

# location based social networks

towards a research agenda

what are location based  
social networks?

# social network sites

The image shows a screenshot of a Facebook profile page for Oliver Roick. The page layout includes a blue header with the Facebook logo and a search bar. The main profile picture is a large landscape photo of a multi-story apartment building with a factory in the background. A smaller profile picture of Oliver Roick is on the left. Below the main photo, there are buttons for 'Informationen bearbeiten' and 'Aktivitätenprotokoll'. The profile information section lists: 'Hat Geographie hier studiert: Friedrich-Schiller...', 'Wohnt in Heidelberg', 'Aus Gera', and 'Geboren am 24. Dezember 1981'. There are also links for 'Freunde 171', 'Fotos 11', and a location tag 'Stadtländorf Hessen'. The bottom section shows the 'Status' tab selected, with a text input field 'Was machst du gerade?' and a 'Posten' button. The 'Freunde' section shows a list of friends' profile pictures.

facebook Suche nach Personen, Orten und Dingen

Messages

Oliver Roick Informationen bearbeiten Aktivitätenprotokoll

Hat Geographie hier studiert: Friedrich-Schiller-...  
Wohnt in Heidelberg  
Aus Gera  
Geboren am 24. Dezember 1981

Info Freunde 171 Fotos 11

Stadtländorf Hessen

Sharing Friends

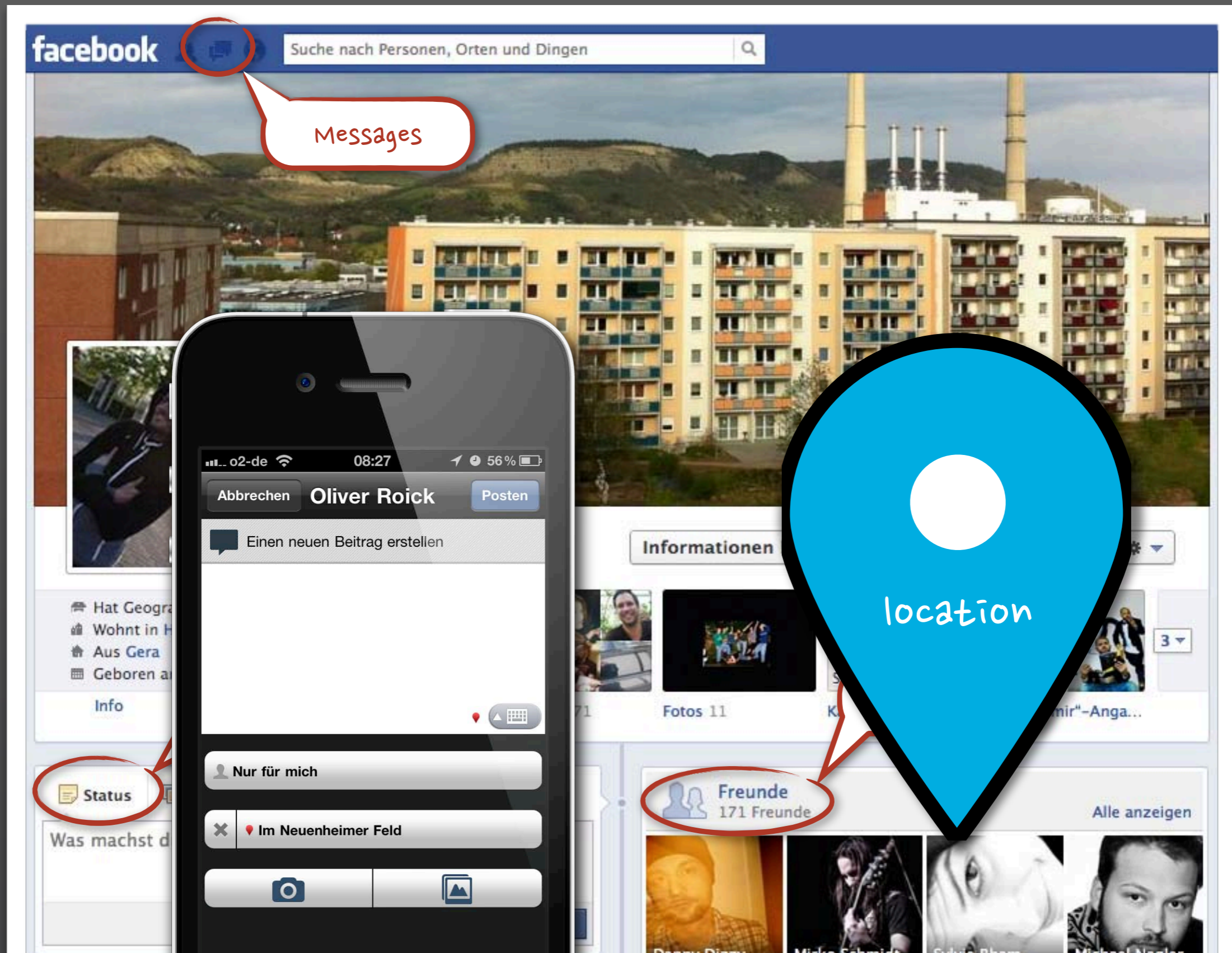
Status Foto Ort Lebensereignis

Was machst du gerade?

Benutzerdefiniert Posten

Freunde 171 Freunde Alle anzeigen

# social network sites



# geosocial networking



## Oliver Roick checked in at **Karlstorkino**



3 weeks ago via foursquare for iPhone



### Zoetrope - Level 2

That's a lot of movie theater check-ins! Now, can you pick us up a large popcorn while you're up?

