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A Sensible Approach to Building the FirstNet Network

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FirstNet is LTE

- ➔ Long Term Evolution (LTE) for a technology
 - Gets better over time
 - New Standards and additions being released yearly
 - Vendors and operators pick and chose what new features to support and/or add to their network
- ➔ Network Build Out: Long Term Evolution
 - Not enough money to happen quickly
 - No partners on the horizon to assist
 - FirstNet is really a U. S. Government entity and NOT an Independent Authority
 - Slows everything down by years
 - Red tape limits what FirstNet can do, and how they do it
 - A new approach is called for!
- ➔ Enter into agreements with carriers for seamless roaming
 - Single bill for both commercial and FirstNet systems as an option

Network Build Out—Phase ONE

- ➔ Goal: Build out to street level vehicle only coverage
 - Most cell sites are not sectorized, but omni-directional
- ➔ Build out to vehicle coverage
 - Utilize Secure Wi-Fi/4.9 GHz spectrum for device to vehicle communications (vehicle repeats to and from network)
 - Fill in with Satellite back-end deployables/Cells on Wheels (COWS)
- ➔ Add Suburban and Rural Partners and build out more robust system in those areas
- ➔ Deploy fixed cell sites in remotes areas with Satellite back-end
- ➔ Local communities/States can add sites as approved
- ➔ Track system usage, develop usage data for potential partnerships in metro areas
- ➔ **This system can be built for the funds available!**

Network Build Out—Phase Two

- Goal: Extend coverage directly to handheld devices outdoors
- Sectorize cell sites to gain capacity where needed
- Fill in sites as needed for better metro coverage/capacity
- Build where partners need/want services
- Permit States/Locals to continue to add new cell sites: Macro, Micro, Pico, and Distributed Area Systems (DAS)
- Work with commercial network operators to co-locate FirstNet if needed, even if operator is not a FirstNet Partner
- Test and prove out true pre-emption priority access for first responders
- Develop plan/pricing for in building system expansion
- Redefine partnership opportunities

Network Build-out Phase 3 and on-going

- ➔ Goal-to provide LTE broadband coverage equal to existing Land Mobile Radio (LMR) coverage
- ➔ Align additional partners, including utility companies, power companies and others
- ➔ Continue build out with FirstNet, Partner, and local organizations to maximize network investment
- ➔ Review and adjust monthly user fees as needed
- ➔ Launch and test combination LTE/LMR redvices
- ➔ Launch and test non-mission critical voice (PTT) services and monitor network usage during incidents
- ➔ Provide limited PTT bridging between LMR/FirstNet for some testing and exercises
- ➔ Build-out in-building coverage are required

Time Frame for FirstNet Build

- ➔ Phase one: up to 3 years
- ➔ Phase Two: 2-4 years
- ➔ Phase Three: 3- on
- ➔ Total project time:
 - If FirstNet remains captive of NTIA/DOC and is required to act like a Federal Agency: 10 years
 - If FirstNet can become what it is suppose to me, an independent Authority, this time can be halfed

- ➔ Can FirstNet, as a U.S. Government Run Organization provide the network and services Public Safety so badly needs?
- ➔ Your answer here:

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