

# The U.S. Census Bureau's Innovative Technologies



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U S C E N S U S B U R E A U

# Data without Context is Dead



- ✓ Give data context by topic area
- ✓ Organize data to reveal important patterns
- ✓ Use complementary data to flesh out a portrait
- ✓ Turn data into actionable information

Statistical Abstract  
of the United States

*The National Data Book*

120th Edition  
2000

U.S. GOVERNMENT PRINTING OFFICE

U.S. Department of Commerce  
Bureau of Economic Analysis  
1100 Jefferson Building  
Washington, D.C. 20530

	C2	C4	C6	C8
2	Formul# 2010-01, Arizona	Formul# 2010-02, Arizona	Formul# 2010-03, Arizona	Formul# 2010-04, Arizona
3	1,385,096	55,420	91,267	112,488
4	0	0	0	126,829
5	1,463	105	141	0
6	1,074	21	0	1,78
7	1,013	0	0	799
8	973	0	0	0
9	91	0	0	0
10	873	0	0	127
11	894	0	0	0
12	878	0	0	0
13	1,280	0	0	0
14	6,112	72	0	162
15	0	0	0	0
16	1,588	0	215	0
17	10,108	78	328	258
18	1,839	91	14	367
19	992	0	0	0
20	4,194	848	411	168
21	1,252	0	0	128
22	618	0	98	0
23	131,881	1,728	4,252	18,953
24	1,210	72	0	0
25	325	0	0	0
26	398	0	0	0
27	1,843	0	98	0
28	1,822	0	0	228
29	1,437	447	74	168

- ✓ 1970s statistical software developed for downloading data sets (SPSS 1970, SAS 1976)

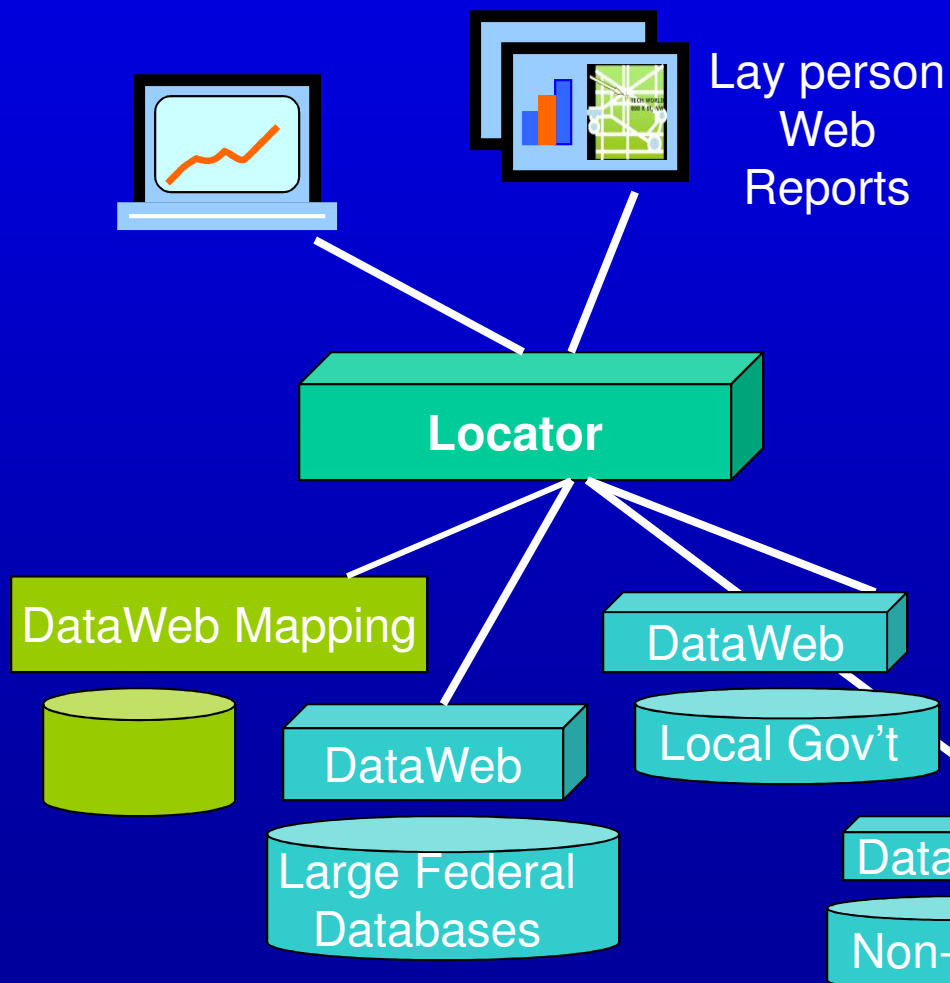
- ✓ Web pages of statistical tables that analysts can copy from

