

Software Patents, Pseudo Code and UML

On how including UML in
a patent application can be
done right to increase
efficiency and patent
ability.

Education



Agriculture



Medicine



Industry



Pseu.do-n't

- Pseudo code is a developers tool
- Teams tend to develop their own flavors
- Lack of standardization makes training harder

```
TRAFFIC SIMULATOR pseudocode

For each iteration:
    For each vehicle
        Speed varies as a function of distance
        Is the vehicle < 3 car lengths away?
            Decrease speed to match that
        Is the vehicle > 3 car lengths from?
            Increase vehicle speed sufficiently
            When vehicle and next vehicle
                Are within 3 car lengths
            Is the vehicle = 3 car lengths from?
                Maintain current speed
        New spot = old spot + new speed
    Next vehicle
Next iteration
```

```
,phone
,age
,income
,do_not_call?
{payment_info //Interactive Structure
,credit_card/bank/online_vendor
,IF credit_card
    ,company
    ,number
    ,pin
    ,expiration
,IF bank
    ,routing
    ,account_number
,IF online_vendor
    ,user_id
    ,password
    ,vendor //Paypal, Dwolla, Amazon
{Customer
,(Non_Customer:Except do_not_call?)
support_plan
```

```
initialize passes to 0
initialize failures to 0
initialize car to 1
while car counter is less than or equal to 100
    input the next crash-test result
    if the car passed
        add 1 to passes
    else
        add 1 to failures
        add 1 to car counter
    print the number of passes
    print the number of failures
if 99 or more cars passed
    print "Passed safety inspections"
```

Create vs Consume Ratio

- It is relatively easy to see what a UML diagram is doing.
- It's harder to learn how to make one properly.
- Moves a burden of work from the examiners onto the patent applicants.

