Tech Challenge 2013

# TEam Application

## Solution description

Use the following space to describe the problem identified by your team, what your unique solution is and how the Raspberry Pi will be used as the central part of the final design:

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| **EM situational awareness is critical for spectrum dominance and force protection. Deployment of ubiquitous RF sensors on the battlefield is often limited by the cost of current equipment. For Tech Challenge 2013, Team REDHAWK will develop a low cost RF sensor node based on the open source REDHAWK Software Defined Radio framework (redhawksdr.org). The Raspberry Pi will host the REDHAWK framework and serve as an integration platform for a low-cost USB receiver covering (roughly 24 to 1850MHz) along with USB GPS and WiFi dongles.**  **The project will demonstrate an inexpensive distributed RF sensor grid based on Raspberry Pi nodes to perform spectrum operations missions such as spectrum monitoring, threat detection and (as a stretch goal) coarse emitter location. The project will also serve as a well documented, freely available reference design for groups within the ISR and EW communities who are interested in learning more about the REDHAWK SDR framework and how it might benefit their missions.** |

## Team Description

What is the name of your team?

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| ***Team REDHAWK* – a joint team of Geon Technologies, LLC and Morgan State University’s Center of Excellence for Tactical and Communications Technologies (CETACT)** |

Describe your team membership (add rows if needed; list can change during competition):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Name** | **Employer** | | **Email** | |
| **Primary POC** | Jim McCloskey | | Geon Technologies, LLC | | jmccloskey@geontech.com |
| **Member** | Dr. Willie Thompson | | Morgan State University | | willie.thompson@morgan.edu |
| **Member** | Patrick Wolfram | | Geon Technologies, LLC | | pwolfram@geontech.com |
| **Member** | Antonio Samuel | | Morgan State University | | ansam3@morgan.edu |
| **Member** | Brandon Luquette | | Geon Technologies, LLC | | bluquette@geontech.com |
| **Member** |  | |  | |  |
| **Member** |  | |  | |  |

## Pre-Competition Feedback

What thoughts do you have as this first challenge is started? Open, honest and constructive input welcomed.

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| **Great idea!! Please let me know if you need additional support. -- Jim McCloskey** |

## Submitting this form & Payment Information

Email the completed form to [apgtechchallenge@gmail.com](mailto:apgtechchallenge@gmail.com). Once application is received, information on how to submit payment of the **$100** registration fee of will be provided.