505421664 04/10/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5468455

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
QINETIQ LIMITED	03/27/2019

RECEIVING PARTY DATA

Name:	QUBITEKK, INC.		
Street Address:	1400 NORRIS ROAD		
City:	BAKERSFIELD		
State/Country:	CALIFORNIA		
Postal Code:	93308		

PROPERTY NUMBERS Total: 16

Property Type	Number
Patent Number:	8768992
Patent Number:	8693685
Patent Number:	8611534
Patent Number:	8254079
Patent Number:	8885828
Patent Number:	8855316
Patent Number:	9148225
Patent Number:	8650401
Patent Number:	8654979
Patent Number:	8792791
Patent Number:	8639932
Patent Number:	8749875
Patent Number:	8762728
Patent Number:	8681982
Patent Number:	8683192
Patent Number:	9692595

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

505421664 REEL: 048853 FRAME: 0638

PATENT

Phone: 619-203-3186

Email: kristen@acuitylg.com

Correspondent Name: MICHAEL A. WHITTAKER

Address Line 1: 12707 HIGH BLUFF DRIVE, STE. 200

Address Line 2: ACUITY LAW GROUP, P.C.
Address Line 4: SAN DIEGO, CALIFORNIA 92130

ATTORNEY DOCKET NUMBER:	GCTI
NAME OF SUBMITTER:	KRISTEN LEMME
SIGNATURE:	/Kristen Lemme/
DATE SIGNED:	04/10/2019

Total Attachments: 38

source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page1.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page2.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page3.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page4.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page5.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page6.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page7.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page8.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page9.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page10.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page11.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page12.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page13.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page14.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page15.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page16.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page17.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page18.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page19.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page20.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page21.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page22.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page23.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page24.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page25.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page26.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page27.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page28.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page29.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page30.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page31.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page32.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page33.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page34.tif source=QinetiQ-Qubitekk patent assignment agreement EXECUTED 27MAR19#page35.tif

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Patent Assignment Agreement

between

QinetiQ Limited

and

Qubitekk, Inc

3/27/2019

(31)

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THIS PATENT ASSIGNMENT AGREEMENT ("Agreement") is made on

3/27/19

BETWEEN:

(1) QinetiQ Limited (Company number 3796233) a company registered in England and Wales whose registered office is at Cody Technology Park, Ively Road, Farnborough, GU14 0LX, UK ("QinetiQ")

AND

(2) Qubitekk, inc (Company number C3563288 California / 5220639 Delaware) incorporated and registered in Delaware, USA whose registered office is at 1400 Norris Rd, Bakersfield, CA 93308, USA and place of business is at 1216 Liberty Way, Vista, CA 02081, USA ("Qubitekk")

hereinafter referred to individually as a "Party" or jointly as "Parties".

INTRODUCTION:

- A. QinetiQ is the proprietor of certain technology, namely the Patents (as defined below).
- B. QinetiQ has agreed to sell the Patents to Qubitekk and Qubitekk has agreed to purchase the Patents from QinetiQ on the terms and conditions of this Agreement.

IT IS AGREED as follows:

1. Interpretation

The following definitions and rules of interpretation apply in this Agreement.

1.1 Definitions:

- "Associated Company" means QinetiQ Group and any company other than QinetiQ which at the relevant time is a subsidiary or a holding company of QinetiQ Group or any subsidiary of any such holding company and 'subsidiary' and 'holding company' shall have the meanings given to them by Section 1159 of the Companies Act 2006.
- "Business Days" means a day, other than a Saturday, Sunday or public holiday in England, when banks in London are open for business.
- "Closing Date" means the date on which the Initial Instalment is received in full and cleared funds into QinetiQ's bank account in accordance with Clauses 4 and 5 and on which the Patents are assigned.
- "Confidential Information" means any information disclosed (whether directly or indirectly) by one Party to the other Party under this Agreement including but not limited

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to business methods or plans, information relating to customers or suppliers, finances, ideas, strategies, concepts, methodologies, inventions, intellectual property rights, processes, formulae, products, software, programs, source code, the terms of this Agreement (but not its existence) and any information exchanged for the purposes of agreeing it, regardless of whether that information is marked as confidential/proprietary or not. Confidential Information shall also include any information generated from such Confidential Information, including but not limited to information generated during any examination, testing and/or analysis of that Party's Confidential Information.

"Effective Date" means the date indicated at the head of this Agreement.

"Initial Instalment" means the initial instalment payment set out in Schedule 2 to be invoiced by QinetiQ on 1 April 2019.

"Patent Product" means any product, device, tool (including any components and prototype products), process or design whose manufacture, use and/or sale wholly or partially falls within any claim of any Patent.

"Patents" means the patents, short particulars of which are set out in Schedule 1.

"QinetiQ Group" means QinetiQ Group plc (company number 4586941) a company registered in England and Wales whose registered office is at Cody Technology Park, Ively Road, Farnborough, GU14 0LX, UK.

"QinetiQ Senior Officer" means Business Development Manager – Technology Exploitation or equivalent role as communicated to Qubitekk.

"QinetiQ Space N.V" means QinetiQ Space N.V (company number 0439.039.321) a company registered in Belgium whose registered office is Hogenakkerhoekstraat, 9, 9150 Kruibeke, Belgium.

"Reversionary Interest" means the interest set out in Clause 9.4.

"Security Interest" means a security interest in all of Qubitekk's right, title and interest in and to the Patents (Individually and collectively).

- 1.2 A person includes a natural person, corporate or unincorporated body (whether or not having separate legal personality).
- 1.3 The Schedules form part of this Agreement and shall have effect as if set out in full in the body of this Agreement. Any reference to this Agreement includes the Schedules.
- 1.4 Unless the context otherwise requires, words in the singular shall include the plural end in the plural shall include the singular.

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- 1.5 A reference to a statute or statutory provision is a reference to it is in force as at the date of this Agreement.
- 1.6 A reference to writing or written includes fax but not email.
- 1.7 Any words following the terms including, include, in particular, for example or any similar expression shall be construed as illustrative and shall not limit the sense of the words, description, definition, phrase or term preceding those terms.

2. Assignment

- 2.1. In consideration of payment under Clause 4.1 by Qubitekk to QinetiQ and subject to the terms of this Agreement, QinetiQ hereby assigns to Qubitekk on the Effective Date absolutely all of its right, title and interest in and to the Patents, including its full and exclusive rights:
 - 2.1.1 in respect of each and any invention disclosed in the Patents, to file an application, claim priority from such application, and prosecute and obtain grant of patent or similar protection in or in respect of any country or territory in the world:
 - 2.1.2 to extend to or register in, or in respect of, any country or territory in the world each and any of the Patents, and each and any of the applications filed as aforesaid, and to extend to or register in or in respect of any country or territory in the world any patent or like protection granted on any of such applications;
 - 2.1.3 to any patents granted pursuant to any of the applications filed as aforesaid; and
 - 2.1.4 to enforce rights under the Patents, including rights to sue, to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief in respect of any infringement, or any other cause of action arising from ownership, of any of the Patents or any patents granted on any of the applications filed as aforesaid, whether occurring before, on or after the Effective Date, including without limitation the enforcement rights for damages, injunctive relief, and any other remedles of any kind for past, current and future infringement.
- 2.2. Qubitekk shall bear all costs relating to the assignment of the Patents, including any fees charged by any patent office or equivalent registry, agents' charges and QinetiQ's reasonable costs and charges (as referred to in Clause 2.3) from the Effective Date. Provided that the Initial Instalment is paid in accordance with Clauses 4 and 5 and received in full and cleared funds into QinetiQ's bank account on the Closing Date, QinetiQ at the reasonable request of Qubitekk shall thereafter:

