

PRAGMA31 Student Symposium Lightning Talk

# **Managing Reputation of Crowdsourcing Systems**

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# What is Crowdsourcing Systems?

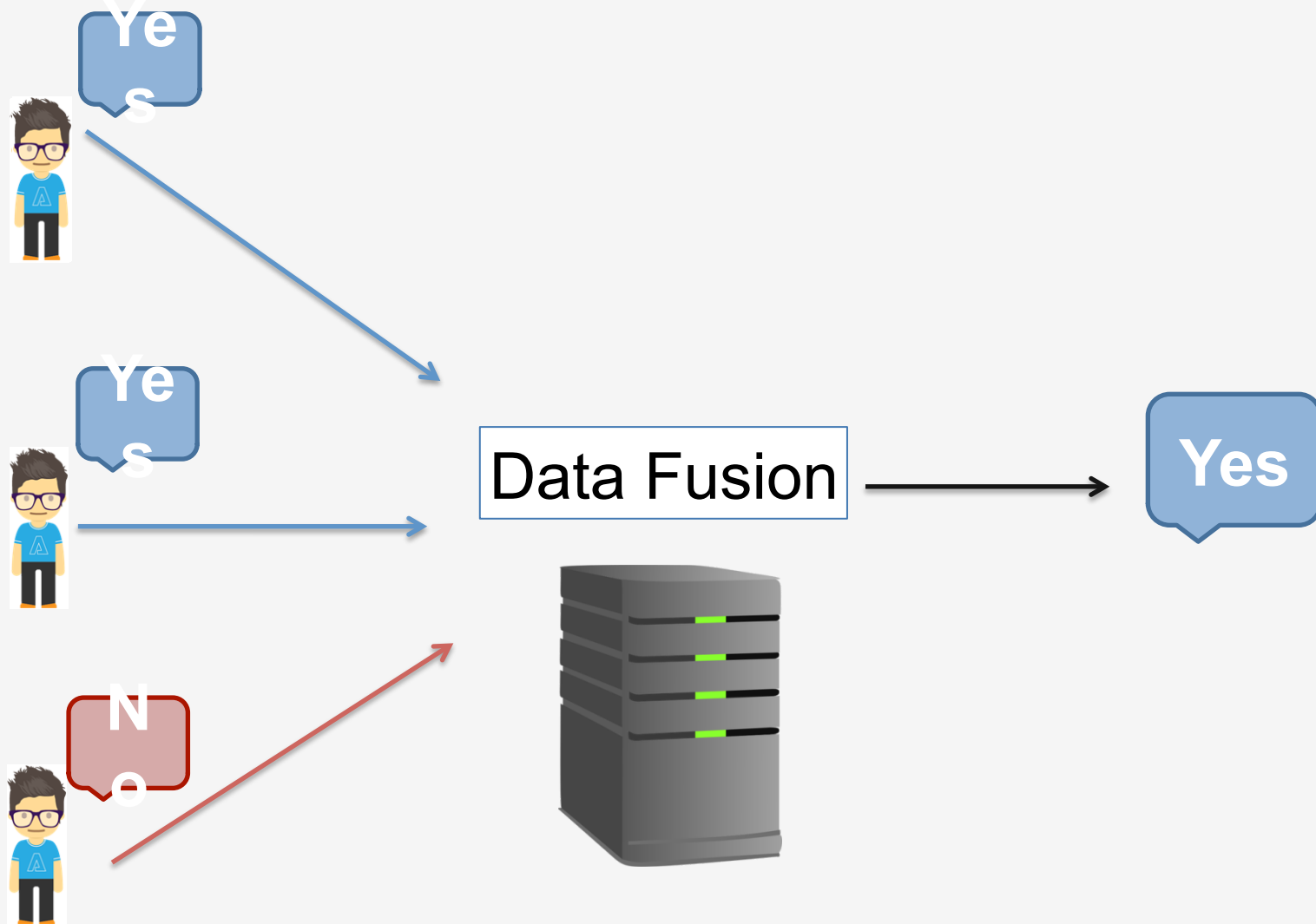
- Crowdsourcing systems receive data from users.
- Data from user will generate into result that systems wanted.



