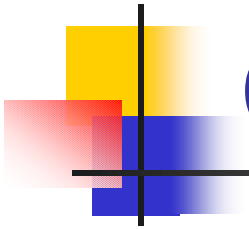
SMI Update

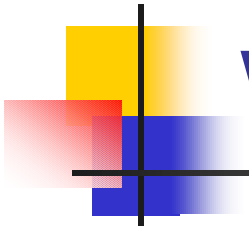
Mor Peleg

Samson Tu



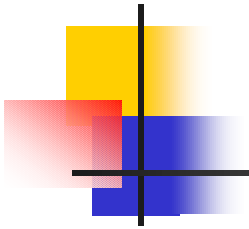
Outline

- Work done since November
- Work to be done in June
- Plans for 6 months extension



Work done since November

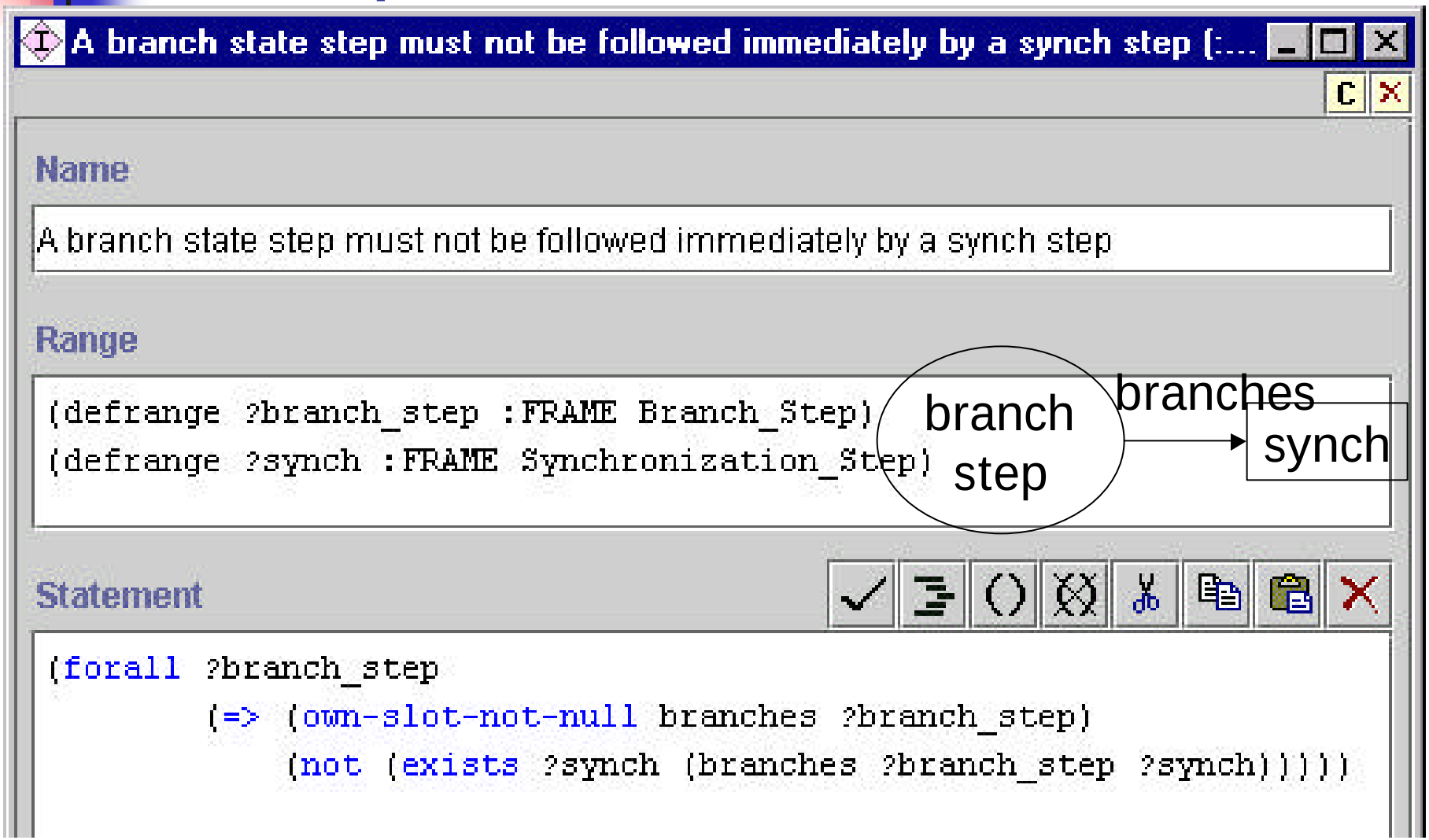
- Comparison study
- ACP studies with Vimla
- Validation tool
- HL7 work: standardizing process flow