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- 2.2.1 promptly deliver to Qubitekk the grant and registration certificates relating to the Patents to the address for notices in Clause 19;
- 2.2.2 provide an 'action list' to Qubitekk setting out the dates by which certain formalities relating to the Patents are required to be completed for six (6) months from the Closing Date;
- 2.2.3 provide reasonable assistance to Qubitekk with the recording and registration of the assignment of the Patents at the relevant countries' patent offices and/or execute and deliver the mutually agreed confirmatory assignment set out in Schedule 3, and such instruments as may be necessary (subject to prior agreement between the Parties as to the form and content of such instruments) to complete the grant of the rights conferred by this Agreement; and
- 2.2.4 provide reasonable assistance necessary for litigation or other actions and proceedings with respect to the claims under the Patents to Qubitekk limited to using its reasonable efforts to make available its current employees to provide witness evidence and to providing Qubitekk with all pertinent extracts of QinetiQ's relevant files and records in its possession pertaining to the relevant Patents; and
- 2.2.5 in connection with the foregoing, QinetiQ shall use its reasonable efforts to maintain all documents, records, software, firmware and/or hardware relating to the conception, reduction to practice, design, implementations of, and revisions to the inventions claimed in the Patents in QinetiQ's custody or control at the Effective Date. For the avoidance of doubt, QinetiQ makes no warranty or representation that any such documents, records, software, firmware and/or hardware are in QinetiQ's custody or control.
- 2.3 In relation to the assistance under Clause 2.2.4, Qubitekk shall reimburse QinetiQ in accordance with Clauses 4 and 5 for all costs and expenses incurred in rendering such assistance, including the cost to QinetiQ of diverting an employee from his/her normal duties (e.g., some portion of such person's salary proportional to the time expended in rendering such assistance), provided that Qubitekk agrees and acknowledges that there is no obligation on QinetiQ to disclose the salary of any employee to Qubitekk or any other person). For the avoidance of doubt, the assistance referred to in this Clause 2.3 includes the involvement of QinetiQ and its current or future employees in litigation or other actions and proceedings with respect to the claims under the Patents, including by way of depositions, affidavits, subpoenas, testimony or witness statements.
- 2.4 In relation to the Patents and subject to Clause 2.5, QinetiQ confirms that maintenance, issue and renewal fees which were due prior to the Effective Date have been paid.
- 2.5 Qubitekk agrees and acknowledges that, except as expressly provided in this Agreement, QinetiQ will not from and after the Effective Date have any obligations with Page 5 of 37

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respect to the Patents, including payment of any costs or fees associated with prosecution, maintenance, enforcement or defence of the Patents. For the avoidance of doubt, the 'action list' referred to in Clause 2.2.2 is provided for information purposes only and Qubitekk is solely responsible for verifying and complying with the relevant formalities requirements for the Patents from the Closing Date.

- Qubitekk agrees and undertakes until such time as the Security Interest is discharged and released or the Patents are assigned to QinetiQ under the Reversionary Interest to:
 - 2.6.1 diligently prosecute and maintain the Patents in a timely manner, including paying any associated costs or fees;
 - 2.6.2 provide a quarterly report to QinetiQ, with the first report to be provided three (3) months after the Effective Date, confirming the payment by Qubitekk of all costs and fees necessary to prosecute and maintain the Patents in full force and effect; and
 - 2.6.3 in the event that Qubitekk is not willing to pay any costs and fees referred to above in this Clause 2.6, it shall:
 - 2.6.3.1 inform QinetiQ that it is not willing to pay such costs and fees at least thirty (30) days before the fee payment window closes, the fee payment window being the period during which no surcharge or late payment fee is due; and
 - 2.6.3.2 execute and promptly deliver to QinetiQ any document or instrument as QinetiQ may require to assign the applicable Patent or Patents to QinetiQ in order for it to prosecute and maintain such Patents.
- 2.7 In no event shall Qubitekk join or attempt to join QinetiQ or any of its Associated Companies as a party to any proceeding, claim, litigation or action relating to the Patents. This clause does not limit Qubitekk's rights to name QinetiQ in any proceeding contemplated in Clause 21 between the Parties arising from any Party's allegations of a lack of compliance with this Agreement.
- 3. Grant of licence and covenant not to sue
- 3.1 Notwithstanding anything to the contrary in this Agreement, Qubitekk hereby grants to QinetiQ on the Effective Date a non-exclusive, irrevocable, perpetual, fully paid-up, worldwide, non-transferable, non-sublicensable (subject to Clause 20.3) licence to the extent necessary for QinetiQ to comply with agreements between QinetiQ and the UK Secretary of State for Defence ("UKMOD") prior to the Effective Date relating to the Patents with QinetiQ Reference Numbers P7394, P7420, P7555 and P7682, including the continuance of the rights and licences of UKMOD and its permitted sub-licensees under those Patents as set out in Schedule 4.

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- 3.2 Qubitekk shall ensure that the licence granted in Clause 3.1 is binding upon any licensee of the Patents and enforceable by QinetiQ and that the terms of this Clause 3 shall be repeated in any future licence of the Patents with QinetiQ Reference Numbers P7394, P7420, P7555 and P7682.
- 3.3 Qubitekk hereby covenants and agrees not to sue QinetiQ Limited and/or QinetiQ Space N.V for developing, making, manufacturing, using, exporting, selling or supplying, and/or offering to sell or supply any product, service, method or process covered by the Patents within the UK and the European Union as constituted from time to time. This covenant not to sue is non-transferable and voided by any change of control of QinetiQ Limited and/or QinetiQ Space N.V. This covenant not to sue is specifically limited territorially and does not apply to or permit acts outside of its territorial limits, including but not limited to exports and/or sales to customers outside of the UK and the European Union as constituted from time to time.

4. Consideration

4.1 In consideration of the assignment of the Patents, Qubitekk shall pay to QinetiQ US\$3,600,000, payable in the instalments set out in Schedule 2 to be invoiced by QinetiQ on the invoice dates set out in Schedule 2, which invoices shall be submitted to Qubitekk at the following address:

Chief Executive Officer Qubitekk Inc. 1216 Liberty Way Suite A Vista CA 92081 USA

4.2 Qubitekk shall pay each instalment and any other sums due under this Agreement within thirty (30) days of the date of invoice.

5. Payment

5.1. Payments from Qubitekk to QinetiQ under this Agreement shall be paid in US Dollars by bank transfer to the credit of the bank account stated below or to such other account as may be designated in writing by QinetiQ:-

Barclays Bank plc 1 Churchill Place, Canary Wharf London E14 5HP

Account Name:

QinetiQ Limited

Account Number for USD:

66924111

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Sort code:

20-00-00

IBAN No:

GB78 BARC 2000 0066 9241 11

quoting the reference QinetiQ Ref: IP/01/E/1242.

- 5.2. All sums due under this Agreement:
 - 5.2.1 shall be made in full without any deduction of any set offs, counterclaims, taxes, charges and other duties (including any withholding or other income taxes), except where Qubitekk is required by law to make such a deduction or withholding, in which case Qubitekk shall:
 - 5.2.1.1 ensure that the deduction or withholding does not exceed the minimum amount legally required;
 - 5.2.1.2 immediately pay to QinetiQ such additional amount as shall result in the net amount received by QinetiQ being equal to the amount which would have been received by QinetiQ had no such deduction or withholding been made;
 - 5.2.1.3 pay to the applicable taxation or other authorities within the period for payment permitted by law the full amount of the deduction or withholding (including the full amount of any deduction or withholding from any additional amount paid under the previous sub-clause);
 - 5.2.1.4 provide to QinetiQ, within the period for payment permitted by law, either an official receipt of the applicable taxation or other authorities for all amounts deducted or withheld, or (if such receipts are not issued by such authorities) a certificate of deduction or equivalent evidence of the relevant deduction or withholding; and
 - 5.2.1.5 co-operate in all respects necessary to permit and enable QinetiQ to take advantage of such double taxation agreements as may be available.
- 5.4 If any US state or local taxes, duties or governmental charges (other than those identified in Clause 5.2.1) are levied on this Agreement for any reason it shall be the responsibility of Qubitekk to pay all such taxes when due. Such taxes shall be in addition to other sums payable by Qubitekk and shall not be set off against any of the sums due to QinetiQ under this Agreement.
- 5.5 QinetiQ is responsible for any fees (including legal and broker fees) incurred by QinetiQ in relation to the preparation and execution of this Agreement and Qubitekk is responsible for any fees (including legal and broker fees) incurred by Qubitekk in relation to the preparation and execution of this Agreement.

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- 5.6 Qubitekk agrees to release and indemnify QinetiQ from and against all liability of whatever nature rising out of Qubitekk's failure to comply with its obligations under this Clause 5.
- 5.6 In the event of any delay in paying any sum due under this Agreement by the required date, Qubitekk shall pay to QinetiQ interest (calculated on a daily basis) on the overdue payment from the date when such payment was due to the date of actual payment at a rate of eight percent (8%) over the base rate of Barclays Bank plc from time to time, and in relation to Qubitekk's obligations of payment under this Agreement time shall be of the essence.

6. QinetiQ warranty

- 6.1 QinetiQ warrants that it has the power and authority to enter into this Agreement.
- 6.2 Other than the warranty in Clauses 6.1, all other representations and warranties which may be implied (by statute or otherwise) are excluded to the fullest extent permitted by law. In particular, QinetiQ makes no representation and gives no warranty:
 - 6.2.1 as to the accuracy, quality, validity, enforceability or fitness for use of the Patents in any particular product or application for any particular purpose:
 - 6.2.2 that the use of any processes or information described or contained within the Patents will achieve any particular result or specification;
 - 6.2.3 that the manufacture, use, sale or other supply of any Patent Product will not infringe the intellectual property rights of any third party (including such rights as may exist or arise from time to time in any patent or patent application);
 - 6.2.4 that any Patent Product does not fall within the scope of any intellectual property rights other than the Patents; and/or
 - 6.2.5 as to the accuracy or completeness of the 'action list' referred to in Clause 2.2.2.

