



## Various Software to Analyze Survey Data - A Review

<sup>1</sup>Rashmi Bade, <sup>2</sup>Swastik Bhoyar, <sup>3</sup>Aiman Javed, <sup>4</sup>Chetan Hiwase

<sup>1</sup>Assistant Professor, Department of Civil Engineering, Anjuman College of Engineering & Technology, Nagpur,  
Maharashtra, India

<sup>2-4</sup>UG Student, Department of Civil Engineering, Anjuman College of Engineering and Technology, Nagpur,  
Maharashtra, India

### ABSTRACT

In the modern age of technology, the art of surveying has taken a huge boost due to technological advances. With the new software enabling us to mark, measure, and present the survey data with intense accuracy and details so as to improve the progress of the projects.

**Keywords :-** Survey, Software, Google, Technological

### I. INTRODUCTION

In this review, we shall see various software that can be used to analyze survey data and prepare a plan accordingly.

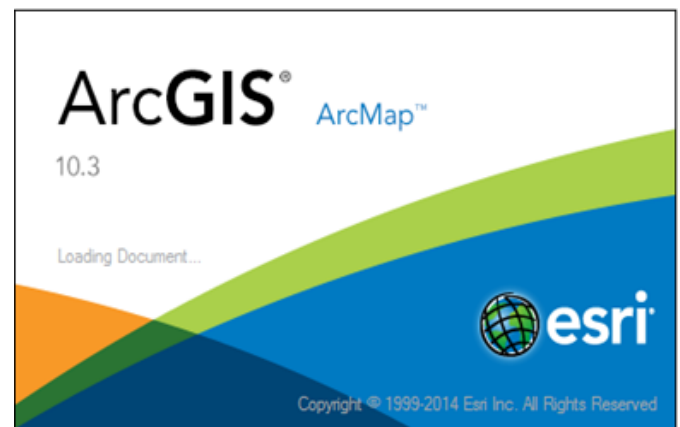
- ❖ We shall learn about so
- ❖ me basic softwares used to analyze survey data.

### II. Types of Software

1. ArcGIS
2. QuikGrid
3. AutoCAD
4. TCX Converter
5. Google Earth

#### 1) ArcGIS:

ArcGIS is a powerful mapping and analytic platform designed to help the users to search information and share location-based data. The software provides contextual tools for spatial reasoning and mapping to industries, educators, developers.



This program has premium features which use Geographical Information system (GIS) to solve problems. The unique set of capabilities include; spatial analytic, mapping & visualization, 3D GIS, Imagery and remote sensing. Real-time GIS, and data collection & management.

The functionalities apply location-based analysis to the business practices to create a deeper understanding and help you quickly visualize how your business information is connected and where everything is happening.

One major benefit of ArcGIS is the use of geographical information system (GIS). The GIS helps organizations of all sizes to question, analyze, visualize, and interpret data to gain an understanding of relationships, trends, and patterns. The system provide an improved communication, better record keeping, cost savings, and better decision-making.

Overview of ArcGIS future:

- Spatial Analytics
- Mapping and Visualization
- 3D GIS
- Real-Time GIS
- Imagery and Remote Sensing
- Data Collection and Management

Devices Supported:

Windows

- Deployment:

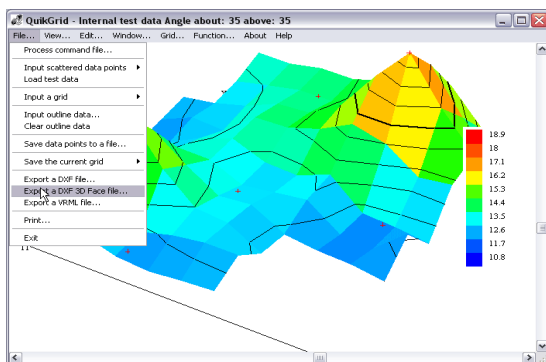
Cloud Hosted

- Language Support:

English.

One of the newest addition to the AutoCAD allows the integration the available GIS data from geo-databases, application of spatial analysis by using implemented expert knowledge, and auto-production of maps and reports.[1]

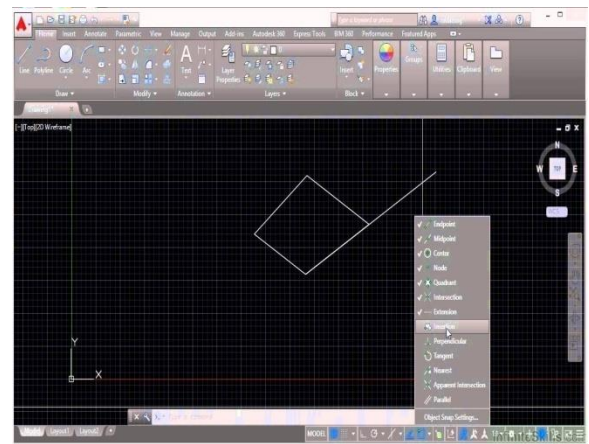
## 2) QuikGrid



QuikGrid is a program freely available for windows that visualizes data 3D elevation maps. It can be used

to visualize data as 3D model map. This program converts a set of scattered data points to create maps. It is easy to use and it will run on various, even old hardware platforms as well.[2] It is suited in situations where a quick look at a set of data points is required.[5] QuikGrid will read in a set of scattered data points which represent a surface and generate a grid which represent the surface defined by these points.

