

Integrated BioCAD Toolchain Enables Search for Experimentally Validated Components

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Project Goals:

Biological computer-aided design (bioCAD) tools are gaining widespread adoption in commercial, academic, and government research settings. As more and more tools emerge, there is an increasingly urgent need to integrate them into a larger toolchain that aggregates functionality and data. Researchers at JBEI engineer plants, enzymes, and microbes to produce biofuels. To enable them to design biological systems without knowing the intricate details of the constituent components, we have integrated several of our bioCAD tools (DeviceEditor, DIVA, ICE, EDD Analytics, and EDD). The specifications of these biological components are experimentally validated to meet particular design criteria (e.g., promoters with high transcriptional levels in *E. coli*).

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