



**AABC**

# AABC Annual Meeting Program

**October 11-13, 2023**

THE WESTIN KIERLAND | SCOTTSDALE, ARIZONA



**WESTIN**  
HOTELS & RESORTS



# AABC Vision & Mission

## **Vision:**

AABC members are the trusted Total System Balance providers of choice for every building owner and design professional.

## **Mission:**

AABC establishes industry standards for Total System Balance of building environments, and is the only association that exclusively certifies independent agencies. Members receive certification, technical training, continuing education, marketing, business resources, professional networking, and industry advocacy.

# Welcome to the 2023 ANNUAL MEETING!

## President's Welcome

On behalf of the entire AABC Board of Directors, I want to welcome you to the 58th AABC Annual Meeting in Scottsdale, Arizona! The board hopes you enjoy the venue selected and the outstanding program provided.



**Gaylon Richardson**  
AABC President

Following the AABC vision and mission statements, the board has launched a critical environment certification program. The first phase of this program will be a fume hood certification based on a new AABC Standard for testing fume hoods. The next phase will include a clean room certification and HEPA filter testing. This will be followed by a certification program that will cover decontamination of safety cabinets and testing biosafety cabinets (BSC). USP manufacturing labs will be included in the clean room and BSC program.

To keep up with the ever-changing world we live in, over the past year the board also revised the AABC Policies and Procedures, which each of you should have received in August. I would like to extend a warm thank you to Jim Anderson, who assisted on that project, and recently completed more than 30 years of service as legal counsel to AABC. Finally, at this year's meeting we will announce this past year's outstanding service award, and proudly induct a new member into the AABC Hall of Fame.

I look forward to seeing each and every one of you at this year's Annual Meeting. Enjoy your colleagues and have fun!

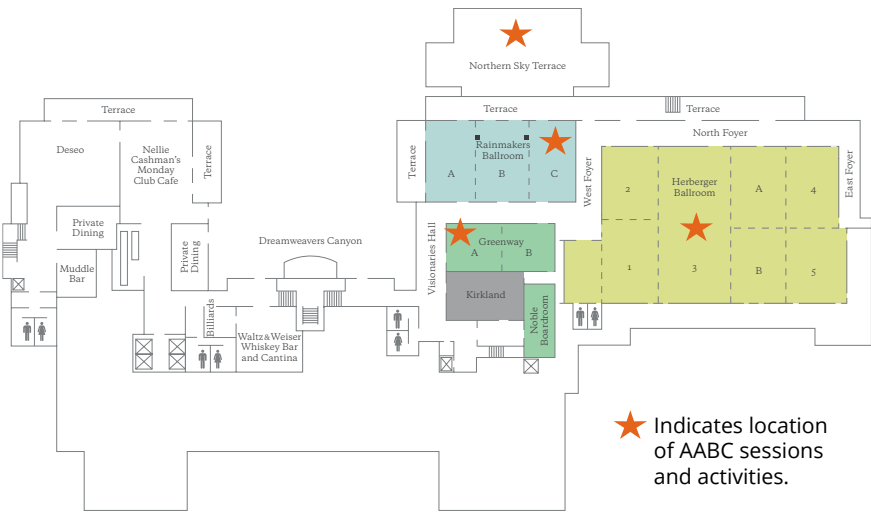
Sincerely,

A handwritten signature in black ink that reads "Gaylon Richardson". The signature is fluid and cursive, with a long horizontal flourish at the end.

Gaylon Richardson, TBE, CxA  
*Engineered Air Balance Co., Inc.*  
AABC President

# Hotel Map

## THE WESTIN KIERLAND



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# Activity Highlights



## **AABC Open Golf Tournament**

**Wednesday, October 11**

**Westin Kierland Golf Club**

**Shotgun Start 8:30 am - Finish**

Get ready for a little collegial competition! The course is in walking distance, and golf-cart transportation is available from the lobby entrance beginning at 7:30 am.



## **Get Acquainted Reception**

**Wednesday, October 11**

**Marshall's Outpost Pavilion**

**6:30 pm – 8:00 pm**

Enjoy food, drinks and fellowship, as we welcome old friends and colleagues, and meet new ones! Beverage service will begin at 6:30 pm, includes two (2) drink tickets.



