

Boston Engineering Corporation Shipyard Robotics and Digital Solutions

PROBLEM STATEMENT

- Maintenance and sustainment of our weapons systems is being challenged by shrinking experienced workforce and increases in our national retirement rate.
- Nascent workers require training and mentoring before achieving the proficiency of highly skilled workers.
- Nascent workers often experience work package execution issues and must leave the work site to seek advice or help with decisions enabling continued work execution.
- Many maintenance requirements are discovered only after a weapon system reaches its destination. Knowledge gathering in route to the shipyard is not captured well today.

TECHNOLOGY SOLUTION

- Mixed Reality Expert Guidance (MREG) is an Augmented Reality (AR) enhanced secure video remote assistance tool connecting experienced workforce to nascent workforce.
- MREG operates on premise, on cloud infrastructure, on in hybrid or mixed connected and unconnected configurations.
- The capability is built using open architecture, open standards, and software licensing to operate not require.
- MREG has been demonstrated on portable 5G communications ship-to-shore in port providing the necessary bandwidth to support video communications.
- MREG is device agnostic.

BENEFITS

- Provides experienced guidance to workers in work areas from experienced remotely located high skill or experienced workers and supervisors.
- MREG can record or actively share work assessments in the field in advance of shipyard stationing provided planners advanced information, resulting in reduced schedule.
- Connects nascent workers with retired workers who can work from home or part-time and continue sharing experience.
- Open architecture enables capability advancement contributions by multiple people and organizations in industry, academia, and DoD R&D Centers. Achieved TRL 7 demo

GRAPHIC

Worker in Work Zone



Technical Exchange



Remote Experience



Two-way visual and
audio communications
with AR mark-up tools