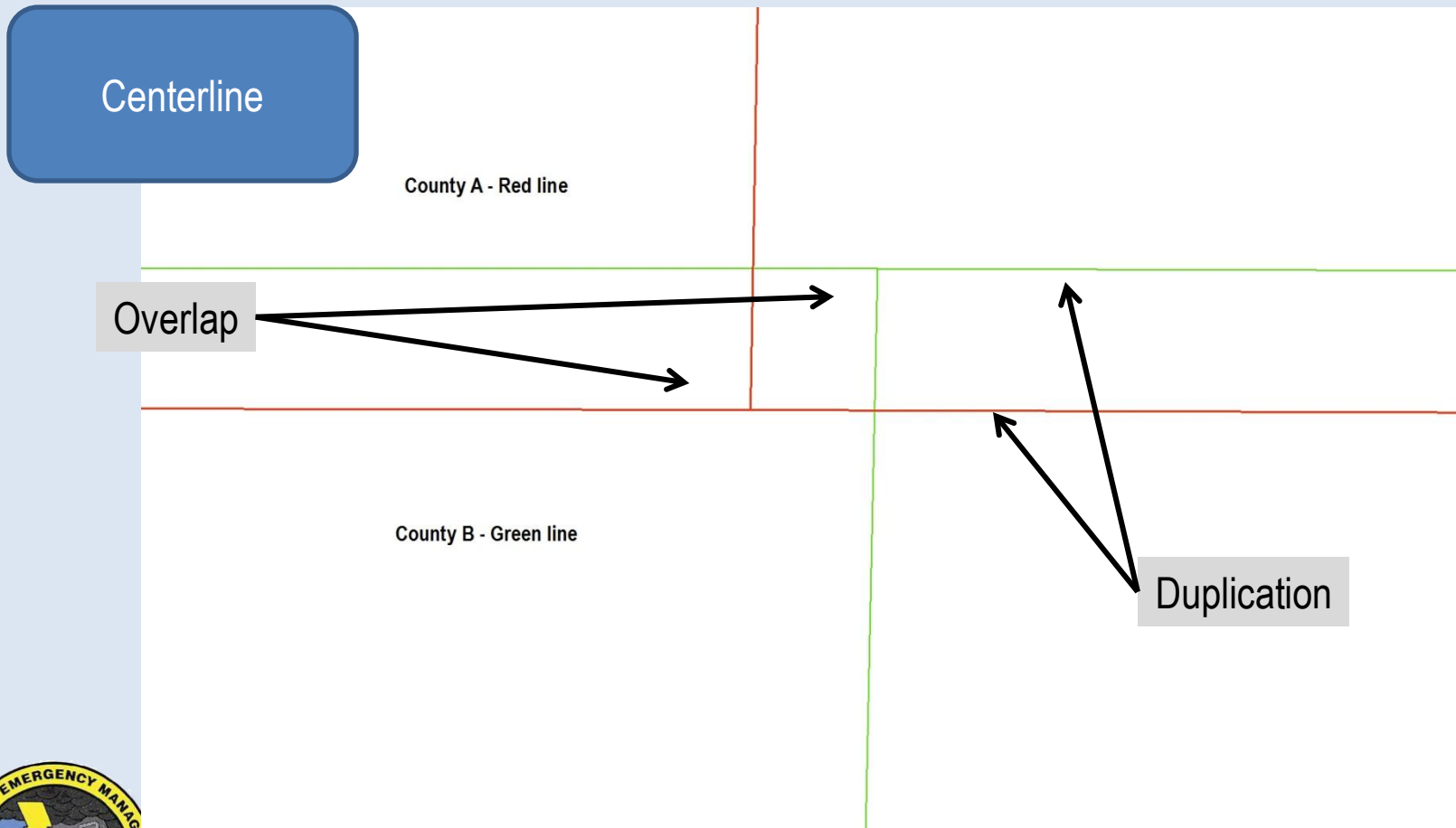
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Mapping Issues – Gap & Overlap



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Mapping Issues - Duplication



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Standardization will...

take longer than
we think...



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Conclusion

- Lots of work is in OUR future!
- Don't panic...no estimate on when NG 9-1-1 will be fully implemented
- NENA standards must be (and WILL be) shared with GIS/9-1-1 communities at ALL levels AND training MUST be provided
 - NENA NG 911 GIS Standards MUST be followed



What can be done now...

- Synchronization of current street centerline and the MSAG
- Synchronization of current address points and the phone company(s) Telephone Number Listing
- Update the jurisdiction's Emergency Service Number (ESN) boundary OR create one if it only exists in tabular format



Valuable NENA Documentation

- 71-501 – Synchronizing GIS with MSAG & ALI
- 02-010 v8.2 Data Formats for ALI, MSAG & GIS
- 02-014 – GIS Data Collection & Maintenance
- 71-001 v1 – NG9-1-1 Additional Data
- NENA NG 9-1-1 GIS Standards should be released soon for public comment



Kansas NG911 GIS Documentation



www.kansas911.org

as documentation becomes available



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Thank You!

Jessica Frye

GIS Coordinator

Kansas Adjutant General's Department

785-274-1610

jessica.p.frye@us.army.mil



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