

USING BEHAVIOR REPRESENTATION MODELS IN RISK-DRIVEN DESIGN

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A report by the National Research Council (Human-system integration in the system development process: A new look. Pew & Mavor, eds., 2007, available free with registration;

http://www.nap.edu/openbook.php?record_id=11893) noted a new way to include human factors in developing systems of systems, the risk-driven spiral model. In this talk I introduce the theory in this report and note a few extensions based on thinking since the report. The report argues that most systems are developed with a mind to what are the riskier aspects of the design and implementation. The report notes how different perspectives have different views of what is risky, and that risk-driven spiral model can be used to organize methods in HCI. (This theory can apply to developing our own models as well.) The report calls for using user models as a shared representation between designers and design stages. The use of models as shared representations in design offers a new outlet and use for user models, but also raised new challenges and repeats old ones, like the ability to build models easily and make them explainable to others. Knowing this report will help modelers understand their own work, find their audience, and apply their models more effectively.