



CDP // REMASTERED

Topic Summer 2024

Despite the constant increase in the use of a computer in architect offices, it is still widely unutilized in the early design stages. The biggest problem is not only the lack of appropriate Humane-Computer-Interfaces but also the limited possible use case scenarios. Furthermore, complex Software solutions and unfitting workflows restrict the creative process and hinder the design process. The goal of the „CDP // Remastered” is to bridge the gap between the established design tools utilized by architects and the digital tools.

The focus of the “Remastered”-topics is to not only bring modern versions of old project features but also to explore new and exciting technologies and software solutions to the framework and to improve and expand on existing ones. With these improvements, the architect will be capable of bringing even more of the established design tools to a digital environment and have a greater support for the creative process.

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Project Information

<http://cdp.ai.ar.tum.de>

Topics:

- **Topography:** The goal for this topic is to integrate topographical information into the CDP and find appropriate ways for its visualization and interaction with the other GIS data.
- **OSM:** As a main source of information for the urban environment the Platform uses Openstreet Maps. Currently only buildings are represented in the Platform. One goal is to expand the processing capabilities of the CDP to integrate also environmental data such as greenspaces, streets, important building information (such as exit and entrances) and much more.
- **Data Sources:** Currently only information that is provided through OSM is used in the CDP. The goal of this topic is to research other potentially useful data sources which can be then integrated and mixed with the current one to provide an even more detailed environment.
- **VPL:** As part of a previous IDP, a visual programming language was developed to enable users, to create simple plugins for the CDP without having any traditional programming knowledge. The goal of this topic is to extend this language, so that users can create complex simulation and analysis plugins.
- **Render Pipeline Remastered:** The goal of this topic is to expand upon the new OpenGL Render Pipeline with further complex shaders that will bring not only new features (like transparency) but also improve upon the visual fidelity of the Platform.