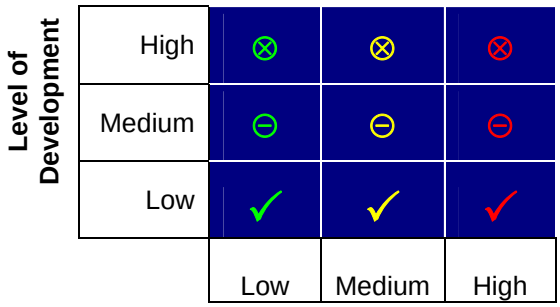
Appendix A - Evaluation of required technology enhancements to meet SAFECOM requirements

Legend



1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
Applications												
Network Congestion Management Requirements												
SC -6.1-R1	Where possible, applications and services must support rate reduction techniques to reduce the network bandwidth used during congested conditions.	Yes	Yes	⊖	⊖	⊖	✓	✓	⊗	⊗	⊖	⊖
PAN, Class of Service 0 (emergency traffic orginiating from Device)												
SC -6.1.1.1-R1	The network must support creation and implementation o automated emergency triggers, e.g., if a bulletproof vest detects an impact or a firefighter's helmet is impacted, it can originate a message to appropriate parties.	Yes	No	⊗	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊗
SC -6.1.1.1-R2	Where possible, applications and services in this class of service must support rate reduction techniques to reduce the network bandwidth used during congested conditions to ensure delivery.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
PAN, Class of Service 1 (traffic orginiating from Device)												
SC -6.1.1.2-R1	The network must support real-time transmission of vital statistics of objects on the PAN, e.g., the heart rate of an LE officer and the air level of the tank for a firefighter.	Yes	No	⊖	⊖	✓	⊖	N/A	⊖	⊖	⊗	⊖
IAN, Class of Service 0 (real time, jitter sensetive, high-interaction applicatio, separate queue with prefertential servicing & traffic grooming)												
SC -6.1.2.1-R1	The network must support full-duplex, peer-to-peer, **mission-critical** voice communications in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	No	⊖	⊖	⊖	⊗	⊖	⊗	⊗	⊗	⊖
SC -6.1.2.1-R2	The network must support full-duplex, peer-to-peer, **mission-critical** video teleconferencing in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	No	⊖	⊖	⊗	⊗	N/A	⊗	⊖	⊗	⊖
IAN, Class of Service 1 (real-time, jitter sensetive, interactive appl, separate queue with prefertential servicing & traffic grooming)												
SC -6.1.2.2-R1	The network must support full-duplex,peer-to-peer, voice communications in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	Yes	⊖	⊖	⊗	⊗	⊗	⊗	⊗	⊗	⊖
SC -6.1.2.2-R2	The network must support full-duplex, peer-to-peer, video teleconferencing in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	Yes	⊖	⊖	⊗	⊗	N/A	⊗	⊖	⊗	⊖
IAN, Class of service 2 (Highly interactive and needs separate queue with drop priority)												
SC -6.1.2.3-R1	The network must support a signaling protocol that is capable of providing session control for both voice and video applications, as well as instant messaging. Additionally, this signaling protocol must be capable of establishing presence on the network.	Yes	Yes	✓	✓	✓	✓	⊖	⊗	⊖	⊖	⊖
IAN, Class of Service 3 (interative, needs separate queue with drop prority)												
SC -6.1.2.4-R1	The network must support peer-to-peer instant messaging.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.1.2.4-R2	The network must support automated database transactions.(no human interaction)	Yes	No	✓	✓	⊖	⊖	✓	⊖	⊖	⊖	⊖
SC -6.1.2.4-R3	The network must support database transactions.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
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IAN, Class of Service 4 (low-loss traffic, needs long queue with drop priority)												
SC -6.1.2.5-R1	The network must support voice paging in which the transmission is sent to one or more participants.	Yes	Yes	✓	✓	⊖	✓	⊖	⊖	✓	⊖	⊖
SC -6.1.2.5-R2	The network must support bulk file transfer.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.1.2.5-R3	The network must support near-real-time video streaming.	Yes	Yes	⊖	⊖	⊗	⊗	N/A	⊖	⊖	⊖	⊖
SC -6.1.2.5-R4	The network must support three-dimensional geolocation information transmissions.	Yes	No	⊖	⊖	⊖	✓	N/A	✓	✓	⊗	⊖
SC -6.1.2.5-R5	The network must support devices' status queries from any authorized source from any location.	Yes	No	⊖	✓	⊖	⊖	⊖	⊖	⊗	⊖	⊖
IAN, Class of Service 5 (traditional applications of default networks, need separate queue with the lowest priority)												
SC -6.1.2.6-R1	The network must support World Wide Web browser-based applications.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	✓	✓
SC -6.1.2.6-R2	The network must support e-mail.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	✓	✓
JAN, Class of Service 0 (real-time, jistter sensetive, high- interactive appl, need separate queue with prefrential servicing & traffic gooming)												
SC -6.1.3.1-R1	The network must support full-duplex, peer-to-peer, **mission-critical** voice communications in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	No	⊖	⊖	⊗	⊗	⊗	⊗	⊗	⊗	⊖
SC -6.1.3.1-R2	The network must support full-duplex, peer-to-peer, **mission-critical** video teleconferencing in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	No	⊖	⊖	⊗	⊗	N/A	⊗	⊖	⊗	⊖
JAN, Class of Service 1 (real-time, jitter sensetive, interactive, need separate queue with preferential servicing & traffic grooming)												
SC -6.1.3.2-R1	The network must support full-duplex, peer-to-peer, voice communications in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	Yes	⊖	⊖	⊗	⊗	⊗	⊗	⊗	⊗	⊖
