SMART ENERGY

Southern Company's Advanced Metering Infrastructure (AMI) System On 900 MHz Narrowband PCS Spectrum

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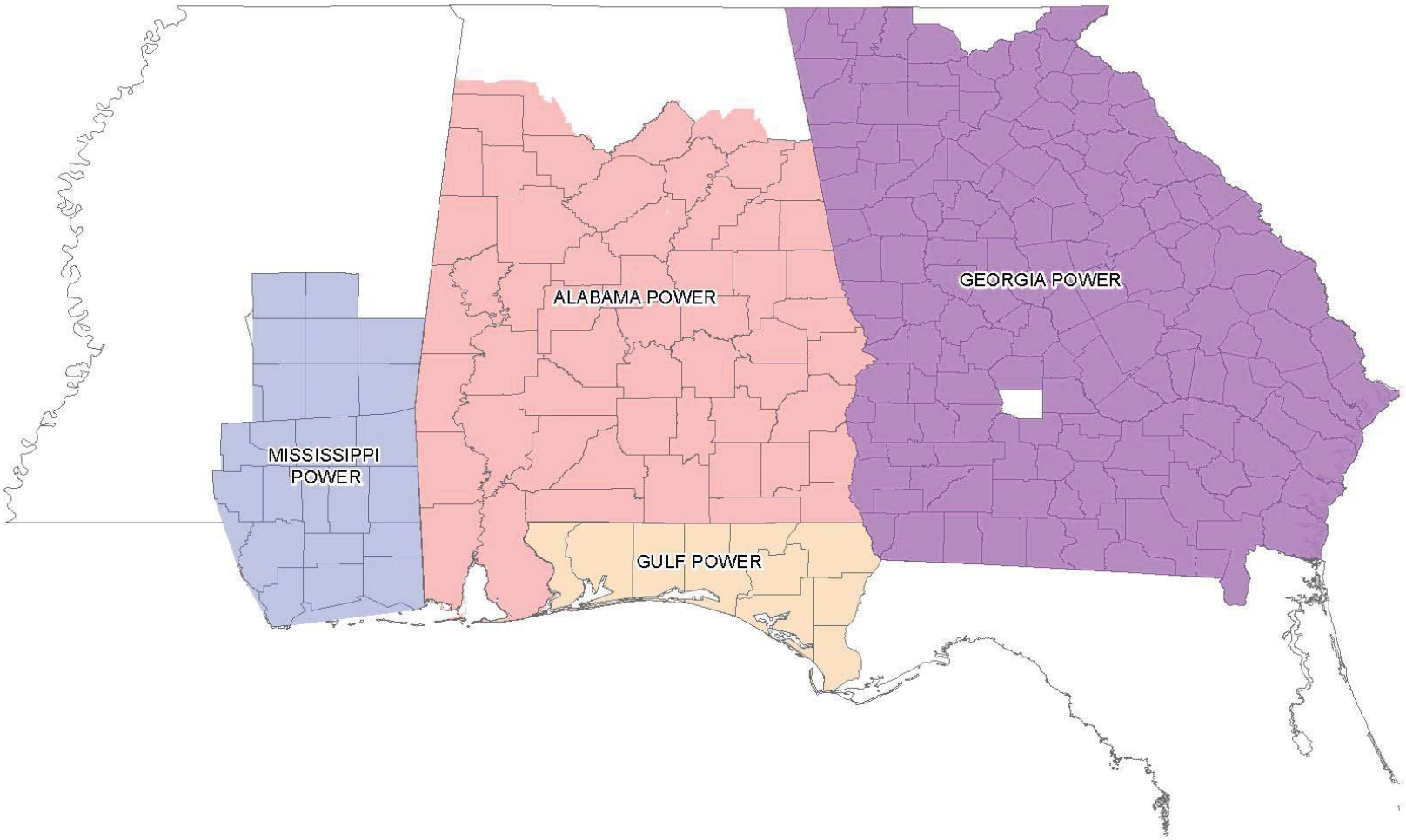
SOUTHERN COMPANY