## 3) AutoCAD

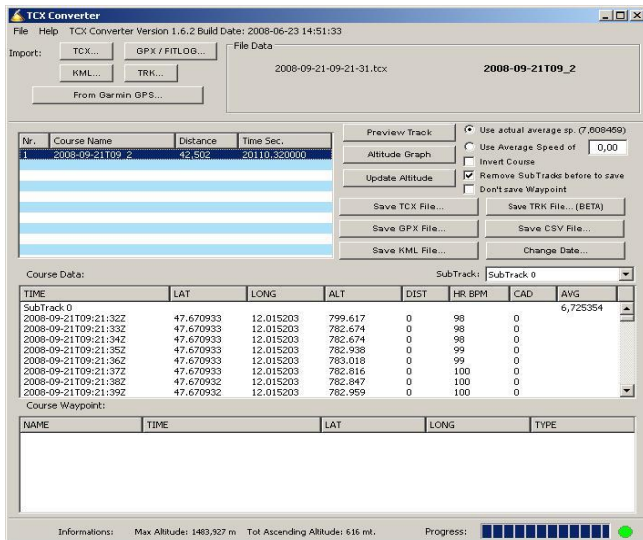


AutoCAD is a software application for 2D and 3D drafting and Engineering Drawing. It is designed by Autodesk (Luke Kennedy, 2014).[3]

2D Engineering Drawing is designed by Gaspard Monge(1746-1818), also Orthographic Drawing is possible and Scientific Drawing is available.[3] AutoCAD enables users to import data from PDF files so they can collaborate with their teammates as they review their models and drawings. The users can modify & move section planes to examine the inner details of 3D objects, enabling them to cut through solids, surfaces, meshes, or regions. AutoCAD can also be classified depending on domain it serves.

- Architecture
- Electrical design
- Mechanical design
- MEP (mechanical electrical and plumbing)

#### 4) TCX Converter:



Every GPS device and mapping software supports only a few kinds of files, many of their users have to deal with file compatibility problems.

The free TCX Converter application has been designed to solve such problem. TCX converter is much more than a simple conversion solution for TCX files. It can also load TRK, GPX, KML, FT, FITLOG, PLT and CSV files and export to TCX, GPX, KML, PLT, HRM, TRK, CSV and FIT files.[6] It can load multiple GPX track files and stick them into a single course. It can manage waypoints, truncate tracks, view and update altitude data. It has a well-organized interface, and it can import data directly from Garmin GPS devices.[6]

#### 5) Google Earth



Google Earth is a computer program that renders a 3D representation of Earth based primarily on

satellite imagery. It was first introduced in 2005. The program maps the Earth by superimposing satellite images, aerial photography, and GIS data onto a 3D globe, allowing users to see cities and landscapes from various angles. Users can explore the globe by entering addresses and coordinates, or by using a keyboard or mouse. The program is also available to be downloaded on a smartphone or tablet, using a touch screen or stylus to navigate easily. A maintainability analysis visualization system is developed under AutoCAD environment. Thus the designers can analyze the product design according to easy, maintenance concurrently.

### III. CONCLUSION

In this review, we have looked at some key features of various softwares used in the analysis, design and planning of survey data obtained from the field. Each software presents a unique feature that makes it stand out.

### IV. REFERENCES

- [1]. R. Laudien, H.P. Thamm, S. Giertz, Dept. Geography University of Cologne, Bonn, Germany, " Customizing ArcGIS for spatial decision support Case study: Locating potential small water reservoir in Benin"
- [2]. John and Eleanor Coulthard's home page.
- [3]. Case study of AutoCAD 2D Engineering Drawing performance among Furniture and Product Design (BFPD) students.
- [4]. J. P. Hao, Y. L. Yu and Q. Xue. A, "Maintainability analysis visualization system and its development under the AutoCAD environment[J]. Journal of Materials Processing Technology.

- [5]. 3D rendering of a surface represented by scattered data points using QuikGrid:  
<https://www.galiander.ca/quikgrid/>
- [6]. TCX Converter – Software Informer.  
<https://www.google.com/amp/s/tcx-converter.software.informer.com/amp>