- ✓ Analysts working alone or in small groups

# The Census Bureau's Breakthrough Technologies

- ✓ **TheDataWeb** is a network of public and private databases--a virtual data warehouse on the Internet.
- ✓ **DataFerrett** is a web browser that searches TheDataWeb and allows analysts to recode variables, add calculations and create custom tables.
- ✓ **HotReports** use DataFerrett to retrieve data from TheDataWeb to produce interactive web pages with custom tables, maps, graphs and text.

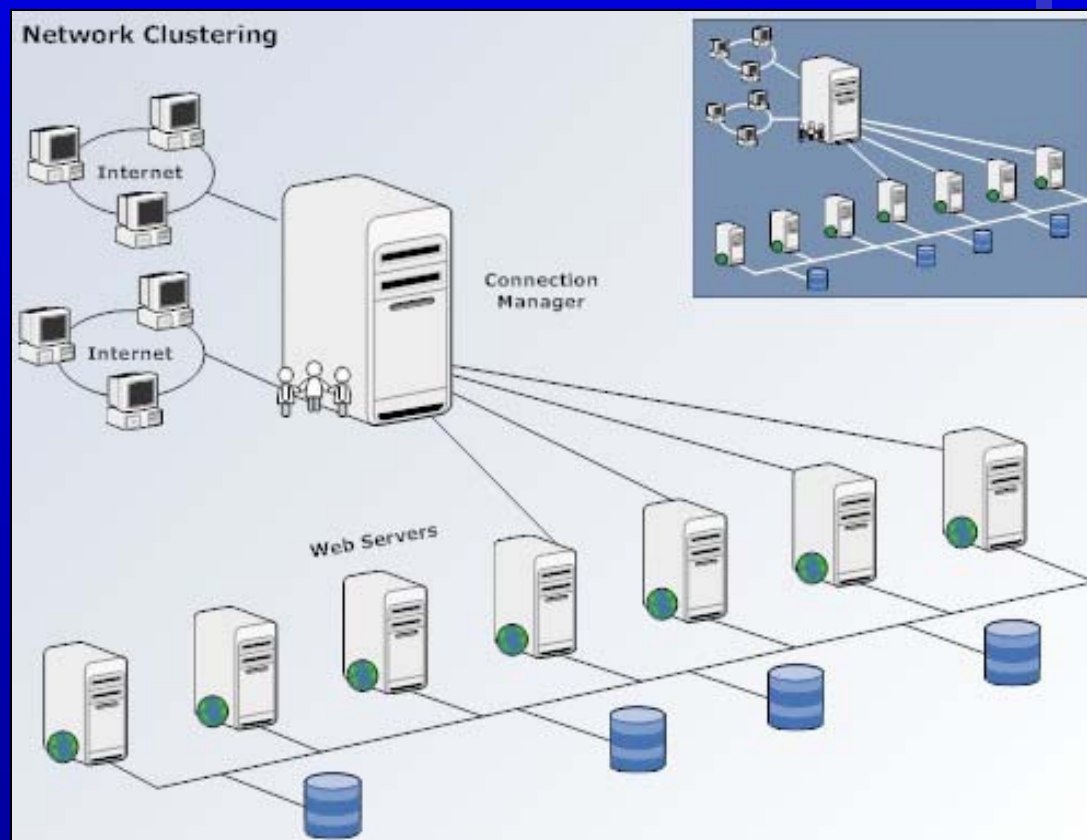
# Internet Technology Tends towards Sharing...



