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Australian team leads the way in single photon production

Melbourne, Australia – April 18, 2008 - The world's first commercial source of individual photons using diamond based quantum technology has been developed by **Quantum Communications Victoria (QCV)** within the School of Physics at The University of Melbourne, Australia.

QCV will be exhibiting at the Defence Services Asia (DSA) 2008 Conference and Exposition in Kuala Lumpur, Malaysia from 21 to 24 April to showcase their Single Photon Source technology.

The technology uses the unique properties of diamond to produce single particles of light (photons) on demand at room temperature.

“This is a critical moment in the development of quantum based technologies for practical use,” said QCV Product Development Director Dr Steve Trpkovski, “The availability of a commercial single photon source will enable many viable quantum technologies to reach the market place”

The device, which can be accessed with a standard optical fibre connection, has the potential to be used for many applications including as a component in secure telecommunications systems, for quantum metrology and other quantum based applications.

“As an initial application, the Single Photon Source will be integrated into existing commercial Quantum Cryptosystems, drastically improving their performance and ultimately providing 100% secure telecommunications,” said Dr Trpkovski.

QCV is considering partners and investors to participate in a start-up which will pursue commercialisation of the Single Photon Source into various markets.

The Australian based development team are collaborating with MagiQ Pty Ltd, a Boston based supplier of Quantum Cryptography Systems, to optimise the integration of the Single Photon Source into existing systems with testing and field trials to be conducted in the near future.

Further work is being undertaken in investigating the various other applications for the QCV Single Photon Source including: additional quantum applications, microscopy and optical sensing.

QCV is supported by a State Government Infrastructure grant in Victoria, Australia and is the first group in the world to produce such a commercial device.

For more information contact:
Dr Steve Trpkovski on +61 411 733 234 or stpr@unimelb.edu.au
Or Dr Joanna Gajewski on +613 8344 8744 or joannag@unimelb.edu.au
QCV, School of Physics, The University of Melbourne Australia
www.qcvictoria.com

