

From Text to Visual BPMN Process Models: Design and Evaluation



BPMN Sketch Miner

A web-based tool for rapidly sketching graphical Business Processes using BPMN.
<https://www.bpmn-sketch-miner.ai/>

The input is a textual process description based on a textual DSL

DSL Grammar

```

<text> ::= (<trace>'EOL')+EOF' ;
<trace> ::= <dots>(<line>'EOL'<dots>)+ ;
<dots> ::= [...] ;
<line> ::= <parallel>|<annotation>|<comment> ;
<comment> ::= '///' (any character until EOL)* ;
<annotation> ::= '//'<label> ;
<parallel> ::= <element>(''|<element>))* ;
<element> ::= [<role>] (<task>|<event>|<XOR label>) ;
<role> ::= <label>: ;
<XOR label> ::= <label>? ;
<task> ::= [<ttype> ]<label> ;
<event> ::= (' [<etype> ]<label> ') ;
<ttype> ::= ('send' | 'receive' | 'user' | 'manual' | 'service' |
'script' | 'rule' ) ;
<etype> ::= ('start' | 'finish' | 'timer' | 'send' | 'receive' | 'publish' |
'notify' | 'error' | 'escalate' | 'terminate' ) ;
<label> ::= any valid BPMN element label
  
```

Useful examples and tutorials

Layout orientation (horizontal/vertical)

Zooming facilities

Share model as a link

BPMN Sketch Miner

Sketch Tutorial Examples Help Feedback

Layout: Horizontal Vertical Zoom: 1:1 Fit Share: Link Export: SVG PNG BPMN

Junior: (receive claim)
Enter the claim
Do a basic check
(send rejection notification)

...
Do a basic check
Mark claim as eligible
Senior: Perform disability assessment
Determine benefit entitlement
(send outcome to customer)
Register the entitlement

...
Senior: Perform disability assessment
Require a medical report
Junior: (send authorization request)
(receive authorization)
(send medical report request)
(receive medical report)
Senior: Review medical report
Determine benefit entitlement

...
Register the entitlement
Finance: Trigger first entitlement
Schedule monthly payments
(send payment)
(send payment)

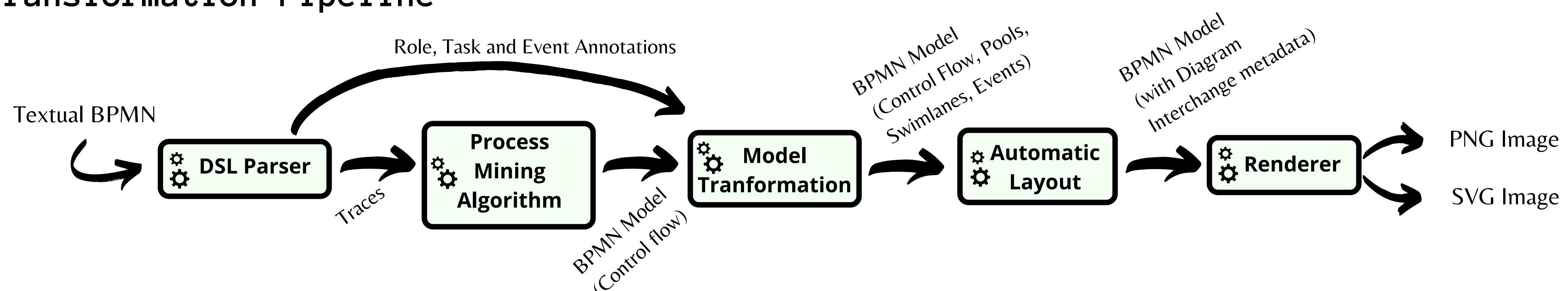
...
(send payment)
Senior: Review the benefit
(send termination notification)

...
Senior: Review the benefit
Do a simple check
Determine benefit entitlement

Live graphical output
(can be exported as: svg, png, bpmn)

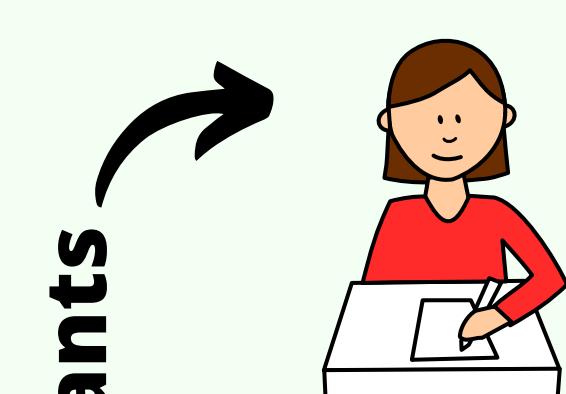
SCAN ME

Model Generation and Transformation Pipeline



BPMN Sketch Miner Evaluation

BPMN Learners



74% managed to finish the modelling task in less than 1h30.

