



University of Southern California  
**Center for Software Engineering**

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# CS599 Software Process Modeling Week 8

**Ray Madachy**

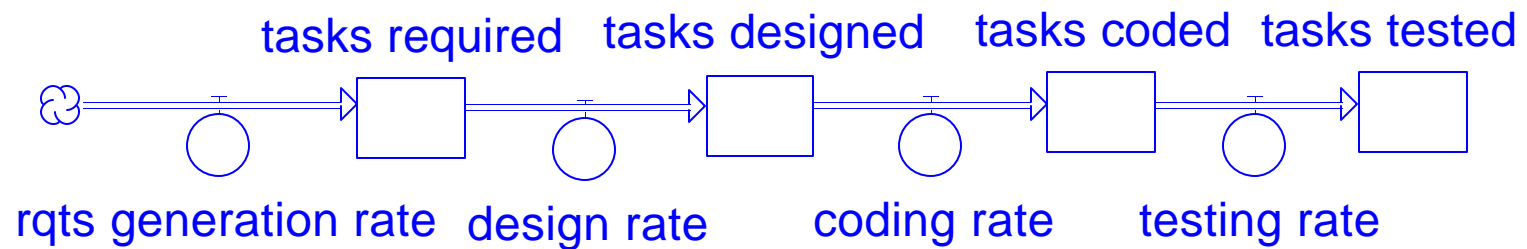
**October 19, 1999**



# Outline

- Student Presentations
- Quiz #2 Review
- Common Structures Review
- Grades

# Software Product Transformations



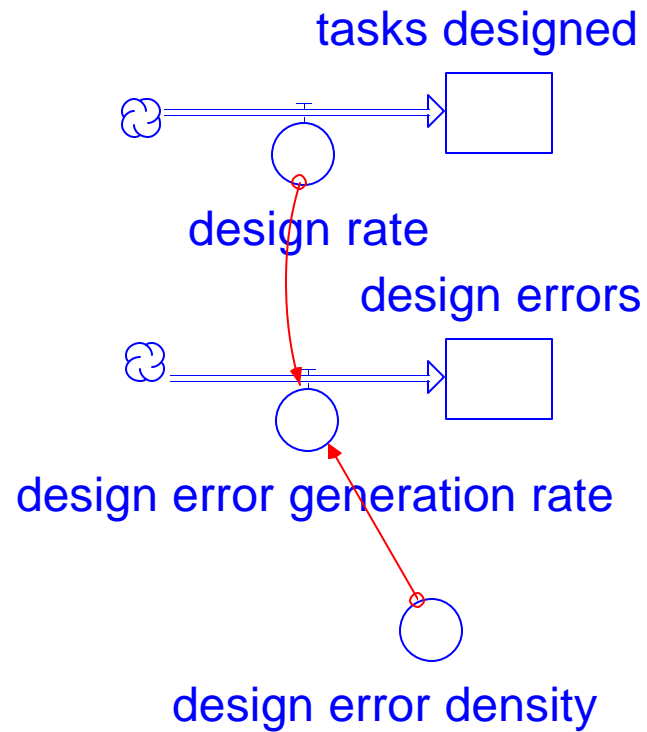
*Cycle time per phase =*

*start time of first flowed entity - completion time of last flowed entity*

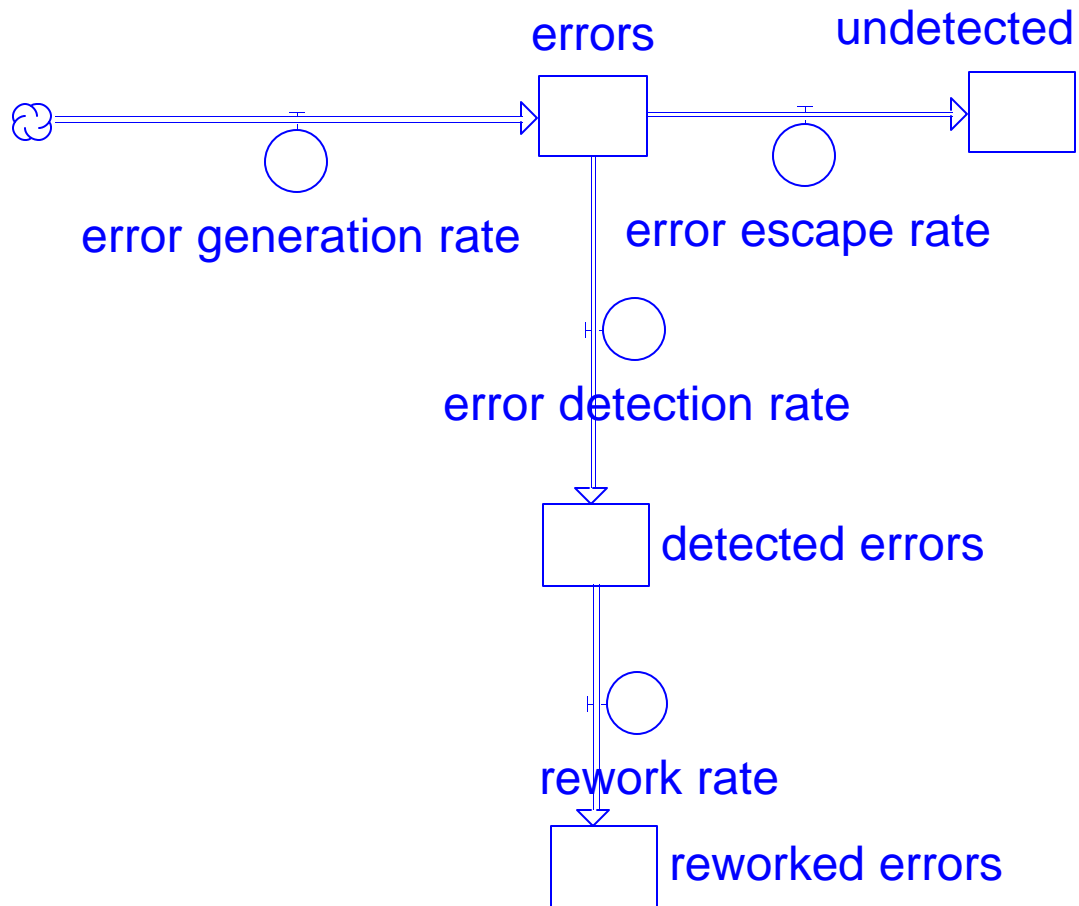
*Cycle time per task = transit time through relevant phase(s)*



