John Kennedy

From: Shin, Dong [dshin@comsearch.com]
Sent: Tuesday, November 07, 2006 3:02 PM
To: Shin, Dong; John Kennedy
Subject: RE: Justification for Experimental Application: 0495-EX-PL-2006
Attachments: ~$date_11_06_06_1 9GHz_Independence_Center_Letter_Why_Need_STA Experimental_License1 (2).doc; MobileShield Brochure v2.pdf_D-00295.pdf

Hi John,

Attached are a revised justification and a brochure for the demonstrations that we will use the Experimental License for. Also attached is the URL to a demonstration that we need the license for this week. There is a AFCEA Conference in Hawaii that will be linked to the Network at the Independence Center in Chantilly, VA. The conference is made up of over 800 members representing the military, federal government, and industry. The goal is to support the mission of AFCEA and ultimately, the security of our great nation.

AFCEA Conference Demonstration
http://www.afceahi.org/subpage.asp?section=2

Thanks for your help,

Dong Shin
Comsearch
703-726-5653

From: Shin, Dong
Sent: Monday, November 06, 2006 1:46 PM
To: Shin, Dong; 'John Kennedy'
Cc: 'Davenport, Jule'; Hibbeler, Rich
Subject: RE: Justification for Experimental Application: 0495-EX-PL-2006

Hi John,

Per our phone conversation this morning, please find attached the justification for this application.
Please review it, and let me know if you have any questions or need additional information.

Thanks for your help in advance.

Dong Shin

From: Shin, Dong
Sent: Thursday, October 19, 2006 2:45 PM
To: 'John Kennedy'
Subject: Experimental Application: 0495-EX-PL-2006

Hi John,

I just amended one application I filed on 08/16/2006.
Our client wanted to reduce the testing frequency range from 1910 MHz – 1920 MHz to 1915 MHz – 1920 MHz.

When you have a chance, please review the application.

Thanks,

Dong Shin
Frequency Engineer
Microwave and Satellite Services
Phone (703) 726-5653
Fax (703) 726-5594

4805 Stonecroft Blvd
Chantilly, VA 20151
November 6, 2006

FCC
1270 Fairfield Rd.
Gettysburg, PA 17325

SUBJECT: Experimental License

To Whom It May Concern:

Northrop Grumman requests to expedite processing of Experimental License filing (0495-EX-PL-2006) in the 1915 to 1920 MHz frequency range. The reason for the Experimental License request is to build a safety awareness wireless broadband network for evaluation of equipment and demonstration to various customers including the United States Department of Defense (DOD) and AFCEA Conference in Hawaii that will be linked to the Network at the Independence Center in Chantilly, VA. The conference is made up of over 800 members representing the military, federal government, and industry. The goal is to support the mission of AFCEA and ultimately, the security of our great nation.

The system will test **MobileShield™**, the secure wireless solution from Northrop Grumman Information technology (IT) and the capability of an information sharing system that will improve situational awareness and decision making for the federal, state, and local agencies including public safety personnel on one communications medium. It will test the capability to provide secure mobile wireless communications among first responders and war fighters. The general target functionality of testing the system will be to develop a way to save lives, time, and money. It will demonstrate an ability to deter, prevent, and rapidly defeat terrorist acts and safeguard our quality of life.

The system will test the capability of a communication network that will demonstrate an ability to improve situational awareness and decision making for federal, state, and local agencies. It will also test the ability to provide secure mobile wireless communications among first responders and war fighters. The system will be used as a research and development test bed for developing capabilities of leading wireless broadband communications.

The site information is listed below:

Site Name: Independence Center
Coordinates 38 52 50.0, 77 27 43.2
Frequency Range: 1915 to 1920 MHz

Transmitter Power = 2.5 Watts/34 dBm
Antenna Gain =18 dBi
Wave Guide Loss = 2 db

EIRP = Tx Power (dBm) + Antenna Gain (dBi) – Wave Guide Loss (db) = 50 dBm

R/C = 95 feet
Antenna Model = EMS Antennas (Sector)
Site Type = Fixed Site

If there are any questions they can be directed to the following point of contact:
Jule Davenport
Northrop Grumman Information Technology (TASC)
(Office)-703-633-8300 Extension 5070, Email: jule.davenport@ngc.com

Sincerely,

Communications Systems Engineer, Jule Davenport
Northrop Grumman IT (TASC) Signature: _____

Wireless Without Limits℠

Northrop Grumman is setting the standard for next-generation secure broadband wireless networks and interoperable voice communications. MobileShield services deliver secure, mobile, broadband IP-based capabilities to meet the growing wireless communications needs of government agencies and commercial enterprises. With over 40 years of experience designing, integrating and operating some of the world's most complex communication systems, no other organization is better positioned to provide the expertise, impartiality and initiative to enhance America's mobile networks. To learn more about MobileShield and visit our wireless integration and demonstration facility, please send inquiries to MobileShield@ngc.com or call 703.818.7400.

