

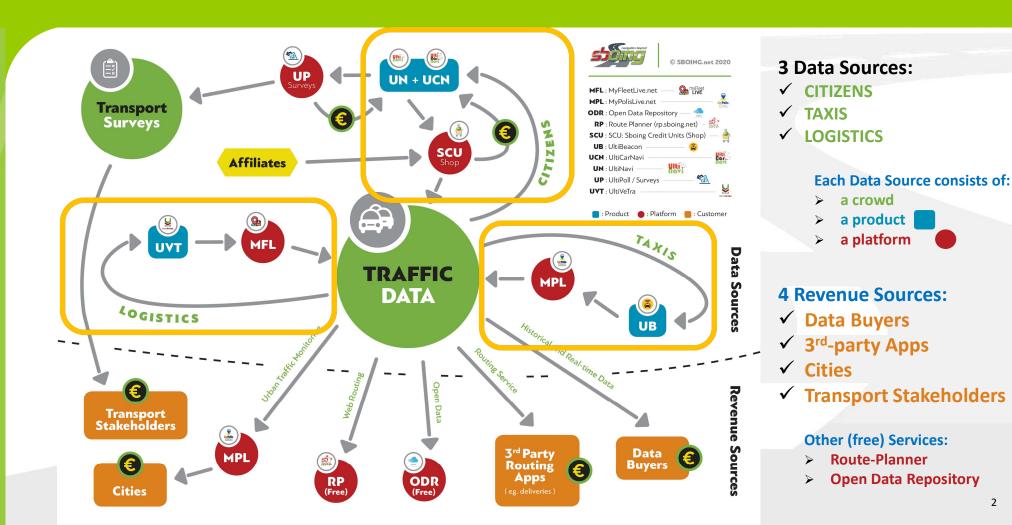
Benefits of Partnership with



A presentation of our Achievements over a decade

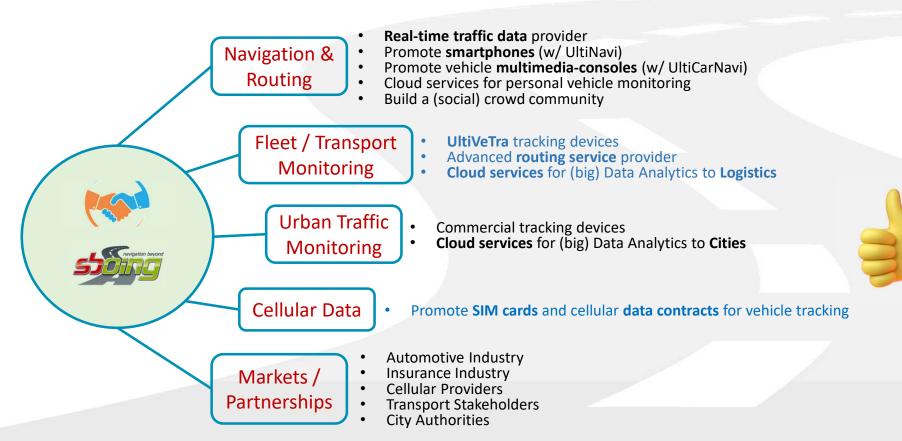


The Big Picture





Benefits from a Partnership with SBOING





Navigation & Routing Technology









- ✓ Free, offline, 3D navigation
- ✓ Multilingual voice guidance
- ✓ Fast, multi-waypoint routing
- ✓ Better, adaptive routing algorithms
- ✓ Global, optimized, OSM-based maps
- ✓ Frequent (next day) map updates
- ✓ Versatile, offline searching options
- ✓ Route simulation
- ✓ User-defined viewing macros
- ✓ User-customizable view and functionality
- ✓ In-vehicle Dashboard
- ✓ Social features ("I'm here", route sharing)
- ✓ Crowdsourced map updates (POIs, routes)
- ✓ Offline route recording
- ✓ Incentivization via digital virtual currency
- ✓ Supports map overlays (gas prices, hotels, etc.)
- ✓ Module for Transport surveys (UltiPoll)
- ✓ Real-time traffic (info, alerts, routing)
- ✓ Scalable, globally
- ✓ Special edition for in-vehicle consoles
- ✓ Runs on Android (soon on iOS, too)
- ✓ Internationally patented methodology (18 patents)



UltiBeacon

- Background app in Taxis to collect traffic data
- ✓ Transparent for the driver
- ✓ Provides urban traffic conditions for any city
- ✓ Strongly secure & compressed communications
- ✓ Piloted with 400 taxis for a 1.5M-people city



- ✓ Web platform for Urban Traffic Monitoring
- ✓ Provides urban traffic conditions for any city
- ✓ Covers the entire city's road network, globally
- ✓ Aggregates location data from many sources:
 - from UltiNavi, UltiBeacon & UltiVeTra
 - ✓ from commercial trackers
- ✓ Real-time & historical information for every vehicle
- ✓ Real-time & statistics for every road



- ✓ Web app for multi-waypoint route planning
- ✓ Based on OSM maps and SBOING routing
- ✓ Routing offered interactively and as a service
- ✓ Uses better, adaptive routing algorithms
- ✓ Uses real-time traffic info, where available



- ✓ A system for Dynamic Transport Surveys
- ✓ Multilingual, Transport-targeted surveys
- ✓ Web-based and UltiNavi-based (+incentivization)
- ✓ Dynamic campaign monitoring at run-time

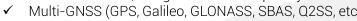




Vehicle Tracking & Transport Monitoring Technologies







Hardware device, designed and developed by SBOING

- Multi-GNSS (GPS, Galileo, GLONASS, SBAS, Q2SS, etc.), for higher position accuracy
- With Inertial Navigation technology, when satellite signal is poor (e.g. in tunnels and urban canyons)
- GSM/GPRS and Iridium satellite bidirectional communications
- Ubiquitous sensor interfacing with 1-wire protocol
- Engine status monitoring, supporting a vast variety of vehicles
- Monitoring of driving profile and performance
- Powerful & intelligent processing with advanced & custom algorithms
- High storage capacity for very long periods of offline operation
- Advanced power management for high availability and autonomy
- Smart communications management for cost-optimized operation
- Strongly secure and reliable operation
- Remote management
- Feature-rich fleet management platform (www.mvFleetLive.net)
- Search-and-Rescue (COSPAS-SARSAT) functionality support
- Piloted with KRI-KRI and MAKIOS Logistics
- Web platform for Fleet Management
- Real-time monitoring and historical information
- Transport conditions monitoring with sensors
- Fleet / shipment / product / asset tracking
- Works with UltiVeTra or any commercial tracker
- Cloud-based data aggregator
- Data analytics using cloud laaS / IoT services
- Strongly secure & compressed communications
- Scalable globally
- Role-based smartphone apps
- Internationally and nationally awarded

WJETS presents a new paradigm in addressing the challenges of Transport Quality Management and Verifiability, by enabling transportable, consumable and perishable "things" or dangerous cargo (IoT) to "tell" their Whole-Journey Experience (WJE) from production to consumption, through the monitoring and collection of sensor data (called "sensourcing") from all transport legs.







