RCloud Tasking Form - Part B: Statement of Requirement (SoR)

| Title of Requirement | Time Reversed Waves for Redacted |
|----------------------|----------------------------------|
| Requisition No. | RQ0000011858 |
| SoR Version | 1.0 |

| 1. | Statement of Requirements | | | | | |
|-----|---|--|--|--|--|--|
| 1.1 | Summary and Background Information | | | | | |
| | Summary | | | | | |
| | This document sets out the requirements for Phase II of an electromagnetic Time Reversal feasibility study. Phase I activities focussed primarily Redacted Phase II tasking aims to build on this work to investigate Redacted. | | | | | |
| | Background | | | | | |
| | Within the Redacted. | | | | | |
| | The technical plan for Redacted. | | | | | |
| | In accordance with this plan, a number of techniques have been identified that specifically Redacted | | | | | |
| | Subsequent research phases will need to address the potentially challenging problem of Redacted. | | | | | |
| | With reference to [1] & [2], use of time reversal techniques with Redacted. | | | | | |
| | | | | | | |
| 1.2 | Requirement | | | | | |
| | Aim | | | | | |
| | The aim of this study is to determine the feasibility of using Redacted. | | | | | |
| | The aim of this study is to determine the reasibility of daing reducted. | | | | | |
| | References | | | | | |
| | [1]. Redacted | | | | | |
| | [2]. Redacted | | | | | |
| | [3]. Redacted | | | | | |
| | | | | | | |
| | <u>Scope</u> | | | | | |
| | With reference to earlier work at [3], this study shall comprise two main parts with a further, optional, part to investigate additional aspects not considered essential to the main task objectives. | | | | | |
| l | Port 1 | | | | | |
| | Part 1 | | | | | |

Evaluation of selected approaches for achieving Redacted. To include for example:

Part 1 will investigate the feasibility of using Redacted

- Hardware configuration options
- Methods to Redacted
- Techniques for isolating Redacted.
- Characterisation, testing and evaluation of all associated hardware, software and test
 environments to identify any relevant limitations, assumptions and simplifications for
 example, which must also be clearly stated.
- Development of any supporting modelling and simulation activities.

Additionally, the following original (non-exhaustive) requirements shall also be addressed where applicable:

- What are the practical implications associated with a Redacted?
 - Redacted.
- How much Redacted?
- What does a suitable Redacted?
- How much can Redacted?
- Can a specific Redacted?
- Is it possible to distinguish between Redacted?
- Is it possible to distinguish between Redacted?

Part 2

Part 2 will comprise a practical demonstration of Redacted. Full details of this demonstration, including its scope and limitations are likely to be dependent on Part 1 activities and hence will be determined by all relevant stakeholders at a suitable point in the contract.

Assumptions and Limitations

The constraints and limitations associated with real world operation shall take priority throughout this study. Details regarding Redacted.

Redacted.

Whilst the principal purpose for this study is with regards to the Redacted.

Any computational models developed as a result of this study shall be Redacted.

Government Furnished Information (GFI)

Redacted.

Government Furnished Equipment (GFE)

Redacted.

Redacted.

Definitions

A series of guideline definitions have been produced to help define the project boundaries. These remain open to change/modification subject to agreement of all relevant stakeholders and are available upon request at any point throughout the contract duration.

1.3 Options or follow on work (if none, write 'Not applicable')

| Part 3 (Optional) |
|---|
| Part 3 includes research activities not considered essential to meeting the requirements for Parts 1 and 2 above, but will contribute to a wider understanding of the Redacted. |
| With reference to earlier work at [3], the following (non-exhaustive) activities are included under Part 3 tasking: |
| A mathematical approach to Redacted Redacted Redacted |
| RedactedModelling Redacted |
| investigations into Redacted Redacted Redacted |
| Contract Management Activities |
| As per SOR Deliverables |
| As per RCloud T&Cs |
| Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement |
| No significant aspects |
| |
| |

