53. An OpenStreetMap Mapathon as an Open Geomatics Laboratory: Education and Crowdmapping

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Since 2010, the University of Bologna's DICAM Geomatics team has organised mapathons involving engineering students and welcoming anyone regardless of expertise. Through interpretation of high-resolution satellite imagery, participants enrich OpenStreetMap (OSM) vector data in areas with absent, outdated or incomplete mapping worldwide, supporting responses to actual or potential natural or human-induced disaster risks. This combines technical practice with social relevance in university education. After twenty editions, this paper describes the adopted format and investigates its effectiveness, by analysing the data collected during the last event, held in spring 2026. Introductory teaching and guided editor training preceded autonomous building digitisation with instructor support, combining image interpretation, geometric delineation, attribute assignment and open geographic data publication. PRE and POST questionnaires with aggregate project-level contribution statistics reveal that participants' confidence in OSM editing and in tracing building geometry increased significantly (respectively, from 3.0 to 4.3 and from 3.5 to 4.1 on a five-point Likert scale). Ratings of humanitarian usefulness and data quality responsibility remained high from baseline. Project records documented substantial building creation or modification. Imagery interpretability was the principal reported technical limitation, emphasising the importance of building awareness about uncertainty management and critical judgment in geomatics. Despite the limitations due to small sample size, self-reported outcomes and absence of independent validation, this study provides a documented, potentially transferable format for integrating collaborative mapping into geomatics curricula, connecting practical geospatial workflows with reflection on geographic representation and the societal responsibilities of mapping.