SENSE OF PATTERNS

VISUALIZING MOBILITY DATA IN PUBLIC SPACES

Sense of Patterns is an on-going project, a series of printed data visualizations aiming to depict the behaviors of masses in different public spaces. The visualizations have a focus on the patterns of moving entities in public like commuters, cars and public transportation vehicles as well as the interaction between these entities and physical structures like roads, sidewalks, buildings and parks. The project intends to provide strong visuals on what we all experience in our daily lives in different cities.

The first edition of the project consists of six A1 size prints and a video animation based on the data related to Vienna and its suburbs. Two different datasets provided by AIT: Austrian Institute of Technology sorted with python and visualized by using processing. The first dataset includes taxi trips during the 25th of July, 2011. It has 915.353 single entries (Unique id of the trip, timestamps, longitude and latitude coordinates in WGS84). Second dataset includes coordinates of the locations of four commuters in Vienna region for five weeks. It has 520.331 single entries (Unique id of commuters, timestamps, longitude and latitude coordinates in WGS84).

Credits & Thanks

Data sorting, python and processing codes, print layout and designs realized by Mahir M. Yavuz (mahir.yavuz [at] ufg.ac.at).

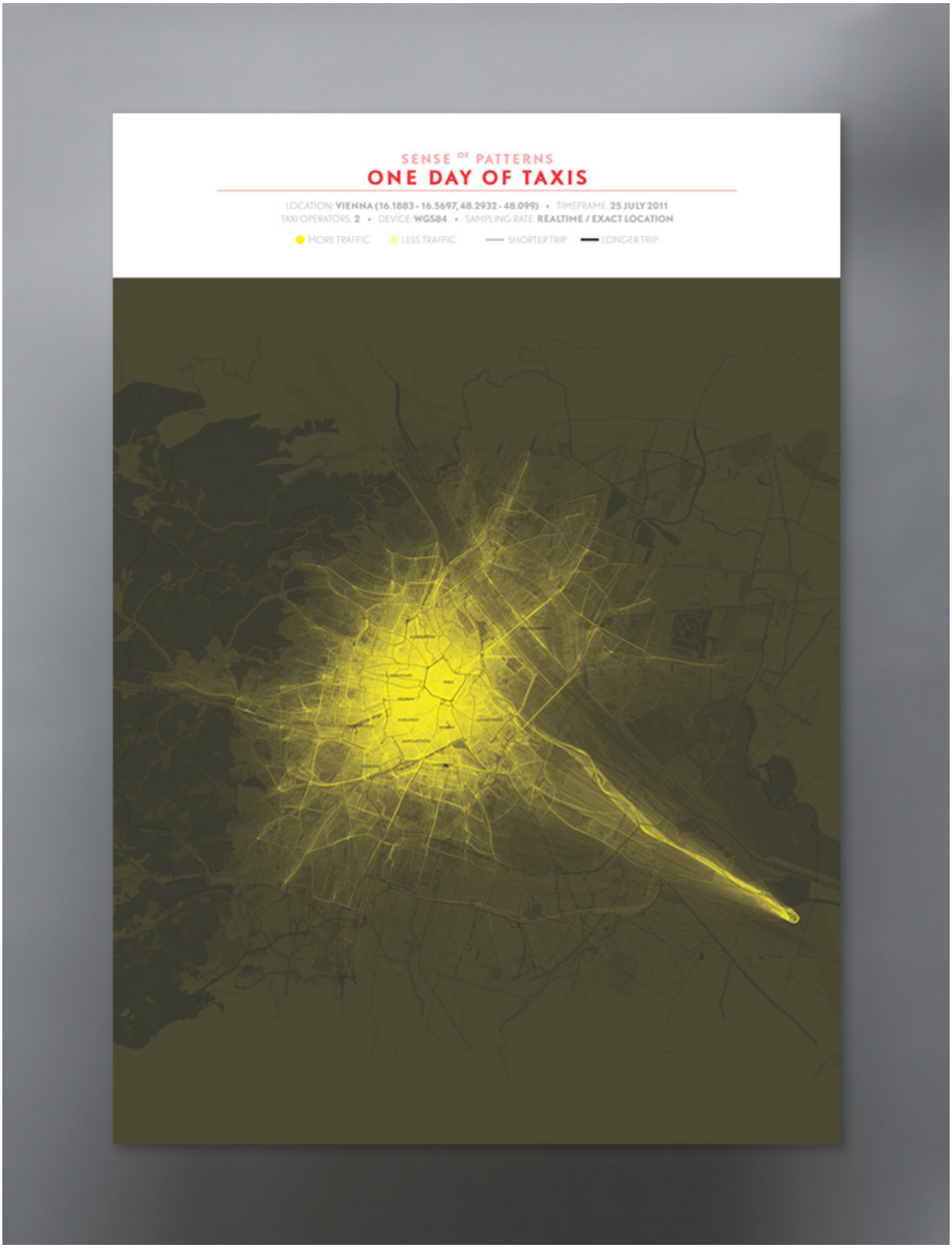
Datasets provided by AIT. Project is generously supported by AFO and AIT. Many thanks to Dietmar Offenhuber, Katja Schechtner, Markus Ray, AIT Austrian Institute of Technology, AFO Architekturforum Oberösterreich, Ars Electronica Festival and MIT Senseable City Lab.

