

Marketing Research using Scientific Tools

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Abstract

Marketing research is the systematic gathering, recording, and analysis of information regarding problems relating to the marketing of goods and services. Data such as these often contain very large numbers of points that may need to be seen visually in order to be fully understood. Scientific data exploration tools such as ArcView GIS and a high-resolution tiled display known as the Exploratory Visualization Environment for REsearch in Science and Technology (EVEREST) will be used to visualize data-intensive marketing information. EVEREST is a powerful data analysis tool that is used for interactively analyzing and exploring detailed scientific imagery, allowing scientists to obtain a more detailed visual understanding of their large-scale data. The research explores how scientific tools may be used to understand large-scale business marketing research data. Research results will be displayed in the EVEREST facility.

Marketing Analysis

- Construct business plan
- Research information
- Competition
- Business locations



Fig 1. Scientific analysis of marketing data.

EVEREST Display

- Transform data to EVEREST
- View data on large scale

ID	Name	State	Value 1	Value 2	Value 3
221	Center County Youth Center Inc.	Illinois	33513	-0215078	2014079
222	Sylvania Heights Community Youth Center Inc.	FL	32648	-8653007	3041762
223	Miami City Mission Youth Center Inc.	FL	33137	-8025660	2618191
224	Boys And Girls Club of Hamilton County Inc.	FL	34806	-8208812	2848795
225	Central Florida Youth Program, Inc.	FL	32444	-8010003	2648726
226	Center Simon Success Center	FL	32318	-8420304	3041296
227	Crystal Beach Youth Center	FL	34691	-8277944	2818129
228	Crystal Beach Youth Center	FL	32918	-8420304	3041296
229	Crystal Beach Youth Center	FL	32918	-8420304	3041296
230	Crystal Beach Youth Center	FL	32918	-8420304	3041296
231	Crystal Beach Youth Center	FL	32918	-8420304	3041296
232	Crystal Beach Youth Center	FL	32918	-8420304	3041296
233	Crystal Beach Youth Center	FL	32918	-8420304	3041296
234	Crystal Beach Youth Center	FL	32918	-8420304	3041296
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236	Crystal Beach Youth Center	FL	32918	-8420304	3041296
237	Crystal Beach Youth Center	FL	32918	-8420304	3041296
238	Crystal Beach Youth Center	FL	32918	-8420304	3041296
239	Crystal Beach Youth Center	FL	32918	-8420304	3041296
240	Crystal Beach Youth Center	FL	32918	-8420304	3041296

Fig 2. Marketing analysis data.

Business Info

- Gather data
- Create spreadsheet (Figure 2)
- Coordinate locations with proper scaling

GIS Tool

- Import data into ArcView GIS tool
- Manipulate graph to analyze marketing demographic/geographic information

Methodology

- Gather data: validate data, create spreadsheet
- ArcView: load data into graph, manipulate graphs
- Generate image layers for final data aggregation

Results

- Successful transition of data from spreadsheet to scientific tool (Figure 3)
- Scientific approaches are extremely beneficial when trying to understand large scale marketing research data.
- Viewing extremely dense data is very effective on the EVEREST display (Figure 4).

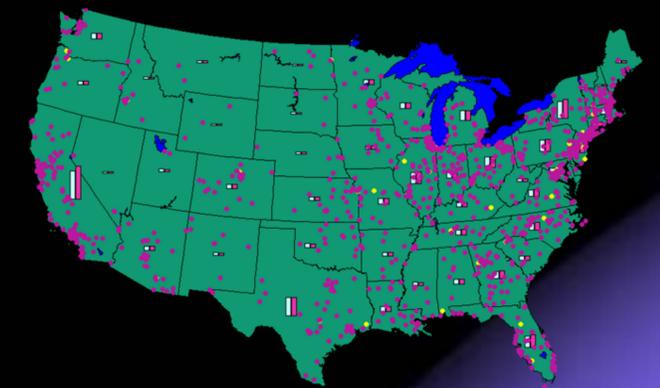


Fig 3. Youth center locations and relative populations of targeted age groups in ArcView.



Fig 4. EVEREST display of large scale data.