EUCI CONFERENCE

PRACTICAL APPLICATIONS FOR UAS IN CONSTRUCTION AND ENGINEERING

March 15-16, 2017
Hyatt Regency Orange County
Orange County, CA

PRE-CONFERENCE WORKSHOP

Implementation and Business Building Strategies

WEDNESDAY, MARCH 15, 2017

AUTHORIZED IACET PROVIDER

EUCI is authorized by IACET to offer 1.0 CEUs for the conference and 0.4 CEUs for the workshop

OVERVIEW

Unmanned Aerial Systems (UAS) technology is continuing to advance, providing new opportunities for construction and engineering firms to stand out. This advancement is making way for a huge overhaul in an industry that is traditionally conservative toward technology adoption, putting construction companies and engineering firms at the leading edge as new regulations are developed.

At EUCI's upcoming Practical Applications for UAS in Construction and Engineering Conference, taking place on March 15th and 16th 2017 in Orange County, CA, we will cover the most effective and affordable UAS implementation strategies for keeping companies competitive in a changing industry. FAA compliance requirements are continuously being updated, so with a presentation on the current regulations, you will leave this event with an understanding of these guidelines, quantifiable information on the full cost and benefits of implementing UAS, and new business contacts to either help you get started with UAS or build out and manage your fleet. This event will explore the unique challenges across the full range of opportunities – from outsourcing occasional drone flights for construction site monitoring to the full implementation and training process necessary for UAS integration within a company business model.

LEARNING OUTCOMES

- Analyze affordable implementation strategies for UAS within your own company
- Quantify the full cost and benefits of UAS within the construction industry
- Evaluate compliance strategies for FAA regulations, legal requirements, and training programs
- Compare practical applications for using UAS in new construction and existing structure inspections
- Define parameters for the usability of UAS in construction through recent case studies
- Leverage your own UAS program to differentiate offerings within the construction industry, increase business, and improve both safety and accuracy
- Assess the future of UAS in the construction industry through evaluations of how far it has advanced within the last few years and expectations for growth
- Integrate innumerable pieces of raw data into usable information providing current project analysis to help developments stay on track

WHO SHOULD ATTEND

This event will cater to the following company types who are looking to use or already implementing UAS in their company business model:

- Construction companies
- Engineering firms
- Building contractors and subcontractors
- Survey companies
- Government agencies
- Drone manufacturers and designers
- UAS software developers
- Law firms specializing in aviation and construction

AGENDA

WEDNESDAY, MARCH 15, 2017

12:00 – 1:00 pm **Registration**

1:00 – 1:15 pm **Conference Welcome**

1:15 – 2:30 pm **FAA Compliance Requirements on the Use of Drones in Construction**

FAA regulations are consistently changing to keep up with new technologies, and 2017 will not be any different. This session will give you a firsthand account on:

- Current regulatory requirements on a new construction site and around existing buildings and infrastructure
- VLOS/BVLOS regulations and the expectations for how the FAA envisions these limitations will develop along with the industry
- Understanding the differences between the 333 exemption and the requirements in Part 107
- Licensing requirements for pilots both outsourced and in-house, and necessary documentation for the company for whom the drone is flying
- Limitations on night flight and expectations for the future
- The process for flying in urban and other densely populated areas to inspect existing structures

Alvin Brunner, Aviation Safety, FAA

2:30 – 3:00 pm **Networking Break**

3:00 – 4:00 pm **Using UAS for Infrastructure Inspection**

The MNDOT has begun implementing UAS for inspections on existing bridges and other critical infrastructure, and is now looking to scale this process. You will hear directly from the professionals leading these efforts, and hear expectations for how this will grow and ultimately change the bridge inspection process completely.

Jennifer Wells, State Bridge Inspection Engineer, MNDOT
Barritt Lovelace, Regional Manager, Collins Engineers, Inc.

