

2010

-2'500 keys > 100 uses

-1'250 keys > 1'000 uses

2018

-11'000 keys > 100 uses

-4'450 keys > 1'000 uses

An excursion in to the world of OSM tagging presets

Simon Poole, SOTM 2018

In the beginning

JAVA Applet 2006 - 2007

- Bus Station amenity=bus_station
- Car Park amenity=parking
- Mini Roundabout highway=mini_roundabout
- Petrol Station amenity=fuel
- Pub amenity=pub
- Railway Station railway=station
- Tourist Attraction tourism=attraction
- Tourist Information tourism=information
- Motorway (highway) highway=motorway
- Trunk (highway) highway=trunk
- Primary (highway) highway=primary
- Secondary (highway) highway=secondary
- Tertiary (highway) highway=tertiary
- Unclassified (highway) highway=unclassified
- Residential (highway) highway=residential
- Rail (railway) railway=rail
- Tram (railway) railway=tram
- Subway (railway) railway=subway
- River (waterway) waterway=river
- Canal (waterway) waterway=canal

Potlatch 1 (early 2007)

- motorway: highway=motorway,ref=(type road number)
- trunk road: highway=trunk,ref=(type road number),name=(type road name)
- primary road: highway=primary,ref=(type road number),name=(type road name)
- secondary road: highway=secondary,ref=(type road number),name=(type road name)
- residential road: highway=residential,name=(type road name)
- unclassified road: highway=unclassified,name=(type road name)
- footpath: highway=footway,foot=yes
- bridleway: highway=bridleway,foot=yes
- byway: highway=unsurfaced,foot=yes
- permissive path: highway=footway,foot=permissive
- cycle lane: highway=cycleway,cycleway=lane,ncn_ref=
- cycle track: highway=cycleway,cycleway=track,ncn_ref=
- cycle lane (NCN): highway=cycleway,cycleway=lane,name=(type name here),ncn_ref=(type route number)
- cycle track (NCN): highway=cycleway,cycleway=track,name=(type name here),ncn_ref=(type route number)
- canal: waterway=canal,name=(type name here)
- navigable river: waterway=river,boat=yes,name=(type name here)
- navigable drain: waterway=drain,boat=yes,name=(type name here)
- derelict canal: waterway=derelict_canal,name=(type name here)
- unnavigable river: waterway=river,boat=no,name=(type name here)
- unnavigable drain: waterway=drain,boat=no,name=(type name here)
- railway: railway=rail
- tramway: railway=tram
- light railway: railway=light_rail
- preserved railway: railway=preserved
- disused railway tracks: railway=disused
- course of old railway: railway=abandoned
- mini roundabout: highway=mini_roundabout
- traffic lights: highway=traffic_signals
- bridge: highway=bridge
- gate: highway=gate
- stile: highway=stile
- cattle grid: highway=cattle_grid
- gate: highway=gate
- lock gate: waterway=lock_gate
- weir: waterway=weir
- aqueduct: waterway=aqueduct
- winding hole: waterway=turning_point
- mooring: waterway=mooring
- station: railway=station
- viaduct: railway=viaduct
- level crossing: railway=crossing

JOSM (late 2007)

- amenity=biergarten
- amenity=cafe
- amenity=college
- amenity=courthouse
- amenity=fast_food
- amenity=fire_station
- amenity=fuel
- amenity=grave_yard
- amenity=hospital
- amenity=kindergarten
- amenity=library
- amenity=parking
- amenity=pharmacy
- amenity=place_of_worship
- amenity=police
- amenity=post_box
- amenity=post_office
- amenity=prison
- amenity=pub
- amenity=public_building
- amenity=recycling
- amenity=refuge
- amenity=restaurant
- amenity=school
- amenity=telephone
- amenity=toilets
- amenity=university
- boundary=administrative
- boundary=civil
- boundary=national
- boundary=national_park
- boundary=political
- highway=bollard
- highway=bridge
- highway=bridleway
- highway=bus_halt
- highway=bus_station
- highway=bus_stop
- highway=byway
- highway=cattle_grid
- highway=crossing
- highway=cycleway
- highway=footway
- highway=ford
- highway=gate
- highway=incline
- highway=incline_steep
- highway=mini_roundabout
- highway=minor
- highway=motorway
- highway=motorway_junction
- highway=motorway_link
- highway=pedestrian
- highway=primary
- highway=primary_link
- highway=residential
- highway=secondary
- highway=service
- highway=services
- highway=steps
- highway=stile
- highway=stop
- highway=toll_booth
- highway=track
- highway=traffic_signals
- highway=trunk
- highway=trunk_link
- highway=unclassified
- highway=unsurfaced
- highway=viaduct
- historic=archaeological_site
- historic=castle
- historic=icon
- historic=monument
- historic=museum
- historic=ruins
- landuse=allotments
- landuse=basin
- landuse=brownfield
- landuse=cemetery
- landuse=commercial
- landuse=farm
- landuse=forest
- landuse=greenfield
- landuse=industrial
- landuse=landfill
- landuse=plaza
- landuse=quarry
- landuse=reservoir
- landuse=residential
- landuse=retail
- leisure=common
- leisure=fishing
- leisure=garden
- leisure=marina
- leisure=nature_reserve
- leisure=park
- leisure=park_bench
- leisure=pitch
- leisure=playground
- leisure=slipway
- leisure=stadium
- leisure=track
- leisure=water_park
- man_made=beacon
- man_made=gasometer
- man_made=lighthouse
- man_made=power_fossil
- man_made=power_hydro
- man_made=power_nuclear
- man_made=power_wind
- man_made=reservoir_covered
- man_made=survey_point
- man_made=tower
- man_made=water_tower
- man_made=works
- natural=bay
- natural=beach
- natural=cliff
- natural=coastline
- natural=fell
- natural=heath
- natural=marsh
- natural=mud
- natural=peak
- natural=scree
- natural=scrub
- natural=spring
- natural=water
- natural=wood
- place=city
- place=continent
- place=country
- place=county
- place=hamlet
- place=region
- place=state
- place=suburb
- place=town
- place=village
- railway=abandoned
- railway=crossing
- railway=disused
- railway=halt
- railway=light_rail
- railway=narrow_gauge
- railway=preserved
- railway=rail
- railway=station
- railway=subway
- railway=tram
- railway=viaduct
- shop=bakery
- shop=butcher
- shop=chandler
- shop=supermarket
- tourism=attraction
- tourism=camp_site
- tourism=caravan_site
- tourism=guest_house
- tourism=hostel
- tourism=hotel
- tourism=information
- tourism=motel
- tourism=picnic_site
- tourism=theme_park
- tourism=viewpoint
- waterway=aqueduct
- waterway=botyard
- waterway=canal
- waterway=dock
- waterway=drain
- waterway=lock_gate
- waterway=mooring
- waterway=river
- waterway=turning_point
- waterway=waste_disposal
- waterway=water_point
- waterway=weir

A, perhaps curated, template containing suggested keys and associated values for specific real world objects.

Order into Chaos

Preset systems

Editor	Preset system	File type
JOSM	JOSM	XML
iD	iD	JSON
Potlatch 2	Custom	XML
Merkaartor	Custom	XML
Vespucci	JOSM+	XML
Go Map!!	iD	JSON
MAPS.ME	Custom	XML
OsmAnd	Custom	XML

Top (relevant) editors ordered by number of edits 2017

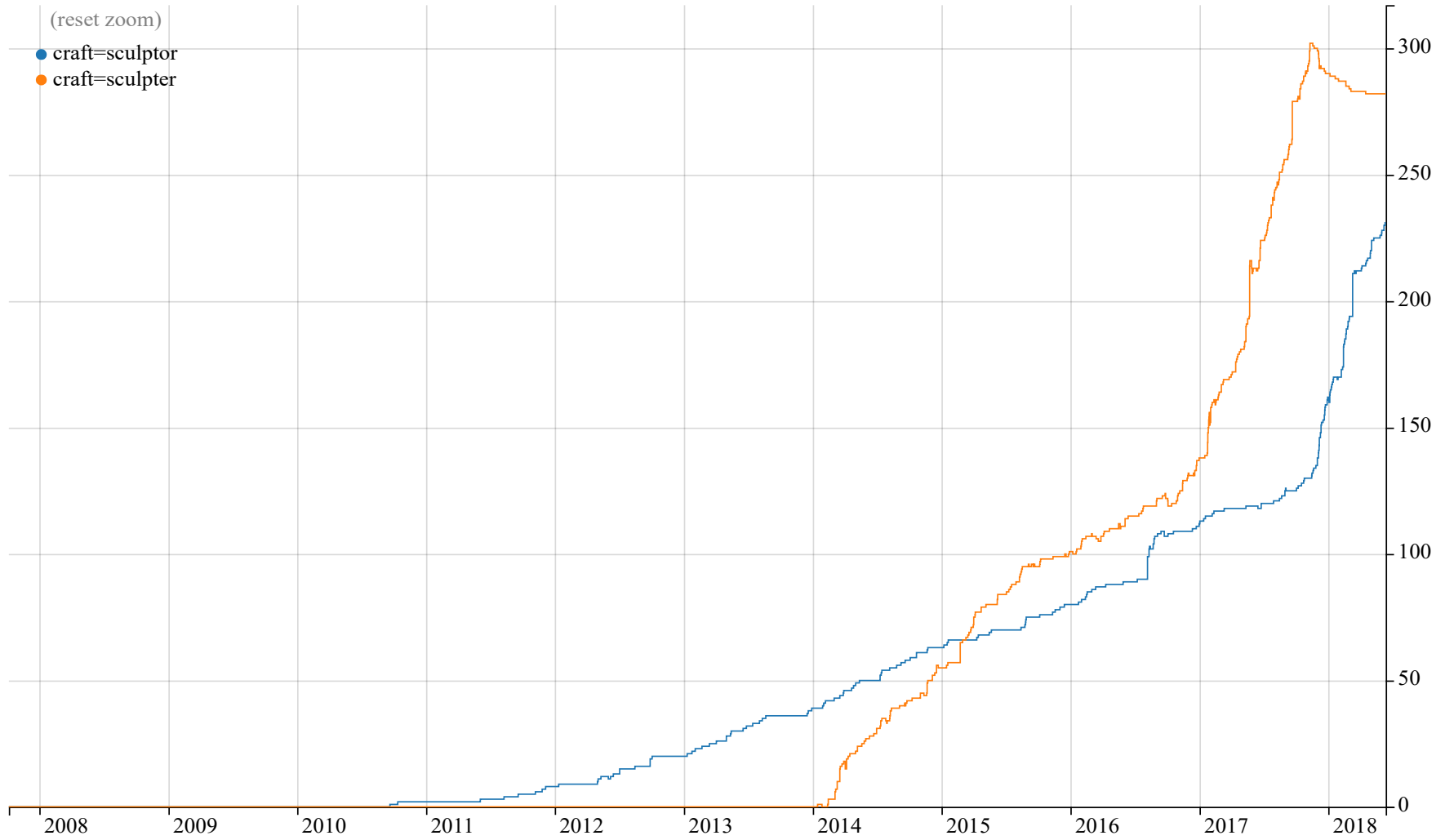
OSM2Go utilizes JOSM format, OSMContributor iD format

Preset field types

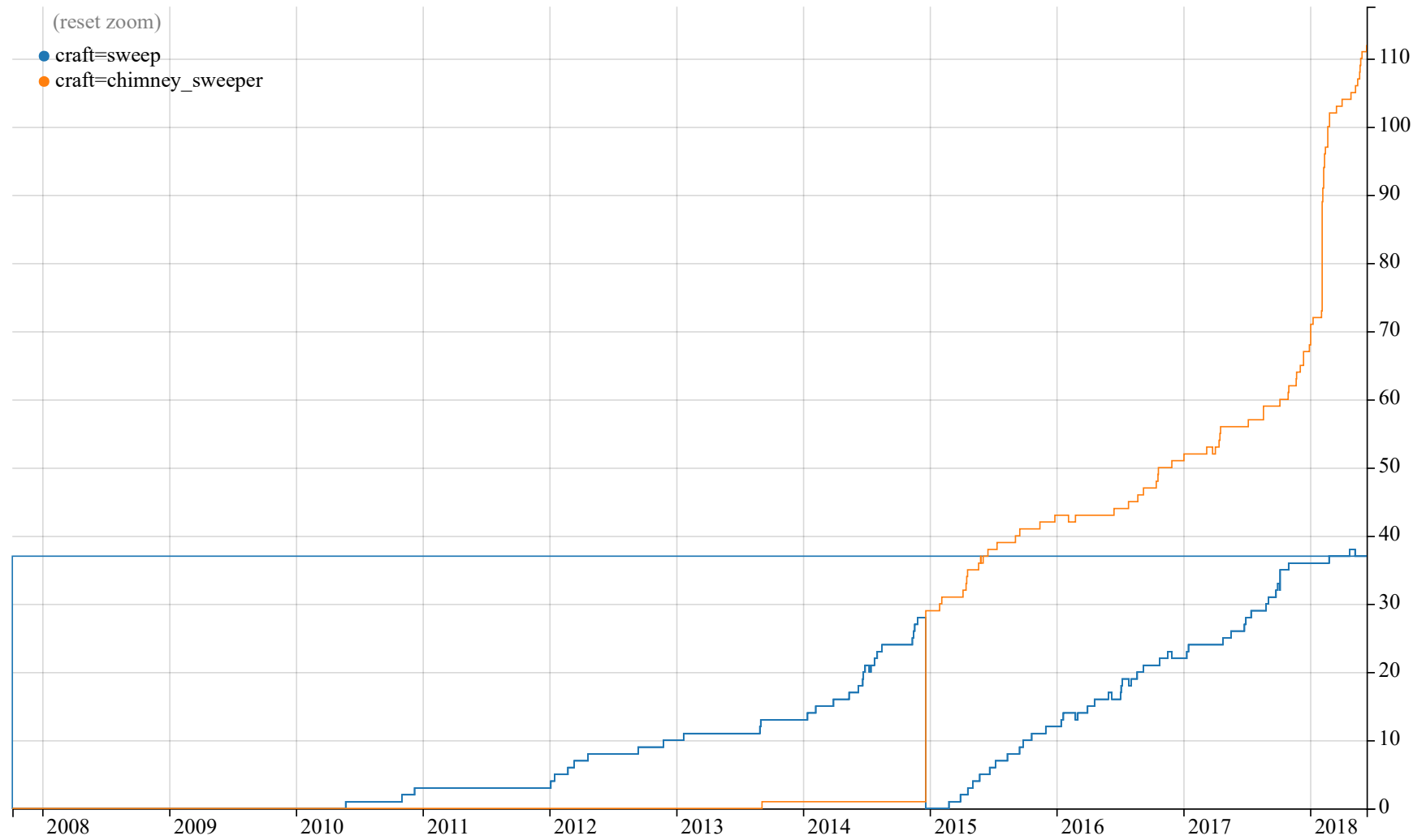
- Fixed key – values
- Key with text field
- Key with yes/no value (check box)
- Key with multiple “fixed” values (combo and multiselect)
- ...
- ID has further 20 field types

Do presets matter?

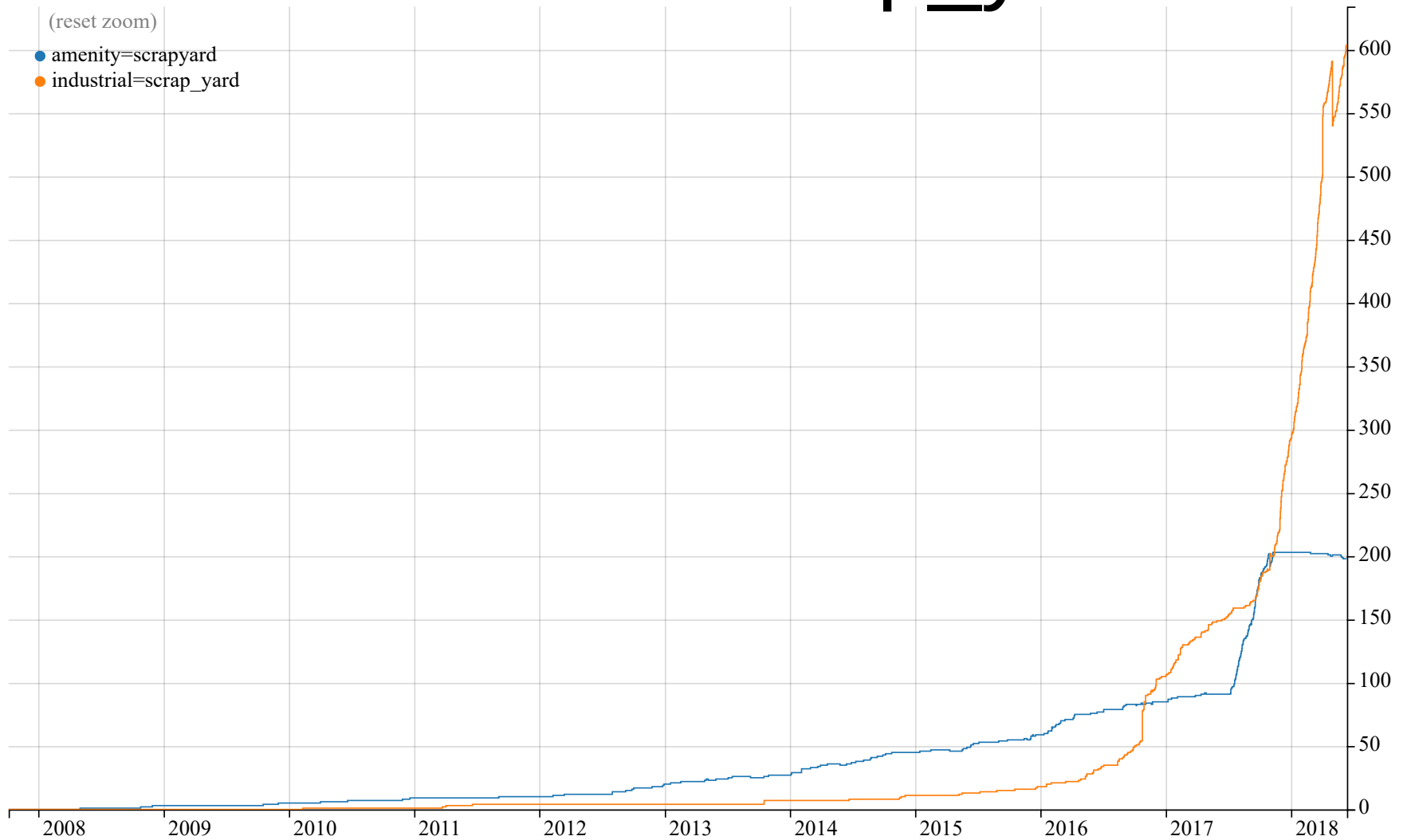
sculpter vs sculptor



sweep vs. chimney_sweeper



amenity=scrapyard vs. industrial=scrap_yard



iD vs JOSM – fight!

- Convert iD presets to JOSM format (including taginfo queries)

```
<combo key="kerb" text="Curb"  
  values="no,normal,flush [road hump],yes,lowered,raised,  
         dropped,rolled,none,flush_[road_hump],unknown,  
         driveway,beveled,flush,flat,0.03,sloped,regular"
```

...

Edit feature

Point Line Area Save 1

Street Crossing i

All fields

Type island;uncontrolled i

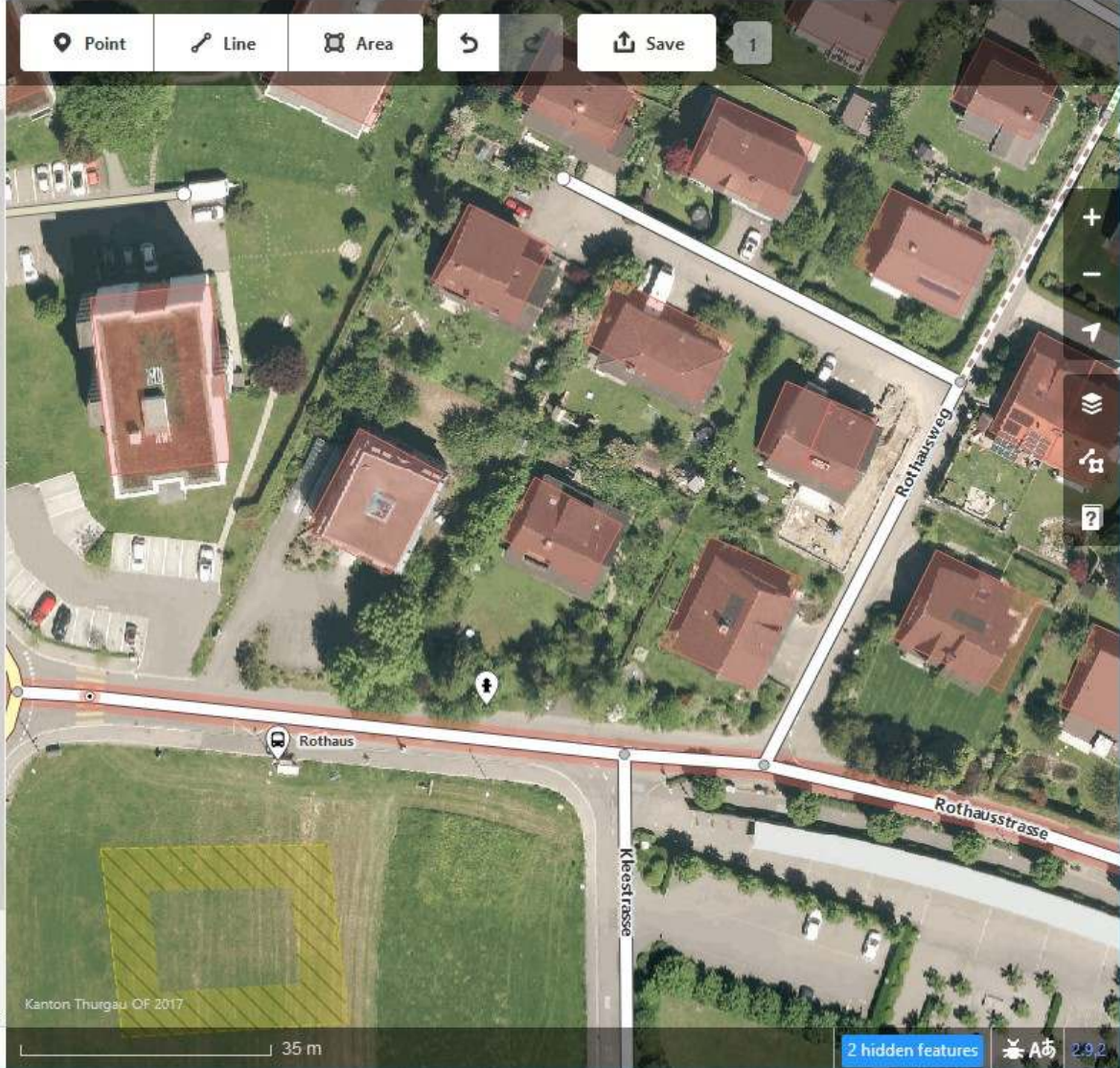
Curb lowered, flush, raised... i

- none
- sloped
- flush [road hump]
- beveled
- regular
- driveway
- flush [road hump]
- 0.03

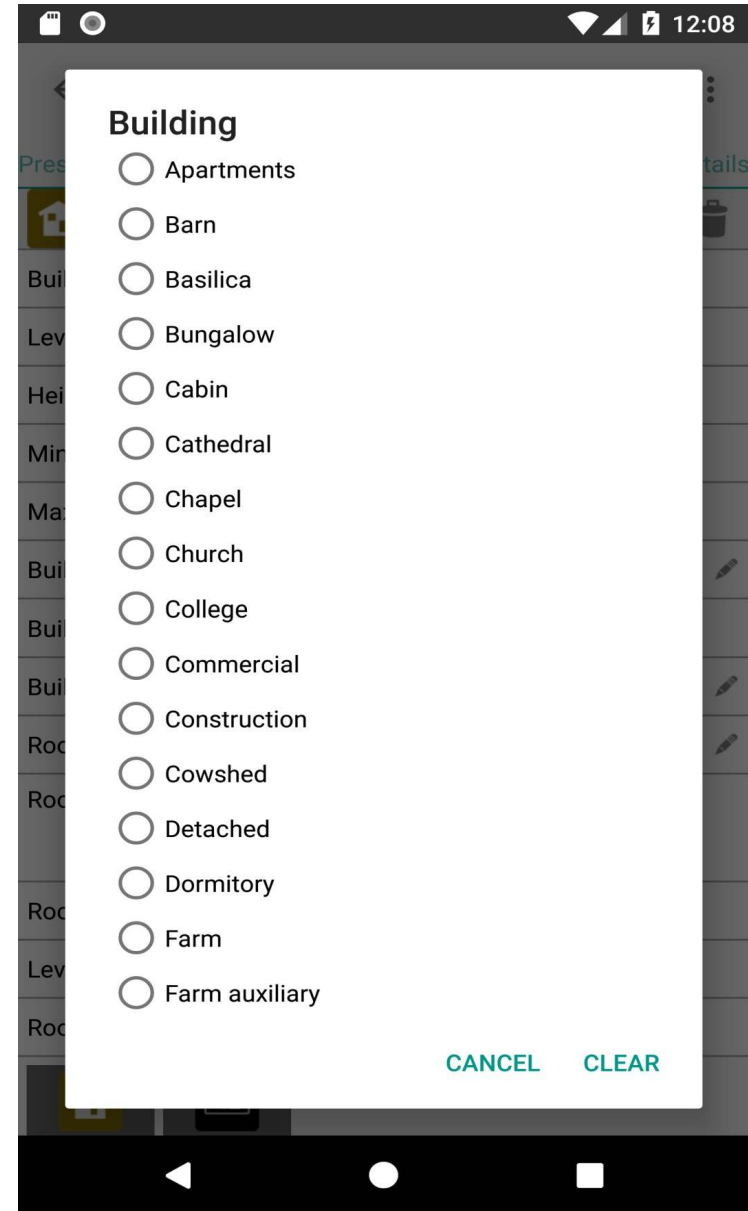
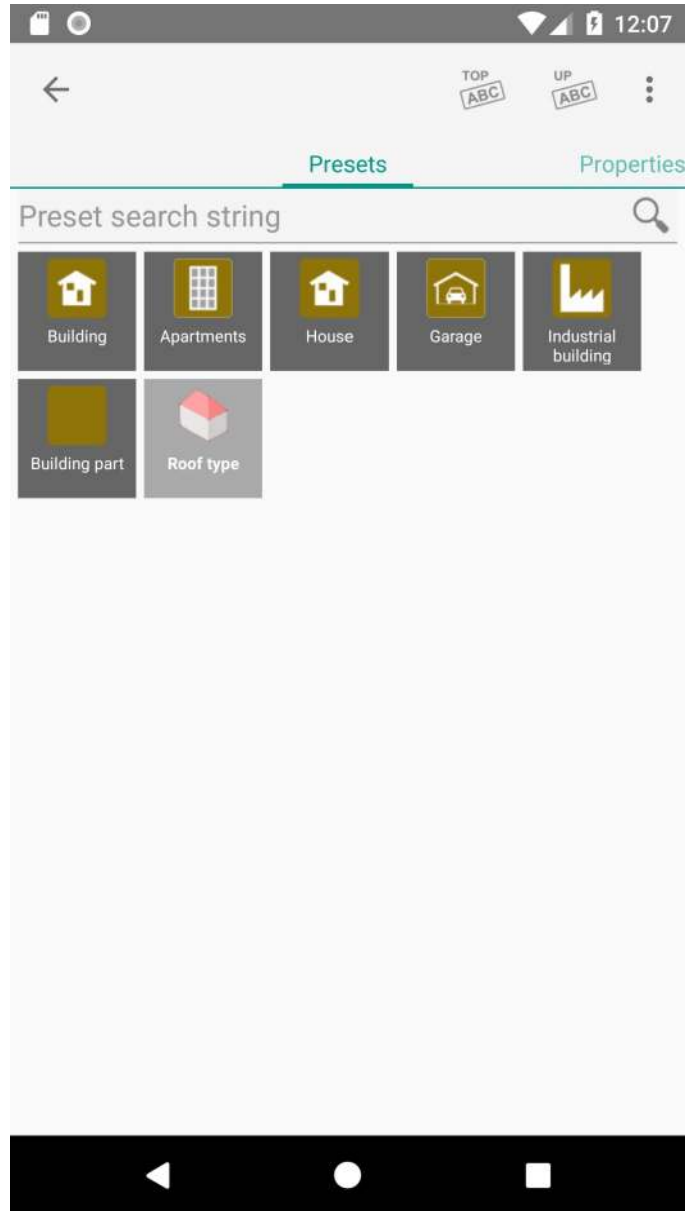
highway crossing i

All relations (0)

View on openstreetmap.org



- Convert iD presets to JOSM format (including taginfo queries)
- Expand lists of values for top level “object” keys



- Convert iD presets to JOSM format (including taginfo queries)
- Expand lists of values for top level “object” keys
- Expand 1st level sub-values lists (example natural=water, natural=...)

	iD	JOSM	JOSM 2007	Vespucci
Items	1'909	1'224	180	1'624
Unique keys	499	594	42	692
Unique values	2'339	1'718	222	2'102

A win for iD!!

.... well may be not....

	iD	ID n. TagInfo	JOSM	JOSM 2007	Vespucci
Items	1'909	945	1'224	180	1'624
Unique keys	499	244	594	42	692
Unique val.	2'339	985	1'718	222	2'102

Tag	iD	iD no TagInfo	JOSM	Vespucci	Count
advertising=billboard	X	X	X	X	20341
advertising=column	X	X	X	X	8289
aerialway=abandoned	X				30
aerialway=aerodrome	X				20
aerialway=cable_car	X	X	X	X	1303
aerialway=canopy	X				31
aerialway=chair_lift	X	X	X	X	8518
aerialway=construction	X				18
aerialway=disused	X				15
aerialway=drag_lift	X	X	X	X	4651
aerialway=gondola	X	X	X	X	1385
aerialway=goods	X	X	X	X	1855
aerialway=j-bar	X		X	X	178
aerialway=magic_carpet	X	X	X	X	1765
aerialway=mixed_lift	X	X	X	X	58
aerialway=no	X				271
aerialway=platter	X	X	X	X	3238
aerialway=proposed	X				19
aerialway=pylon	X	X	X	X	41773
aerialway=rope_tow	X	X	X	X	1053
aerialway=station	X	X	X	X	26533
aerialway=t-bar	X	X	X	X	2487
aerialway=taxilane	X				22
aerialway=unknown	X				60
aerialway=yes	X				451
aerialway=zip_line	X				472
aeroway=aerodrome	X	X	X	X	40608
aeroway=aerodrome / military=airfield			X		1847
aeroway=airstrip	X				4225
aeroway=approach_light	X				301
aeroway=apron	X	X	X	X	27841
aeroway=gate	X	X	X	X	13241
aeroway=hangar	X	X	X	X	24137

Idea: compare to a reference

Reference data generation (from taginfo):

- Iterate over “object” keys
- Generate tags for all values with more than 500 occurrences
- Iterate over subkeys and add tags for values with more than 100 occurrences
- Remove rubbish

From the „Collective Database“ guideline:

“Primary feature” means data from a key value pair, or combination thereof, but not inclusive of properties (e.g. colour, brand, operator, or width). For purposes of illustration, you may reference http://wiki.openstreetmap.org/wiki/Map_Features#Primary_features.

aerialway aeroway amenity barrier boundary
building craft emergency geological highway
historic landuse leisure man_made military
natural office place power public_transport
railway route shop sport (!) tourism waterway

advertising (?) airmark attraction cemetery
entrance golf healthcare indoor landcover
pipeline playground traffic_sign
traffic_sign:forward traffic_sign:backward

Reference tag list

- Contains 1176 “top-level” tags
- 2’300 tag combinations with sub-tags

	iD	ID n. TagInfo	JOSM	JOSM 2007	Vespucci
Items	1'909	945	1'224	180	1'624
Unique keys	499	244	594	42	692
Unique val.	2'339	985	1'718	222	2'102
Reference	52%	32%	38%	6%	43%

service:bicycle:repair=yes

“classical” OSM tagging

`top_level_key=value`

`value=sub_value(s)`

`shop=clothes`

`clothes=women;men`

“new” OSM tagging

`top_level_key=value`

`value:sub_value=yes/no/?`

`shop=clothes`

`clothes:women=yes`

`clothes:men=yes`

“newer” OSM tagging

`top_level_key=value`

`detail:value:sub_value(...)=?`


`shop=bicycle`

`service:bicycle:cleaning=yes`

`service:bicycle:parts=yes`

Edit feature ✓

Point Line Area ↻ ↶ Save 1

 **Bicycle Shop** i

▼ All fields

Name i
Common name (if any) +

Operator i
Unknown

Address i
Street ▼ 123
Postcode ▼ City ▼

- Services** 🗑️ ↻ i
- tools × Add...
- cleaning
 - parts
 - Bicycle Sales and Service
 - sales
 - bicycle
 - mtb
 - ebike



But what about

shop=bicycle

service:bicycle:opening_hours=?

service:bicycle:parts:opening_hours=?

service:bicycle:parts:brand=?

service:bicycle:tools:opening_hours=?

service:bicycle:tools:brand=?



English

Data from: 2018-07-25 00:58 UTC

service:bicycle

[KEYS](#) · [TAGS](#) · [RELATIONS](#) · [PROJECTS](#) · [REPORTS](#) · [ABOUT](#)

SEARCH RESULTS

You were searching for: service:bicycle

Keys Values Relation types Roles Full text

Keys

Page 2 of 9 JSON Displaying 18 to 34 of 145 items

Count	Key
88	service:bicycle:dealer
52	service:bicycle:chaintool
49	service:bicycle:bike
47	service:bicycle:rental:name
47	service:bicycle:rental:opening_hours
45	service:bicycle:charging
41	service:bicycle:rental:ref
39	service:bicycle:screwdriver
29	service:bicycle:spare_parts
26	service:bicycle:vending
15	service:bicycle:wheel
14	service:bicycle
12	service:bicycle:showroom
11	service:bicycle:school
10	service:bicycle:wash
9	service:bicycle:hire
8	service:bicycle:parking



Good:

- reflects actual use
- reduces work and maintenance for developers
- discover keys that you don't know about

Problematic:

- breaks the “curated” assumption
- taginfo currently only supports limited context for value queries with combinations
- no semantic information on keys

Edit feature

Point Line Area Save 1



Construction

i

All fields

Name

i

Common name (if any)

+

Type

i

yes, house, residential...

yes

house

residential

motorway

trunk

tertiary

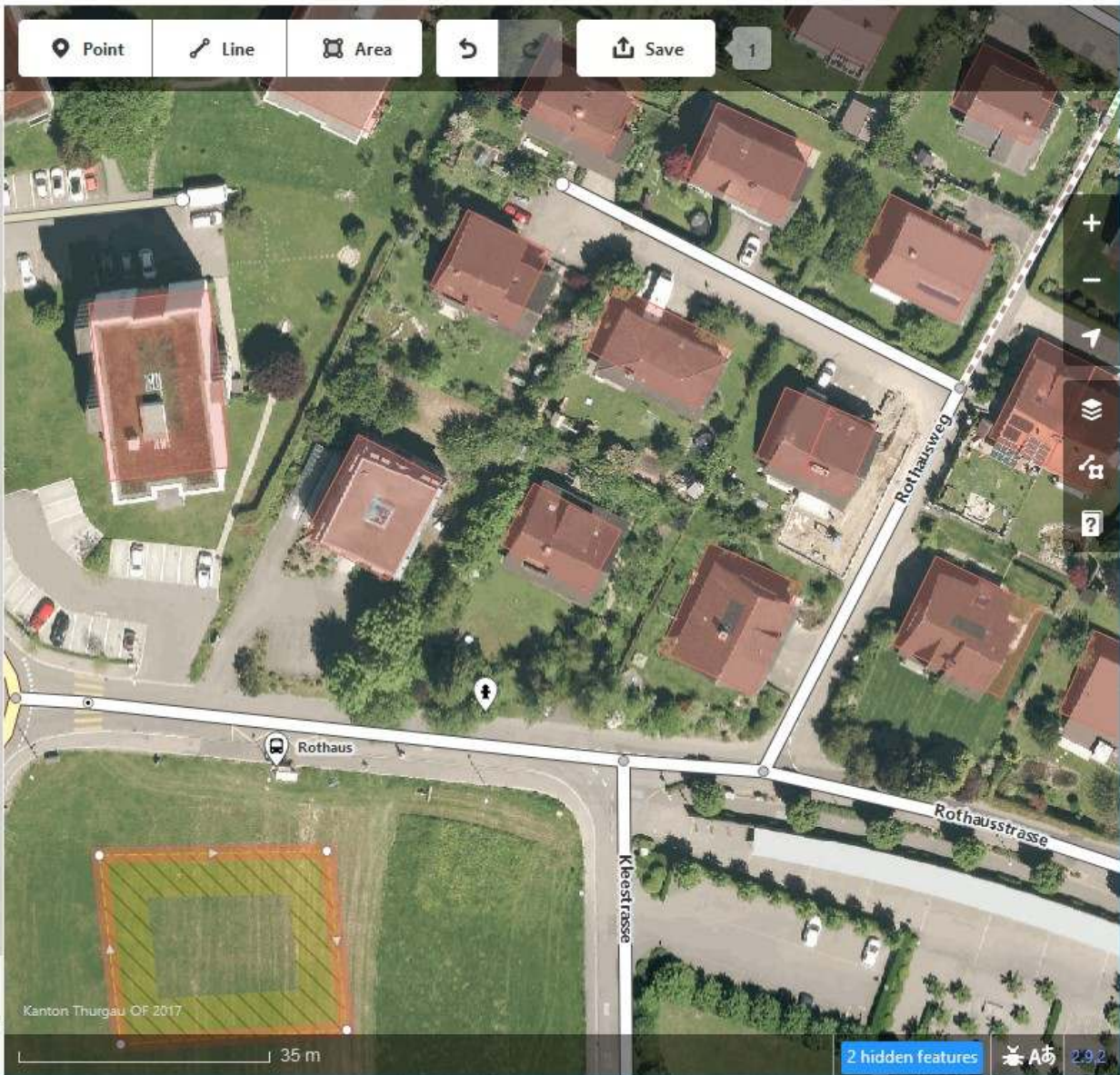
secondary

motorway link

+

All relations (0)

+



What about generating presets “completely”
from taginfo?





Vespucci “Auto-Presets”


- taginfo keyword search, returns aka tags
- Remove tags for which we already have a preset
- Retrieve taginfo wiki-page information for remaining tags, if none, discard
- Create basic preset
- Retrieve combination tags from wiki and taginfo (if any)
- Massage combination tags
- Add some hard-wired tags



Android status bar: 3:19, battery, signal, Wi-Fi.

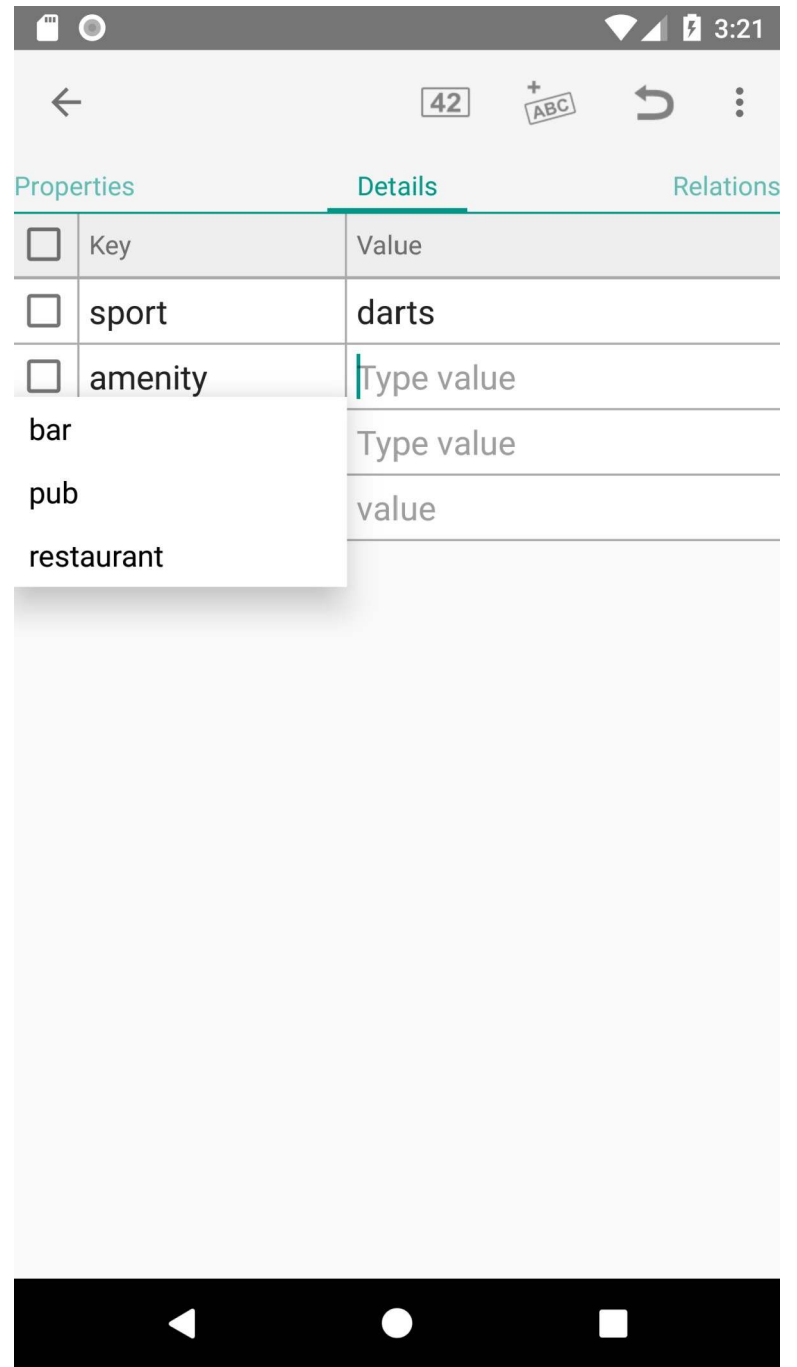
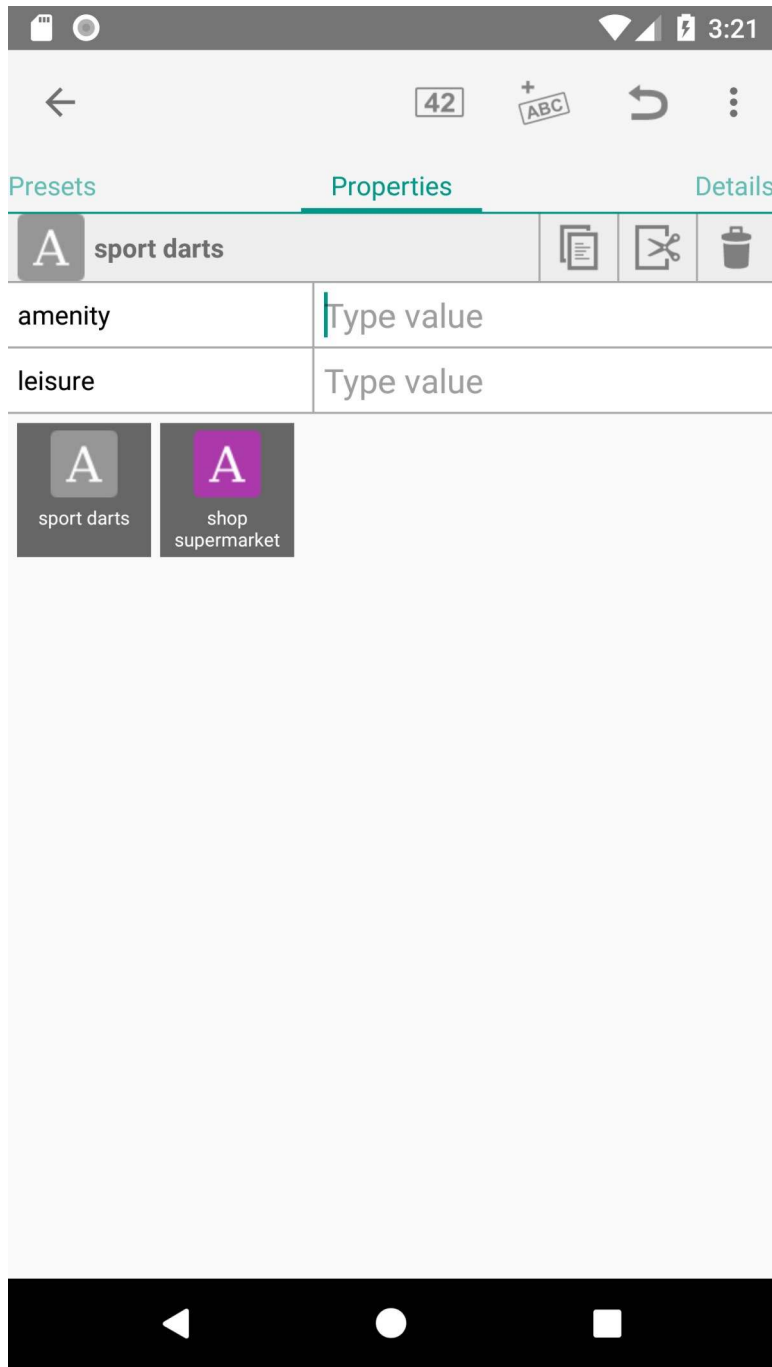
Navigation bar: Back, 42, ABC, Refresh, Menu.

Page tabs: Presets, Properties, Details.

Header:  shop supermarket   

Wheelchairs	Type value
addr:housenumber	Type value
name	Type value
Opening Hours	Tap to edit 
addr:street	Type value
addr:postcode	Type value
building	Type value
operator	Type value
addr:city	Type value
Level	Type value

Footer:  shop supermarket  sport darts



Points not touched on

- Naming and translation of presets
- Depth (how detailed is the tagging?)
- Diversity

- Thanks to Jochen Topf, Martin Raiffer and Roland Olbricht for their indispensable tools
- And to Tom Hughes for bearing with me while I overloaded taginfo