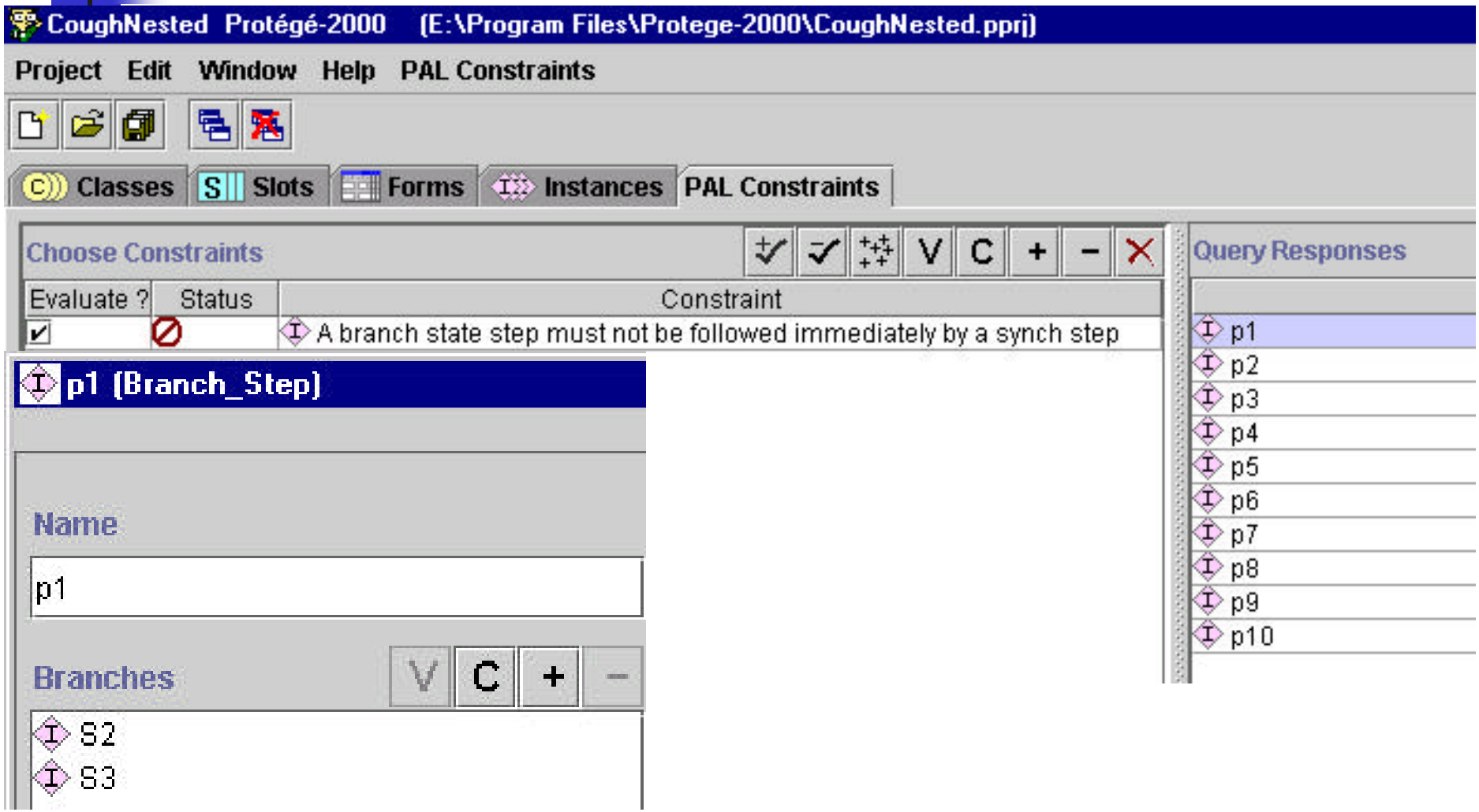
Integrity Constraints

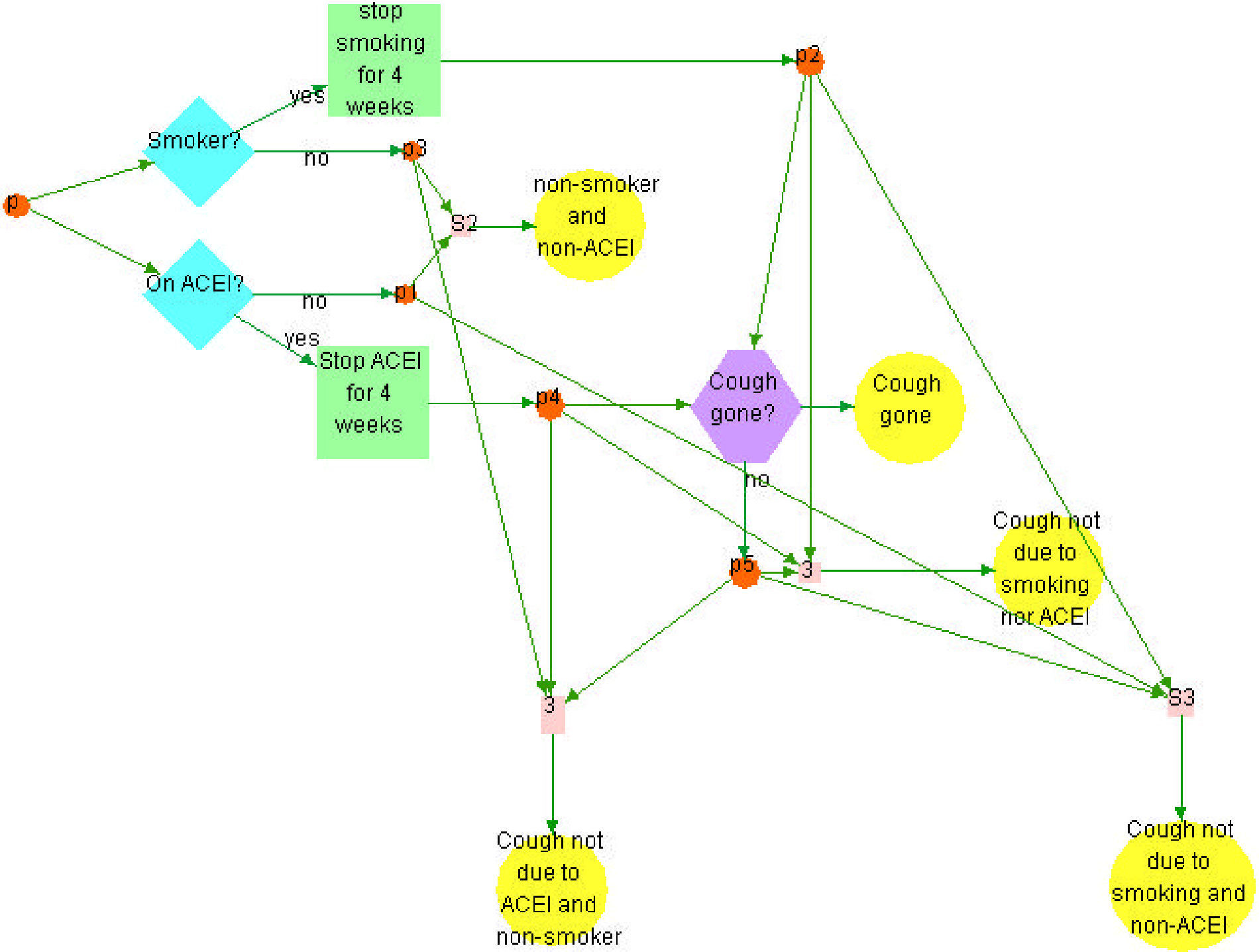
- **A decision step should link to =2 options**
- **A branch step should link to =2 branches**
- **A synchronization step should not immediately follow a branch step**
- **A guideline step must not connect to a step from a different algorithm**
- **A step must be part of an Algorithm**

Example PAL Constraint



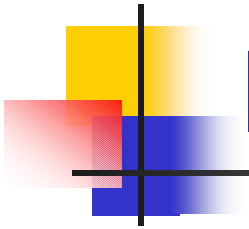
Validation Output




stop smoking for 4 weeks
yes
Smoker?
no
p3
p2
non-smoker and non-ACEI
S2
p
On ACEI?
no
p1
yes
Stop ACEI for 4 weeks
p4
Cough gone?
Cough gone
no
Cough not due to smoking nor ACEI
p5
3
3
S3
Cough not due to ACEI and non-smoker
Cough not due to smoking and non-ACEI

