Textures in Second Life

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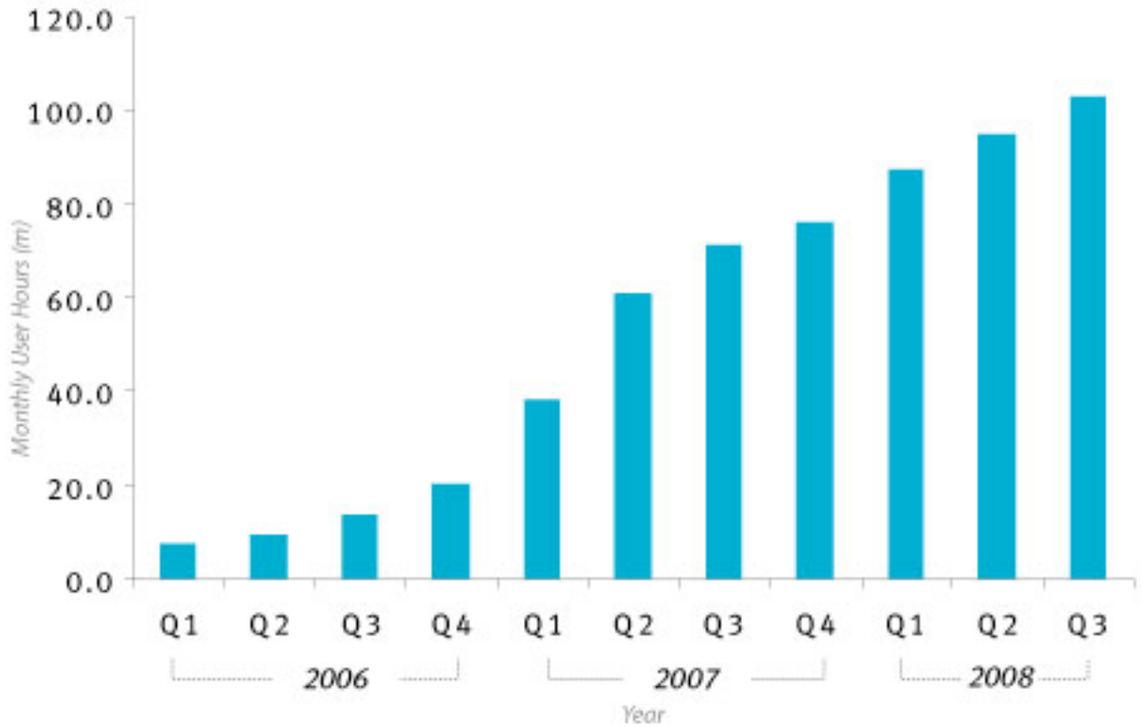
me
Tree
What Is An Endangered Tree?
Why
We Save Our Rainforests?