- ✓ Frameworks, networks, and toolsets
- ✓ Social statistical networks with public and private input
- ✓ Snap-in components for viewing and discussing data

# The Internet is the Silk; Metadata is the Spider

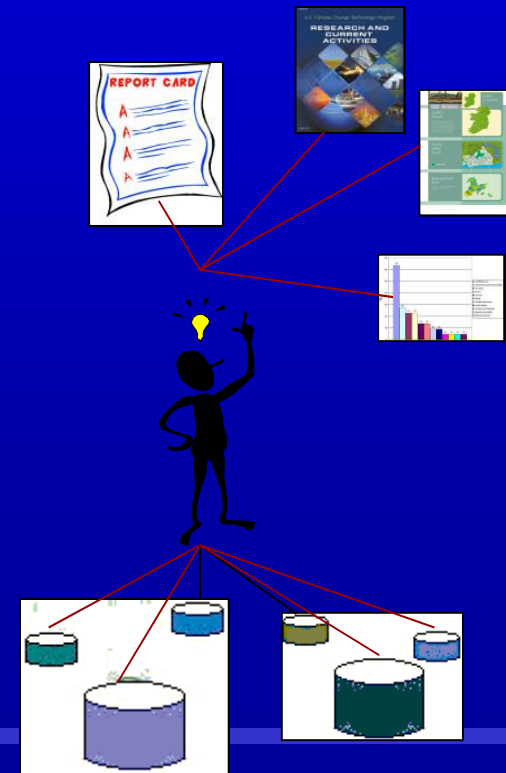
- ✓ Translates programming languages
- ✓ Defines locations
- ✓ Identifies dataset variables
- ✓ Sets usage rules across independent databases



