**Abstract**

InnovateAFITC is an annual Hackathon held in conjunction with Air Force Information Technology and Cyberpower Conference (AFITC). This document describes the event operates and serves as the governing document for innovateAFITC.

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# Event at a Glance

## Overview

The Montgomery Area Chamber of Commerce – TechMGM in partnership with the Montgomery Armed Forces Communications and Electronics Association (AFCEA) –Chapter Education Foundation (EdF) and the United States Air Force (USAF) to bring this exciting event to our beautiful city!

Held in conjunction with AFITC, innovateAFITC is a hackathon where members of government, industry, Cyber Patriots and students collaborate and network together to discuss the national problems we face today. Diverse, multi-skilled teams will compete by presenting solutions to Air Force and local government, senior leadership and key stakeholders. This competition will enable IT professionals from all IT backgrounds such as network communications, cyber security, software development, design, and STEM to quickly collaborate, form bonds of Wingmanship, and share skills and experience. By tapping into the expertise across functional and organizational lines, residents of the community and the Air Force can leverage talent right in their backyard, bringing the nation’s cyberpower capabilities to new heights through collaborative innovation!

## Planning committee

**Event Coordinators**

|  |  |  |
| --- | --- | --- |
| Name | Email | Phone |
| Charisse Stokes | [cstokes@tidalits.com](mailto:cstokes@tidalits.com) | 334-657-1883 |
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| Joe Besselman | [Joe.besselman@yahoo.com](mailto:Joe.besselman@yahoo.com) | (781) 879-9216 |

**Volunteers**

|  |  |  |
| --- | --- | --- |
| Name | Email | Phone |
| Angela Amadore | [angela.amadore@gmail.com](mailto:angela.amadore@gmail.com) |  |
| Patrick Hart | [patrickhart@spherion.com](mailto:patrickhart@spherion.com) |  |
| Terry Duggan | [Kalabario@hotmail.com](mailto:Kalabario@hotmail.com) | (719) 243-3399 |
| Bryant Noel | Bryant\_Noel@outlook.com | (417) 437-9753 |
|  |  |  |
|  |  |  |

# Objective Criteria

## Goals and Objectives

* Encourage collaboration amongst students, industry, airmen and government IT professionals
* Provide an opportunity for participants to utilize their technical skillsets and apply their expertise across AF mission areas in cybersecurity, network communications and software development
* Increase awareness and recruit for the AF’s Cyber patriot program
* Mentor students, Cyber Patriots and airmen
* Enhance awareness of Smart City Smart Base and explore the technologies to support them
* Welcome newcomers and spark interest in cybersecurity, network communications, software development and design in support of AF mission areas
* Leverage industry expertise and innovative solutions to address AF and local government challenges
* Educate the River Region community on technical opportunities available locally and within the USAF
* Showcase a collaborative working environment for participants to make headway on problems they care about

## Considerations

* Complement AFITC’s theme and agenda, not detract from AFITC, encourage maximum participation at keynotes and breakout sessions
* Close collaboration with the local community to provide workspace for the teams to collaborate and prepare for their presentations
* Maintain consistency in judging and evaluation of each team’s presentation
* Highlight potential talent for the USAF/supporting organizations to recruit for cyber careers

## Event Theme

Smart City and Smart Base

## Target Audience

The target audience for participants is focused around members of the USAF in the local community and those that are geographically separated who are already planning to attend the conference, state and local government, industry, and academia whom are or working towards IT careers such as:

* Students (High School and College) in STEM
* CyberPatriots
* Robotics Participants
* Network Operators
* Software Developers
* Database Administrators
* Data Scientists
* IT Managers
* Designers
* Architects
* Security Professionals

# Event Details

## Eligibility

* 4-6 person teams, no more, no less
* Each team must consist of members’ representative of the following backgrounds:
  + 1 Student
  + 1 Military Member
  + 1 Industry Professional
* It would be advantageous that your team composition includes expertise within the network communications, cybersecurity, software development and design areas to effectively address all evaluated areas
* Participant matchmaking for participants without a starting team is available
* 15 teams MAX

This event aims to foster military organization collaboration with industry partners and the educational community. In addition, industry, academia and military members are encouraged to serve in mentor, coaching and training roles as members of a team.

