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Titolo della tesi [Multi-dimensional GeoWeb platforms for citizen science and civic engagement applications](#)

Abstract in italiano *Affermatasi nel contesto del GeoWeb 2.0 e favorita dall'ampia diffusione di dispositivi mobili, la pratica del VGI (Volunteered Geographic Information) ha rappresentato un punto di svolta nella storia dei GIS (Sistemi Informativi Geografici) rendendo la creazione e la condivisione Web di contenuti geografici operazioni a portata di tutti. Questo lavoro si concentra in dettaglio sul sottoinsieme delle applicazioni di VGI note come citizen science (letteralmente "scienza dei cittadini") e basate sulla partecipazione dei comuni cittadini in progetti scientifici legati alla raccolta e/o analisi di informazioni geografiche. Cuore del lavoro, in particolare, è lo sviluppo di un'architettura interamente basata su software libero e a codice aperto (FOSS, Free and Open Source Software) in grado di garantire le tipiche funzionalità dei sistemi di citizen science, ovvero: la raccolta sul campo di dati georeferenziati (anche multimediali) mediante dispositivi mobili, la memorizzazione e gestione dei dati tramite un meccanismo di autenticazione, la pubblicazione Web dei dati secondo protocolli standard, e l'interazione Web con i dati mediante piattaforme multi-dimensionali. Sono realizzate infatti, da un lato, diverse applicazioni Web 2D per un accesso ai dati ottimizzato da dispositivi desktop e dispositivi mobili, a dall'altro una piattaforma 3D (mediante la tecnologia dei globi virtuali) che offre un insieme di funzionalità avanzate volte alla collaborazione. L'architettura sviluppata è testata su una serie di applicazioni pratiche inerenti le discipline di turismo e cultura, monitoraggio urbano, progettazione urbana, e gestione dell'acqua. Il lavoro offre anche uno studio complementare sull'accuratezza del posizionamento da dispositivi mobili, che rappresenta un fattore cruciale per valutare la qualità del VGI.*

Abstract in inglese *Driven by the rise of GeoWeb 2.0 and the non-stop spread of mobile devices, the practice of Volunteered Geographic Information (VGI) has revolutionized the history of Geographic Information Systems (GIS) by making creation and Web sharing of geospatial data within reach for anyone. This research focuses on the VGI subcategory of citizen science, which concerns citizens' participation into scientific projects involving collection and/or analysis of geospatial information. An architecture entirely based on FOSS (Free and Open Source Software) is developed, which allows to fulfill the typical citizen science requirements, i.e. collection of georeferenced data (including multimedia) from mobile devices; data storage and management through an authentication mechanism; data Web publication through standard GeoWeb protocols; and data Web interaction on multi-dimensional platforms. Different 2D Web applications are built providing an optimized data access for desktop devices and mobile devices. A virtual globe 3D platform is also designed which provides a pool of advanced collaboration-enabling functionalities. The implemented architecture is tested on several civic engagement case studies related to tourism and culture, urban monitoring, urban planning, and water management. A complementary study on the geolocation accuracy of current mobile devices, which represents a crucial factor for the evaluation of VGI quality, is also addressed.*

Tipo di documento *Tesi di dottorato*

Appare nelle tipologie: [Tesi di Dottorato](#)

File allegati

File	Dimensione	Formato	
2014_03_PhD_Minghini.pdf accessibile in internet per tutti	16.94 MB	Adobe PDF	Visualizza/Apri

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During the last two decades Web mapping applications have gradually evolved from being mostly static, poorly



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interactive and with limited functionality (few data accessible and few functions available on them) to dynamic, interactive and resembling the traditional desktop counterparts (Plewe 2007). Virtual globes are also used in remote sensing as platforms for collecting, comparing and validating land use/land cover (LULC) data. The main example is Geo-Wiki23 (Fritz et al. 2009; Fritz et al. A multidimensional viewer of telecommunication data, based on a high-level platform for scientific data analysis, is then presented in section on "Telecommunication Data Viewer". PoliCrowd. In: Teaching science and investigating environmental issues with geospatial technology. Civocracy's civic tech platform and advisory services help government to co-create their best cities. The technology - our engagement platform. Designed for constructive cooperation, tangible impact, and ease of use for administrators. The platform comes with different participatory modules and is easily adjusted to your needs. Top-down or bottom-up participation, the platform provides the right solution for you. Learn More. Request a demo. The expertise - consulting and training. From forming the right project team, over communications to process design and result analysis. After all, participation needs more than just a technical solution to be impactful. We help you succeed. civic engagement platform - Town meetings used to be an excellent way for community members to have their say in their local government—something this civic engagement p... City citizens are able to post their ideas on the civic engagement platform, while other inhabitants can comment on their concepts. They can even vote for their favorite ideas. In addition to being interactive, the system is categorized, customized and moderated. On the other hand, local governments can consult the opinions of their constituents. Citizen engagement (CE) in science and policy-making, ranging from civic engagement and public participation, to citizen science and Do-It-Yourself (DIY) practices, offers an effective way to connect citizens, experts and policy makers. 1) What citizen engagement in science and policy-making means for the European Commission? · A boost in democratic legitimacy, accountability and transparent governance can. CIMULACT stands for 'Citizen and Multi-Actor Consultation on Horizon 2020'. For data collected from citizens, we take our investigations one step further by providing an information platform for Citizen Science and by demonstrating its value for European policymaking at the intersection of the Better