WJETS: Enabling consumable Internet Things to tell their lifetime stories to Consumers through Global SenSourcing







- Web platform for monitoring urban deliveries
- Dynamic, best route scheduling
- Adaptive routing based on real-time traffic info
- "Uber-like" customer notification (w/ app)
- Fleet monitoring using MyFleetLive.net
- For super-markets, couriers, home deliveries





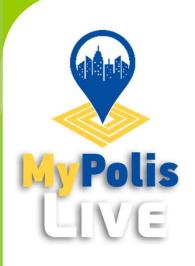
Worldwide-Patented Crowdsourcing

- ✓ The "Methodology of collecting, processing and delivering of SBOING traffic data for advanced navigation and routing, using satellite navigation equipment (GPS)" has received a patent for Greece from the Industrial Property Organization (OBI) under number 1006698 (G08G 1/0968), entitled "System and Methods for Collection, Processing and Distribution Data for Improved Road Traffic Routing in vehicular satellite navigation systems" and valid until 23/12/2028.
- ✓ Granted patentability by WIPO (PCT/GR2009/000066, WO/2010/073053).
- ✓ Granted in the USA, Australia, China, Israel, and India.
- ✓ Granted EU (by <u>EPO</u>) patent and registered in <u>13 European countries</u>: Greece, UK, Germany, France, Spain, Italy, Netherlands, Belgium, Austria, Switzerland, Ireland, Luxemburg & Malta.





10 years of Innovative Research & Development

































Section Indexing

























SBOING's Ultimate Navigator





UltiNavi for Smartphones, Tablets & Vehicles



















UltiNavi: SBOING's Ultimate Navigator





Scan and Download for FREE!



- Global maps(*) with frequent updates and NO ads
- Omprehensive multi-lingual voice guidance for undistracted driving
- Navigation with powerful map searching features
- Switch map views with user-defined viewing macros
- An impressive and informative dashboard for your vehicle

The Ultimate "Navipedia", powered by self-validated, social, collaborative crowdsourcing:

- Add your map info and see it "next day" on UltiNavi
- Share your ride data and let everyone benefit from navigation with real-time traffic information
- Save, replay and share your rides with others
- Turn your rides, map contributions and validations into money savings
- Opt-in to share and contribute anonymously through strongly secure and anonymizing technologies





www.sboing.net

























Join NOW our **Ultiflevi** Community and we will reward you with **9 more SCUs** for every SCU you collect, until **31/12/2019**!

(SCU: Sboing Credit Unit)

- Offline, 3D, voice Navigation
- Global Maps, frequent updates
- Fast, multi-waypoint Routing
- Route simulation
- In-vehicle Dashboard
- Social, collaborative Navigation
- Real-time traffic (soon)



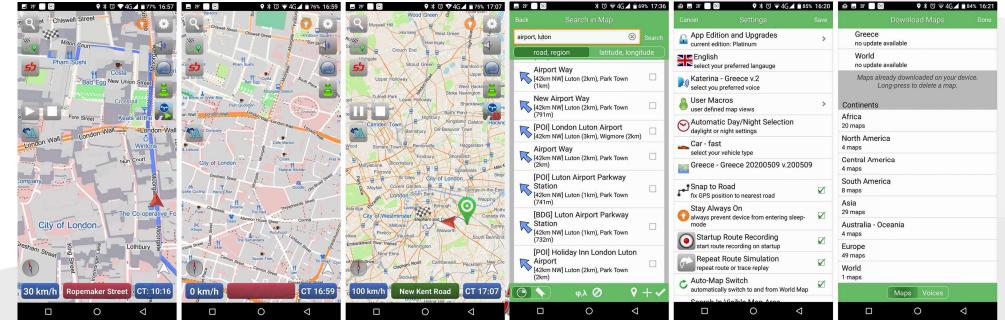
(*) SBOING maps are based on the collaborative OpenStreetMap maps, www.openstreetmap.org (© OpenStreetMap contributors)



UltiNavi: SBOING's Ultimate Navigator











Advanced Routing & Free, Crowdsourced, OSM-based Maps



- ✓ Fast, multi-waypoint routing with route optimization
- ✓ Route simulation
- ✓ Replaying of recorded routes



- ✓ 3D buildings & views
- ✓ All POIs from OSM + more
- ✓ Smart, offline searching
- ✓ Frequent, free map updates







UltiNavi's informational Dashboards!







Travel Course Statistics

Speed and Altitude Statistics







Offline Maps & Routing Comparison: Maps.Me vs. SBOING

ROUTING Time:

Maps.me: 132 sec

11x faster!

12 sec

UltiNavi:

MAPS.ME Greece Map Size: UltiNavi: 128 MB Maps.me: 212 MB 40% smaller!

CT 14:41

More compact maps ...

Ορμένιο (66m) [41 43' 14.2", 26 12' 50.8"] Πόρτο Κάγιο (3km) [36 24' 16.4", 22 29' 13.3"] Route Distance: 1219.0km Route Time: 12:36:14 4 km/h CT 10:51

12 h 21 min · 1229 km

... faster routing!