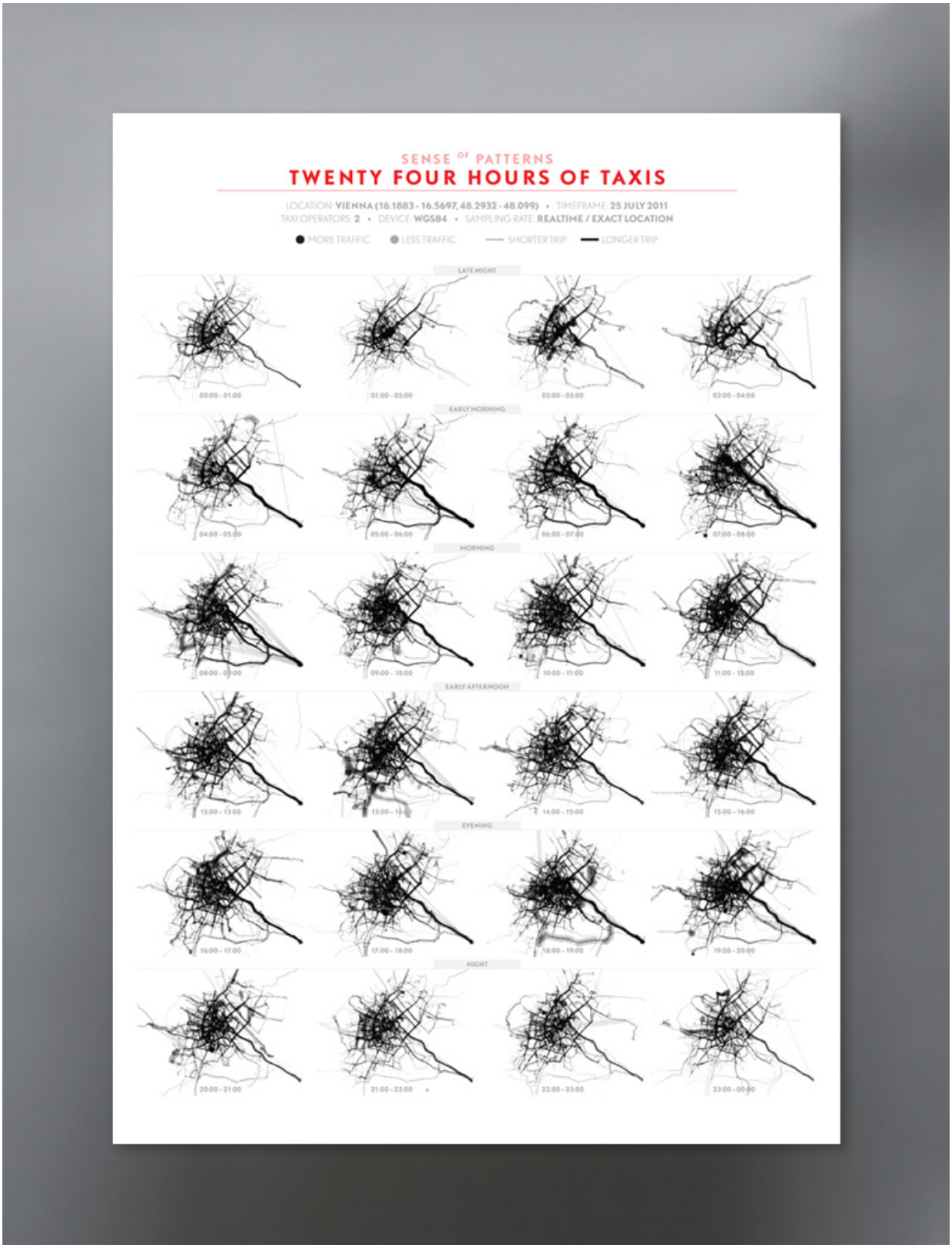
Special thanks to visualization community and processing folks!