WIKIPEDIA  
*The Free Encyclopedia*



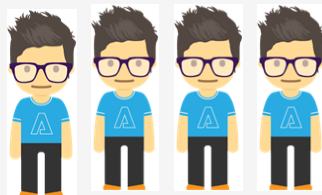
# Crowdsourcing Systems



# Problems of Crowdsourcing Systems

## “Reputation of Users”

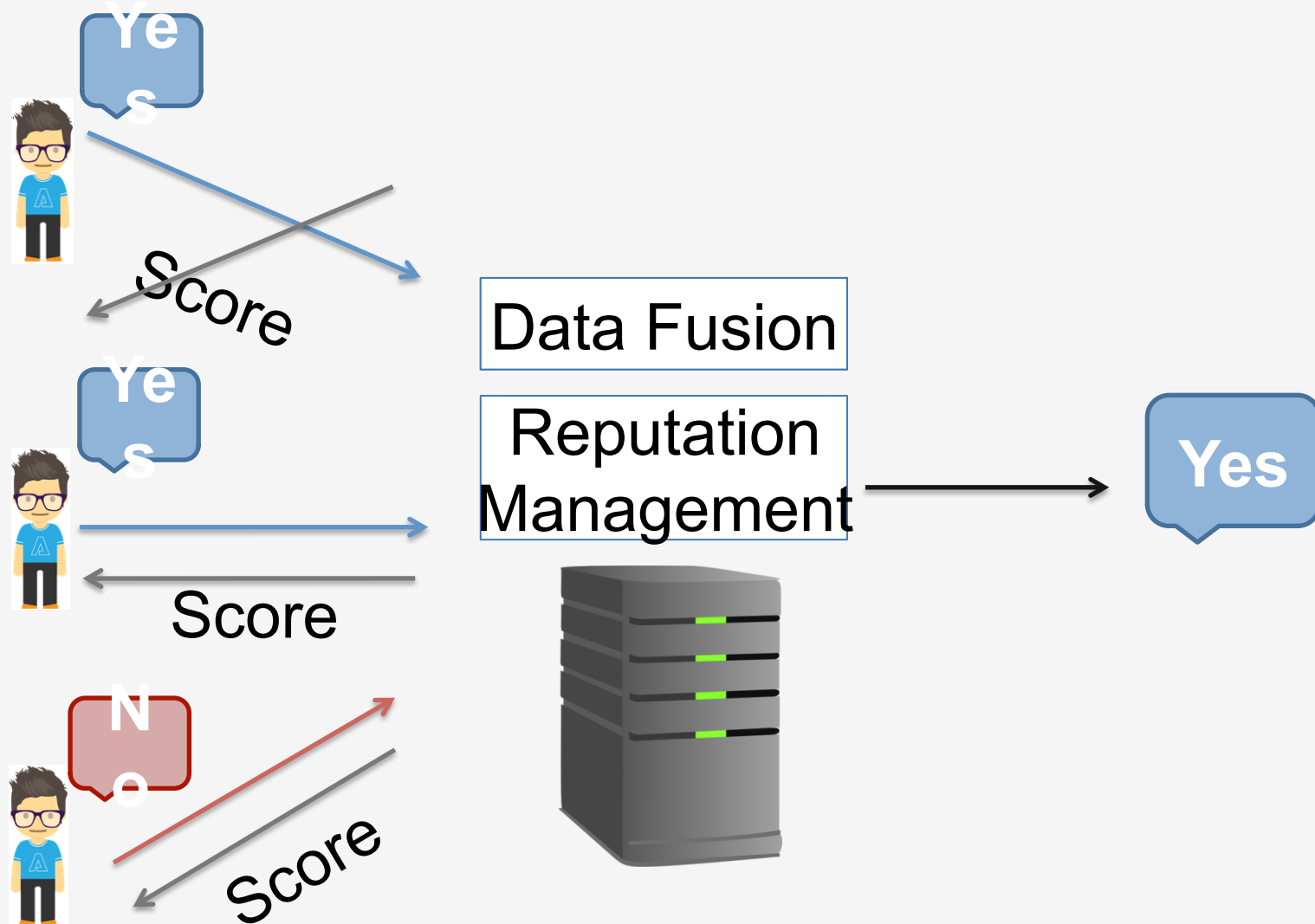
Yes



No



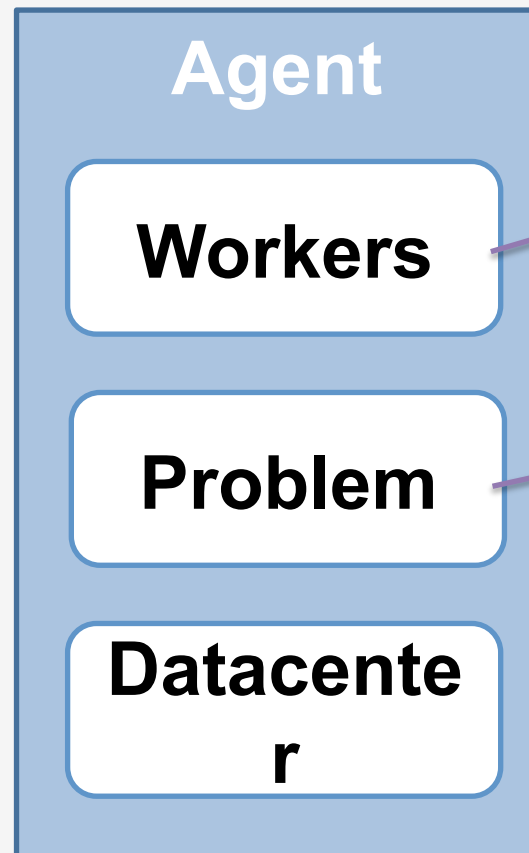