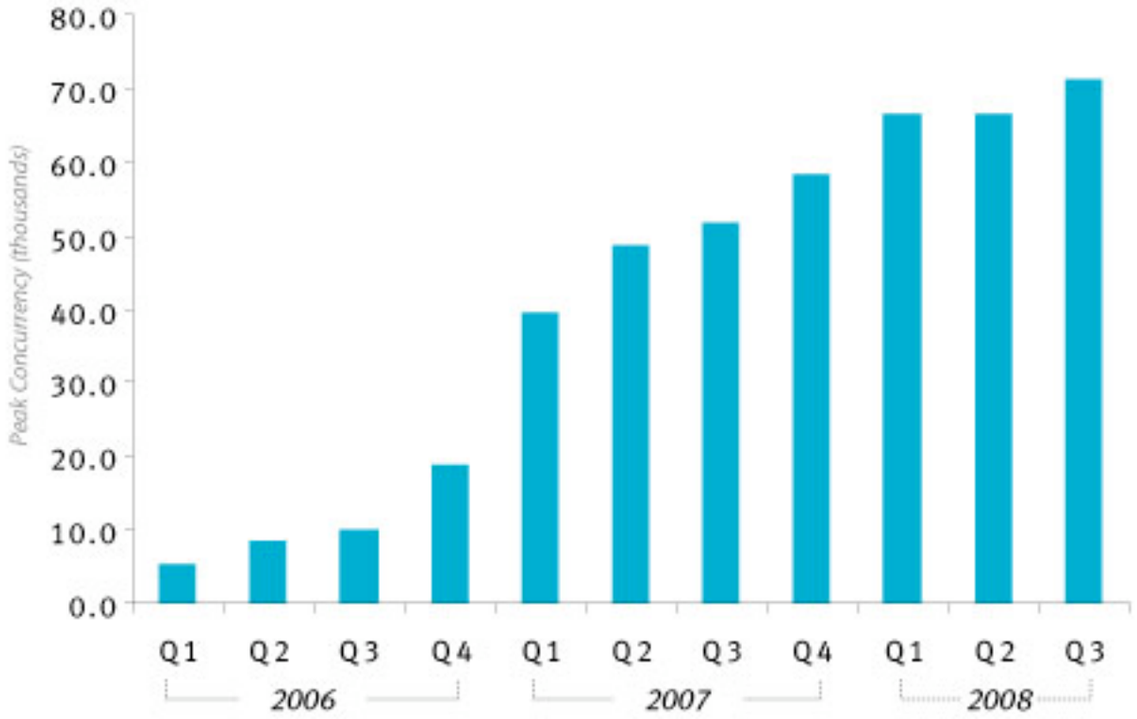
1,020,500

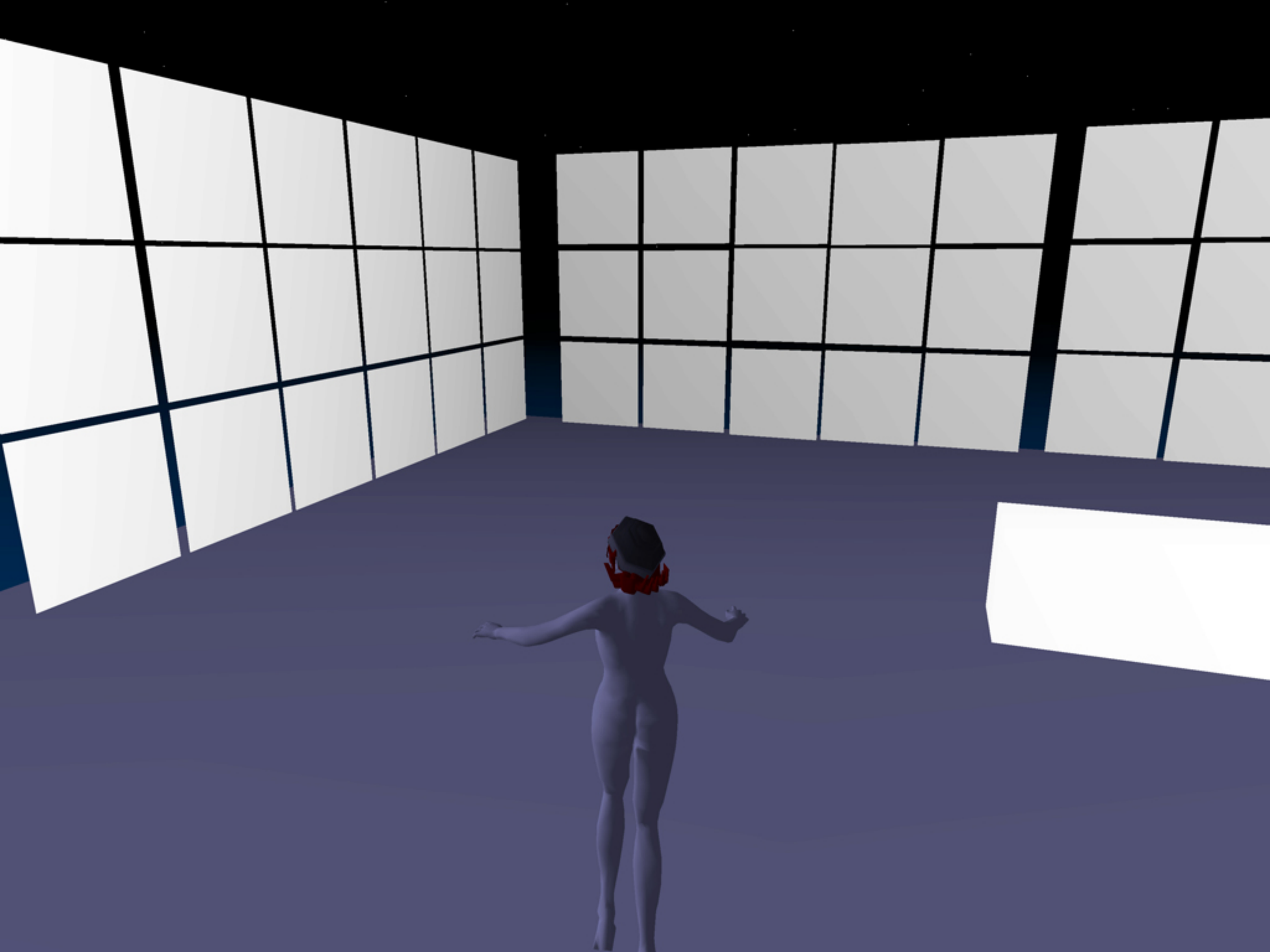
residents logged in the last 30 days

16,271,892

total residents


120.0
100.0
80.0
60.0
40.0
20.0
0.0
Monthly User Hours (m)
Q1
Q2
Q3
Q4
Q1
Q2
Q3
Q4
Q1
Q2
Q3
2006
2007
2008
Year


Peak Concurrency (thousands)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Q1
Q2
Q3
Q4
Q1
Q2
Q3
Q4
Q1
Q2
Q3
2006
2007
2008




BAPE TRAINING SHOES
5 paires de cha
600 Lt

Take-Away Messages

I.