# TheDataWeb Defined

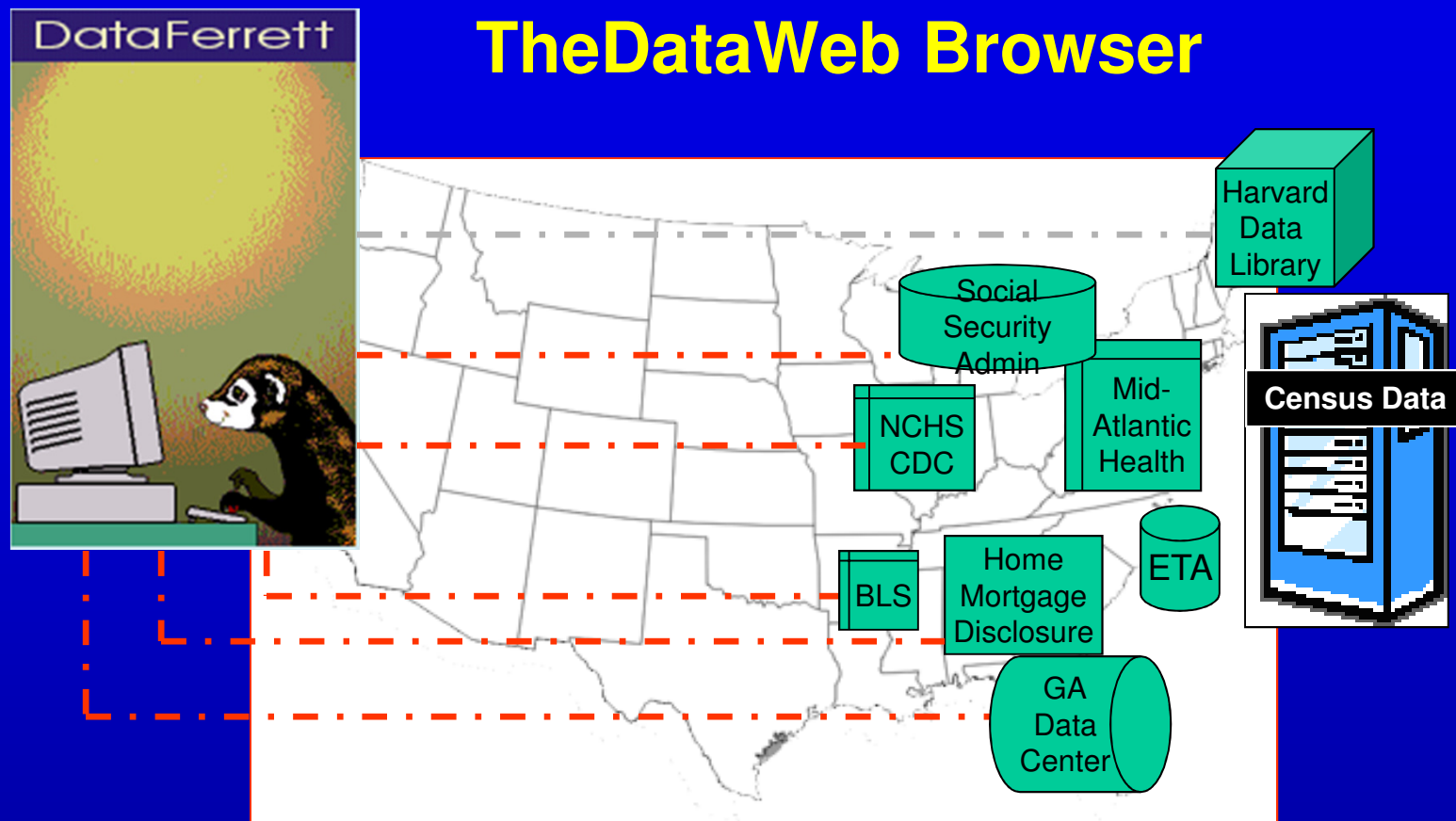
An infrastructure for linking different databases into a single virtual data warehouse that supports different...

- ✓ vendors
- ✓ file structures
- ✓ data types
- ✓ file security models





# DataFerrett: TheDataWeb Browser

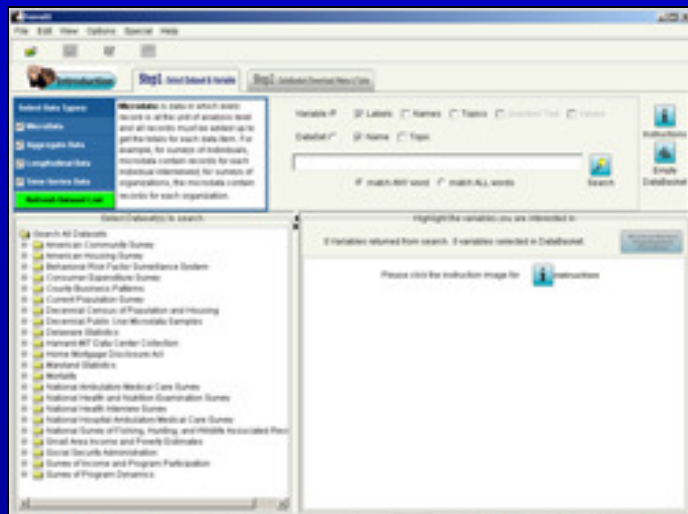
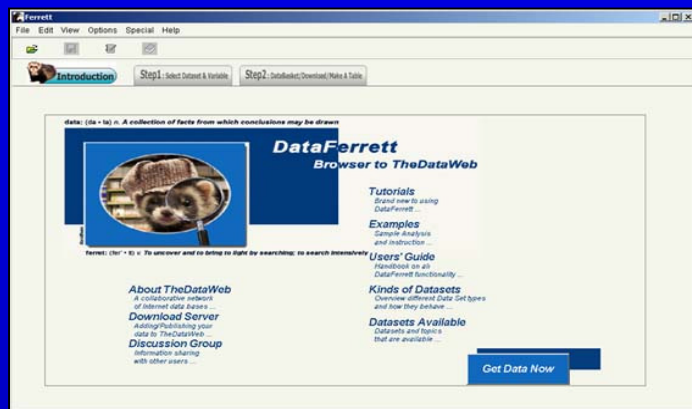