7. Assignee warranty

- 7.1 Qubitekk warrants that it is a company duly formed in the State of Delaware, validly existing and in good standing under the laws of the jurisdiction of its formation, and that it has the power and authority to enter into this Agreement and carry out its terms.
- 7.2 Qubitekk's execution, delivery and performance of its obligations under this Agreement will not conflict with or violate any laws to which Qubitekk is subject, or any agreement or other obligation directly or indirectly applicable to Qubitekk.

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8. NOT USED

9. Security Interest

- 9.1 To secure its satisfactory performance and payment of all sums due under this Agreement, Qubitekk hereby grants to QinetiQ on the Effective Date a Security Interest, which Qubitekk agrees QinetiQ may record with relevant countries' patent offices and/or other governmental offices.
- 9.2. On written request by QinetiQ, Qubitekk shall execute or procure the execution of and promptly deliver any document or instrument, and promptly take or procure the taking of such action with respect to the Security Interest or the Reversionary Interest as QinetiQ may reasonably require in order to enjoy the full benefit of and rights granted to it under this Agreement. To the extent that Qubitekk fails to promptly comply with its obligations under this Clause 9.2, Qubitekk appoints QinetiQ as its attorney and in Qubitekk's name or otherwise and on its behalf to execute and deliver any document or instrument or take any action pursuant to this Clause 9.2.
- 9.3 If Qubitekk fails to pay any sum due under this Agreement on the due date for payment, or commits a material breach of any other term of this Agreement, and fails to remedy such breach within forty-five (45) days of being notified in writing to remedy such breach, QinetiQ may exercise any right or remedy of a secured party provided by law. in addition to any other right or remedy provided under this Agreement, other instruments or by law.
- 9.4 In the event of default under Clause 9.3, all right, title and interest in and to the Patents, including all such right, title and interest assigned to QinetiQ under Clause 2.1 and its sub-sections, automatically reverts to QinetiQ without any action on the part of Qubitekk.
- 9.5 Qubitekk shall have the right, exercisable upon written notice to QinetiQ at any time, to extinguish the Security Interest and the Reversionary Interest with regard to any applicable Patent or Patents upon receipt of payment by QinetiQ from Qubitekk of a mutually agreed sum, such sum to be deducted from remaining instalments due as consideration under Clause 4.1.

10. NOT USED

11. Confidentiality

11.1 The Parties are party to a Non-Disclosure Agreement with reference QinetiQ NDA Ref: 2017-CORP-NDA-005428 ("NDA") dated 1 December 2017 as amended on 14 January 2019, which Parties agree shall be terminated by mutual consent with effect from the Effective Date, and any Confidential Information which has been exchanged under the NDA and which is still in the possession of a Party as a receiving Party shall be treated from the Effective Date as having been exchanged under this Agreement.

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- In the event of any conflict or inconsistency between this Agreement and the NDA, this Agreement shall prevail.
- 11.2 Each Party undertakes that it shall not at any time during this Agreement, and for a period of ten (10) years after termination of this Agreement, disclose to any person any Confidential Information, except as permitted by Clause 11.3.
- 11.3 Each Party may disclose the other Party's Confidential Information:
 - 11.3.1 to its directors, officers and employees, attorneys or professional advisors who strictly need to know such information for the purposes of exercising the Party's rights or carrying out its obligations under or in connection with this Agreement. Each Party shall ensure that its directors, officers and employees, attorneys or professional advisors to whom it discloses the other party's Confidential Information comply with this Clause 11;
 - 11.3.2 to a court of competent jurisdiction, or a mediator or arbitrator under Clause 21, for the purposes of enforcing and resolving Disputes pertaining to this Agreement; and
 - 11.3.3 as may be required by law, a court of competent jurisdiction or any governmental or regulatory authority.

11.4 No Party shall:

- 11.4.1 use the other Party's Confidential Information for any purpose other than to exercise its rights and perform its obligations under or in connection with this agreement; and/or
- 11.4.2 except where otherwise stated in this Clause 11, disclose the other Party's Confidential Information to any third party (including any subcontractor, parent company or subsidiary of the receiving Party or any subsidiary of such parent company or any contractor of the receiving Party) without the prior written permission of the disclosing Party; and then always on the condition that it first binds the third party by obligations of confidentiality and non-use in respect of the disclosed Confidential Information which are no less onerous than the confidentiality terms under this Agreement (and each Party hereby grants permission to the other to disclose its Confidential Information to Adapt IP Ventures LLC on the condition above);
- 11.5 Confidential Information shall not include information which:
 - 11.5.1 is or becomes generally available to the public other than as a direct or indirect result of the information being disclosed by the receiving Party in breach of this Agreement;

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11.5.2 was already lawfully known to or independently developed by the receiving Party before it was disclosed by the disclosing Party; or

- 11.5.3 has been received by the receiving Party in writing from a third party source that is not connected with the disclosing Party and was not under any obligation of confidence in respect of that information.
- 11.6 Either Party may disclose this Agreement to a patent office and/or other governmental office in connection with perfection or recordation of such Party's rights in the Patents.

12. Term and termination

- 12.1 This Agreement shall commence on the Effective Date and continue in full force and effect until the later of the following events:
 - 12.1.1 all instalment payments set out in Schedule 2 and all other sums due under this Agreement have been received by QinetiQ in full and cleared funds into QinetiQ's bank account in accordance with Clauses 4 and 5, and
 - 12.1.2 every claim of each and every Patent has expired or until every claim of each and every Patent has been ruled invalid or unenforceable in a final nonappealable decision by a court of competent jurisdiction

on which date the Agreement shall automatically terminate.

- 12.2 On termination each Party shall promptly, at the other Party's request, return, destroy or delete that Party's Confidential Information.
- 12.3 Termination of this Agreement shall not affect any rights, remedies, obligations or liabilities of the Parties that have accrued up to the date of termination, including the right to claim damages in respect of any breach of the Agreement which existed at or before the date of termination.
- 12.4 Any provision of this Agreement that expressly or by implication is intended to come into or continue in force on or after termination or expiry of this Agreement shall remain in full force and effect.

13. Waiver

No failure or delay by a Party to exercise any right or remedy provided under this Agreement or by law shall constitute a waiver of that or any other right or remedy, nor shall it prevent or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall prevent or restrict the further exercise of that or any other right or remedy.

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14. Entire agreement

- 14.1 This Agreement constitutes the entire agreement between the parties and supersedes and extinguishes all previous agreements, promises, assurances, warranties, representations and understandings between them, whether written or oral, relating to its subject matter.
- 14.2 Each Party agrees that it shall have no remedies in respect of any statement, representation, assurance or warranty (whether made innocently or negligently) that is not set out in this Agreement. Each Party agrees that it shall have no claim for innocent or negligent misrepresentation based on any statement in this Agreement.

15. Variation

No variation of this Agreement shall be effective unless it is in writing and signed by the Parties (or their authorised representatives).

16. Severance

- 16.1 If any provision or part-provision of this Agreement is or becomes invalid, illegal or unenforceable, it shall be deemed deleted, but that shall not affect the validity and enforceability of the rest of this Agreement.
- 16.2 If any provision or part-provision of this Agreement is deemed deleted under Clause 16.1, the Parties shall negotiate in good faith to agree a replacement provision that, to the greatest extent possible, achieves the intended commercial result of the original provision.

17. Counterparts

- 17.1 This Agreement may be executed in any number of counterparts, each of which when executed shall constitute a duplicate original and all of which counterparts shall together constitute the one agreement.
- 17.2 Signatures of the Parties transmitted electronically shall be deemed to be their original signatures for the purposes of execution.

18. Third party rights

Nothing express or implied herein is intended to confer, nor shall anything herein confer, upon any person other than the Parties and the Associated Companies, and their respective successors and assigns any rights, remedies, obligations or liabilities whatsoever.

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19. Notices

- 19.1 Except as otherwise stated in this Agreement, any notice given to a Party under or in connection with this Agreement shall be in writing and shall be:
 - 19.1.1 delivered by pre-paid first-class post or other next working day delivery service, or pre-paid airmail; and
 - 19.1.2 sent in the case of QinetiQ, to:

Group General Counsel

QinetiQ Ltd

Cody Technology Park

Ively Road

Famborough

Hampshire GU14 0LX

United Kingdom

quoting QinetiQ Ref: IP/01/E/1242

and in the case of Qubitekk, to:

Chief Executive Officer

Qubitekk Inc.