SC -6.1.3.2-R2	The network must support full-duplex, peer-to-peer, video teleconferencing in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	Yes	⊖	⊖	⊗	⊗	N/A	⊗	⊖	⊗	⊖
JAN, Class of Service 2 (highly -interactive, needs separate queue with drop priority)												
SC -6.1.3.3-R1	The network must support a signaling protocol that is capable of providing session control for both voice and video applications, as well as instant messaging. Additionally, this signaling protocol must be capable of establishing presence on the network.	Yes	Yes	✓	✓	✓	✓	⊖	⊗	⊖	⊖	⊖
JAN, Class of Service 3 (interactive, needs separate queue with drop priority)												
SC -6.1.3.4-R1	The network must support peer-to-peer instant messaging.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -6.1.3.4-R2	The network must support automated database transactions.	yes	Yes	✓	✓	⊖	⊖	✓	⊖	⊖	⊖	⊖
SC -6.1.3.4-R3	The network must support database transactions.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
JAN, Class of Service 4 (low-loss traffic only, needs a long queue with drop priority)												
SC -6.1.3.5-R1	The network must support voice paging in which the transmission is sent to one or more participants.	Yes	Yes	✓	✓	⊖	✓	⊖	⊖	✓	⊖	⊖
SC -6.1.3.5-R2	The network must support bulk file transfer.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.1.3.5-R3	The network must support near-real-time video streaming.	Yes	Yes	⊖	⊖	⊗	⊗	N/A	⊖	⊖	⊖	⊖
SC -6.1.3.5-R4	The network must support three-dimensional reolocation information transmissions.	Yes	No	⊖	⊖	⊖	✓	N/A	✓	✓	⊗	⊖
SC -6.1.3.5-R5	The network must support devices' status queries from any authorized source from any location.	Yes	No	⊖	✓	⊖	⊖	⊖	⊖	⊗	⊖	⊖
JAN, Class of Service 5 (traditional applications of default networks, will need a separate queue with the lowest priority)												
SC -6.1.3.6-R1	The network must support World Wide Web browser-based applications.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	✓	✓
SC -6.1.3.6-R2	The network must support e-mail.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	✓	✓
EAN, Class of Service 0 (real-time, jitter sensetive, high-interactive, needs separate queue with preferential servicing & traffic grooming)												
SC -6.1.4.1-R1	The network must support full-duplex, peer-to-peer, **mission-critical** voice communications in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	No	⊖	⊖	⊖	⊗	⊖	⊗	⊗	⊗	⊖
SC -6.1.4.1-R2	The network must support full-duplex, peer-to-peer, **mission-critical** video teleconferencing in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	No	⊖	⊖	⊗	⊗	N/A	⊗	⊖	⊗	⊖
EAN, Class of Service 1 (real-time, jitter sensetive, interactive, needs separate queue with preferential servicing & traffic grooming)												
SC -6.1.4.2-R1	The network must support full-duplex, peer-to-peer, voice communications in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	Yes	⊖	⊖	⊗	⊗	⊗	⊗	⊗	⊗	⊖
SC -6.1.4.2-R2	The network must support full-duplex, peer-to-peer, video teleconferencing in which two or more participants are involved. The session must allow for late entry. User identification must be a feature of the service.	Yes	Yes	⊖	⊖	⊗	⊗	N/A	⊗	⊖	⊗	⊖
EAN, Class of Service 2 (highly-interactive , needs separate queue with drop priority)												
SC -6.1.4.3-R1	The network must support a signaling protocol that is capable of providing session control for both voice and video applications, as well as instant messaging. Additionally, this signaling protocol must be capable of establishing presence on the network.	Yes	Yes	✓	✓	✓	✓	⊖	⊗	⊖	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
EAN, Class of Service 3 (interactive, needs separate queue with drop priority)												
SC -6.1.4.4-R1	The network must support peer-to-peer instant messaging.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.1.4.4-R2	The network must support automated database transactions.	Yes	Yes	✓	✓	⊖	⊖	✓	⊖	⊖	⊖	⊖
SC -6.1.4.4-R3	The network must support database transactions.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
EAN, Class of Service 4 (low-loss traffic only and needs a long queue with drop priority)												
SC -6.1.4.5-R1	The network must support voice paging in which the transmission is sent to one or more participants.	Yes	Yes	✓	✓	⊖	✓	⊖	⊖	✓	⊖	⊖
SC -6.1.4.5-R2	The network must support bulk file transfer.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.1.4.5-R3	The network must support near real time video streaming.	Yes	Yes	⊖	⊖	⊗	⊗	N/A	⊖	⊖	⊖	⊖
SC -6.1.4.5-R4	The network must support three-dimensional geolocation information transmissions.	Yes	Yes	⊖	⊖	⊖	✓	N/A	✓	✓	⊗	⊖
SC -6.1.4.5-R5	The network must support devices status queries from any authorized source from any location.	Yes	Yes	⊖	✓	⊖	⊖	⊖	⊖	⊗	⊖	⊖
EAN, Class of Service 5 (traditional applications of default networks, will need a separate queue with the lowest priority)												
SC -6.1.4.6-R1	The network must support World Wide Web browser-based applications.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	✓	✓
SC -6.1.4.6-R2	The network must support e-mail.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	✓	✓
Security												
Authentication												