Free online open source software

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# DataFerrett Features



- ✓ Data manipulation and variable recoding
- ✓ Frequencies, cross- and multi- dimension (nested) tabulations
- ✓ Spreadsheet formulas
- ✓ Mapping & graphing
- ✓ Publishing to HTML and PDF

# Integrates Live Data from Federal, State, Local & Private Sources

The screenshot displays the DataBasket web application interface, which is divided into two main steps: **Step1: Select Dataset & Variable** and **Step2: DataBasket/Download/Make A Table**.

**Step1: Select Dataset & Variable**

- Select Data Types:** Includes checkboxes for **MicroData**, **Aggregate Data**, **Longitudinal Data**, and **Time Series Data**. A **Refresh Dataset List** button is also present.
- Microdata Definition:** A text box explains that microdata is data where every record is at the unit of analysis level, and all records must be added up to get totals for each data item. It provides examples for surveys of individuals and organizations.
- Variable Selection:** Includes checkboxes for **Labels**, **Names**, **Topics**, **Question Text**, and **Values**. Below this, there are checkboxes for **Name** and **Topic**.
- Search Functionality:** A search bar with a **Search** button and a **match ALL words** option.
- Dataset Selection:** A list of datasets is shown, including **American Community Survey**, **American Housing Survey**, **County Business Patterns**, **Current Population Survey**, **Decennial Census of Population and Housing**, **Decennial Public Use Microdata Samples**, **Delaware Statistics**, **Harvard-MIT Data Center Collection**, **Home Mortgage Disclosure Act**, **Maryland Statistics**, **Local Employment Dynamics**, **National Health and Nutrition Examination Survey**, **National Health Interview Survey**, **National Hospital Ambulatory Medical Care Survey**, **National Survey of Fishing, Hunting, and Wildlife Associated Recreation**, **Small Area Income and Poverty Estimates**, **Quarterly Census of Employment and Wages**, **Survey of Income and Program Participation**, and **Survey of Program Dynamics**.

**Step2: DataBasket/Download/Make A Table**

- Variable Selection:** A section for selecting variables, with a **0 Variables** indicator.
- Highlight the variables you are interested in:** A section for highlighting variables.
- Instructions:** A link to **Instructions** and a button for **Empty DataBasket**.
- Instruction Image:** A section for an **Instruction** image.
- Browse/Select Highlighted Variables:** A button to browse or select highlighted variables.

Three red boxes with arrows point to specific datasets in the list:

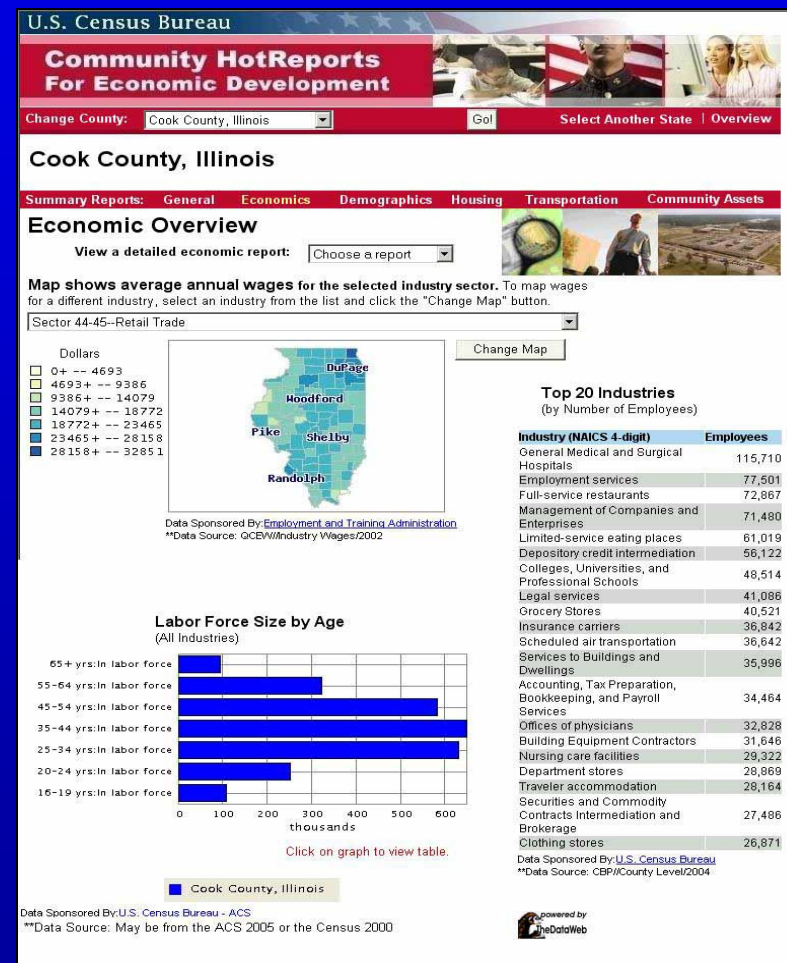
- Census Bureau** (points to American Community Survey)
- Census Bureau** (points to American Housing Survey)
- Employment and Training Administration** (points to Local Employment Dynamics)

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# HotReports MASHUPS

## Custom, Interactive, Web-based

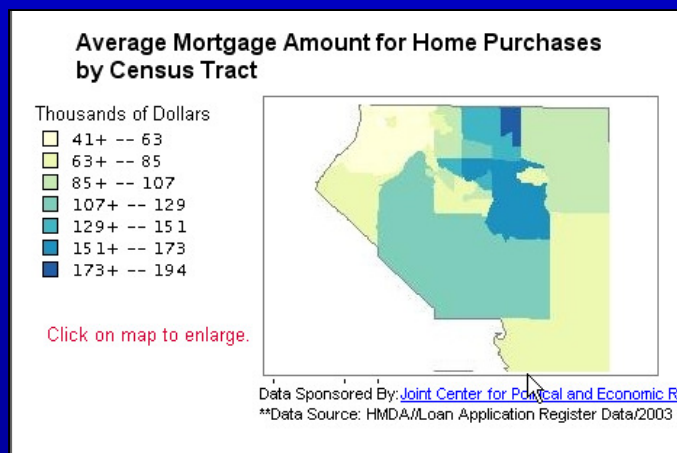
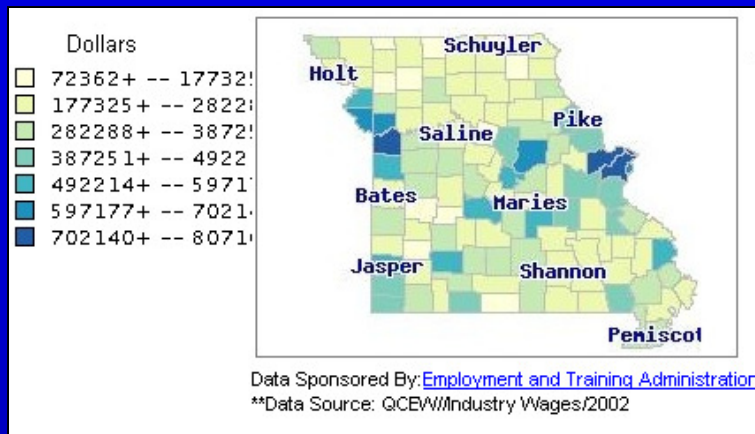
- ✓ Target issues
- ✓ Target audiences
- ✓ Reuse data
- ✓ Built-in statistical intelligence
- ✓ Reference data
- ✓ Intuitive interface