1216 Liberty Way Suite A

Vista

CA 92081

USA

or in either case to such other address as the Party concerned may notify the other Party in writing from time to time.

- 19.2 Any notice shall be deemed to have been received:
 - 19.2.1 if sent by pre-paid first class post or other next working day delivery service, on the second Business Day after posting or at the time recorded by the delivery service;
 - 19.2.2 if sent by pre-paid airmail, on the fifth Business Day after posting or at the time recorded by the delivery service.
- 19.3 This clause does not apply to the service of any proceedings or other documents in any legal action or, where applicable, other method of dispute resolution.
- 19.4 A notice given under this Agreement is not valid if sent by email.

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20. Further assignment

- 20.1 Qubitekk shall not seek to assign or delegate its rights, liabilities or obligations under this Agreement without QinetiQ's prior written consent, and the Parties agree that any such purported dealing without QinetiQ's prior written consent shall be a material breach as referred to in Clause 9.3.
- 20.2 Subject to Clause 20.1, as regards any sale, assignment, transfer or disposal of the Patents to any third party, Qubitekk covenants with QinetiQ that such sale, assignment, transfer or disposal shall be subject to QinetiQ's continuing licence and Qubitekk's covenant not to sue under Clause 3 and, if such sale takes place prior to payment in full under this Agreement, the obligations under Clause 2.6 and the Security Interest and Reversionary Interest, and:
 - 20.2.1 it shall ensure that such licence and covenant not to sue, obligations under Clause 2.6, Security Interest and Reversionary Interest are binding upon any successor and assign and enforceable by QinetiQ and its Associated Companies; and
 - 20.2.2 any such sale, assignment, transfer or disposal shall be by means of a written assignment which requires any successor or assign to repeat the terms of this Clause 20.2 in any future assignments of the Patents.
- 20.3 QinetiQ shall not seek to assign or delegate its rights, liabilities or obligations under this Agreement without Qubitekk's prior written consent, and the Parties agree that any such purported dealing without Qubitekk's prior written consent shall be a material breach of this Agreement. Notwithstanding the foregoing, no such consent will be required to assign QinetiQ's rights under this Agreement to an Associated Company or to a successor or acquirer in the event of a merger, acquisition or corporate reorganisation, provided QinetiQ remains responsible to Qubitekk for its obligations hereunder.

21. Dispute resolution

- 21.1 If a dispute or claim arises out of or in connection with this Agreement or the performance, validity or enforceability of it ("Dispute"), then the Parties shall follow the procedure set out in this clause:
 - 21.1.1 either Party shall give to the other written notice of the Dispute, setting out its nature and full particulars ("Dispute Notice"), together with relevant supporting documents. On service of the Dispute Notice, the QinetiQ Senior Officer and a duly appointed representative of Qubitekk shall attempt in good faith to resolve the Dispute; and
 - 21.1.2 if the Parties have not resolved the Dispute within sixty (60) days of its being referred to representatives of the Parties under Clause 21.1.1, either Party may refer the Dispute to mediation, administered by the International Centre Page 15 of 37

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for Dispute Resolution ("ICDR") in New York, New York. The language of the mediation shall be English. To initiate the mediation, a Party must serve notice in writing ("ADR Notice") to the other Party to the Dispute, referring the Dispute to mediation. A copy of the ADR Notice should be sent by the initiating Party to the ICDR.

- 21.2 If the Dispute is not resolved within sixty (60) days after service of the ADR Notice or either Party fails to participate or ceases to participate in the mediation before the expiry of that 60 day period, the Dispute shall be finally resolved by arbitration under the International Expedited Procedures of the ICDR. The arbitration will be held in New York, New York and the language of the arbitration shall be English.
- 21.3 The prevailing Party in any arbitration or other proceeding arising from or relating to this Agreement is entitled to recover its costs, including reasonable attorney fees.

22. Law and jurisdiction

This Agreement shall be governed and construed in accordance with the laws of New York and the Parties irrevocably submit to the exclusive jurisdiction of the courts in New York, USA. both state and federal. For the avoidance of doubt, nothing in this Agreement shall prevent either Party seeking injunctive or other interim relief or enforcement of a court order in the jurisdiction of the defendant or any other court of competent jurisdiction.

SCHEDULES 1 to 4 follow:

(A)

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SCHEDULE 1

Patents

QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7393	DE	Granted	22-Feb- 06	07712756.1	19- Feb- 2007	602007014829 4	Apparatus and method for generating random numbers.
P7393	FR	Granted	22-Feb- 06	07712756.1	19- Feb- 2007	1987420 ^	Apparatus and method for generating random numbers.
P7393	GB	Granted	22-Feb- 06	07712756.1	19- Feb- 2007	1987420	Apparatus and method for generating random numbers
P7393	JÞ	Granted	22-Feb- 06	2008-555860	19- Feb- 2007	5384118	Apparatus and method for generating random numbers.
P7393	US	Granted	22-Feb- 06	12/280219	19- Feb- 2007	8768992	Apparatus and method for generating random numbers.
P7394	JP	Granted	05-Jul- 06	2013-055300	04- Jul- 2007	5512848	Quantum Cryptography Apparatus
P7394	US	Granted	05-Jul- 06	12/306969	04- Jul- 2007	8693685	Quantum Cryptography Apparatus
P7394	DE	Granted	05-Jul- 06	07766155.1	04- Jul- 2007	602007047732.8	Quantum Cryptography Apparatus
P7394	FR	Granted	06-Jul- 06	07766155.1	04- Jul- 2007	2041912	Quantum Cryptography Apparatus
P7394	GB	Granted	05-Jul- 06	07766155.1	04- Jul- 2007	2041912	Quantum Cryptography Apparatus
P7420	EP	Published	12- Sep-06	07804228.0	12- Sep- 2007	· ·	Electro-Optic Waveguide Polarisation Modulator
P7420	CA	Granted	12- Sep-06	2667145	12- Sep- 2007	2667145 ;	Electro-Optic Waveguide Polansation Modulator

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QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7420	JР	Granted	12 Sep-06	2009-527883	12- Sep- 2007	5416585	Electro-Optic Waveguide Polarisation Modulator
P7420	TW	Granted	12- Sep-06	096133999	12- Sep- 2007	1420188	Electro-Optic Waveguide Polarisation Modulator
P7420	US	Granted	12- Sep-06	12/310922	12- Sep- 2007	8611534 3	Electro-Optic Waveguide Polansation Modulator
P7555	DE	Granted	02-Feb- 07	08701989.9	01- Feb- 2008	602008055412 0	EPR Pair Generation
P7555	FR	Granted	02-Feb- 07	08701989.9	01- Feb- 2008	2108170	EPR Pair Generation
P7555	GB	Granted	02-Feb- 07	08701989 9	01- Feb- 2008	2108170	EPR Pair Generation
P7555	US	Granted	02-Feb- 07	12/524911	01- Feb- 2008	8254079	EPR Pair Generation
P7620	DE	Granted	25-Jan- 08	09703427.6	23- Jan- 2009	602009046705.0	Multi-community Network with Quantum Key Distribution
P7620	FR	Granted	25-Jan- 08	09703427 6	23- Jan- 2009	2245768	Multi-community Network with Quantum Key Distribution
P7620	GB	Granted	25-Jan- 08	09703427 6	23- Jan- 2009	2245788	Multi-community Network with Quantum Key Distribution
P7620	JР	Granted	25-Jan- 08	2010-543568	23- Jan- 2009	5431365	Multi-community Network with Quantum Key Distribution
P7620	US	Granted	25-Jan- 08	12/812849	23- Jan- 2009	8885828	Multi-community Network with Quantum Key Distribution
P7621	DE	Granted	25-Jan- 08	09703693.3	23- Jan- 2009	602009026113.4	Quantum Cryptography Apparatus
P7621	FR	Granted	25-Jan- 08	09703693 3	23- Jan- 2009	2245789	Quantum Cryptography Apparatus