SC -6.2.1-R1	A public safety user must be authenticated before the use of all network (PAN, IAN, JAN, and EAN) resources.	Yes	Yes	✓	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
SC -6.2.1-R2	A public safety user must be able to authenticate from any geographic location on the network.	Yes	Yes	⊖	✓	✓	⊖	N/A	⊖	⊖	⊖	⊖
SC -6.2.1-R3	A public safety user's traffic must be tied directly to the user's identity.	Yes	No	⊗	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Authorization												
SC -6.2.2-R1	A public safety user must be authorized to use specific resources.	Yes	No	✓	✓	✓	✓	⊖	⊖	⊖	⊖	⊖
SC -6.2.2-R2	A public safety user must be able to gain authorization from any location on the network.	Yes	Yes	✓	✓	✓	✓	N/A	✓	✓	⊖	✓
SC -6.2.2-R3	A public safety user's authorization must be tied to a role-based access control method.	Yes	No	⊖	⊖	⊗	✓	⊖	⊗	⊗	⊗	⊖
Privacy												
SC -6.2.3-R1	Access to (seeing the contents of) traffic traversing the network must be limited to authorized recipient(s).	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
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SC -6.2.3-R2	The traffic must conform to the current Federal Information Processing Standards (FIPS) publication for data privacy, or its current equivalent.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Integrity (inability to be modified without detection)												
SC -6.2.4-R1	The traffic traversing the network must be immune to attacks against its integrity.	Yes	Yes	✓	✓	✓	✓	⊖	⊗	⊖	⊖	⊖
SC -6.2.4-R2	The traffic must conform to the current FIPS publication for data integrity, or its current equivalent.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Monitoring (admin = detailed network observation)												
SC -6.2.5-R1	The traffic traversing the network must have non-repudiation. This has the effect of creating an audit trail. This audit trail must be protected from unauthorized access, modification, and destruction.	Yes	No	⊖	⊖	⊗	⊖	⊖	⊗	⊗	⊖	⊖
SC -6.2.5-R2	The network must be able to be monitored by authorized users in every aspect of its functionality anywhere on the network.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -6.2.5-R3	The network will log the following events: device failure (including details such as model, serial number, hardware/software versions, etc.); outage start time; diagnosis time; solution implementation time; and full functionality restored time.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -6.2.5-R4	The network must have a maximum defined period in which, through monitoring and self-tests, network component failures are detected and reported.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Attack Prevention and Detection												
SC -6.2.6-R1	The network must be capable of continued operations in the face of a denial of service attack, using any means available.	Yes	No	⊖	✓	⊖	⊗	⊖	⊖	⊖	⊖	⊖
SC -6.2.6-R2	The network must be immune to traffic flow analysis.	Yes	Yes	⊖	✓	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -6.2.6-R3	The network must be capable of geolocating the source of an attack against any node on the network.	Yes	No	✓	✓	⊖	⊖	⊖	⊖	⊗	⊖	⊖
SC -6.2.6-R4	The network must be capable of effective passive/active attack monitoring and defense deployment.	Yes	No	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Physical Security												
SC -6.3-R1	Access to fixed infrastructure must be controlled such that only authorized individuals have access to equipment.	Yes	Yes	N/A	N/A	N/A	✓	✓	✓	✓	✓	✓
SC -6.3-R2	Access to portable and mobile PSCDs must be controlled such that only authorized individuals have access to equipment.	Yes	No	⊖	⊖	⊖	N/A	N/A	N/A	⊖	N/A	N/A
Operations												
Administrative requirements for the network												
SC -6.4.1-R1	Authorized administrators must be able to create, control, and configure user groups. The users associated with a group can originate from any source where the administrator has nominal access to the user roster.	Yes	Yes	✓	✓	⊖	✓	⊖	⊗	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
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SC -6.4.1-R2	Authorized administrators must be able to configure and control the following aspects of a user group: on-the-fly user addition and deletion from a group; priorities; roaming;authorizations; security used; transmission power; etc.	Yes	Yes	⊖	⊖	⊖	✓	⊖	⊖	⊗	⊖	⊖
SC -6.4.1-R3	Authorized administrators must be able to disable a user's access to the network over the air.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.4.1-R4	Authorized administrators must be able to perform all administrative functions from anywhere on the network.	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.4.1-R5	Authorized administrators must be able to disable automated status reporting of objects on the network to prevent unwanted transmissions and to maintain emission control.	Yes	No	⊖	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.4.1-R6	Administrator capabilities will include broad policy definitions that will encompass most of the feature/functionality of the network.	Yes	Yes	✓	✓	✓	⊖	⊖	⊖	⊖	✓	✓
Maintenace (upgrading, monitoring performance modification, diagnostics, etc.)												