Validation Results

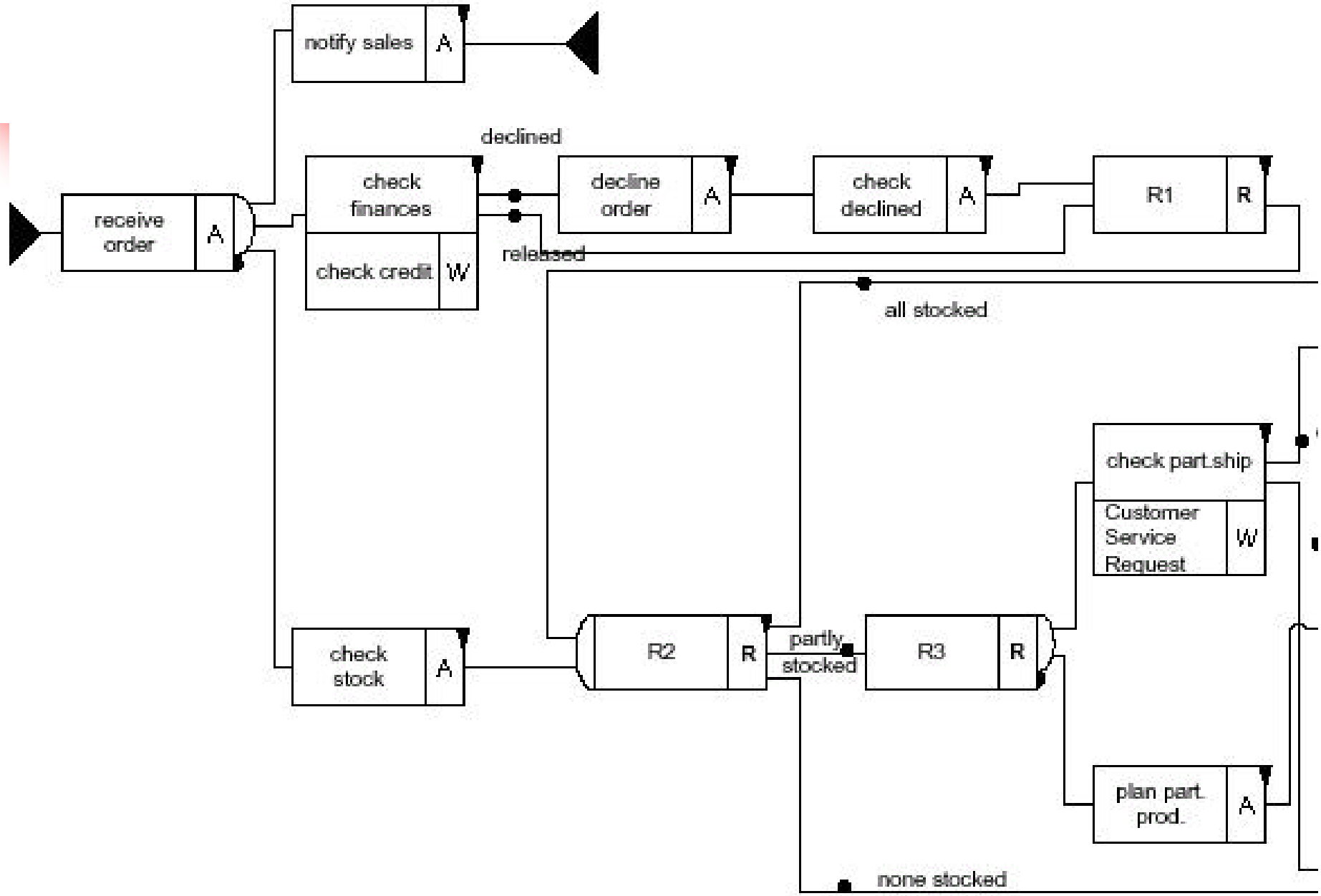
	e(C)	e(SA)
A decision step should link to =2 options	7	10
A branch step should link to =2 branches	0	0
A synchronization step should not immediately follow a branch step	10	0
A guideline step must not connect to a step from a different algorithm	0	0
A step must be part of an Algorithm	0	2