large amount of
textures within a region

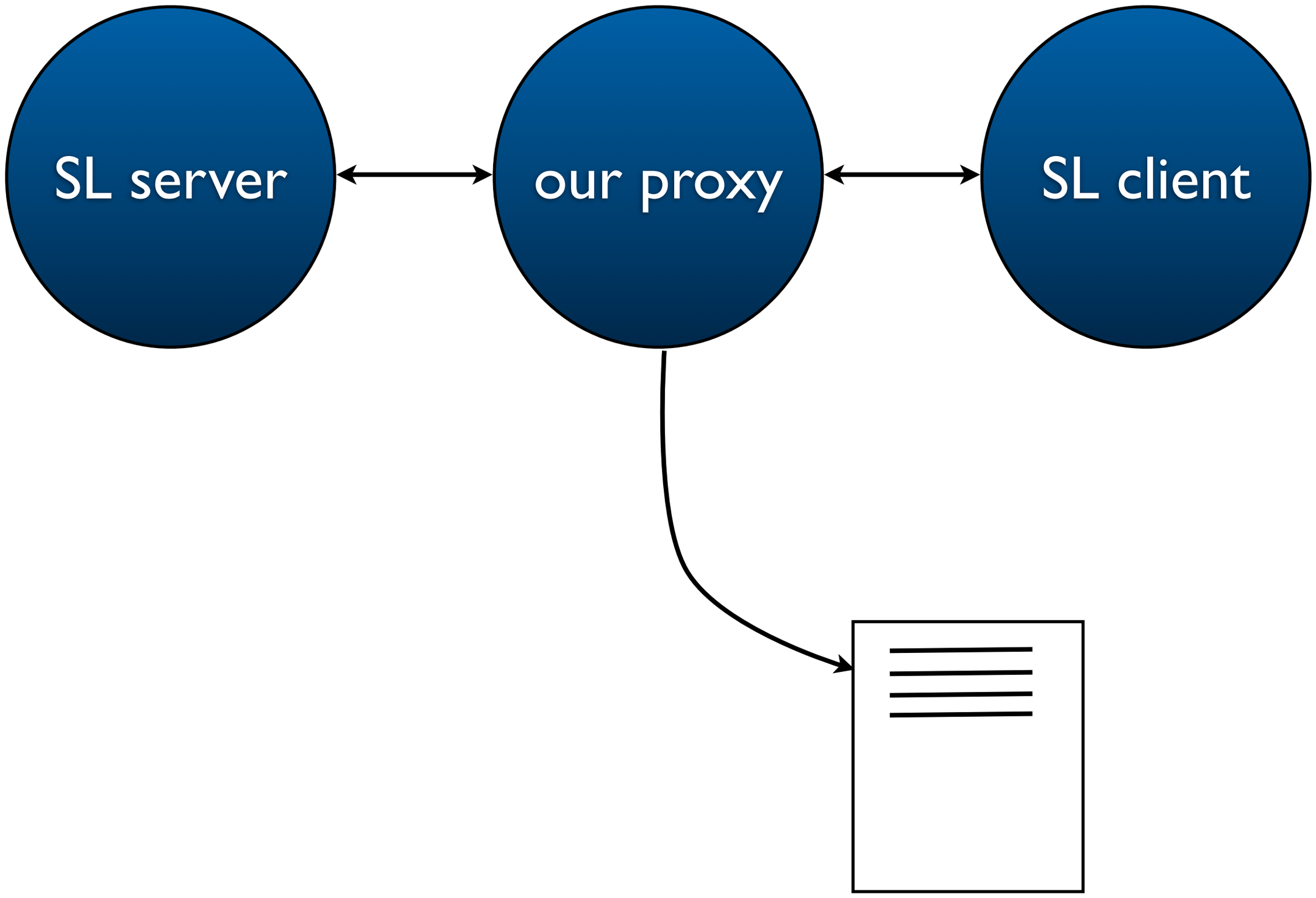
2.
network traffic is dominated by textures

3.

spatial distributions of textures are skewed

important to study textures in an NVE

Methods


SL server
our proxy
SL client

here are the objects and their positions..

SL server

SL client

cool, I would need the following textures for them..

SL server

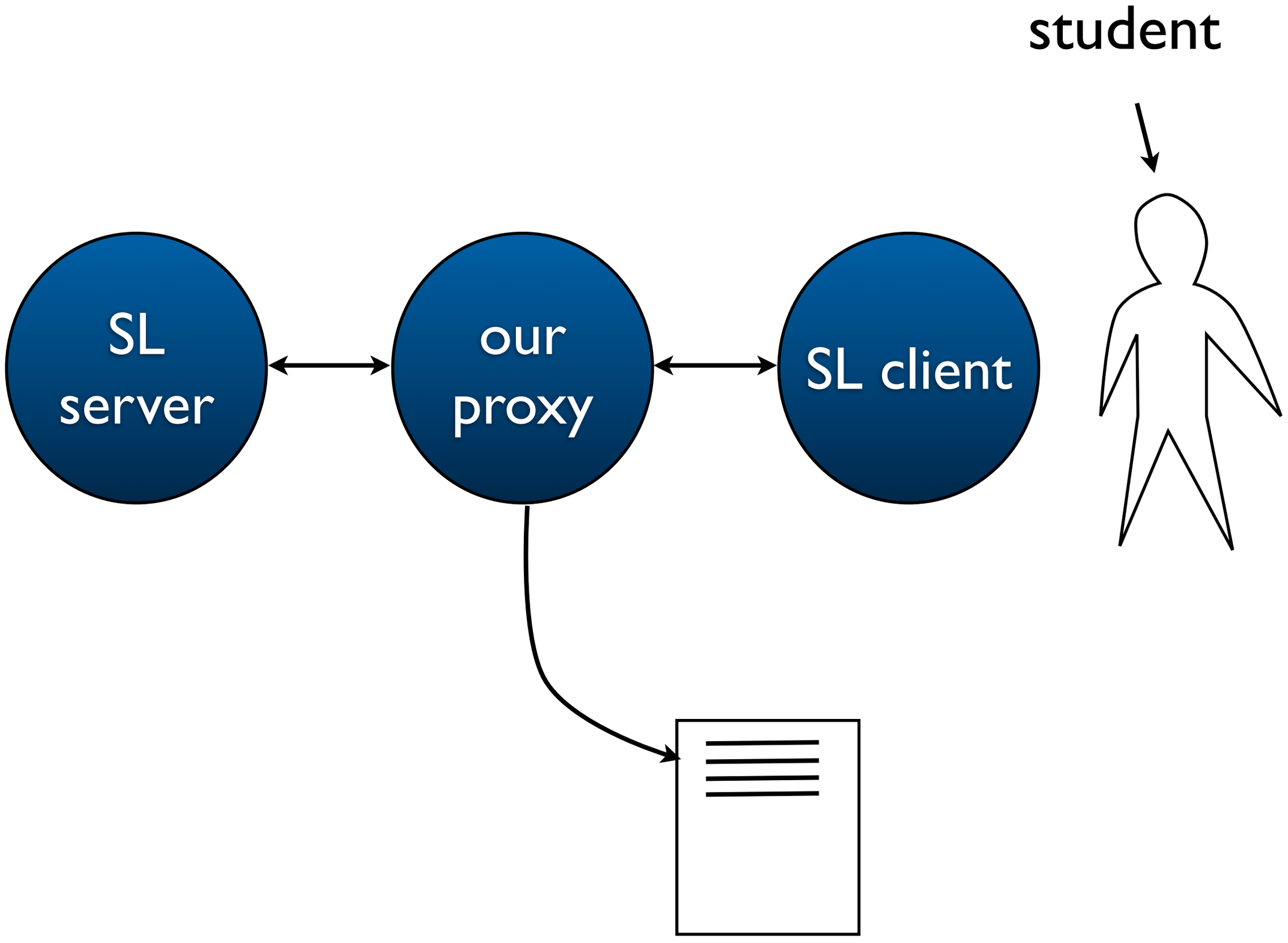
SL client

ok, here are the textures for those objects I sent earlier..