SC -6.4.2-R1	Authorized administrators must be able to perform routine maintenance without any user-noticeable degradation of the network.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.4.2-R2	Network self-tests and diagnostics must not cause any failure or degradation of any network function.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
Design Methodology (design best practices, including use of COTS technology & standards-based systems)												
SC -6.5-R1	COTS technology will be leveraged wherever possible.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.5-R2	The network must be based on standards and must not infringe upon any Intellectual Property Rights (IPR) that are not in the public domain or licensed at a first responder determined fair and reasonable cost.	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.5-R3	Standards used will be those that provide or take advantage of the broadest possible market base while meeting all of the stated requirements.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -6.5-R4	A well-defined migration path must be created for legacy systems to migrate toward a network satisfying the requirements in this document. (PS)	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -6.5-R5	The network design must provide as much backward compatibility as possible with legacy systems without sacrificing these requirements.	Yes	Yes	⊖	⊖	✓	⊖	⊗	⊖	⊖	✓	✓
First Responder Mobile Communications Device												
First responder mobile communications device (device first responder uses in vehicles)												
SC -7.1-R1	The device must support biometric identification techniques as a method of identifying a user to the device.	Yes	No	⊗	⊗	⊗	✓	⊖	⊖	⊖	✓	✓
SC -7.1-R2	The device must support real-time voice commands.	Yes	No	⊖	⊖	✓	✓	✓	✓	✓	✓	✓
SC -7.1-R3	The device must support voice language translation techniques.	Yes	No	⊖	⊖	⊗	✓	⊖	⊖	⊖	⊗	⊖
SC -7.1-R4	The device must support TTY/TDD interfaces.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -7.1-R5	The device must support human performance support systems (e.g., online help functions, operator and maintenance training, etc.).	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -7.1-R6	The device must be capable of capturing data pertinent to first responder operations and of sharing this data as necessary, as defined by the administrator.	Yes	No	⊗	⊗	⊗	✓	⊗	⊖	⊗	⊖	⊖
SC -7.1-R7	The device must be capable of storing an appropriate amount of data locally on the device.	Yes	Yes	⊖	⊖	✓	N/A	N/A	N/A	N/A	✓	N/A
SC -7.1-R8	The device must be capable of generating a transmission to other devices on the network based on those devices' geolocation relative to the transmitting device.	Yes	No	⊖	⊖	⊗	⊖	✓	✓	⊗	⊖	✓
SC -7.1-R9	The device must be capable of communications regardless of location: city street, highway, parking garage, high-rise building, airport, air/waterborne, etc.	Yes	No	✓	✓	✓	✓	⊖	⊖	✓	✓	✓
SC -7.1-R10	The device must support a status query from an authorized source.	Yes	Yes	✓	✓	✓	✓	N/A	✓	⊖	✓	✓
SC -7.1-R11	The device must be capable of supporting low probability of detection techniques.	Yes	No	⊖	✓	✓	N/A	N/A	✓	⊖	✓	N/A
SC -7.1-R12	The device must be reprogrammable over the air in a reasonable amount of time. Multiple device reprogramming can occur simultaneously.	Yes	Yes	⊖	✓	✓	✓	N/A	✓	⊗	⊖	⊖
SC -7.1-R13	The device must support personality cloning from device to device.	Yes	No	⊗	⊗	⊗	✓	✓	✓	⊗	✓	✓
SC -7.1-R14	The device must support hands-free operation.	Yes	No	⊗	⊗	✓	✓	✓	✓	✓	✓	✓
SC -7.1-R15	The device must support plug-and-play component add-on capabilities.	Yes	Yes	⊗	⊗	⊖	✓	✓	✓	⊖	⊖	⊖
First Responder Portable Communications Device												
First responder portable communications device (device that a first responder carries when not in vehicle)												
SC -7.2-R1	The device must support biometric identification techniques as a method of identifying a user to the device.	Yes	No	⊗	⊗	⊗	✓	⊖	⊖	⊖	✓	✓
SC -7.2-R2	The device must support real-time voice commands.	Yes	No	⊖	⊖	✓	✓	✓	✓	✓	✓	✓
SC -7.2-R3	The device must support voice language translation techniques.	Yes	No	⊖	⊖	⊗	✓	⊖	⊖	⊖	⊗	⊖
SC -7.2-R4	The device must support TTY/TDD interfaces.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -7.2-R5	The device must support human performance support systems (e.g.,online help functions, operator and maintenance training, etc.).	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -7.2-R6	The device must be capable of capturing data pertinent to first responder operations and of sharing this data as necessary, as defined by the administrator.	Yes	No	⊗	⊗	⊗	✓	⊗	⊖	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -7.2-R7	The device must be capable of storing an appropriate amount of data locally on the device without sacrificing size, weight, and power consumption beyond reasonable expectations.	Yes	Yes	⊖	⊖	✓	N/A	N/A	N/A	N/A	✓	N/A
SC -7.2-R8	The device must be capable of generating a transmission to other devices on the network based on those devices' geolocation relative to the transmitting device.	Yes	No	⊖	⊖	⊗	⊖	✓	✓	⊗	⊖	✓
SC -7.2-R9	The device must be capable of communications regardless of location: city street, highway, parking garage, high-rise building, airport, air/waterborne, etc.	Yes	No	✓	✓	✓	✓	⊖	⊖	✓	✓	✓
SC -7.2-R10	The device must support a status query from an authorized source.	Yes	Yes	✓	✓	✓	✓	N/A	✓	⊖	✓	✓
SC -7.2-R11	The device must be capable of supporting low probability of detection techniques.	Yes	No	⊖	✓	✓	N/A	N/A	✓	⊖	✓	N/A
SC -7.2-R12	The device must be reprogrammable over the air in a reasonable amount of time. Multiple device reprogramming can occur simultaneously.	Yes	Yes	⊖	✓	✓	✓	N/A	✓	⊗	⊖	⊖
SC -7.2-R13	The device must support personality cloning from device to device.	Yes	No	⊗	⊗	⊗	✓	✓	✓	⊗	✓	✓
SC -7.2-R14	The device must support hands-free operations.	Yes	No	⊗	⊗	✓	✓	✓	✓	✓	✓	✓
SC -7.2-R15	The device must have a maximum acceptable weight defined separately for each first responder discipline.	Yes	Yes	✓	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC -7.2-R16	The device's shape must be appropriate to the application in which it is used.	Yes	Yes	✓	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC -7.2-R17	The device must have a minimum acceptable battery life defined separately for each first responder discipline.	Yes	Yes	⊖	✓	✓	⊖	✓	✓	✓	✓	✓
SC -7.2-R18	The device must adhere to discipline-specific usability standards. These standards could cover such aspects of the device as button size, screen size, etc.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -7.2-R19	The device must not introduce undue operator fatigue during continuous usage over a 12-hour period every 24 hours.	Yes	No	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
SC -7.2-R20	The device must accommodate use by the 5th percentile female to a 95th percentile male.	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -7.2-R21	The device must conform to a safety standard.	Yes	Yes	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
