

CS 182

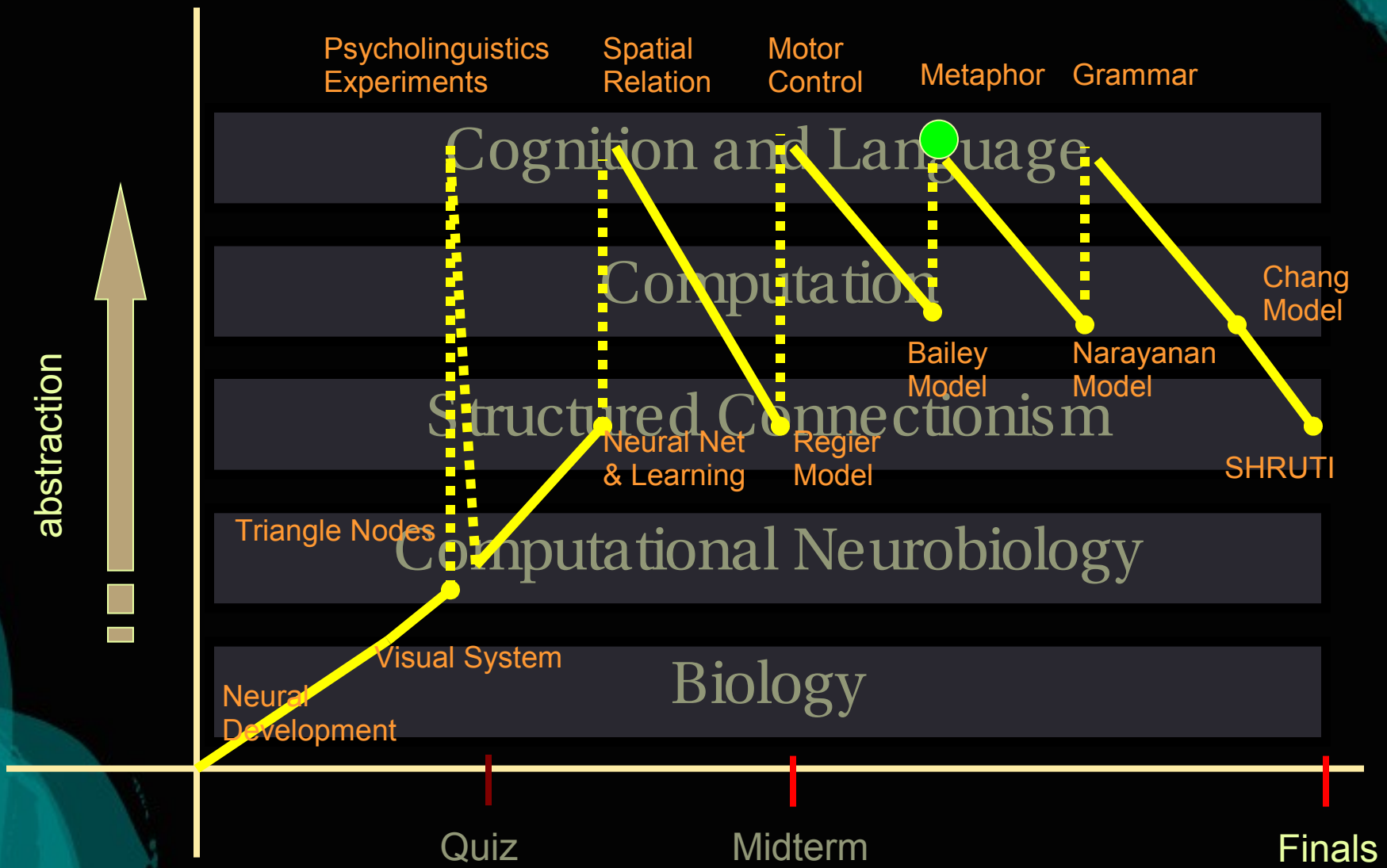
Sections 103 - 104

Leon Barrett

with acknowledgements to Eva Mok and Joe Makin

April 4, 2007

The Last Stretch



Homework

- A6 (model merging) is due next Tuesday
- A7 (metaphor) is due next Thursday
- Any homework questions?

Questions

- Is there experimental evidence for metaphorical thinking?
- What is tense?
- What is aspect?
- How does an X-Net relate to aspect?
- How can you diagram tense?
- How do aspect and tense interact?

Metaphor

- There are LOTS of metaphors we use
 - Power is size
 - Knowing is seeing
 - Event structure is motion

Event Structure Metaphor

- States are Locations
- Changes are *Movements*
- Causes are Forces
- Causation is Forced Movement
- Actions are Self-propelled Movements
- Purposes are Destinations
- Means are Paths
- Difficulties are Impediments to Motion
- External Events are Large, Moving Objects
- Long-term, Purposeful Activities are Journeys

Metaphor

- Is there evidence that people use metaphor to think?
 - If so, what?