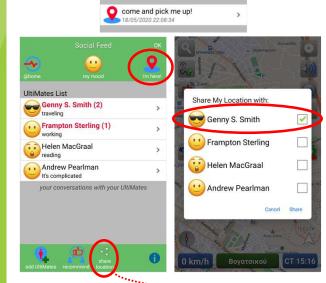




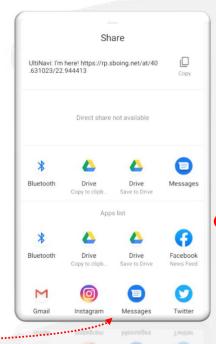
Social features of UltiNavi

Sender (your friend)

A friend sends you an "I'm here" message:



(..sharing options..)



Receiver (the sender's UltiMate; you)

...you pick it up and open it..

This is a test message. Hi, how are

I'm fine, thank you, where are you?

your conversation history with Genny S. Smith

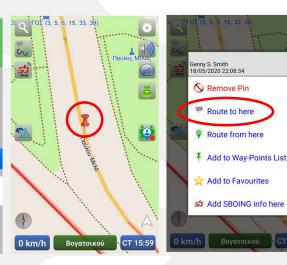
type your message here ..

you???

Greece!

...a pin is set on the map..

...a route to your UltiMate is set!



- ✓ Location sharing
- ✓ Route sharing
- ✓ Mood & status reporting
- ✓ Short messaging



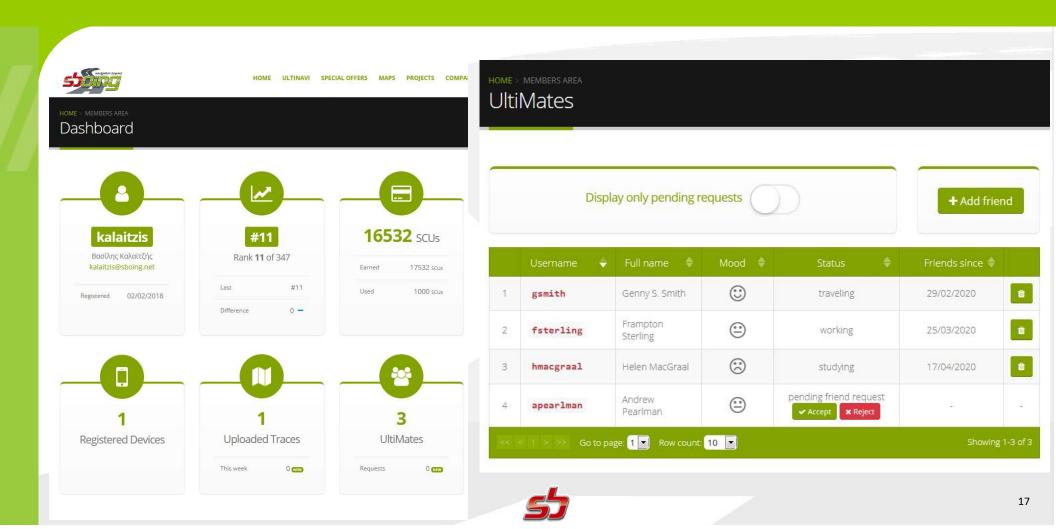
- ✓ Email, SMS
- ✓ Facebook, Messenger, Instagram, Twitter
- ✓ Google Drive, Dropbox, OneDrive, etc.







SBOING User Account & Management of UltiMates





Crowdsourcing Incentivization through SCUs and Affiliates







ULTINAVI SPECIAL OFFERS MAPS PROJECTS COMPANY AFFILIATES CONTACT

SBOING Special Offers



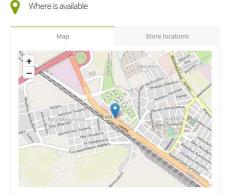






Deals & Special Offers

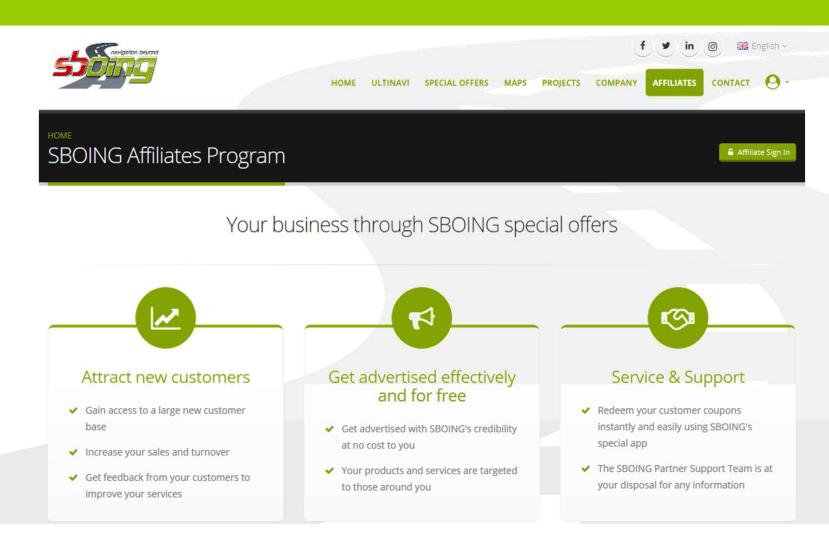
SBOING is an innovative high-tech SME in the field of information Technology and Communications (ICT), specializing on the development of GPS/GNS analysation software applications and systems. SBOING implements an internationally patented, collaborative, crowdsourcing technology for the collection, processing and distribution of road information and traffic data to provide improved routing for satellite navigation devices (IGPS navigators). SBOING's strategic objective is to rapidly evolve into a noticeable player of international caliber in the market of satellite navigation software applications and services, with high visibility and a large, active user-community.