SC -7.2-R22	The device must support plug-and-play component add-on capabilities.	Yes	Yes	⊗	⊗	⊖	✓	✓	✓	⊖	⊖	⊖
SC -7.2-R23	The device must support citizen use in the event of an emergency.	Yes	No	⊖	⊖	⊗	✓	✓	✓	⊖	⊖	⊖
Public Safety Sensors												

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -7.3-R1	The device must support status queries and other types of communications over the network in real time.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -7.3-R2	The device must be capable of generating a transmission to other devices on the network based on those devices' geolocation relative to the transmitting device.	Yes	No	⊖	⊖	⊗	⊖	✓	✓	⊗	⊖	✓
SC -7.3-R3	The device must be capable of communications regardless of location: city street, highway, parking garage, high-rise building, airport, air/waterborne, etc.	Yes	Yes	✓	✓	✓	✓	⊖	⊖	✓	✓	✓
SC -7.3-R4	The device must support a status query from an authorized source.	Yes	Yes	✓	✓	✓	✓	N/A	✓	⊖	✓	✓
SC -7.3-R5	The device must be capable of supporting low probability of detection techniques.	Yes	No	⊖	✓	✓	N/A	N/A	✓	⊖	✓	N/A
Network Priority												
Priority (for all network levels)												
SC -8.1.1-R1	In addition to associating classes of service to an application or service, each packet will be capable of having a priority level associated with it. This prioritization will provide all precedence information with regard to traffic traversing a node.	Yes	No	⊖	⊖	⊖	⊗	⊗	⊗	⊗	⊖	⊖
Personal Area Network												
Performance requirements, PAN, specific to Class of Service 0												
SC -8.1.2.1.1-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.1.1-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.1.1-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.1.1-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, PAN, specific to Class of Service 1												
SC -8.1.2.1.2-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.1.2-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.1.2-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.1.2-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Reliability of PAN												
SC -8.1.2.2-R1	The network must be capable of handling all of the Class of Service 0 traffic, and any signaling associated with it, even under constrained network conditions.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.2.2-R2	The network must have a minimum defined reliability. Reliability is defined as the percentage of packets delivered satisfying Class of Service requirements on the first attempt.	Yes	Yes	⊖	⊖	✓	⊖	⊖	⊗	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
Availability Temporal (or time-based) requirements for the PAN												
SC -8.1.2.3.1-R1	The network must have a defined minimum acceptable temporal availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.2.3.1-R2	The network must be capable of operating 24 hours a day, 7 days a week, 365 days a year.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Availability Spatial (or space-based) requirements for the PAN												
SC -8.1.2.3.2-R1	The network must have a defined minimum acceptable spatial availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Horizontal (coverage area) Scalability of the PAN												
SC -8.1.2.4.1-R1	The network must be able to scale in terms of coverage area in a very cost-efficient manner, while still meeting all of the requirements for the particular type of network that is being extended.	Yes	No	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.2.4.1-R2	The network must support the ability to drop in infrastructure and become operational with little to no configuration or setup required.	Yes	No	⊖	✓	✓	⊖	⊖	⊖	⊖	✓	✓
Vertical (Number of users) scalability of the PAN												
SC -8.1.2.4.2-R1	The network must be capable of dynamically scaling to accommodate a growing number of users while not sacrificing any **mission-critica**l services or applications.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
Survivability requirements for the PAN (ability of network to continue operating under adverse or destructive conditions)												
SC -8.1.2.5-R1	The network will not have any single points of failure (SPOF) where economically feasible.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.2.5-R2	The network must be capable of self-healing functionality.	Yes	Yes	⊖	✓	✓	⊗	⊖	⊗	⊗	⊖	⊖
SC -8.1.2.5-R3	The network must support ad hoc network creation in the absence of infrastructure.	Yes	No	⊖	⊖	⊖	⊖	⊖	N/A	N/A	N/A	N/A
SC -8.1.2.5-R4	The network must be able to operate through power fluctuations and/or power loss for a defined period of time.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Restorability (ease of restoring PAN functionality in the event of a catastrophic failure)												
SC -8.1.2.6-R1	The network will have a defined maximum amount of time for restoration or replacement of critical infrastructure.	Yes	Yes	✓	✓	✓	✓	✓	✓	⊖	✓	✓
Spectrum and/or Network Efficiency												
SC -8.1.2.7-R1	The RF system must be spectrally efficient to a minimum quantifiable degree.	Yes	Yes	⊖	✓	✓	⊖	✓	⊖	✓	✓	✓
SC -8.1.2.7-R2	The goodput (information-to-overhead ratio) of the network must be specific to a minimum quantifiable degree.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	✓
Incident Area Network												
Performance requirements, IAN, specific to Class of Service 0												

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.3.1.1-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.1-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.1-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.1-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, IAN, specific to Class of Service 1												
SC -8.1.3.1.2-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.2-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.2-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.2-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, IAN, specific to Class of Service 2												
SC -8.1.3.1.3-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.3-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.3-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.3-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, IAN, specific to Class of Service 3												
SC -8.1.3.1.4-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.4-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.4-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.4-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, IAN, specific to Class of Service 4												
SC -8.1.3.1.5-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.5-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.5-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.3.1.5-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, IAN, specific to Class of Service 5												
