Bachelor Thesis / Master Thesis

Investigating the potential of the Industrial Metaverse within the scope of logistics engineering

Vision of the Industrial Metaverse

The vision of the industrial metaverse is to create a constantly virtual world that mirrors real-world infrastructures such as machines, factories, buildings, cities, networks, and transportation systems. The aim is to change the way problems are approached by enabling rapid identification, analysis and resolution, often before problems even arise. This virtual space should enable a high level of collaboration, so that people from different parts of the world can work together as if they were in the same place.[1]
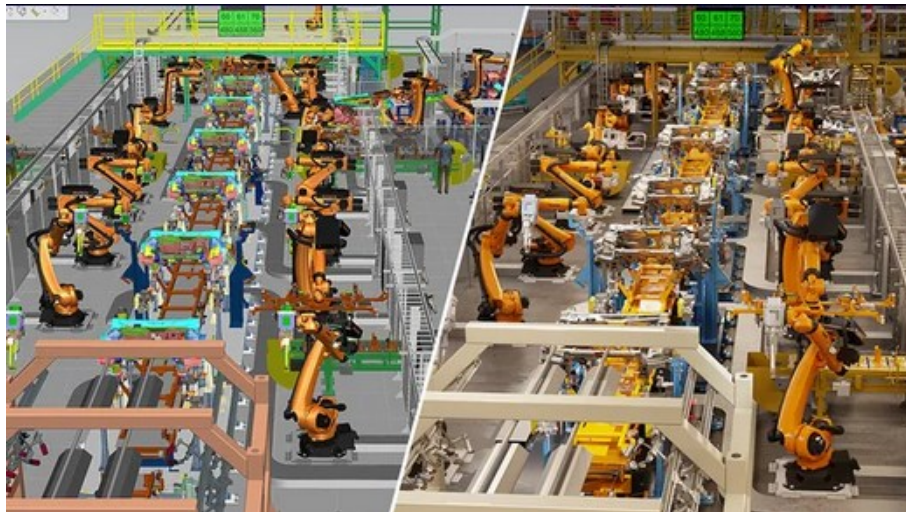

Figure 1: One of the requirements of the industrial metaverse is the realization of photorealistic, physics-based and real-time capable digital twins.[2]

Tasks

The task of the thesis is to carry out a systematic analysis of the extent to which the industrial metaverse already exists in areas of logistics. The following topics (among others) will be addressed:

- In which areas does the industrial metaverse already exist in logistics? (science and industry)

- How is the vision of the Industrial Metaverse currently being implemented in other sectors?

- What would be possible use cases for the field of logistics?

If you are interested in this topic, please contact me at cichocki@tugraz.at. We will find an exciting topic for your thesis which suits your personal interests.

Contact

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[1] https://www.siemens.com/global/en/company/digital-transformation/industrial-metaverse/what-is-the-industrial-metaverse-and-why-should-i-care.html
[2] Image from Siemens "What is the Industrial Metaverse": https://www.siemens.com/global/en/company/digital-transformation/industrial-metaverse/what-is-the-industrial-metaverse-and-why-should-i-care.html