SBOING's "Affiliates Program" to Reward Crowdsourcing



19



UltiPoll: Profitable Surveys through crowdsourcing

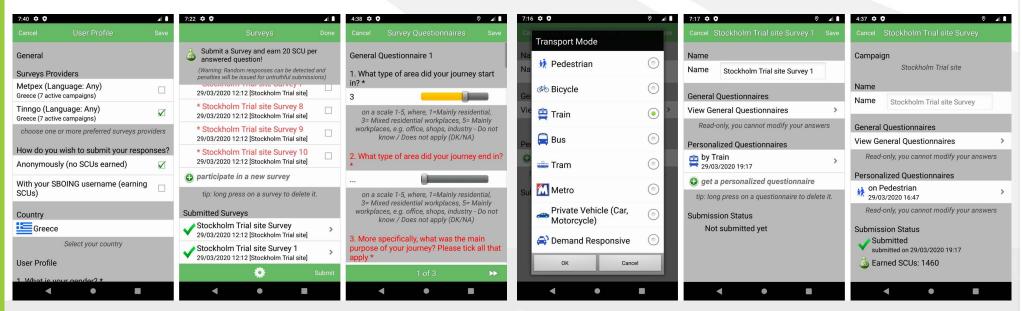




- An add-on to UltiNavi, for responding to survey questionnaires
- Transport stakeholders may conduct custom "dynamic surveys"
- User profiling, dynamic monitorability, multiple organizations
- Cloud service, data analytics, adaptive cost model
- The "crowd" may also get profit by responding to questionnaires











Navigation with Real-Time Traffic data through Crowdsourcing



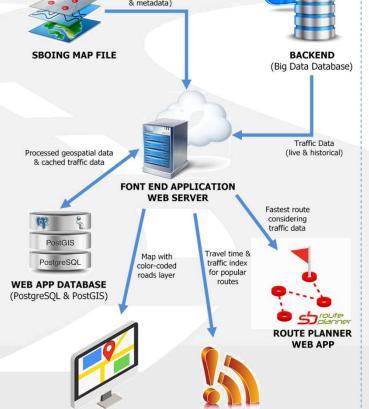






Cloud-based Architecture for Real-Time Traffic Services





RSS FEEDS

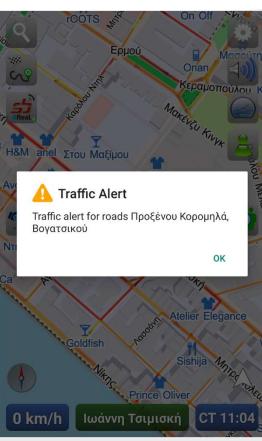
22



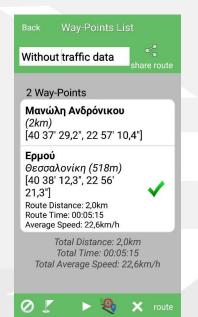


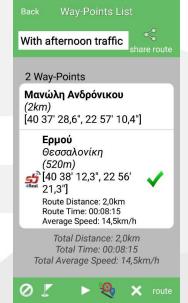
Real-time Traffic Routing and Alerts





- Color traffic maps
- Traffic & incident alerts
- Routing with real-time or historical traffic data



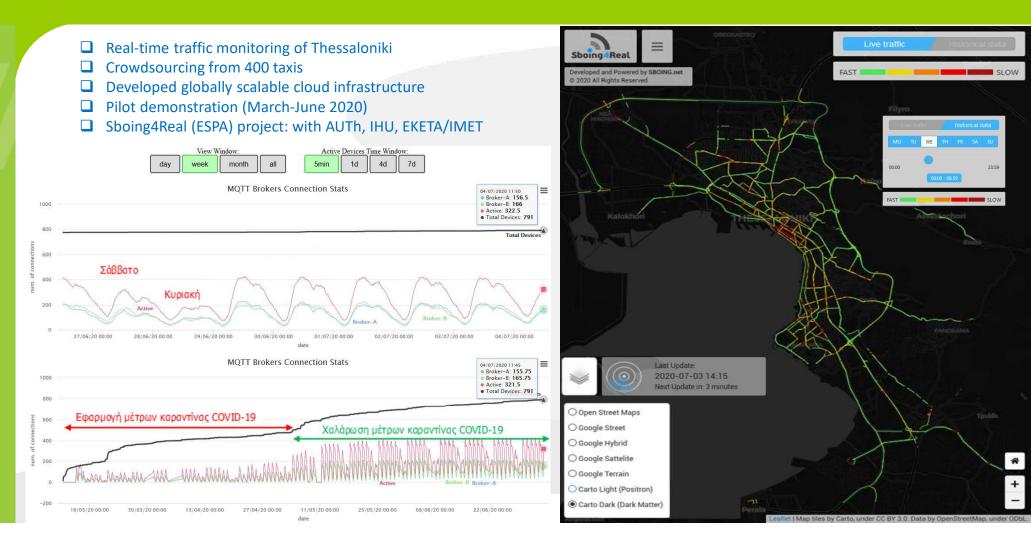






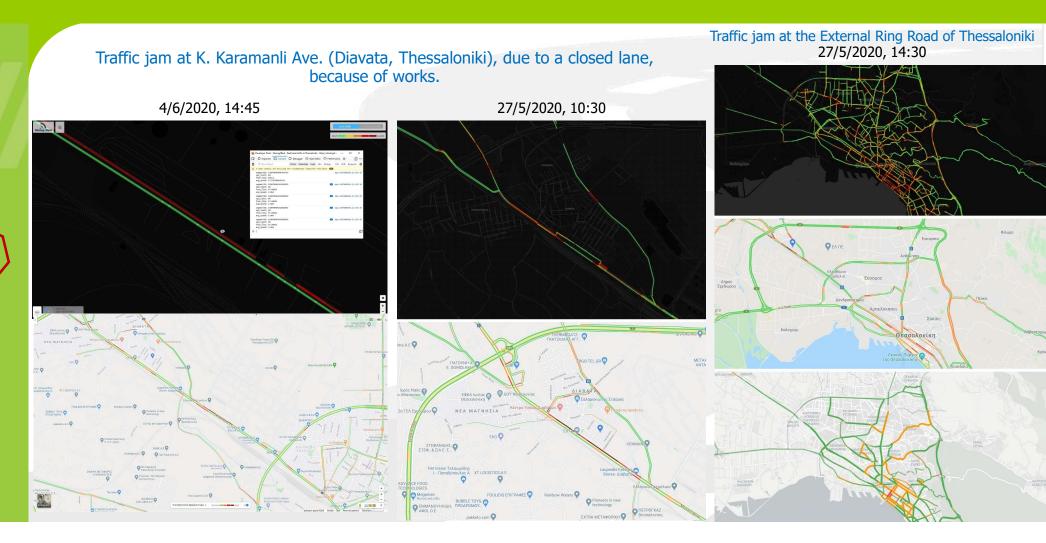
Real-time Traffic of Thessaloniki: Crowdsourcing from Taxis 🚑







