

LA MATANZA, ARGENTINA, OPTIMIZES PUBLIC ADVERTIZING USING MOBILE MAPPING

“THE SURVEY AND IDENTIFICATION OF PUBLIC ADVERTIZEMENT SPACE FOR THE CALCULATION OF THE ADVERTISING RIGHTS OF LA MATANZA ALLOWS THE CITY TO QUANTIFY AND TYPIFY ALL THE INSTALLATIONS AND/OR ADVERTISING ELEMENTS THROUGH WHICH THE ECONOMIC ACTIVITY OF A CERTAIN SOCIAL ACTOR IS DEVELOPED AND MATERIALIZED ACCORDING TO THE ORDINANCE TARIFF 2017 FOR THE ADVERTISING RIGHTS OF THE MUNICIPALITY OF LA MATANZA.

THE COMMERCIAL MARKET IS ONE OF THE KEY AXES IN THE ECONOMIC DEVELOPMENT OF A COUNTRY, REGION OR CITY. PUBLIC AND PRIVATE SECTOR INSTITUTIONS MUST ENSURE THE PROTECTION AND IMPROVEMENT OF THE VALUES OF THE URBAN LANDSCAPE AND ITS IMAGE.”
- IRINA LONGO.

A Taxable Advertizements Database

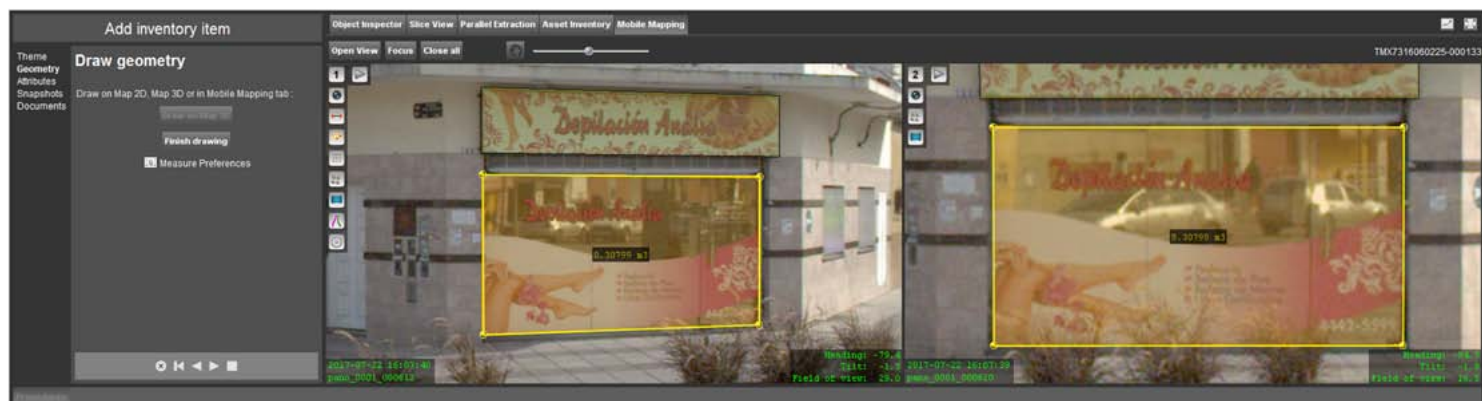
The Municipality of La Matanza hired Genmap S.A. for a 360° survey of its main avenues. The aim was to identify and measure all advertising elements present on public roads. The fundamental purpose of this project was to complete and update the database used to tax public advertising. On this database and from subsequent processes, lists of posters obtained by the survey were linked to the alphanumeric database that prepares

the payment forms. As a result of this process, a very important number of posters that were not declared were added to the database – thus providing an economical justification for the cost of the survey.