SL server

SL client

Texture(ID, size, position)


student
SL server
our proxy
SL client

Freebies

Isis

Ross

How much textures are there?

Freebies	**74.3 %**
Isis	**61.6 %**
Ross	**88.2 %**

Freebies	**1782**	**153** MB
Isis	**3572**	**351** MB
Ross	**2860**	**236** MB

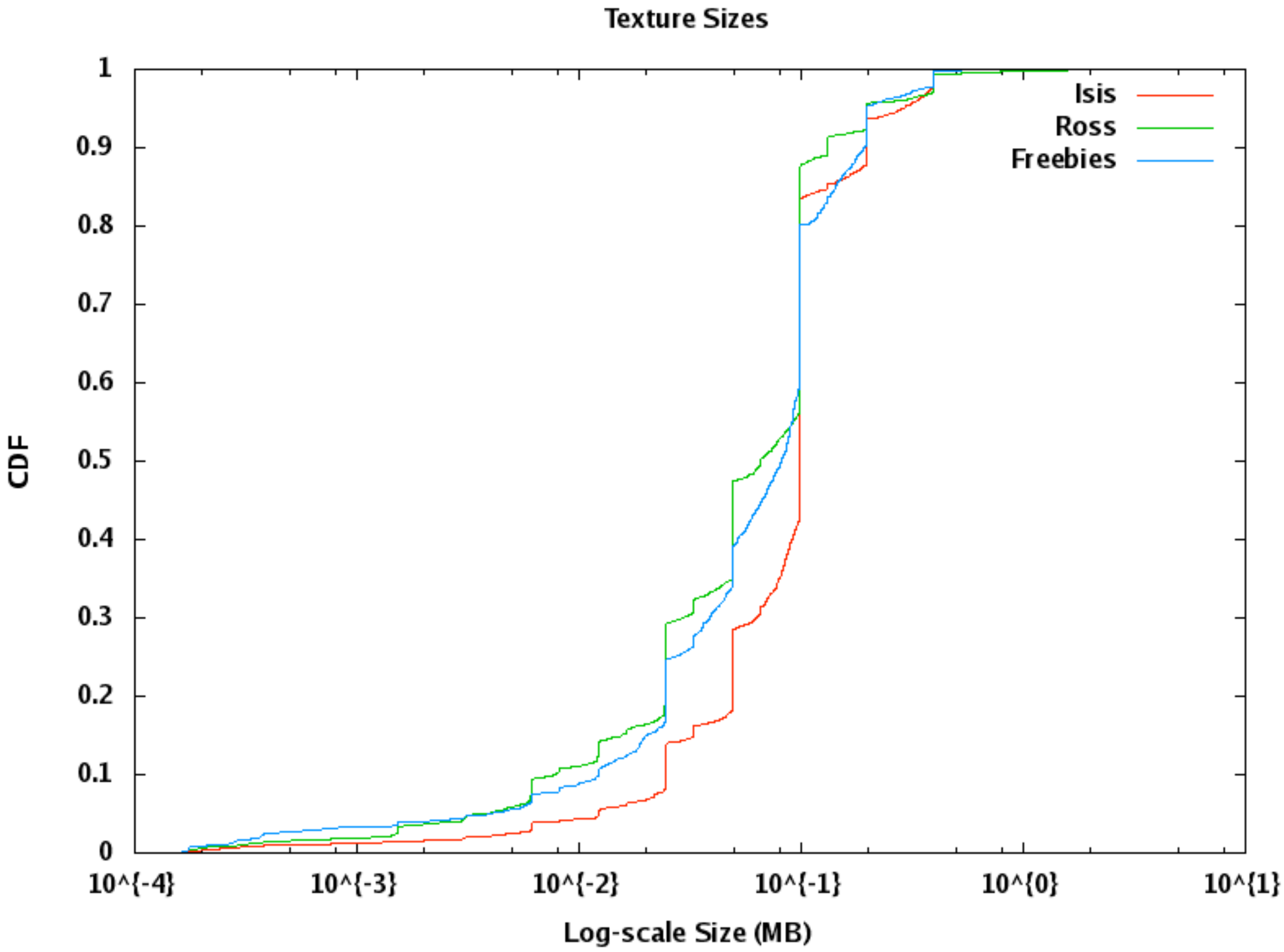
2700 visitors to Isis

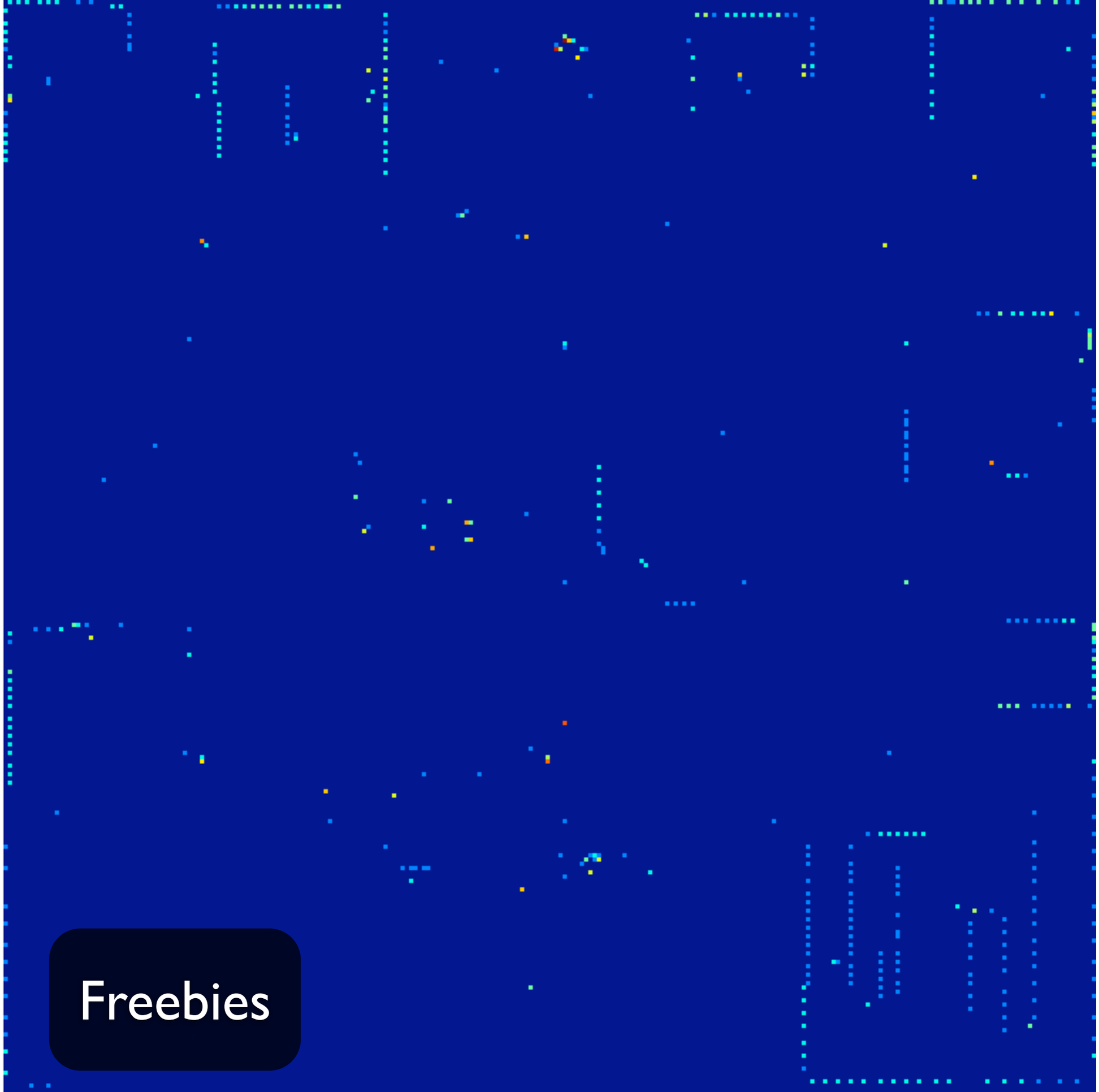