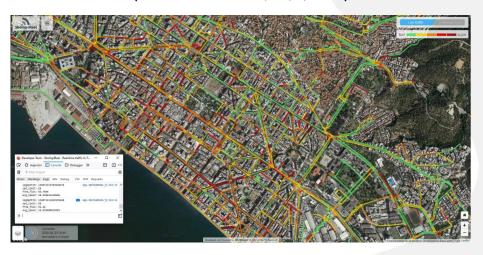
Real-time Traffic of Thessaloniki: Traffic Incidents (Sboing vs. Google)



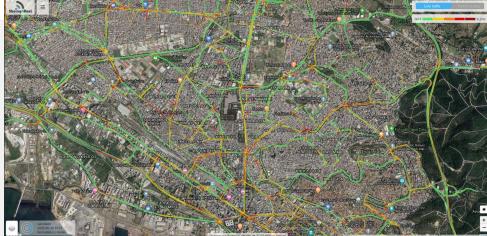


Real-time Traffic of Thessaloniki: Road network granularity

Detail of the city's road network granularity. (Thessaloniki center, 23/6/2020)



Comparison of traffic conditions and road network granularity of Thessaloniki between Google (down) and SBOING (up), [26/6/2020]



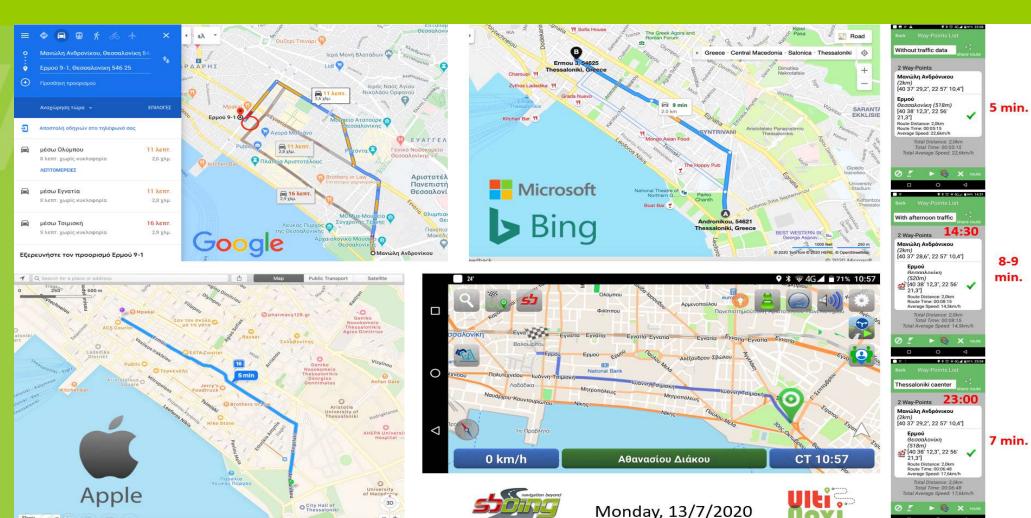






SBOING Routing superior to Google, Microsoft Bing & Apple!

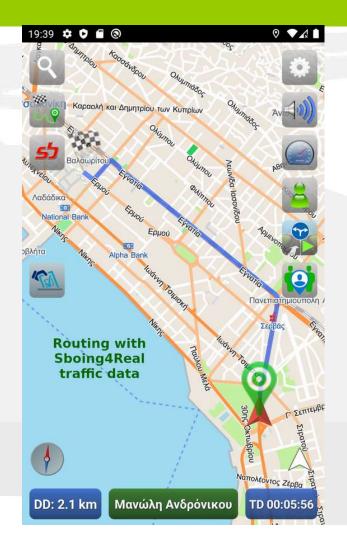
8-9 min.





More realistic Routing using Real-Time Traffic Information













Real-Time Traffic Services provided to 3rd parties



Real time traffic data RSS feeds for popular routes in Thessaloniki

3 Last updated: 2020-07-12 02:55 Distance: 2.19 km 3 [Thessaloniki International Exibition → Courthouse] via Tsimiski Z Currect Travel Time: 5 min Currect Traffic Conditions: Moderate 3 Last updated: 2020-07-12 02:55 Distance: 5.14 km Papareorgiou Hospital → Triandria Exit] via Periferiaki Z Currect Travel Time: 3.4 min S Currect Traffic Conditions: Fast **5** Last updated: 2020-07-12 02:55 Distance: 1.54 km Port of Thessaloniki - White Tower of Thessaloniki] via Nikis X Currect Travel Time: 2.7 min Currect Traffic Conditions: Normal 3 Last updated: 2020-07-12 02:55 Distance: 3.22 km [25 Martiou - Kamara] via Egnatia Z Currect Travel Time: 5.3 min Currect Traffic Conditions: Normal





UltiNavi Videos



Video #1: About SBOING https://youtu.be/-cpe0qEi0PQ



Video #4: UltiNavi: How to use it https://youtu.be/eNwGqbkLVDg



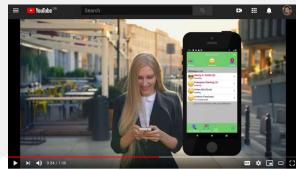
Video #2: The SBOING NaviPedia https://youtu.be/VxUgbqmgtDs



