Workshop seminar 3

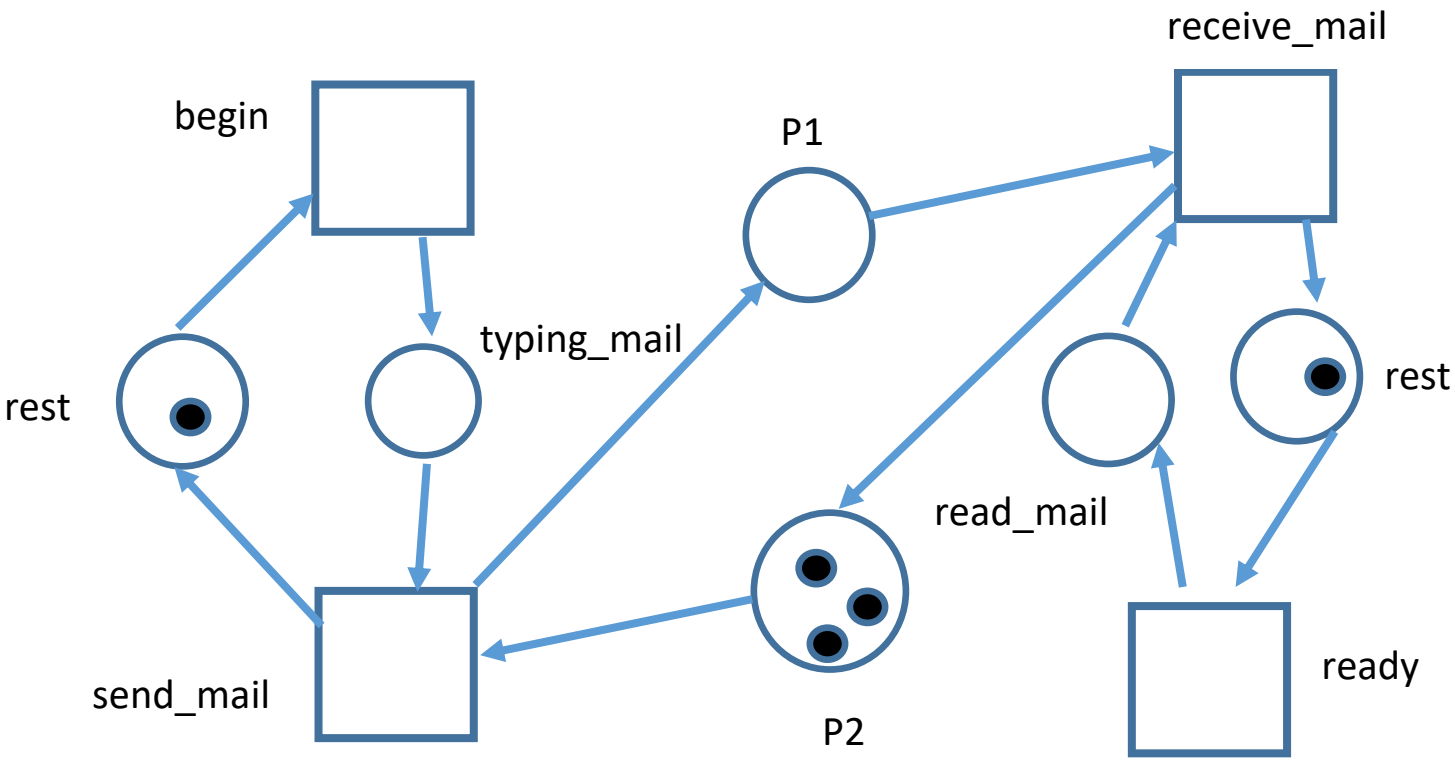
Comp201 Software Engineering

Petri Net Review

Q1. What are the conditions needed for a Petri net to be deterministic?

Q2 What are the conditions needed for a Petri net to model a finite state system?

Q3. In lecture's 9 and 10, slide 26, we had a petri net model for email sending/receiving.