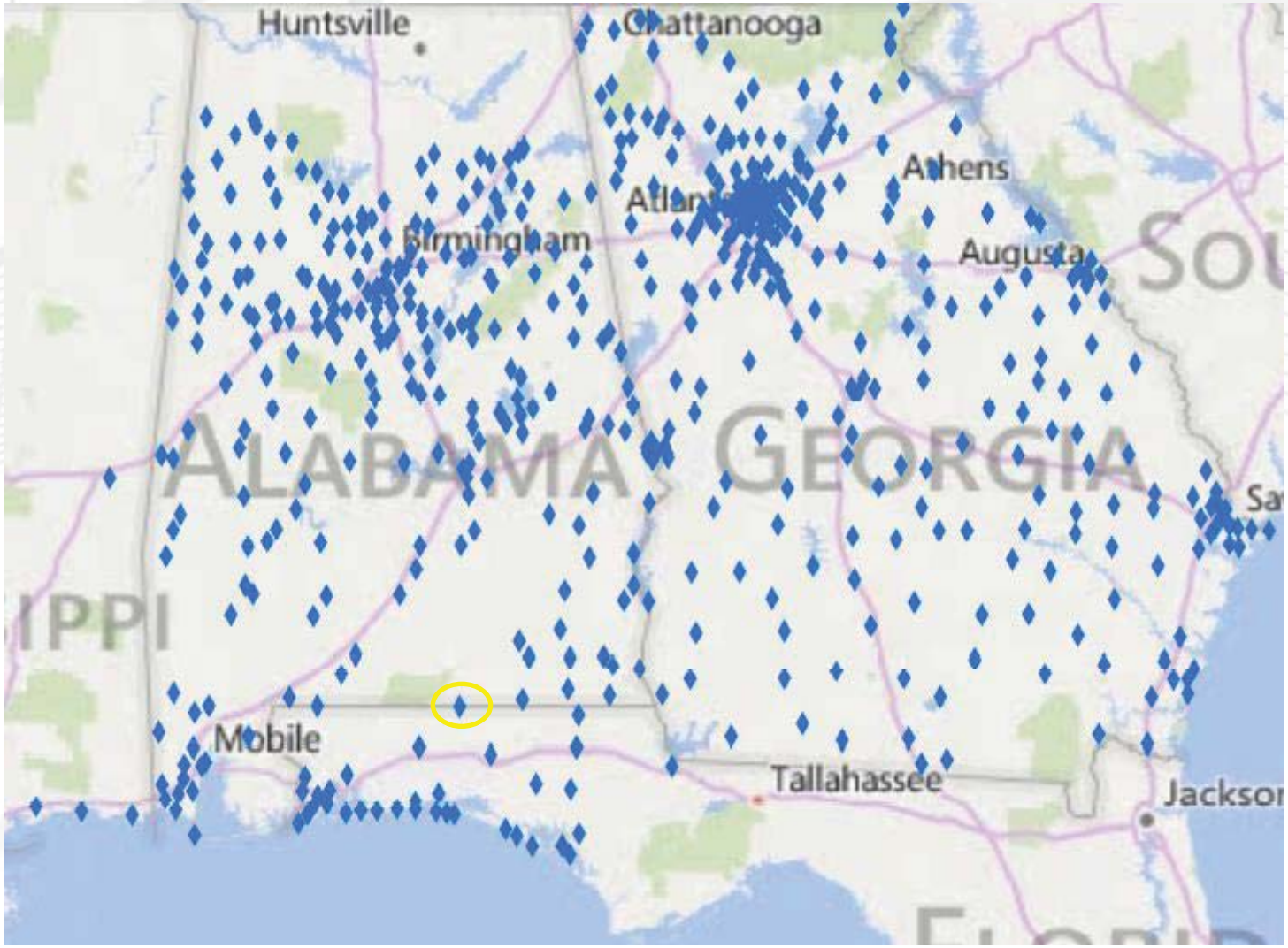
Points of the Presentation

1. System use in everyday business
2. Use in emergency response
3. How the system works today with the current noise floor