When America Needs Trusted IT Solutions, We're There

Northrop Grumman's Information Technology sector, headquartered in McLean, Va., is a trusted IT leader and premier provider of advanced IT solutions, engineering and business services for government and commercial clients. The company's technological leadership spans such areas as homeland security solutions, secure wireless, cyber and physical assurance, IT and network infrastructure, managed services, knowledge management, modeling and simulation, and geospatial intelligence solutions.

MobileShield.

You won't believe what you can accomplish in a world without wires.

NORTHROP GRUMMAN
DEFINING THE FUTURE™

www.it.northropgrumman.com/ITsolutions

TASC, 4801 Stonecroft Boulevard, Chantilly, VA 20151-3822 703-818-7400
Northrop Grumman Information Technology, 7575 Colshire Drive, McLean, VA 22102 703-556-1144

D-00295 09-05-05

NORTHROP GRUMMAN
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Wireless Without Limits

MobileShield™

Consumer use of wireless technologies has skyrocketed during the past decade. Unfortunately, full adoption of wireless technologies by the public sector and commercial enterprises has been restricted by three factors: security limitations, broadband mobility challenges and interoperability obstacles.

MobileShield, Northrop Grumman's secure broadband wireless integration service, solves these historical challenges. MobileShield delivers fully secure, high-speed, Internet Protocol (IP) based wireless network solutions that enable the convergence of data, voice and video. It also ensures full interoperability across disparate communications systems. With MobileShield, wireless is virtually limitless.

MobileShield In-Depth

As the largest, most experienced federal information systems integrator[1] and leading provider of highly secure wired networks, Northrop Grumman is uniquely positioned to deliver a solution that will revolutionize wireless communications. MobileShield provides the three critical elements of a comprehensive wireless solution:

- Broadband Mobility
- Interoperability
- End-to-End Security

MobileShield delivers tangible solutions for real-world communications challenges:

- Vastly improves the capacity of mobile wireless devices accommodating new bandwidth-intensive applications, faster current application performance, and significant increases in the number of simultaneous users a system can support.
- Promotes complete interoperability between wired and wireless voice and data systems, simplifying information sharing and collaboration.
- Provides security features – end-to-end physical and cyber security – that are unmatched, especially by traditional cellular operators.
- Converges voice, data and video traffic onto one network, resulting in resource savings and network management efficiencies.

1 Northrop Grumman named #1 systems integrator 2004 (Federal Computer Week)
2 Input Inc. (2005)

MobileShield Total Security

Typical MobileShield deployments yield data transport speeds 10-15 times faster than digital cellular wireless systems

At Northrop Grumman, we believe wireless communications systems cannot be secure until we have evaluated the overall security posture of an organization—security policy, cyber security, physical security, personnel security and operational security. This 360° approach to security is based on our delivery of cyber and physical security solutions for some of the intelligence and defense communities' most secure communications systems. Our experience as the #1 provider of security solutions to the federal government[2] is the foundation of our wireless network design.

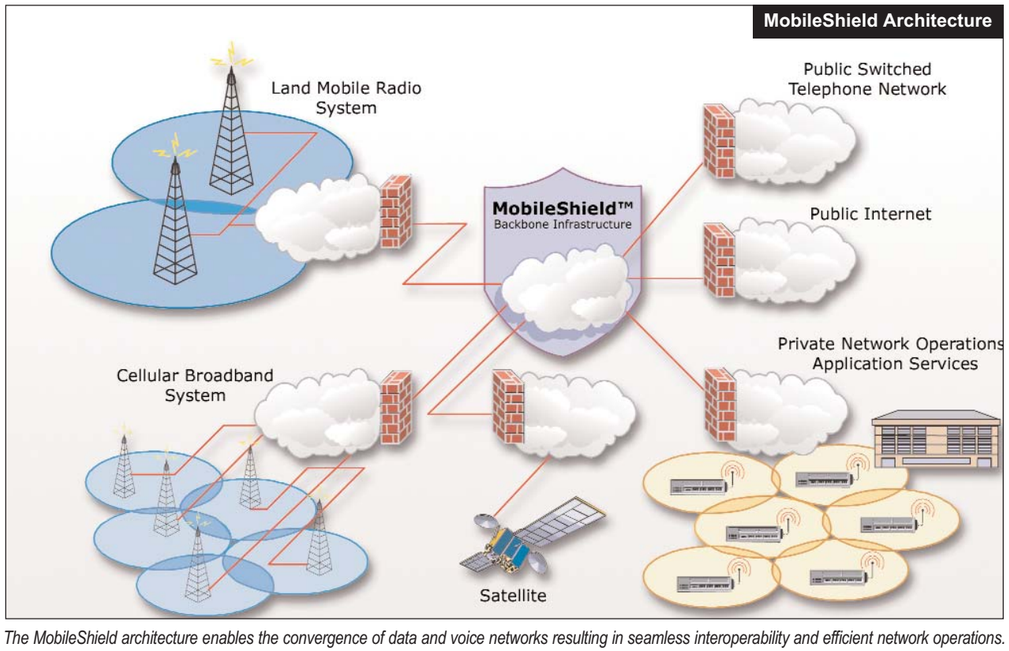
MobileShield protects people, data and infrastructure with its array of security features:

- Multi-level Advanced Encryption Standards or Digital Encryption Standards *(future implementation of Type 1 NSA standards)*
- User Authentication
- Encryption Key Management
- Firewall Deployment and Management
- Prevention of "Denial-of Service" Attacks and Viruses
- Physical and Cyber Intrusion Detection, Prevention, Tracking

Confident that access to sensitive wireless networks meets the same high security standards as the wired domain, MobileShield customers can move new and previously office-bound applications directly into the hands of deployed personnel. Now, secure wireless has practically no limits.

