



## MOBILE CONNECTIVITY SOLUTION

Mobile Connectivity Solution (MCS) is a collaborative effort with Navy (Fleets, TYCOMs, and NAVSEA) bringing encrypted Wi-Fi connectivity to ship and maintenance shop networks for improved internet access during maintenance availabilities on naval installations or in commercial shipyards.

Currently, maintenance team personnel utilize office issued laptop computers and phones, which have reduced efficiency or are not suitable in industrial environments or field activities. These tools can be limited in functionality and capability due to the natural shielding of cellular signals within the interior of ships and berthing barges. Productivity is also reduced due to the need to travel between the maintenance team's support facilities and the actual maintenance performing facilities or the piers. Shipboard networks and temporary network services are available to the fleet units; however, the maintenance team personnel have minimal access to these services due to lack of connectivity, bandwidth, workstations availability, or limited data access.

MCS provides a mobile solution reliable and functionable for industrial environments such as shipyards, shipboard, and barges. MCS allows for quicker response to current needs, remains flexible for future applications, supports legacy systems, and easily upgrades with technology. The MCS service support system consists of Commercial Off the Shelf (COTS) leased Internet Service Provider (ISP) service, antennas, repeaters, mobile devices, and government and mobile applications. This system can bring together the Navy enterprise-wide innovation and technology developments to accelerate execution and production.

MCS has been successfully prototyped on USS IWO JIMA using Cox Communications Cable Company's Wi-Fi service to assist maintenance teams. The MCS prototype has data transfer rates of 350 Mbps with 10 Mbps allocated to each user login, which is sufficiently supplying mobile connectivity. The team is further exploring the actions required to improve the productivity of the enterprise-wide project and maintenance teams using mobile tools and enterprise resource solutions as well as existing initiatives. By further digitizing the workload to the highest extent possible with MCS, maintenance teams will have support tools at their fingertips enabling them to increase productivity in the field and eliminate delays due to travel back to their commands to retrieve or input data. For example, digital formatted maintenance support artifacts including assessments forms, manuals, specifications, drawings, instructions, job performance aids, and learning aids will be available in real time on their devices. Another benefit is the Ship's Force maintenance team can access MCS for professional and personal use. As a prototype, MCS has successfully demonstrated a positive contribution to the Sailor's Quality of Work-Life. Ship's Force has been more productive during their maintenance period, which has helped ease the transition into their operational mission. Therefore, MCS directly contributes to improving the Navy's warfighting ability.



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