

Augmented Reality - Demonstrator

1. Context

What does fibclick do?

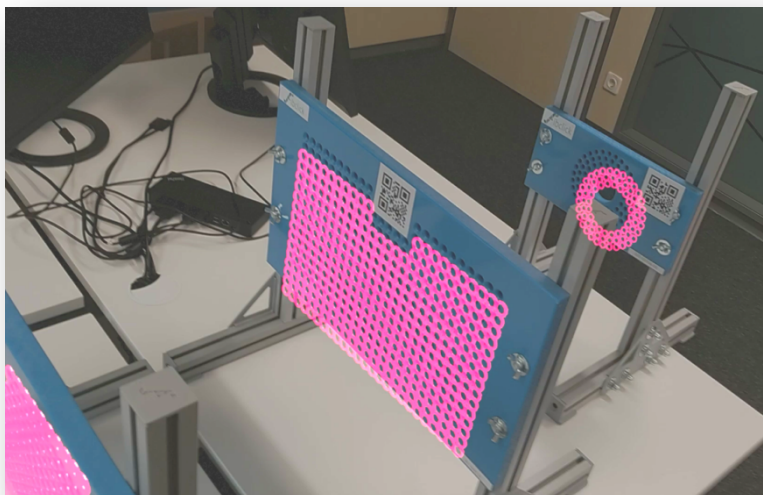
We are Niklas Paprotta, Jonas Wilfert and Isa Taflan. We are developing an intelligent computer-aided design system (CAD) that uses artificial intelligence and computer-aided optimization methods to digitize and automate lightweight construction planning and setup processes. Compared to metallic materials (e.g. steel or aluminum), lightweight materials such as fiber-reinforced plastics (composites) have some favorable material properties. Fiber-reinforced plastics are less corrosion-resistant, require less manufacturing energy, and have a significantly better strength-to-mass ratio. For example, 1 kg of carbon fiber-reinforced plastic has the same strength as 5 kg of steel. Due to the significant weight savings, fiber composite materials are mainly used in the following industries: Construction, automotive, aerospace, mechanical engineering, and medical technology.

Problem?

However, a significant challenge in fiber composite production is the very long planning and set-up time, which leads to high personnel and system costs. Employees must manually arrange hundreds to thousands of individual fibers along the system when planning the system. This is only done by hand - if at all - in advance, which is why this is a lengthy process, and many errors can creep in.

Solution?

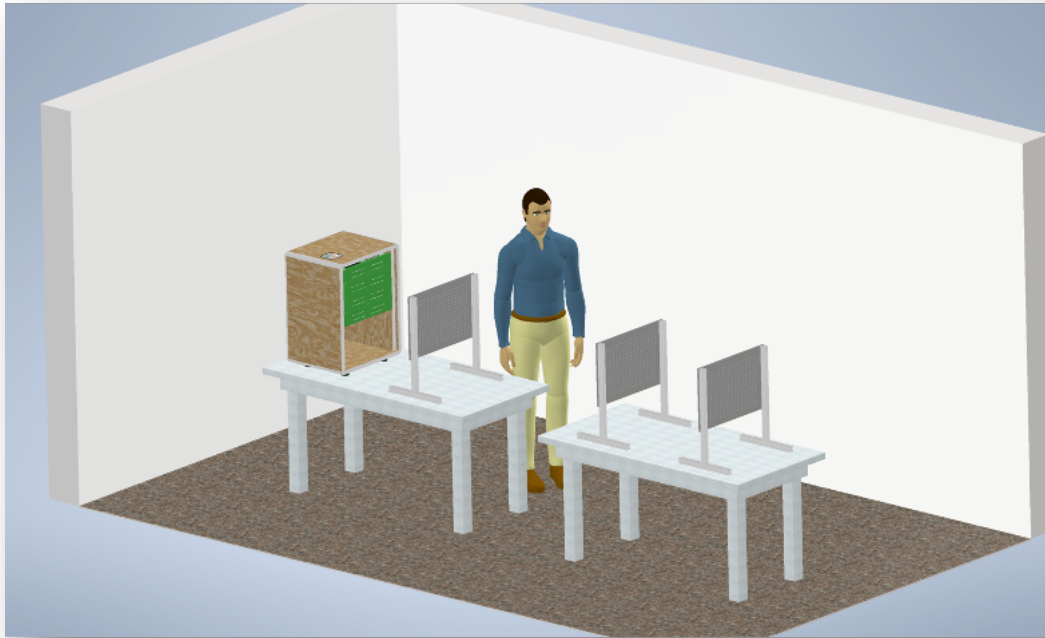
We are developing an augmented reality application that projects fiber movements directly into the worker's field of vision using augmented reality glasses. On the one hand, this minimizes the error rate that leads to production stops enormously, and on the other hand, the setup time of the system is accelerated by a factor of 5.



2. Project description

Summary & Goals

We are now using a demonstrator to develop further our AR application, which we want to take to trade fairs and customer appointments to demonstrate its added value. The student will finish creating the AR application as part of the project module.



Current status

We developed the first version of our demonstrator as part of a master's thesis and are currently looking for IT-savvy students who would like to further their experience in AR development on our demonstrator.

Benefits for students

- Valuable practical experience in a real business context
- There are no limits to your ideas
- Close support from the founders
- Very flexible work opportunities
- Possibility of long-term collaboration
- We speak English, German, and French

Who are we looking for?

- Motivated and IT-savvy students in a degree program with a focus on IT
- First points of contact with AR applications through lectures or similar

If you are interested, let's talk about it.

Wir freuen uns auf dich!

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