# Reputation Management



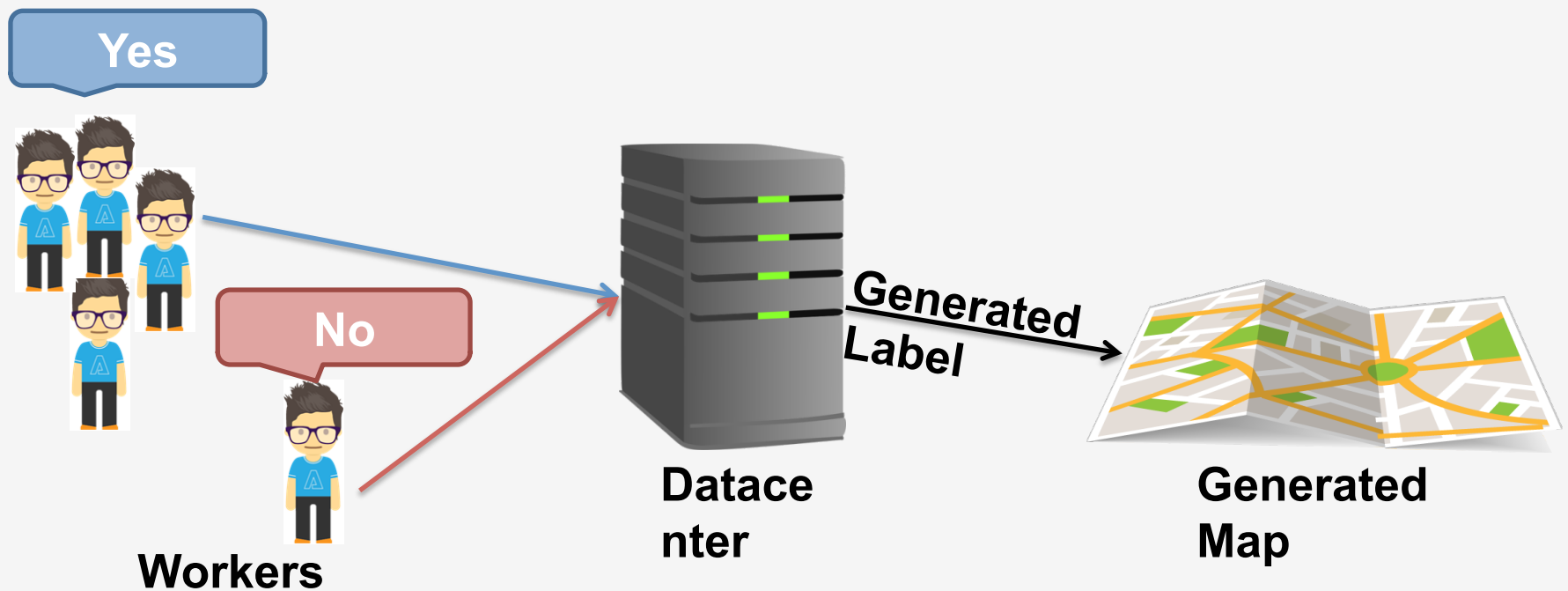




# Agent-based Simulation

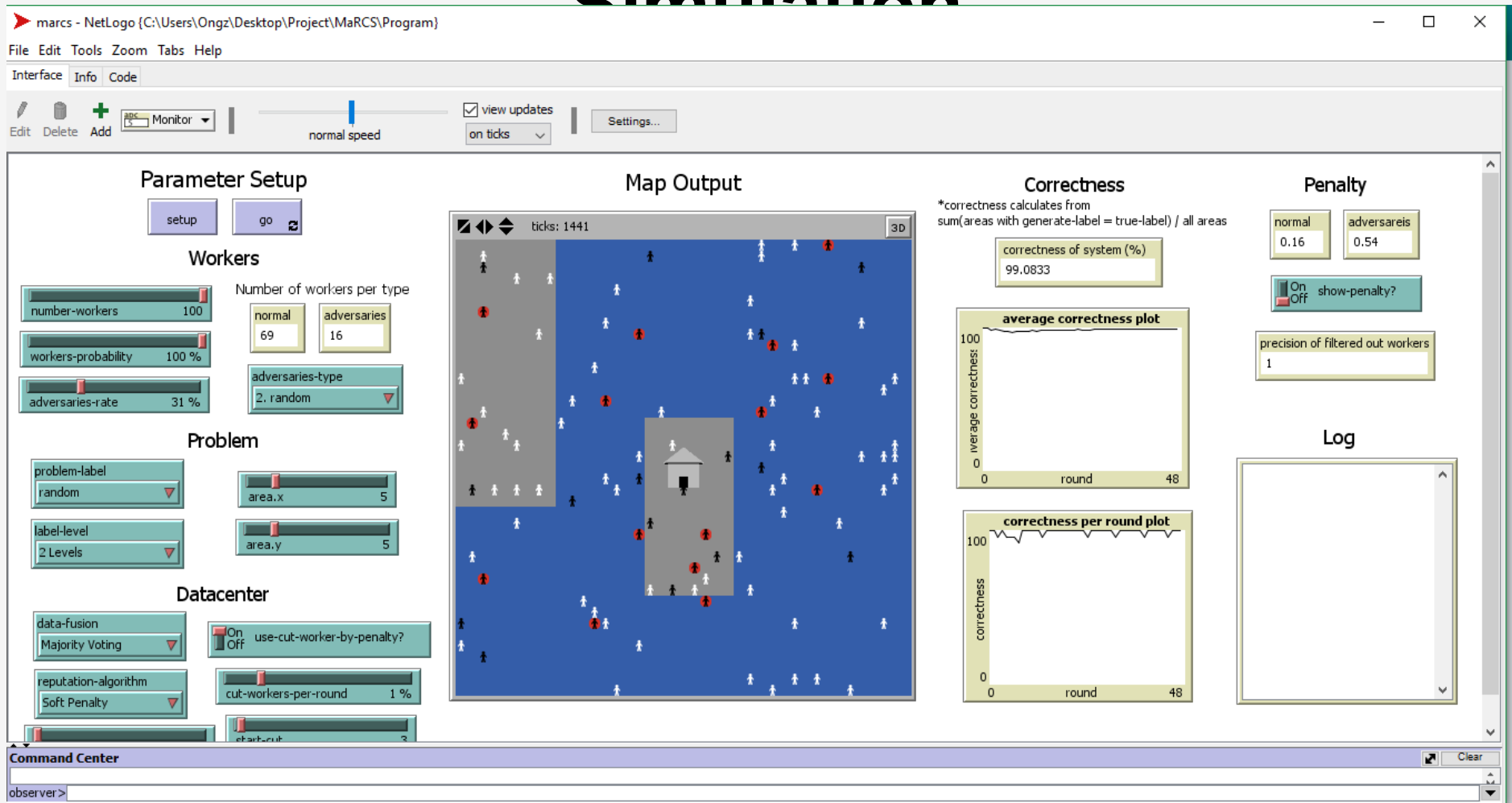


# Agent-based Simulation





# Implementation of Agent-based Simulation



# Implementation of Agent-based (Website Demo) Simulation

MaRCS

Setting Parameter

Simulation Result

Reporter Setting

Number of Reporter

0

100

0

10

20

30

40

50

60

70

80

90

100

Percent of Adversarial Reporter

0%

30%

100%

0

10

20

30

40

50

60

70

80

90

100

Adversarial Reporter Types

☐ Fixed Answer: Normal

☐ Fixed Answer: Flood

☐ Random Answer (Same Chance)

