CC-236

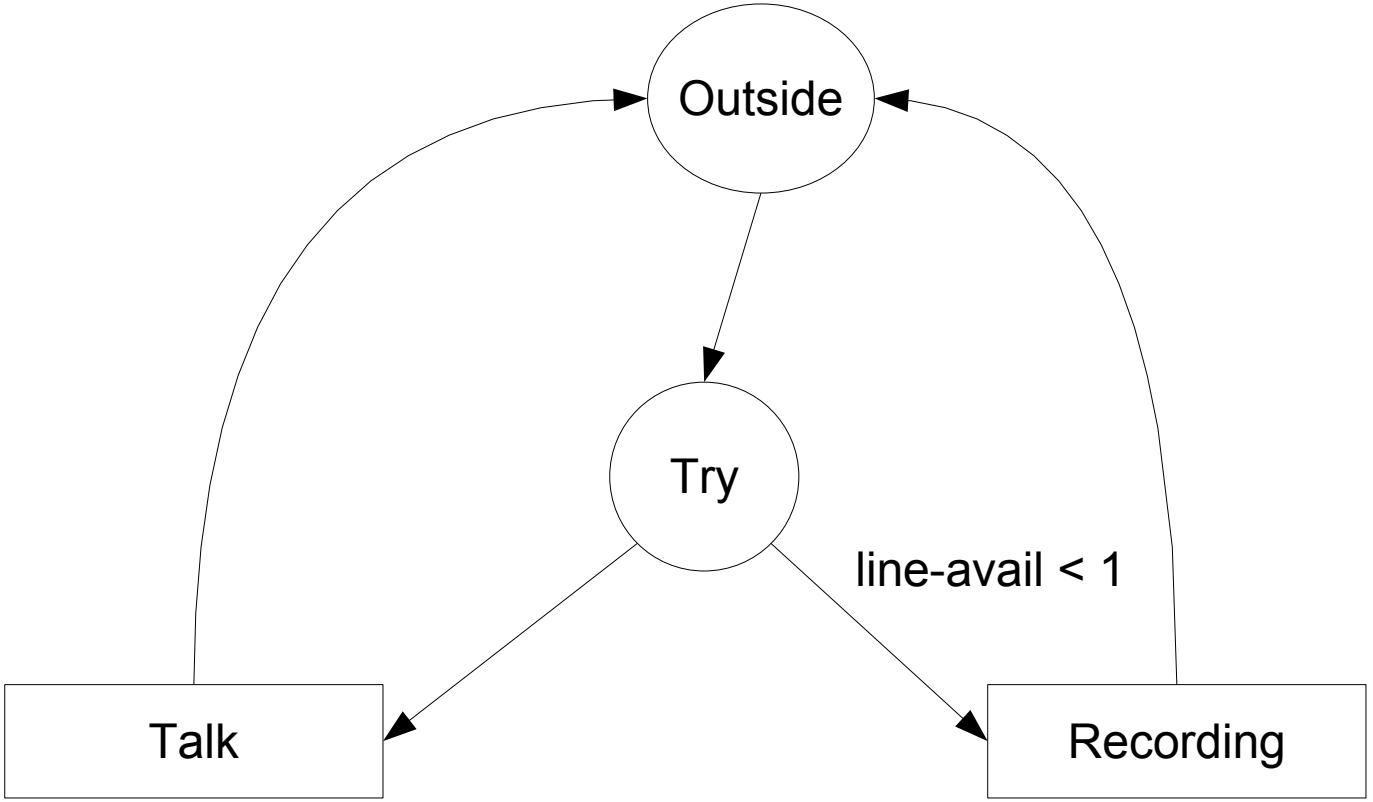
Exercício 1 – Sistema 1

ACD e Eventos

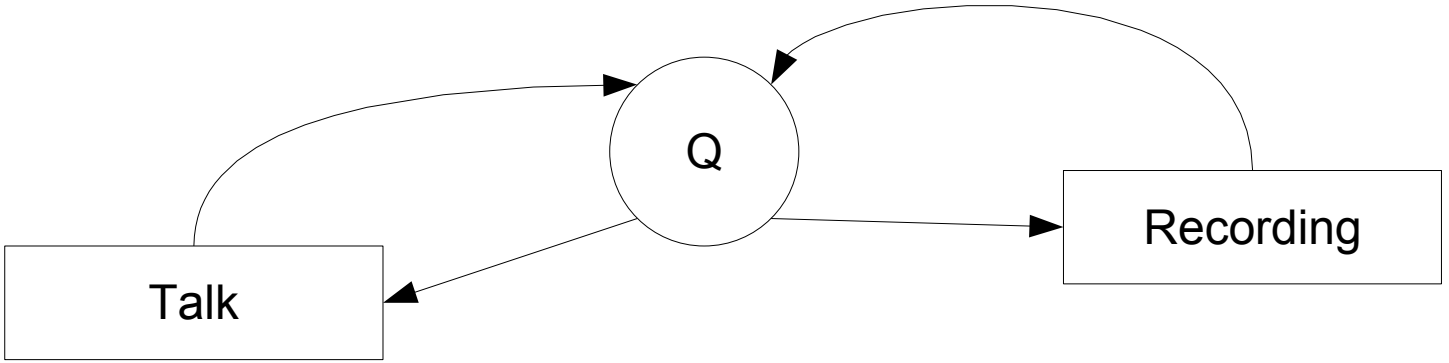
Sistema 1 - Entidades

- Usuário A
  - Talk
  - Recording
- Usuário B
  - Talk
  - Recording
- Companhia Teleco
  - Talk
  - Recording