Ego Moving versus Time Moving

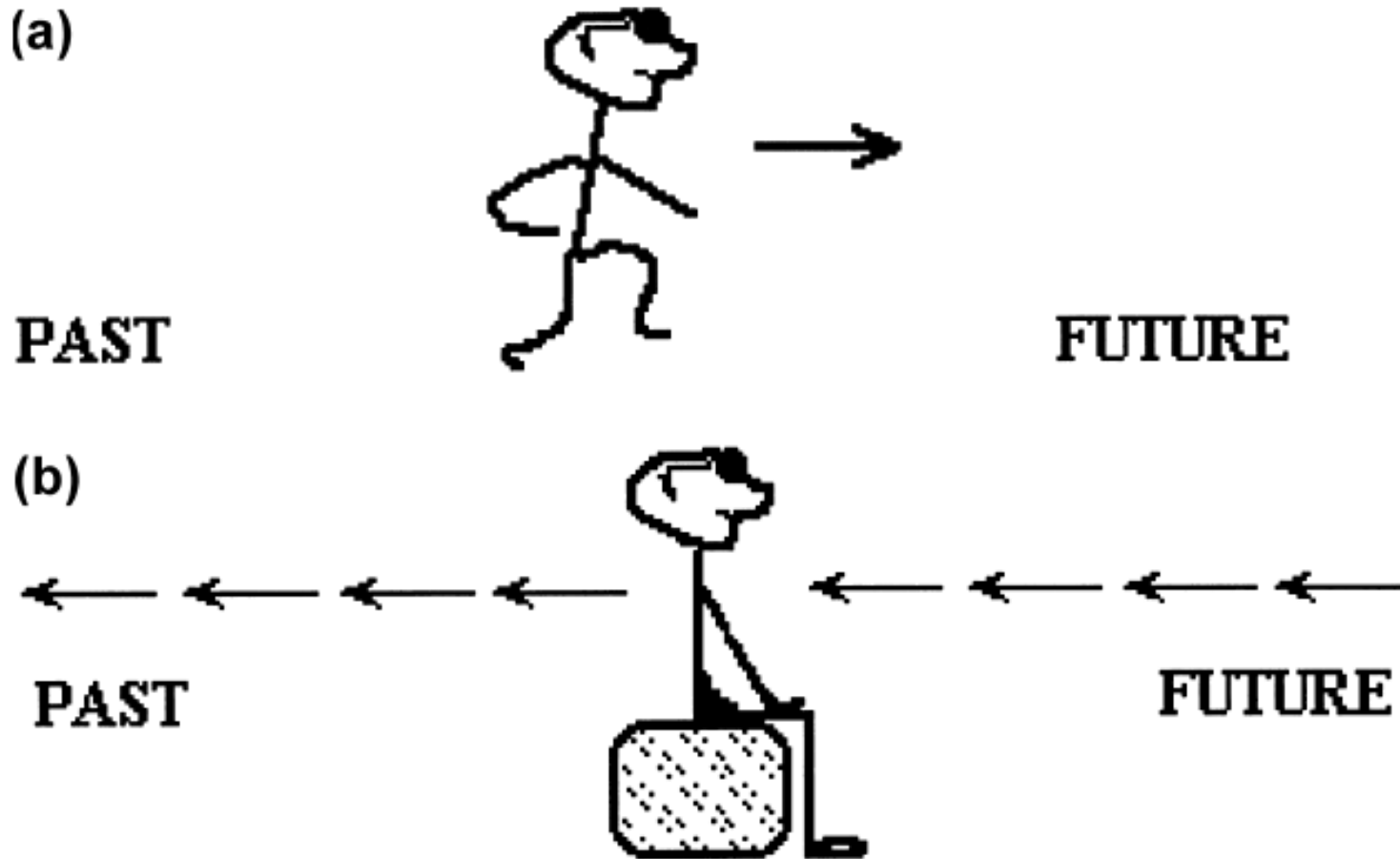
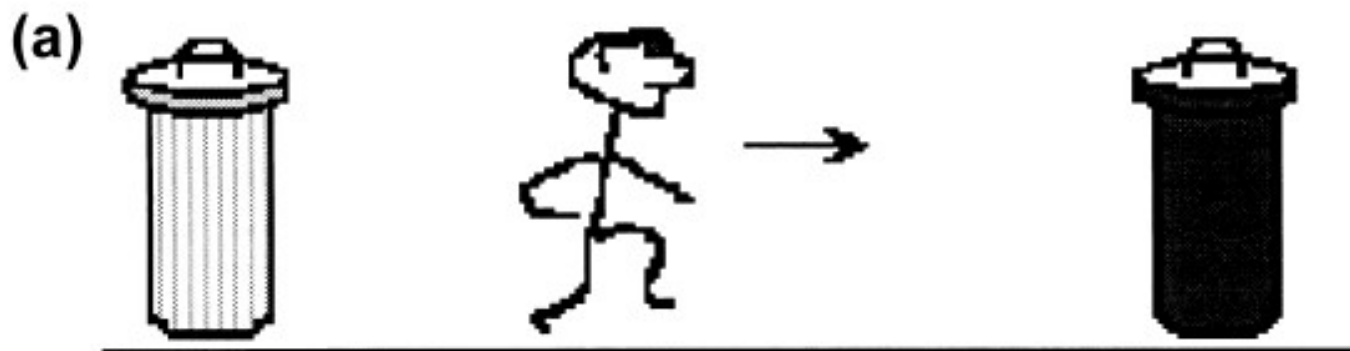
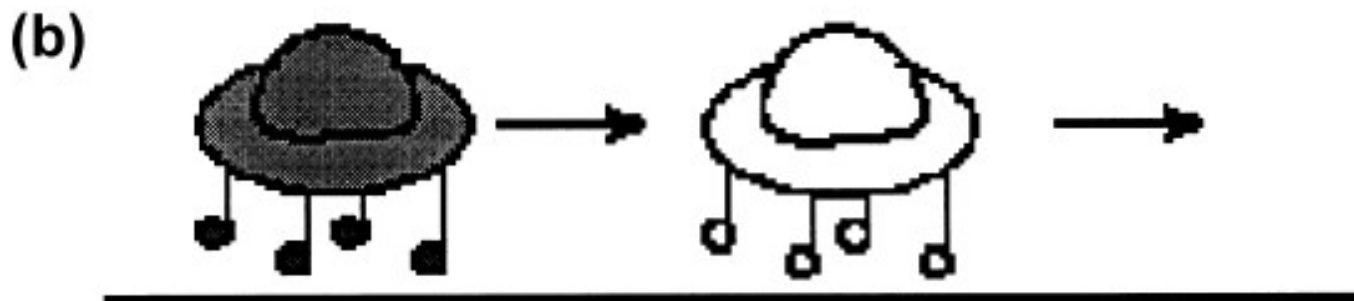


Fig. 1. (a) Schematic of the ego-moving schema used to organize events in time. (b) Schematic of the time-moving schema used to organize events in time.

Ego Moving and Object Moving Spatial Primes



The dark can is in front of me.



The light widget is in front of the dark widget.

Do people use Spatial Metaphors for time?

- Participants answered several priming questions about spatial relations of objects in pictures.
 - Ego-moving or object moving
- Then, participants interpreted an ambiguous temporal statement such as '**Next Wednesday's meeting has been moved forward two days**'.
- If the above statement is interpreted using the ego-moving schema, then forward is in the direction of motion of the observer, and the meeting should now fall on a Friday.
- In the time-moving interpretation, however, forward is in the direction of motion of time, and the meeting should now be on a Monday.

Hypothesis

- If space and time do share some relational structure, then participants primed in the ego-moving spatial perspective should thus think that the meeting will be on Friday.
- Participants primed in the object-moving perspective should prefer the time-moving interpretation and think that the meeting will be on Monday.
- However, if the domains of space and time do not share any relational structure, then spatial primes should have no effect on the way participants think about time.

Results

PRIME	Meeting is Monday	Meeting is Friday
Ego Moving	26.7%	73.3%
Object Moving	69.2%	30.8%

