

Human Behavior Modeling in a Virtual Environment

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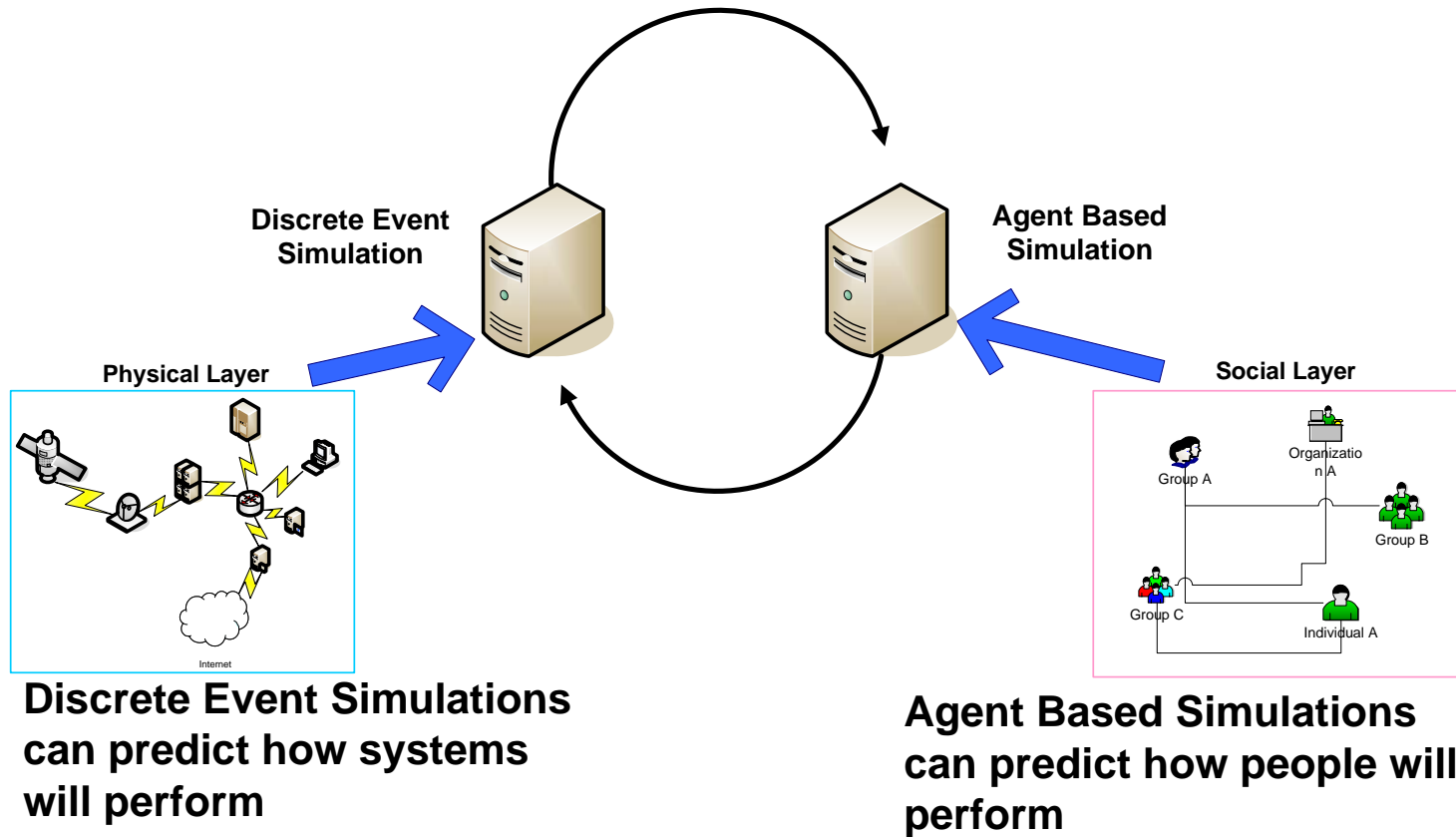
MSR