☒ Wrong Answer

Number of Flood Area Report

0

2

30

0

3

6

9

12

15

18

21

24

27

30

Area Condition and Setting

Level of Area

☒ 2 Level

☐ 3 Level

Area Type

☐ Static Area : Always Normal

☐ Static Area : Always Flood

☒ Random Area (Same Chance)

☐ Random Area (Seed)

☐ Area from Real Dataset

Grid of Area

Row

Column

5

5

System Management Setting

Data Fusion

☒ Majority Voting

☐ EM Algorithm

Reputaion Management

☒ None

☐ Simple Penalty

☐ Soft Penalty

☐ Hard Penalty

☒ Filter out reporters in each Round

Number of Filtered reporters Per Round

0%

1%

5%

0

1

2

3

4

5

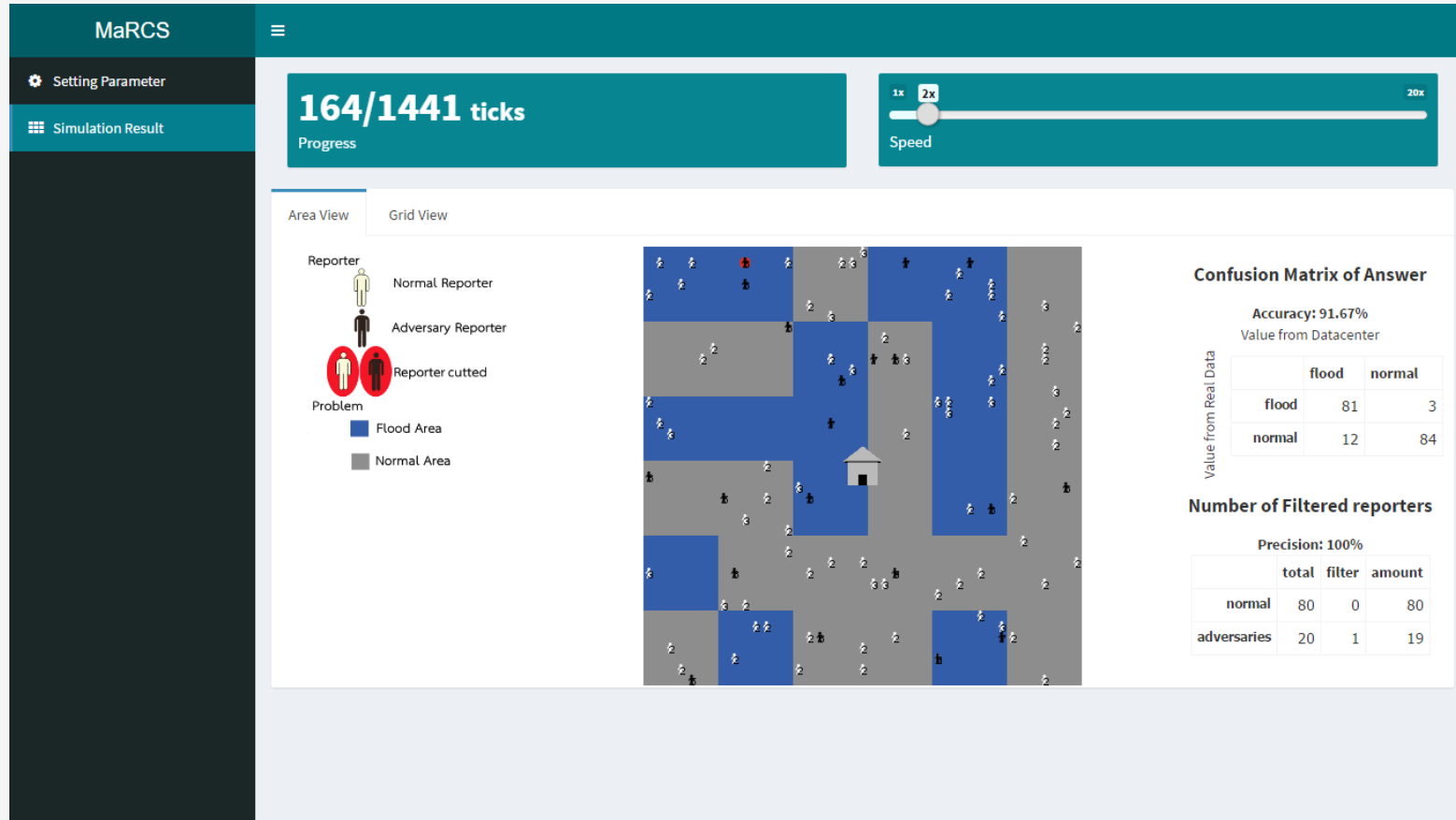
☒ Show Penalty?