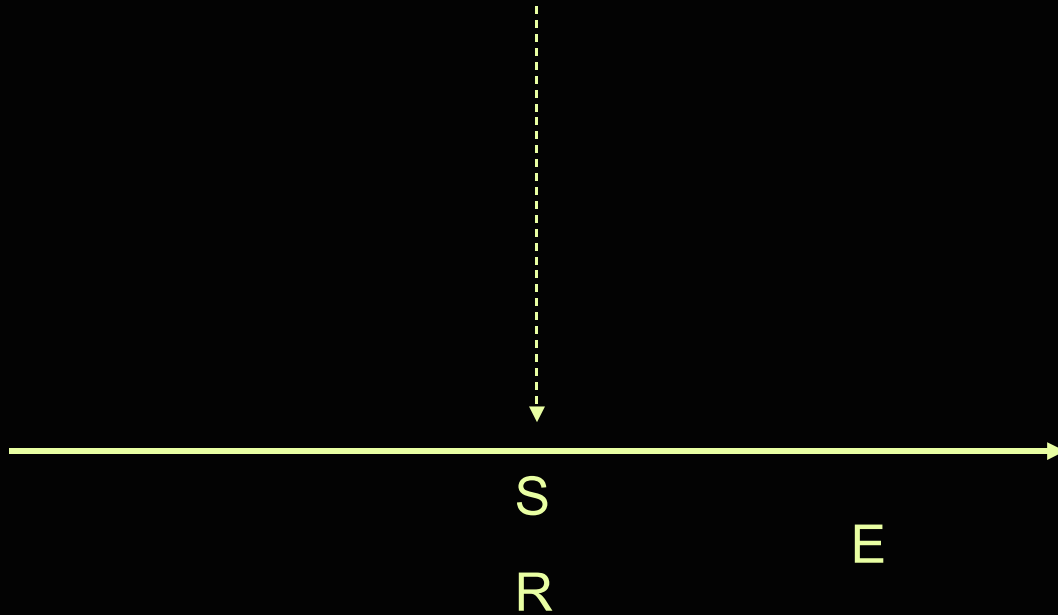
Tense

- What is tense?
- Time information
- Present, Reference point, Event

He *talked*



He will talk



He will have talked

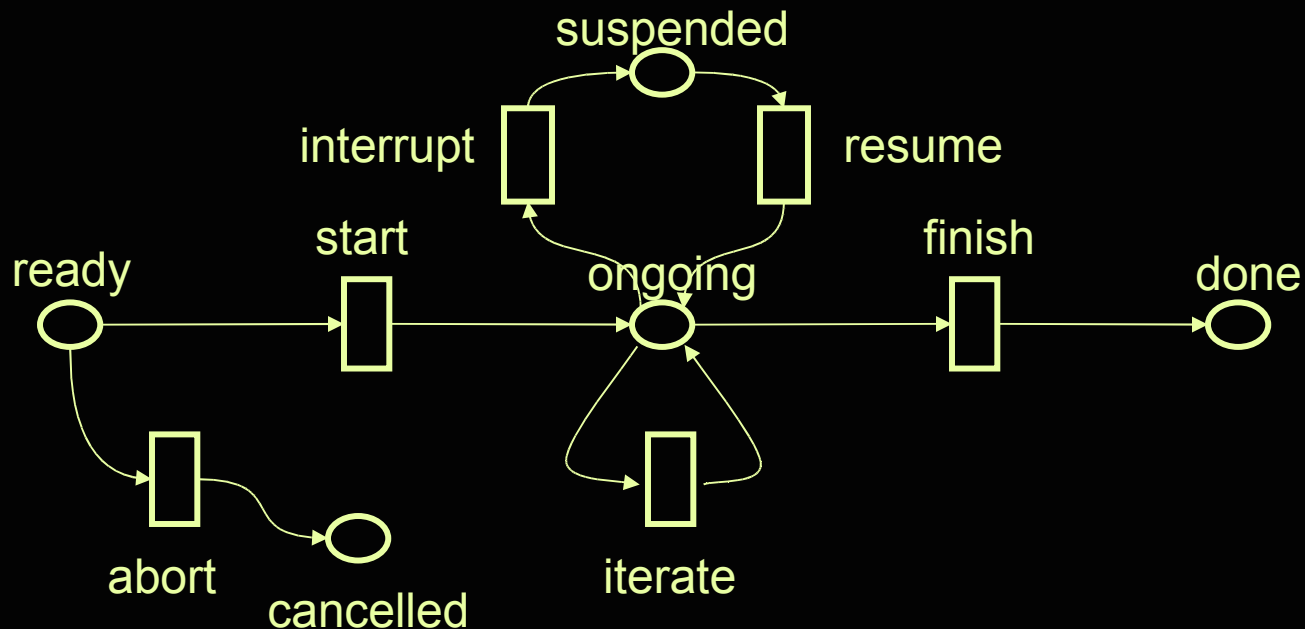


Aspect

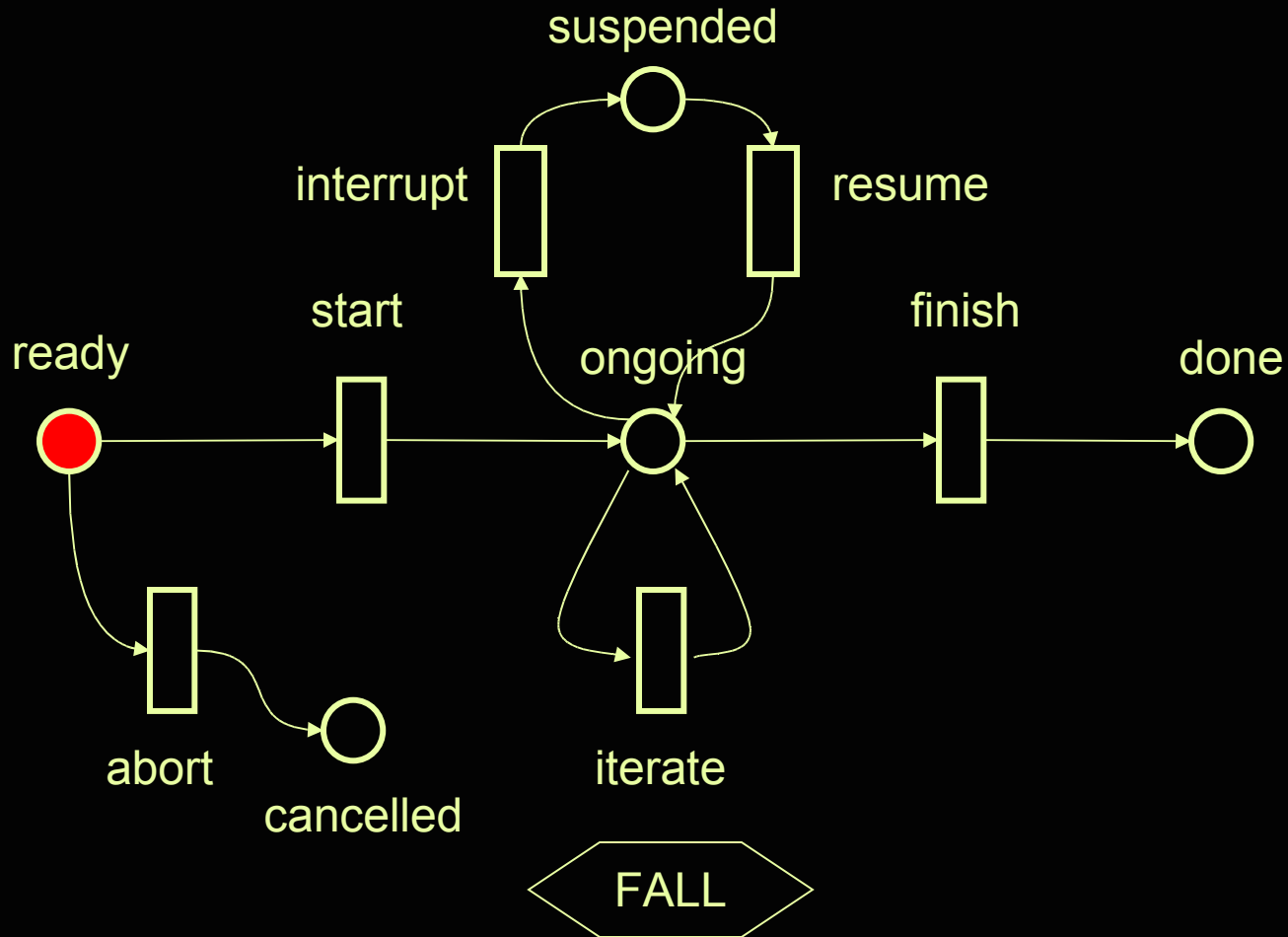
- What is aspect?
- Aspect is different from tense in that it deals with the temporal structure of events
- Viewpoints
 - looking at the same event at different granularity
 - *He was walking / He has walked / He walks*
- Phases of Events
 - stages of an event
 - *He is about to walk / He finished walking*
- Inherent Aspect
 - perfective / imperfective (telic / atelic)
 - *He is walking / He is tapping his finger*