Southern Company Service Territory



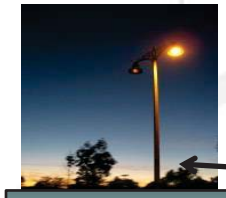
Southern Company AMI Base Stations



Smart Meter Infrastructure

Line Booster Monitor

Capacitor Bank Monitor/Control



Street Lights and Controls

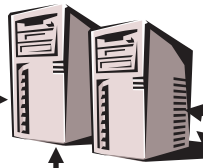
Transformer Temperature

Radio TGB

Meter Data Mgmt System Itron (MDM)

CSS

Additional Alarm WFMS Example- Meter Health



AMI Host System RNI

OMS

Load Control Server
(Control Thermostats, Switches, Etc.)

In-Home Displays for Energy Usage, Advertising, Pre-Pay Metering, etc.

Thermostats for CPP Type Rates

H/W

Load control switches for AC , Hot Water Heaters, Pool Pumps, etc.

Standard Meter

Data Store

Data for Multiple Years

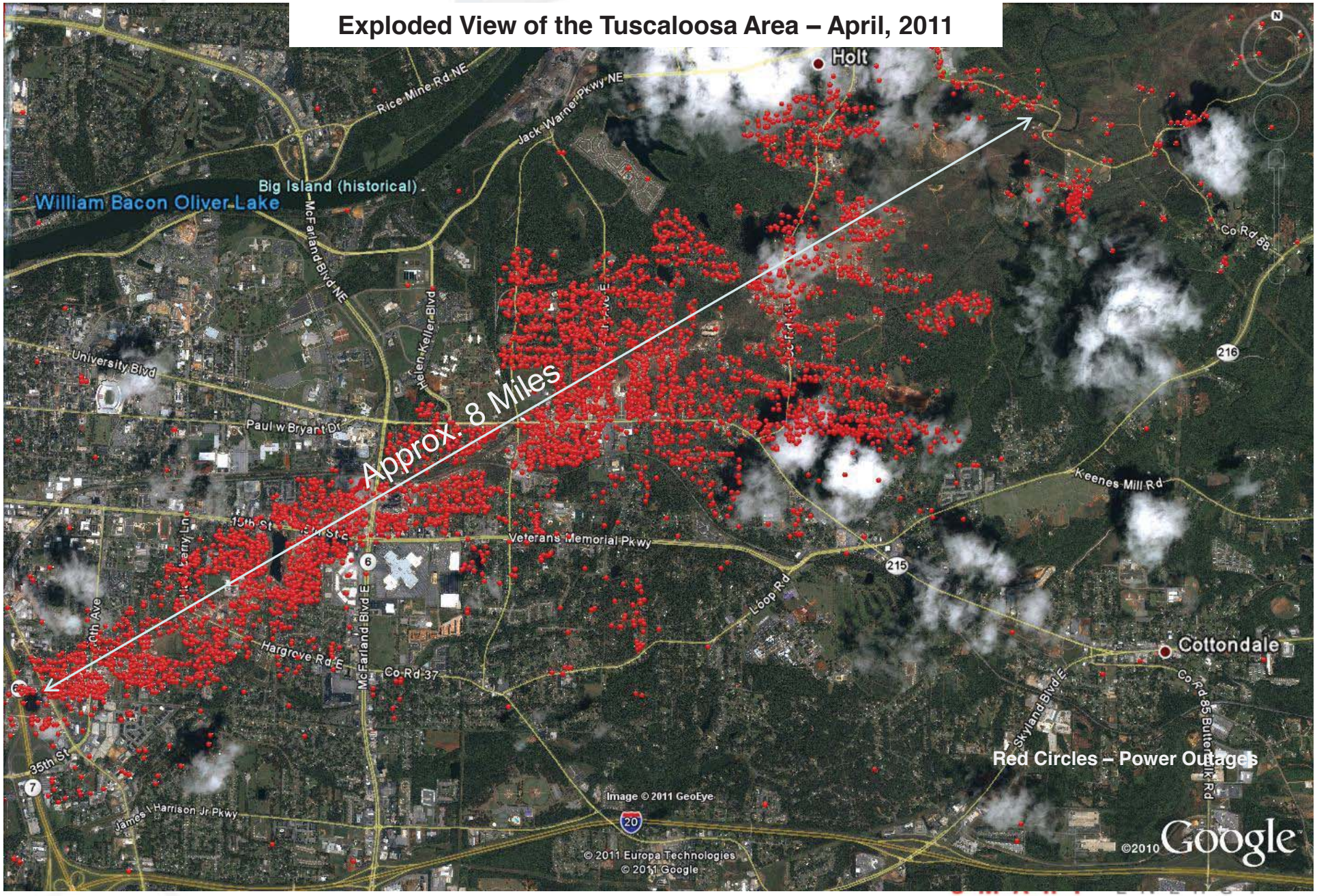
My Power Usage

RC/DC Meter used with Pre-Pay

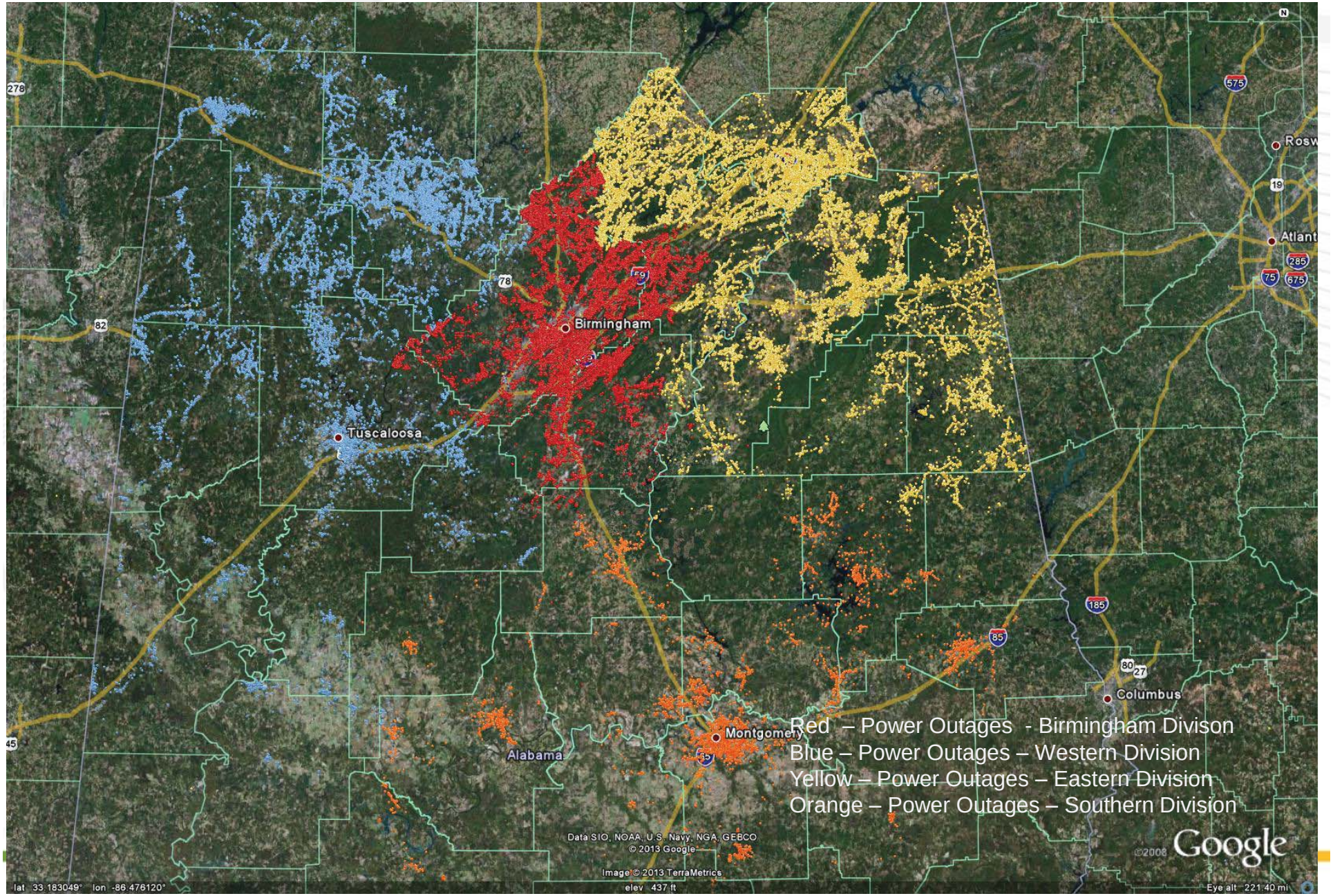
Demand Meters

SMART ENERGY

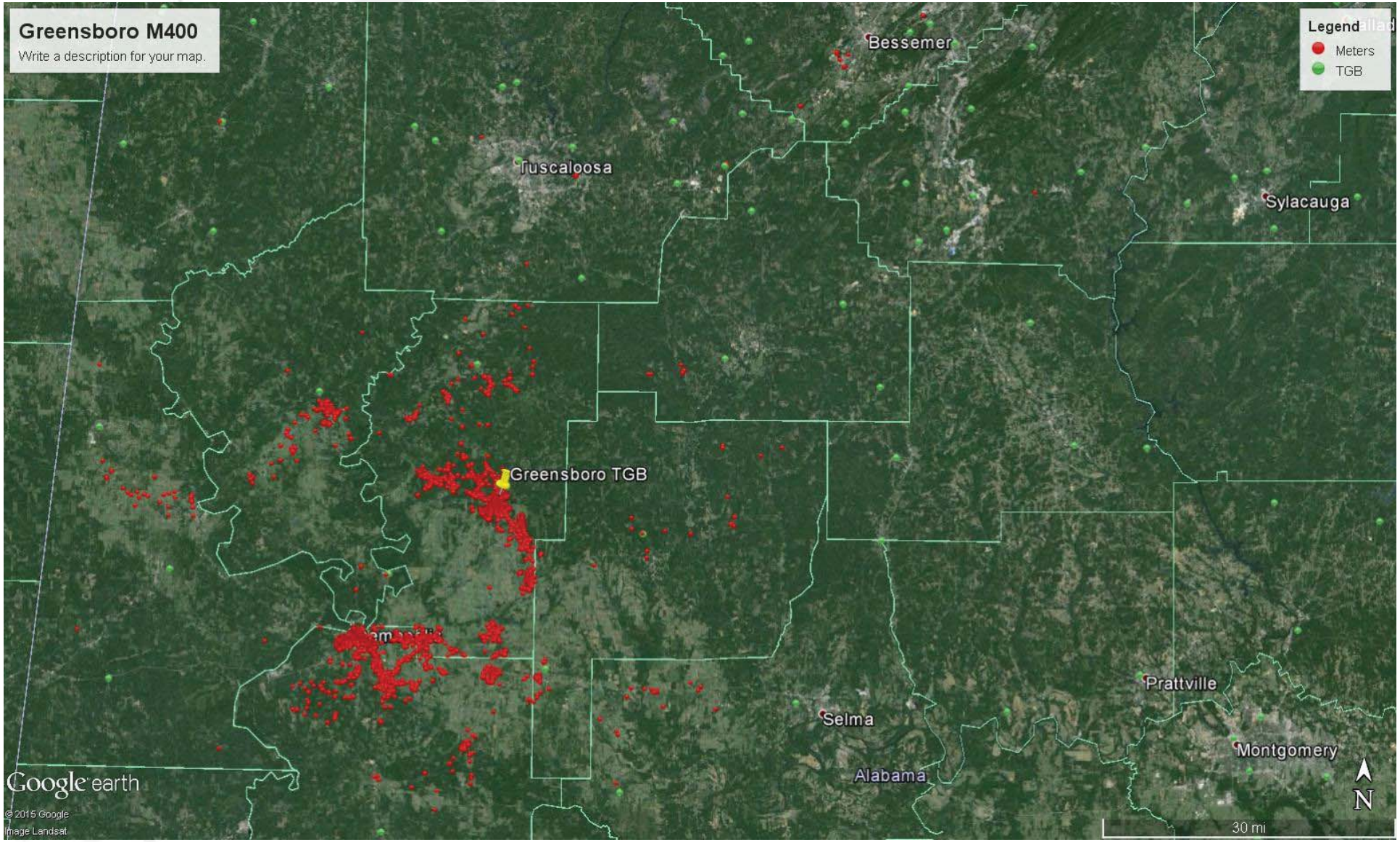
Exploded View of the Tuscaloosa Area – April, 2011