The MobileShield Solution

From homeland security to law enforcement, transportation and commerce, MobileShield delivers comprehensive wireless networks that can dramatically enhance communications capabilities. Whether handling routine business or managing a crisis, organizations can depend on MobileShield for reliable, fully redundant, instant, continuous communication systems. MobileShield solves many of today's wireless challenges.



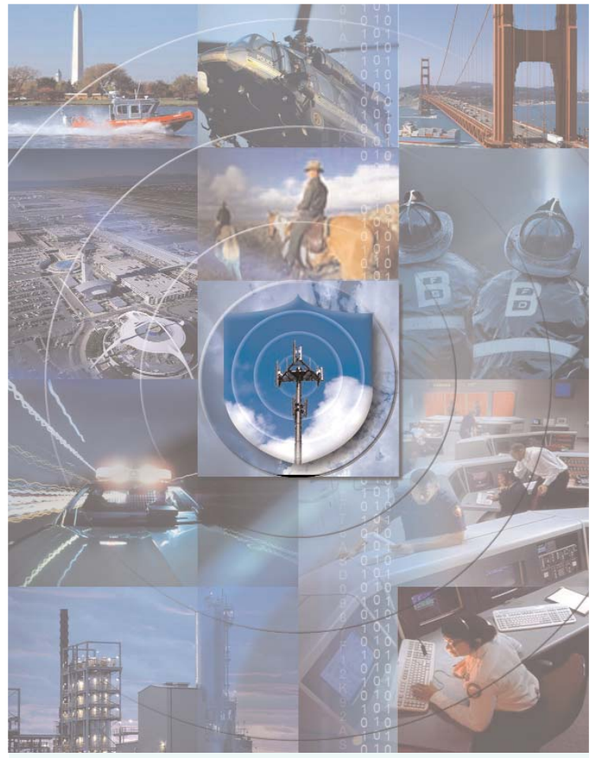
The MobileShield architecture enables the convergence of data and voice networks resulting in seamless interoperability and efficient network operations.

Law Enforcement – Mobile, High-Speed Information
Effective law enforcement requires "anytime, anyplace" access to federal, state and local government databases. To perform their jobs safely and effectively, personnel also need complete situational awareness of counterparts and adversaries. Field personnel need immediate, bandwidth-intensive information such as license and vehicle registration details, felony warrant data, and fingerprint biometrics in an ultra-secure environment, with full mobility. With MobileShield, law enforcement personnel can access and share secure information "on the move" via handheld and wearable devices, tablet PCs, and laptops.

Air, Sea and Land Ports – Physical Security
Today's ports of entry use video surveillance technology to identify safety threats. MobileShield is the wireless communications system with the capacity to disseminate live video surveillance data across multiple organizations, via their native communication systems. Security personnel can access real-time information across the port campus, enhancing information sharing and improving security coordination.

First Responder – Interoperable Voice Communications
Emergency first responders require interoperability between disparate land mobile radio (LMR) systems in order to communicate critical incident information and to ensure collaboration between agencies and jurisdictions. The MobileShield solution enables traditional, analog LMR systems to interconnect and supports the deployment of next-generation IP-LMR systems. The MobileShield also enables voice interoperability between LMR and cellular systems and increases the number of simultaneous users that can be supported by a wireless communications network. This interoperability improves mutual aid and public safety response.

Enterprise – Secure Network Deployment
Enterprises interested in modifying or diversifying their existing campus-wide communications infrastructure should consider a MobileShield solution as an alternative to traditional wired networks. MobileShield is delivered at a cost savings compared with many wired networks, while offering comparable security options including multi-level encryption, user authentication, firewall management and cyber intrusion detection.



Access MobileShield Key Features

IP-based, Open Architecture – *integration of common off-the-shelf technology ensures long-term interoperability and broadens the range of device manufacturer and application developer options; results in reduced infrastructure cost and total cost of ownership.*

Unbiased Engineering – *provides vendor-neutral approach to system design; ensures access to broad range of technologies.*

Security – *offers fully customizable physical and cyber security features; addresses and combats all known and evolving security threats.*

Broadband – *supports real-time access to bandwidth-intensive wireless applications; provides low latency and highly reliable communications.*

Mobility – *enables functionality "on the move," facilitating seamless wireless communications anywhere within the network footprint; resulting in improvements in workplace efficiency.*

Scalability – *promotes simple migration path from legacy systems; eases expansion due to open architecture design.*