Controller X-Schema

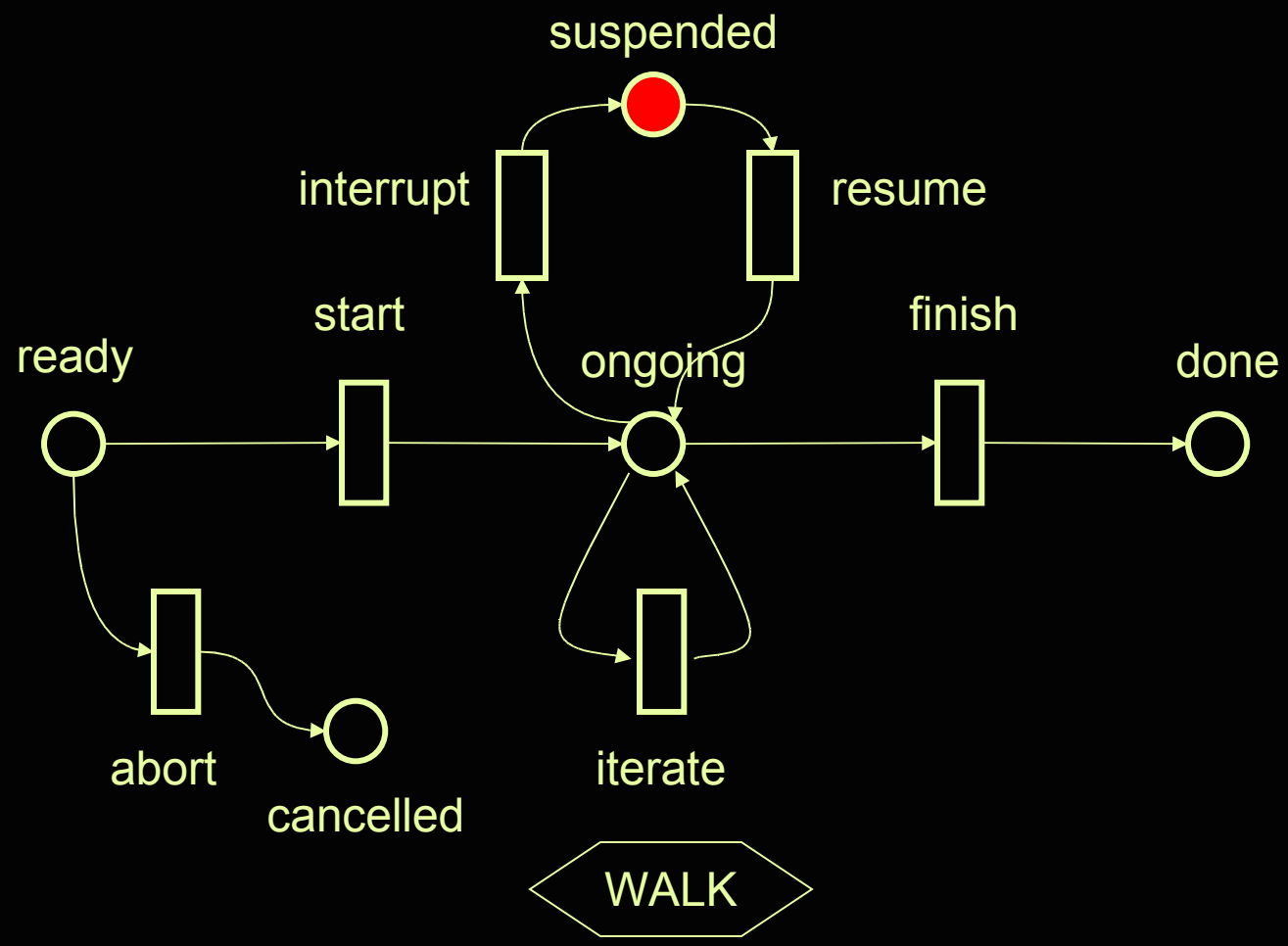
- The controller x-schema is meant to capture the generic structure of events.
- Aspect therefore marks (or profiles) certain states or transitions.



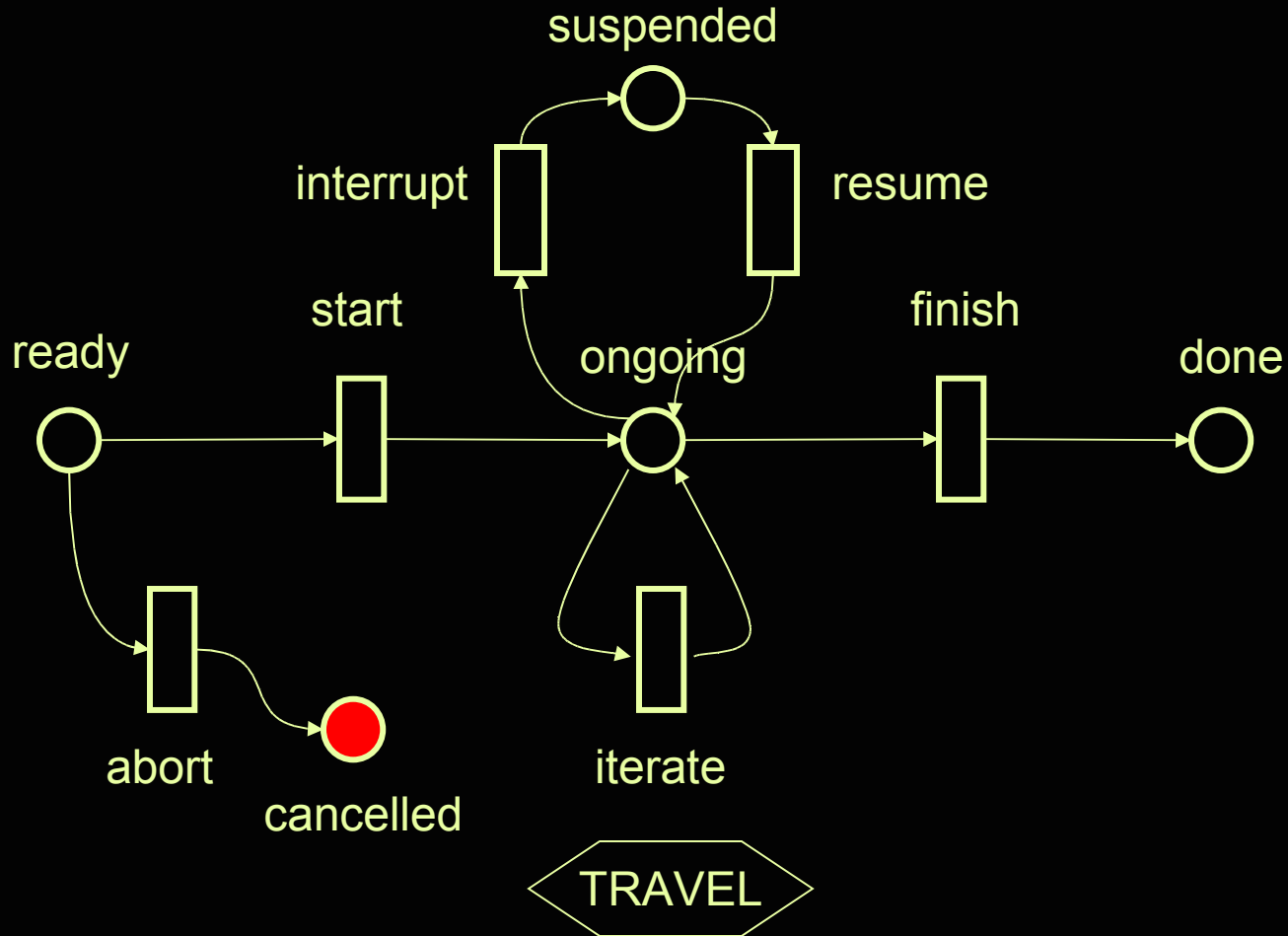
The car is *on the verge of falling* into the ditch.