SC -8.1.3.1.6-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.6-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.6-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.3.1.6-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Reliability of IAN												
SC -8.1.3.2-R1	The network must be capable of handling all of the Class of Service 0 traffic, and any signaling associated with it, even under constrained network conditions.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.3.2-R2	The network must have a minimum defined reliability. Reliability is defined as the percentage of packets delivered satisfying Class of Service requirements on the first attempt.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Availability Temporal (or time-based) requirements for the IAN												
SC -8.1.3.3.1-R1	The network must have a defined minimum acceptable temporal availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.3.3.1-R2	The network must be capable of operating 24 hours a day, 7 days a week, 365 days a year.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Avalibility Spatial (or space-based) requirements for the IAN												
SC -8.1.3.3.2-R1	The network must have a defined minimum acceptable spatial availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Horizontal (coverage area) Scalability of the IAN												
SC -8.1.3.4.1-R1	The network must be able to scale in terms of coverage area in a very cost-efficient manner, while still meeting all of the requirements for the particular type of network that is being extended.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.3.4.1-R2	The network must support the ability to drop in infrastructure and become operational with little to no configuration or setup required.	Yes	No	⊖	✓	✓	⊖	⊖	⊖	⊖	✓	✓
Vertical (Number of users) scalability of the IAN												
SC -8.1.3.4.2-R1	The network must be capable of dynamically scaling to accommodate a growing number of users while not sacrificing any mission-critical services or applications.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
Survivability requirements for the IAN (ability of network to continue operating under adverse or destructive conditions)												
SC -8.1.3.5-R1	The network will not have any SPOF where economically feasible.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.3.5-R2	The network must be capable of self-healing functionality.	Yes	Yes	⊖	✓	✓	⊗	⊖	⊗	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.3.5-R3	The network must support ad hoc network creation in the absence of infrastructure.	Yes	No	⊖	⊖	⊖	⊖	⊖	N/A	N/A	N/A	N/A
SC -8.1.3.5-R4	The network must be able to operate through power fluctuations and/or power loss for a defined period of time.	yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Restorability (ease of restoring IAN functionality in the event of a catastrophic failure)												
SC -8.1.3.6-R1	The network will have a defined maximum amount of time for restoration or replacement of critical infrastructure.	Yes	No	✓	✓	✓	✓	✓	✓	⊖	✓	✓
Spectrum and/or Network Efficiency												
SC -8.1.3.7-R1	The network must support multicast communications. Multicast occurs when one device sends data across the network to multiple devices; however, depending on the multicast protocol, only nodes that are on the path from the originating device to the receivi	Yes	No	⊗	⊖	⊖	⊗	⊖	⊖	⊖	⊖	✓
SC -8.1.3.7-R2	The network must support efficient, unique, plug-and-play addressing of every object on the network that receives and/or transmits information of any kind.	Yes	Yes	⊗	⊗	⊖	⊖	⊗	⊖	⊗	⊗	⊖
SC -8.1.3.7-R3	The RF system must be spectrally efficient to a minimum quantifiable degree.	Yes	Yes	⊖	✓	✓	⊖	✓	⊖	✓	✓	✓
SC -8.1.3.7-R4	The goodput (information-to-overhead ratio) of the network must be specific to a minimum quantifiable degree.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	✓
Mobility and/or roaming requirements for the IAN												
SC -8.1.3.8-R1	The network must support first responders from outside jurisdictions using the IAN of a local jurisdiction	Yes	No	⊖	✓	⊖	⊖	⊖	⊗	⊗	⊖	⊖
SC -8.1.3.8-R2	The network must support user transition across multiple IANs while maintaining constant communications and full user functionality.	Yes	No	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖	⊖
SC -8.1.3.8-R3	The network must support seamless transition between the IAN and the JAN as a user becomes too far removed from the IAN for efficient communications.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Jurisdiction Area												
Performance requirements, JAN, specific to Class of Service 0												
SC -8.1.4.1.1-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.1-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.1-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.1-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, JAN, specific to Class of Service 1												
SC -8.1.4.1.2-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.2-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.2-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.4.1.2-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, JAN, specific to Class of Service 2												
SC -8.1.4.1.3-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.3-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.3-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.3-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, JAN, specific to Class of Service 3												
SC -8.1.4.1.4-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.4-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.4-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.4-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, JAN, specific to Class of Service 4												
SC -8.1.4.1.5-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.5-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.5-R3	A maximum Packet Loss Ratio will beestablished for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.5-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, JAN, specific to Class of Service 5												
SC -8.1.4.1.6-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.6-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.6-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.1.6-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Reliability of JAN												

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.4.2-R1	The network must be capable of handling all of the Class of Service 0 traffic, and any signaling associated with it, even under constrained network conditions.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.4.2-R2	The network must have a minimum defined reliability. Reliability is defined as the percentage of packets delivered satisfying Class of Service requirements on the first try.	Yes	No	⊖	⊖	✓	⊖	⊖	⊗	⊗	⊖	⊖
Availability Temporal (or time-based) requirements for the JAN												