Initial Node

FIG.3a

Timer Node

1 Second

Action Node

Decision Node

Send Signal Action

Merge Node

Edge Node

Note

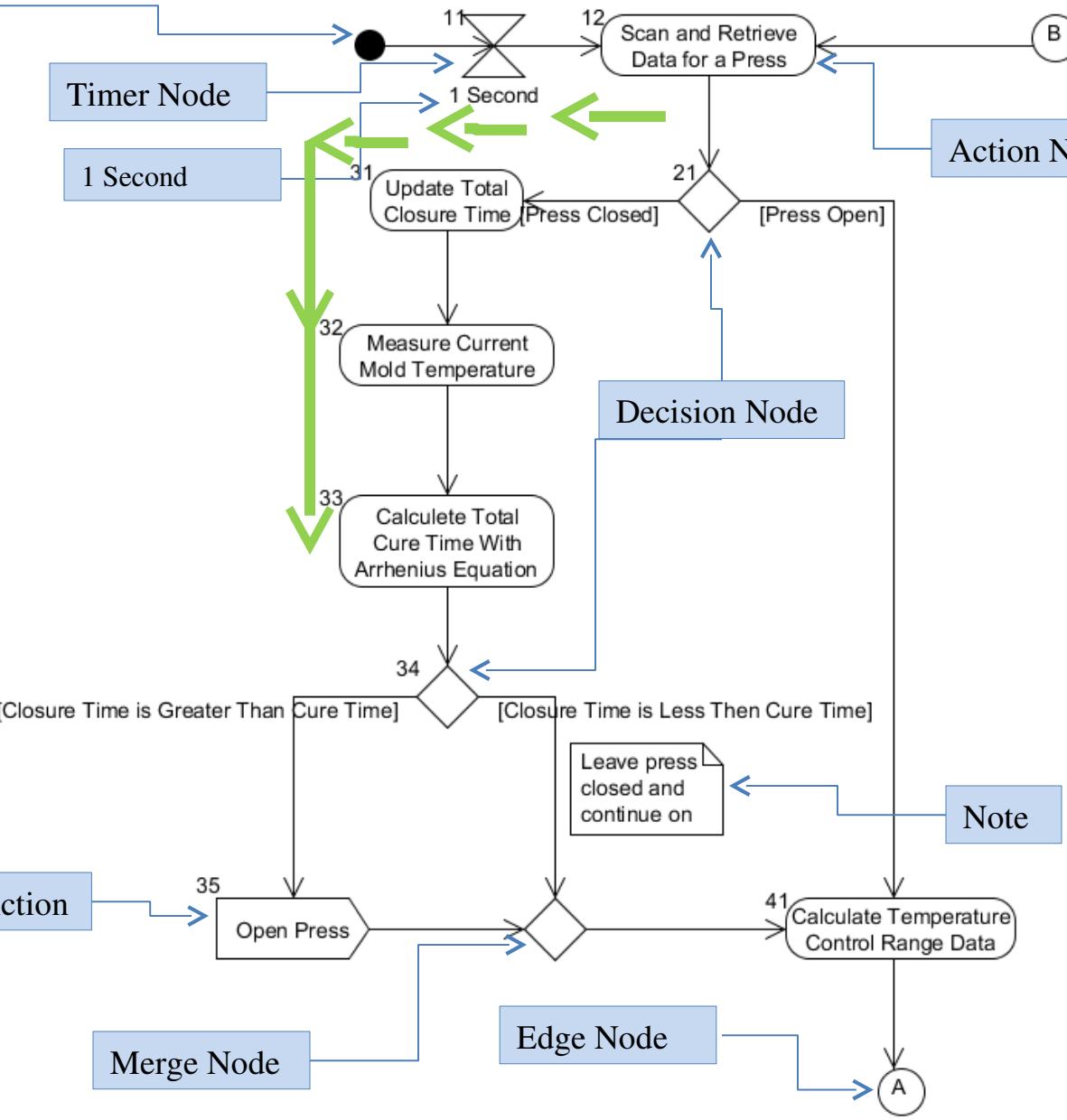
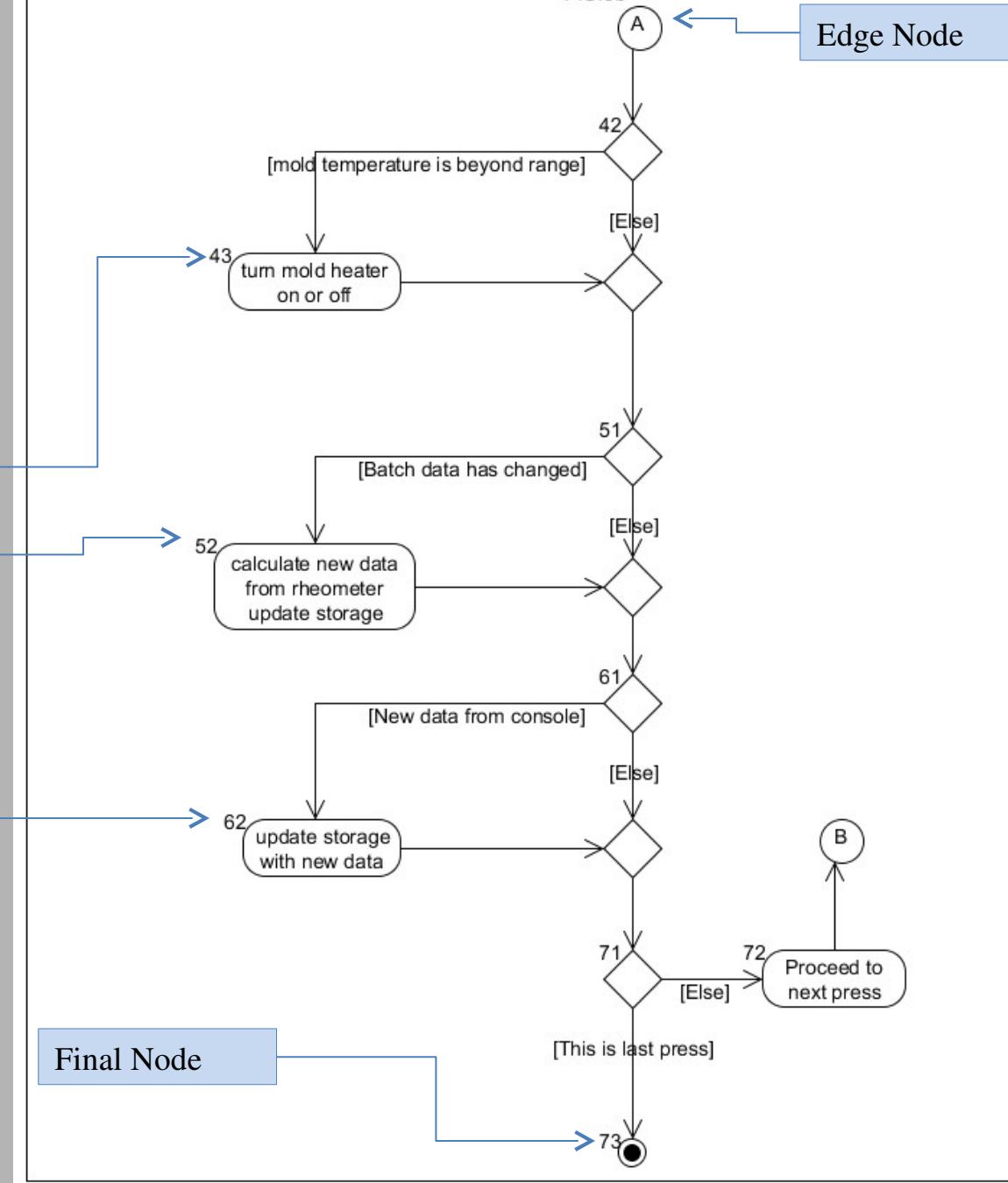


FIG.3b



Patent number labels to match with the “Detailed Description of Drawings” portion of a patent application.

Final Node

Free UML Learning

- www.tutorialspoint.com/uml/index.htm
- www.sparxsystems.com/uml-tutorial.html
- <http://edn.embarcadero.com/article/31863>

To name a few.

- <http://www.omg.org/spec/UML/2.4.1/> – For the, detailed, spec sheets.

Free UML diagram creators

- UMLet @ www.umlet.com – (My favorite)
- StarUML @ staruml.sourceforge.net
- Less feature-full open source and free creators are available.
- Commercial alternatives are plentiful

Special Thanks

- <http://www.omg.org> (for UML)
- All the free UML diagram creators and teachers.
- instacod.es (those hip pseudo-code pictures)
- flickr.com/photos/jamesclay/3509154015 For the classroom photo
- US Gov sites that had the other images under public domain