## **Mavrix**

**Thursday, October 12**

**6:30 pm – 9:30 pm**

Get ready for some fun & games! Bowling, billiards, laser tag, and arcade games provide fun for ALL ages! Transportation will depart from Westin Lobby entrance at 5:45 pm and return to Westin Kierland at 10:00 pm.  
*\$95 per adult, \$35 per child.*



## **Annual Closing Reception & Celebration**

**Friday, October 13**

**Herberger Ballroom**

**6:30 pm – 10:00 pm**

Good food, good fun & The Lucky Devils Band! Cocktail reception starts at 6:30 pm on the Northern Sky Terrace, followed by dinner and live music!



# Spouse Activities

**SPOUSE BREAKFAST Thursday, October 12 & Friday, October 13**  
**8:00 am – 10:00 am** Held in Rainmakers A



## **Morning Yoga**

**Thursday, October 12**

**Greenway A**

**8:00 am – 9:00 am**

Join us and start your day in a great way!  
More stretching, less stressing!



## **Mixology Class: Holiday Entertainment Edition**

**Thursday, October 12**

**Greenway A**

**10:00 am – 11:30 am**

Class begins promptly at 10:00 am.  
*\$85 per adult, \$35 per child.*



## **Morning Meditation & Mindfulness**

**Friday, October 13**

**Greenway A**

**8:00 am – 9:00 am**

Relax, relate and release! Join us and learn some calming and stress-reducing techniques.



## **“The Joy of Dance” by Dance Fusion**

**Friday, October 13**

**Greenway A**

**10:30 am – 12:00 pm**

Enhance your dance moves and learn some new ones! Class begins promptly at 10:30 am. *\$50 per adult, children are free (must be accompanied by an adult).*

**Questions? Please contact Cyndie Graddy: [events@aacb.com](mailto:events@aacb.com)**

# Meeting Schedule

**Wednesday, October 11 – Friday, October 13**

Westin Kierland • Scottsdale, Arizona

## Wednesday, October 11th

8:00 am – 5:00 pm	<b>Registration</b>	<i>Herberger Foyer</i>
8:30 am – 2:00 pm	<b>Inaugural AABC Open Golf Tournament</b>	<i>Westin Kierland Golf Club</i>
6:30 pm – 8:00 pm	<b>Get Acquainted Reception</b>	<i>Marshall's Outpost</i>

## Thursday, October 12th

*\* All sessions will be held in Herberger Ballroom unless otherwise noted.*

7:00 am – 8:00 am	<b>Breakfast</b>	<i>Rainmakers Ballroom BC</i>
8:00 am – 8:25 am	<b>AABC President's Welcome Gaylon Richardson, TBE, CxA</b>	
8:25 am – 8:30 am	<b>ASHRAE Welcome Address M. Dennis Knight, PE, CxA, FASHRAE, President-Elect ASHRAE</b>	
8:30 am – 9:45 am	<b>Executive Director's Report &amp; Awards Presentation Ray Bert, AABC Executive Director</b>	
9:45 am – 10:00 am	<b>Coffee Break</b>	
10:00 am – 11:00 am	<b>The Art of Testing &amp; Balancing Outside of Standard TAB Practices Mike Kelly, TBE, CxA American Testing, Inc.</b>	
11:00 am – 12:00 pm	<b>The Role of TAB on the Testing of HVAC Systems M. Dennis Knight, PE, CxA, FASHRAE Whole Building Systems, LLC</b>	
12:00 pm – 1:30 pm	<b>Lunch</b>	<i>Rainmakers Ballroom BC</i>
12:30 pm – 1:30 pm	<b>Sponsor Product Demonstrations Ameritech Data Solutions (12:30 pm), EAB Training (12:45 pm), Evergreen Telemetry (1:00 pm), Instruments Direct (1:15 pm)</b>	
1:30 pm – 2:15 pm	<b>Airflow Measuring Stations: An Overview of Different Technologies, Understanding Their Limitations and How to Get More Accurate Results Scott Mahanes, University of Virginia</b>	