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QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7621	GB	Granted	25-Jan- 08	09703693.3	23- Jan- 2009	2245769	Quantum Cryptography Apparatus
P7621	JР	Granted	25-Jan- 08	2010-543567	23- Jan- 2009	5631743	Quantum Cryptography Apparatus
P7621	US	Granted	25-Jan- 08	12/863510	23- Jan- 2009	8855316	Quantum Cryptography Apparatus
P7622	ЕР	Published	28-Jan- 08	09706420 8	23- Jan- 2009		Optical Transmitters and Receivers for Quantum Key Distribution
P7622	US	Granted	28-Jan- 08	12/863509	23- Jan- 2009	9148225	Optical Transmitters and Receivers for Quantum Key Distribution
P7623	DE	Granted	25-Jan- 08	09703191.8	23- Jan- 2009	602009027431 7	Network having Quantum Key Distribution
P7623	FR	Granted	25-Jan- 08	09703191.8	23- Jan- 2009	2248318	Network having Quantum Key Distribution
P7623	GB	Granted	25-Jan- 08	09703191.8	23- Jen- 2009	2248318	Network having Quantum Key Distribution
P7623	JP	Granted	25-Jan- 08	2010-543565	23- Jan- 2009	5492095	Network having Quantum Key Distribution
P7623	US	Granted	25-Jan- 08	12/863483	23- Jan- 2009	8650401	Network having Quantum Key Distribution
P7639	EP	Published	19- May-08	09750064.9	15- May- 2009		Quantum Key Device
P7639	US	Granted	19- May-08	12/993146	15- May- 2009	8654979	Quantum Key Device
P7640	US	Granted	19- May-08	12/993098	15- May- 2009	8792791	Multiplexed Quantum Key Distribution
P 7 641	EP	Published	19- May-08	09750065 8	15- May- 2009		Quantum Key Distribution Involving Moveable Key Davica
P7641	US	Granted	19- May-08	12/992695	15- May- 2009	8765625	Quantum Key Distribution Involving Moveable Key Device

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QinetiQ Raferance Number	Country	Status	Priority Date	Application Number	Filling Date	Patent Number	Title
P7621	GB	Granted	25-Jan- 08	09703693.3	23- Jan- 2009	2245789	Quantum Cryptography Apparatus
P7621	JP	Granted	25-Jan- 08	2010-543567	23- Jan- 2009	5631743	Quantum Cryptography Apparatus
P7621	US	Granted	25-Jan- 08	12/863510	23- Jan- 2009	8855316	Quantum Cryptography Apparatus
P7622	EP	Published	28-Jan- 08	09706420.8	23- Jan- 2009		Optical Transmitters and Receivers for Quantum Key Distribution
P7622	US	Granted	28-Jan- 08	12/863509	23- Jan- 2009	9146225	Optical Transmitters and Receivers for Quantum Key Distribution
P7623	DE	Granted	25-Jan- 08	09703191.8	23- Jan- 2009	602009027431.7	Network having Quantum Key Distribution
P7623	FR	Granted	25-Jan- 08	09703191 8	23- Jan- 2009	2248318	Network having Quantum Key Distribution
P7623	GB	Granted	25-Jan- 08	09703191.8	23- Jan- 2009	2248318	Network having Quantum Key Distribution
P7623	JP	Granted	25-Jan- 08	2010-543565	23- Jan- 2009	5492095	Network having Quantum Key Distribution
P7623	US	Granted	25-Jan- 08	12/863483	23- Jan- 2009	8650401	Network having Quantum Key Distribution
P7639	EP	Published	19- May-08	09750064.9	15- May- 2009		Quantum Key Device
P7639	US	Granted	19- May-08	12/993146	15- May- 2009	8654979	Quantum Key Device
P7640	US	Granted	19- May-08	12/993098	15- May- 2009	8792791	Multiplexed Quantum Key Distribution
P7641	EP	Published	19- May-08	09750065.6	15- May- 2009		Quantum Key Distribution Involving Moveable Key Davics
P7641	US	Granted	19- May-08	12/992695	15- May- 2009	8755525	Quantum Key Distribution Involving Moveable Key Device

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QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7660	EP	Published	27-Oct- 08	0974,4716 3	23- Oct- 2009		Quantum Key Distribution
P7660	US	Granted	27-Oct- 08	13/125735	23~ Oct- 2009	8639932	Quantum Key Distribution
P7682	GB	Granted	08- Dec-08	1108890.3	25- Nov- 2009	2477885	Non-Linear Optical Device
P7682	US	Granted	08- Dec-08	13/130944	25- Nov- 2009	8749875	Non-Linear Optical Device
P7684	EP	Published	05- Dec-08	09775243.0	02- Dec- 2009		Method of Performing Authentication between Network Nodes
P7684	US	Granted	05- Dec-08	13/130897	02- Dec- 2009	8762 <i>7</i> 28	Method of Performing Authentication between Network Nodes
P7685	EP	Published	05- Dec-08	09775242.2	02- Dec- 2009		Method of establishing a quantum key for use between network nodes
P7685	US	Granted	05- Dec-08	13/130790	02- Dec- 2009	8681982	Method of establishing a quantum key for use between network nodes
P7722	EP	Published	29- Sep-09	10766089.6	28- Sep- 2010		Methods and Apparatus for Use in Quantum Key Distribution
P7722	JР	Granted	29- Sep-09	2012-531490	28- Sep- 2010	5784612	Methods and Apparatus for Use in Quantum Key Distribution
P7722	us	Granted	29- Sep-09	13/496324	15- Mar- 2012	8683192	Methods and Apparatus for Use in Quantum Key Distribution
P7780	US	Granted	02- Dec-10	13/990230	01- Dec- 2011	9692595	Quantum Key Distribution
P7780	DE	Granted	02- Dec-10	11794839.8	01- Dec- 2011	2647155	Quantum Key Distribution
P7780	FR	Granted	02- Dec-10	11794839.8	01- Dec- 2011	2647155	Quantum Key Distribution

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QinetiQ Ref: IP/01/E/1242

QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7780	GB	Granted	02- Dec-10	11794839 8	01- Dec- 2011	2647155	Quantum Key Distribution
P7780	JР	Granted	02- Dec-10	2013-541416	01- Dec- 2011	5936618	Quantum Key Distribution

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SCHEDULE 2

Payment schedule

Payment date	Amount in US Dollars
1 April 2019	\$37,500
1 July 2019	\$37,500
1 October 2019	\$37,500
1 January 2020	\$37,500
1 April 2020	\$75,000
1 July 2020	\$75,000
1 October 2020	\$75,000
1 January 2021	\$75,000
1 April 2021	\$300,000
1 July 2021	\$300,000
1 October 2021	\$300,000
1 January 2022	\$300,000
1 April 2022	\$487,500
1 July 2022	\$487,500
1 October 2022	\$487,500
1 January 2023	\$487,500
TOTAL	\$3,600,000

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OinetiO Ref: IP/01/E/1242

SCHEDULE 3

Confirmatory Assignment

THIS CONFIRMATORY ASSIGNMENT is dated and effective from and is by and between:

QINETIQ LIMITED (Company number 3796233) a company registered in England and Wales whose registered office is at Cody Technology Park, Ively Road, Farnborough, GU14 0LX (the "Assignor"); and

QUBITEKK, INC. (Company number C3563288 California / 5220639 Delaware) incorporated and registered in Delaware, USA whose registered office is at 1400 Norris Rd. Bakersfield, CA 93308, USA and place of business is at 1216 Liberty Way, Vista, CA 02081, USA (the "Assignee")

WHEREAS the Assignor owns certain granted patents and applications for patents, as set out in Annex 1 (the "Patents"), and the Assignor and Assignee have entered into a Patent Assignment Agreement dated the "Patent Assignment").

CONFIRMATION OF ASSIGNMENT

- The Assignor confirms that, by way of the Patent Assignment, and for the consideration specified in the Patent Assignment, it has assigned absolutely all of its right, title and interest in the Patents, to be held and enjoyed by Qubitekk forever, as fully and entirely as the same would have been held and enjoyed by the Assignor had this assignment and sale not been made, and in and to all and any inventions disclosed in the Patents, subject to the clauses of the Patent Assignment, including:
 - in respect of each and any invention disclosed in the Patents, the right to file an application, claim priority from such application, and prosecute and obtain grant of patent or similar protection in or in respect of any country or territory in the world;
 - the right to extend to or register in, or in respect of, any country or territory in the (b) world each and any of the Patents, and each and any of the applications filed as aforesaid, and to extend to or register in or in respect of any country or territory in the world any patent or like protection granted on any of such applications;
 - the absolute entitlement to any patents granted pursuant to any of the applications filed as aforesaid; and
 - the right to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of the Patents, whether occurring before, on or after the effective date of the Patent Assignment.

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and with sub-paragraphs (a) to (d) inclusive above being subject to the provisions of the Patent Assignment.

(2) The purpose of this document is to confirm the assignment by the Assignor of the rights, title and interest in the Patents to Qubitekk and it is not intended to replace, supersede, modify or otherwise affect the operation of the terms of the Patent Assignment. The parties acknowledge and agree that the Patent Assignment is the determinative document pursuant to which such assignment was agreed and effected, and by which matters concerning the assignment are governed, and that this document serves only a confirmatory purpose and does not by itself create rights or obligations between the parties.