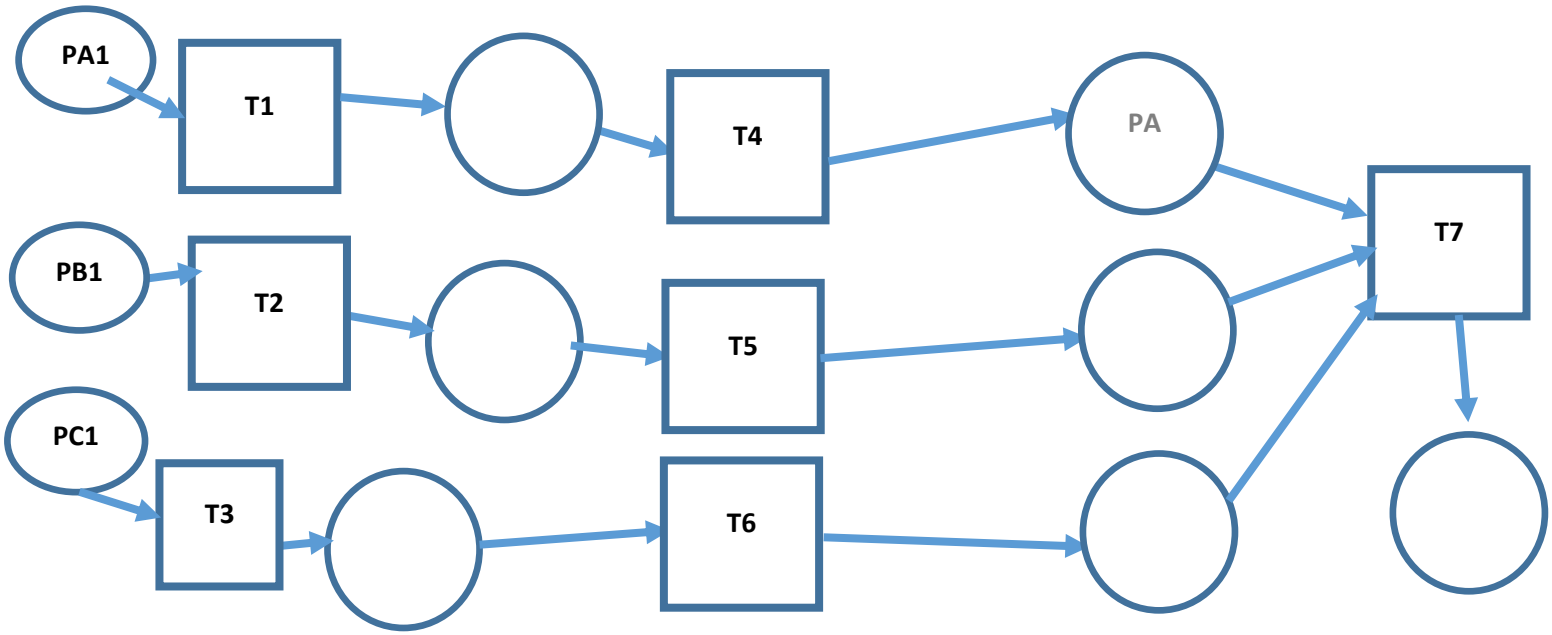
Here is a solution for dealing with the problem of a limited buffer size.

What do the tokens in P1 represent?

What do the tokens in P2 represent?

Q4 The next model is a supply chain and manufacturing example, for manufacturing a product out of 3 separate components A, B and C. What could the places, tokens and transitions represents.

What timing constraints would be useful?



How would be change the model so that 4 x components A as needed to make the product.

We might want to model with an alternate supplier for one of the components, how would be do this.

Now imagine the component supplier 2 is lot more expensive but has a guaranteed 1/day delivery, supplier but supplier 1 is half the price but has a possibly longer leader time.

How would could you extend the model to keep having enough of produce A but not pay too high a price.

Q5. What is the problem with these 2 petri nets with timing constraints?