*That's 5 different theaters. Visit 5 new spots to unlock Level 3. More movie munchies await you!*

### Points for this check-in:



Your first check-in at Karlstorkino!

5



First of your friends to check in here

+3

+2

# geotagging

Neckarkanal

Im Neuenheimer Feld

Universität Heidelberg

Neuenheim

Bergheim

Heidelberg

Neckarwiesen

Hauptstrasse

Plöck

Weststadt

Bergstrasse

Bahnhof Heidelberg Altstadt

Bahnhof Heidelberg Wieblingen

Pfaffengrund

Obere Röd

Kranichweg

Marktstrasse

Gurachweg

Ringstrasse

Hutzelwaldweg

Blockhausweg

Block

Fligstuhl

Rudolf Wild

Maps by

**49.667 Elemente mit Geotags**  
Sortieren nach: **Interessanteste** • Neueste

Auf der Karte suchen

Gam in Heidelberg von Extra Medium

towards a research agenda

# towards a research agenda

- ① applications & data
- ② quality assessment
- ③ fusion of data sets



# 1

# which applications?

Social Interaction

Games

Marketing

Directory

Q&A

The image displays a variety of mobile application logos, organized into five categories. The 'Social Interaction' category includes logos like Google Latitude, DAILYPLACES, AKO'AKI, SK@UT, ipoki, fire eagle, PLAZES, rally up, bluemapia, mobiLuck, yobongo, WOBISTN?, shizzow, geoloqi, blockboard, ditto?, Bizzy, buddyway.com, TriOut, trover, gypsi, Shizzlr, pegshot, DOPPLR, blummi!.com, Rumble, and broadcastr. The 'Games' category features Gbanga, myTown, endomondo, GEO Socials, Map My Fitness, Map My Tracks, and scvngR. The 'Marketing' category contains checkpoints, foursquare, where, and yelp. The 'Directory' category includes ask around, LOCAL, Google places, foodspotting, askalo, localmind, travell, Gootip, tellmewhere, Woomark, and Tupalo.com. The 'Q&A' category has no specific logos but is labeled at the bottom right.

