Digital Twin Consortium Open-Source Collaboration Community Initiative Available on GitHub

Open-source collaboration drives digital twin innovation

BOSTON, MA – OCTOBER 27, 2021 – Digital Twin Consortium® (DTC) announced The Digital Twin Consortium's open-source collaboration initiative is now available to the public on GitHub. An open-source collaboration community will accelerate the adoption of digital twin-enabling technologies and solutions. Consortium members and non-members can collaborate on open-source projects, code, and collateral and become part of the DTC ecosystem.

"Open-source collaboration will encourage innovation in digital twin solutions," said Dr. Said Tabet, Distinguished Engineer, Chief Architect Emerging Technology & Ecosystems, CTO Office, DELL Technologies, and DTC Steering Committee member. "Our Open-Source Collaboration Community will also accelerate the adoption of digital twins and drive business transformation."

"As a consortium, our collective goal is to progress digital twin technology out of the lab and into the marketplace. Digital twins can be difficult to apply across the entire life cycle, where efficiency is often stifled by data silos and a lack of interoperability. Integration with legacy environments can also be challenging," said Dan Isaacs, CTO Digital Twin Consortium. "Digital Twin Consortium's open-source community will speed the cross-industry adoption of digital twin technologies and techniques and drive digital twin technology toward interoperability and market readiness."

"We're excited to be supporting this initiative by open-sourcing some of our video streaming tech as well as looking forward to supporting the other projects announced today," said David McKee, CEO, CTO & Founder, Slingshot Simulations, and co-chair of DTC Technology, Terminology, and Taxonomy, and Open-Source, Standards, and Platform Stacks Working Groups.

"Our Open-Source Virtual Reality Initiative 'Mars Induction Explorer' is the larger Stellar Transformer project's first composite digital twin component. We have plans to map digital twins of the entire solar system, capturing the long-wavelength electromagnetic solar induction effects on all the planets," said Bruce Leybourne, CEO & Founder, Stellar Transformer Technologies, and Non-Profit – Geoplasma Research Institute.

"By utilizing open-source, projects can reach a greater audience and gain adoption faster. This project supports the drive for open-source digital twin models based on Digital Twin Definition Language (DTDL)," said Nicole Scheinbach, Engineering Consultant, Wind Power Plant & Wind Turbine DTDL Models at XMPro.

"An open collaboration between companies around software and open-source projects is the key to taking advantage of the benefits of digital twins of any asset of a company," said Eric Truffet, Master's Professor, Digital Interconnection, ECAM Strasbourg-Europe. "The Ecolcafé open-source project represents a coffee roasting company, with its enterprise resource planning (ERP), staff, real production machines, and digital twin management system. You can reuse projects and source code for your uses of the digital twin concept."

"The Digital Twin Consortium open-source initiative provides an accelerator for organizations at different stages of their Digital Twins journey," said Pieter van Schalkwyk, CEO, XMPro. "Our IEC 61400-25-based Digital Twin Definition Language (DTDL) models for wind farms is an example of an accelerator that demonstrate how digital twins can be built in a standardized way while reducing the time to value by using open-source models. We are excited to be part of this trailblazing initiative by the Digital Twin Consortium."

Open-Source Repositories:

- dtc-glossary – A repository for collaboration on a glossary of digital twins and digital twin technology from the Digital Twin Consortium.
- EcolCafe-Industrie-4.0 – Project proposes internal ERP, SCADA, and SysML projects to describe, execute, and improve end-to-end manufacturing digitalization.
- Stellar-Transformer – Repository comprising the first digital twin-component (Mars Induction Explorer) of the larger Stellar-Transformer project, which will provide digital twins of the entire solar system, including earth. It captures the electromagnetic solar induction effect on all planets.
- UA Nodeset Web Viewer – A tool used in Industrial IoT scenarios to bridge the gap from operational technology (OT) to information technology (IT). OPC UA is the standard interface for vendor-neutral OT interoperability in factories, plants, and renewable energy farms with best-in-class data/information modeling functionality.
- UnrealRenderStreamingExample – Sample project demonstrating how to set up unreal render streaming within a JavaScript framework. This project is a basic walkthrough to set up the Unreal Pixel streaming within an iFrame rather than a fully fleshed-out project.
- XMPro-dtdl-data-models – This repository includes DTDL models for wind farms and wind turbines based on the IEC 61400-25 standard. These models can create digital twin instances in Azure Digital Twins directly or through the XMPro No Code application development platform.

To contribute to the open-source collaboration community, candidates complete a project application, which the DTC Technical Advisory Committee reviews. If approved, contributors upload their project or related content to the DTC Open-Source Collaboration GitHub site. GitHub is an open-source repository hosting service, which contains project files and revision history, and enables participants to share and collaborate on digital twin-related content and projects.

For more information about the Digital Twin Consortium open-source collaboration initiative, click [here](#).

About Digital Twin Consortium
Digital Twin Consortium is The Authority in Digital Twin. It coalesces industry, government, and academia to drive consistency in vocabulary, architecture, security, and interoperability of digital twin technology. It advances the use of digital twin technology in many industries from aerospace to natural resources. Digital Twin Consortium is a program of Object Management Group.

The [Object Management Group® (OMG®)](#) is an international, open membership, not-for-profit technology standards consortium. Founded in 1989, OMG standards are driven by vendors, end-users, academic institutions, and government agencies. OMG Task Forces develop enterprise integration standards for a wide range of technologies and an even wider range of industries

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