Reset Setting

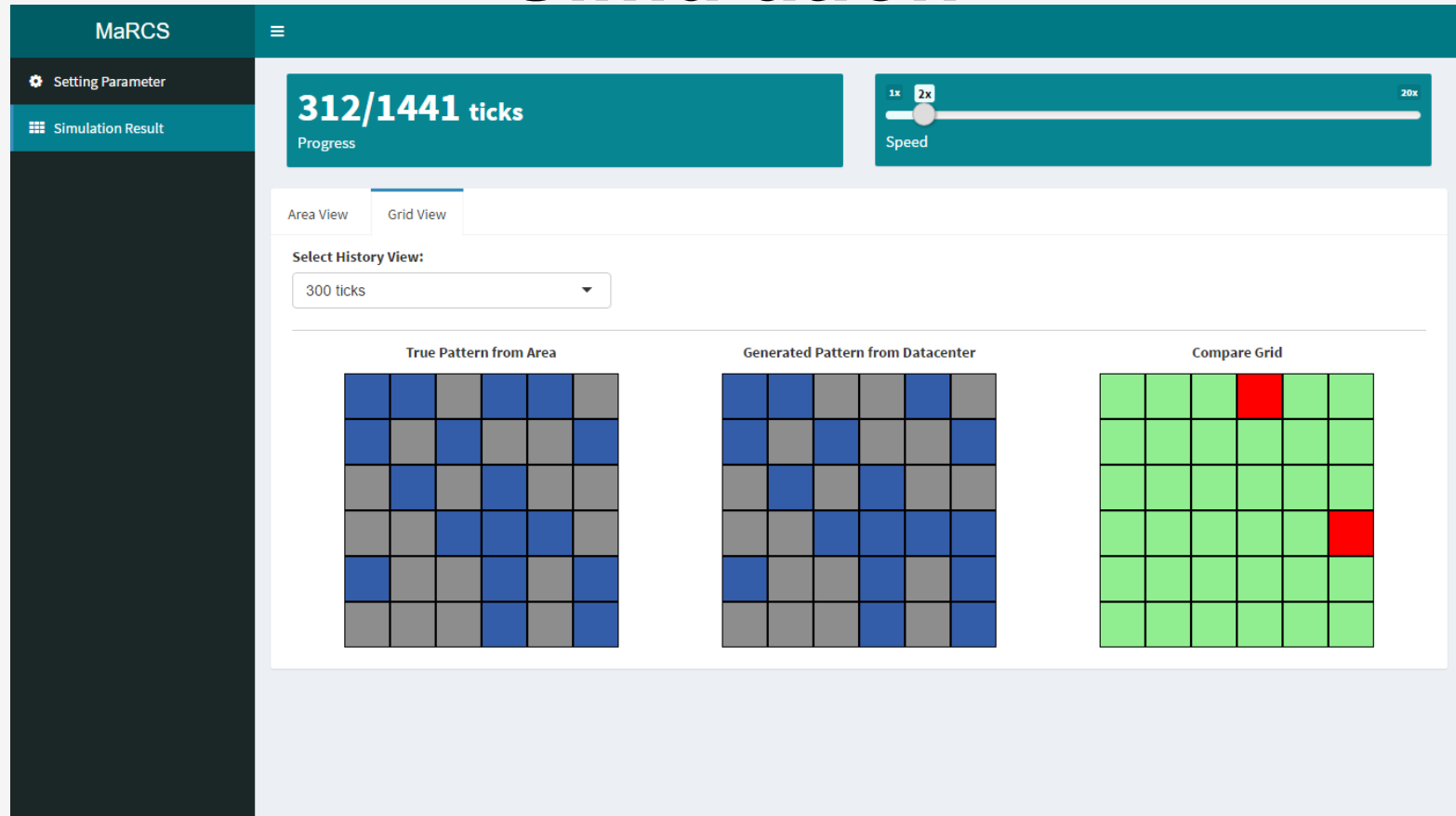
Start Simulation

☒ View Update?