He *stumbled* on the uneven road.

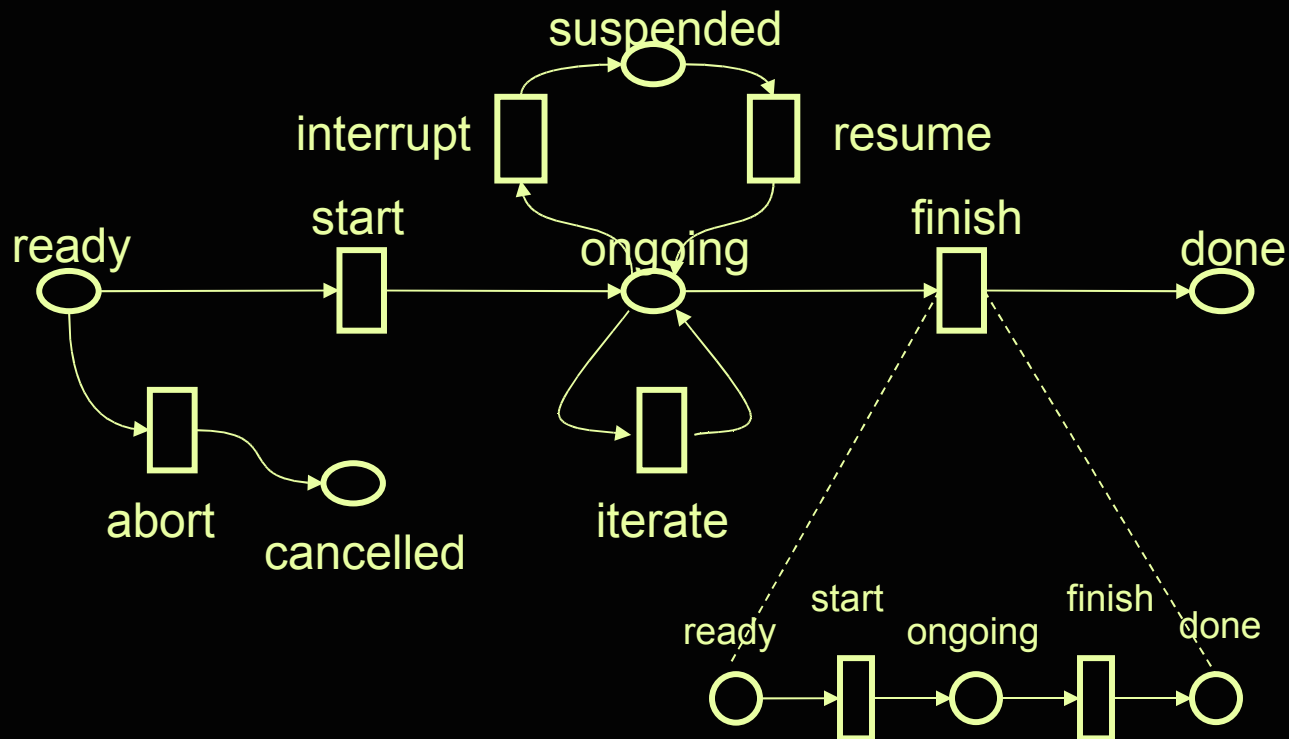


She cancelled her trip to Paris.

