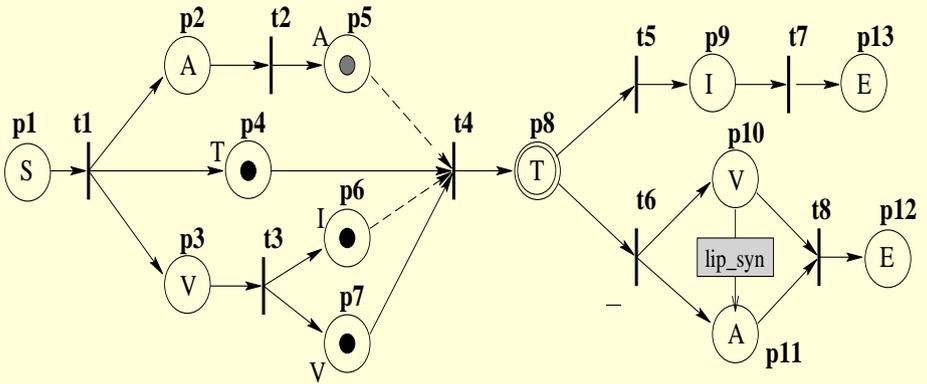


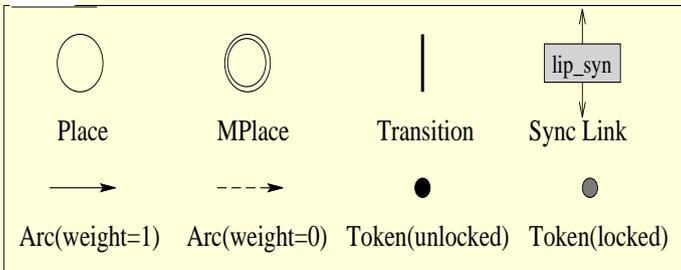
GOCPN

Definition: A GOCPN is a 10-tuple $G = \{P, T, A, AW, PO, PD, PS, POP, TF, SL\}$.

- $P = \{p_1, p_2, \dots, p_m\}$ is a finite set of places with $m \geq 0$.
- $T = \{t_1, t_2, \dots, t_n\}$ is a finite set of transitions with $n \geq 0$ and $P \cap T = \Phi$.
- $A = \{P \times T\} \cup \{P \times T\}$ is a mapping representing arcs between places and transitions.
- $AW: A \rightarrow B, B = \{0, 1\}$ is a weight function of arcs; It is used to determine the token flow and firing condition of the net.
- $PO: P \rightarrow \{C \times Q\}$ is a mapping of places to the content set C and QoP (Quality of Presentation) set Q .
- $PD: P \rightarrow D$ represents playout duration of the media object with D as the integer set.
- $PS: P \rightarrow S$ represents the spatial information of the media object.
- $POP: P \rightarrow Op$ defines media operations. $SL: \{P \times P\} \rightarrow I$ represents lip-sync link between two places. I is an integer set that represents maximum skew allowed between two media objects measured by discrete time units.
- $TF: T \rightarrow \{Atype, Etype\}$ differentiates transition types by its firing rules. For $Atype$ transition, its firing mode is automatic(A). For $Etype$ transition, its firing mode is event-driven(E).
- $SL: \{P \times P\} \rightarrow I$ represents lip-sync link between two places. I is an integer set representing maximum skew allowed between two media objects measured by discrete time.



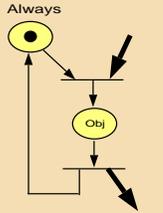
LEGEND



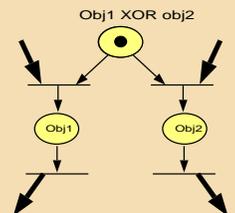
Keys

- | |
|----------|
| A: Audio |
| I: Image |
| T: Text |
| V: Video |
| S: Start |
| E: End |

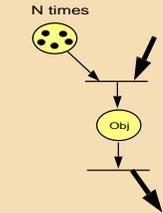
Some Access Control Operations



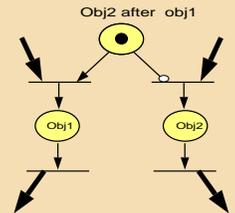
always allow access to Obj



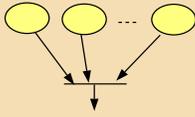
Allow access to one of Obj1 or Obj2



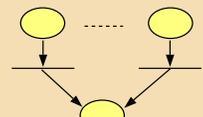
Allow access to Obj N times



Allow access to Obj2 after Obj1

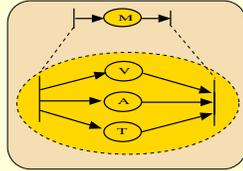


AND - Join



OR - Join

- R** Registration object
- M** Material displayed just before questions
- Q** Question set - one or more questions
- S** Object that processes score
- A** Answer set
- S** **E** Start and End

