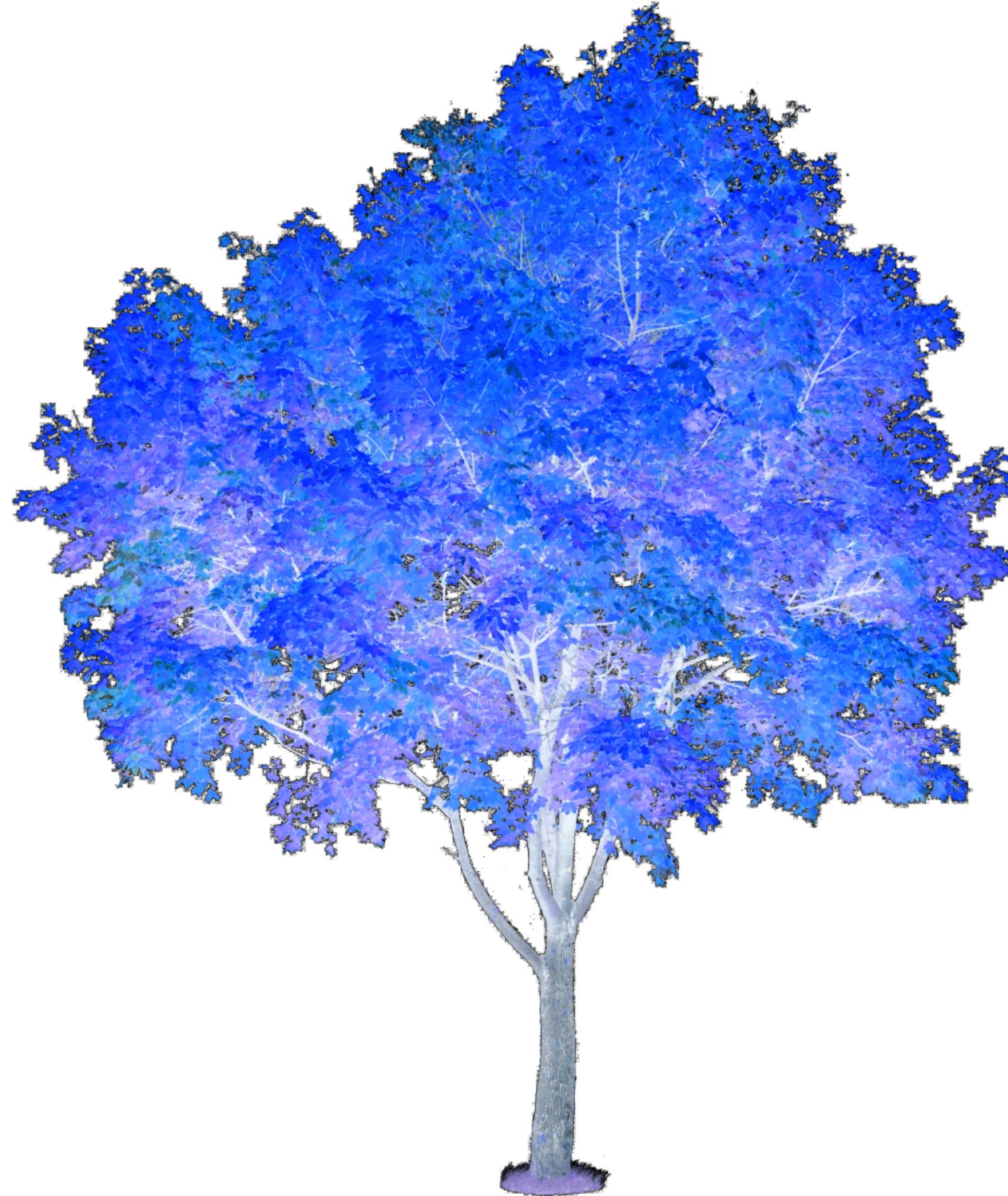


Index Structures





AU--
BA

17

GEOL--
GY

30

OT--
PE

BE--
BIO

HISTORY OF T

BIR--
BLY

19

Foggenhorn
2'569 m

① Ignore Signs

② Follow Signs

Nessel

1h

Birgisch 

2h 35

Nessjeri

Alpe Bäll

1h 35

Belalp 

1h 55

Seminole
Drive
EAST

Apache
Trail
SOUTH

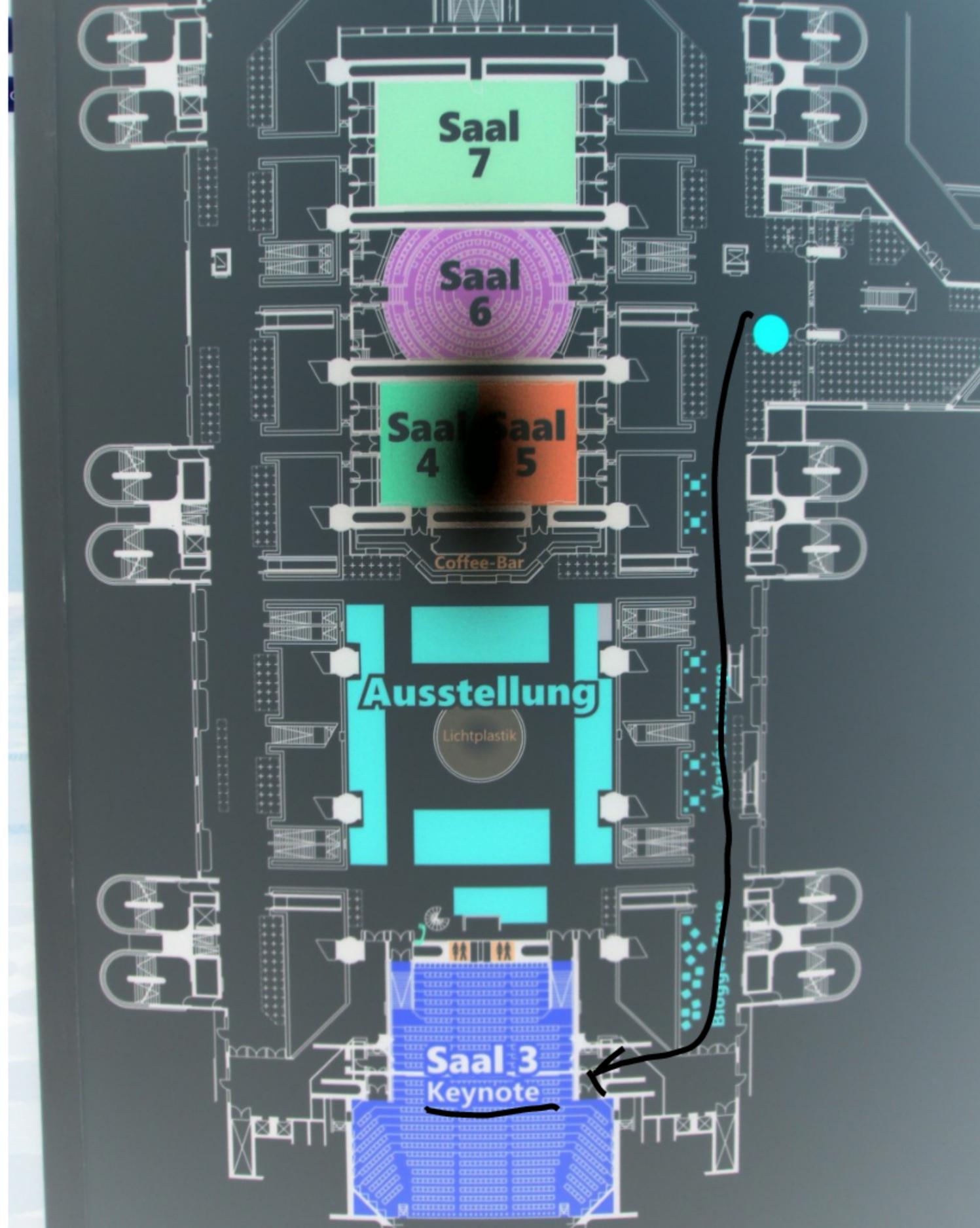


Thunder
Road

WEST

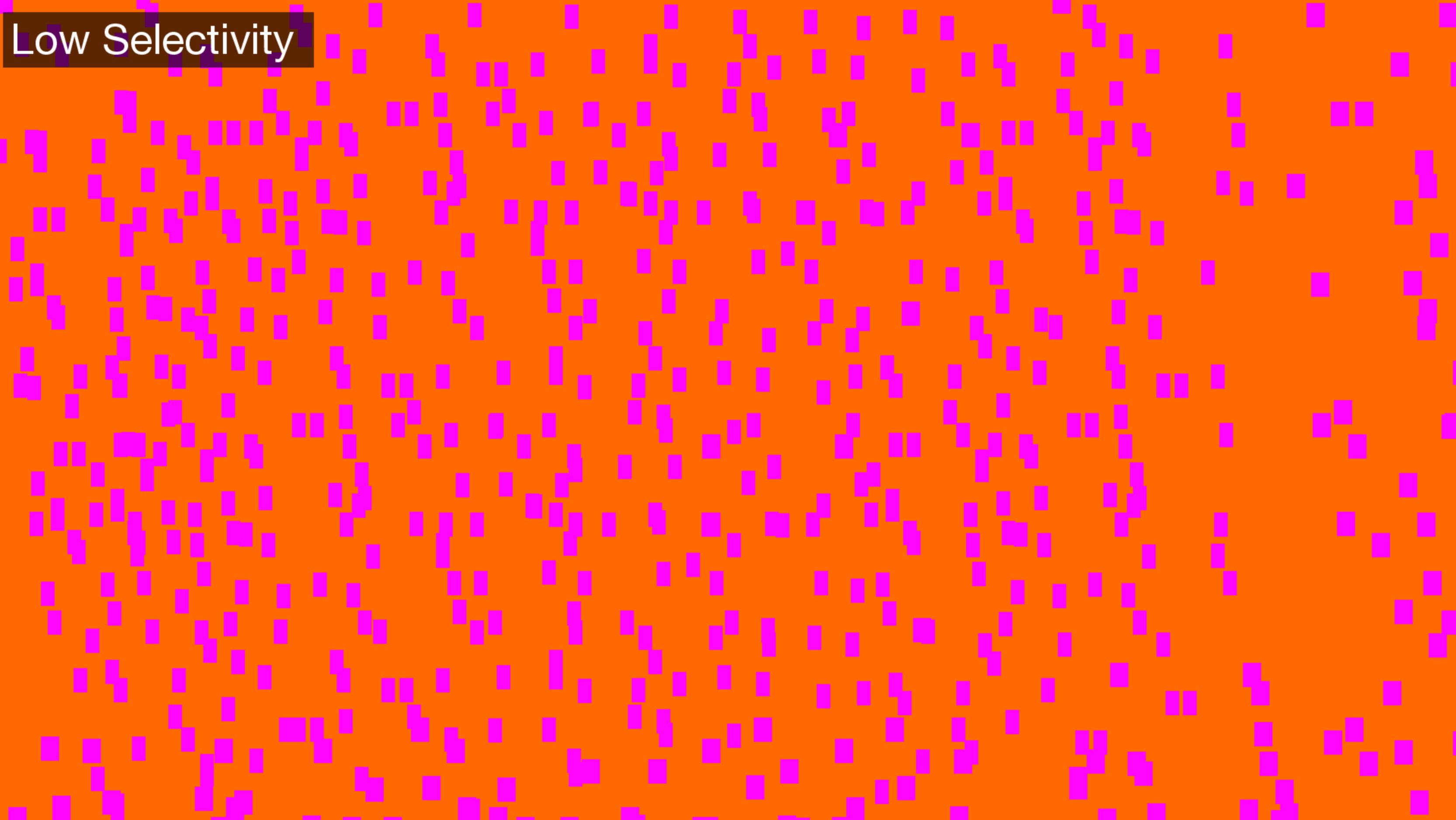