| 1.6 | Deliverables & Intellectual Property Rights (IPR) | | | | | |
|------|---|--|---|---|---|---------------|
| Ref. | Title | Due by | Format | Expected classification (subject to change) | What information is required in the deliverable | IPR Condition |
| D1 | Kick-off Meeting | ТО | Teleconference or face to face with supporting slide pack and minutes | Redacted | Introduction and discussion of proposed approach with any initial issues or questions raised. | Redacted |
| D2 | Informal Progress Meetings (Min. 2 off) | Minimum 2 off; 1 either side of D3. Otherwise as required. | Teleconference with supporting slide packs and minutes as required. | Redacted | Flexible format to discuss progress and matters arising. | Redacted |
| D3 | Interim Report | Halfway point or thereabouts | Softcopy. Adobe PDF. | Redacted | Draft technical report or presentation describing progress to date. | Redacted |
| | | | | | To be delivered a minimum of 5 working days before interim progress review at D4 to enable sufficient time for Dstl review. | |
| D4 | Interim Progress Review | D3 + 5 days | Teleconference or face to face with supporting slide pack and minutes | Redacted | Meeting to discuss interim report feedback and agree an appropriate way forward. | Redacted |
| D5 | Draft Final Report | D7 – 5 days | Softcopy. MS Word format to assist review process. | Redacted | Draft technical report fully describing all work undertaken, including a full list of assumptions, conclusions, | Redacted |

| | | | | | recommendations and references. To include model user guide if applicable. To be delivered a minimum of 5 working days before final presentation meeting at D8 to enable sufficient time for Dstl review. | |
|----|--|-----------------|---|----------|---|----------|
| D6 | Associated Models (Where applicable) | D5 | Model source code | Redacted | All models to be delivered together with draft final report and must be compatible with Redacted. | Redacted |
| D7 | Final Presentation | ТВА | Teleconference or face to face meeting with supporting slide pack and minutes. | Redacted | Meeting to discuss conclusions and recommendations reported at D5, plus any additional Dstl feedback. | Redacted |
| D8 | Practical Demonstration (Part 2) | ТВА | Face to face meeting at contractors premises. Practical demonstration of Redacted | Redacted | May be combined with final presentation at D7. | Redacted |
| D9 | Final Report | D7 + 10 days | Softcopy. Adobe PDF | Redacted | Up-issued final report incorporating any changes notified at the final presentation meeting D7. | Redacted |

| printing to 7 to | | D10 | Poster | D7 | Softcopy. Adobe PDF & PowerPoint (or agreed alternative). Suitable for printing to A0 | Redacted | Poster describing the concept and the findings of the research | Redacted |
|------------------|--|-----|--------|----|---|----------|--|----------|
|------------------|--|-----|--------|----|---|----------|--|----------|

Notes:

- Minimum Redacted Full Rights for all deliverables
- Slide packs to be provided in advance for any presentations.
- Minutes, including main points and actions, to be provided for all formal meetings and progress reviews. By email, PDF (preferred) or other format to be agreed.
- Teleconference preferred for meetings if classification allows. Practical demonstration to be held at contractors premises unless agreed otherwise.
- Final presentation and practical demonstration are separate deliverables to mitigate for Covid 19 restrictions if applicable.
- Final reports shall describe the entire work performed under the Contract in sufficient detail to explain comprehensively the work undertaken and results achieved including all relevant technical details of any hardware, software, process or system developed there under. The technical detail shall be sufficient to permit independent reproduction of any such process or system.

1.7 Deliverable Acceptance Criteria All Reports shall be free from spelling and grammatical errors and shall be set out in accordance with the Statement Of Requirement (1) above.

| 2 | Evaluation Criteria | | | | | |
|-----|---|--|--|--|--|--|
| 2.1 | Method Explanation | | | | | |
| | Non-competitive, based on whether requirements are met and value for money. | | | | | |
| 2.2 | Technical Evaluation Criteria | | | | | |
| | A clear, robust and concise technical plan detailing how the requirement will be met, demonstrating value for money. | | | | | |
| 2.3 | Commercial Evaluation Criteria | | | | | |
| | No limiting IP issues. Any background IP claims must be specified in the proposal. Complies with RCloud T&Cs Costs do not exceed Redacted Please provide pricing assumptions, dependencies and exclusions together with a Maximum price for Phase 3, based on current R-Cloud Rates, this will be Firm Priced prior to taking up the Option. | | | | | |