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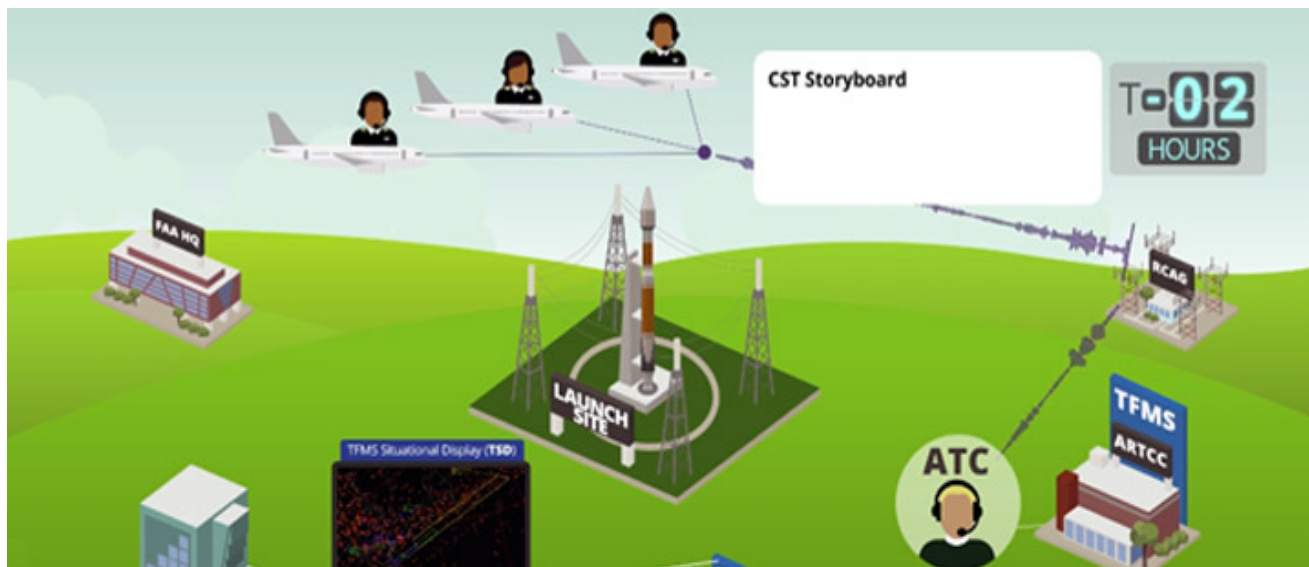
Turning Inspiration into Innovation   1

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The Office of NextGen's monthly Tech Talk Tuesday series provides an opportunity for attendees to not only learn about new technologies influencing aviation, but also the work fellow colleagues are doing each day to support modernization. July's Tech Talk, featured Harry Bilicki of ANG's Verification & Validation Strategies Practice Branch, located at the William J. Hughes Technical Center in Atlantic City, N.J.

Bilicki's presentation focused on the National Airspace System (NAS) Storyboard, but also provided the seasoned engineer and-10 year FAA veteran the perfect opportunity to share his personal story of his pathway to aviation.

Audience members at the July Tech Talk Tuesday listen to Bilicki's history, ultimately leading to the creation NAS Animated Storyboard.

As the NAS Storyboard team lead, Bilicki spearheads one of the most user-friendly ways to understand the National Airspace System.

Accompanied by two NAS Storyboard team engineers, , Bilicki began by telling the audience how his interest in innovation was influenced at an early age by his father, who worked as an electrical engineer at RCA and won multiple individual and team awards for innovation with the company. Taking a page from his father's book, Bilicki took an interest in innovation, and thought about ways technology could improve the lives of everyone.

As a young cross-country runner, Bilicki recalled a summer in his childhood where he and a friend decided it was necessary for them to run more every day, until the new school year and cross-country season started, in an effort to better their endurance and performance for the team. He likened his mindset then to the way he approached the development of the NAS Storyboard - If you put in the work, clarity and teamwork can improve.

After his brother experienced a traumatic accident, Bilicki learned the value of patience and teaching. For many years he worked with his brother to help him re-learn how to play baseball, and Bilicki found his third passion to help others understand and interact with the world around them.

These three experiences became foundational experiences, which led to not only a job with the FAA, but the inspiration for the NAS Animated Storyboard.

Early in his FAA career, Bilicki worked on the Test Standards Board, providing oversight of Tech Center test programs. While reviewing requirements, architecture, and operations of the Tech Center programs, a pattern quickly emerged: while the

Bilicki discussing his passions and the NAS Animated Storyboard to the audience at the Quesada Auditorium.

program diagrams provided a one-dimensional picture of how systems connected, the content was difficult to read and harder to interpret. The diagrams also neglected to provide a full representation of the relationships between different systems or to clearly show the flow of events in different scenarios.

Ultimately, it was up to each person's interpretation to try to understand the complex NAS.

However, Bilicki had a solution. Initially written on the back of a paper plate, he dreamed of an interactive and interconnected tool that would show the complexities of an interrelated system—how the architecture connected, how data or experiences flowed through the system based on the scenario, and the relationships between the different areas.

From left to right: Cuong Nguyen, NAS Animated Storyboard Engineer; Shelley Yak, Director of the William Hughes Technical Center Office (ANG-E); Harry Bilicki, NAS Animated Storyboard Lead; Peter D'Amico, NAS Animated Storyboard Engineer

It took years for the paper plate diagram to become reality. With support and exposure of this idea to the broader technical community (including the Department of Defense (DOD)), Bilicki finally had the support of the FAA and a team. Four years later, the NAS Animated Storyboard now encompasses 40 complete storyboards. This work is ongoing and constantly improving to help not only FAA employees but also the general public understand about the ever-evolving NAS.

For more information, visit the NAS Animated Storyboard Home Page (https://www.faa.gov/about/office_org/headquarters_offices/ang/offices/tc/library/Storyboard/nextgen-overview.html#home) .

Since Bilicki's initial foray into creating the NAS Animated Storyboard, the FAA has provided new opportunities for Technical Center employees to make innovation suggestions. Contact the Innovation and Technology Advisory Council (ITAC) (https://ksn2.faa.gov/nextgen/TechCtr/ITAC/SitePages/Home.aspx) to submit your ideas and garner support.

Did you miss the Tech Talk on July 23? Visit our Tech Talk Tuesday webpage (https://my.faa.gov/org/staffoffices/ang/development/techtalk.html) to find out about the events remaining in 2019.

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Kim Spence
1 year ago

Anyone who talks to Harry knows, he loves what he does. Furthermore, anyone who details to his team also loves the work :) The Storyboards are a powerful educational tools that allow people on every level to understand the NAS. Thanks Harry & team!

This page can be viewed online at:
https://my.faa.gov/focus/articles/2019/08/Turning_Inspiration_.html