# Meeting Schedule

2:15 pm – 3:00 pm	<b>Testing, Adjusting &amp; Balancing HVAC Systems with an Aerosol-Based Methodology</b> <b>Phil Arnold</b> , <i>SafeTraces</i>
3:00 pm – 3:15 pm	<b>Coffee Break</b>
3:15 pm – 4:15 pm	<b>Balancing and Operational Issues of CO<sub>2</sub>-based DCV</b> <b>David Dougan</b> , <i>EBTRON</i>
4:15 pm – 5:00 pm	<b>What is a Well-Thought-Out and Well-Executed Marketing Strategy?</b> <b>Eric J. Poerschke</b> , <i>NextLevel Thinking</i> <b>Brian Venn</b> , <i>TBE, CxA, Mechanical Testing, Inc.</i>
6:30 pm – 10:00 pm	<b>Off-Site Event – Mavrix</b> <i>Transportation will depart from Westin Lobby at 5:45 pm and return to Westin Kierland at 10:00 pm.</i>

## Friday, October 13th

7:00 am – 8:00 am	<b>Breakfast</b>	<i>Rainmakers Ballroom BC</i>
8:00 am – 9:00 am	<b>The Evolution of the TAB Professional: It's More Than Just Showing Up to Work!</b> <b>Justin Garner</b> , <i>PE, TBE, CxA, Engineered Air Balance Co., Inc.</i>	
9:00 am – 9:15 am	<b>Break</b>	
9:15 am – 10:15 am	<b>Visualizing Real-Time Contamination Risks Using Modern Methods and Technologies</b> <b>Jennifer Wagner</b> , <i>Onsite, LLC</i>	
10:15 am – 11:15 am	<b>AABC Fume Hood Testing Discussion</b> <b>Gaylon Richardson</b> , <i>TBE, CxA, Engineered Air Balance Co., Inc.</i> <b>Josh Green</b> , <i>TBE, CxA, Environmental Test &amp; Balance Company, LLC</i> <b>Mike Morwin</b> , <i>TBE, CxA, Mechanical Testing, Inc.</i>	
11:15 am – 12:00 pm	<b>Technology Showcase</b> <i>3-minute Exhibitor Presentations &amp; Raffle</i>	
Noon	<b>Adjournment</b>	
6:30 pm – 10:00 pm	<b>Annual Closing Reception &amp; Celebration</b>	<i>Northern Sky Terrace (reception) / Herberger Ballroom</i>

# CEU Deadlines & Information

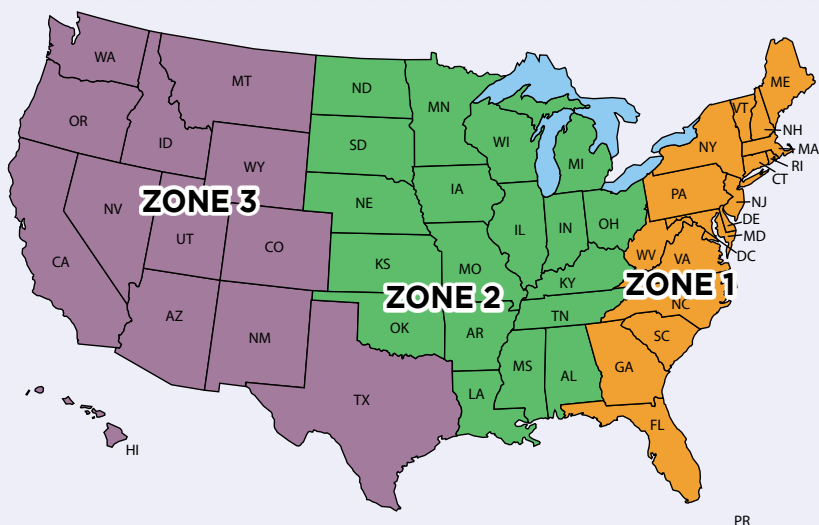
*CEUs due every 3 years at  
60 credits for TBEs & 30 credits for Techs*

**ZONE 1 (Eastern):**  
Next Deadline: December 31, 2023

**ZONE 2 (Central):**  
Next Deadline: December 31, 2024

**ZONE 3 (Western + International):**  
Next Deadline: December 31, 2025

For reference, the map of the Zones is as follows:



**Technical Papers for ALL companies  
are due 12/31/2023!**



# 2023 Highlights By the Numbers



**9** TAB Talk webinars resulted in

**1,556** registered users  
(through September 2023)



**99%+**

**MEMBERSHIP RENEWALS RATE**



**80+**

**Membership & certification inquiries** from non-members.



**42 FREE CEU** opportunities in 2023 for AABC members.



Industry Professionals Earned Over

**2,150** TAB Journal & Webinar

**CEU hours**

(in the last 12 months)



Google Analytics reports

**30,000** new users visiting AABC website in just 8 months!

~ 50% user acquisition comes from organic search, referral, or social media



**AABC TAB** ★★★★★

**Calculator App** nearly **2,000** downloads



**Complete Revision of Policies & Procedures** and membership-related documents.



**9** Industry Advocacy Presentations

AHR

APPA

ASHRAE

engineer

CX ENERGY 2023

ES ENGINEERED SYSTEMS

HPAC Engineering

HEALTHCARE FACILITIES TODAY

**Social Media Marketing**

**AABC LinkedIn Page Followers:**

SEPTEMBER 1, 2022:

**1,268** followers

SEPTEMBER 3, 2023:

**1,760** followers



**39% increase!**



**349** **AABC Certified** TBEs/TBSs

**580** **AABC Certified** Technicians

# 2023 Outstanding Service Award



**Jeremy Johnson, TBE**  
*American Testing, Inc.*

This award, created in 2021, recognizes a small number of members who have contributed significantly to AABC's programs and overall mission over the previous year.

After being elected Zone 1 Vice President in October 2022 and assuming those additional responsibilities, Jeremy distinguished himself by increasing his other work on behalf of AABC. In addition to being a key member of the marketing committee, he co-authored an article on balancing critical spaces that appeared in *Healthcare Facilities Today*, helped man the AABC booth at AHR Expo, gave a presentation at the AABC TAB & Cx Seminar in May, moderated a TAB Talk Webinar, and currently reviews and approves submissions for AABC's new social media TAB Project Spotlight program.



## Hall of Fame

*Quality. Integrity. Independence.*

The association established the AABC Hall of Fame in 2021. Intended as the highest honor the association can bestow, it is a formal recognition of those who have given the most to the association and to the testing and balancing industry through extraordinary volunteer service over many years.

### 2023 Hall of Fame Historical Inductee:



**Theodore "Ted" Cohen, PE, TBE**  
*Air Conditioning Test & Balance Co.*

After earning his engineering degree from Cooper Union in New York City with the help of the GI Bill after the end of World War II, Ted Cohen worked for a sheet metal company for 18 years before founding his testing and balancing firm in 1968. He soon became an active member of AABC, with highlights including working on the 4th edition of the AABC National Standards (published in 1982), and serving on AABC's Board of Directors, including as President from 1990-1992.

Most visibly to us today, TAB Journal—something Cohen believed in strongly—was conceived and launched during his presidency in 1991. A member from the association's earliest years until he retired in 2013, Ted left a lasting mark on AABC with both his technical acumen and his professional, gentlemanly and genial demeanor.

# 2023 Technical Program



## **The Art of Testing & Balancing Outside of Standard TAB Practices**

**Mike Kelly, TBE, CxA, American Testing, Inc.**

The objective of the presentation is to review different types of HVAC unit/system configurations and unconventional TAB practices. Providing case studies from different unit/systems and discuss procedures, practices and results from testing.



## **The Role of TAB on the Testing of HVAC Systems**

**M. Dennis Knight, PE, CxA, FASHRAE  
Whole Building Systems, LLC**

This presentation provides a comprehensive exploration of the role of testing and balancing in testing HVAC systems, focusing on the involvement of TAB agents throughout the design, construction, startup, and commissioning phases of a building. It delves into the critical significance of TAB agents in ensuring optimal system performance, energy efficiency, and occupant comfort.

The presentation covers key aspects such as the TAB agent's responsibilities, collaboration with design and construction teams, coordination during system startup, and their role in the commissioning process. Attendees will gain valuable insights into the TAB agent's potential contributions at each phase, equipping them with a deeper understanding of their vital role in the successful implementation and operation of HVAC systems. This presentation aims to enhance the knowledge and effectiveness of TAB agents, enabling them to make a meaningful impact in their respective roles within the design, construction, and commissioning teams.