IN WITNESS of which the parties hereto have executed this document on the dates stated below.

Assignor:

QinetiQ Limited

3y:

Name:

Title:

Assignee:

Qubitekk Mc.

Title CEO

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ANNEX 1

Patents

QinatiQ Reference Number	Country	Status	Priority Data	Application Number	Filing Date	Patent Number	Title
P7393	DE	Granted	22-Feb- 06	07712756.1	19- Feb- 2007	602007014829 4	Apparatus and method for generating random numbers
P7393	FR	Granted	22-Feb- 06	07712756.1	19- Feb- 2007	1987420	Apparatus and method for generating random numbers
P7393	GB	Granted	22-Feb- 06	07712756.1	19- Feb- 2007	1987420	Apparatus and method for generating random numbers
P7393	JP	Granted	22-Feb- 06	2008-555860	19- Feb- 2007	5384118	Apparatus and method for generating random numbers
P7393	US	Granted	22-Feb- 06	12/280219	19- Feb- 2007	8768992	Apparatus and method for generating random numbers
P7394	JР	Granted	05-Jul- 06	2013-055300	04- Jul- 2007	5512848	Quantum Cryptography Apparatus
P7394	US	Granted	05-Jul- 06	12/306969	04- Jul- 2007	8693685	Quantum Cryptography Apparatus
P7394	DE	Granted	05-Jul- 06	07766155.1	04- Jul- 2007	602007047732.8	Quantum Cryptography Apparatus
P7394	FR	Granted	05-Jul- 06	07766155.1	04- Jul- 2007	2041912	Quantum Cryptography Apparatus
P7394	GB	Granted	05-Jul- 06	07766155 1	04- Jul- 2007	2041912	Quantum Cryptography Apparatus
P7420	ЕР	Published	12- Sep-06	07804228 0	12- Sep- 2007		Electro-Optic Waveguide Polansation Modulator
P7420	CA	Granted	12- Sep-06	2667145	12- Sep- 2007	2667145	Electro-Optic Waveguide Polarisation Modulator

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QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7420	JP	Granted	12- Sep-06	2009-527883	12- Sep- 2007	5416585	Electro-Optic Waveguide Polarisation Modulator
P7420	TW	Granted	12- Sep-06	096133999	12- Sep- 2007	1420188	Electro-Optic Waveguide Polarisation Modulator
P7420	US	Granted	12- Sep-06	12/310922	12- Sep- 2007	8611534	Electro-Optic Waveguide Polarisation Modulator
P7555	DE	Granted	02-Feb- 07	08701989.9	01- Feb- 2008	602008055412.0	EPR Pair Generation
P7555	FR	Granted	02-Feb- 07	08701989.9	01- Feb- 2006	2108170	EPR Pair Generation
P7555	GB	Granted	02-Feb- 07	08701989.9	01- Feb- 2008	2108170	EPR Pair Generation
P7555	US	Granted	02-Feb- 07	12/524911	01- Feb- 2008	8254079	EPR Pair Generation
P7620	DE	Granted	25-Jan- 08	09703427.6	23- Jan- 2009	602009046705.0	Multi-community Network with Quantum Key Distribution
P7620	FR	Granted	25-Jan- 08	09703427.6	23- Jan- 2009	2245788	Multi-community Network with Quantum Key Distribution
P7620	GB	Granted	25-Jan- 08	09703427 6	23- Jan- 2009	2245788 .	Multi-community Network with Quantum Key Distribution
P7620	JP	Granted	25-Jan- 08	2010-543568	23- Jan- 2009	5431365	Multi-community Network with Quantum Key Distribution
P7620	US	Granted	25-Jan- 08	12/812849	23- Jan- 2009	8865828	Multi-community Network with Quantum Key Distribution
P7621	DE	Granted	25-Jan- 08	09703693.3	23- Jan- 2009	602009026113.4	Quantum Cryptography Apparatus
P7621	FR	Granted	25-Jan- 08	09703693.3	23- Jan- 2009	2245789	Quantum Cryptography Apparatus

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QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7621	GB	Granted	25-Jan- 08	09703693 3	23- Jan- 2009	2245789	Quantum Cryptography Apparatus
P7621	JΡ	Granted	25-Jan- 08	2010-543567	23- Jan- 2009	5631743	Quantum Cryptography Apparatus
P7621	US	Granted	25-Jan- 08	12/863510	23- Jan- 2009	8855316	Quantum Cryptography Apparatus
P7622	EP	Published	28-Jan- 08	09706420 8	23- Jan- 2009		Optical Transmitters and Receivers for Quantum Key Distribution
P7622	US	Granted	28-Jan- 08	12/863509	23- Jan- 2009	9148225	Optical Transmitters and Receivers for Quantum Key Distribution
P7623	DE	Granted	25-Jan- 08	09703191.8	23- Jan- 2009	602009027431.7	Network having Quantum Key Distribution
P7623	FR	Granted	25-Jan- 06	09703191.8	23- Jan- 2009	2248318	Network having Quantum Key Distribution
P7623	GB	Granted	25-Jan- 08	09703191.8	23- Jan- 2009	2248318	Network having Quantum Key Distribution
P7623	JР	Granted	25-Jan- 08	2010-543565	23- Jan- 2009	5492095	Network having Quantum Key Distribution
P7623	US	Granted	25-Jan- 08	12/863483	23- Jan- 2009	8650401	Network having Quantum Key Distribution
P7639	EP	Published	19- May-08	09750064.9	15- May- 2009		Quantum Key Device
P7639	US	Granted	19- May-08	12/993146	15- May- 2009	8654979	Quantum Key Device
P7640	US	Granted	19- May-08	12/993098	15~ May- 2009	8792791	Multiplexed Quantum Key Distribution
P7641	EP	Published	19- May-08	09750065.6	15- May- 2009	<u> </u>	Quantum Key Distribution Involving Moveable Key Device
P7641	US	Granted	19- May-08	12/992695	15- May- 2009	8755525	Quantum Key Distribution Involving Moveable Key Device

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QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filing Date	Patent Number	Title
P7660	EP	Published	27-Oct- 08	09744716.3	23- Oct- 2009		Quantum Key Distribution
P7660	US	Granted	27-Oct- 08	13/125735	23- Oct- 2009	8639932	Quantum Key Distribution
P7682	GB	Granted	08- Dec-08	1108890.3	25- Nov- 2009	2477885	Non-Linear Optical Device
P7682	US	Granted	08- Dec-08	13/130944	25- Nov- 2009	8749875	Non-Linear Optical Device
P7684	EP	Published	05- Dec-08	09775243.0	02- Dec- 2009	l	Method of Performing Authentication between Network Nodes
P7684	US	Granted	05- Dec-08	13/130897	02- Dec- 2009	8762728	Method of Performing Authentication between Network Nodes
P7685	EP	Published	05- Dec-08	09775242 2	02- Dec- 2009		Method of establishing a quantum key for use between network nodes
P7685	US	Granted	05- Dec-08	13/130790	02- Dec- 2009	8681982	Method of establishing a quantum key for use between network nodes
P7722	EP	Published	29- Sep-09	10766089.6	28- Sep- 2010		Methods and Apparatus for Use in Quantum Key Distribution
P7722	JР	Grented	29- Sep-09	2012-531490	28- Sep- 2010	6784612	Methods and Apparatus for Use in Quantum Key Distribution
P7722	US	Granted	29- Sep-09	13/496324	15- Mar- 2012	8683192	Methods and Apparatus for Usi in Quantum Key Distribution
P7780	US	Granted	02- Dec-10	13/990230	01- Dec- 2011	9692595	Quantum Key Distribution
P7780	DE	Granted	02- Dec-10	11794839 8	01- Dec- 2011	2647155	Quantum Key Distribution
P7780	FR	Granted	02- Dec-10	11794839.8	01- Dec- 2011	2647155	Quantum Key Distribution

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QinetiQ Ref: IP/01/E/1242

QinetiQ Reference Number	Country	Status	Priority Date	Application Number	Filling Date	Patent Number	Title
P7780	G8	Granted	02- Dec-10	11794839 8	01- Dec- 2011	2647155	Quantum Key Distribution
P7780	JP	Granted	02- Dec-10	2013-541416	01- Dec- 2011	5938618	Quantum Key Distribution

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SCHEDULE 4

UKMOD Licences

UKMOD's rights and licences are fully described in DEFCON 705 (Edition 11/02) headed 'Intellectual Property Rights – Research and Technology' (the "Condition") as set out below. In addition to the definitions below, "Authority" means UKMOD, "Contractor" means QinetiQ and "Contract" means the agreement between QinetiQ and UKMOD.