SC -8.1.4.3.1-R1	The network must have a defined minimum acceptable temporal availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.4.3.1-R2	The network must be capable of operating 24 hours a day, 7 days a week, 365 days a year.	Yes	yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Avalibility Spatial (or space-based) requirements for the JAN												
SC -8.1.4.3.2-R1	The network must have a defined minimum acceptable spatial availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
Horizontal (coverage area) Scalability of the JAN												
SC -8.1.4.4.1-R1	The network must be able to scale in terms of coverage area in a very cost-efficient manner, while still meeting all of the requirements for the particular type of network that is being extended.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.4.4.1-R2	The network must support the ability to drop in infrastructure and become operational with little to no configuration or setup required.	Yes	No	⊖	✓	✓	⊖	⊖	⊖	⊖	✓	✓
Vertical (Number of users) scalability of the JAN												
SC -8.1.4.4.2-R1	The network must be capable of dynamically scaling to accommodate a growing number of users while not sacrificing any **mission-critical** services or applications.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
Survivability requirements for the JAN (ability of network to continue operating under adverse or destructive conditions)												
SC -8.1.4.5-R1	The network will not have any SPOF where economically feasible.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.4.5-R2	The network must be capable of self-healing functionality	Yes	Yes	⊖	✓	✓	⊗	⊖	⊗	⊗	⊖	⊖
SC -8.1.4.5-R3	The network must support ad hoc network creation in the absence of infrastructure	Yes	No	⊖	⊖	⊖	⊖	⊖	N/A	N/A	N/A	N/A
SC -8.1.4.5-R4	The network must be able to operate through power fluctuations and/or power loss for a defined period of time	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Restorability (ease of restoring JAN functionality in the event of a catastrophic failure)												
SC -8.1.4.6-R1	The network will have a defined maximum amount of time for restoration or replacement of critical infrastructure.	Yes	Yes	✓	✓	✓	✓	✓	✓	⊖	✓	✓
Spectrum and/or Network Efficiency												

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.4.7-R1	The network must support multicast communications. Multicast occurs when one device sends data across the network to multiple devices; however, depending on the multicast protocol, only nodes that are on the path from the originating device to the receivi	Yes	No	⊗	⊖	⊖	⊗	⊖	⊖	⊖	⊖	✓
SC -8.1.4.7-R2	The network must support efficient, unique, plug-and-play addressing of every object on the network that receives and/or transmits information of any kind.	Yes	Yes	⊗	⊗	⊖	⊖	⊗	⊖	⊗	⊗	⊖
SC -8.1.4.7-R3	The RF system must be spectrally efficient to a minimum quantifiable degree.	Yes	Yes	⊖	✓	✓	⊖	✓	⊖	✓	✓	✓
SC -8.1.4.7-R4	The goodput (information-to-overheadratio) of the network must be specific to a minimum quantifiable degree.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	✓
Mobility and/or roaming requirements for the JAN												
SC -8.1.4.8-R1	The network must support user motion while traveling at reasonable speeds. A reasonable speed implies speeds up to and including aircraft, such as helicopters or small propeller-driven planes.	yes	No	⊖	✓	✓	⊖	✓	✓	✓	✓	✓
SC -8.1.4.8-R2	The network must support user transition across multiple jurisdictions while maintaining constant communications and full user functionality.	Yes	No	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖	⊖
Extended Area Network												
Performance requirements, EAN, specific to Class of Service 0												
SC -8.1.5.1.1-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.1-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.1-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.1-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, EAN, specific to Class of Service 1												
SC -8.1.5.1.2-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.2-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.2-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.2-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, EAN, specific to Class of Service 2												
SC -8.1.5.1.3-R1	A maximum Packet Transfer Delaywill be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.3-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.3-R3	A maximum Packet Loss Ratio will beestablished for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.5.1.3-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, EAN, specific to Class of Service 3												
SC -8.1.5.1.4-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.4-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.4-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.4-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 3.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, EAN, specific to Class of Service 4												
SC -8.1.5.1.5-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.5-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.5-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.5-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance requirements, EAN, specific to Class of Service 5												
SC -8.1.5.1.6-R1	A maximum Packet Transfer Delay will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.6-R2	A maximum Packet Delay Variation will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.6-R3	A maximum Packet Loss Ratio will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.5.1.6-R4	A maximum Packet Error Ratio will be established for this network for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Reliability of EAN												
SC -8.1.5.2-R1	The network must be capable of handling all of the Class of Service 0 traffic, and any signaling associated with it, even under constrained network conditions.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.5.2-R2	The network must have a minimum defined reliability. Reliability is defined as the percentage of packets delivered satisfying Class of Service requirements on the first try.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Availability Temporal (or time-based) requirements for the JAN												
SC -8.1.5.3.1-R1	The network must have a defined minimum acceptable temporal availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.5.3.1-R2	The network must be capable of operating 24 hours a day, 7 days a week, 365 days a year.	Yes	yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Avalibility Spatial (or space-based) requirements for the EAN												

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.5.3.2-R1	The network must have a defined minimum acceptable spatial availability. Additionally, a clear and cohesive measurement methodology will be defined to address this requirement.	Yes	Yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Horizontal (coverage area) Scalability of the EAN												