x

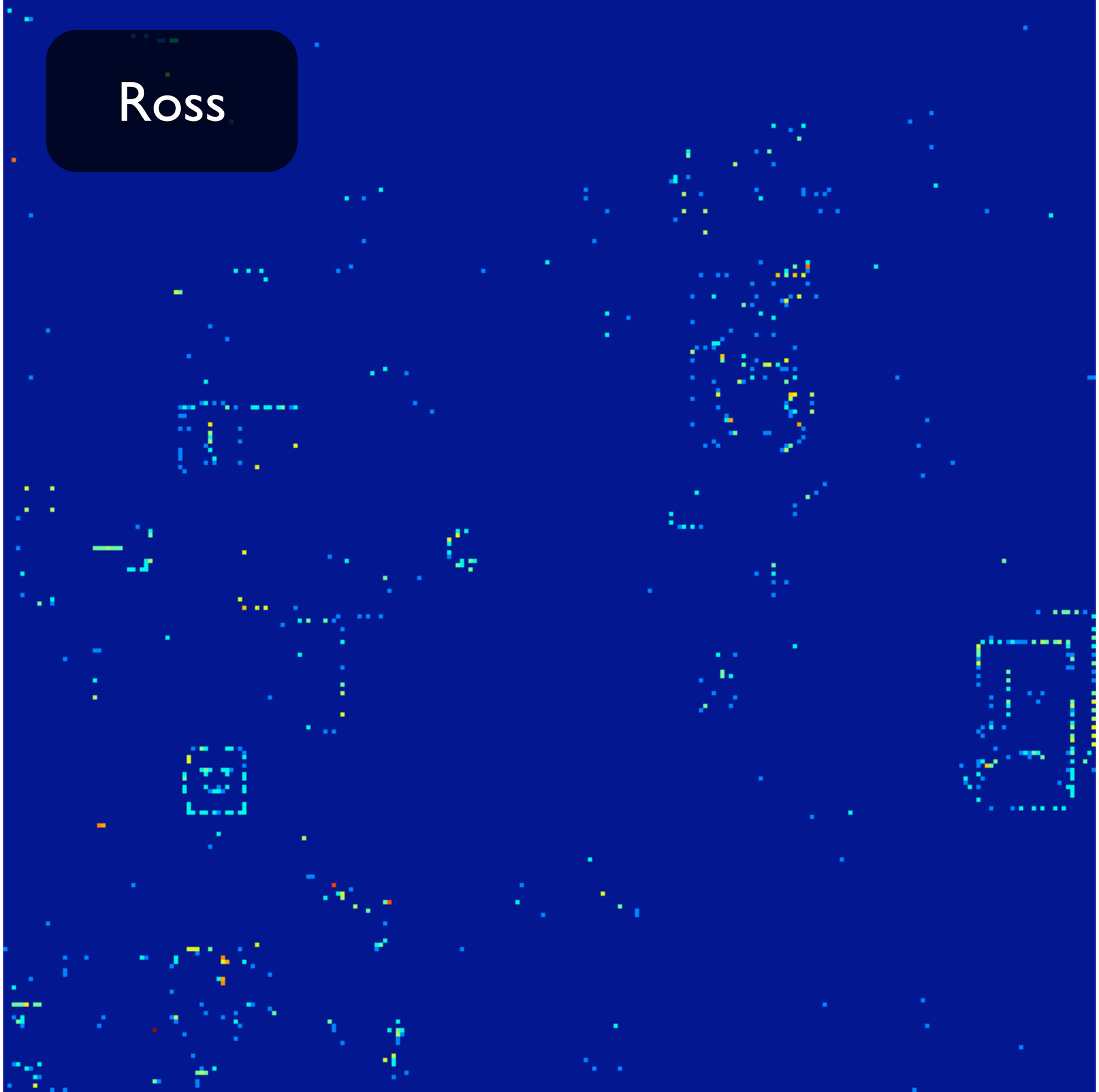
351 MB

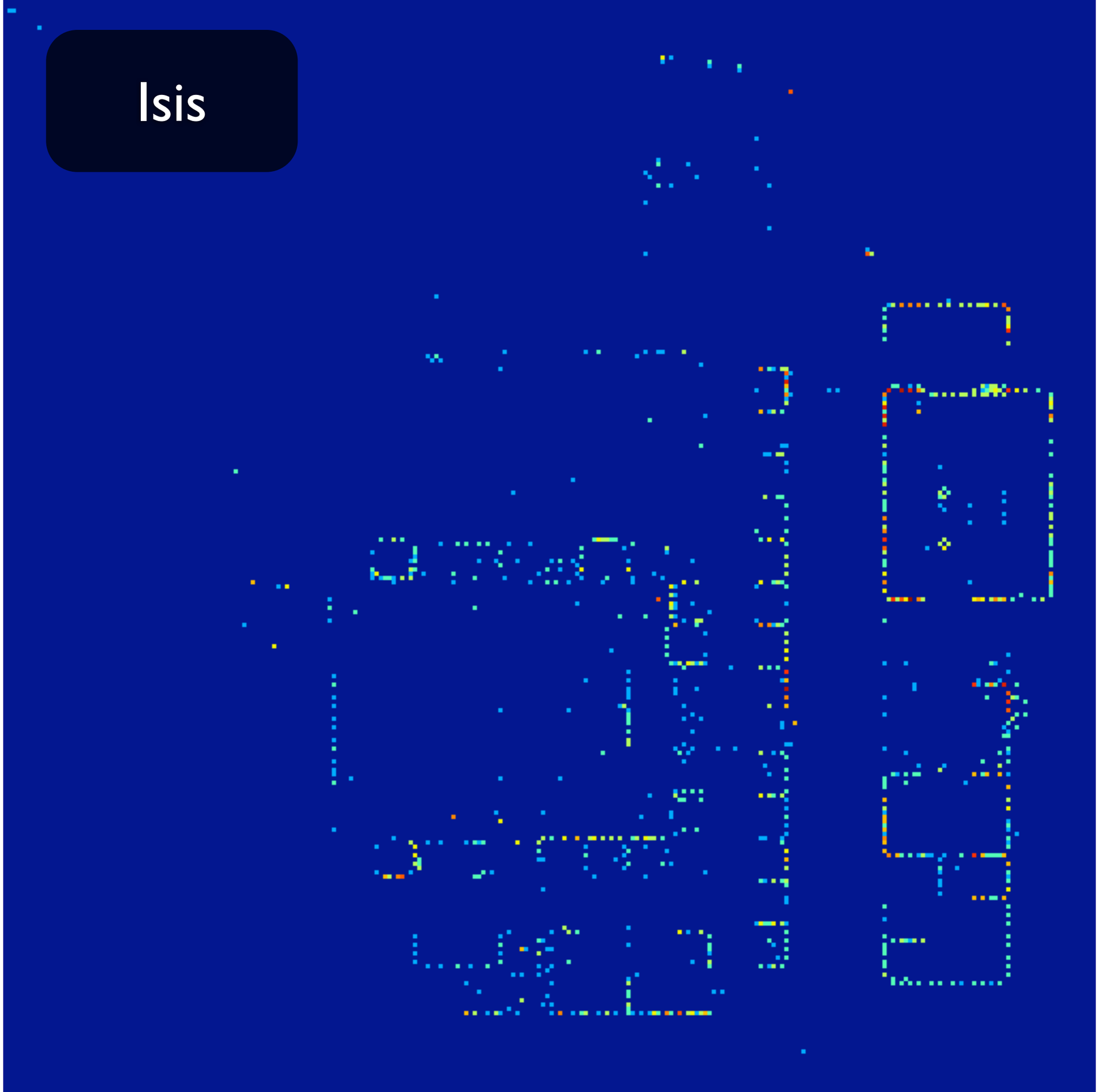
=

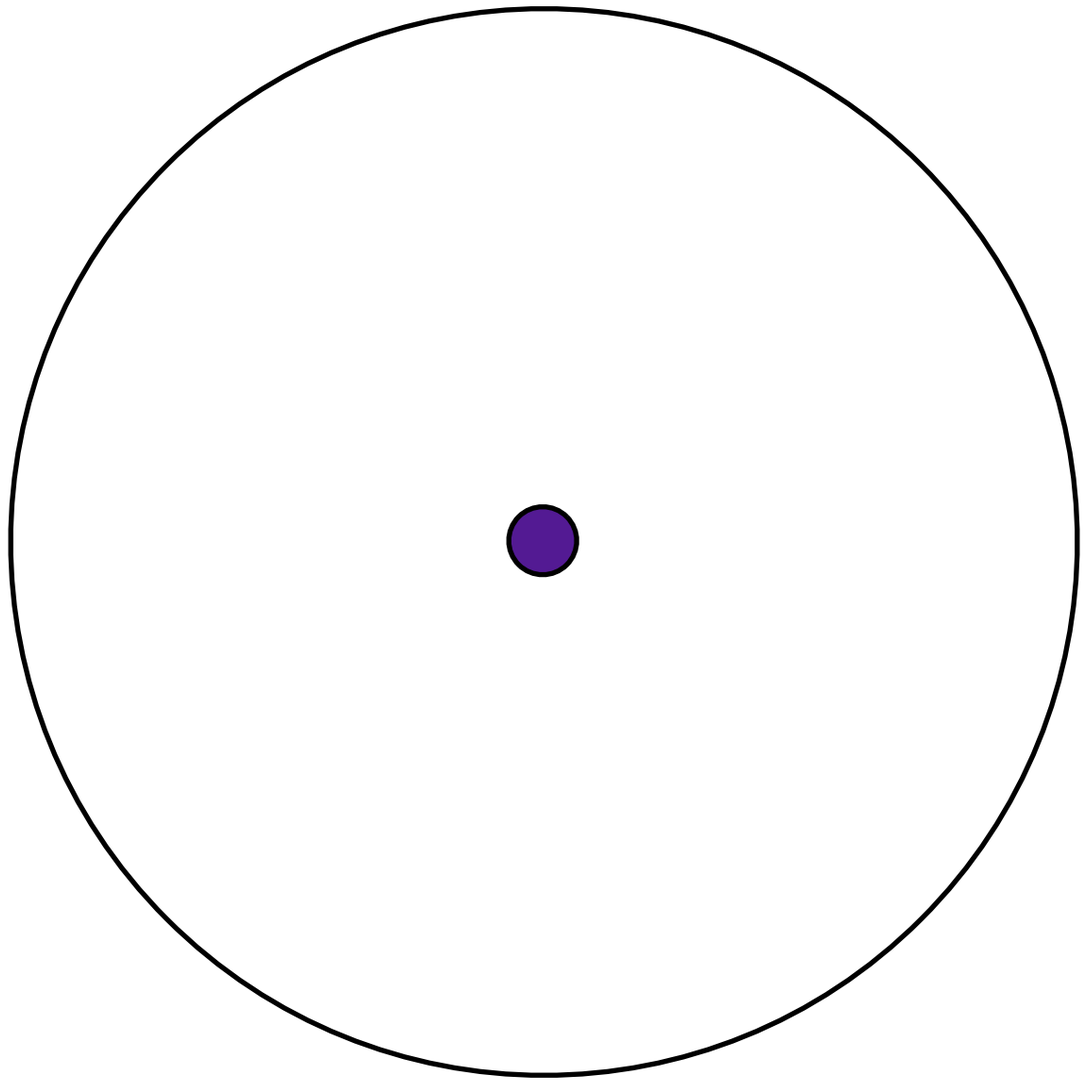
925 GB