Definitions

- 1. For the purpose of this Condition, the following definitions apply:
 - a) Technical Information' means information of a scientific or technical nature (including information in the form of know how, inventions, designs, secret formula and processes, and other confidential information) which is recorded or documented in any medium and whether or not in human readable format, but excluding unrecorded information communicated solely by oral communications. It may be presented in the form of documents, pictorial reproductions, drawing and other graphical representations, disc and film recordings (magnetic, optical and laser), computer software both programmatic and data base, and computer memory printouts or data retained in computer memory, or other form.
 - Foreground Technical Information means Technical Information which is generated in the performance of work under the Contract.
 - c) "Technical Deliverable' means a document or product comprising Technical Information which is required to be provided to the Authority under the terms of the Contract.
 - d) 'Full Rights Information' means Foreground Technical Information together with the following (which may not wholly consist of Foreground Technical Information).
 - data and information resulting from studies analyses or tests that are conducted in the performance of work under the Contract;
 - any item which is specifically required to be produced in the performance of work under the Contract, such as a mathematical model, algorithm or software program, and
 - iii a requirement document or specification which is specifically required to be produced in the performance of work under the Contract.
 - "Full Rights Version" means a version of a Technical Deliverable which comprises Full Rights Information and which is coherent in itself.
 - f) 'Limited Rights Information' means Technical Information which is neither in the public domain nor Full Rights Information, whether owned by the Contractor a subcontractor or a third party, and which comprises details of any of the following:

techniques of design or test or data management, manufacturing methods and processes, products (including software) or materials, and any other category specifically identified in the Contract as being Limited Rights Information when the requirements for Technical Deliverables are agreed

g) "Limited Rights Version" means a version of a Technical Deliverable specifically comprising or including Limited Rights Information.

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- h) 'Intellectual Property Rights' ('IPR') means all patents, utility models, rights (registered and unregistered) in any designs; applications for any of the foregoing, copyright; confidential information and trade secrets; and all rights and forms of protection of a similar nature to these or having agrivalent effect anywhere in the world
- i) 'Foreground IPR' means all IPR in Foreground Technical Information, including patents for any inventions generated in the performance of work under the Contract, and patents for any inventions conceived out of the technical requirements of the Contract if these have been first enabled in the performance of work under the Contract.
- (I) 'UK National Defence Agraement' means any invitation to tender, agreement, or contract, Issued or entered into by or on behalf of the Authority in any territory pursuant to its own defence, civil defence, or security or intelligence purposes and which may provide, without limitation, for information awareness or assessment, or research, or design development, integration, manufacture, provision or support of any equipment materials tools or services.
- k) 'Collaborative Defence Agreement' means any treaty, agreement, MOU or other like formal arrangement entered into by or on behalf of the UK Government, the Authority or any other UK Government Department with another government, government agency, intergovernmental organisation or its agency, for the UK Government's own or its shared defence, civil defence, or security or national or international intelligence purposes.
- i) 'Research and Technology Agreement' means a Collaborative Defence Agreement, not being one established for the development or procurement of a specific equipment, which is within the field of research and technology and which may provide, without limitation, for information exchanges, information awareness or assessment, research projects, or technology demonstrator projects.
- m) 'Use' means utilisation of Technical Deliverables and Technical Information in accordance with this Condition for the purposes provided hereunder and, within these limitations, shall include the reproduction and modification of Technical Deliverables.
- n) 'for the Services of the United Kingdom Government' means anything done by the Authority, under the authority of, or to the order of, a Minister of the Crown in pursuance of the authority vested in the Minister by Parliament.

Ownership of IPR

- 2. All Foreground IPR shall belong to the Contractor and shall be subject to this Condition.
- The Contractor shall ensure that the terms of engagement of all individuals carrying out work for him under the Contract are such as to vest the ownership required by Clause 2.
- 4 The Contractor shall ensure that no part of the work to be performed under the Contract is subcontracted to a legal entity without the prior written agreement of the Authority, except as follows:
 - by first ensuring that the subcontractor has entered into an agreement with the Authority, in the form of DEFFORM 177, which invokes this Condition in regard to the subcontract work, or alternatively
 - b) by placing a contract which provides that the Contractor shall own the Foreground IPR arising from the performance of work under the subcontract, and subject to these being licensed to the Authority by the Contractor under the terms of this Condition.
- In the event that the Contractor assigns his ownership of any Foreground IPR he shall secure for the Authority the continuance of its rights under this Condition.

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Publication

The Authority may, at any time, publish or have published a brief summary indicating the nature of work to be carried out under the Contract.

- 7. The Authority may publish, or have published, an abstract, of a commercially non-sensitive nature, of the Full Rights Versions of the Technical Deliverables. The Contractor may supply an acceptable abstract of that Full Rights Version for this purpose. In the absence of such an acceptable abstract, the Authority may produce an abstract itself but it shall not publish this without first consulting the Contractor allowing 45 Business Days for response.
- 8 The Contractor may publish the Foreground Information or any part of it, provided that the Contract, or the pertinent work package within the Contract, is UNCLASSIFIED, unless exceptionally the Authority considers that the publication is not in the national interest. The Contractor shall give written prior notice of intended publication to the Authority and allow 45 Business Days for the Authority to raise an objection on national interest grounds. In the absence of such an objection from the Authority within this period, the Contractor shall be entitled to proceed with publication.

Provision and Use of Technical Information and Retention of Records

- 9 The Contractor shall provide Full Rights Versions of Technical Deliverables as required by the Contract. The Contractor shall not be required to include, and shall not include, Limited Rights Information in Full Rights Versions. Where a Full Rights Version does not contain all deliverable Technical Information, the Contractor shall provide a Limited Rights Version of such other deliverable Technical Information.
- 10. To allow for the provision of further Foreground Technical Information under Clause 11 the Contractor shall retain, for the duration of the Contract and for a period of five years thereafter (or such alternative period as may be specified in the Schedule of Requirements), a record of the work performed under the Contract and of the results obtained.
- 11. The Authority shall have the right to acquire from the Contractor additional Full Rights Information not contained in the Technical Deliverables comprising data and Information resulting from studies analyses or tests that are conducted in the performance of work under the Contract, for so long as this exists. This right shall be exercisable by separate order and on agreement of a fair and reasonable price and other relevant terms.
- 12. The Authority shall have the right to Use all Full Rights Versions and Full Rights Information in confidence, as provided below:
 - to disclose to and authorise Use within any United Kingdom Government Department (which term shall include the United Kingdom Armed Forces) and the UK police and civil defence agencies, for any purposes;
 - to disclose to and authorise Use by any party under, and solely for the purposes of, any UK National Defence Agreement;
 - c) to disclose to any governmental or intergovernmental body under any Research and Technology Agreement, and to allow onward release in confidence to contractors to the extent only that such aniward release is authorised by the Authority in the circumstance that the Research and Technology Agreement provides for these releases on a reciprocal basis, and to authorise Use by these parties in accordance with, and solely for the purposes set out in, the Research and Technology Agreement concerned,
 - d) to disclose to any governmental or intergovernmental body under any Collaborative Defence Agreement other than a Research and Technology Agreement, to allow onward release in confidence to a contractor to the extent only that such onward release is authorised by the Authority and complies with the Collaborative Defence Agreement, and to authorise Use by these parties in accordance with, and solely for the purposes set out in, that Collaborative Defence Agreement, providing that.

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- i. unless the Collaborative Defence Agreement is one which has been identified in the Contract at the time of Contract placement or exceptionally is one subject to security restrictions to a degree which precludes its identification to the Contractor, the Authority shall not exercise its rights under this sub-Clause without first informing the Contractor adequately of its intentions and giving the Contractor an opportunity to make representations; and
- whilst the Authority's decision shall be final between the parties it shall pay due regard to the Contractor's representations when making its decision.
- e) where any Technical Information is to be disclosed to a contractor of another governmental or intergovernmental body under sub-Clauses 12 c) or 12.d), the Authority will use all reasonable endeavours to release to the Contractor and other contractors to the Authority relevant Technical Information received from the other body under the relevant Collaborative Defence Agreement commensurate with the terms of release and use set out in that Agreement, and
- f) to disclose to and permit Use by any party as reasonably necessary in connection with the sale or disposal of anything made pursuant to sub-Clause 12.b), which is surplus to requirements
- 13 Subject to the availability of the relevant expertise and on a request made by the Authority within the period specified in Clause 10, the Contractor shall provide assistance in understanding any Full Rights Versions to the Authority or any other person to whom the Authority may provide it in accordance with Clause 12. The degree of assistance shall be limited to that required for a person competent in the relevant area of technology to interpret the results of the Contract. The assistance shall be made available within a reasonable period of the request and on fair and reasonable terms and conditions.
- 14 The Authority shall have the right to Use in confidence all Limited Rights Versions and Limited Rights Information as provided below:
 - to disclose to and authorise Use within any United Kingdom Government Department (which term shall include the United Kingdom Armed Forces) and the UK police and civil defence agencies, for any purposes, and
 - b) to disclose to and authorise Use by a service provider, under a UK National Defence Agreement, solely for the purposes of the provision of a service to the Authority which, unless otherwise identified in the Contract or agreed by the Contractor, shall be limited to managing, monitoring, evaluating, assessing or auditing the work under the Contract, provided that the service provider is identified for this purpose in the Contract at the time of Contract placement or is one later agreed with the Contractor with a view to avoiding any conflict of interests
- 15 Subject to the limitation imposed by Clause 16, the rights granted under Clauses 12 and 14 shall be free of payment to the Contractor in respect of any IPR owned or controlled by him.
- 16. The freedom from payment granted under Clause 15 shall not extend to Use of any patents, or registered designs other than those comprising Foreground IPR, but shall be without prejudice to the rights of the Authority arising under any separate contract or agreement or arising under statute.