# Implementation of Agent-based Simulation



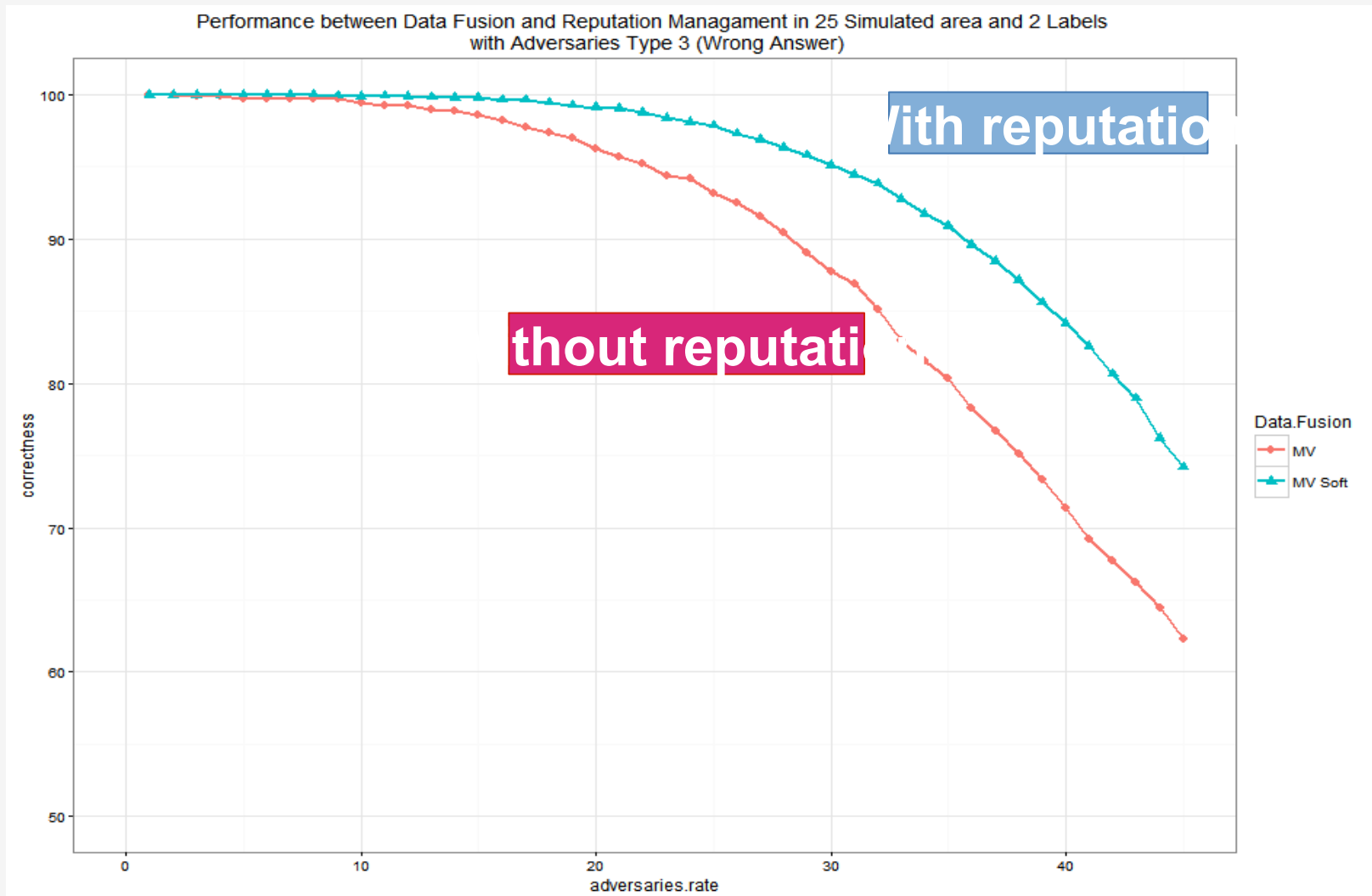
# Implementation of Agent-based Simulation



# Simulating ...



# Result



# Thank you