Process flow model

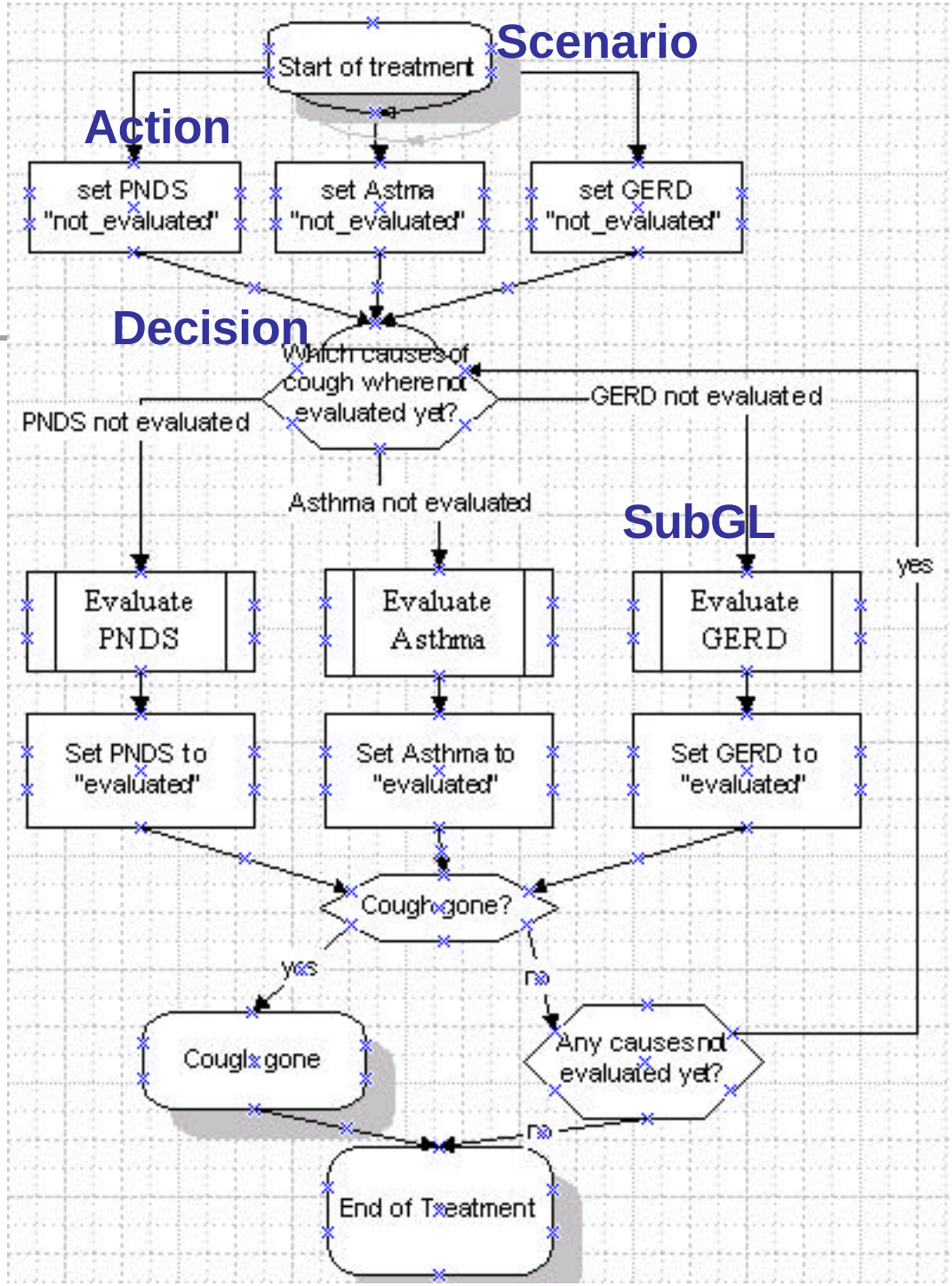
- Base on Workflow model
  - Model tested by WfMC
  - Experience of GUIDE which maps its guideline model to Petri Nets
- Mapping to Petri Nets
  - Mapping of basic model exists
  - Analysis methods that can draw conclusions about behavior and structure of pathways
  - Simulation