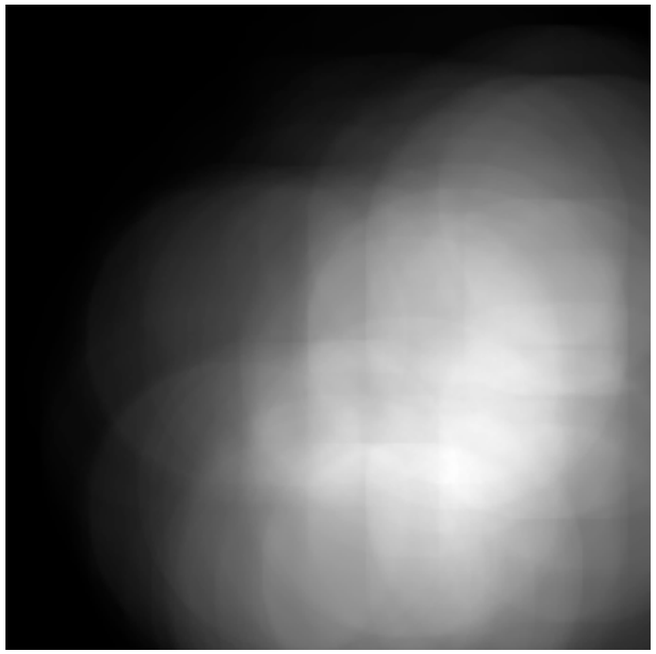

Texture Sizes
CDF
Log-scale Size (MB)
Isis
Ross
Freebies
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10^{-4}
10^{-3}
10^{-2}
10^{-1}
10^{0}
10^{1}