Marking of Information

- 17. The Contractor shall mark each Technical Deliverable with a proprietary legend in which the owner of the rights shall be identified and references to the Contract and this Condition included. The legend may also make other IPR statements reserving rights to the Contractor provided that these are stated in terms consistent with the Authority's rights under this Condition. All Limited Rights Versions shall be clearly marked as such.
- 18. The Authority shall not remove or modify any marking properly applied to Technical Deliverables in accordance with Clause 17, shall perpetuate the marking on any copies it makes of Technical Deliverables and their contents, and shall require any third parties to whom the Technical Deliverable or Technical Information is provided to preserve that marking on all copies.

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Applications for Patents and Registered Designs

- 19 The Contractor shall provide the Authority's Director of Intellectual Property Rights with the following notifications and copies:
 - a) a notification of the first application for patent or like protection (wherever made) for an invention comprising Foreground IPR, which identifies the country and the application number and number of the Contract, together with a copy of the application.
 - a notification of the first application for registration of a design (wherever made) for a design generated in the performance of work under the Contract, which identifies the country and the application number and the number of the Contract, together with a copy of the application, and
 - c) a notification of the grant of any patent or like protection effective in the UK secured for an invention comprising Foreground IPR or the grant of registered design protection effective in the UK for a design generated in the performance of work under the Contract, which gives identification details for the rights granted.
- 20. All notifications under Clause 19, together with the accompanying material as required, shall be provided by the Contractor within 45 Business Days of receipt by him of the corresponding certificate of filling or grant, save as provided in Clause 21.
- 21. In lieu of providing individual notifications under Clause 19, the Contractor shall be entitled to provide a notification, aggregated across the Contract and any other contracts, of all applications and grants which are subject to this Condition (such as a notification in the form of a data base print or extract), as long as this is provided no less frequently than quarterly and as long as the copies required by Clause 19 are provided at the same time.
- 22. The Authority undertakes to hold all copies provided under Clause 19 in confidence and to use them only for the purpose of ascertaining the Authority's rights, unless and until they are published in the normal way.
- 23 The Contractor shall, at the request and expense of the Authority, take all reasonable steps necessary to enable the Authority to register, at the UK Petent Office or elsewhere, its interest in inventions or designs notified under this Condition.
- 24. If the Contract, or a package of work under the Contract, has a national security grading of or equivalent to 'RESTRICTED' or higher then the Contractor shall prepare and file all patent applications for any invention generated in the performance of work under the Contract or that package of work, in accordance with his appropriate national security laws and procedures, using persons having appropriate security clearance for the purpose. This obligation on the Contractor shall apply also to the making of any patent applications for other inventions which discloses any matter connected with the Contract, or a package of work under the Contract, so graded.
- 25. If the Contractor's national security laws and procedures require him to make a patent application for an invention to which Clause 24 applies otherwise than to the UK Patent Office, he shall secure the Authority's consent (which shall not be unreasonably withheld) before making the patent application.
- 26. When a patent application for an invention to which Clause 24 applies is made at the UK Patent Office, the Contractor shall ensure that it is filed directly with the Security Section. When making such a patent application the Contractor shall comply with the following:
 - he shall provide authorisation to the UK Patent Office, at the appropriate stage in the proceedings, to
 provide a copy of the patent application to the Authority in confidence, solely for the purpose of
 assessing the correct national security grading, and
 - b) for inventions which constitute Foreground IPR, he shall state in writing when the application is made that the invention concerned is related to UK Government work and he shall quote the number of the Contract and the name and address of the appropriate representative of the Authority as identified in Box 2 of DEFFORM 111.

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- 27. For the purposes of Clause 3 of DEFCON 659 any patent application made in accordance with Clauses 24 to 26 shall be considered to have been made with the prior consent of the Authority
- The Contractor shall have no right to compensation under Section 22(7)(b) of the Patents Act 1977 in relation to any invention comprising Foreground IPR.
- 29. The provisions of Clauses 24 to 26 do not apply to any individual patent application made or proposed to be made if the whole content of that application has been reviewed and assessed by an appropriate UK national classification authority as having a national security grading of or equivalent to 'UNCLASSIFIED'

Patents etc - Rights of the Authority

- 30 The Authority shall have an irrevocable, world-wide non-exclusive payment free licence with the right to sub-license, for the Services of the United Kingdom Government as follows
 - to do in relation to any patent or like protection of the Contractor for an invention comprising Foreground IPR, any act as defined in Section 55(1) (a) to (e) of the Patents Act 1977 or
 - to make, use, have used, import, keep, offer to sell or sell a registered design comprising Foreground IPR;

and this shall include the right to grant a licence, with the right to sub-license, to another government, government agency, intergovernmental organisation or its agency under the terms of a Collaborative Defence Agreement to permit use of the invention or registered design in any joint activity with the Authority under the Collaborative Defence Agreement (including the provision to all parties to that Agreement of any defence equipment which is produced by the joint activity).

31. The Authority shall inform the Contractor when the Authority exercises its rights under Clause 30

Exploitation

- 32. The Contractor shall notify the Authority promptly if it is not able, or does not wish, to take responsibility for the utilisation, management and exploitation of the Foreground Technical Information or Foreground IPR so that the Authority can consider alternative options. Unless such a notification has been given. Clauses 33 to 36 shall apply.
- 33. The responsibility for securing effective utilisation, management and exploitation of the Foreground Technical Information and Foreground IPR shall fall to the Contractor concomitant upon his ownership of these under Clause 2.
- 34. The Authority shall be entitled to require the Contractor, at reasonable intervals during the Contract and for a period of five years thereafter or such other period as may be set down in the Contract, to inform it of the plans for and the extent to which the Foreground Technical Information and Foreground IPR are being exploited in both the defence market and other markets. The Authority may review from time to time the technology arising from the Contract and may require the Contractor to engage in discussions with a view to promoting commercial exploitation. The Authority may conduct this review itself, or may engage a contractor to conduct a review on its behalf providing that this contractor is reasonably acceptable to the Contractor and is bound by an obligation of confidence.
- 35. If the Contractor wishes to grant a licence including any provision which conflicts with a provision of this Condition, he shall inform the Authority's Director of Intellectual Property Rights giving full details of the proposed licence and the conflict of provisions. If, having regard to the territories and/or goods or services to which the licence relates, it appears to the Authority that the proposed licence is unlikely to inhibit its defence interests it will consent to the licence or consent to the grant on modified terms. No such licence may be granted unless the Authority's consent has been given.
- 36 Subject always to the Authority's existing obligations at the time of the request, the Authority will favourably consider the grant of a licence to the Contractor (with the right to sub-license) to use information provided by and belonging to the Authority as necessary to enable the Contractor to exploit Foreground Information and

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Foreground IPR commercially. Such a licence shall be non-exclusive and on fair and reasonable terms, taking account of all the circumstances

General

- 37. For the avoidance of doubt, nothing in this Condition shall
 - a) restrict the entitlement of either party to make use of information once it enters the public domain.
 - extinguish any entitlement to use information and IPR which has been acquired under any separate contract or agreement; or
 - c) override any applicable security restriction or constitute an export licence for Technical Information
- This Condition shall constitute 'an agreement to the contrary' for the purposes of Section 48(5) of the Copyright, Designs and Patents Act 1988.
- 39. The terms of this Condition shall survive the cessation of the Contract.

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This Agreement has been entered into on the date stated at the beginning of it.

SIGNED for and on behalf of QinetiQ by:

Signature:

Name:

Position:

Authorised to sign on behalf of QinetiQ

SIGNED for and on behalf of Qubitekk by:

Signature:

Name: STA

Position:

Authorised to sign on behalf of Qubitekk

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