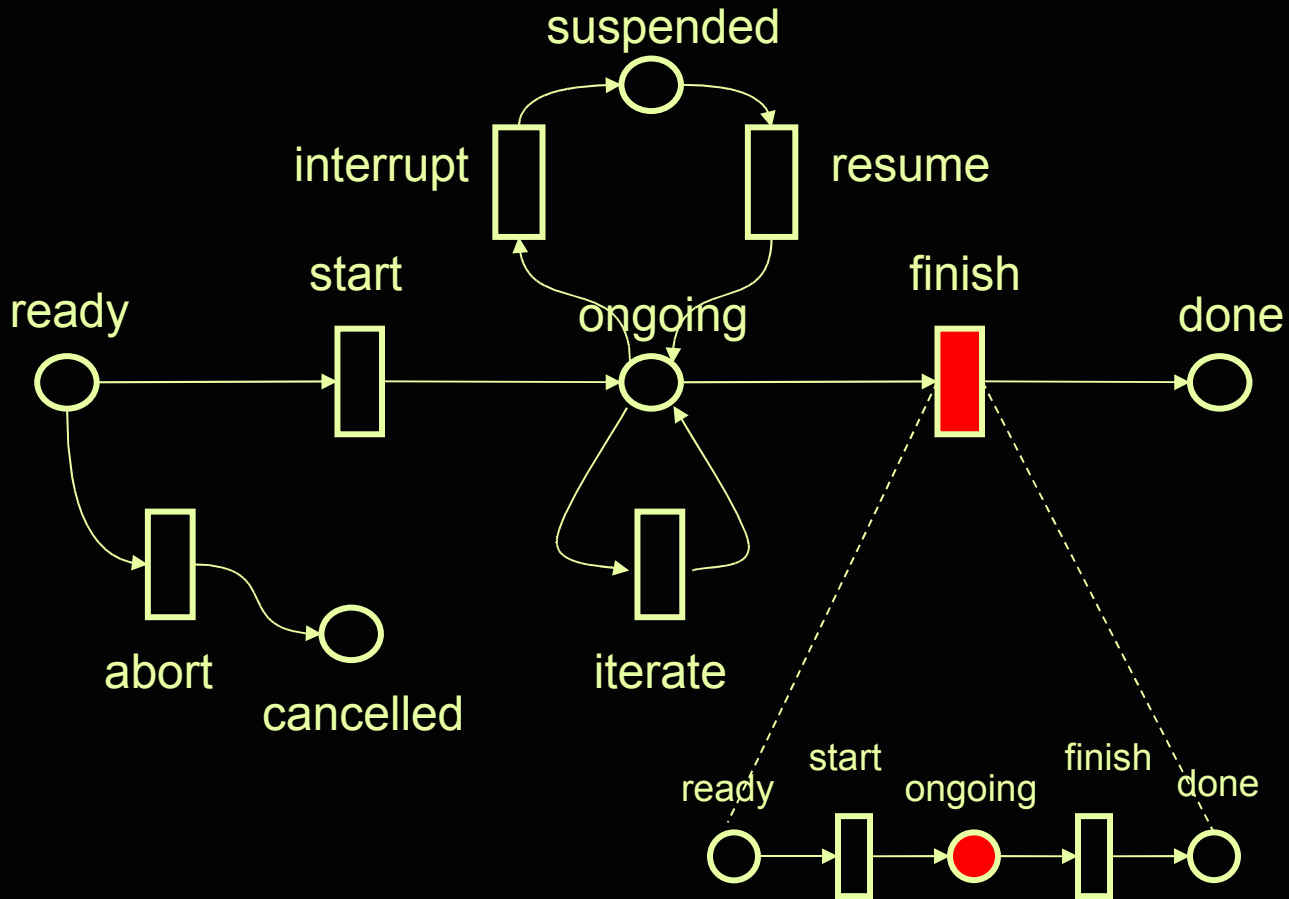


X-Schema Embedding

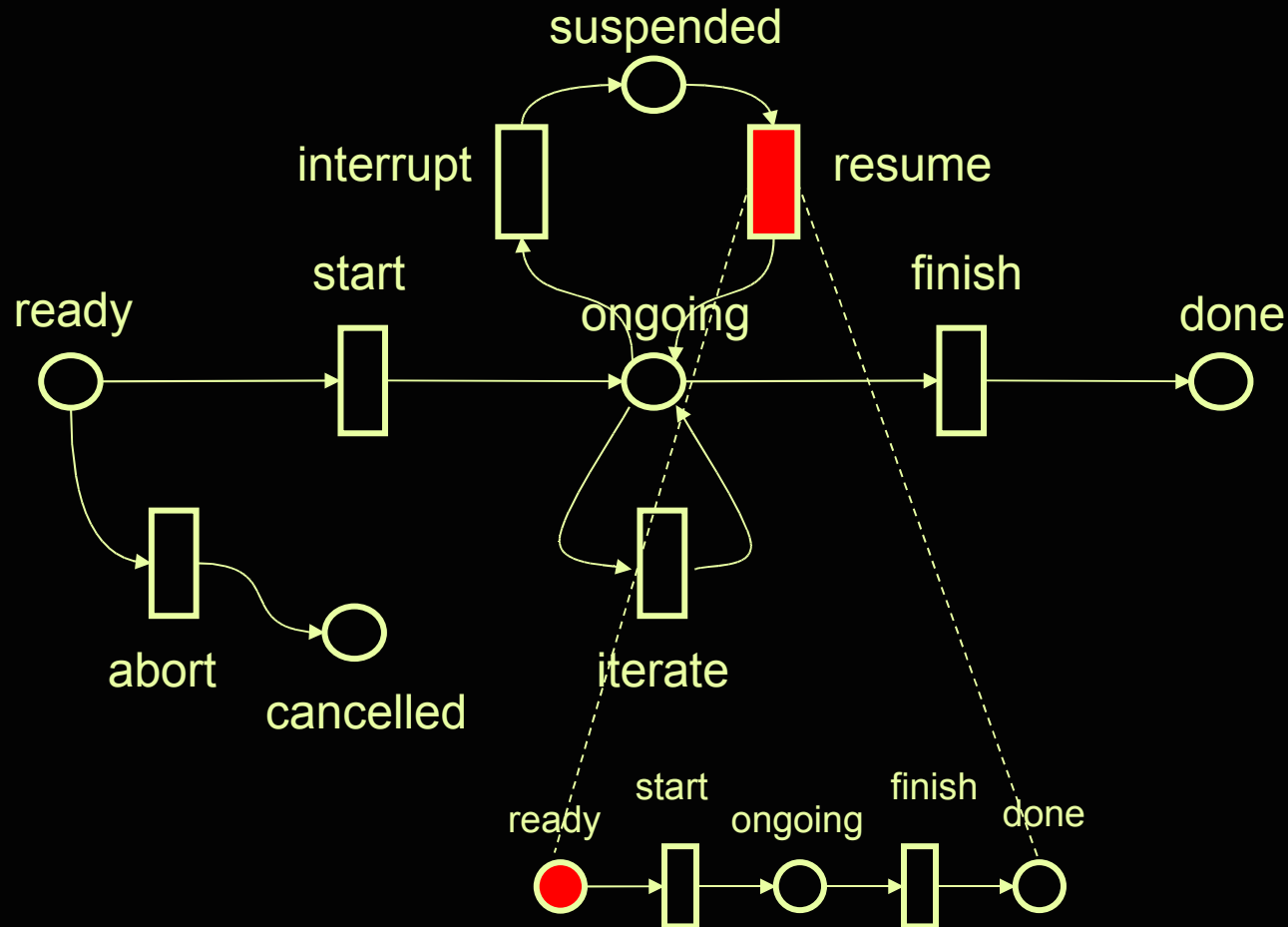
You can 'blow up' any state or transition into a lower level x-schema, allowing embedding



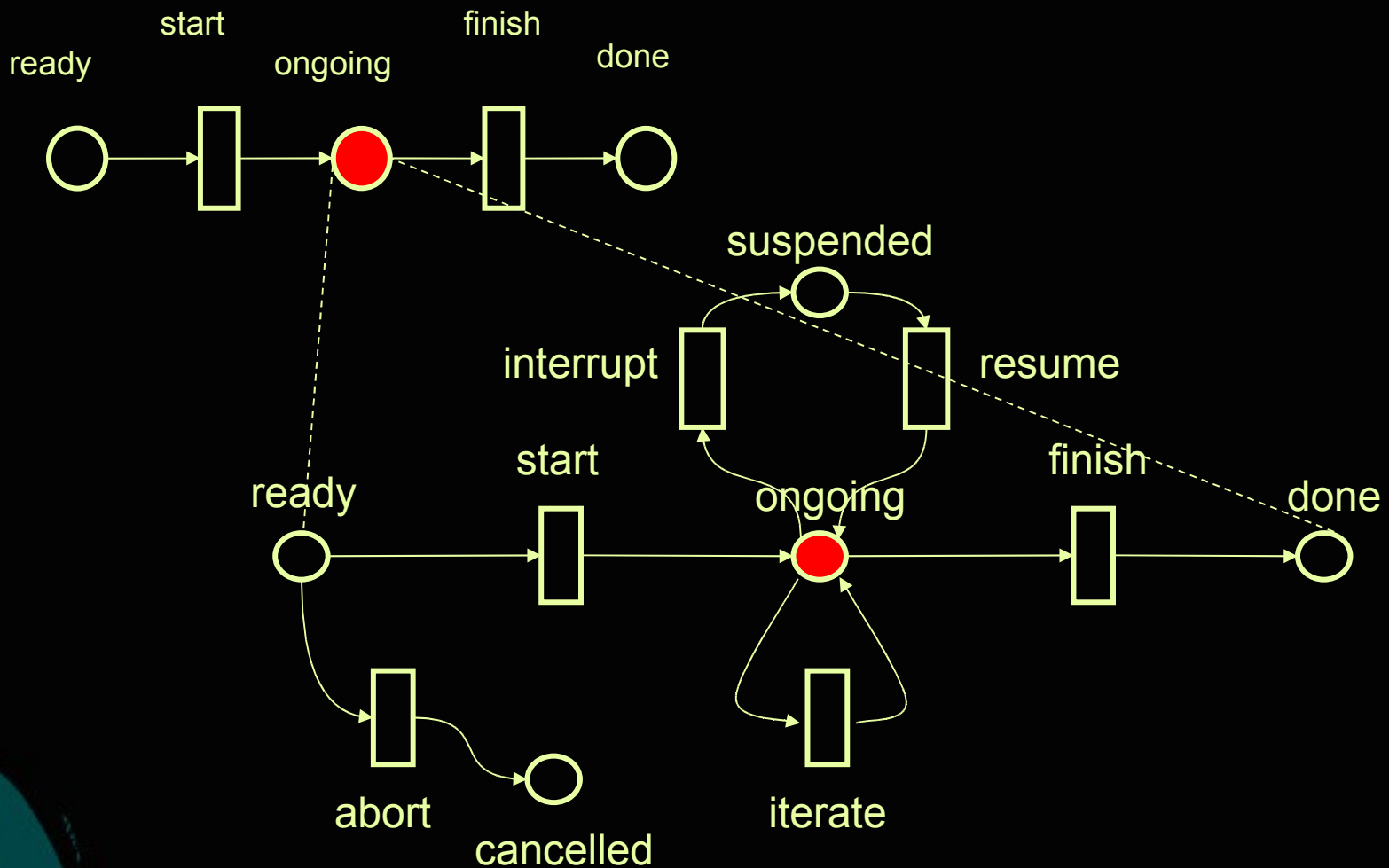
He is concluding his talk.