## Registration

Teams can register online at [www.innovateafitc.com](http://www.innovateafitc.com) . Each team must detail which team members are meeting the required criteria. If you are looking for a team, we can pair you with other IT experts looking to form a team. Registration will close once 15 teams have successfully registered.

## Competition & Presentation

Each team will identify a problem or challenge within an Air Force mission area and will create an innovative technical solution to that problem to present for a panel of judges. As the event draws near, information will be released to aid in the development of the solution. The rubric detailing the criteria for each team’s presentation will be released in phases with the final phase occurring at the event kickoff at 4CDT on Sunday, 27 August at CoWerx46 on 46 Commerce St, Montgomery, AL 36109 and live streamed on (TBD). Each team will have 24hours to create and submit their presentation to the event organizers.

## Judging

Participating teams will have 10 minutes to present their solution to a panel of judges. The solution may be in the form of slides (PowerPoint) or a live demonstration. Post presentation, each team will have up to two minutes to answer any questions the judges may have.

Each panel will have judges representing the following areas/organizations; SAF/A6, AU/PEO BES, State/County/City, Academia and the Chiefs Group. A judging website/application will be created and used to expedite the scoring.

Presentation will occur in two rounds:

**Preliminary Round**

* 3-4 panels of judges will evaluate assigned teams
* Each panel will select the team that scored the highest under evaluation criteria to move to the final round

**Final Round**

* Single panel of judges
* 1st place winners will present to the AFITC audience in the MPAC, seminar room, and/or vendor floor 30 Aug 17

## Workspace

Beginning on Friday, 25 August at 4CDT there will be designated locations at the Renaissance Hotel and in downtown Montgomery, AL within walking distance where teams can collaborate to work on their presentations. High speed and reliable network access will be provided at all locations; some will be available 24/7.

## Judging/Scoring Rubric

Each judge will assign a score between 1 and 10 inclusively for each of the criteria detailed by the rubric, with 1 being unexceptional and 10 being exceptional. Maximum score is 70 points.

|  |  |  |
| --- | --- | --- |
| Criteria | Description | Max Points |
| Creativity | How unique is the solution? | 5 |
| How does the solution differ from existing solutions or technologies? | 5 |
| How ambitious and creative is the solution? | 5 |
| Feasibility | How practical is the solution? | 5 |
| How marketable is the solution? | 5 |
| How cost-effective is the solution? | 5 |
| Validity | Is the problem addressed in full? | 10 |
| How closely does the solution relate to and solve a real-world concern? | 10 |
| Technology | Are the technologies/software languages/interfaces that will be used clearly defined? | 5 |
| How well is the system’s architecture defined? |  |
| Is existing (networking) infrastructure leveraged? |  |
| How well are confidentiality, integrity, and availability concerns of the system addressed? |  |
| Integration | How well does the solution mesh and integrate with existing technology? | 5 |
| How well does the solution collect and/or leverage open data? | 10 |
| Pitch | Were you able to fully understand the solution presented? | 5 |
| If you were a potential investor, how persuaded were you by the team/speaker’s presentation? | 5 |
| Intangibles | Subjective bonus points the judge may choose to award for criteria that does not neatly fit into the former categories. | 15 |
| Bonus | Prototype demonstration. | 5 |
| Open source approach. | 10 |
| Customer/end user sampling and/or analysis. | 10 |

Each team will have 6 minutes to present their problem and innovative solution to a panel of judges. The judges will have 2 minutes to ask questions of the presenting team.

