

ISRaCML: A 2017 Dataset of Cellular Microwaves Links from Israel

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1. Introduction

We presents the **ISRaCML** dataset, commercial CML data from across Israel, collected between January to August 2017 from 3 cellular providers: Pelephone, Orange and Cellcom. The dataset is unique in its inclusion of multiple configurations: instantaneous 15 minutes and 24-hour (daily) samples values, 15 minutes min-max samples and 7 days min-max values.



2. Dataset

- ❖ The dataset spans from January 1 – August 31, 2017.
- ❖ Nationwide network spanning diverse climatic zones with link frequencies in the 17–23 GHz (K-Band) range and path lengths from 0.5 to 16 km.
- ❖ Ground Truth: 83 rain gauges operated by the Israel Meteorological Service (IMS) for ground truth validation.

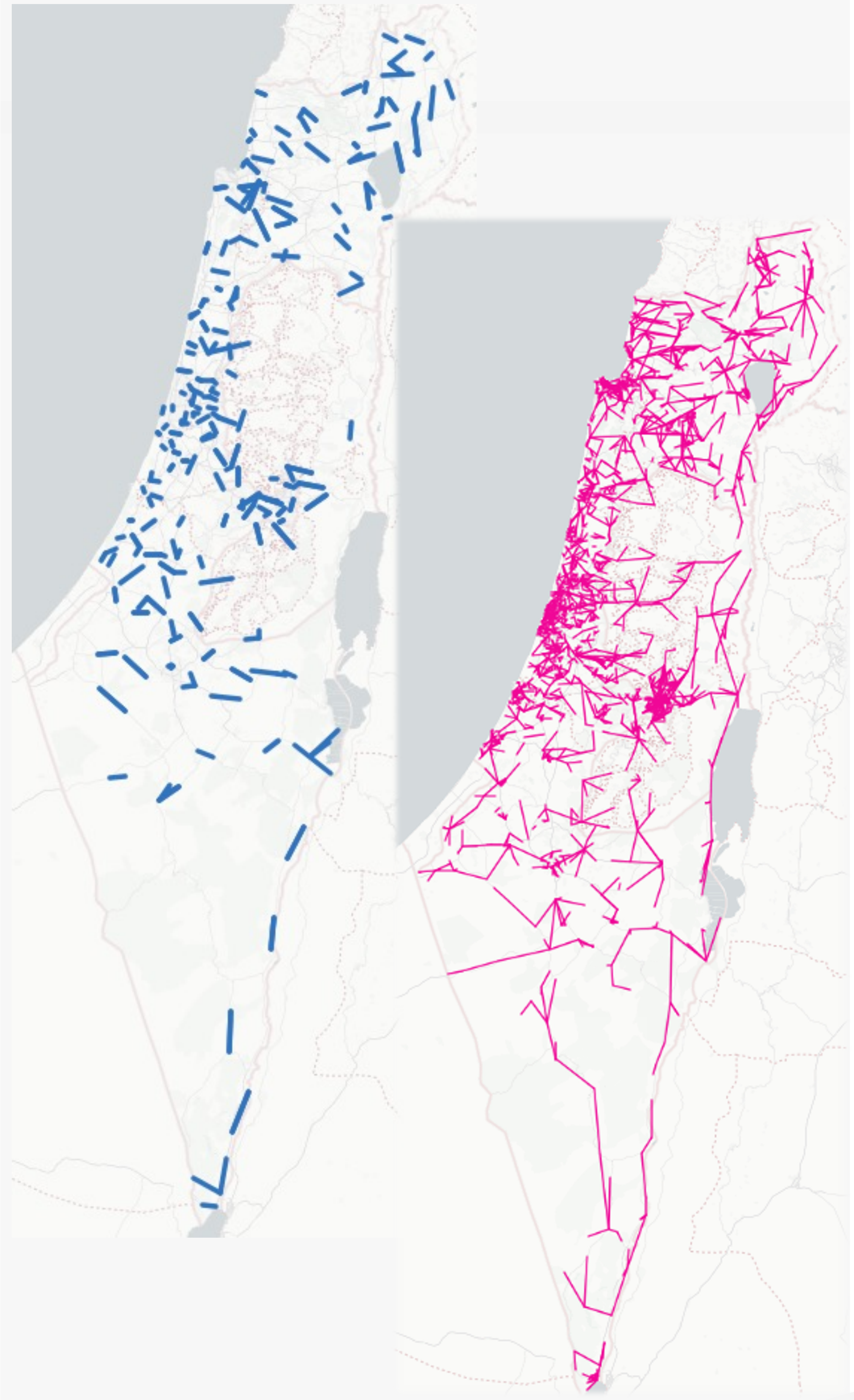
3. Data Diversity

Sampling Interval	Configuration	# of Links
15 min	Instantaneous	519
	min-max	71
Daily	Instantaneous	1514*
Daily (over a 7-day rolling window)	min-max	2627 ^T

* The number of links that report a single instantaneous measurement daily also report the daily min-max values (over a 7-day rolling window (with 1-day stride), and thus, are included in ^T

3. Links Map

Spatial coverage of both 15 minutes and daily sampling. Blue links refer to 15 minutes, pink refer to daily samples.



References

- [1]. Fencel, M. Nebuloni, R., Bares, V., Bletner, N., Cazzaniga, G., Chwala, C., ... & Zheng, X. (2023). **Data formats and standards for opportunistic rainfall sensors**. *Open Research Europe*, 3, 169-169.