They are *getting ready to continue* their journey across the desert.

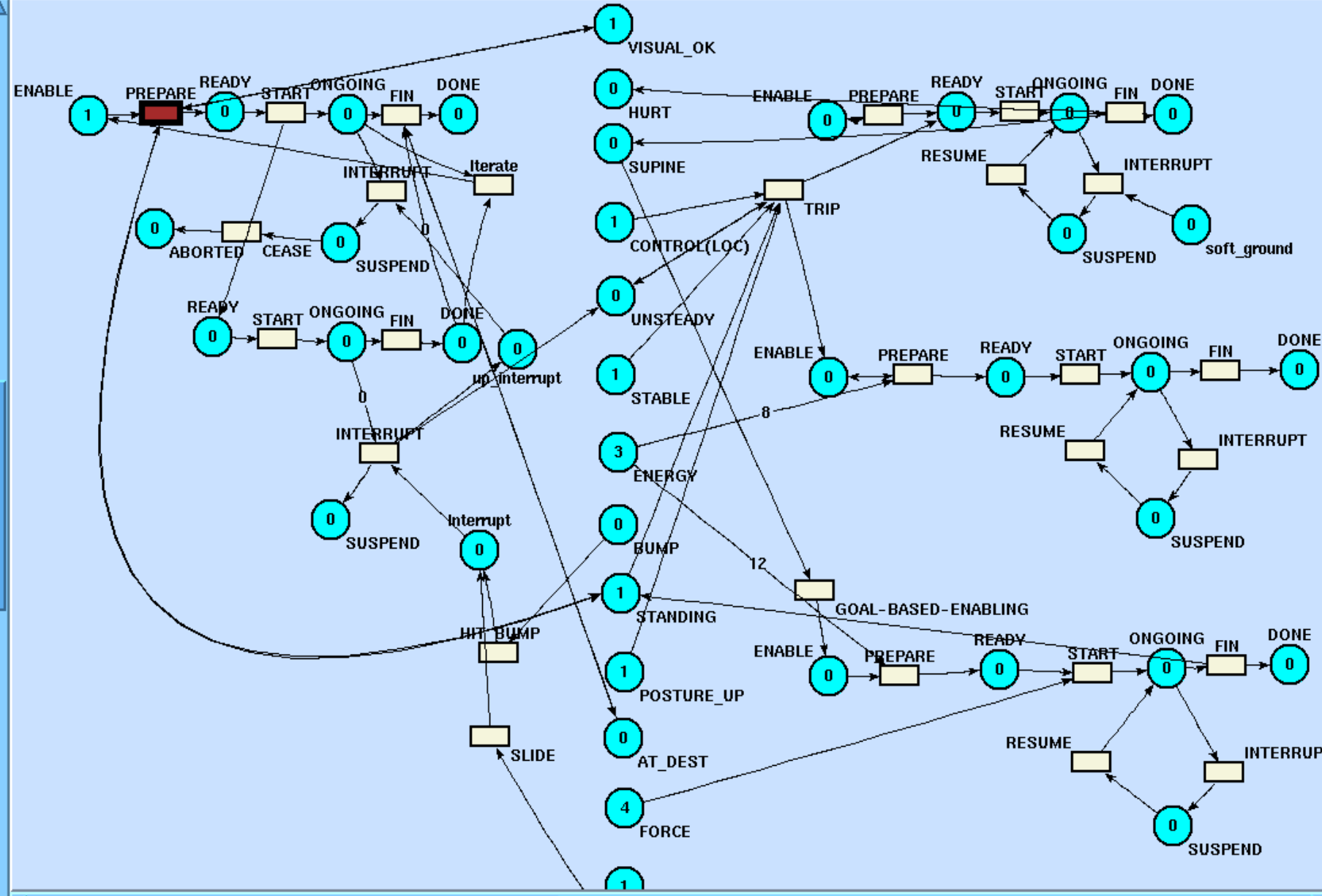


She *smokes*. (habitual reading)



loaded at 842 1123 1918 1893

Name: /u/snarayan/code/simulator/compose | Move | Copy | Arc |

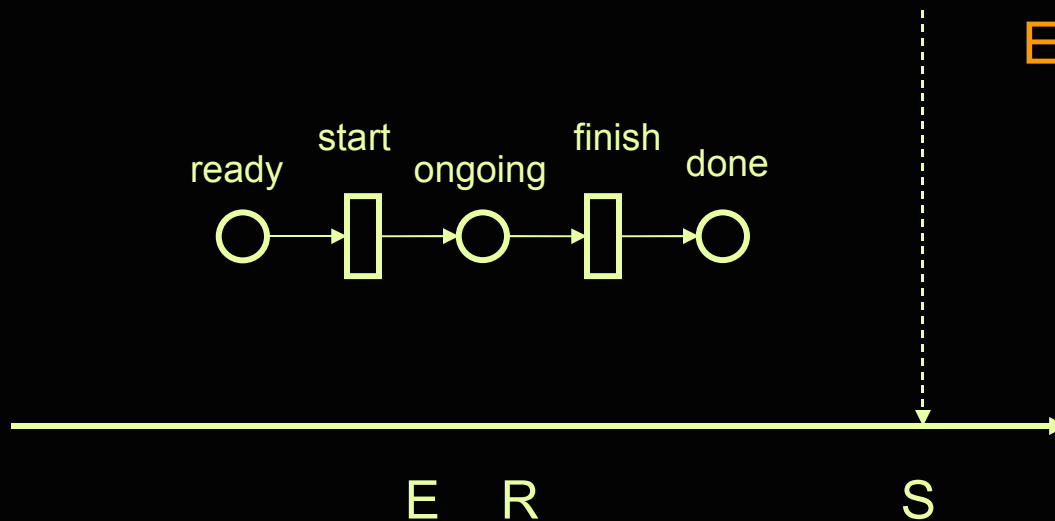


State
0
=> 0
Fire
Init
Save

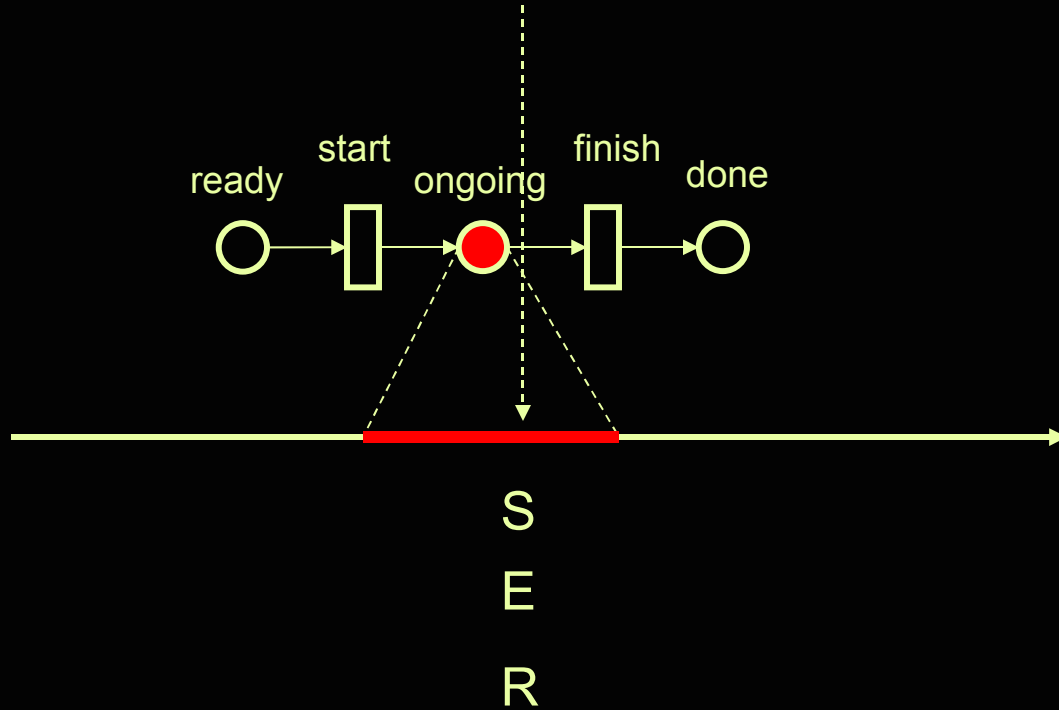
Mapping down to the time line

- we can use Reichenbach's system to map the controller X-schema down to a time line and get tenses

