



ISIC International Meeting

Chapter/Committee: ISIC International
Date/Time: Tuesday, 01/09/2024, 11:00 AM – 12:00 PM US EST
Location: Washington Convention Center (Room 155) and MS Teams
Meeting Title: ISIC-FHWA Meeting at TRB 2024

Participants

In-person

Amanda Gilliland
António Gomes Correia
Bob de Jong
Chuck Hixon
Curt Turgeon
Dave Johnson
David Cist
David H. Parker
David Unkefer
Jacopo Alaimo
James Gray
Jim Preston
Kyle Hoegh
Laikram (Nars) Narsingh

Matt Corrigan
Monica Jurado
Paul Angerhofer
Soheil Nazarian
Stephen (Steve) Cooper
Subramanian (Subu) Sankaranarayanan
Ted Sussmann
Tim Kowalski
Todd Mansell

Remote

James Schneider
Luis Carlos Soto Moreno
Sam Afkar



Agenda

Time	Topics	Lead Speakers
11:00 – 11:05	Welcome & ISIC International Update <ul style="list-style-type: none"> - ISIC 5-Year Plan and Bylaws revisions - ISIC publications, conferences 	George Chang (Transtec)
11: 05 – 11:30	FHWA Updates <ul style="list-style-type: none"> - ADCMS grant program - IC for Foundation 	James Gray (FHWA) Tom Yu (FHWA)
11:30 – 11:40	MDMS National Implementation	Curt Turgeon (MnDOT)
11:40 – 12:00	ISIC 2024 Conference <ul style="list-style-type: none"> - Overview (Brochure) - Technical program and publication 	Tim Kowalski (John Deere-Wirtgen) Antonio G. Correia (U. Minho)
	Adjourn	

Acronyms and Links

*ISIC: [International Society for Intelligent Construction](#)

*ISIC 2024: [4th International Society for Intelligent Construction International Conference](#)

*FHWA ADCMS: [Advanced Digital Construction Management System](#)

*FHWA IC for Foundation: [Feasibility of Utilizing Intelligent Compaction Equipment to Ensure Uniformity and Quality of Pavement Foundation](#)

*FHWA NDT ICT Workshops: [Develop Informational Materials NDT Intelligent Construction Technologies for Asphalt Pavement during Construction](#)

*AASHTO MDMS: Material Delivery Management System – [AASHTO MDMS-1-UL Standard](#), [MnDOT website](#).



Meeting Presentation

Please download the PDF version of the meeting presentation from the following link:

<https://www.is-ic.org/wp-content/uploads/2024/01/ISIC-FHWA-TRB2024-20240109-v4A.pdf>

For people who are interested in the FHWA ADCMS grant program update, please contact James Gray (James.Gray@dot.gov) directly.

Discussion and Action Items

Action Items are underlined.

Welcome and ISIC International Update

ISIC 5-year plan and bylaws, ISIC Publications, and Conferences

The current 5-year plan is on the website (<https://www.is-ic.org/about/isic-strategic-plan/>). We are revising it and will post the 2024 version soon.

There was a webinar hosted by the NA Chapter, “How Veta Leverages ICT Data,” in 2023. It was very well received. (<https://www.is-ic.org/library/isic-webinar-recording/recording-webinar-005-how-veta-leverages-values-of-intelligent-construction-technologies/>).

There was an ISIC track at MTC&E in May 2023. A summary report was published based on the ISIC track. (<https://www.is-ic.org/conferences/2023-isic-track-at-mtce-conference/>)

There is a book series in English and Chinese on IC for Transportation Infrastructures. The first book is published, and the 6 remaining books will be published in 2024. (<https://www.is-ic.org/library/isic-journal-and-publication/>)

There are two new subcommittees established in 2023. Rebecca Embacher of MnDOT will arrange the next subcommittee meetings in 2024 soon.

