



# CycloMedia Mapper

Accurate and detailed  
measurement  
of the surroundings,  
from behind your desk.

**CYCLOMEDIA®**

## Geographic information

The availability of actual and reliable information is very important for the performance of various maintenance tasks within government and industry. To obtain geographic information two traditional survey capture methods are known:

- \$ Air borne: by means of photogrammetry with use of aerial photographs.
- \$ Ground based: by means of measurements in the field using tacheometers.

Both methods have advantages and disadvantages. Capturing data through aerial photographs is fast but relatively less accurate, while capturing data through a tacheometer is more accurate but a slower process.

CycloMedia Mapper combines the advantages of both methods of capturing geographical data. In cooperation with several partners, Frank Data has developed an advanced method where the efficiency of aerial photogrammetry is combined with the accuracy of tacheometry.

## Field notes with fisheye camera

CycloMedia Mapper can best be compared with a combination of a tacheometer and a photogrammetric instrument.

As for measuring in aerial photographs, for CycloMedia Mapper good images are a first requirement. The photographs are made with a fisheye camera, which is usually mounted on top of a car. The fish-eye photos are transformed into digital panoramic images (Cycloramas) with a precision that exactly matches your application.

One single digital panoramic image has a horizontal field of view of 360° and a vertical field of view of 30° below the horizon up to 60° above. With such an image, you will be able to literally look all around you from the shooting position of the camera. This gives you the possibility to get a clear overview of the surroundings of the shooting location on your

computer screen. As the camera subsequently moves to different locations, you will get a series of successive digital panoramic images, which allow you to observe objects in the field from various shooting positions.

## Measure your environment, from behind your desk

To capture geometric data, with the aid of CycloMedia Mapper, you can perform accurate and detailed measurements in your own office in the supplied digital images.



*Measuring screen of CycloMedia Mapper*

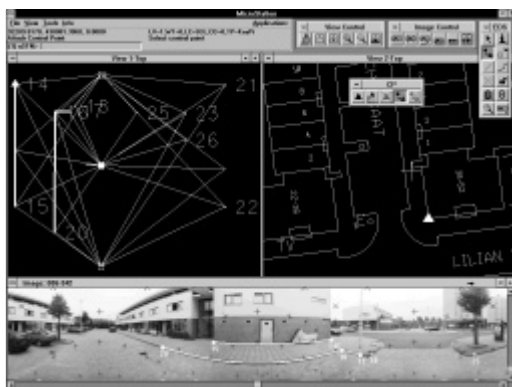
State-of-the-art geodetic adjustment software guarantees the quality of the final result, the geographic-geometric component of your geographic information system. Field tests in suitable projects proved that with CycloMedia Mapper savings up to 30% are attainable, compared to traditional methods.

Because of its advanced functionality, CycloMedia Mapper can use existing digital geometry during measurement, so that it is especially suitable for the updating of map data. Addition or removal of geographic objects can take place based on what the operator observes in the digital panoramic images.





*Frank Data  
is a supplier of optical  
data and systems.  
The developed systems  
are applied in the  
professional market  
for geographics  
and landsurveying  
applications.*



*CycloMedia Mapper with existing map*

## Production of Cycloramas

Of course, you want your panoramic images delivered efficiently in the right form and according to your specifications in terms of location, density and accuracy. The required digital images, with additional administrative data, are delivered on demand. Frank Data ensures a punctual completion of your order.

## Who uses CycloMedia Mapper?

CycloMedia Mapper is especially meant for survey departments of engineering companies and government agencies.

Experience has learned that CycloMedia Mapper can be optimally used in 3D data collection projects and 2D updating projects, especially where a high point density is at stake.

## Technical aspects of CycloMedia Mapper

CycloMedia Mapper consists of several parts for:

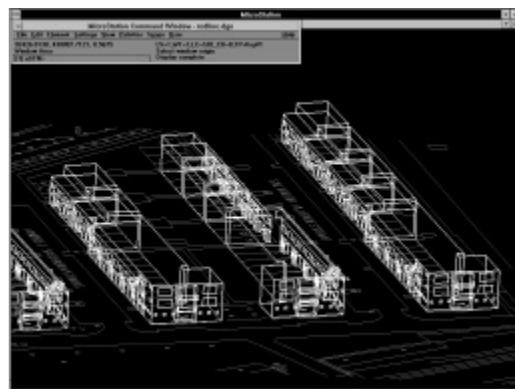
- \$ measurement: the determination of the measuring sequence of images in a project, the retrieval and display of both overview images and detail images, the choice and registration of object and control points, the display of measured object points,
- \$ adjustment: on-line check and correction of measurements, calculation of coordinates of measured object points, both by geodetic adjustment software according to the method developed at the Delft University of Technology,

\$ editing: create a graphical relationship between measured object points.

Especially for the last mentioned functionality, a linkage with MicroStation V5 is used.

CycloMedia Mapper offers a coding and classification method tuned to the user, in which relationships with existing digital topography can be made for updating measurements.

The minimum computer configuration for CycloMedia Mapper is a PC working under Microsoft Windows NT v.3.51 or v.4.0, as well as a DAT-recorder.



*3D measurement output*

## Advantages CycloMedia Mapper

- \$ Combines the accuracy of terrestrial measurements with the speed of photogrammetric measurements.
- \$ Efficiency improvement of up to 30% while maintaining the required accuracy.
- \$ Full three-dimensional data collection.
- \$ The ease of use of desktop measuring, independent of weather conditions.
- \$ Reproducibility and eventual later further extensibility of measurements from already available panoramic images.
- \$ Availability of full CAD-functionality via MicroStation V5.
- \$ Added value of Cyclorama's by the possibility of combined use with CycloMedia Image-Viewer.
- \$ Availability of full Cyclorama production services through Frank Data.



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