4:00 – 5:00 pm **Understanding and Quantifying the Full Cost and Value of Drones**

- Evaluating the full up-front cost: looking at the numbers for compliance costs, legal requirements, drone investment, insurance, team training, etc.
- Quantifying the benefits and the full results of what you receive through the use of UAS
- The value of raw data that comes out of drone usage, and strategies for how to place a dollar amount on time saved, progress reported to prevent errors in the construction process, and safety
- Valuation of the increase in accuracy for the work done
- Understanding the different technologies that are available for commercial use, and what level is needed to accomplish specific tasks
- UAS allowing for the extension of warranties on completed work – decreasing the cost and labor necessary to evaluate finished projects for any issues

Tomislav Zigo, Director of Virtual Design and Construction, Clayco
Jon Ferguson, Corporate Manager of Visualization, Layton Construction
Rudy Armendariz, Senior VDC/BIM Manager, Balfour Beatty Construction

AGENDA

THURSDAY, MARCH 16, 2017

7:30 – 8:30 am **Continental Breakfast**

8:30 – 9:15 am **Using UAS for Maps, Models, and Progress Forecasting in Construction**

- Point cloud technology and the process for site mapping
- Detecting underground obstructions and a full site evaluation before moving any dirt
- Progress forecasting during the construction process to ensure no errors are made
- Inspecting key structural elements before and after critical steps in the construction process
- 3D modeling to envision an accurate view of the final product
- Time lapse photos to show progress to owners and investors
- Creating a comprehensive image of a job site conventionally too large for analysis
- Construction documentation integrated into building information monitoring

Siva Yarrabilli, Project Manager, BIM / VDC, Suffolk Construction
McKenzie Lewis, Field Solutions Manager, McCarthy Building Companies

9:15 – 10:00 am **Implementing a Company-Wide Fleet**

This co-presentation on the process for implementing a company-wide fleet will give insight into both scalable technologies available now, as well as the process for managing a team of pilots and a fleet of drones on multiple construction sites. We will discuss using a software platform such as DroneDeploy that can both reduce time spent flying in the field and increase the usefulness of the data being captured.

Blake Potts, Regional VDC Manager, Rogers-O'Brien Construction
Jesse Arenivas, Senior VDC Specialist, Rogers-O'Brien Construction

10:00 – 10:30 am **Networking Break**

10:30 – 11:15 am **Best Practices through Practical Use: Safety, Security, and Privacy**

- Improvement of overall worker safety inside of worksites through using UAS by preventing unnecessary risk
- Practical use for site security with the understanding of restrictions on night flight and privacy concerns in both residential and commercial areas
- Restrictions on flying over people in densely populated areas and the privacy of residents
- Insurance requirements for utilizing a drone program internally

Laura O'Donnell, Aviation Insurance Specialist, Aviation Solutions, A Marsh & McLennan Agency

11:15 am – 12:15 pm **Regulations, Applications, and Processes for Night Flight**

Industrial Skyworks and Tremco Roofing have partnered to offer evening infrared roof inspections to check for leaks, damage, and safety concerns involving nighttime flights that could be hampered with the heat of sunlight. Here we will cover the regulatory process for night flight approval, available thermographic technologies making the most of these inspections, and business implementation strategies for the best client result.

Michael Cohen, President, Industrial Skyworks
Robb Chauvin, Executive Director of Inspection Services, Tremco Roofing

12:15 – 1:15 pm **Group Luncheon**

AGENDA

1:15 – 2:15 pm **Now What? Turning Raw Data into Actionable Information**

- Understanding the technology and collected information: HD photo, video, IR, UV inspection, photogrammetry, point cloud mapping, temperature measurement, and thermal detection
- Necessary software for analyzing and combining these pieces of information
- Understanding and implementing the full range of uses one UAS flight can provide
- Improving team communication and timeline projections using this real-time data
- Integrating this data and these strategies into a construction business model

Richard Lopez, VDCO Department, Hensel Phelps

2:15 – 3:00 pm **The Final Product: Making UAS Technology Work Together**

As an end-to-end servicer, Dustin Price will show you how Landpoint implements drones for their customers from the first drone takeoff through the final analytics with a determinable outcome. Here we will go step-by-step through planning, the first site survey, data collection, data analysis and processing, to delivery.

Dustin Price, Land Surveyor and Operations Manager, Landpoint

3:00 – 3:30 pm **Networking Break**

3:30 – 5:00 pm **Looking Ahead: Automation, Cyber Security, and the Future of UAS**

- Discuss current technological capabilities and what is just on the horizon
- Exploring the potential of automated flights: building and erosion monitoring through pre-mapped, repeatable routes, time lapse photography, etc.
- Cyber security concerns as both UAS technology and processing capacity are on the rise
- Expectations for technology improvement for uses applicable to construction and engineering
- Looking further ahead to potential applications in holographic imagery, reality capture, real-time location systems, jobsite sensors, etc.