# Error Co-flows

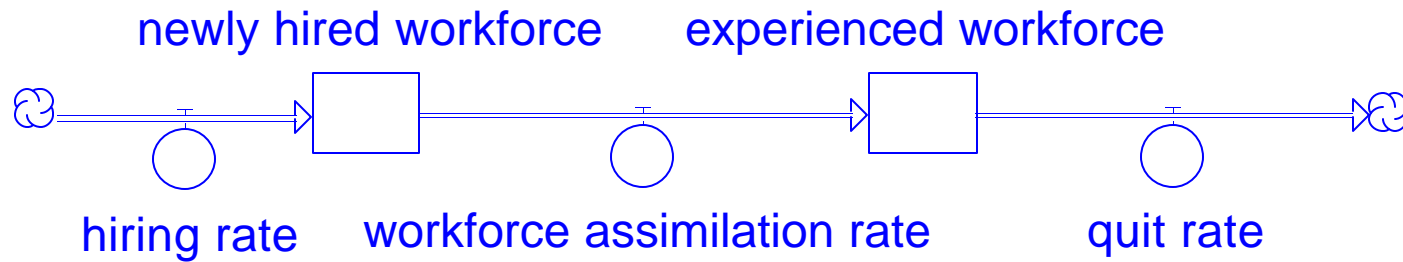


# Error Detection and Rework



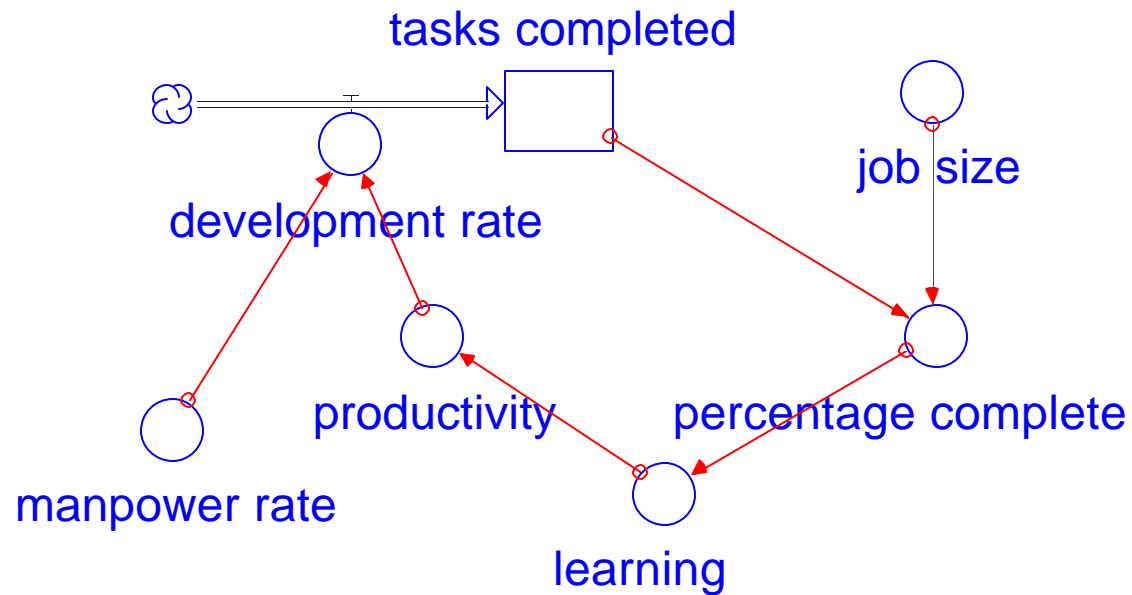


# Personnel Pool



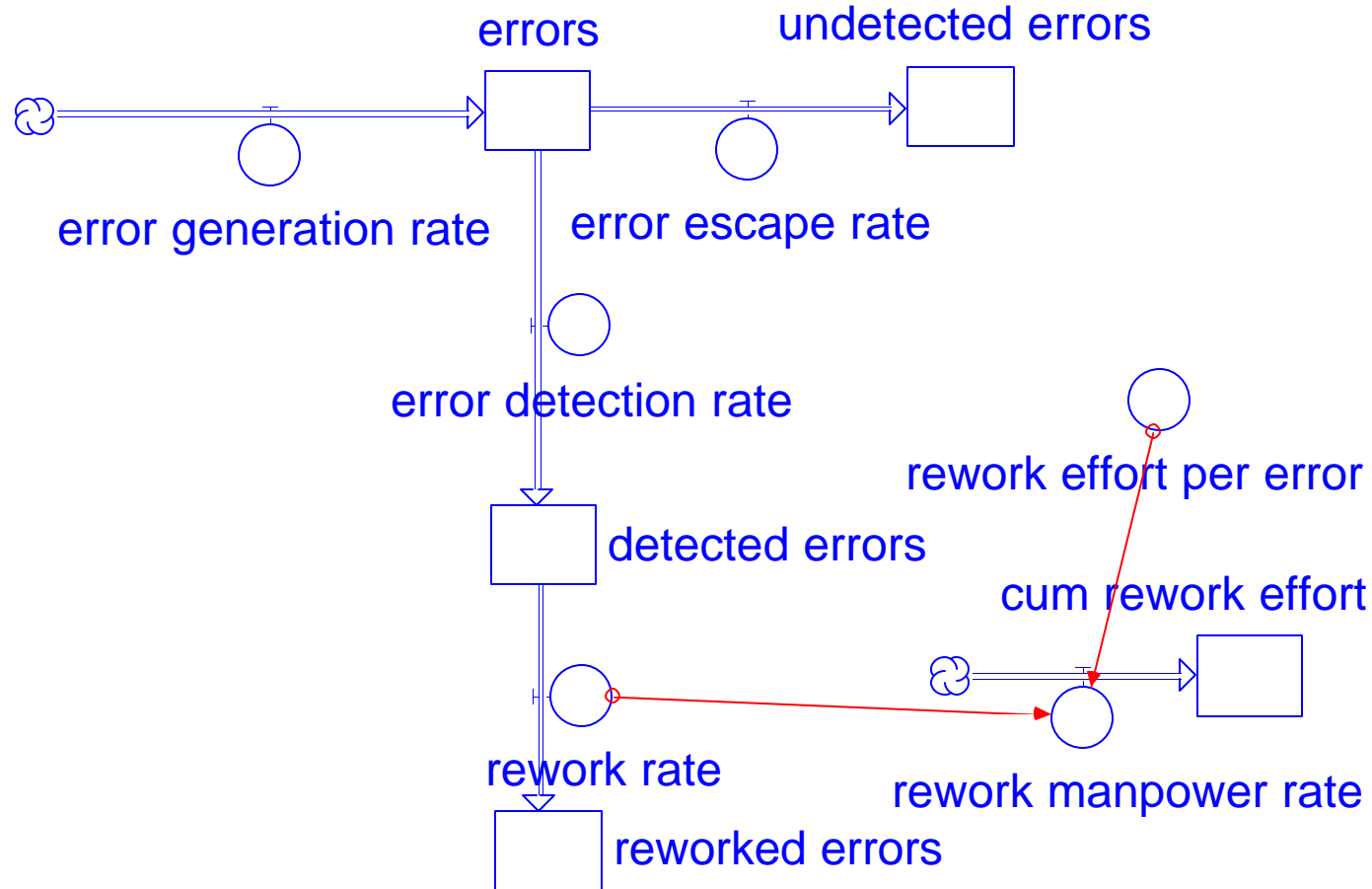


# Learning Curve



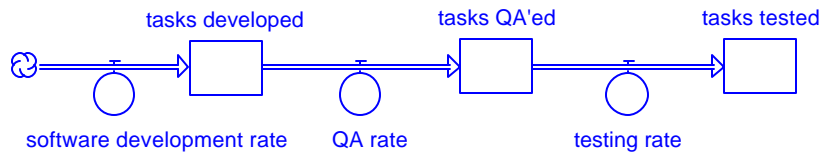
# Cost/Schedule/Quality Tradeoffs

- Inherent in system dynamics models that represent defects as levels, and include the associated variable effort and cycle time for rework and testing as a function of those levels