Freebies

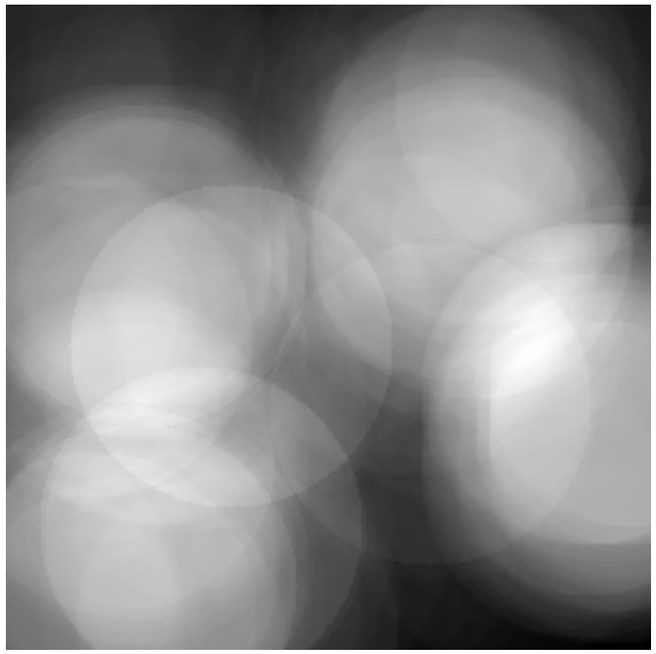

Ross


Isis

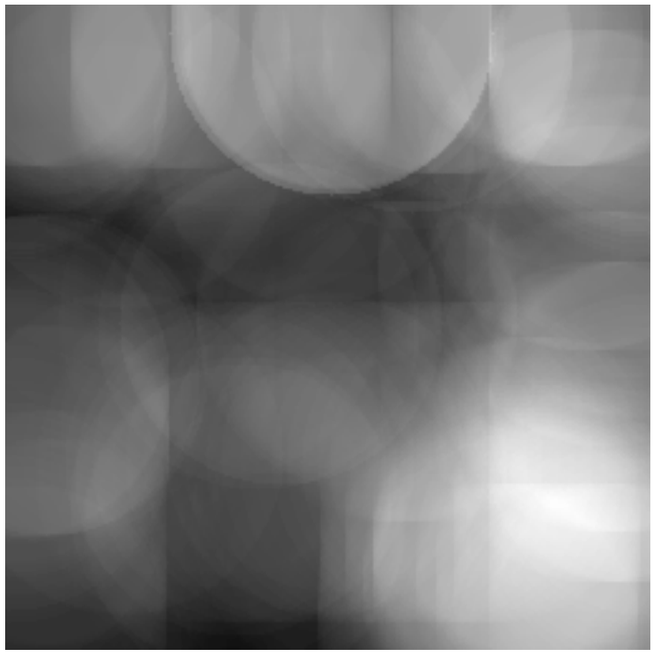




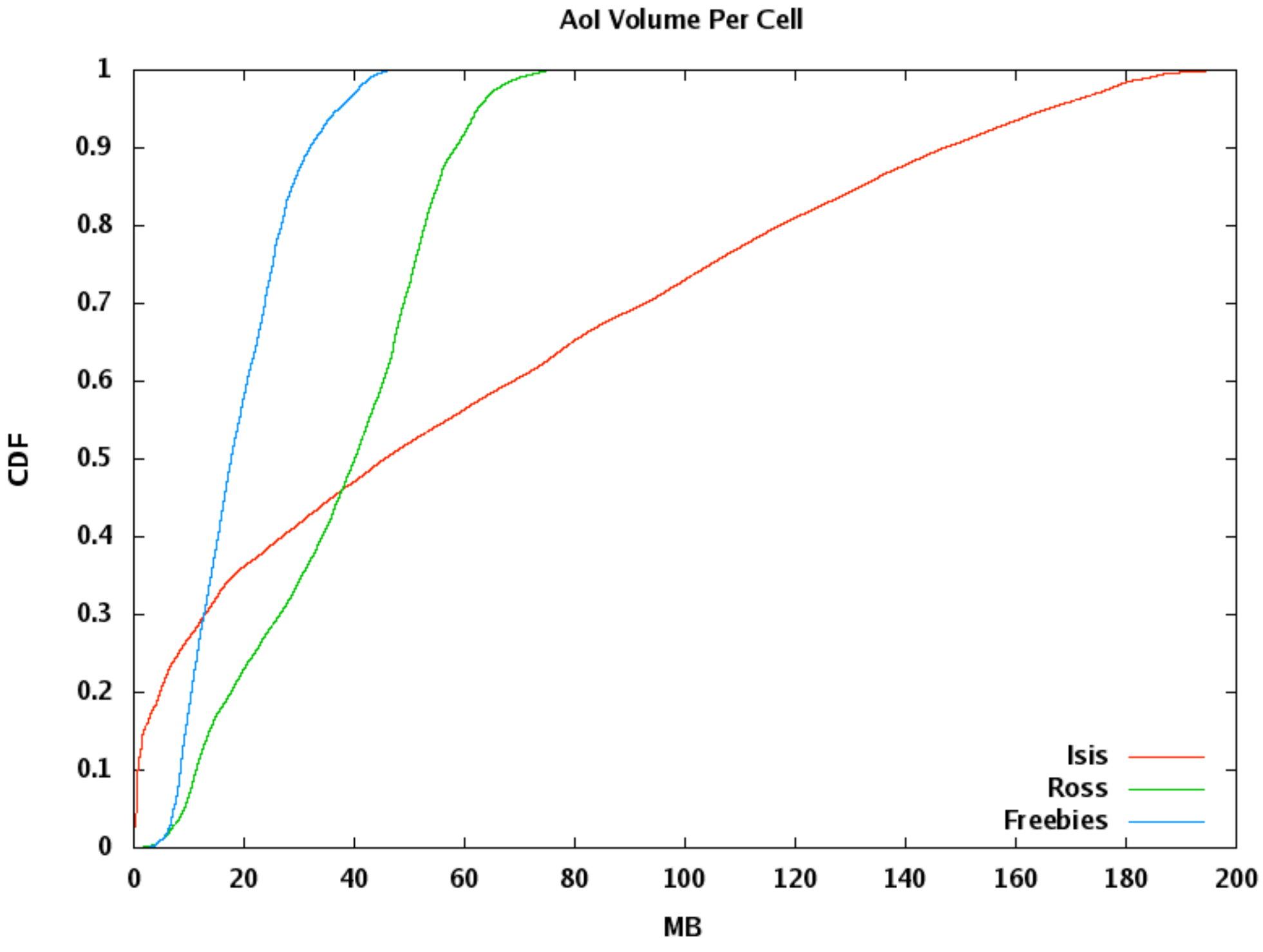
Isis



Ross



Freebies


AoI Volume Per Cell
CDF
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100
120
140
160
180
200
MB
Isis
Ross
Freebies

Conclusion

Motivates the need to investigates textures

Caching textures would be really helpful

Needs to be careful when zoning a VE

Trace-based Simulations Workload Model

Avatar Traces

"Avatar Mobility in NVE:
Measurements, Analysis, and Implications"

(available at arXiV)