- Material Delivery Management System (MDMS) (<https://www.is-ic.org/committees/sub-committees/sc7-material-delivery-management-systems-mdms/>)
- Digital as-built (DAB) (<https://www.is-ic.org/committees/sub-committees/sc8-digital-as-build/>)

David Unkefer (FHWA) mentioned that we should collaborate with TRB committees (AKC10, etc.) and FHWA/TPFs for Infrastructure and Bridge/Structures, IHEEP, and BuildingSMART of similar interests. Chuck Hixson (ISIC NA Chapter’s Digital Delivery Coordinator) will follow up with David Unkefer.

There is a new ISIC NA Chapter Officer – Dave Johnson, with the Asphalt Institute. He will be the new Secretary.



FHWA Updates

Advanced Digital Construction Management Systems (ADCMS) Grant Program (James Gray)

All general questions on the ADCMS grant program can be directed to digitalconstruction@dot.gov.

ADCMS are digital technologies and processes for the management of construction and engineering activities, including systems for infrastructure planning and coordination, design, construction, maintenance, modernization and management, and asset management, including hardware, mobile devices, software, 'internet of things' (IOT), and personnel. It also includes the development and support of systems to enhance and share data across an asset's lifecycle and between organizational silos, also referred to as maximizing interoperability. (<https://www.fhwa.dot.gov/construction/adcms/>)

There are 20 million dollars annually (about 17 million in grants) for 5 years with a total of \$100M.

The goals of the program (from Congress) are as follows: promote timely information, leverage digital tech, develop best practices, accelerate the adoption of technologies, increase tech adoption, provide technical training development guidance to assist states, reduce environmental footprint and congestion, and enhance safety.

FHWA is looking at a holistic approach.

The first ADCMS grant NOFO was issued on June 28, 2023. Applications were received in August.

- There were 31 applications received and 26 DOTs applied.
- The first round of grant awards was for fiscal 2022 and 2023.
- On November 16, 2023, FHWA announced the awarding of \$33,919,136 in Fiscal Year (FY) 2022 and (FY) 2023 ADCMS Program grants to 10 projects in 10 States.
(https://www.fhwa.dot.gov/construction/adcms/grants/FY22_23.cfm).

Lessons learned in applications:

- DOTs still struggle with "silos" – they are struggling to connect data between planning, design, and construction.
- The goal for DOTs is to have all the information supporting a common data environment (CDE).
- DOTs would like it to be easier to collect data. Less manually intensive and more automated.
 - This includes data for inventory/asset management, data for payment purposes on construction projects, etc.

The general areas of interest (from most interested to least interested) are related to CDE/standards (a most common theme), data capture, software upgrades, data viewing, document management, 3D models, etc.

- Common data standards were the number one interest.

Next Steps:

- Next round of NOFO will be announced in May 2024.
- 60-day advertisements.



- DOTs can apply – others can partner with DOTs to apply.

Qs and As:

- Is there a standard application – no. However, the ones that covered the 9 sections of merit sections were the most successful. 15 pages maximum.
- Some DOTs are partnering with others outside the DOT.
- There are reporting requirements.
- Is there guidance on the match required – it's a 20% match that DOTs need to bring. The match can be met with private partnerships.
- DOTs can take different parts of it (e.g., pavements, bridges, or others) as the current focus, although ideally, the approach will be more holistic.
- Example project: looking into automation. Many construction activities should be more automated – less manual typing. For example, automatically bringing in weather data rather than having to type it in.
- For the 10 agencies that received awards – how will information be shared? The kickoff meeting will be in May 2024. Each DOT will discuss their projects, share ideas, and look for collaboration points. There are planned peer exchanges (public and private), webinars, etc.
- When everything wraps up in 2026, how will the program continue – ultimately, it is up to Congress. FHWA will report the success and outcomes to Congress. The private sector is instrumental in getting it lobbied to continue.
- It was recommended to include James Gray in future ISIC meetings and vice versa.