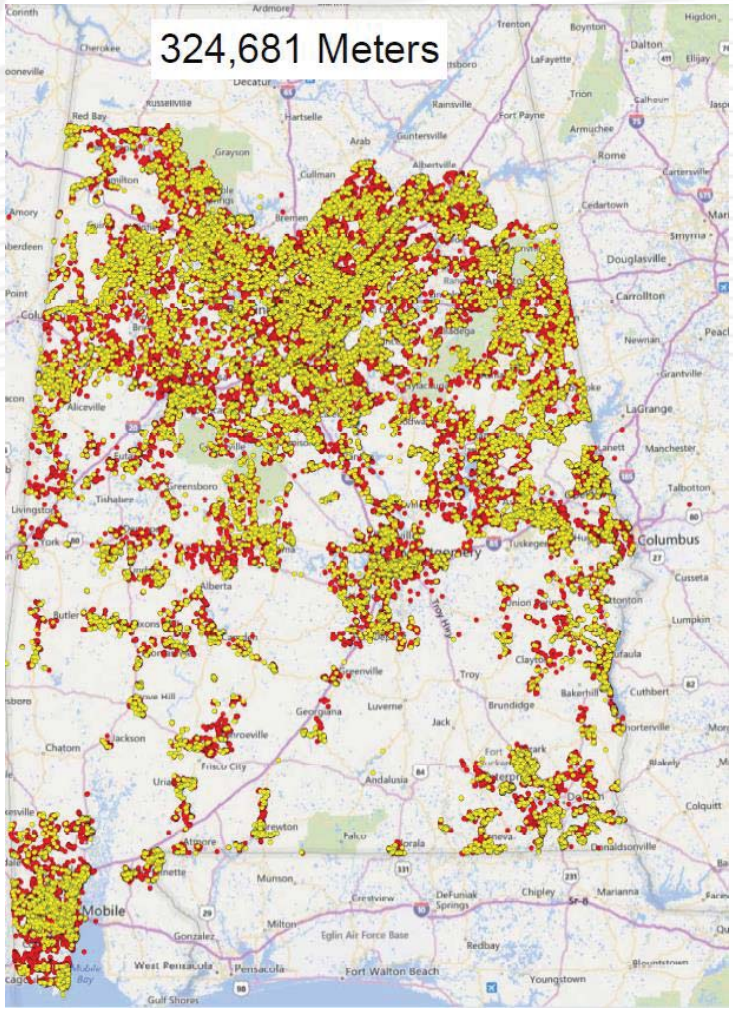
Derecho 2013



Typical Base Station



Impact of 5 DB and 10 dB Overlaid



Conclusion of Additional Noise

- 10 dB impacts over 4 times more meters than 5 dB
- However, 5 dB of interference is just as substantial as a 10 dB interference ..