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# Elements of *HotReports*

## MAPS



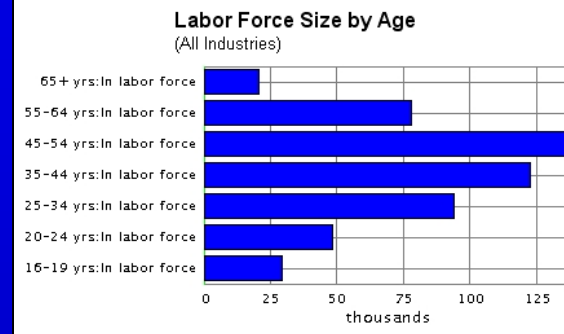
## Occupancy Status



St. Louis County, Missouri

- Owner Occupied
- Renter Occupied
- Vacant

## CHARTS/GRAPHS



## DYNAMICALLY UPDATED TEXT

### Education Levels

In **St. Louis County, Missouri**, **89.9%** of the population 25 years and over had a high school diploma or more education compared with **84.5%** in the entire **nation**.

Additionally, **35.3% of the county's** population had a Bachelor's degree or more compared with **22.2% of the nation's** population.



## TABLES

### Top 20 Industries (by Number of Employees)

Industry (NAICS 4-digit)	Employees
Management of Companies and Enterprises	32,868
General Medical and Surgical Hospitals	24,643
Full-service restaurants	21,782
Employment services	19,672
Limited-service eating places	18,359
Building Equipment Contractors	11,397
Services to Buildings and Dwellings	11,286
Religious organizations	10,532
Offices of physicians	9,929
Insurance carriers	9,781
Department stores	9,758
Grocery Stores	9,194
Computer Systems Design and Related Services	8,706
Nonresidential Building Construction	7,763

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# Community *HotReports* for Economic Development

**Community HotReports  
For Economic Development**



[Overview](#)

To begin, select a state and county to view:

Alabama

Autauga County, Alabama

Go

**Project Sponsors:**



powered by  
TheDataWeb

This site, Community HotReports for Economic Development, provides access for users seeking economic indicators for states and counties.

For areas that experience economic disruptions due to natural disasters, plant closings, base closings, and other economic changes, such as abrupt increases in employment, this HotReport shows pertinent economic indicators in unified on-line reports from many data sources.

**Available HotReports include:**

- \*Economic Indicators
- \*Community Assets
- \*Demographics
- \*Housing Characteristics
- \*And more!*



# HotReport: Community Characteristics

## County Level Baseline

- ✓ Workforce, Income, Employment & Education
- ✓ Unemployment Rate
- ✓ Age Pyramid
- ✓ Population

## Topics

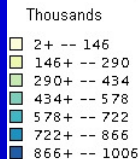
- ✓ Economics
- ✓ Demographics
- ✓ Housing
- ✓ Transportation
- ✓ Community Assets

### St Louis County, Missouri

Summary Reports: General Economics Demographics Housing Transportation Community Assets

#### General Characteristics

##### Population Size (in thousands)



Data Sponsored By: [U.S. Census Bureau - Population Division](#)  
\*\*Data Source: POPEST/Census Bureau Version/County Population 2005

##### General Area Statistics for St Louis County, Missouri

Population (2005)	1,004,666
Average annual wage (2004)	\$42,503
Number in labor force (2004)	560,629
Number employed (2004)	530,349
Unemployment rate (2004)	5.4%
Median household income *	\$54,268
Median housing value *	\$165,000
Median gross rent *	\$717
Per capita personal income *	\$32,186
Poverty rate *	9.0%
High school graduates *	89.9%
Bachelor's degree or higher *	35.3%

\* May be from ACS 2005 or Census 2000

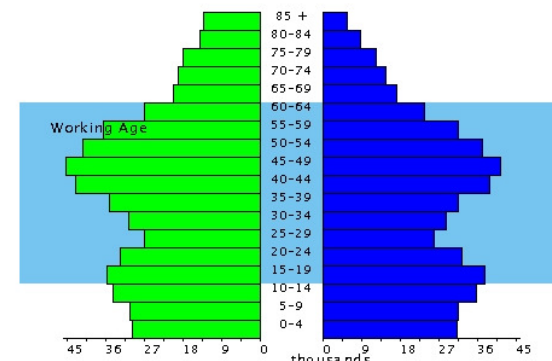
##### Relocation Data for Industry

Industries looking to relocate often consider areas in terms of the number of people in its workforce and their education, its unemployment rate, its wage rates, its housing stock, and educational and transportation infrastructures.

