

Proposal No. 13

(Proposal details for the R&D scheme of USOF)

Subject: Secured Communication equipment

Problem Statement / Challenge title	Development of rugged handheld quantum-secure two-way radio communication equipment
Challenge brief / definition	<p>The defense field units use UHF/VHF based two-way radio equipment for short distance direct communication. These two-way radios become very important during war like situations and enemy continuously monitors various frequencies in order to pick-up any communication happening between troops and take advantage of it.</p> <p>Generally, such equipment either do not use encryption or have a weak encryption. With the advent of quantum computers, it is possible that in future enemy could deploy a small-scale field quantum computer for real time deciphering of the messages thereby jeopardizing safety and security of the troops.</p> <p>Hence, it is very pertinent that a quantum secure version of UHF/VHF handheld equipment is designed and developed keeping in view the emerging threats from quantum computers. Quantum securing could be introduced using Post quantum mathematical keying or some form of QKD and use of quantum-safe symmetric encryption.</p>
Future expectation	For defense field units

Format of Response

Companies / organizations / institutions / individuals developing enabling technologies / modules / components / subsystems / products are required to respond in the format provided in Annexure-A, on the DOT website ([link address provided- refer "format of response"](#))