An average of correctness of 87%.

They all agree with the fact that the generated visual model was helpful for them to understand the flow.

BPMN Users in industry

21

The majority agrees they can type faster than they can visually model BPMN diagrams

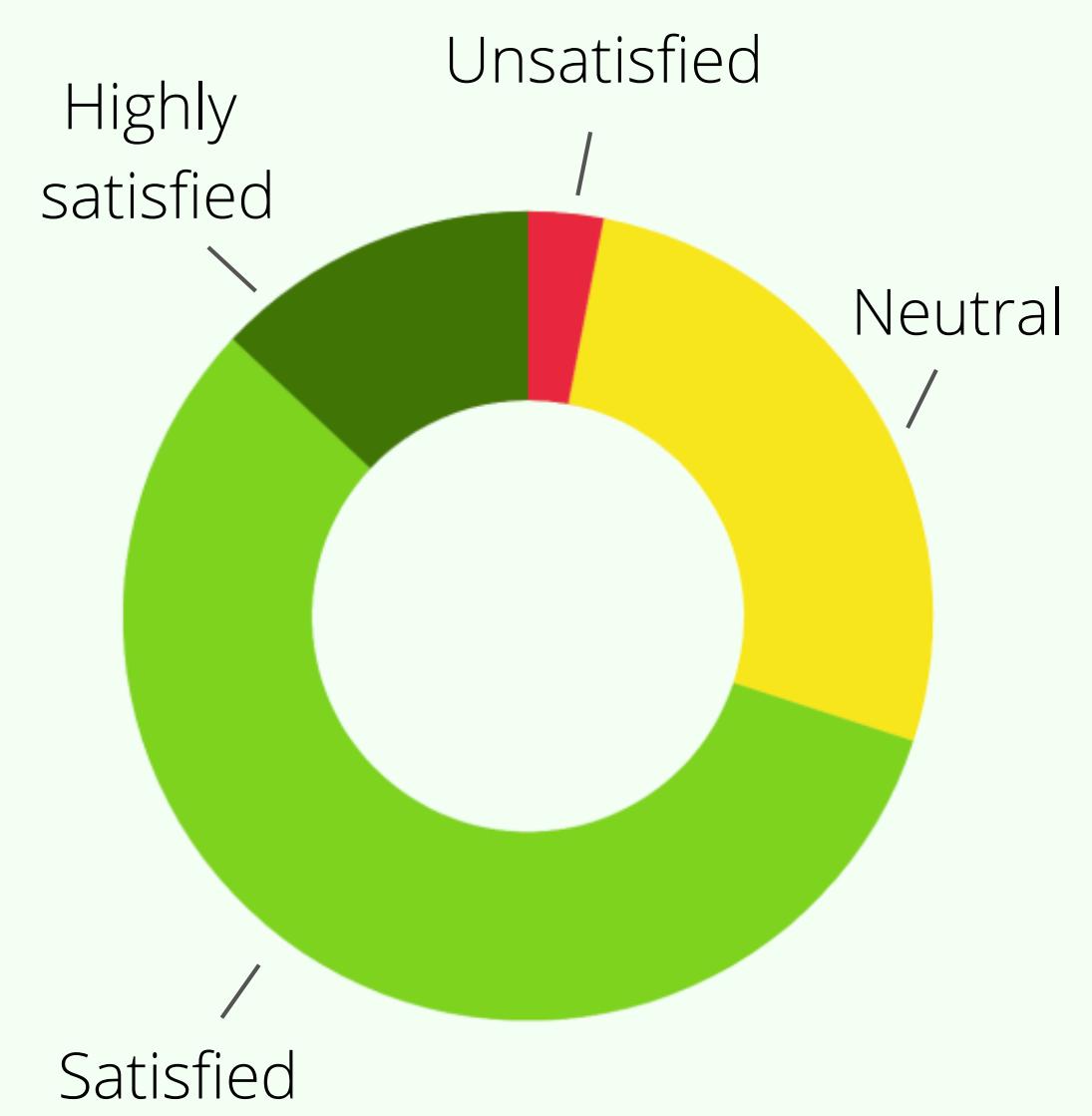
9

All agree with the learnability both of the DSL and the tool.

5

56% found the DSL expressiveness sufficient for modelling their processes.

Users Satisfaction



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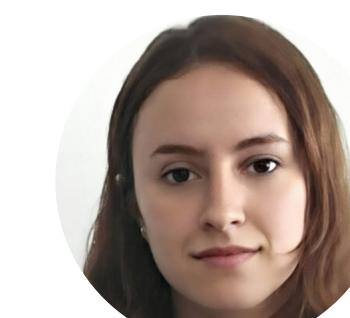
Ana Ivanchikj

ana.ivanchikj@usi.ch



Souhaila Serbout

souhaila.serbout@usi.ch



Cesare Pautasso

c.pautasso@ieee.org