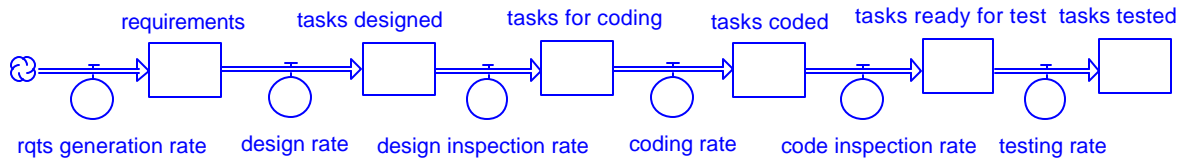




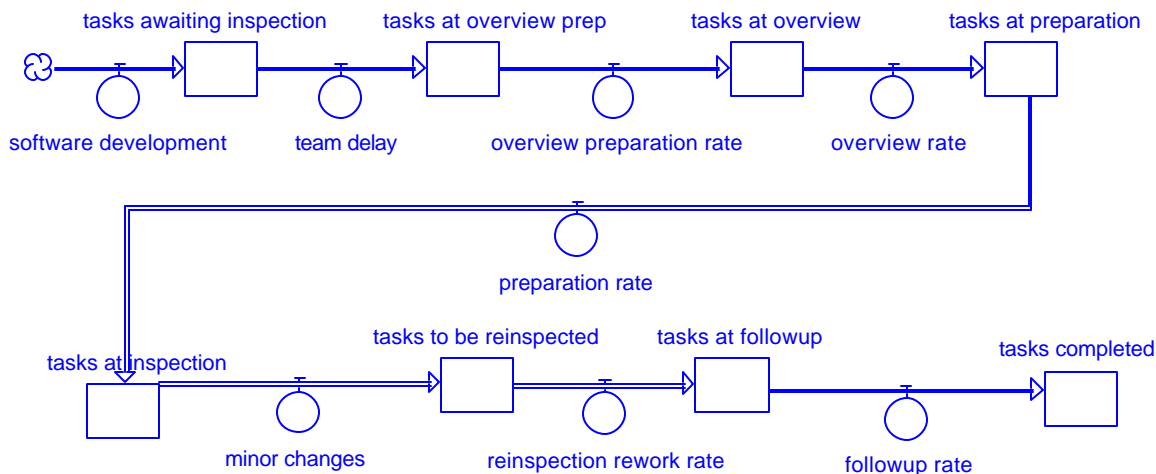
# Example Product Chains



Abdel-Hamid/Madnick 91



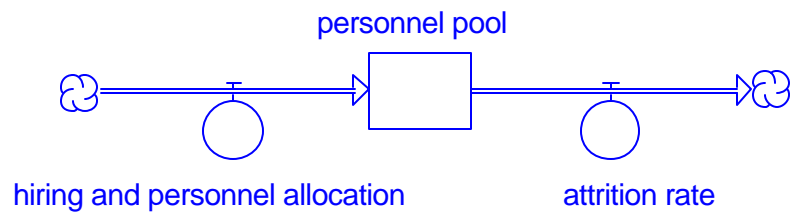
Madachy 94



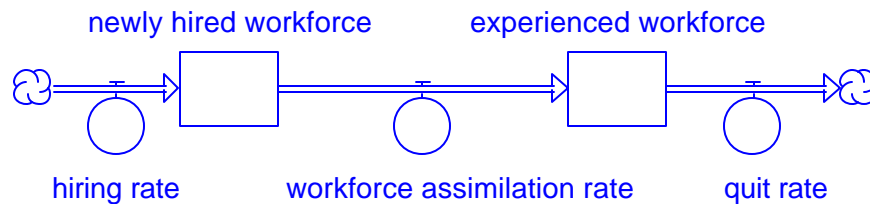
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# Example Personnel Chains



Madachy 94



Abdel-Hamid/Madnick 91



# Current Grades

SS #	HW #1 Degree Progress (10 points)	HW #2 Brooks's Law (20 points)	HW #3 DPRS (15 points)	Quiz #1 (12 points)	Quiz #2 (12 points)	Total Points
2245	7	10	9	1	5	32
7134	7	17	12.5	12	11	59.5
9077	7	15	12	12	7	53
5928	10	13	9.5	3	4	39.5
6190	5	14	12	0	1.5	32.5
4866	9	18	14	9	9	59
2558	7	15	13.5	10	6	51.5