FCC Working Group
Commercial Off the Shelf (COTS) Use Cases - 12/11/2013

Introduction: Please enter a general use case for COTS technology followed by a specific use case where COTS technology is being used or is planned to be used. The use cases will be compiled and edited to help guide the creation of a concrete definition for COTS technology

General Use Case #	Specific Use Case #	Author	Use Case Name	Industry	Description	Limitations or Issues
1			In Transit Remote Communications	Transportation	Commercial wireless service can be used by airlines, railways, and other transportation companies to provide data access to customers where commercial service does not exist	Fast moving vehicles may present a technology challenge
	1.1	Morgan Greenleaf	Airline Broadband Access	Airlines	GoGo inflight Wi-Fi makes use of commercial Wi-Fi technology for plane level Wi-Fi access and commercial wireless service with modified antenna technology for backhaul	
2			Monitoring & Private Network	Utility	Utilities can use COTS technology to provide wireless communications where no viable commercial service exists, monitor consumer and business power usage, and monitor utility networks.	Multiple Hardware Vendors to be supported
	2.1	Glen Tindal	Customer Monitoring	Utility	Business and User Power Consumption using smart meter technology	Scalability due to number of Consumers and Businesses
	2.2	Doug Smith	Fixed Private	Utility	Private LTE where no commercial services exist with independent site operations for survivability	Spectrum Access
	2.3	Doug Smith	Remote Monitoring & Surveillance	Utility	LTE provides secure broadband access for remote monitoring, surveillance, and smart grid in rural underserved areas.	Spectrum Access
	2.4	Doug Smith	Deployable Pico Cell	Utility	LTE network on the move provides voice, video, and data services to remote areas with no traditional services	Interconnect
	2.5	Glen Tindal	Junction Point Montoring	Utility	Monitoring Junction points where regional grids connect thereby creating a national power grid	Lack of coverage due to highly remote locations
3		Glen Tindal	Personal Safety	Personal Security	Home Security Monitoring using commercial or private networks	Remote location wireless coverage
	3.1	Glen Tindal	Wireless Break In Monitoring	Personal Security	Priority Security (ie Break In)	Quality of Service for priority events

	3.2	Glen Tindal	Wireless Medical Emergency Monitoring	Personal Security	Wireless monitoring of home Injury Events (ie "I've fallen down and can't get up")	Quality of Service for priority events
4		Glen Tindal	Health Monitoring	HealthCare	Remote HealthCare Monitoring using M2M technology	Coverage and scale. Quality of Service imperatives
	4.1	Glen Tindal	Personal Device Monitoring	HealthCare	Personal Device Monitoring	QoS and Scale
	4.2	Glen Tindal	Medical Device Monitoring	HealthCare	Device State Monitoring	QoS and Scale
5		Glen Tindal	Point of Sale	Finance	Handheld Point of Sale Device Proliferation. Use of cellular connected, handheld devices for sales transactions inside and outside the traditional retail space	Scale
6		Glen Tindal	Retransmission	Wireless	Growing Dependancies on Wireless Infrastructure Creating Broadcast and Re-transmission Storms	Scale and Quality of Service
7		Kevin Kahn	Aviation Telemetry Platform	Prospective Aviation	Due to increased use of drones by civilian and military users and the high bandwidth requirements for telemetry and control, there is a need for a unified wireless aviation telemetry and control platform that could be developed and shared among the many future users.	Who would deploy and operate such a system, what priority mechanisms would be needed to make it work
8			Armed Forces Wireless Networks	Defense	The armed forces or other defense organization could use commercial LTE or wireless equipment to provide private wireless networks supporting training facilities and deployed forces	Security
	8.1	Shahid Ahmed	Navy LTE	Defense	The Navy set up a two-ship sea trial to augment existing satellite-based communications. The USS Kearsarge and the USS San Antonio were equipped with a microwave-based wireless wide-area network (WWAN) and its own cell network providing a tactical area of 4G LTE communications.	Security, Reliability, Range

	8.2	Doug Smith	Mission	DoD	Private and secure deployable LTE networks for anti-terrorism/force protection and ISR missions at the tactical edge	Spectrum Access
	8.3	Doug Smith	Fed CIV	Fed CIV	Wireless monitoring of ISR sensors for border protection	CONUS Spectrum Access
9			Public Safety	Public Safety	Public safety personel can use commercial networks for emegency communication or can build private networks using commercial 3g/4g technology	Reliability
	9.1	Shahid Ahmed	FirstNet	Public Safety	FirstNet is a nationwide effort to provide emergency responders with the first nationwide, high-speed network dedicated to public safety. Using a nationwide spectrum license, FirstNet will provide a single platform for daily public safety communications. FirstNet will be built to public-safety grade standards using Long-Term Evolution (LTE) wireless technology	Cost
	9.2	Kevin Kahn	Remote Public Safety	Public Safety	Remote area public safety - park service, state police with rural coverage - could move to an LTE platform using civilian accessible bands and get a huge increase in 911 coverage as a side effect even when civilians were not authorized to use the public safety system for any normal use while the public safety users would get the benefits of common radio systems	
	9.3	Doug Smith	Capacity	Public Safety	Add broadband capacity to existing areas of operation	Interconnect
	9.4	Doug Smith	Deployable Pico cell	Public Safety	Small cell deployable on fire, police, and EMS vehicle for short range coverage and low capacity	Spectrum Coordination
10			MVNO-M2M	Wireless	M2M MVNO leveraging host network operator resources	Interoperability
11		Walter Johnston	Emergency 911	Consumer	Communities can use COTS/Private networks for 911 calls that will extend emergency services to unserved areas	Spectrum Coordination