IC for Foundation

Tom Yu was unavailable to attend, so George gave a brief update on the project. The project overview and some summary results are in the meeting presentation slides.

The project aims to evaluate the uniformity and feasibility of using IC for foundations. The report and tech brief will be wrapped up in June. (<https://www.intelligentconstruction.com/projects/fhwa-ic-for-foundation-project/>)

ICT workshops

FHWA has a contract with Weirs, with Transtec Group as their sub, started in the fall of 2023 to develop 4-hrs of workshop material focused on NDT ICTs for asphalt pavement during construction. The intent is to promote NDT ICT technologies as well as Veta.

MDMS National Implementation (Curt Turgeon)

MDMS is an expanded form of e-ticketing:

- Source (E-ticket)
- Loading and Delivery events
- Testing and contract administration
- Agency verification
- Hauler



- (George's added comments: digital as-built will be added in the next version of the MDMS AASHTO standard)

Historically, IC and PMTP standards have gone through materials AASHTO committees. There is a new committee for data – the new standard went through the new AASHTO Committee on Data Management and Analytics (<https://data.transportation.org/>).

The Standard Specification for MDMS was published in November 2023.

(<https://aashtojournal.transportation.org/new-aashto-material-delivery-management-guide/>)

The goals are to link AASHTOware and Veta for data sharing and have everything digital.

Auditors need to be able to follow the processes and systems for verification.

Veta MDMS is Web-based to facilitate the national implementation of the AASHTO MDMS standard.

Veta MDMS aligns with FHWA's goals of data sharing and automation for the construction side.

Next steps:

- Veta MDMS Beta testing with eTicketing vendors.
- Veta MDMS full-scale testing with DOTs.
- Roll out Veta MDMS.
- Duplicate the desktop Veta's IC/PMTP/DPS features in Veta Web
- Support 2D/3D GPR data in Veta Web.

ISIC 2024 Conference (Tim Kowalski and Antonio Correia)

Overview (Tim Kowalski)

The first three ISIC conferences were in MN, US (2017, Beijing, China (2019), and Gumeraes, Portugal (2022).

The theme of ISIC 2024 (i.e., the 4th international conference) is "Sustainability through Technologies".

Tim showed the conference brochure with the conference details. The ISIC 2024 conference will be in Orlando from September 10-12.

Tim showed the sponsorship opportunities.

There was a comment that the hotel is GSA-friendly.

Technical Program and Publication (Antonio Correia)

The conference proceedings are contracted with Springer. Past conference proceedings were published for past conferences.

For ISIC 2024, we got 35 submissions. Statistically, only 60% of papers come out of accepted abstracts. We only have 8 papers submitted at this time. That is not enough for conference proceedings. There are two options:



- We can leave the conference submittal open to try to get more papers (the current deadline is February 20). We would need commitment to get folks to submit papers.
- The other option is to have no proceedings and use abstracts or extended abstracts, add PowerPoint presentations, and provide an e-book of materials. (George's follow-up: the ISIC Executive Committee decided to choose this option.)

In 2017, there were no proceedings, but it was a very successful conference that people are still talking about till 2024.

Antonio mentioned a balance between practical and academic; the e-book generally satisfies practical, but the proceedings are nice for academia.

The NA Chapter will have a meeting in the next few months to put together the technical program.

George mentioned that open panels are always popular.

There was a comment on bringing in LCA and LCCAs and how true they are to sustainability. Quantifying safety and sustainability will be critical. We need data to back it up.

Next Meeting

TRB 2025!

Adjournment

The meeting adjourned at 12:00 PM US EST.