Los Angeles



015	Thakkar Paresh & Parul 39 Arlington Ave.....	978 263-3763
200	Thakrar Bhavna & Kiran 47 Russells Wy Wsd.....	978 392-8610
57	Thakur Aman 3 Trailside Wy Wsd.....	978 692-7430
14	Vijay & Gwyn 10 Lady Slipper Ln Atn.....	978 264-4109
34	Thaller Kurt & Carol 10 Knowlton Dr Atn.....	978 263-6006
8	Thandapani Suresh 8 Meyer Hill Dr Atn.....	978 929-9567
66	Tharp Lisa Kauffman 10 Dunham Ln Acton.....	978 897-5995
9	Thatcher Bruce M 5 Till Dr Atn.....	978 635-9889
7	Patricia 23 Turtle Dr Acton.....	978 263-0205
2	Thatcher Photography 5 Till Dr Atn.....	978 929-0880
2	Thatcher R 102 Willow W Atn.....	978 263-8087
	Thaure Frederic & Lisa 8 Heather Hill Rd Atn.....	978 263-1342
	Thayer Kent & Astrid 45 Parkerville Rd Chel.....	978 244-9260
	Wm H Jr 47 North Rd Chel.....	978 256-5156
	Wm & Teresa 46 Sylvan Av Chel.....	978 256-5645
	The Courtyard Condominium 360 Littleton Rd Chel.....	978 250-2447
	The Family Eye Care Center 133 Littleton Rd Wsd..	978 692-1400
	The Gill Group 1 Courthouse Ln Chel.....	978 453-5115
	The Gutierrez Co 2 Technology Pk Dr Wsd.....	978 589-8247
	The Mill 481 Great Rd Atn.....	978 263-9989
	The Movement Center Dance Studio	978 264-4588