Video #5: UltiNavi for real-time traffic https://youtu.be/4XE90ZogG7U



Video #3: The features of UltiNavi https://youtu.be/rg5m--NukwQ



Video #6: Social features of UltiNavi https://youtu.be/CnafRmhTUnA





SBOING's Route Planner Web Platform











SBOING's Route-Planning (web) platform https://rn.shoing.net

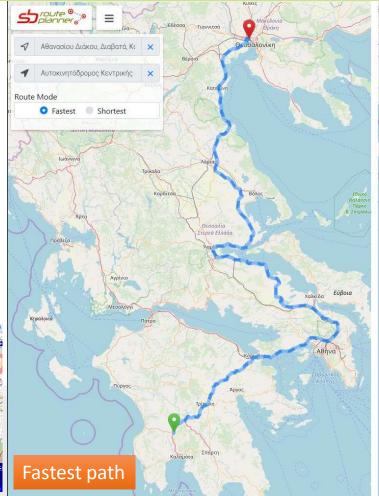
https://rp.sboing.net

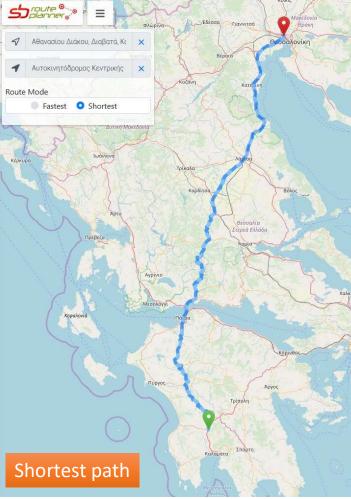




- Multi-waypoint route planning
- With real-time traffic data, where available
- Fastest/Shortest route options
- Turn-by-turn guidance
- Realistic time & distance estimations
- Based on OpenStreetMap
- Multiple map substrates











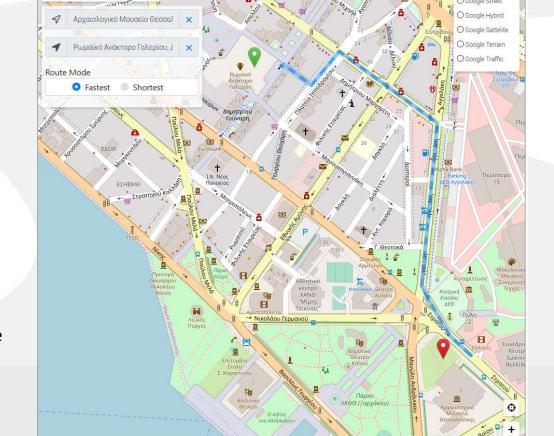
UltiTour: SBOING's platform and services for Tourism



Touristic Touring

with best routing among multiple points of thematic interest

- Using SBOING Route Planner (web app/service), https://rp.sboing.net
- Choice of touristic / thematic POIs with map overlays over SBOING's Route Planner.
- Multi-waypoint route optimization, based on time or distance or POI importance.
- Ability to <u>transfer the suggested route</u> to UltiNavi for <u>offline</u> navigation in real-time.







MyPolisLive.net: Urban Traffic Monitoring Web Platform









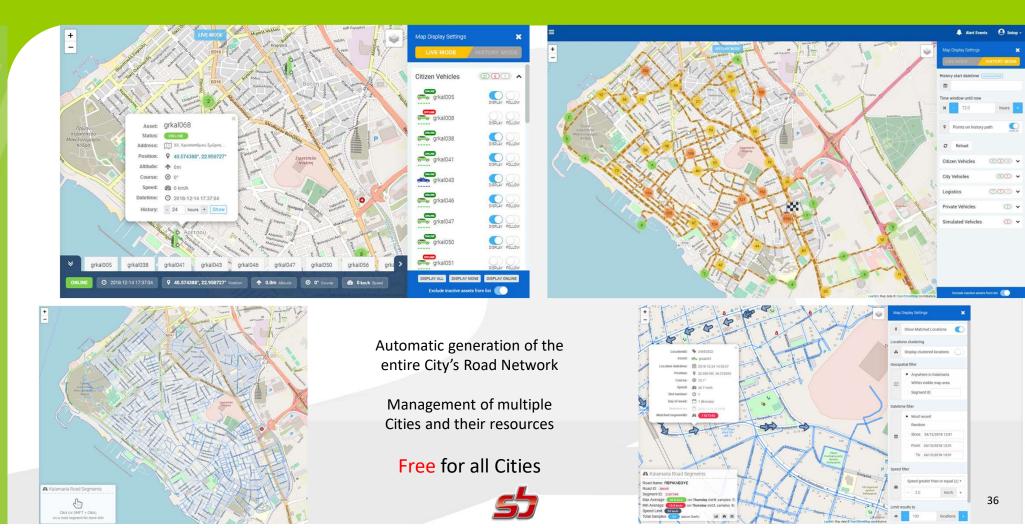
Urban Traffic Management using Crowdsourcing & Cloud Infrastructure