Prepared by: Amanda L. Gilliland

Subramanian Sankaranarayanan

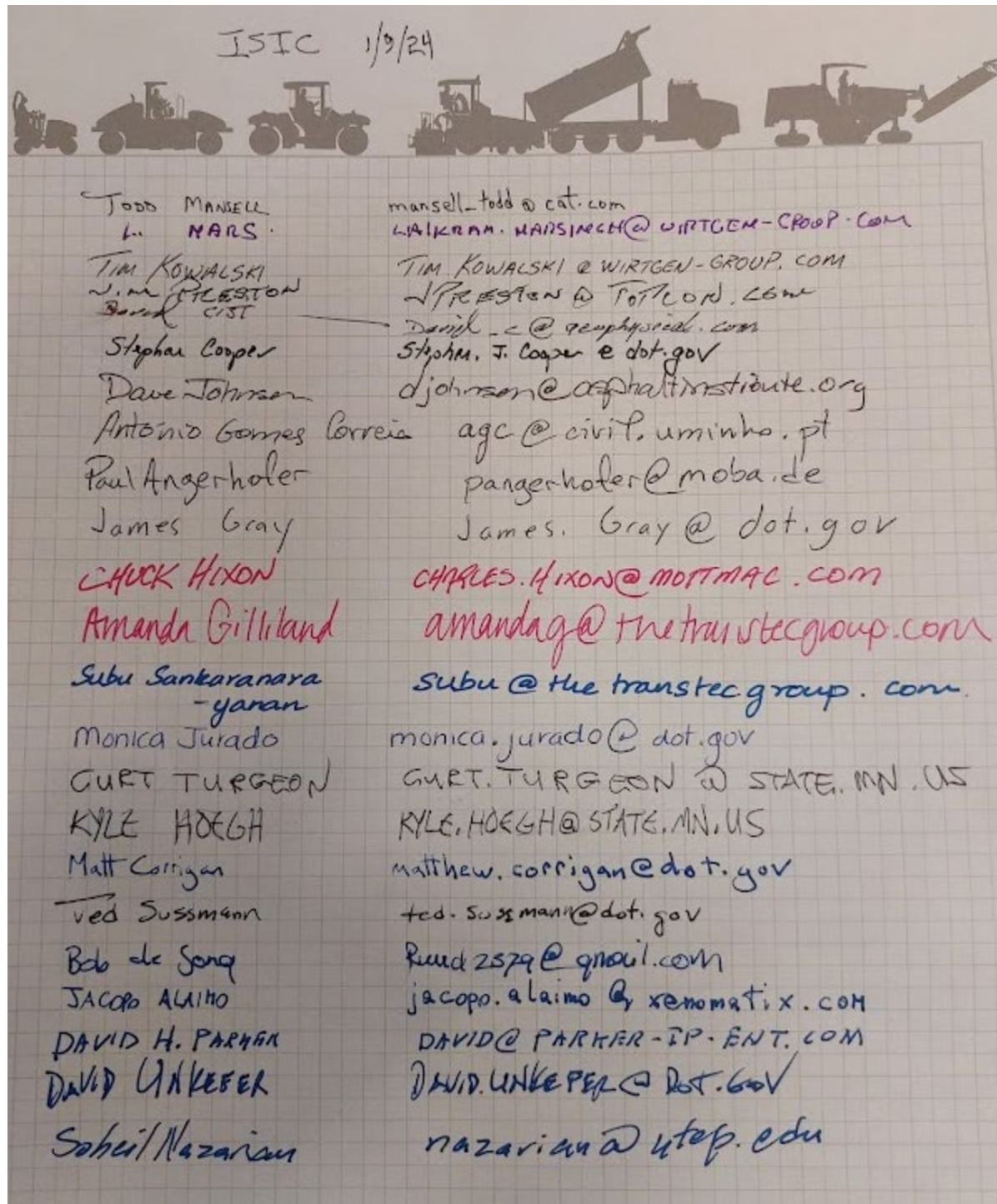
George Chang

Approved by: ISIC Executive Committee

Date 01/12/2024, revised 01/16/2024

Appendix A – Meeting Sign in Sheets

ISIC 1/9/24



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