QSCRIPT
PAVING THE WAY WITH PORTUGUESE TECHNOLOGY

Portuguese sovereignty in secure communication anchors in the development of fully domestic encryption machines and cryptographic key production processes.

30/06/2021: First field experiment

Sponsored by

Two sites of MoD, 4.5km apart, were connected by a quasi-quantum link, on fully portuguese technology
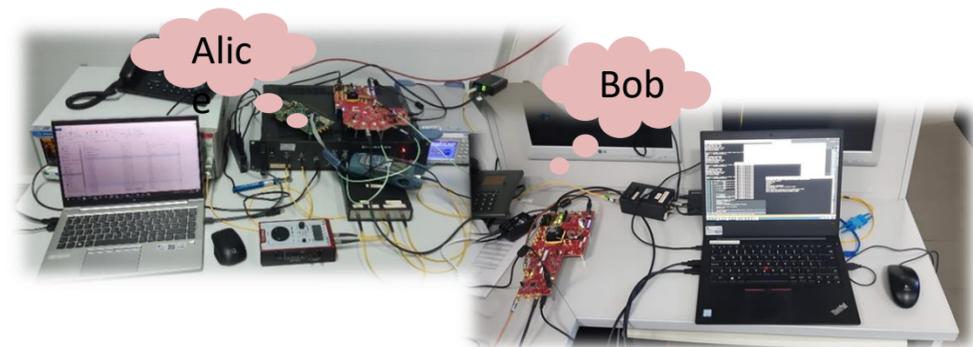
Cipher Machines
1st version

Continuous Variable Quantum Key Distribution
*Courtesy of Instituto de Telecomunicações, Aveiro (PT)*

DISCRETION: DISRUPTIVE SDN SECURE COMMUNICATIONS FOR EUROPEAN DEFENSE

AIMING HIGH ON EUROPEAN TECHNOLOGY SOVEREIGNITY ON SECURE COMMUNICATIONS

Technology developed in Europe, by Europe and for Europe..

DISCRETION MAIN GOAL IS TO DESIGN AND DEVELOP AN OPTICAL SDN SOLUTION THAT ENABLES SECURE AND RESILIENT COMMUNICATIONS FOR EUROPEAN DEFENCE
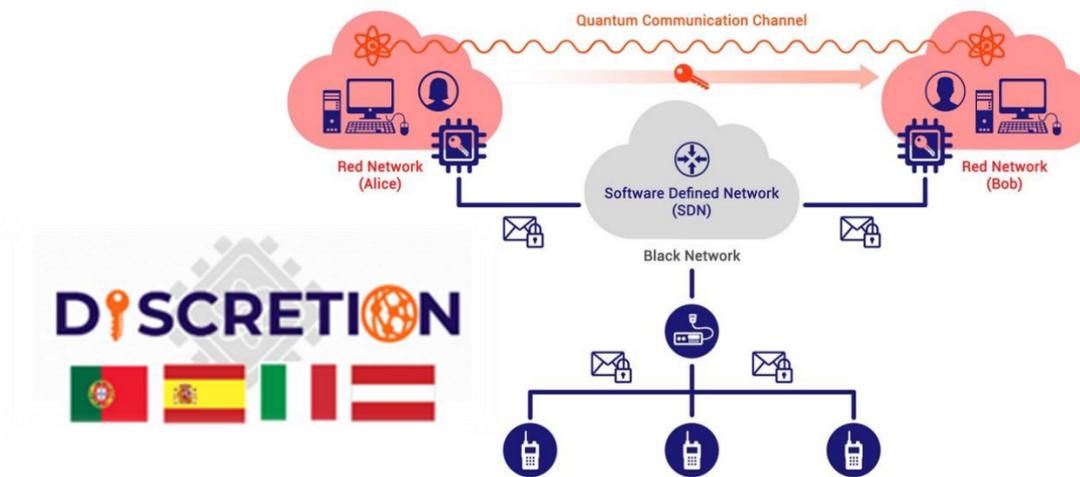

DISCRETION will integrate and combine SDN and QKD technologies on top of legacy optical networks to build a highly secure, scalable and resilient network control architecture for advanced tactical operation services. Such SDN shall have centralized control in order to increase the resilience and security of the network through the integration with QKD technologies.

