Bringing the Network With You: The use of deployable technology for First Responders

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Bringing the Network With You

➢ Deployable technology can be utilized to deliver LTE to less populated areas and help deliver coverage to "every square meter of the country" as envisioned by FirstNet Chairman Ginn.

➢ Working in conjunction with fixed infrastructure, deployable technology improves coverage and capacity.

➢ Deployable technology creates an environment that allows First Responders to bring the network as needed.

– Immediately available upon arrival on scene

– Supports applications with a local application server

– Backhaul only what is necessary

– Be fully interoperable with fixed assets

Lightweight Deployable Solutions – Bringing the Network with You

Scalable Solutions on Multiple Platforms Deliver FirstNet Capability Where You Need It

LTE Macro & Small Form Factor

One Size Fits All?

No. Use the appropriate form factor to deliver the required communications capability.

	Macro	Small Form Factor
Typical Use Type	Longer term - Incident Recovery	Immediate - Incident Response
Typical Ownership	Likely FirstNet or State level	Likely Local Public Safety
Backhaul Requirements	Larger Capacity; Likely satellite based or commercial microwave	Reduced Capacity; Likely 4.9GHz microwave or commercial LTE based
User Base	Supports all agencies on-scene	Likely supports only sponsoring agency
Coverage	Wider area. 1-10 mile radius depending upon terrain and antennas	Local area. 0.25 mile radius typical
Applications	Available from National FirstNet or local application servers	Available from local servers Aligned to local agency IT policy and first responder procedures

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Emerging Technology Developments and Challenges

➢ Interference between fixed and deployable system must be managed.
  – Policy and process can also reduce interference
  – Technology supports automated methods

➢ Interoperability between fixed and deployable is possible with some additional standardization or policies.
  – Limit traffic between systems to conserve limited backhaul resource
  – Consider Jurisdictional Area Networks and Role Based Provisioning

➢ Reduce backhaul costs
  – Backhaul only what is needed
  – Leverage commercial mobile broadband providers for backhaul where available

➢ Develop distributed applications
  – Keep information local whenever possible

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Summary

➢ Deployable Systems assure that Public Safety always has access to critical communications as they:

- – Provide an LTE network immediately available upon arrival on scene
- – Use the same user equipment as fixed infrastructure
- – Are fully interoperable with fixed assets
- – Support applications with a local application server
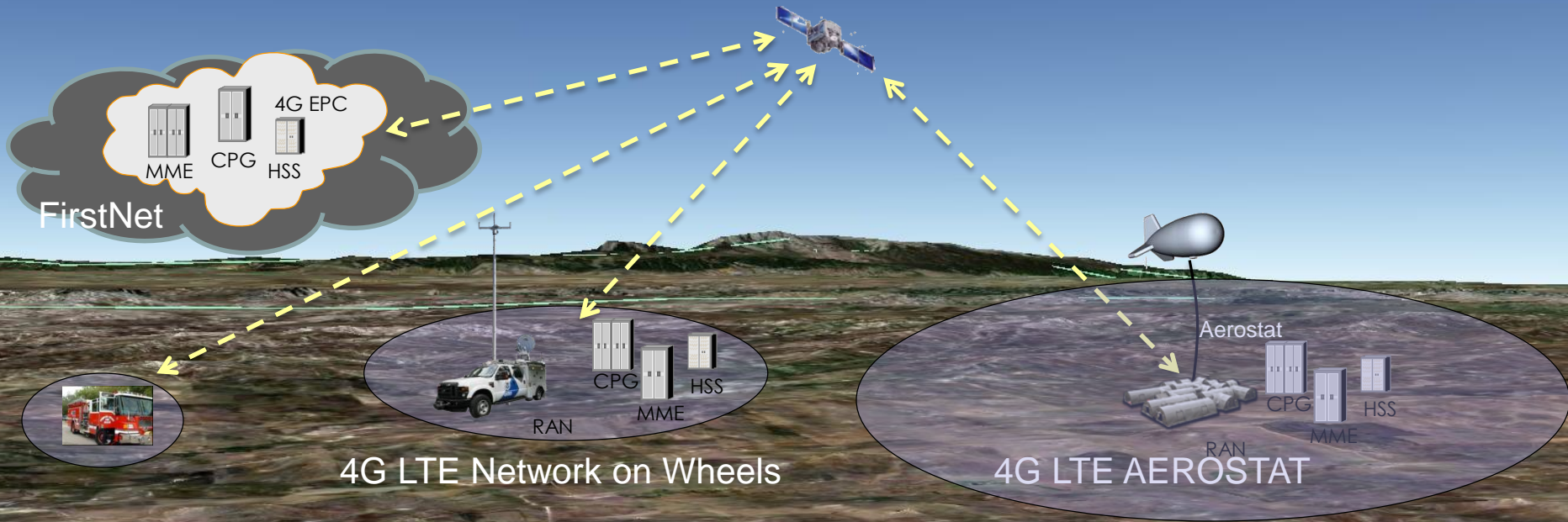- – Backhaul only what is necessary

Thank You.

Any questions or follow-up:

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Macro Deployable Systems

Deployable LTE Networks

- Quick and easy to deploy.
- Local Core Network provides LTE call processing at the edge.
- On-board Application Servers can provide video, voice and data without backhaul.
- Interoperability with FirstNet Network.
- Reduced backhaul requirements.