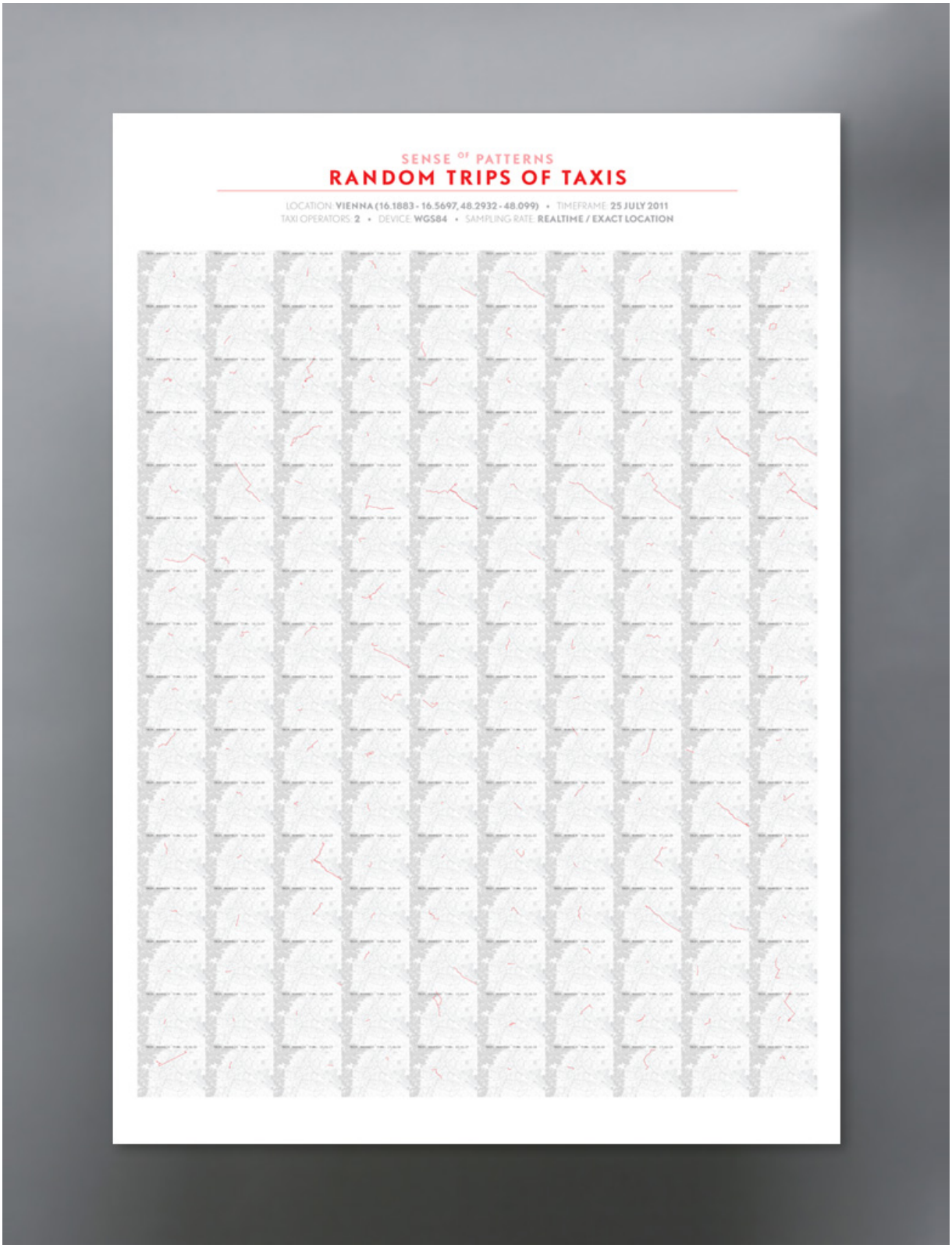
Exhibitions and Features

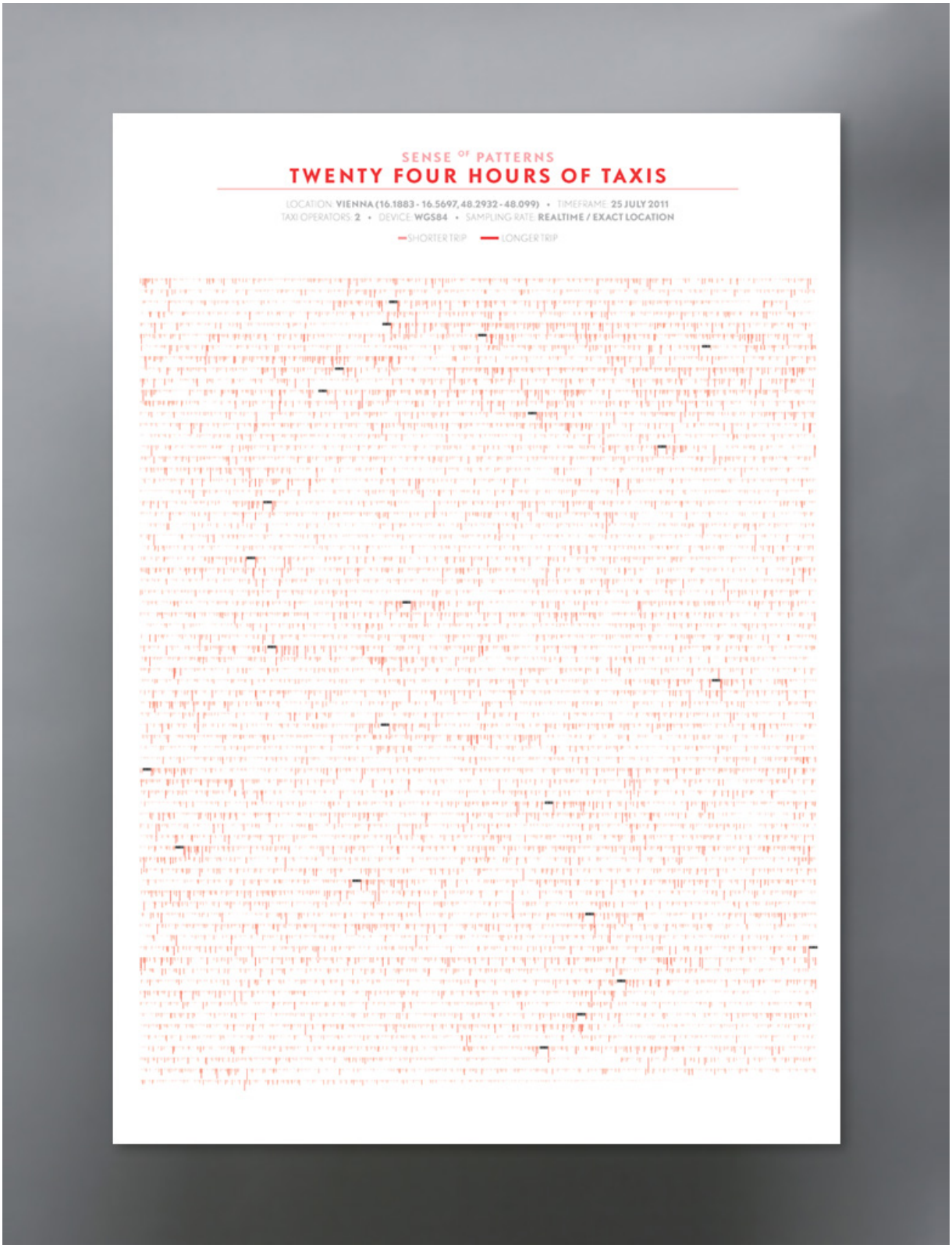
9/2011 — Sensing Place / Placing Sense, AFO, Linz [»»]
9/2011 — Mit dem Taxi vom Datenberg in die Stadt [»»]
10/2011 — Featured on Visual Complexity [»»]
10/2011 — Q&A Session on Visualizing.org [»»]