## Prizes

Prizes will be awarded for:

**1st: Best in Show -** Simply the best!

**2nd: Community Impact -** Creative use of tech with immediate impacts to the community.

**3rd: Most Innovative -** The most brilliant idea/concept.

## Schedule of Events

|  |  |
| --- | --- |
| 1. Date/Time | Event |
| 27 Aug 17 5PM | Event Kickoff |
| 28 Aug 17 12PM | Completion Deadline |
| 28 Aug 17 5PM – 7PM | Presentation/Evaluations |
| 30 Aug 17 8AM | Winner Announcement & Presentation to AFITC Audience |
| 30 Aug 17 12PM | Mentorship Session |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **August 2017** | | | | | | |
| ***Sunday*** | ***Monday*** | ***Tuesday*** | ***Wednesday*** | ***Thursday*** | ***Friday*** | ***Saturday*** |
| 27 | 28 | 29 | 30 | 31 |  |  |
| **@5PM**  Event Kickoff | AFITC | | |  |  |  |
| **@12PM**  Project Deadline  **@5PM**  Presentation & Evaluations |  | **@8AM**  Winner Announcement & AFITC Presentation  **@12PM**  Mentorship Session |

# Logistics

## Roadmap & Milestones

|  |  |  |  |
| --- | --- | --- | --- |
| **Date/Time** | **Milestone** | **Task** | **Action Officer(s)** |
| **14 Jun 17** | Finalize Content | Framework | Charisse |
| Event Problem | Boyd, Joe, & Josh |
| Project Tools & Workspace | Boyd & Josh |
| **16 Jun 17** | Brief Key Stakeholders | SAF/A6/Cyber Patriot | Ken |
| AFITC/Legal | Josh |
| MACC/AU | Charisse |
| **20 Jun 17** | Registration Site Deployment | Tech MGM Portal | Charisse |
| Slack Workspace | Josh |
| MACC/Website | Boyd |
| **1 Jul 17** | Marketing Campaign Kickoff | Academia | Charisse |
| BES/26 NOS | Josh |
| HackMGM/Local Community | Josh & Boyd |
| SAF/A6 | Ken |
| Industry | Charisse, Joe, & Ken |
| **15 Jul –**  **24 Aug 17** | Participant Information Campaign Kickoff | Distribution of reading material, training, articles, etc. to spur ideas | Charisse, Josh, & Boyd |

## Registration

Teams can register online via (MACC-TBD) for $200 a team. Each team must detail which team members are meeting the required criteria. If you are looking for a team, visit the matchmaking link to be paired with other IT experts looking to form a team. Registration will close once 15 teams have successfully registered.

## Venue Support

The event will need support in the form of workspace and internet accessibility/bandwidth at and in the community surrounding the Renaissance Hotel for presentations/judging. Ideally the event coordinators would like 2 – 3 spaces designated at the Renaissance Hotel as co-spaces for the event.

## Communications

Event organizers will use the Slack application exclusively for communicating with event organizers and contestants. The channels that will be used are:

#announcements – General announcements for all

#random – Shooting the breeze

#team-NAME – One per team, teams can communicate here

#ineedhelp – contestants can request help here

#mentors – a private channel for communication among the mentors

# Appendix A: Audience Pitch

**Students:** As a student seeking a degree or receiving training in a STEM area this is an ideal opportunity to work alongside individuals doing cyber and IT work. Being a part of a collaborative team will allow you to demonstrate your skills and strengths all the while learning from others across diverse technical areas. This event will expose you to the different aspects, challenges and numerous innovative opportunities in cyber and IT career fields with a focus on AF mission areas.

**Cyber Patriots:** Cyber Patriot competitions focus on either hardening or penetrating an existing system. Such knowledge is crucial in building IT systems and networks from the ground up. Why not put that technical acumen to use in developing a new innovative idea? Cybersecurity professionals are in high demand and the knowledge and expertise you possess is pivotal at the start and throughout the lifecycle of a system. This event gives you the opportunity to test your mettle as part of a focused team!

**USAF Military:** In the cyberspace realm of the USAF mission, professional development often requires the exploration of opportunities external to the organization. Such exploration and experimentation with varying technologies employed by industry is limited within a closed cyberspace environment. In contrast to the normal mission environment, this event will give you the opportunity to bring innovative ideas, develop those ideas using those technologies with a community of professionals, and present those ideas to USAF key leaders!