## **Airflow Measuring Stations: An Overview of Different Technologies, Understanding Their Limitations and How to Get More Accurate Results**

**Scott Mahanes, University of Virginia**

Control strategies have advanced very quickly in the last 15 years. These strategies have made it possible to guarantee comfort and proper control, while reducing as much energy and carbon usage as possible. There is a major downfall with these strategies though, because they are heavily dependent on accurate sensor readings. The most difficult sensor of the kind used in HVAC applications to get working accurately is the airflow measuring station (AFMS), and yet it is the most vital and important control point to get right.

This session will address common issues related to AFMSs, how to get better results when calibrating them, and a quick look into the future of precision calibrations for better accuracy and control.

# 2023 Technical Program



## Testing, Adjusting & Balancing HVAC Systems with an Aerosol-Based Methodology

**Phil Arnold, *SafeTraces***

In recent years, the COVID-19 pandemic, climate change, and macro-economic challenges have significantly increased financial and operational costs, risks, and liability for building owners/operators. Moreover, evolving compliance requirements and regulatory enforcement for indoor air quality, pathogen mitigation, and energy efficiency have made responding to these challenges more urgent and consequential than ever.

Limitations in field assessment tools have hindered accurate and effective TAB of HVAC systems to ensure high performing, compliant indoor environments. However, new innovative TAB approaches, leveraging science, technology, and data, have greatly enhanced the ability of TAB professionals to sharpen field measurement and verification of HVAC systems.



## Balancing and Operational Issues of CO<sub>2</sub>-based DCV

**David Dougan, *EBTRON***

There are expanding requirements of demand control ventilation (DCV) in standards and codes to save operational energy. Although several methods of DCV exist, carbon dioxide (CO<sub>2</sub>) based DCV is often the chosen method. However, CO<sub>2</sub> production from occupants and CO<sub>2</sub> measurement may have significant uncertainty. This can lead to poor ventilation control, resulting in indoor air quality (IAQ), pressurization, temperature, and humidity control issues. Air balancers have a difficult challenge to validate these systems or to identify potential problems, since most often their work is done in unoccupied buildings.

This presentation will review the DCV code and standard requirements, explain the relationship between CO<sub>2</sub> and ventilation, and provide best practice solutions to mitigate issues.

# 2023 Technical Program



## What is a Well-Thought-Out and Well-Executed Marketing Strategy?

**Eric J. Poerschke, *NextLevel Thinking***  
**Brian Venn, TBE, CxA, *Mechanical Testing, Inc.***

Marketing is as important as any of the other disciplines in your business such as accounting, finance, sales, etc. In fact, you can argue that marketing is the most important discipline in your business because it deals with the motivations that drive your customers and potential customers to experience your organization and purchase your product or service.



So, what is a well-thought-out and well-executed marketing strategy? We have boiled down the answer to this question into what we call “the pillars of success.” In his presentation, Eric will discuss the “pillars of success” and illustrate the steps to building a successful brand by outlining the process that NextLevel Thinking has successfully used with clients over the past 20+ years.



## The Evolution of the TAB Professional: It's More Than Just Showing Up to Work!

**Justin Garner, PE, TBE, CxA,**  
***Engineered Air Balance Co., Inc.***

How do we, as a TAB industry, produce experienced and knowledgeable professionals that are dynamic with changing technologies and can also develop future generations of professionals? The simple answer is training and not just the technical type. It is no longer sufficient to have a new technician start in the field and “learn as they go” on their own. It is also not acceptable to say that training ends when a technician passes the certification exam. Those attitudes will cause the decline of our valued professionals because, as the old saying goes, “If you are not constantly learning, you are falling behind.”

This session will discuss the importance of a well-rounded and intentional approach to training at all levels with TAB personnel. As a person grows in the TAB industry, they must not only continue to hone their technical skills, but they must also develop and master leadership and management skills to be successful. This session will focus on where to apply each of these three areas of training throughout the career of a developing TAB professional.