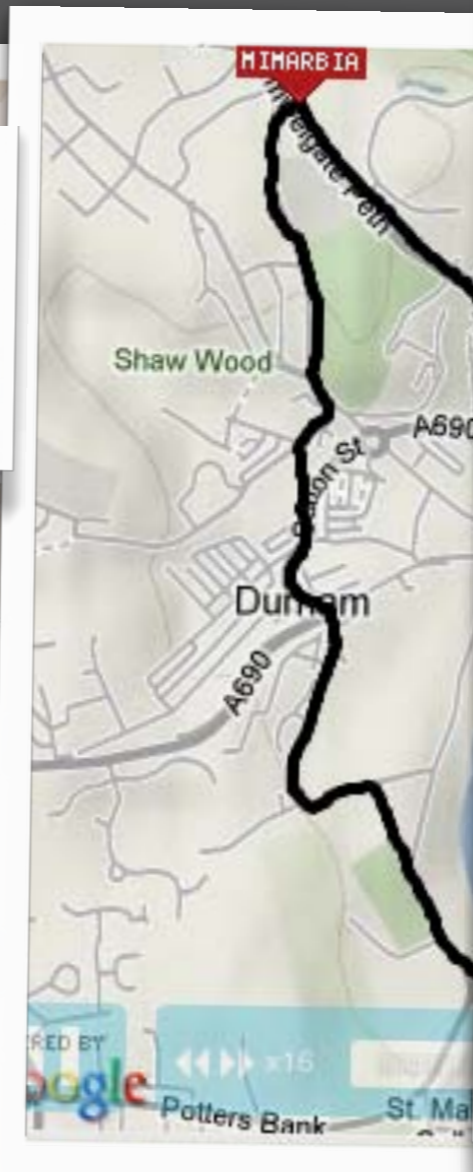
# 1 what data?

