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The CIDER Toolkit Reference Manual Version 0.3.0

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ABSTRACT

Smart Diagram Environments (SDEs) are software applications that use structured diagrams to provide a natural visual interface that behaves as if the computer "understands" the diagram. Unfortunately, despite their potential usefulness, SDEs are not easy to build. This has motivated the creation of CIDER, a Java toolkit for building SDEs which greatly simplifies this task. CIDER is a generic component-based system which is designed to be easily embedded in Java applications. It provides automatic interpretation of diagrams as they are constructed and manipulated, structure preserving manipulation, and a powerful transformation system for specifying diagram manipulations and user interaction. CIDER's main innovation is its component-based approach to SDE development which provides substantially increased architectural flexibility to the application programmer. This manual provides instructions and explanations of CIDER's workings, and also includes a tutorial.