

Critical research issues for science of design in an environment of continuous design
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Cataloging successful designs

Program analysis and visualization tools, because it is hard for documentation to keep up with system evolution and designers need to continually reexamine the software

Refactoring is critical because software undergoing continuous design is frequently redesigned, and refactoring is a good way to incrementally redesign a system.

Refactoring tools (such as <http://jerry.cs.uiuc.edu/~garrido/Crefactory.html>)

Making SCM tools work better with refactoring

Tools for automated testing

References:

Martin Fowler, "Refactoring:Improving the Design of Existing Code", Addison-Wesley Longman, 1999.