points of interest

7.7 / 10 People like this place

YOUR CHECK-INS	TOTAL PEOPLE	TOTAL CHECK-INS
0	317	1,075

tracks



textual information

Jo @FrauJG

blue sky and snow in Heidelberg, Germany

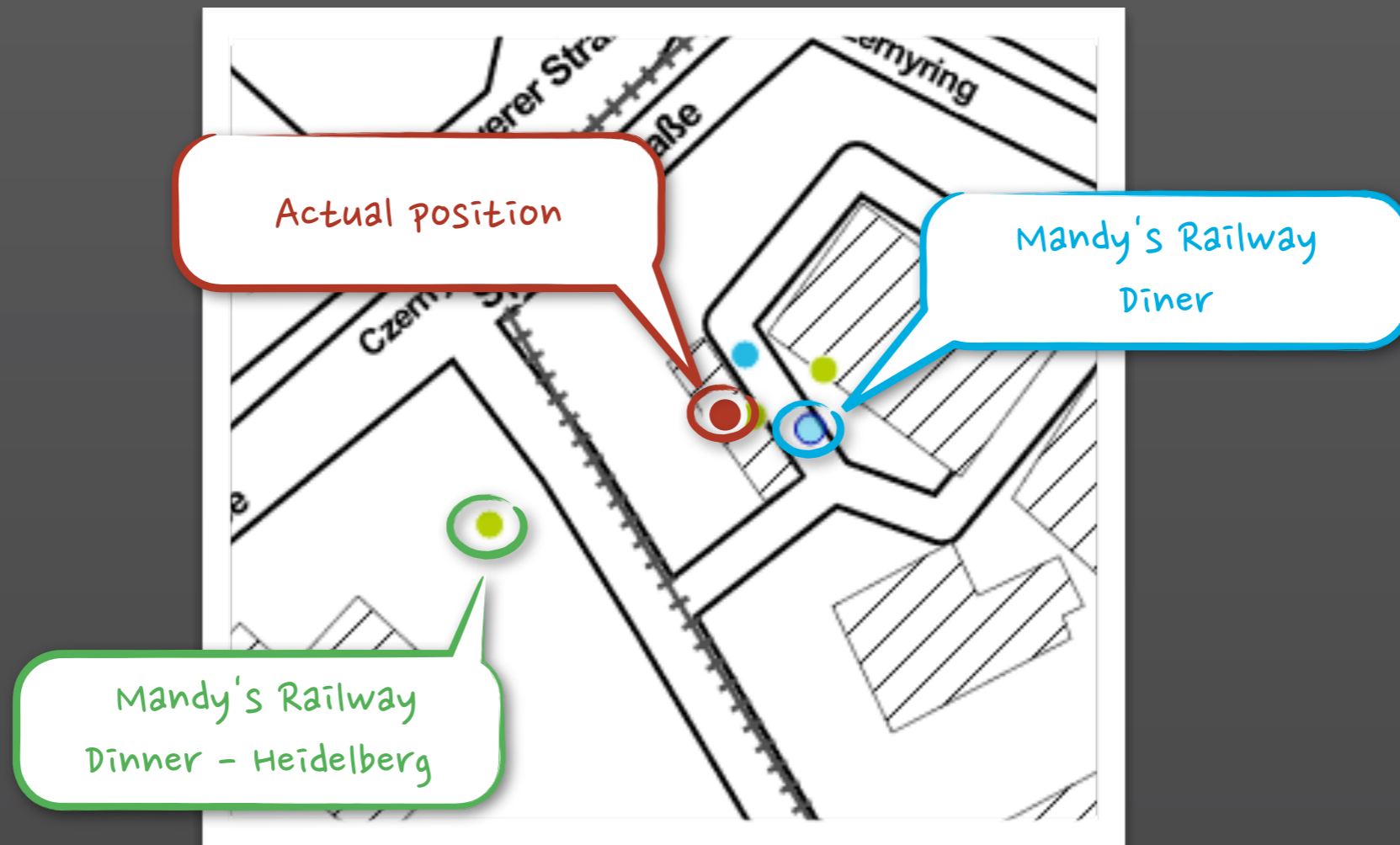
Antworten Retweeten Favorisieren

2:37 PM - 31 Jan 12 · Diesen Tweet integrieren

Reply to @FrauJG

© 2012 Twitter Über uns Hilfe

## 2 quality positional accuracy





## quality attribute completeness

	Foursquare		Facebook	
records overall	114.284		24.263	
full address	33.528	(29%)	1	(0%)
city + street	59.999	(52%)	17.450	(71%)
city	76.010	(67%)	21.287	(88%)
street	62.432	(55%)	17.504	(72%)
category	100.852	(88%)	24.263	(100%)

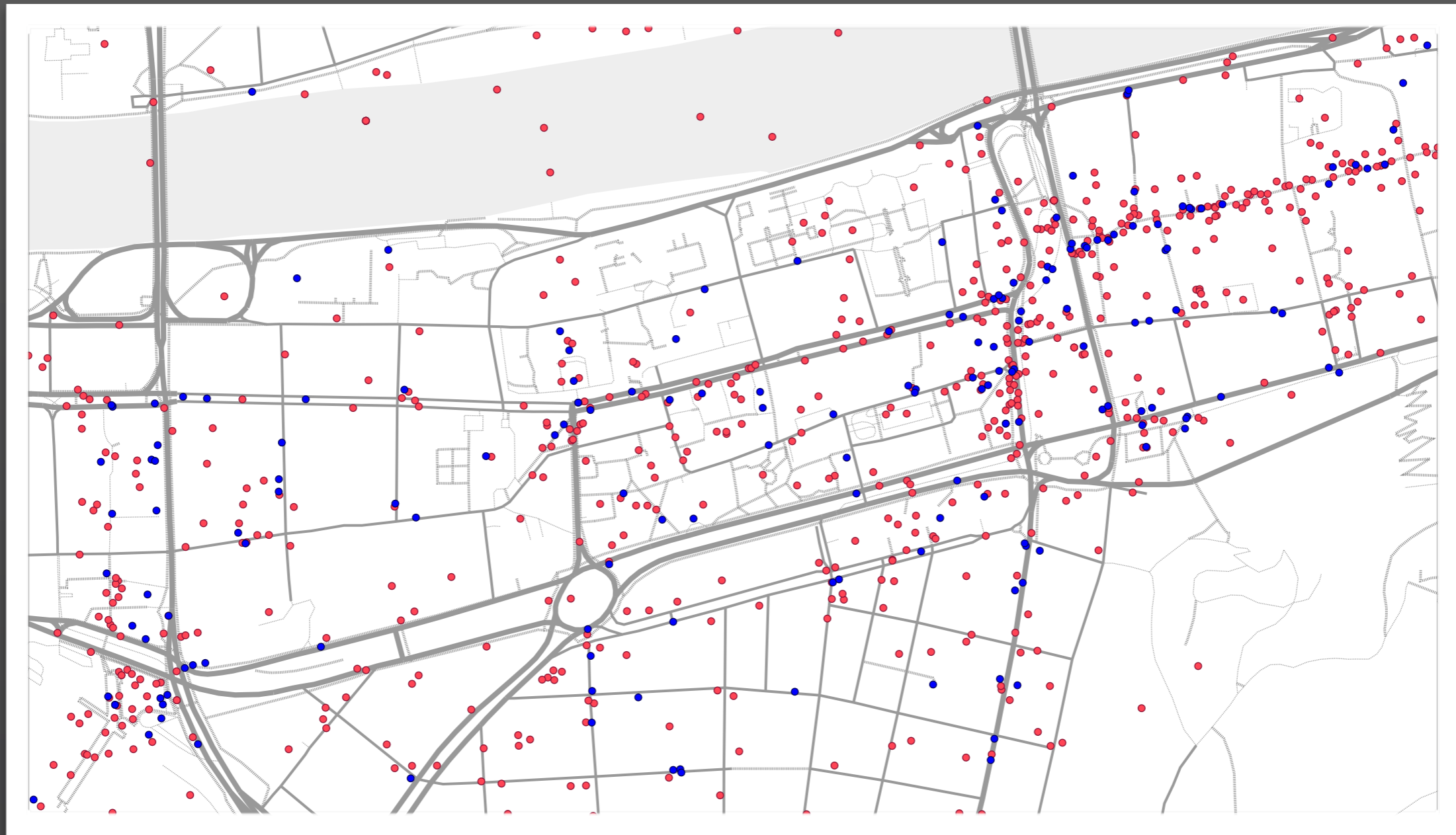
## ② quality

dataset completeness

temporal evolution

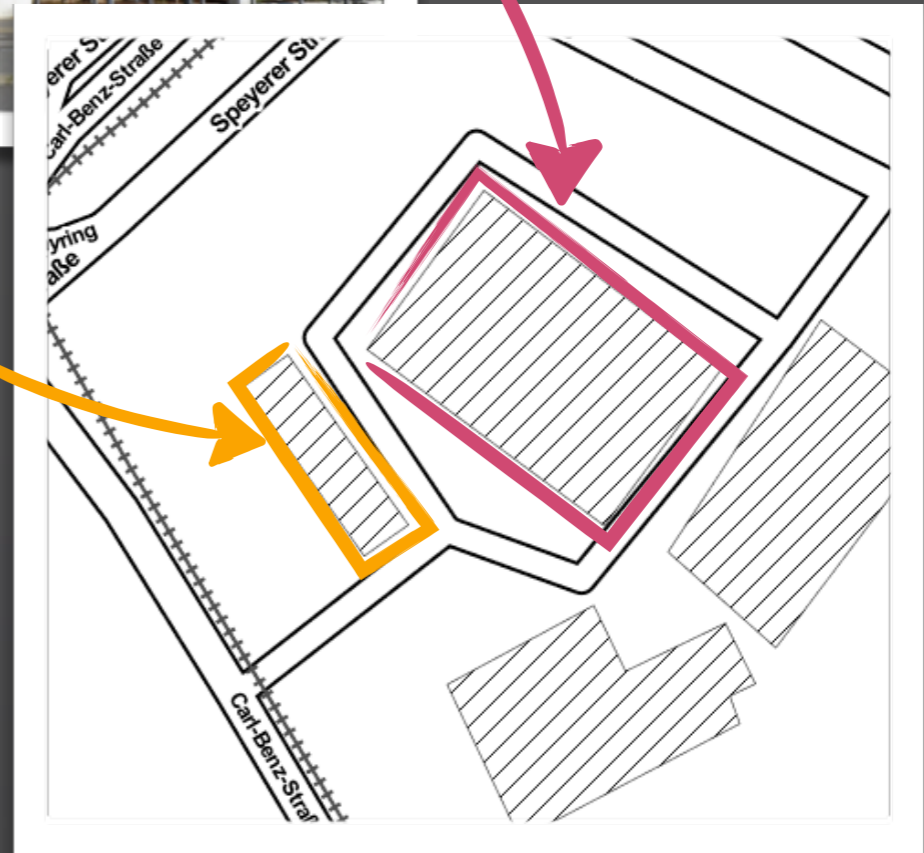
influence of user activity

# 3 fusion problem

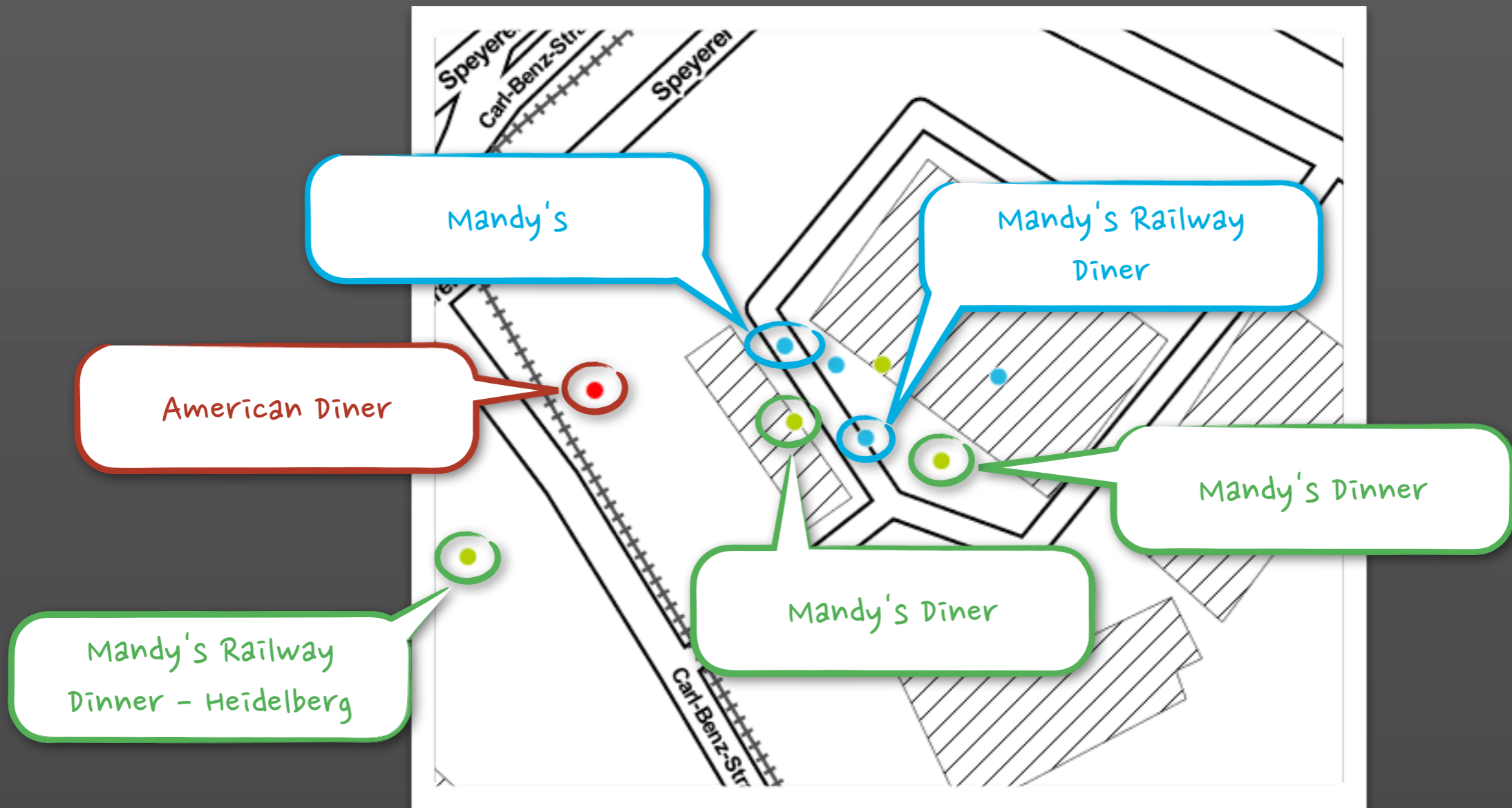


● Facebook ● Foursquare

# 3 fusion the mandy's problem

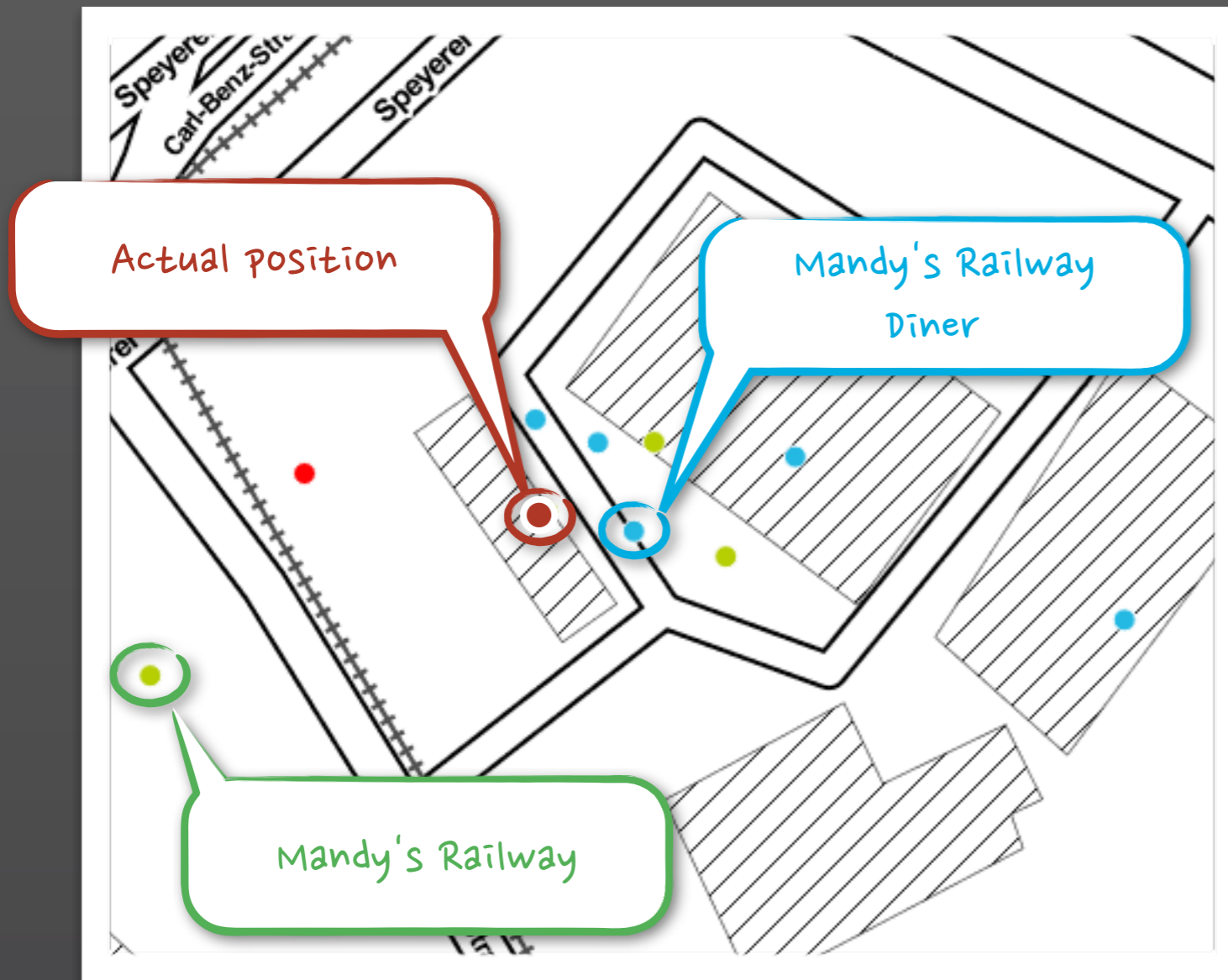