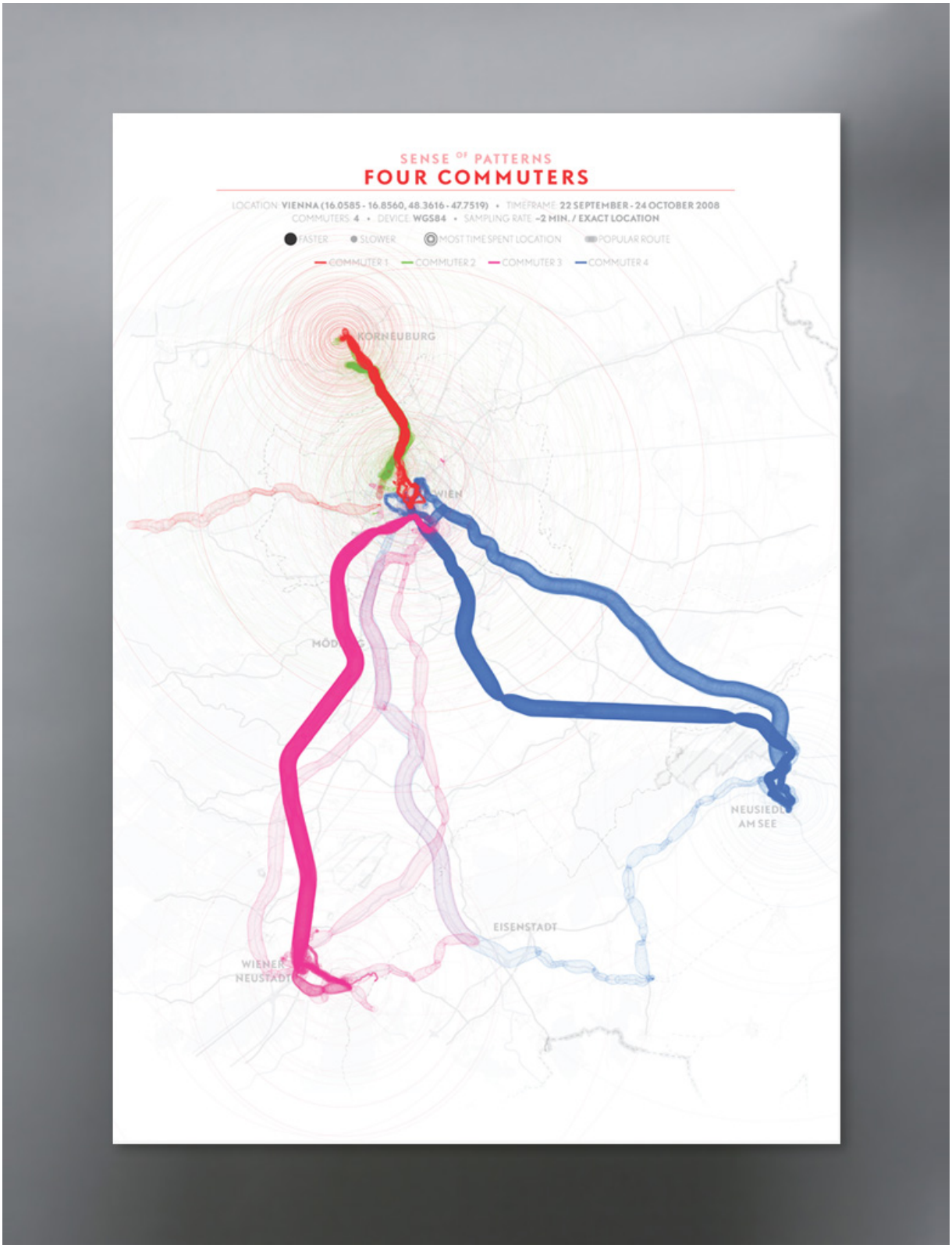
Posters

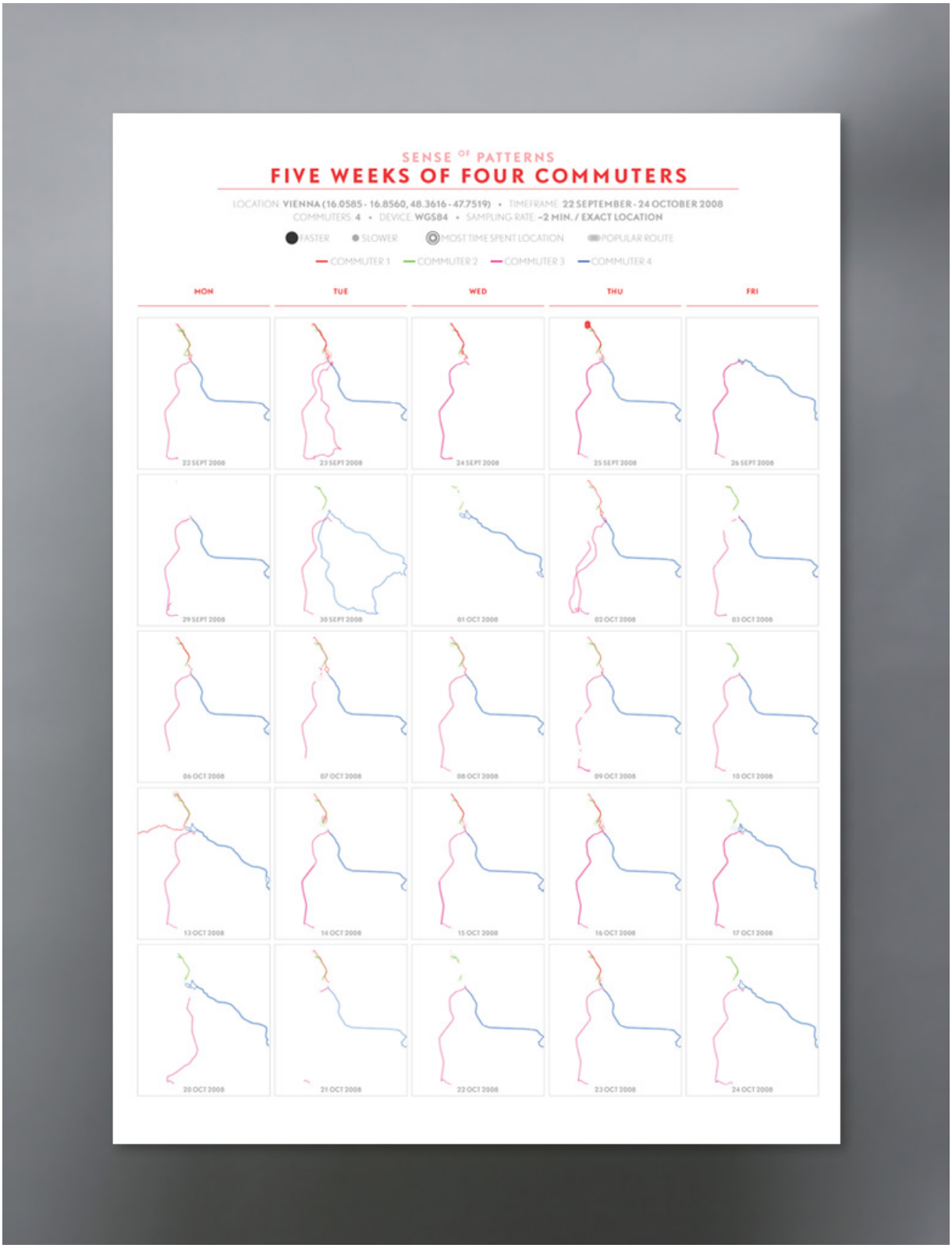

SENSE OF PATTERNS
ONE DAY OF TAXIS
LOCATION: VIENNA (16.1883 - 16.5697, 48.2932 - 48.099) • TIMEFRAME: 25 JULY 2011
TAXI OPERATORS: 2 • DEVICE: WGS84 • SAMPLING RATE: REALTIME / EXACT LOCATION
MORE TRAFFIC
LESS TRAFFIC
SHORTER TRIP
LONGER TRIP