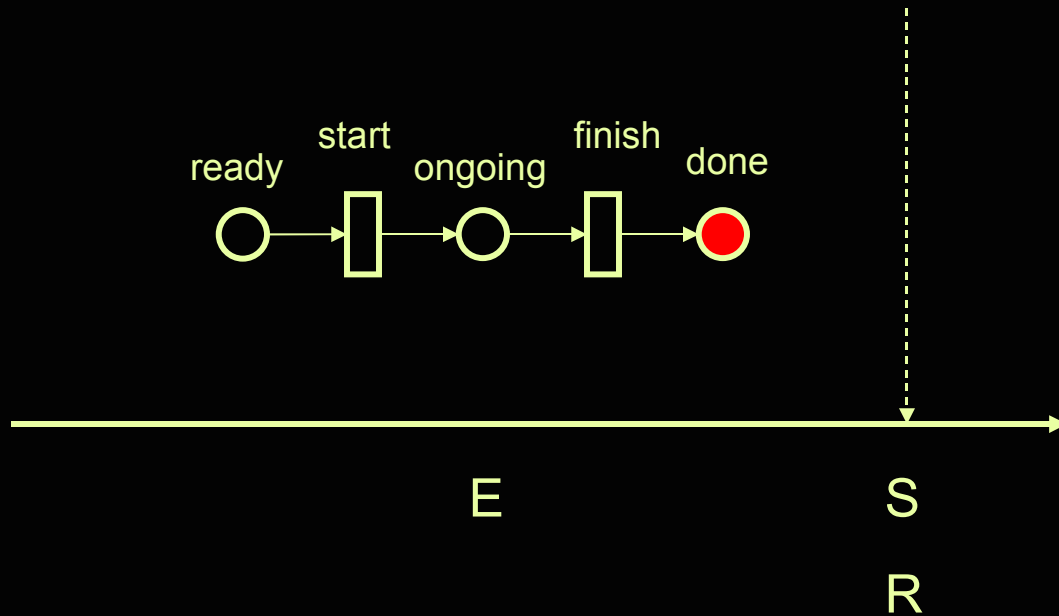
Speech Time (S)
Reference Time (R)
Event Time (E)



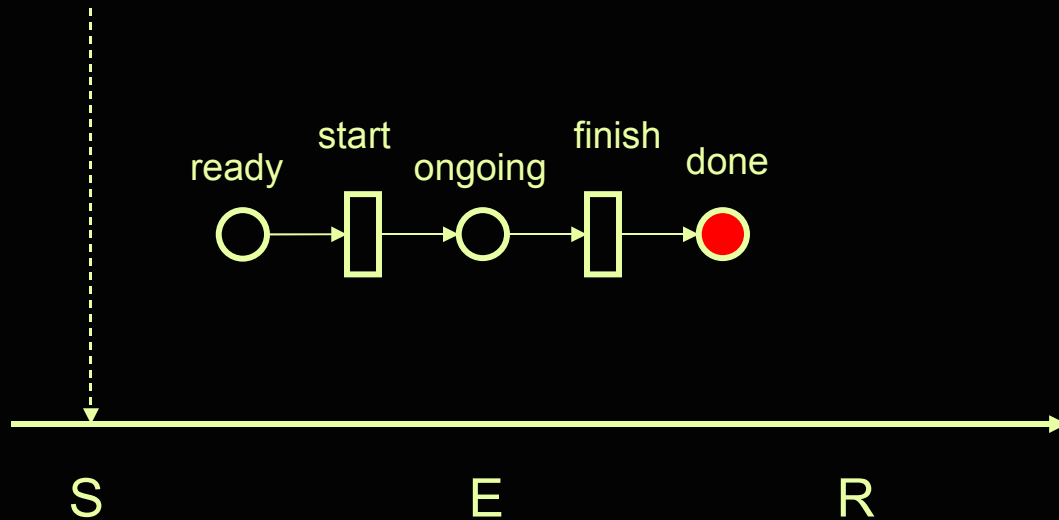
He is talking



He has talked

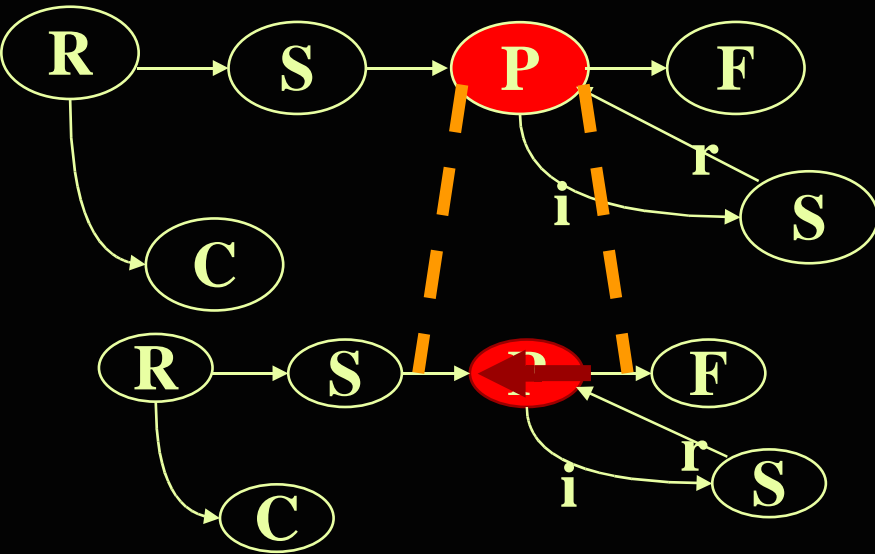


He will have talked

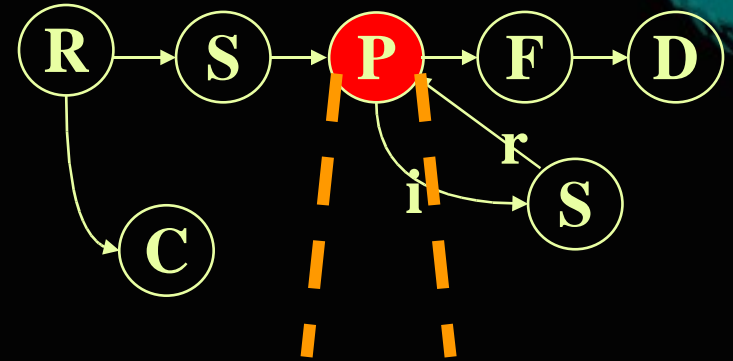


The Present Triumvirate

JAN RUNS



JAN IS RUNNING



JAN HAS BEEN RUNNING