Low Selectivity



Selectivity

$$sel := \frac{|\sigma_{a=42}(R)|}{|R|} \leq 1$$

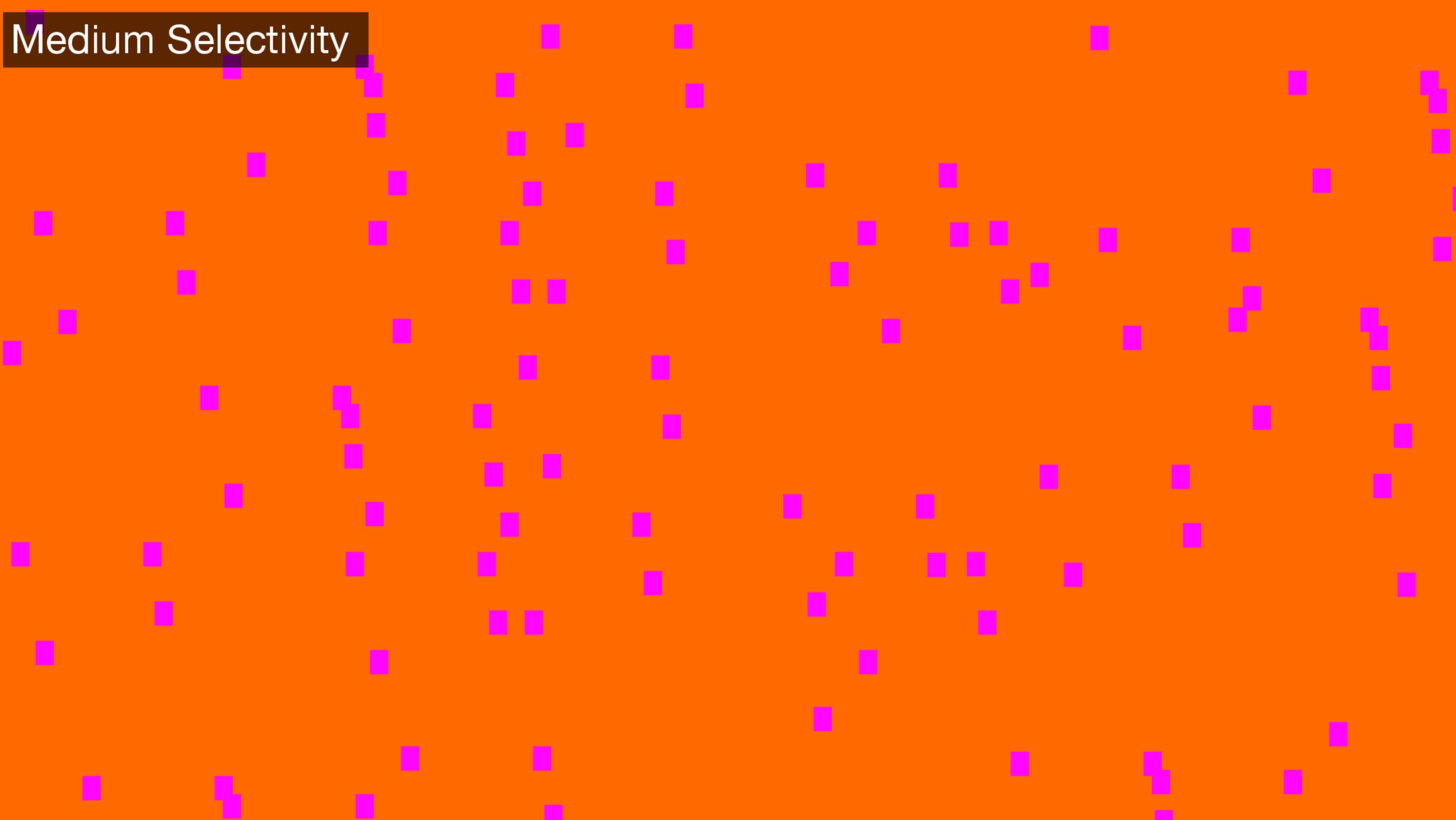
High Selectivity

$$\frac{5}{10000} = 0.0005$$

Low Selectivity

$$\frac{1000}{10000} = 0.1$$

Medium Selectivity



High Selectivity



The “Who Needs Indexes Anyway?” Trap

random access is expensive



disk seek

The “Who Needs Indexes Anyway?” Trap

random access is expensive

sequential access is cheap

=> no need to selectively access data

=> no need for data structures/indexes

=> for any query: just scan the data

(plain wrong!) dangerous



70ms



10ms



70ms



1 ∇ B, 100 MIJ/sec

10,000 sec

vs

0.05 sec

A photograph showing a group of people's hands raised in a circle, suggesting a team or community. The central hand is in sharp focus, wearing a silver watch and a ring. The background is blurred, showing other hands and a bright light source.

“But I have all my data in main memory!”