The unemployment rate of **5.4%** in **St Louis County, Missouri** in 2004 was **lower than** the national unemployment rate of **5.5%** for the same period.



##### Age Distribution in St Louis County, Missouri



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# HotReport: Housing Characteristics

## St Clair County, Illinois

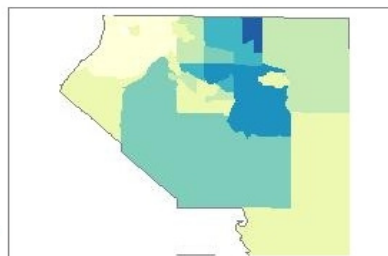
Summary Reports: General Economics Demographics Housing Transportation Community Assets

### Housing Overview

#### Average Mortgage Amount for Home Purchases by Census Tract

Thousands of Dollars

- 41+ -- 63
- 63+ -- 85
- 85+ -- 107
- 107+ -- 129
- 129+ -- 151
- 151+ -- 173
- 173+ -- 194



[Click on map to enlarge.](#)

Data Sponsored By: [Joint Center for Political and Economic Research](#)  
\*\*Data Source: HMDA/Loan Application Register Data/2003



#### Housing Values

The average mortgage for a home purchased in 2003 was **\$107,817** in **St Clair County, Illinois**. Homeowners reported in the 2000 Census that the median value of their home was **\$77,700**.



#### Housing Shortage or Surplus

There were **111,496** housing units in **St Clair County, Illinois** with **69,025** of them occupied by the owners and **31,851** of them occupied by renters.

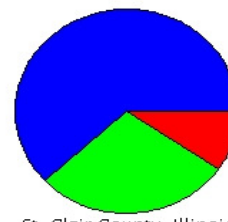
The percentage of owner-occupied units was **68.4**.

Of the **9.5%** of housing units that were vacant, **2,093** of them were for rent.

The average number of people in a household was **2.5**.

\*Data may be from ACS 2005 or Census 2000.

#### Occupancy Status



St. Clair County, Illinois

- Owner Occupied
- Renter Occupied
- Vacant

Data Sponsored By: [State Data Centers - AR and GA](#)

\*\*Source: May be from ACS 2005 or Census 2000



# Integrating Information for Emergency Response

► Hurricane Wilma

Hurricane Katrina

Hurricane Rita

## Demographic Profile of Hurricane Wilma Affected Counties

(This profile includes general demographic characteristics, poverty data, general school information, and shelter information.)

Click on a county in the population map below  
to view the statistics for that county:

### Total Population by County

□	10576+ -- 330974
□	330974+ -- 651372
□	651372+ -- 971770
□	971770+ -- 1292168
□	1292168+ -- 1612566
□	1612566+ -- 1932964
■	1932964+ -- 2253362



### Shelters - Brevard County, Florida



**Note:** The shelter map will not appear if there are no shelters or mapping information for the shelters in the county selected.

Source: Florida Shelter data, 2004

### Schools - Brevard County, Florida



Click on small map to enlarge the image and get additional info on each school.  
(**Note:** All schools may not appear due to a lack of

# Sampling of DataFerrett Agencies

- ✓ Australian Bureau of Statistics  
(National Data Network)
- ✓ Harvard University (Virtual Data Center)
- ✓ Centers for Disease Control  
(Environmental Health Network)
- ✓ Bureau of Labor Statistics
- ✓ National Center for Health Statistics

# Contact Us

<http://thedataweb.org>

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