SENSE OF PATTERNS
TWENTY FOUR HOURS OF TAXIS
LOCATION: VIENNA (16.1883 - 16.5697, 48.2932 - 48.099) • TIMEFRAME: 25 JULY 2011
TAXI OPERATORS: 2 • DEVICE: WGS84 • SAMPLING RATE: REALTIME / EXACT LOCATION
MORE TRAFFIC
LESS TRAFFIC
SHORTER TRIP
LONGER TRIP
LATE NIGHT
00:00 - 01:00
01:00 - 02:00
02:00 - 03:00
03:00 - 04:00
EARLY MORNING
04:00 - 05:00
05:00 - 06:00
06:00 - 07:00
07:00 - 08:00
MORNING
08:00 - 09:00
09:00 - 10:00
10:00 - 11:00
11:00 - 12:00
EARLY AFTERNOON
12:00 - 13:00
14:00 - 15:00
15:00 - 16:00
EVENING
16:00 - 17:00
17:00 - 18:00
18:00 - 19:00
19:00 - 20:00
NIGHT
20:00 - 21:00
21:00 - 22:00
22:00 - 23:00


SENSE OF PATTERNS
RANDOM TRIPS OF TAXIS
LOCATION: VIENNA (16.1883 - 16.5697, 48.2932 - 48.099) • TIMEFRAME: 25 JULY 2011
TAXI OPERATORS: 2 • DEVICE: WGS84 • SAMPLING RATE: REALTIME / EXACT LOCATION


SENSE OF PATTERNS
TWENTY FOUR HOURS OF TAXIS
LOCATION: VIENNA (16.1883 - 16.5697, 48.2932 - 48.099) • TIMEFRAME: 25 JULY 2011
TAXI OPERATORS: 2 • DEVICE: WGS84 • SAMPLING RATE: REALTIME / EXACT LOCATION
SHORTER TRIP
LONGER TRIP


SENSE OF PATTERNS
FOUR COMMUTERS
LOCATION: VIENNA (16.0585 - 16.8560, 48.3616 - 47.7519) • TIMEFRAME: 22 SEPTEMBER - 24 OCTOBER 2008
COMMUTERS: 4 • DEVICE: WGS84 • SAMPLING RATE: ~2 MIN. / EXACT LOCATION
FASTER
SLOWER
MOST TIME SPENT LOCATION
POPULAR ROUTE
COMMUTER 1
COMMUTER 2
COMMUTER 3
COMMUTER 4
KORNEUBURG
WIEN
EISENSTADT
WIENER NEUSTADT
NEUSIEDL AM SEE


SENSE OF PATTERNS
FIVE WEEKS OF FOUR COMMUTERS
LOCATION: VIENNA (16.0585 - 16.8560, 48.3616 - 47.7519) • TIMEFRAME: 22 SEPTEMBER - 24 OCTOBER 2008
COMMUTERS: 4 • DEVICE: WGS84 • SAMPLING RATE: ~2 MIN. / EXACT LOCATION
FASTER
SLOWER
MOST TIME SPENT LOCATION
POPULAR ROUTE
COMMUTER 1
COMMUTER 2
COMMUTER 3
COMMUTER 4
MON
TUE
WED
THU
FRI
22 SEPT 2008
23 SEPT 2008
24 SEPT 2008
25 SEPT 2008
26 SEPT 2008
29 SEPT 2008
30 SEPT 2008
01 OCT 2008
02 OCT 2008
03 OCT 2008
06 OCT 2008
07 OCT 2008
08 OCT 2008
09 OCT 2008
10 OCT 2008
13 OCT 2008
14 OCT 2008
15 OCT 2008
16 OCT 2008
17 OCT 2008
20 OCT 2008
21 OCT 2008
22 OCT 2008
23 OCT 2008
24 OCT 2008

60

G+1

Animation of the Code

Posters - Full Resolution

Click on maximize icon to see it in fullscreen or visit visualizing.org

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