**Serapis Lot 4 Task AII65: Request For Information on Spectrum Sensing Capabilities for Land Tactical Radio Systems**

**Background**

This Request For Information (RFI) is in support of Serapis Task Assured Information Infrastructure number 65 (AII65), on behalf of the Defence Science and Technology Laboratory (Dstl), part of the UK Ministry of Defence (MOD). It is aimed at manufacturers of military land tactical communications radios. Information supplied will be shared within the industry project team (consisting of QinetiQ Ltd, Multiple Access Communications Ltd. and Thales UK) and Dstl for the purposes of delivering this project only. This RFI is not associated with any planned equipment procurement or invitation to tender.

We would like as wide a participation as possible, and are open to mitigating any concerns you have which may otherwise preclude your participation.

**Task Aim**

The aim of Serapis task AII65 is to determine the feasibility of realising land tactical communications radios which also have spectrum sensing capabilities for a range of military purposes such as spectrum management and situational awareness.

**RFI Aim**

The aim of this RFI is to understand the current market support and future plans to develop such radio systems; barriers to doing so (both technical, commercial and regulatory/policy); and identify potential solutions to those barriers.

**Questions:**

**Your Organisation:**

|  |  |  |
| --- | --- | --- |
| **Item Question Number** | **Question** | **Answer** |
| 1. | **What is the name of your organisation?** |  |
| 2. | **How many employees are there in your organisation?** |  |
| 3. | **What is your main business?** |  |
| 4. | **What is your main country/region of operation, or do you operate globally?** |  |
| 5. | **Do you mainly operate within the defence/military market?** |  |
| 6. | **Are you a manufacturer of military land tactical communications radios? (If not please say why you are responding to this RFI and what role you play in the military land tactical radio communications market).** |  |
| 7. | **What is your role within your organisation?** |  |

**Current market status:**

| **Question Number** | **Question/Answer** | |
| --- | --- | --- |
| **8.** | **Q** | **What military land tactical radios do you produce, and who are your main customers? Please provide a brief description of each along with main customers/customer groups where possible.** |
| **A** |  |
| **9.** | **Q** | **Do any of your military land tactical radios support spectrum sensing capabilities? If yes please describe.**   1. **What is the primary purpose of any spectrum sensing capabilities?** 2. **Are they to directly support communications functionality for example enabling interference mitigation/dynamic spectrum access?** 3. **Can they be used for other spectrum sensing purposes such as spectrum situational awareness, spectrum monitoring/management etc.?** 4. **What spectrum sensing capabilities do they support?**    1. **Detection of interfering signals?**    2. **Classification of interfering signals?**    3. **Location of interfering signals?**    4. **Recording of interfering signals?**    5. **Demodulation of interfering signals?** |
| **A** |  |
| **10.** | **Q** | **If your radios support spectrum sensing capabilities, can you please explain the reasons why you decided to include this functionality? If not please explain the reasons why you have decided not to offer such functionality.** |
| **A** |  |
| **11.** | **Q** | **If your radios support spectrum sensing, have you had to design them differently compared to radios which do not include this functionality?**   1. **How has your approach to their architecture differed?** 2. **Have you had to use different/new technologies?** |
| **A** |  |
| **12.** | **Q** | **What (if any) is the increase in the Size, Weight and Power of radios associated with the provision of spectrum sensing capabilities? If your radios support spectrum sensing please provide details in this context, if not please give your professional opinion.** |
| **A** |  |

**Future Market Status:**

| **Question Number** | **Question/Answer** | |
| --- | --- | --- |
| **13.** | **Q** | **What are your plans for spectrum sensing capabilities within your land tactical radios?**   1. **If you do not currently offer spectrum sensing capabilities, do you plan to in the future?**    1. **What capabilities do you plan to offer?**    2. **What timescale do you plan to offer these capabilities in?**    3. **What types of radios will you be offering them on?** 2. **If you do offer spectrum sensing capabilities, what are your plans to evolve it in the future?**    1. **Do you plan to improve the spectrum sensing capabilities?**    2. **Do you plan to offer spectrum sensing capabilities across more radios?**    3. **What are the timescales of these plans?** |
| **A** |  |

**Barriers and Solutions:**

| **Question Number** | **Question/Answer** | |
| --- | --- | --- |
| **14.** | **Q** | **Are there any barriers to offering spectrum sensing capabilities within your radios? If yes please explain.** |
| **A** |  |
| **15.** | **Q** | **In your view what could be done to reduce the barriers you have identified.** |
| **A** |  |
| **16.** | **Q** | **Are any of these barriers specific to the UK market?** |
| **A** |  |
| **17.** | **Q** | **In your view what could be done to reduce the barriers you have identified.** |
| **A** |  |
| **18.** | **Q** | **What in your view should Dstl and UK MOD be doing to encourage radio vendors to incorporate spectrum sensing capabilities in their radios?** |
| **A** |  |
| **19.** | **Q** | **Are there any examples of best practice which the UK MOD should be adopting to support the incorporation of spectrum sensing capabilities into land tactical radios? Please give details where possible.** |
| **A** |  |

**Follow-up**

Thank you for completing this RFI. We plan to follow-up this RFI with a virtual workshop session and one-to-one interviews with selected respondents. Please indicate if you would like to be involved in these activities.

**20. Virtual Workshop participation**

**Yes I would like to be invited to a virtual workshop**

**No I would not like to invited to a virtual workshop**

**21. Willingness to support one-to-one interview**

**Yes I would be willing to participate in a one-one interview (if invited).**

**No I would not be willing to participate in a one-one interview (if invited).**

If you have ticked yes to question 20. or 21.

Please provide a contact email address: