netBravo	

netBravo Open Data Format

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netBravo Aggregated Open Data Format

NetBravo collect a large amount of measures coming from crowd sourcing measures. In order to respect privacy of collected data and compact the size of released files, NetBravo system produces every month a series of aggregated datasets and publish them on the EU Open Data Portal (ODP - https://open-data.europa.eu/).

Data is aggregated and projected to a space grid according to Grid_ETRS89-GRS80z1_1S, Grid_ETRS89-GRS80z2_1S and Grid_ETRS89-GRS80z3_1S [i].

Datasets consists of three different aggregates:

- Broad Band Speed test measurements
- Cellular signal strength measures
- Wi-Fi signal strength

Composed by five shape file components zipped in one single archive:

- .prj: the shape file project
- .shp: geometry file
- .shx: geometry index file
- .csv: aggregated nebravo file
- .dbf: attribute database

Generated files follow the following naming template:

netBravo-OD-EU-*<aggregate type>*-*<grid resolution>*.zip

in which

"Aggregate type" can be: *Broadband* for speed test measurements; *Cellular* for mobile signal strength and *Wifi* for Wi-Fi hotspot signal strength.

"*Grid resolution*" is the resolution of the projection over the geospatial grid and can be 100m or 1km.

Data output is limited to the following continental European boundaries (45600 x 51600):

- S-N 34° ≤ degree ≤ 72°
- E-W -32° ≤ degree ≤ 11°

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[1] INSPIRE.D2.8.I.2 Data specification on Geographical Grid Systems – Technical Guidelines. http://inspire.jrc.ec.europa.eu/documents/Data_Specifications/INSPIRE_DataSpecification_GG_v3.1.pdf

CSV files are published in the following format:

Broadband Speed Test

Field name	Field type	Description	Example
Cell grid code	string	Code of the grid cell according with the Grid_ETRS89 requisite	1kmN0987E1817
X	Int	X coordinate of the cell grid	1817000
Y	Int	Y coordinate of the cell grid	987000
Type	String	Type of the connection used	Wi-Fi / Cellular
Technology	String	Technology of the connection used	2G/3G/4G for cellular strength. 2.4/5 GHz for WiFi strength
Download	Double	Download speed in Kbit per second	12896.0
Upload	Double	Upload speed in Kbit per second	22800.0
Ping	Double	Ping speed in milliseconds	86.0
Measurements	Double	Number of the measurements	4.0

Cellular and WiFi measures

Field name	Field type	Description	Example
Cell grid code	string	Code of the grid cell according with the Grid_ETRS89 requisite	1kmN0987E1817
X	Int	X coordinate of the cell grid	1817000
Y	Int	Y coordinate of the cell grid	987000
Type	String	Type of the connection used	Wi-Fi / Cellular
Technology	String	Technology of the connection used	2G/3G/4G for cellular strength. 2.4/5 GHz for WiFi strength
Strength	Double	Strength of the signal in dBm	-101.0
Deviation	Double	Standard deviation	6.0
Measurements	Double	Number of the measurements	4.0