The final piece of this session will talk about the importance of seasoned TAB professionals training and mentoring those new to the industry. If this does not happen and continue to happen in the future, the quality of the folks in the TAB industry will decline at a time when our society needs competent professionals in the building sciences to achieve the prevailing environmental and sustainability goals.

# 2023 Technical Program



## **Visualizing Real-Time Contamination Risks Using Modern Methods and Technologies**

**Jennifer Wagner, PhD, Onsite, LLC**

An understanding of contamination risks in a controlled environment is of utmost importance. Modern methodologies and technologies are available that improve awareness of contamination risks and support their mitigation. For example, three-dimensional airflow velocity and directionality information can be combined with total and biological particulate counts obtained using a rapid, modern microbial monitoring method to map the current environment and better understand the potential risk to process or product.

Two case studies are presented on the use of modern technologies in a cell therapy clean room and hospital operating room. An overview of the technologies used is provided and data obtained summarized in the form of a microbial and particulate contamination risk map and real-time visualization of the environment. Also presented is a new environmental quality indicator (EQI) metric that combines commonly used environmental variables to predict risk more easily in an environment.



## **AABC Fume Hood Testing Discussion**

**Gaylon Richardson, TBE, CxA**  
*Engineered Air Balance Co., Inc.*

**Josh Green, TBE, CxA**  
*Environmental Test & Balance Company, LLC*

**Mike Morwin, TBE, CxA**  
*Mechanical Testing, Inc.*



This session will update attendees on AABC's development of a new, stand-alone fume hood testing standard and the key technical points of that document. The panel will also provide an overview of the upcoming AABC certification program, also in development, based primarily on that new standard.





# 2023 Technical Program

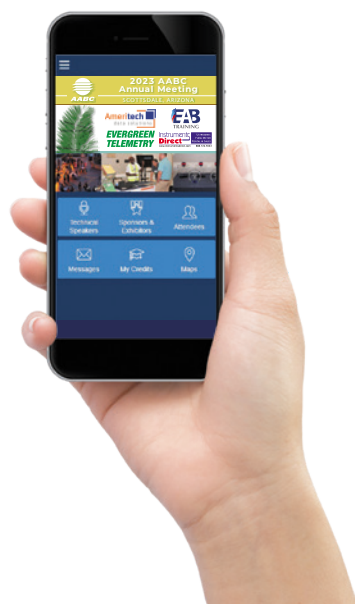
## FAQs

- ▶ All technical presentations are approved for AIA LUs.
- ▶ All presentations will be recorded and available by the end of November.
- ▶ Attendees are able to download certificates from the app.
- ▶ CEUs from this meeting will be uploaded to the member portal by the end of October.

## NEW

# Download the Official 2023 AABC Annual Meeting App

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Engineered Air Balance is a leading authority in total system balancing, building commissioning, and critical environment certifications at the forefront of industry standards and training. Our team is dedicated to ensuring the comfort and safety of our clients and training the next generation of technicians, engineers, and building operators. Our state-of-the-art training center in Houston, Texas offers instructor-led classes with hands-on demonstrations providing enhanced technical learning opportunities. The multidisciplinary courses increase the proficiencies needed for total system balancing, building commissioning, control sequence verification of HVAC systems, building optimization, and much more.

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**AABC**

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**October 9 – 11, 2024**

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– Michael Kelly, President, American Testing, Inc.



AABC  
Members  
Save  
**20%**

**Join us in 2023!**

**TAB Technician - Fundamentals Course**

– December 11-15 **SOLD OUT**

**TAB Technician - Basic Air & Water Systems**

– November 13-17

**TAB Technician - Control Systems Verification**

– November 28-30



Train More In 2024

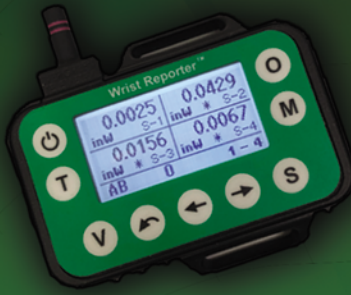
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- Psychrometric Properties of Air
- Water Systems
- Cooling Tower (CT)
- Psychrometric Properties of Water
- Duct Calculations
- Electrical











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Read the latest AABC news. Scan to connect.



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