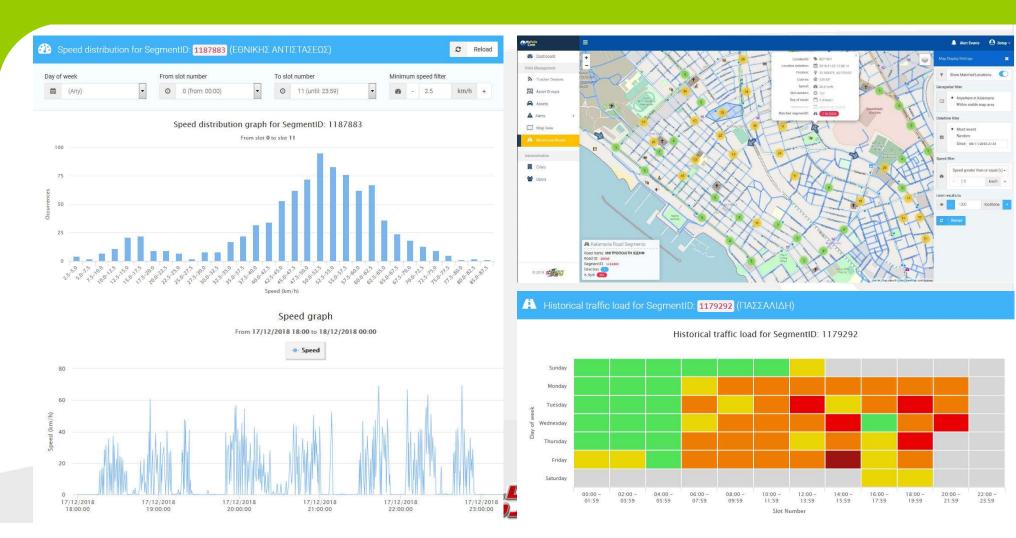


MyPolisLive.net: Real-time & Historical Visualization of Urban Mobility





MyPolisLive.net: Various Statistics per Road-Segment

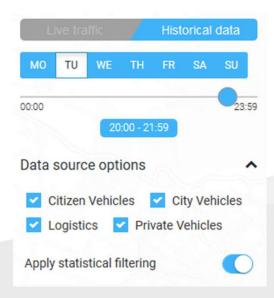


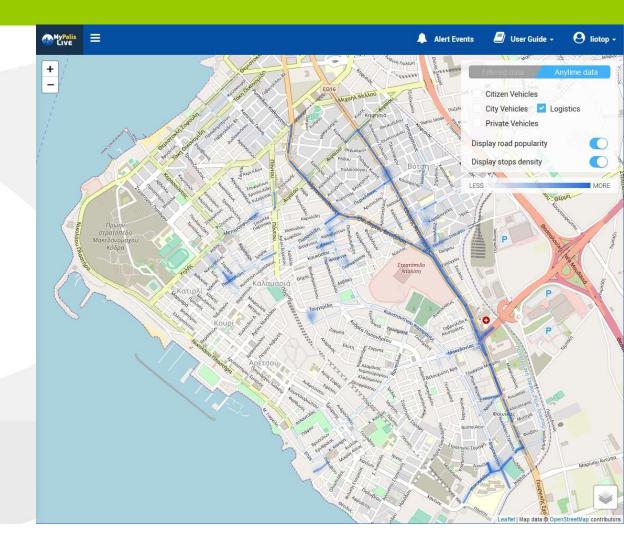


MyPolisLive.net: Segregated Data Processing & Statistics

<u>Traffic segregation</u> benefits the study of the impact and contributions to the total urban traffic load of <u>each individual group</u> (citizens, logistics, taxis, busses, etc.), separately, <u>in space</u> and <u>in time</u>.

Not offered by Cellular providers and Google.



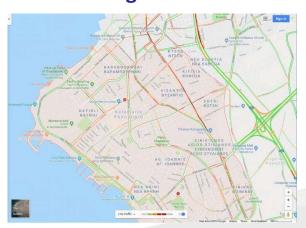






MyPolisLive.net: Real-time Traffic monitoring & Comparisons

Google Traffic



https://www.google.gr/maps/@40.5794659,22.9533678,15z/data=!5m1!1e1

https://mypolislive.net/admin/fleet/map_traffic/kalamaria

18/1/2019 11:45 am



MyPolisLive.net (SBOING)

TrafficThess (CERTh/HIT)



https://www.trafficthess.imet.gr

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Fleet & Transport Monitoring for Logistics









Cloud IaaS / IoT Services for Fleet / Transport Monitoring

UltiVeTra on a truck:

- live sensor streams
- cloud serviced client







Cloud laaS / IoT









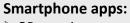


- > Sensor LIVE monitoring
- ➤ Fleet LIVE tracking
- Product tracking
- ➤ Shipment tracking



☐ IoT cloud-support configuration



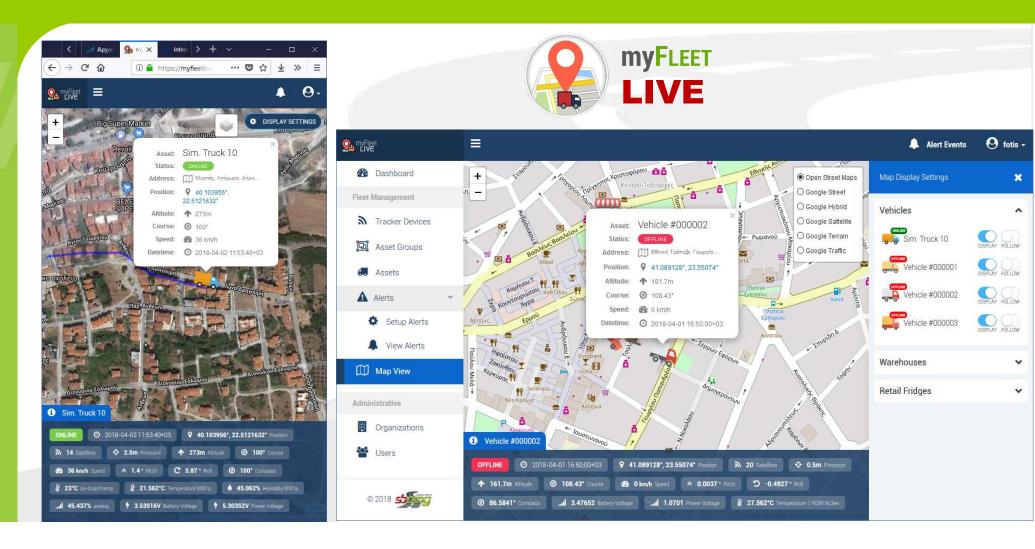


- ➤ QR scanning
- ➤ Product tracing
- ➤ Alerts





MyFleetLive.net: The Fleet Monitoring web Platform

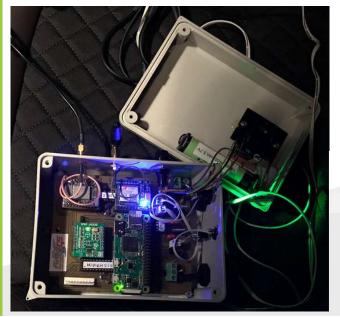






UltiVeTra: The Ultimate Vehicle Tracking Device

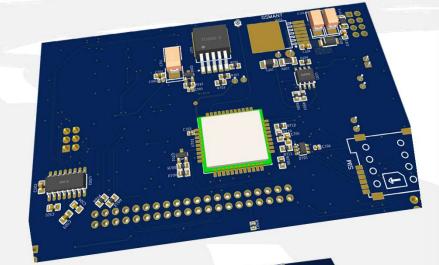
- Transport conditions monitoring through sensors
- Advanced features compared to the competition
 - processing, storage, security, power management
 - multi-GNSS, INS, cellular & satellite communications
- Designed & built by SBOING
- Vehicle operation monitoring (collab. w/ Inventure Automotive)















Installations & Successful Pilots

At MAKIOS Logistics







At CHRYSSO Cafe



At KRI-KRI (Dairy)

