Contents

1 JANE

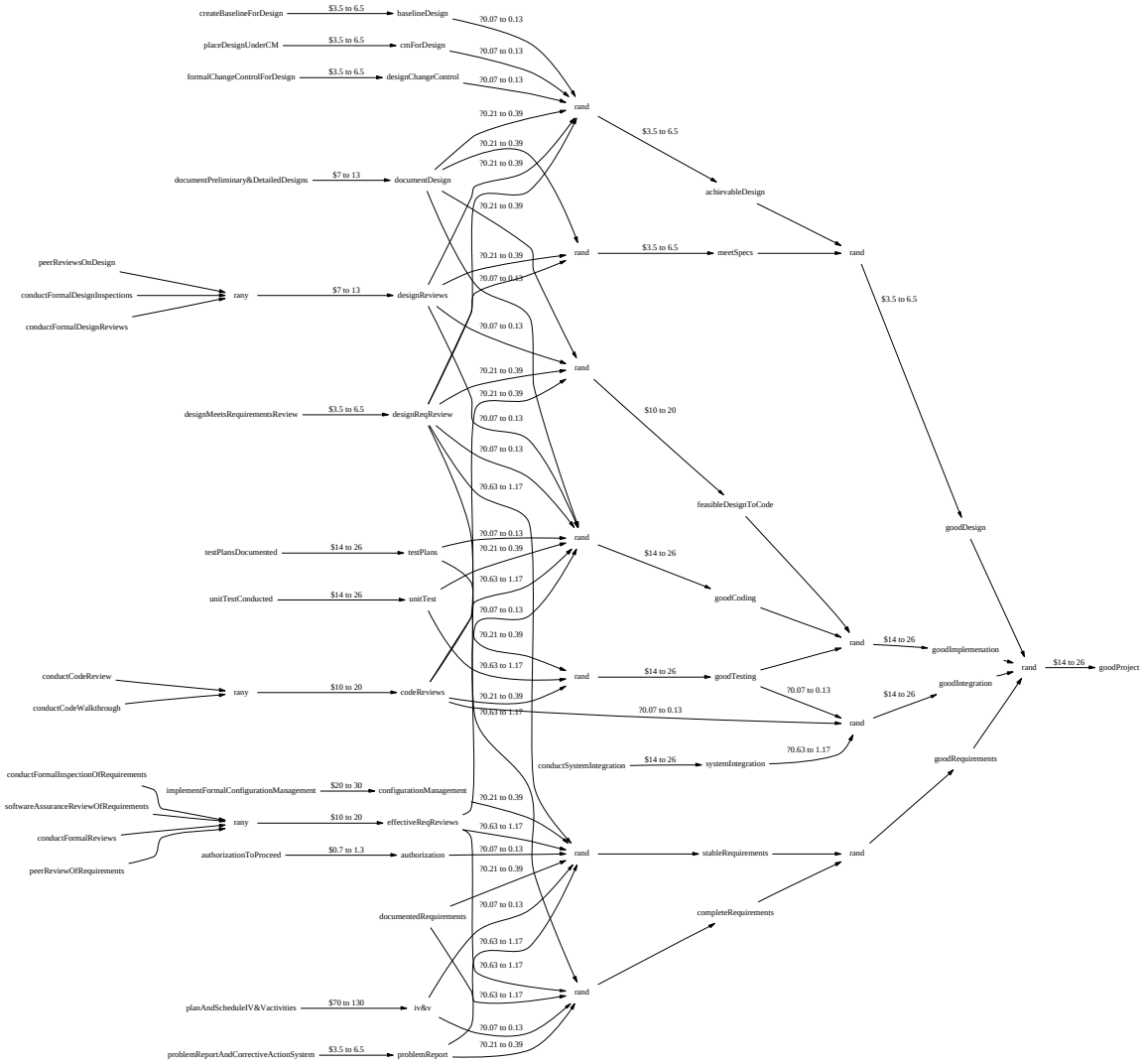
1.1 Domain Rules

```
jim says cost=100.
'iv&v' if 'planAndScheduleIV&Vactivities'.

jim says cost=0.
stableRequirements if authorization @0.1
                      rand effectiveReqReviews @0.9
                      rand problemReport @0.9
                      rand configurationManagement@0.3
                      rand 'iv&v'@0.1
                      rand documentedRequirements @0.3
                      rand designReqReview @0.9.

jim says cost=0.
completeRequirements if effectiveReqReviews @0.9
                         rand 'iv&v'@0.1
                         rand documentedRequirements @0.9
                         rand problemReport  @ 0.3
                         rand designReqReview @0.9.

goodRequirements if stableRequirements
                    rand completeRequirements.

jim says cost = 5.
designReqReview if designMeetsRequirementsReview.

...
```