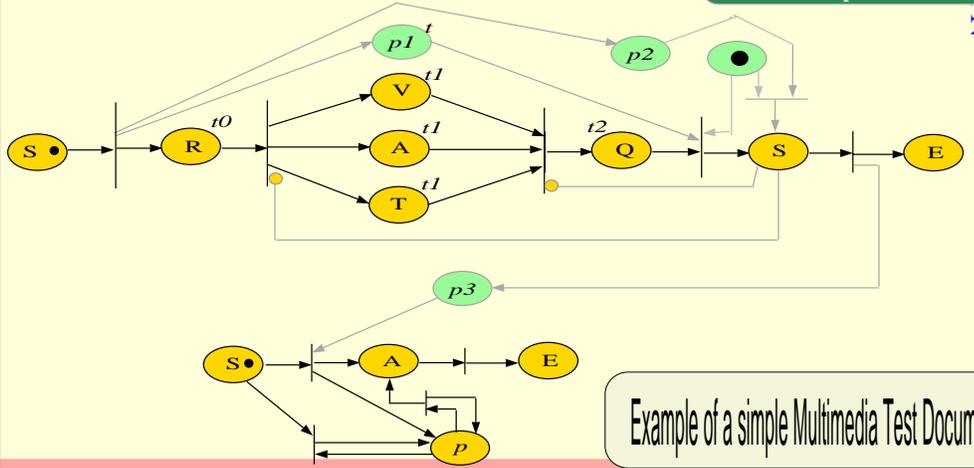


S can be accessed through a regular path or automatically t units after R is allowed accessed (XOR operation, relative time constraint and strong causal)

When S has a token M and Q are denied access. Completion of S produces the Score for the test

When the test document reaches the end (after S), the answers document can be viewed. Once the test is taken answer can be viewed any time in future.

Some Dependencies

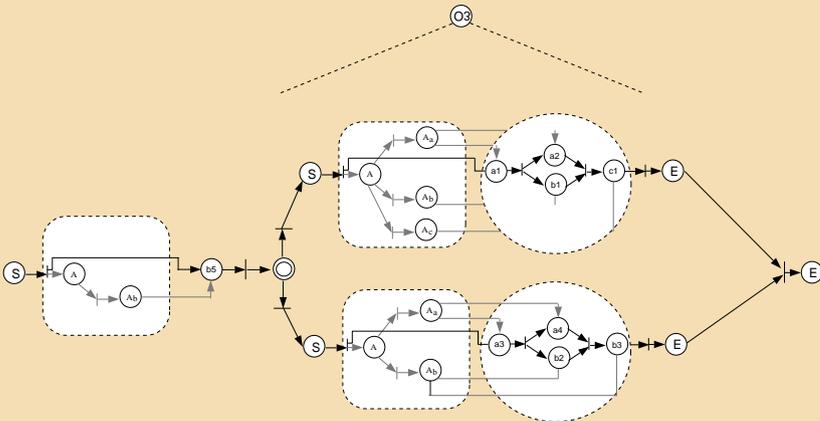
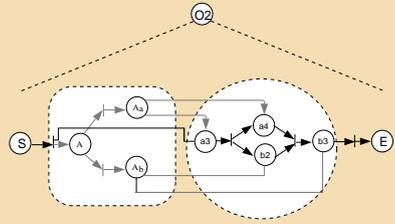
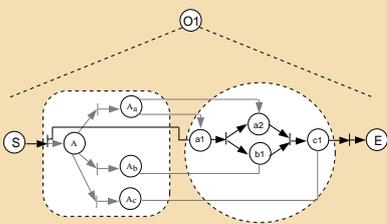
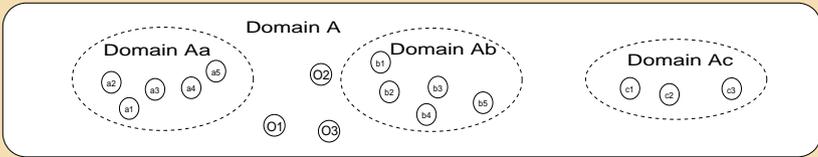


Example of a simple Multimedia Test Document

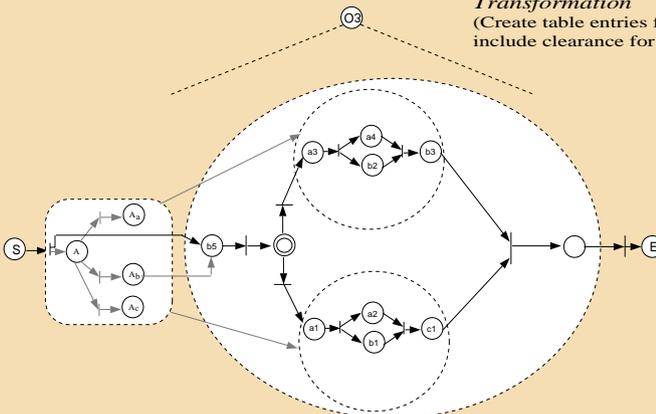
Example of Incremental composition

Composition of document O3. ai, bi, ci are basic multilevel objects

System with multiple domains



Transformation
(Create table entries for O3,
include clearance for new users)



GOCPN