

**PROBLEM TITLE**

Test, Test, Are You Integrated?

**CHALLENGE**

Marine Corps Tactical Systems Support Activity test engineers need an intuitive test framework in order to efficiently perform automated testing for communication gear.

**BACKGROUND**

Marine Corps Tactical Systems Support Activity (MCTSSA) test engineers test communication gear to ensure that it will effectively integrate with existing systems and platforms. Most of the gear is software that requires both automated and manual testing. For automated testing, engineers depend on both commercial and Marine products. Commercially available products test a specific type of application or provide focused simulation or analysis. On the other hand, MCTSSA automation products include an open-source framework and user interface test automation tools that can be used to either test or write the code to test a product.

With this suite of tools, engineers are able to conduct automated testing on most communication software. However, developing the testing script using the open-source framework requires programming knowledge and can be a very slow process. Engineers can use ‘record and replay’ tools which allow them to mimic a user, record their actions, and convert those actions into the script which runs in the background. These tools allow engineers to identify vulnerabilities or problems with program user interfaces. However, such tools cannot robustly support the graphics-heavy mapping programs that MCTSSA engineers work on and scripts cannot be reused across programs. Therefore, MCTSSA test engineers need a test framework that is easier to learn and use in order to more effectively test communication gear.

**OPERATIONAL CONSTRAINTS**

- Automated testing often occurs on classified software.
- Solution must be platform and computing language agnostic.

**PROBLEM SPONSOR**

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**PROBLEM SPONSOR LOCATION**

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