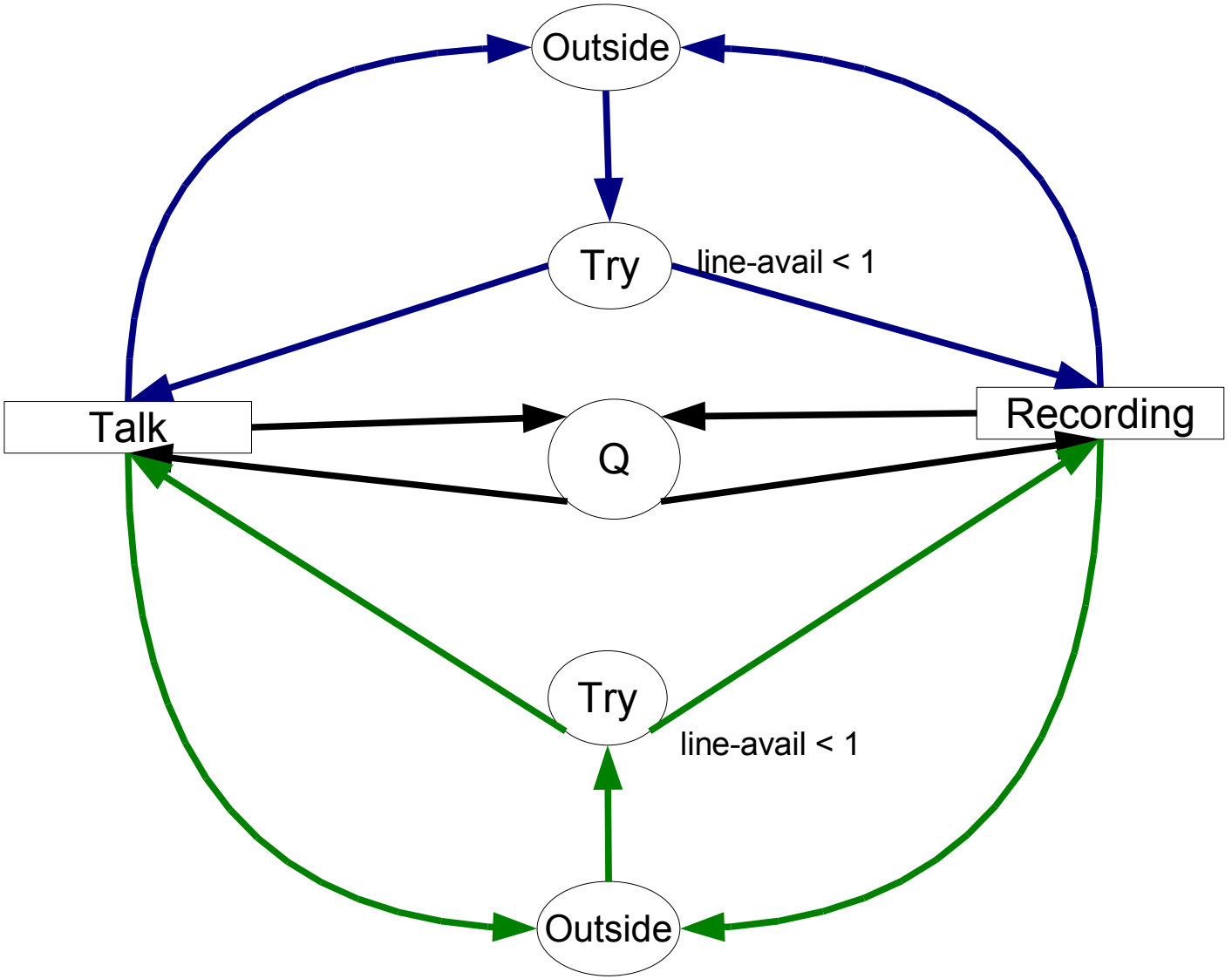
ACD - Usuário



ACD - Teleco



ACD - Completo



Sistema 1 - Eventos

- Entrada Usuário A
- Entrada Usuário B
- Fim da Comunicação Usuário A
- Fim da Comunicação Usuário B
- Fim da Gravação

Data Structures	Schedule-New-Event			Extract-Next-Event		
	Amortized		Max	Amortized		Max
	Expected	Worst		Expected	Worst	
Linked List	$O(n)$	$O(n)$	$O(n)$	$O(1)$	$O(1)$	$O(1)$
Skip List	$O(log(n))$	$O(log(n))$	$O(n)$	$O(1)$	$O(1)$	$O(1)$
Henriksen's	$O(log(n))$	$O(n^{1/2})$	$O(n)$	$O(1)$	$O(1)$	$O(1)$
SPEEDESQ	$O(1)$	$O(1)$	$O(1)$	$O(1)$	$O(n)$	$O(nlog(n))$
Lazy Queue	$O(1)$	$O(n)$	$O(nlog(n))$	$O(1)$	$O(n)$	$O(nlog(n))$
Implicit d-Heap	$O(1)$	$O(log(n))$	$O(log(n))$	$O(log(n))$	$O(log(n))$	$O(log(n))$
Splay Tree	$O(log(n))$	$O(log(n))$	$O(n)$	$O(1)$	$O(1)$	$O(1)$
Skew Heap	$O(log(n))$	$O(log(n))$	$O(n)$	$O(log(n))$	$O(log(n))$	$O(n)$
Calendar Queue	$O(1)$	$O(n)$	$O(n)$	$O(1)$	$O(n)$	$O(n)$

Table 2.1: Analytical Performance of Event Set Algorithms

Fonte: Guanhua Yan. PhD Thesis. 2005
Improving Large-Scale Network Traffic Simulation with Multi-Resolution Models