1 TB, 10 GB/sec

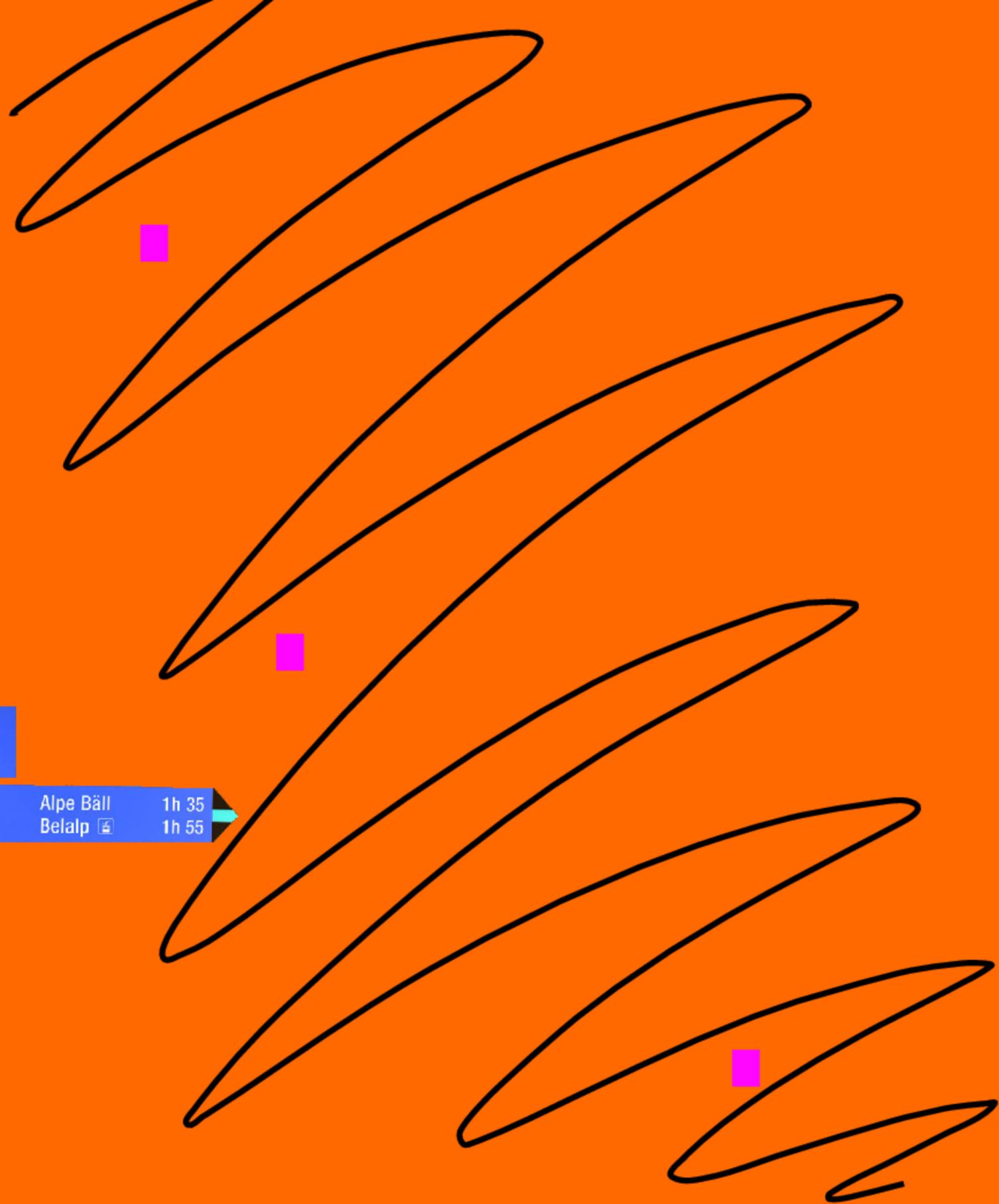
100 sec

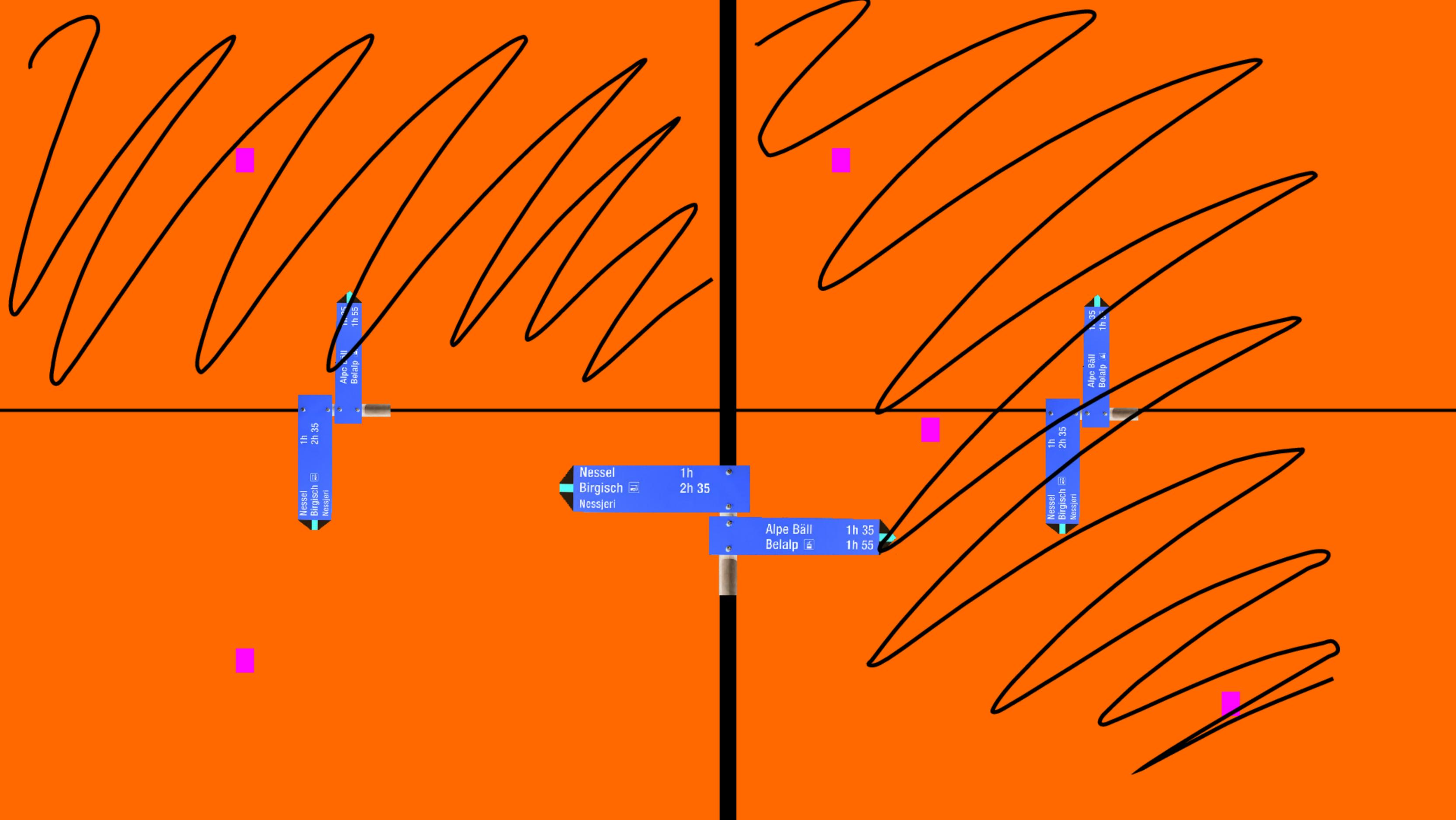
vs

0.0000005 sec

Nessel 1h
Birgisch  2h 35
Nessjeri

Alpe Bäll 1h 35
Belalp  1h 55





1h
2h 35
Nessel
Birgisch
Nessjeri

Alpe Bäll
Belalp
1h 35
1h 55

Nessel 1h
Birgisch 2h 35
Nessjeri

Alpe Bäll 1h 35
Belalp 1h 55

1h
2h 35
Nessel
Birgisch
Nessjeri

Alpe Bäll 1h 35
Belalp 1h 55

Copyrights and Credits

© iStock.com:

Rastan; ftwitty; tomazl

herzugbr

<http://www.flickr.com/photos/herzogbr/2783660249/sizes/l/>

<http://creativecommons.org/licenses/by-nc-sa/2.0/legalcode>

CC:

Summi at the German language Wikipedia:

http://commons.wikimedia.org/wiki/File:Wegweiser_Foggenhorn.jpg

<http://creativecommons.org/licenses/by-sa/3.0/legalcode>

other:

Jens Dittrich

“Caveman Chuck” Coker

http://www.flickr.com/photos/caveman_92223/3191110918/sizes/o/

<http://creativecommons.org/licenses/by-nd/2.0/legalcode>

Blogging Dagger

<http://www.flickr.com/photos/bloggingdagger/3036265060/sizes/o/>

<http://creativecommons.org/licenses/by-nc-nd/2.0/legalcode>