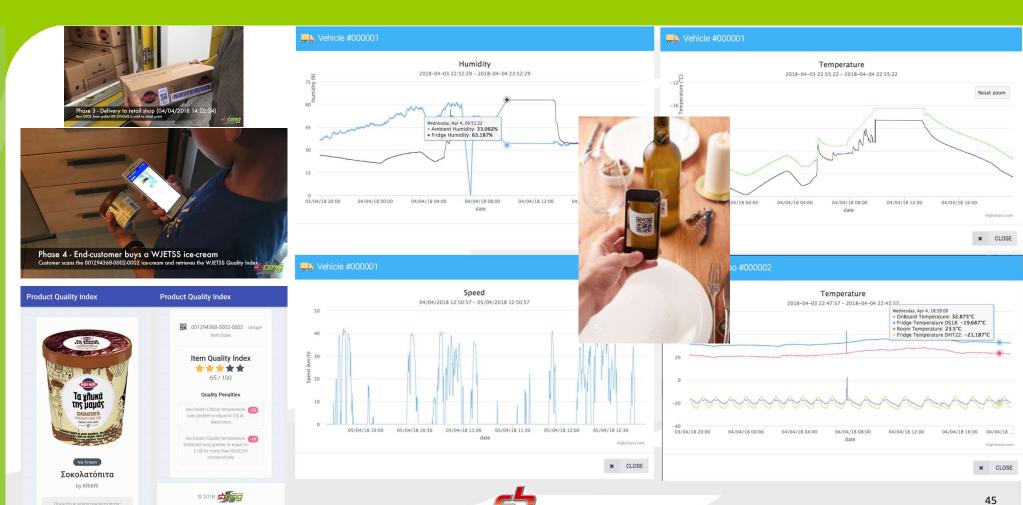








Monitoring Transport Conditions of Sensitive Goods & Cargo







Advanced Routing & Customer notification of Delivery Services

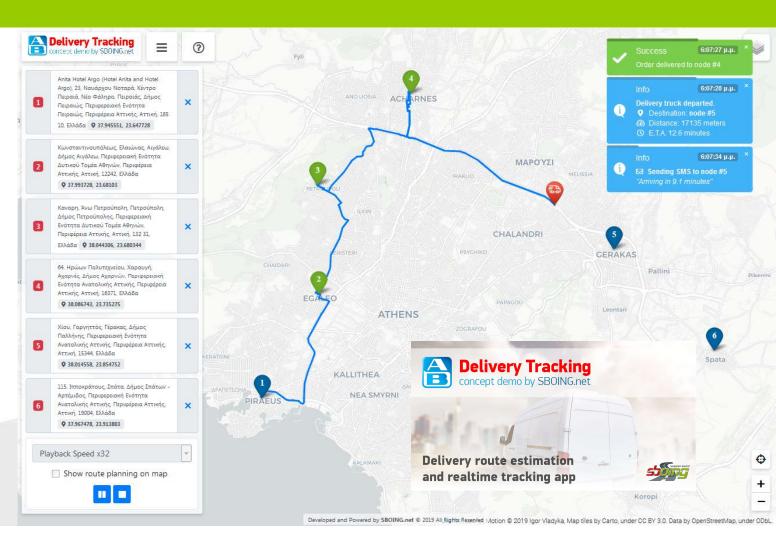




- ✓ Best route scheduling
- ✓ Adaptive routing
- ✓ Real-time traffic info
- "Uber-like" customer notification
- ✓ Fleet monitoring

Examples:

- Super-markets
- Couriers
- Home deliveries







UltiVeTra Promo Video



Video #7: UltiVeTra promo video https://youtu.be/CvqcywCm3HE





... last but not least ...





A Competent Team with Global Presence and Prestige!

















SBOING is a high-tech ICT SME that develops innovative mobile applications and systems for the collection, processing and exploitation of location and mobility data. It implements an internationally patented, collaborative, crowdsourcing methodology for the collection, processing and distribution of traffic, road and sensory data to provide improved navigation and routing capabilities for satellite-assisted navigation, globally. The SBOING satellite-assisted navigator app, sbNavi™, is available for iOS and Android and sbCarNavi® for in - vehicle multimedia consoles, together with OpenStreetMap - based maps of the entire world. SBOING has also developed sbTracker®, an advanced multi-GNSS tracking system with INS capability, satellite communications and multisensor support, for advanced fleet monitoring transport applications. The company has received several international distinctions and awards for "Innovation and Entrepreneurship", and its crowdsourcing methodology has patents granted in the USA, Australia, China, 13 EU countries, Israel and pending in India. SBOING is funded by the EU's Horizon -2020 Research and Innovation program and co-funded by Greece and the EU, through the national Operational Program "Competitiveness, Entrepreneurship and Innovation" (EPAnEK 2014 - 2020).



sboing.net



/SB0INGnet-144574145603773/



+30 2310 784608



@SB0ING



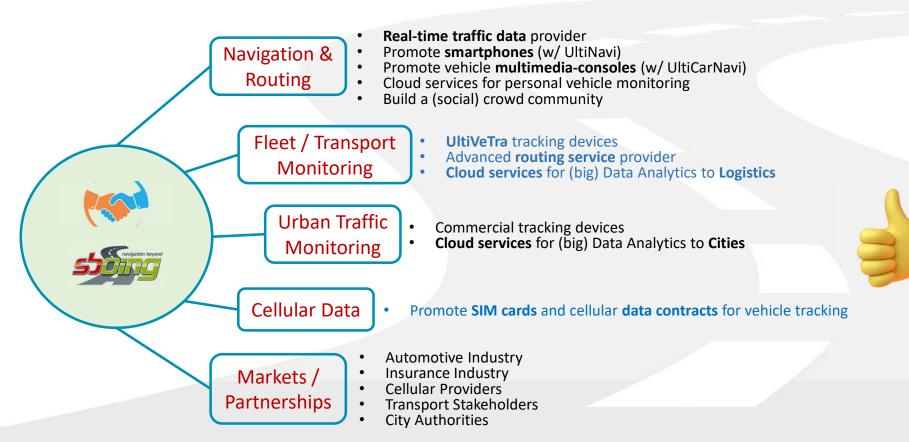
liotop@sboing.net



/company/sboing.net/about/



Benefits from a Partnership with SBOING





Partner with us!

SBOING!

let's talk!