SC -8.1.5.4.1-R1	The network must be able to scale in terms of coverage area in a very cost-efficient manner, while still meeting all of the requirements for the particular type of network that is being extended.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.5.4.1-R2	The network must support the ability to drop in infrastructure and become operational with little to no configuration or setup required.	Yes	No	⊖	✓	✓	⊖	⊖	⊖	⊖	✓	✓
Vertical (Number of users) scalability of the EAN												
SC -8.1.5.4.2-R1	The network must be capable of dynamically scaling to accommodate a growing number of users while not sacrificing any **mission-critica**l services or applications.	Yes	Yes	⊖	✓	✓	⊖	⊖	⊖	⊖	✓	✓
Survivability requirements for the EAN (ability of network to continue operating under adverse or destructive conditions)												
SC -8.1.5.5-R1	The network will not have any SPOF where economically feasible.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.5.5-R2	The network must be capable of self-healing functionality.	Yes	Yes	⊖	✓	✓	⊗	⊖	⊗	⊗	⊖	⊖
SC -8.1.5.5-R3	The network must support ad hoc network creation in the absence of infrastructure.	Yes	No	⊖	⊖	⊖	⊖	⊖	N/A	N/A	N/A	N/A
SC -8.1.5.5-R4	The network must be able to operate through power fluctuations and/or power loss for a defined period of time.	Yes	yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Restorability (ease of restoring EAN functionality in the event of a catastrophic failure)												
SC -8.1.5.6-R1	The network will have a defined maximum amount of time for restoration or replacement of critical infrastructure.	Yes	yes	✓	✓	✓	✓	✓	✓	⊖	✓	✓
Spectrum and/or Network Efficiency												
SC -8.1.5.7-R1	The network must support multicast communications. Multicast occurs when one device sends data across the network to multiple devices; however, depending on the multicast protocol, only nodes that are on the path from the originating device to the receivi	Yes	yes	⊗	⊖	⊖	⊗	⊖	⊖	⊖	⊖	✓
SC -8.1.5.7-R2	The network must support efficient, unique, plug-and-play addressing of every object on the network that receives and/or transmits information of any kind.	Yes	yes	⊗	⊗	⊖	⊖	⊗	⊖	⊗	⊗	⊖
SC -8.1.5.7-R3	The RF system must be spectrally efficient to a minimum quantifiable degree.	Yes	yes	⊖	✓	✓	⊖	✓	⊖	✓	✓	✓
SC -8.1.5.7-R4	The goodput (information-to-overhead ratio) of the network must be specific to a minimum quantifiable degree.	Yes	yes	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	✓
End to End Service requirement												
Performance Metrics Class 0												
SC -8.1.6.1.1-R1	A maximum end-to-end PacketTransfer Delay will be established for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.6.1.1-R2	A maximum end-to-end Packet DelayVariation will be established for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.1-R3	A maximum end-to-end Packet Loss Ratio will be established for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.1-R4	A maximum end-to-end Packet ErrorRatio will be established for Class of Service 0.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance Metrics Class 1												
SC -8.1.6.1.2-R1	A maximum end-to-end PacketTransfer Delay will be established for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.2-R2	A maximum end-to-end Packet DelayVariation will be established for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.2-R3	A maximum end-to-end Packet Loss Ratio will be established for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.2-R4	A maximum end-to-end Packet ErrorRatio will be established for Class of Service 1.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance Metrics Class 2												
SC -8.1.6.1.3-R1	A maximum end-to-end PacketTransfer Delay will be established for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.3-R2	A maximum end-to-end Packet DelayVariation will be established for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.3-R3	A maximum end-to-end Packet Loss Ratio will be established for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.3-R4	A maximum end-to-end Packet ErrorRatio will be established for Class of Service 2.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance Metrics Class 3												
SC -8.1.6.1.4-R1	A maximum end-to-end PacketTransfer Delay will be established for Class of Service 3.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.6.1.4-R2	A maximum end-to-end Packet DelayVariation will be established for Class of Service 3.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.6.1.4-R3	A maximum end-to-end Packet Loss Ratio will be established for Class of Service 3.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
SC -8.1.6.1.4-R4	A maximum end-to-end Packet ErrorRatio will be established for Class of Service 3.	Yes	No	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖	⊖
Performance Metrics Class 4												
SC -8.1.6.1.5-R1	A maximum end-to-end PacketTransfer Delay will be established for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.5-R2	A maximum end-to-end Packet DelayVariation will be established for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.5-R3	A maximum end-to-end Packet Loss Ratio will be established for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.5-R4	A maximum end-to-end Packet ErrorRatio will be established for Class of Service 4.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Performance Metrics Class 5												
SC -8.1.6.1.6-R1	A maximum end-to-end PacketTransfer Delay will be established for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.6-R2	A maximum end-to-end Packet DelayVariation will be established for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
SC -8.1.6.1.6-R3	A maximum end-to-end Packet Loss Ratio will be established for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖

1.1 Req #	Req Text	PS Need	Commercial Need	Device			RAN	Command/Control			Service & Appl.	External Svcs Interface
				Chipset	OS	Client		Interop Bridge	Netwk Ctrl	Cmd Ctr BSS OSS		
SC -8.1.6.1.6-R4	A maximum end-to-end Packet ErrorRatio will be established for Class of Service 5.	Yes	No	⊖	⊖	✓	⊖	⊖	⊖	⊗	⊖	⊖
Interfaces												
External (to public safety) networks that require an interface (through the EAN)												
SC -8.2-R1	The network must support the capability to interface with the PSTN.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -8.2-R2	The network must support interfacing with public utility information, such as that for the power grid, natural gas distribution systems, etc.	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -8.2-R3	The network must support the capability to interface with non-public safety data networks, including the Internet, in a secure manner.	Yes	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -8.2-R4	The network must be capable of accessing real-time weather information.	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓
SC -8.2-R5	The network must support the capability to interface with the Department of Transportation's Intelligent Transportation System (ITS).	Yes	No	✓	✓	✓	✓	✓	✓	✓	✓	✓