

35th
DASC



Hyatt Regency Sacramento
Sacramento, CA
September 25-29, 2016

35th DIGITAL AVIONICS SYSTEMS CONFERENCE

Enabling Avionics for UAS/UTM
(UAS Traffic Management)

www.dasconline.org



Pre-College Futurist Competition

What future do you see for UAS/UTM?

Enter by September 10th and be a part of DASC 35th.

Rules

1. This student competition is open to students who have not yet graduated from high school.
2. Entrants register online at <http://2016.dasconline.org/pre-college-futurist-competition>
3. 10 questions are provided. Select at least 3 questions out of 10 and submit your answers in a short document (Word or PDF) or presentation (PowerPoint) online
<http://2016.dasconline.org/pre-college-futurist-competition> before September 10th, 2016
 - a) Use of accurate statistics, graphics, tables and images in your answers is encouraged
 - b) Limit the answers to one page/slide per question
4. A jury will review and evaluate your answers
5. If your paper/presentation is accepted, you will be invited to present your results during the conference (in person or via a Skype link) – early submissions could be eligible to a travel grant. Submit your request to luc.marcil@cae.com.
6. At the DASC, you will have 10 minutes to present.
7. A jury will evaluate your presentation. Your final score will be based on the quality of your answers and your presentation
8. The three best presentations will be honored at the Digital Avionics Systems Conference Awards dinner and receive a cash prize up to \$500

In the years to come, the skies will be populated with commercial and private drones, Unmanned Aerial Systems (UAS), and traditionally registered aerospace systems. With the affordability of a UAS, private UAS ownership is on the rise. At the same time, large distributors over internet, such Amazon and Google, are pressuring certification authorities for permission to deliver packages everywhere in the world via the use of UAS. With the increasing number of these machines in the sky, a strategy of UAS Traffic Management (UTM) has to be put in place to minimize the risk (unintentionally or maliciously) towards commercial/passenger air transportation. With this new reality in mind, please answer the following questions.

Questions

1. What have you observed in term of UAS evolution over the past decade? And what is the current impact on UTM?
2. What would be the innovations in the next 5 years having the biggest impact on UTM and why?
3. Which avionics equipment on the base station and/or on the UAS would add to better control UTM?
4. Determine the biggest public security issue. If you were a member of a certification authority (e.g., FAA) what would you advocate and why?
5. How do you envision the UAS training for the remote pilots?
6. If you conducted a UTM test, what would be your strategy (e.g., testing, scoring, and evaluation)?
7. Provide a comparison of methods for UTM and their benefits/limitations. Show what is the most promising.
8. UTM security is one important issue, which is related to other issues to consider such as privacy and homeland security, thus, which recommendations would you make to your government to be prepared to coordinate future policies?
9. How would it be possible to globally coordinate the UTM efforts across regions?
10. Finally, what would it take to encourage people to travel in a UAS?