DISCRETION will enable European armed forces to use Radio Spectrum (RS) for military activities, being able to develop an interoperable mode between SDN and Software Defined Radio (SDR).

PORTUGUESE QUANTUM COMMUNICATIONS INFRASTRUCTURE

FIRST GROUND SEGMENT OF EUROQCI IN PORTUGAL
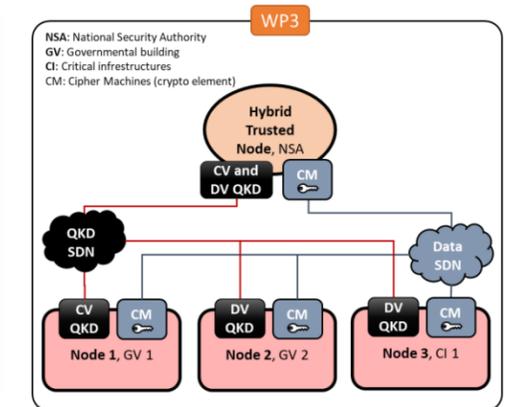
MAIN OBJECTIVES FOR PTQCI:

- ❖ Deploy a **Software Define Quantum Key Distribution Network** over existent infrastructures making use of European components and PT designed cipher machines;

- ❖ Design, Implement and Test a governmental operational network, to demonstrate secure communications between public authorities and Defence buildings, preparing the expansion of the network to farther locations in Portugal.

- ❖ To implement in parallel a testbed network to test new technologies preparing the roadmap of PTQCI, using free space links, 5G/IoT, and considering different use cases;

- ❖ To enable training and educational activities, as for instance promoting the use of this infrastructure by the European Cyber Academia and Innovation Hub (EU CAIH);

QUANTUM COMMUNICATIONS IN PORTUGAL

QSCRIPT, DISCRETION and PTQCI

Focus on the development and implementation of optical and quantum communications, enabling ultra fast and secure data exchange.
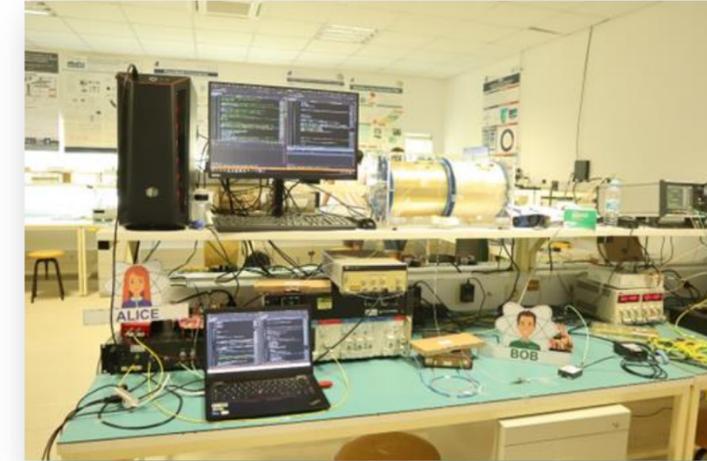
QSCRIPT and DISCRETION are supported by GNS and EMGFA and DISCRETION is funded by the European Commission.

PTQCI is supported and sponsored by GNS and European Commission.

TECHNOLOGY DEVELOPED IN DISCRETION TO BE IMPLEMENTED IN PTQCI.

DISCRETION and PTQCI support PESCO project

DISCRETION supports PESCO project EU CYBER ACADEMIA AND INNOVATION HUB (EU CAIH) led by Portugal, DISCRETION will facilitate the research and investigation of innovative solutions and technologies for cyber security, promote training and develop the new competences required to master systems, foster technology transfer to other sector and foster new product development.

www.discretion-eu.com/

www.ptqci.av.it.pt

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