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PRESS NOTICE

Quantum Leap in Cryptography

Quantum Cryptography has left the laboratory and the theoretical world of quantum physics and is available as commercial products for business applications.

Briefing sessions for officials and private sector executives, organized by Quantum Information Partners LLP at the Bank of England and Department of Trade and Industry, explored the opportunities and limitations offered by this entirely new technique for securing electronic communications. Leading experts from the UK, US and Europe described the unique attributes of quantum cryptography as being provably secure and able to guarantee that the sender will have certainty that a message has not been intercepted. Quantum cryptography may also offer an alternative secure communications capability should existing systems such as PKI (Public Key Infrastructure) be compromised by the development of quantum computers or the discovery of advanced mathematical algorithms capable of fast factoring large numbers.

Professor Andrew Briggs, Head of Quantum Information Processing Interdisciplinary Research Collaboration at Oxford University, emphasized the critical role the UK has played in the development of

quantum information processing and forecast a range of exciting developments. Professor Brian Collins, Professor of Information Systems, Cranfield University, Royal Military College of Science said “The initiative is passing from the scientists to the systems designers to exploit this technology. We ignore it at our peril, it may become the only show in town”.

The unique nature of these events is underlined by the demonstrations of working systems over fibre optic and in free air by world leaders such as QinetiQ (UK), Toshiba Cambridge (UK/Japan) and MagiQ (US). IDQuantique (Switzerland) also contributed to the discussion. Charles Ross, Partner QIP, commented “This is the first time such a range of systems has been demonstrated in the UK. The rate of development over the past 5 years has been increasing”.

“These briefings mark a milestone in the availability of real business solutions based on quantum cryptography” said Charles Hughes, Partner QIP. “It is imperative that all those involved in transferring secure information remain aware of developments in this important area. The next step must be the implementation of pilots and demonstration systems to test applications and develop standards”.

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Quantum Information Partners LLP (QIP) was founded in 2004 to highlight the emerging opportunities for quantum technologies. QIP's role is to provide the link between the technical experts and scientists and the user community.

QIP has reported on the state of the art and emerging opportunities for quantum cryptography for DTI and is running a focused awareness programme with support from the Bank of England and the DTI. QIP provides a range of consulting services and is ideally placed to bridge the gap between potential business users and the technical development teams. QIP's founding partners are Mark Aldington, Charles Hughes and Charles Ross.

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