

SHARE:

[Join Our Email List](#)



The KIT

Knowledge & Information Technology



No. 297 - 1 October 2021

In this Issue

- 3 Digital Twin Consortium Talks
- IoT and Digital Transformation in Oil & Gas
- IBM's Responsible AI Toolkit
- NFT Impact on Cyber Insurance
- Digital Twins in Manufacturing

Our Consulting Services

IT Strategy and Roadmap
Enterprise Architecture
Business Process Modeling
Enterprise Software Selection
IT Innovation Briefings
IT Due Diligence for M&A
Cloud Computing Adoption
Enterprise Security Maturity
Knowledge Management
Communities of Practice



Highlights from the Digital Twin Consortium

The Digital Twin Consortium held its (virtual) quarterly member meeting on Sep. 21-23. Talks covered a broad range of topics, all interesting, from which we selected the following three for your education and enjoyment.

Aziza Suleymanzade, a Graduate Fellow and recent PhD at the University of Chicago, gave a [talk on quantum technology](#) and the design of quantum computers. Some newer technologies will work at normal temperatures instead of the ultra-cold ones required for superconductivity. She reassured the audience that quantum computers don't mean the end of information security because they can break RSA encryption (based on the difficulty of factoring products of very large primes), and there will be other algorithms available by the time this capability becomes reality.

Taxonomy Development Enterprise Social Media Adoption

For more information

Visit us: www.cebe-itkm.com

E-mail us: info@cebe-itkm.com

Phone: +1 415 870 4856

+33 970 444 992

Twitter: [@cbaudoin](https://twitter.com/cbaudoin)

See: [Previous KIT issues](#)

Forward this issue to colleagues and friends!

Reminder: Issue 300 (November 16) will be the last one. The company will continue to provide consulting service to existing and selected new clients, and the KIT archive will remain online for the foreseeable future.

Jaime Barba and Pilar Conejos, from the Spanish water management company Idrica, [described their digital twin](#) of the entire water distribution system for the municipality of Valencia. Pilar's part of the session, including many screenshots of the system in action, starts at minute 13.

Jeffrey De Coux, from the Autonomy Institute, gave a talk on "[Intelligent Infrastructure -- Smart Transportation Corridors](#)." He said that the three pillars needed to build "intelligent, connected, inclusive, autonomous and resilient 21st century cities" are an edge infrastructure, active digital twins, and data exchange. Three digital models are needed to build an effective digital twin in this context: a GIS (geographical information system) model, a high fidelity physics-based model for accurate simulation, and an operational control model to implement the active capability of the digital twin.



IoT and Digital Transformation in Oil & Gas

Claude Baudoin had prepared presentations for two Oil & Gas conferences held in September: one on how to address IoT security challenges for the *IoT in Oil & Gas* conference in Houston, and one on digital transformation for *Canadian Digital Oilfields* in Calgary. Due to COVID-19 concerns and travel uncertainties, both trips were cancelled, but the first talk was replaced by a narrated PowerPoint slide deck, available to participants on the conference website, and the second talk was given by Robert Do, from Emerson Electric in Edmonton, who added a case study from his company in addition to the one Claude had included.

If you are interested in either presentation, please [contact us](#).



Responsible AI Toolkit

At the Object Management Group AI Task Force meeting last Tuesday, Sridhar Iyengar of IBM explained what his company is doing to "help its customers comply with regulations and laws" that are popping up, first in Europe and North America, constraining what AI software can and cannot do -- from the processing of loan applications to making clinical decisions to controlling a self-driving car. In some cases, the issue is fairness: is the application biased against certain people? The bias may not be in the code, it may be in the datasets that were used to train the model, which carry the "memory" of past human biases.

IBM has placed a number of bias detection tools in the public domain (and Sridhar expressed the hope that some of them could be the basis for new standards). See the [AI Explainability 360 Toolkit website](#).



Non-Fungible Tokens, Blockchain, the Cloud, and Cyber Insurance

In Issue 295, we explained how NFTs are creating a new challenge -- and an opportunity -- for cyber insurance. The short paper by the OMG Cloud Working Group, "Non-Fungible Tokens and Cyber Insurance," was approved by OMG on Sep. 30 and will soon be added to the group's [deliverables catalog](#). As always, published specifications and papers from OMG are free and available to all. If you are impatient to read the paper, [send us a request](#) and we will send you a copy.



Digital Twins in Manufacturing

In this [Digital Twin Consortium webinar](#) on October 20, three panelists will evaluate the current state of digital twins and their potential in manufacturing. Steve Varga (Procter & Gamble), Marc Collins (Epic Games), and Mike Taylor (Duality Robotics) will discuss the use of digital twins and synthetic data for manufacturing inspection and collaboration.

But why, oh why, did they have to title this event "*Digital Twins and the Metaverse*"?

Seen Recently...

"Current state of Architecture:

X: 'Kubernetes!'

Me: 'What problem are you trying to solve?'

X: 'Kubernetes!'

Me: Facepalm."

-- [Mike Kavis](#), describing a current example of the perennial problem of customers who are unable or unwilling to describe their requirements, but are dead sure of what technologies are needed.

"No matter what you study, you'll end up using Excel."

-- "Dios" (God), [@Dios_Padre](#), a parody Twitter account from Mexico (in Spanish)