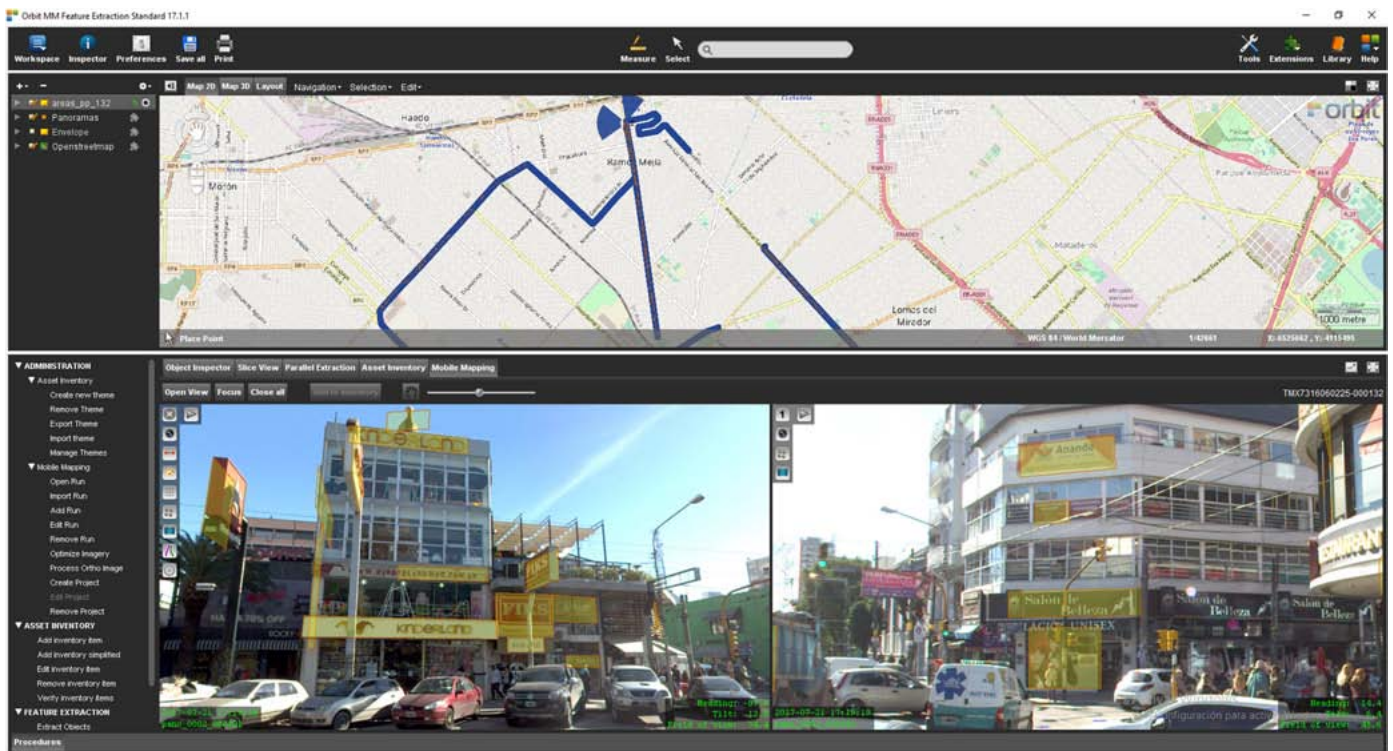
Additionally, the database obtained with Mobile Mapping allows the detection and geopositioning of all the elements of the equipment and street furniture that are found along the public road. It also allows for the verification of the quantity and state of health of all the trees, semaphores,

lighting poles, aerial poles and cables, state of the road and sidewalks, among other traits that can be captured and categorized. The software tools used for this project were equally provided to the municipality, along with ‘on-the-job’ training, which will allow us to maintain and obtain new information from future surveys.

Applying Mobile Mapping technology, Genmap, Authorized Reseller of Orbit GT, surveyed the main streets and avenues of the municipality of La Matanza, Province of Buenos Aires,



Advertisement panel shown in 2 subsequent images in Orbit 3DM Feature Extraction



Many advertizements on buildings along the trajectory in Orbit 3DM Feature Extraction

Argentina. This project enabled the municipality of La Matanza to optimize the income from Advertising Rights as one of the fundamental tasks that guarantee economic sustainability and the principle of equity towards the taxpayers of the municipality.

Project Execution

In July 2017, the municipality of La Matanza began to investigate new techniques for capturing data on public roads in order to improve collection of municipal taxes.

There has been a boom of modern technologies that allow the capture of spherical images in 360 degrees with equipment mounted on cars. This complies with the requirements for surveying the public environment. In the particular case of our municipality, this technology allowed us to extract the elements of interest (facilities and/or advertising elements).

The municipality requested Genmap to survey 80 km of the avenues and streets of greater commercial interest using Mobile Mapping technology. The

aim was to extract all the advertising posted. In all, a total 120 km was surveyed between 21 and 28 July 2017.

The increase in the number of kilometres surveyed by Genmap with respect to what was requested by the municipality of La Matanza was due to the fact that some streets within the project are two-way (round-trip) or wide-margin streets, for which the company suggested us to capture both sides of the road for more detail.

The company used a Trimble MX-7 for mobile mapping georeferencing images and trajectories. Orbit 3DM Feature Extraction was used to visualize, extract and measure the taxable items.

This software enabled the creation of two models or layers of data (templates): one for all the advertising elements that could be drawn as polygons, another for all the elements without associated geometric interpretation.

The name of each data model is composed of: the name of the street

surveyed, the number of the mission or project captured in the field and established in the equipment's controller software (at the time of field survey), and the type of geometry awarded to the object to be captured (point or polygon), being as follows:

- Street_mission_Polygon
- Street_mission_Point

For example: Varela_137_poligono; Varela_137_point.

The fields that make up each data model are exactly the same. The differentiating parameter was the type of geometry captured on the images (point or polygon). The created attributes were named in the following way:

- **Categories:** Type of advertising element (Marquee, Structure, Billboard, Column, Signboard, Screen projection, etc...)
- **Sub-categories:** subtype of advertising element (Simple, Illuminated, Luminous, Animated).
- **Face:** number of sides or equal faces of the advertising element.
- **Area:** calculated automatically by the software.

This dataset allowed the end users to choose the option that corresponded to the point or vectorized polygon on the advertising element according to its characteristics.

In addition, it also allowed us to classify all the installations and/or publicity elements that make up the public road of the avenues and streets surveyed.

ABOUT THE AUTHOR

Irina Longo is a Public Accountant, graduated in 2009 in Argentina. She is Coordinator of the Advertising and Propaganda Department of the municipality of La Matanza.

ABOUT GENMAP

Genmap is an Argentine company and a pioneer in geographic information services. It generates three-dimensional virtual realities based on photogrammetric techniques and serves both the public and private sectors. Genmap is a 'map factory' that provides current data to recreate change scenarios.

It was founded in 2003 by two engineers, who have a recognized track record in the geomatics industry via their participation in large-scale projects at a national and international level. Genmap is prepared to address the Spatial Literacy paradigm, which means understanding and making effective use of spatial data.

*3D Mapping using
Trimble MX7*

