

The ROI of 360-degree Imagery: A Case Study of Data & Data Analytics

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CycloMedia Technology, Inc.

Company Overview

- Founded in the Netherlands (European Market Leader)
- Over 30 Years of Experience
- Grown from "Stop & Shoot" to our Modern GeoCyclorama System
- Began Operations in the United States in 2013

Customers of Note

- Philadelphia, PA Washington, DC
- Franklin County, OH
- Jefferson County, KY
- Maricopa County, AZ
- New York, NY

- Collierville, TN
- Baltimore, MD
- Mason City, IA



Our Mission

To Support State, Local, and Municipal Governments' Business Needs

- Perform Remote Assessment of Assets, Highways, and Real Property
- Identify and Measure Points (x,y,z), Lines (Distance, Height), and Polygons
- Validate and Update Your System of Record
- Image Identification with Date and Time
- Generate Reports/Playlists with Measurements and Notation
- Analysis of Your Jurisdiction Quickly and Accurately (at a lower cost)
- Respond to Citizens/Colleagues More Effectively and Efficiently



Key Business Applications

- Transportation & Public Works
- Tax Assessment
- Planning & GIS
- Permitting & Inspections
- Public Safety
- Community Development
- and more...

... Fewer Field Visits, Enhanced Desktop Review, Understand Grade & Condition, Sustainable Asset Management, Improved Workflows ...

Increased Efficiency = High Return on Investment



Asset Extraction & Analytic Services

- Traffic Signs (MUTCD) & Traffic Signals
- Pavement Markings & Condition Assessment
- Street Lights
- Parking Meters & Parking Machines
- Water Valves
- ADA Ramp Assessment (*RaDiCal™*)
- Elevation Visualization
- and more...

... Accurate, Authoritative datasets delivered in a matter of weeks versus months



CycloMedia Technology, Inc.



360° by 180°, High Resolution, Panoramic Street-Level Imagery



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Professional Grade, Authoritative GeoCycloramas



What is a GeoCyclorama[™]?



A GeoCyclorama is a seamless, parallax-free, spherical, high resolution panoramic image taken at street level.



How are GeoCycloramas Collected?



Patented Recording System

- Five Cameras
- LiDAR Sensor
- Global Positioning System
- Inertial Measurement Unit
- Distance Measuring Instrument

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GeoCyclorama Capture Process



Solution Components

Street-Level Imagery

- Patented Capture Process
- GeoCycloramas
 - 360-degrees around
 - 180-degrees up

Ground-Based LiDAR

- Enhances Imagery Platform (Depth Map)
- Faster & Easier Measurements
- Provides Extraction Capabilities



Enterprise Accessibility

CycloMedia's SaaS – Street Smart

Esri's ArcGIS Platform (Esri Business Partner)

• Desktop, Pro, Online, WAB, Roads & Highways, and more

Other Partner Integrations

- Cityworks
- Cartegraph
- AutoCAD / MicroStation
- EagleView

CAMA and CAD integrations API Key ... Leverage existing investments and software across your enterprise to access our solution



Demonstration



Use Cases



New York City, NY

CUSTOMER CHALLENGES

- NYC Department of Finance (DOF) was looking to modernize and automate its manual tax assessment processes, to mitigate underreported tax revenue.
- As property Appraisers are unionized, demonstrating value of the CycloMedia solution to employees was crucial

CYCLOMEDIA SOLUTION

- Deployed Street Smart solution with NYC DOF
- Assisted the fire department of NYC with the integration of 3D GeoCyclorama imagery into their Incident Command Center software
- Provided NYC Department of Buildings the capability to perform remote site inspections

(after 12 mos. of use)

OUTCOMES

- 53x return on investment realized by NYC DOF CycloMedia platform generated \$53m in new tax revenue off \$1m investment.
- 4x increase in productivity by appraisal professionals (increase in parcel analysis from 15,000 to 53,000 over a short, three-month period)
- Enhanced Situational Awareness for increased safety of First Responders and post incident analysis
- 98% reduction in time spent by NYC Department of buildings performing safety inspections on abandoned properties











Town of Collierville, TN

Customer Challenge:

- Water valve data was on paper and in public service employee memory
- Dataset was required to minimize the impact of broken water mains

Outcomes:

- Collection from imagery was half the price and a fraction of the time
- Imagery remains as a valuable dataset for other purposes



Washington, DC

- 236,000 signs collected from imagery
 - Half the cost of field data collection bids
 - Completed in half the time (approx. 3.5 months)
 - DDOT estimates database is 98.5 99% correct
 - Captured extensive attributes plus location
- Work Order Management integration system keeps data up-to-date
- Visitor parking pass system provides better support to constituents
- Cost savings factors in imagery: a valuable resource for many other departments and projects



City of Philadelphia, PA

Public Safety

- Address verification
- Positioning address points on entrance of building
- Preparing for Next Gen E-911
- Event Planning (EOC)

Citizen Engagement

- <u>https://atlas.phila.gov/</u>
 - Ortho, Oblique, Street-Level







Questions & Discussion

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Thank You!

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