Sales Order Processing

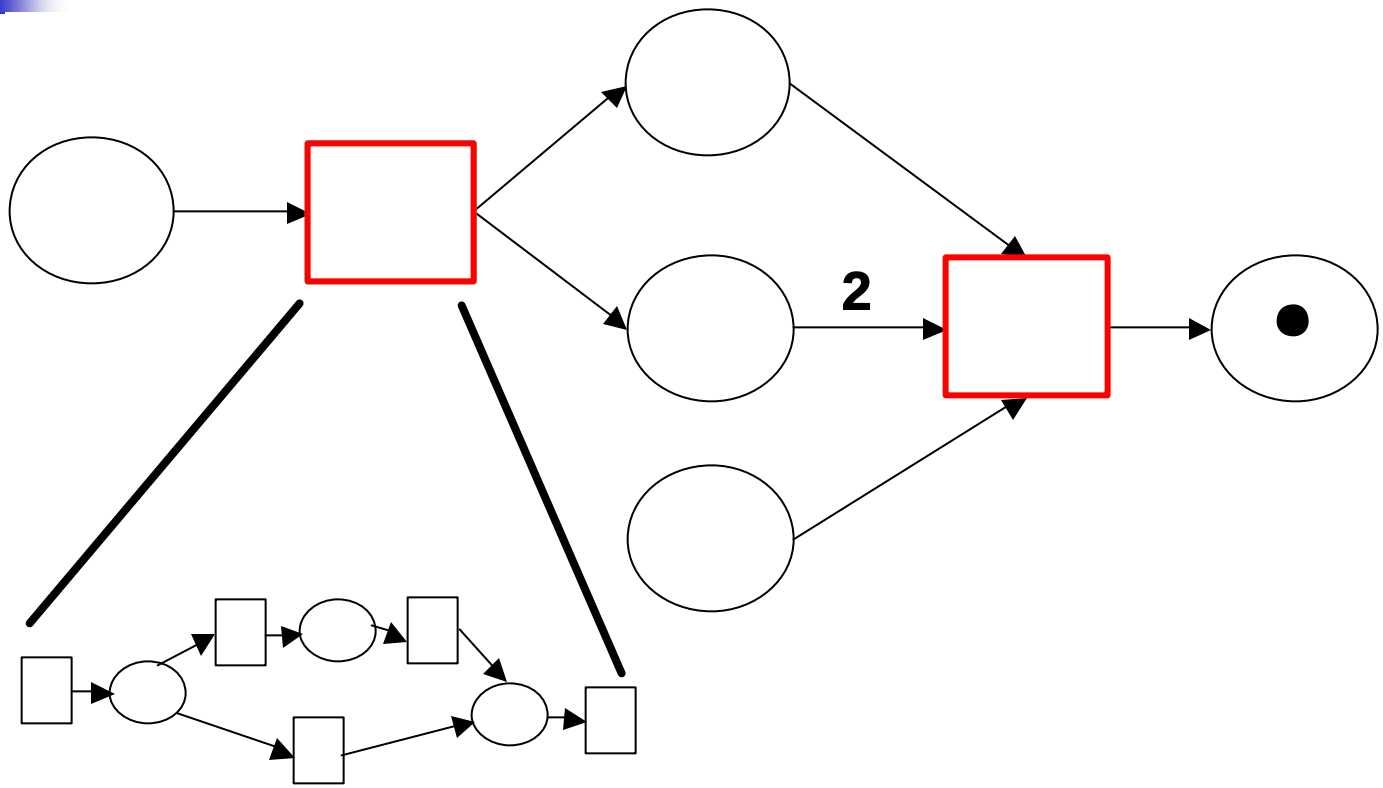


Standardizing Process Flow

- Activity
  - Regular
  - Router
  - Subflow
  - Loop



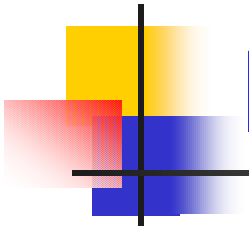
Petri Nets



In hierarchical Petri Nets, a transition can be expanded into a subnet

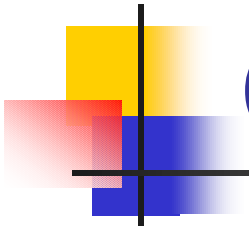
Work to be done in June

- Writing the InterMed Philosophy paper



Plans for 6 months extension

- A tool for converting guideline workflow diagrams into Petri Nets
- Guideline server



Guideline Server

- Collaborating with Yuval Shahar
  - URUZ tool for guideline mark-up and retrieval
  - Generalize to any guideline format
    - Work with GLIF XML Schema or DTD
    - Mark-up guideline
    - Store on server
    - Search according to InterMed classification axes
    - Import/Export from Protege