# 3 fusion the mandy's problem



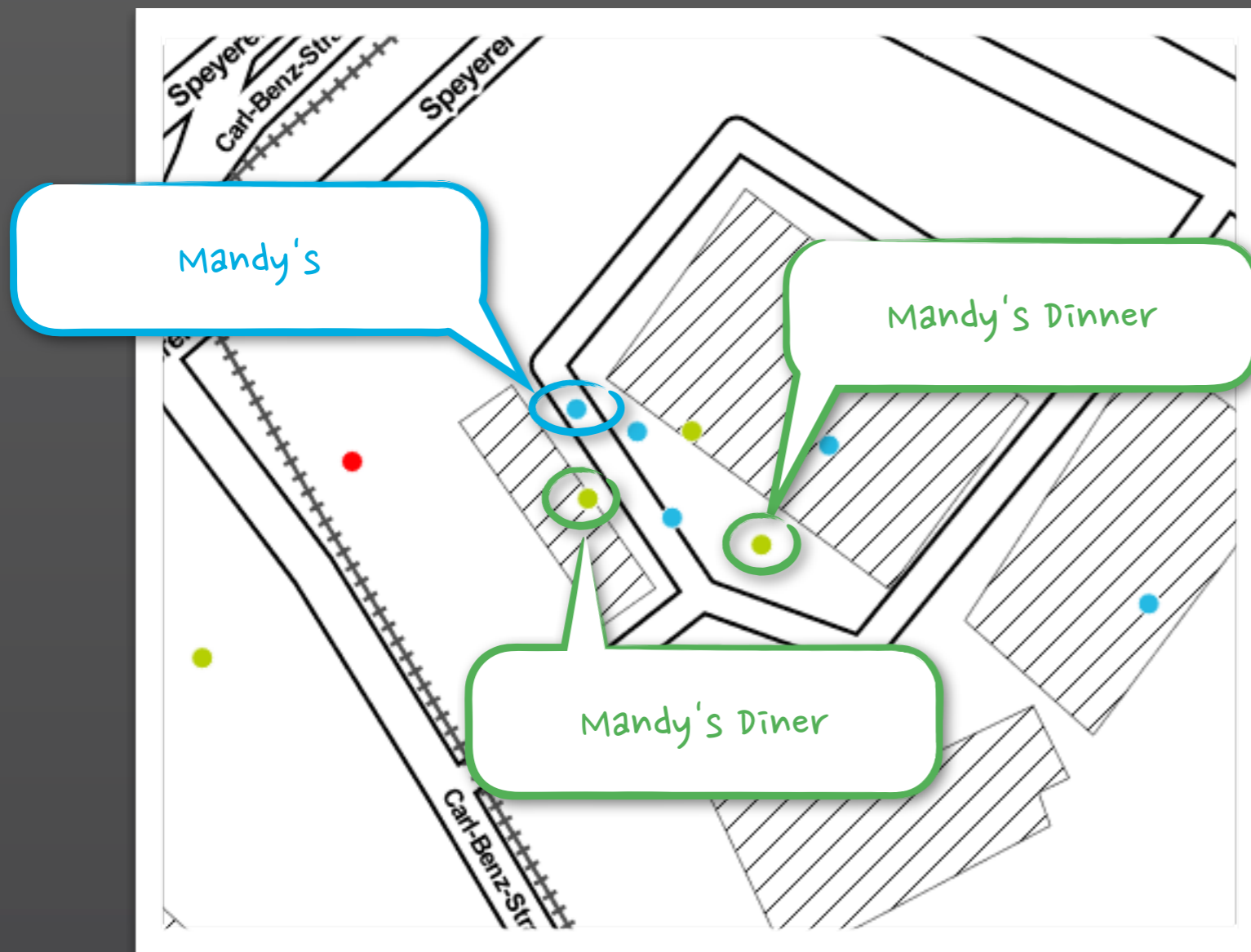


# 3 fusion geometry conflation



how to weight geometry?

### 3 fusion attribute conflation



which is the „most correct“ record?

how can the „most correct“ record be complemented?

thank you.  
questions?