Problem

- **Can we understand a system environment better by considering its human components?**
 - **Perceptions**
 - **Reactions**
 - **Support /opposition**

Background



Most Interesting Problems Include Systems and People

Objective

- **Demonstrate a method for quantifying elements of human behavior**
- **Predict how people's reactions to a communicated message change over time**
 - **Enterprise – Policy Change**
 - **Conflict – Information Operations**
- **Compare an analysis of a system environment with and without accounting for human behavior**

Activities

- **Identify suitable existing behavior models**
- **Design and document the method for predicting reactions**
- **Develop and execute a proof-of-concept demonstration**
- **Evaluate the method on a real-world problem**

Highlight

Decompose



Group C

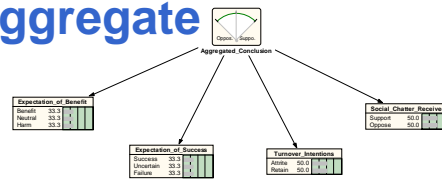
How do I benefit from this change?

Do I expect this change to be implemented successfully?

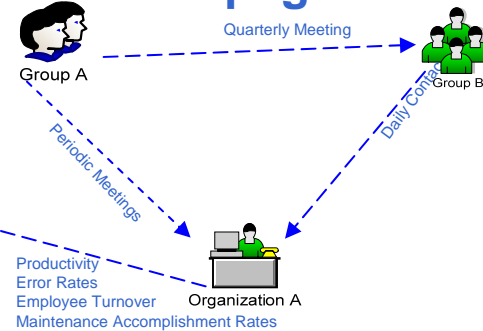
What have I heard about this change from other people?

Am I more inclined to change jobs because of this change?