Jordan Moffett, Virtual Design and Construction Manager, McCarthy Building Companies
Michael Cohen, President, Industrial Skyworks
Lincoln Wood, Regional Manager for Virtual Design and Construction, Turner Construction

5:00 pm **Conference Adjourns**

PRE-CONFERENCE WORKSHOP

Implementation and Business Building Strategies

WEDNESDAY, MARCH 15, 2017

7:30 – 8:00 am	**Registration and Contintental Breakfast**
8:00 – 11:30 am	**Workshop Timing**
11:30 am – 12:30 pm	**Lunch on your own**

OVERVIEW AND AGENDA

This interactive session will give you personalized insight into the most effective strategies for implementing UAS into your own business model. Our discussion leaders come from a diverse set of backgrounds, and can provide insight into the most relevant strategies for your business. This set of topics will be adjusted based on the needs of the registrants.

- In-house implementation costs, strategies, and processes
  - Training programs for existing staff to pilot machines
  - Breaking down insurance costs and quantified cost of compliance requirements
  - Understanding the full value of what UAS provides to a company to justify the budget change and the up-front investment
- Outsourcing UAS services
  - Finding the right partner
  - Analyzing when outsourcing is the right move for a company
  - Software and services available for outsourcing, and what is necessary per each business type and individual needs
- Business building benefits: sales and marketing materials to develop your client base
  - Differentiating yourself and offering additional UAS based services such as site photos and progress information competitors do not
  - Quantifying the value of UAS photos for marketing materials

INSTRUCTORS

Michael Berning
Business Development, Marketing & Sustainable Design, Heapy Engineering

Kevin Pomaski
Emerging Technologies, UAS Operator, Michael Baker International

INSTRUCTIONAL METHODS

Case studies, PowerPoint presentations and group discussion will be used in this event.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day and be in attendance for the entirety of the conference to be eligible for continuing education credit.

IACET CREDITS

EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the AN-SI/ IACET Standard which is recognized internationally as a standard of good practice. As a result of their Au-thorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the AN-SI/IACET Standard.

EUCI is authorized by IACET to offer 1.0 CEUs for the conference and 0.4 CEUS for the workshop.

EVENT LOCATION

A room block has been reserved at the Hyatt Regency Orange County, 11999 Harbor Blvd, Garden Grove, CA 92840, for the nights of March 14-15, 2017. Room rates are US $169 plus applicable tax. Call **714-750-1234** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is February 14, 2017 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

REGISTER 3, SEND THE 4TH FREE

Any organization wishing to send multiple attendees to these conferences may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

REGISTRATION
to register CLICK HERE or

Call: 201 871 0474
fax: 253 663 7224
email: register@pmaconference.com/
web: http://pmaconference.com/
Mail: POB 2303 Falls Church Va 22042

Please make checks payable to: "PMA"

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PLEASE SELECT

- ◯ **PRACTICAL APPLICATIONS FOR UAS IN CONSTRUCTION AND ENGINEERING**
  CONFERENCE AND WORKSHOP: MARCH 15-16, 2017: US $1795,
  EARLY BIRD on or before FEBRUARY 24, 2017: US $1595
- ◯ **PRACTICAL APPLICATIONS FOR UAS IN CONSTRUCTION AND ENGINEERING**
  CONFERENCE ONLY: MARCH 15-16, 2017: US $1395,
  EARLY BIRD on or before FEBRUARY 24, 2017: US $1195
- ◯ PRE-CONFERENCE WORKSHOP ONLY: WEDNESDAY, MARCH 15, 2017: US $595,
  EARLY BIRD on or before FEBRUARY 24, 2017: US $495
- ◯ I'M SORRY I CANNOT ATTEND, BUT PLEASE EMAIL ME A LINK
  TO THE CONFERENCE PROCEEDINGS FOR US $395

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name | Job Title

Company

What name do you prefer on your name badge?

Address

City | State/Province | Zip/Postal Code | Country

Phone | Email

List any dietary or accessibility needs here

CREDIT CARD INFORMATION

Name on Card | Account Number

Billing Address | Billing City | Billing State

Billing Zip Code/Postal Code | Exp. Date | Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

OR Enclosed is a check for $ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before February 10, 2017 in order to be refunded and will be subject to a US $195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of conference cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.