1.2 Combination Rules

operator		X_{cost}	$X_{chances}$
$X =$	$or(Y)$ $ror(Y)$	$first(Y).cost$	$first(Y).chances$
$X =$	$and(Y)$ $rand(Y)$	$\sum_{i=1}^{\|Y\|} cost(Y_i)$	$\prod_{i=1}^{\|Y\|} chances(Y_i)$
$X =$	$rors(Y)$ $ors(Y)$ $rany(Y)$ $any(Y)$	$Z \subseteq Y$ $\sum_{i=1}^{\|Z\|} cost(Z_i)$	$Z \subseteq Y$ $\sum_{i=1}^{\|Z\|} chances(Z_i)$
$X =$	$no(Y)$	$\sum(allY.cost)$	$1 - \sum(allY.chances)$

2 Inside the KB



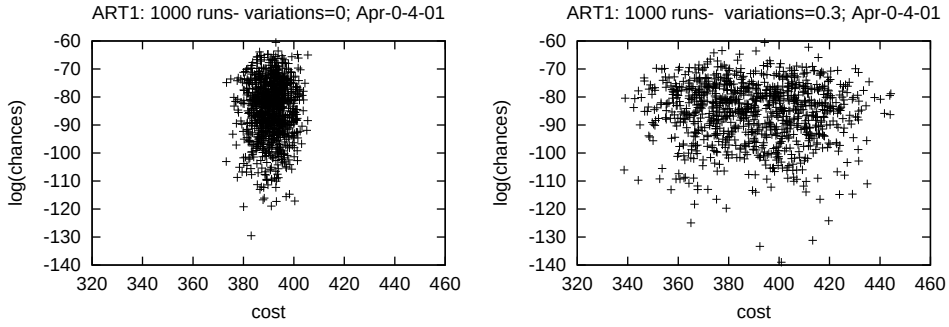
Each edge has cost 0 and chances 1 unless otherwise marked. Marks: $= cost; ?= chances;

3 CHEETAH

3.1 One run

```
data(-1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,-1,1,1,1,1,1,1,1,1,1,1
    ,-1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1
    ,1.0915,1,17.846,1,5.4965,1,29.803,1,78.112,1,0,1,0
    ,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0
    ,0,1,3.7622,1,12.7972,1,9.283,1,4.9655,1,4.9034,1
    ,4.2182,1,4.2935,1,0,0,0,0,4.3097,1,0,0,0,0,0,0,0
    ,0,0,0,5.6543,1,13.118,1,14.942,1,0,0,0,0,0,0,0,0
    ,19.4048,1,21.5468,1,21.0644,1,0,0,0,0,0,0,25.0856
    ,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,23.834,1,21.8156
    ,1,18.6344,1,0,0,0,0,0,0,17.1632,1,sum,lohi).
..
```

3.2 1000 runs



name	cost	log(Chances)	N
hihi	> 392.034	> -86.3225	285
lohi	< 392.034	> -86.3225	200
hilo	> 392.034	< -86.3225	297
lolo	< 392.034	< -86.3225	217

```
  score :    1
what if : no change?
   hihi :   29% ~~~~~~~
   lohi :   30% ~~~~~~~~
   hilo :   20% ~~~~~
   lolo :   22% ~~~~~~
```

4 TARZAN

4.1 Business Decisions, Changes=2

```
  score : 1.20755
what if : [peerReviewOfRequirements=2, conductCodeWalkthrough=1]?
   hihi :   20% ~~~~~
   lohi :   22% ~~~~~~
   hilo :   29% ~~~~~~~
   lolo :   29% ~~~~~~~

  score : 1.18714
what if : [conductFormalReviews=2, conductCodeWalkthrough=1]?
   hihi :   24% ~~~~~~
   lohi :   21% ~~~~~
   hilo :   24% ~~~~~~
   lolo :   30% ~~~~~~~~

  score : 1.16573
what if : [peerReviewOfRequirements=2, conductFormalReviews=2]?
   hihi :   21% ~~~~~
   lohi :   25% ~~~~~~
   hilo :   26% ~~~~~~~
   lolo :   28% ~~~~~~~
```

4.2 Cost Decisions, Changes=1

```
  score : 1.29559
what if : [[iv&v@76]Cost=1]?
   hihi :    3% ~
   lohi :   55% ~~~~~~~~~~~~~~
   hilo :    3% ~
   lolo :   40% ~~~~~~~~~~

  score : 1.10975
what if : [[goodIntegration@147]Cost=1]?
   hihi :   23% ~~~~~~
   lohi :   30% ~~~~~~~~
   hilo :   20% ~~~~~
   lolo :   27% ~~~~~~~
```

4.3 Cost Decisions, Changes=2

```
  score : 1.37102
what if : [[iv&v@76]Cost=1, [goodIntegration@147]Cost=1]?
   hihi :    3% ~
   lohi :   52% ~~~~~~~~~~~~~
   hilo :    0%
   lolo :   45% ~~~~~~~~~~~
```