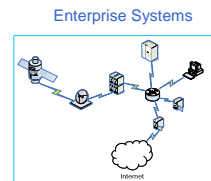
Aggregate



Propagate

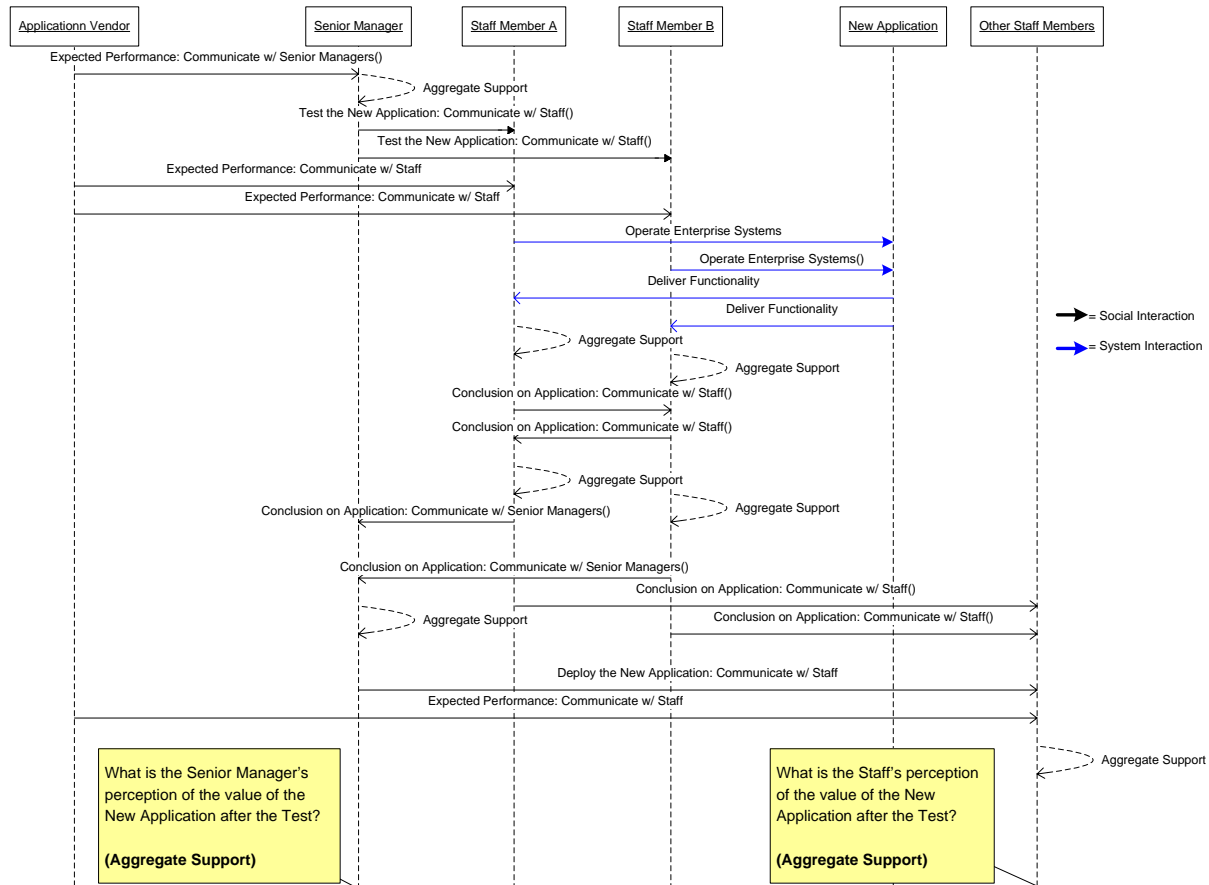


A three step method for predicting the performance impact of perceptions.



Highlight

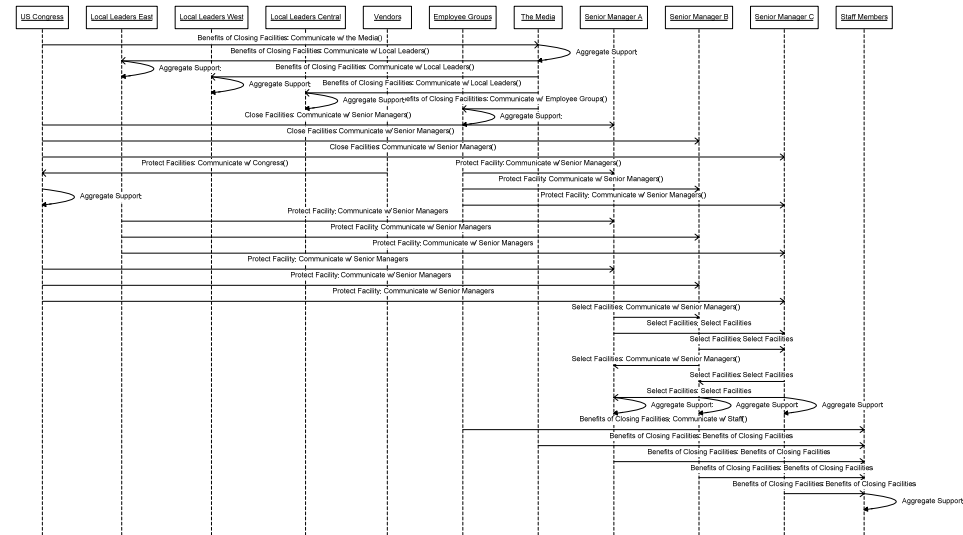
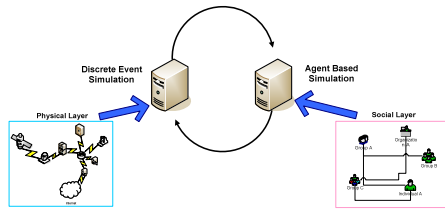
Predict perceptions of value by various stakeholders after the deployment of a new application



Impacts

- **Develop a method to predict:**
 - **User acceptance of a new application**
 - **Stakeholder support for a new policy**
 - **Public reaction to an information operation**

Future Plans



■ **Test communications plans for:**

- Public health campaigns
- Agency reductions in force
- Psychological operations