**Industry:** Whether you’re an integrator, developer, or manager you are in an ideal position to bring value added technology expertise to this event. The latest technology tools and solutions are brought to the USAF by industry. Industry IT professionals are essential to solving military problems through innovation. This event will give you an opportunity to bring your best of breed technology expertise to the forefront in solving a mission area problem for the Air Force!

**Everyone:** Do you have a cool idea? Have you experience problems in the tech space that you could solve but didn’t have the time to invest? Take those innovative thoughts and make them into reality in the cyberspace domain!

# Appendix B: Event Narrative

The cyberspace environment continues to increase in scope and complexity. Because of this growth, new problems arise in how to properly leverage and employ these new technologies, and these problems are only compounded with the world becoming more and more dependent on technology. City and government challenges continue to multiply in tandem with society’s technological advances.

To address such challenges, “Smart City” initiatives are all a buzz around the world to help enable city and community officials to interact directly with the community and city infrastructure to monitor what is happening in the city, assess how it is evolving, and how to enhance a better quality of life.

The traction “Smart City” initiatives have begun to make has enticed the Department of Defense, State and local governments, and industry to partner and promote this venture to leverage each other’s capabilities, maximize efficiencies, and work “smarter”. Earlier this year the 42nd Air Base Wing (ABW), which runs Maxwell Air Force Base (MAFB), began to test and better understand IoT implementations driving Smart City and Smart Base initiatives. Proof of concept examples include facial recognition and license plate scanning at entry points into MAFB, solar beam/geo-fencing technology to reinforce MAFB’s perimeter defenses on the riverside of the installation where a physical barrier is implausible, and remote monitoring of temperatures inside key buildings on the air base.

Such initiatives have the possibility to be replicated across the AF to multiple bases, cities and communities. Among some of the Smart Base solutions being developed at MAFB is perimeter security. A portion of MAFB along the river cannot be secured using a physical barrier, largely due to damage caused by periodic flooding. To address this issue, beam arrays were installed capable of detecting intrusions through the use of Infrared Technology. To address the flooding issue, the beam arrays are setup transportable and can be easily removed during high risk weather. MAFB leadership is also investigating the applicability of a facial recognition and license plate scanning capability, which would quickly detect individuals that are criminal in nature or a high risk to the installation.

Singapore for example has its “Smart Nation” initiative, aimed at engaging citizens, industries, research institutions and the government to harness internet and communication technology to bolster its communities. Singapore’s Beeline app, for instance, draws on aggregated data to provide a demand-driven service to create new transport routes that meet public needs.

Another example is the city of Boston. The Boston Department of Innovation and Technology helped create a number of applications with a wide range of uses, from allowing citizens to report neighborhood issues to the government to helping commuters find on-street parking in the Innovation District.

From a communications perspective, MAFB is exploring the development of a Group Messaging Toolkit and public information kiosks for the base as well. The Group Messaging Toolkit would allow a variety of information to be distributed in a more timely and efficient manner and enable rapid communications, which would distribute emergency notifications to the surrounding community. The information kiosks would provide MAFB residents and visitors historical data about the installation and provide information on current events.

As you can see, “Smart City” initiatives are in full swing at both the local and national government levels, and collaboration with industry is crucial in this venture in order to leverage each other’s capabilities, maximize efficiencies, and work “smarter”. The potential for MAFB and the City of Montgomery to collaboratively pursue “Smart City” and “Smart Base” pilots could allow government officials to explore a number initiatives that will allow the co-located city and base communities to emerge as a model “Smart Community” through public and private partnerships that could provide lessons and capabilities that could be used by other bases and cities that are co-located.

Be it creating mobile applications for public transportation, developing smart parking garages, leveraging unified cloud messaging systems, consolidating e-911 help centers, or developing innovative ways to promote awareness in the environment, the possibilities are boundless in the discovery and development of IT solutions that enable a better quality of life for a military base and the city or community it supports.