WHERE WE STAND UPDATE

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East-West Gateway Coordinating Council • 10 Stadium Plaza • St. Louis, MO 63102-1714

# EARNINGS FROM COMPUTER AND MATHEMATICAL JOBS IN THE ST. LOUIS REGION

## Introduction

The emerging world economy revolves around technology and information. Growth in this "new economy" has been intense, with U.S. firms doubling their research and development efforts over the last 15 years.[1] Expertise in technology and information management has replaced natural resources and the efficiency of physical labor as the engines of wealth and economic growth. The evolution of our economy has significantly altered the way that regions remain competitive. Fading are the days when cities could secure advantages over other cities by simply reducing the overall costs of doing business. In the new economy, regional advantage comes to areas that can best retain and attract talent.

## Where We Stand

This issue of *Where We Stand Update* examines one factor in the battle to retain and attract new economy workers - salary. How well do the region's employers compensate their technical workforce? How does St. Louis compare to 35 peer regions?[2]

Since 1992, East-West Gateway has tracked and compared various demographic, social, and economic factors across metropolitan areas in the publication *Where We Stand: A Strategic Assessment of the St. Louis Region*. The charts to the right, displayed in the trademark *Where We Stand* format, reflect the most recent data available regarding occupational employment and wage estimates for computer and mathematical occupations. These occupations were chosen because they represent many of the fastest growing and most in-demand jobs in the new economy. A list of these occupations can be found on page four.

1 The Global Context for U.S. Technology Policy. Office of Technology Policy, Technology Administration, U.S. Department of Commerce, Washington, D.C. 1999.

2 Metropolitan areas were selected for comparison as our "peers" if they met one of two criteria: the area had a population of 950,000 or more and was within 500 miles of St. Louis or the area had an economic function similar to that of the St. Louis region.

The first chart ranks regions according to 1999 average annual salary estimates from the Bureau of Labor Statistics. For the St. Louis metropolitan statistical area, the average annual salary for all computer and mathematical occupations is $54,370. This places St. Louis 18th among 35 peer regions. The average salary among these regions is $54,880. *continued on page 4...*

**AVERAGE ANNUAL SALARY**

| | | |
|---|---|---|
| 1 | **San Francisco** | **$65,160** |
| 2 | Boston | 64,090 |
| 3 | Austin | 61,520 |
| 4 | New York | 60,860 |
| 5 | Houston | 60,110 |
| 6 | Dallas | 59,220 |
| 7 | Washington DC | 58,180 |
| 8 | Philadelphia | 57,220 |
| 9 | Seattle | 57,190 |
| 10 | Denver | 57,080 |
| 11 | Atlanta | 56,800 |
| 12 | Chicago | 56,560 |
| 13 | San Diego | 56,370 |
| 14 | Detroit | 55,940 |
| 15 | Minneapolis | 55,780 |
| 16 | Charlotte | 55,270 |
| | **Average** | **54,880** |
| 17 | Los Angeles | 54,780 |
| **18** | **St. Louis** | **54,370** |
| 19 | Columbus | 53,790 |
| 20 | Portland | 53,200 |
| 21 | Baltimore | 53,080 |
| 22 | Cleveland | 51,350 |
| 23 | Phoenix | 51,250 |
| 24 | Pittsburgh | 51,190 |
| 25 | Cincinnati | 50,910 |
| 26 | Kansas City | 50,530 |
| 27 | Indianapolis | 47,860 |
| 28 | Milwaukee | 47,440 |
| 29 | Salt Lake City | 47,300 |
| 30 | Nashville | 46,850 |
| 31 | Miami | 46,410 |
| 32 | Louisville | 45,560 |
| 33 | Oklahoma City | 42,880 |
| 34 | Memphis | 41,160 |
| **35** | **San Antonio** | **38,700** |

**Average annual salary ($) for computer and mathematical jobs, 1999**

Source: U.S. Bureau of Labor Statistics

**AVERAGE ADJUSTED ANNUAL SALARY**

| | | |
|---|---|---|
| 1 | **Houston** | **$63,610** |
| 2 | Austin | 61,950 |
| 3 | Dallas | 58,580 |
| **4** | **St. Louis** | **55,880** |
| 5 | Charlotte | 55,380 |
| 6 | Atlanta | 55,040 |
| 7 | Baltimore | 54,720 |
| 8 | Columbus | 53,900 |
| 9 | Denver | 52,710 |
| 10 | Minneapolis | 52,420 |
| 11 | Cincinnati | 52,000 |
| 12 | Phoenix | 50,100 |
| 13 | Kansas City | 49,830 |
| 14 | Indianapolis | 49,750 |
| 15 | Detroit | 49,550 |
| 16 | Nashville | 49,160 |
| 17 | Philadelphia | 48,950 |
| 18 | Pittsburgh | 48,290 |
| | **Average** | **48,250** |
| 19 | Seattle | 48,180 |
| 20 | Oklahoma City | 47,430 |
| 21 | Portland | 47,330 |
| 22 | Louisville | 47,260 |
| 23 | Boston | 47,060 |
| 24 | Salt Lake City | 45,920 |
| 25 | Cleveland | 45,770 |
| 26 | Chicago | 45,610 |
| 27 | Memphis | 44,890 |
| 28 | Milwaukee | 44,880 |
| 29 | San Diego | 44,600 |
| 30 | Los Angeles | 44,500 |
| 31 | Miami | 43,620 |
| 32 | San Antonio | 41,480 |
| 33 | Washington DC | 32,140 |
| 34 | San Francisco | 30,030 |
| **35** | **New York** | **26,260** |

BETTER — AVERAGE — WORSE

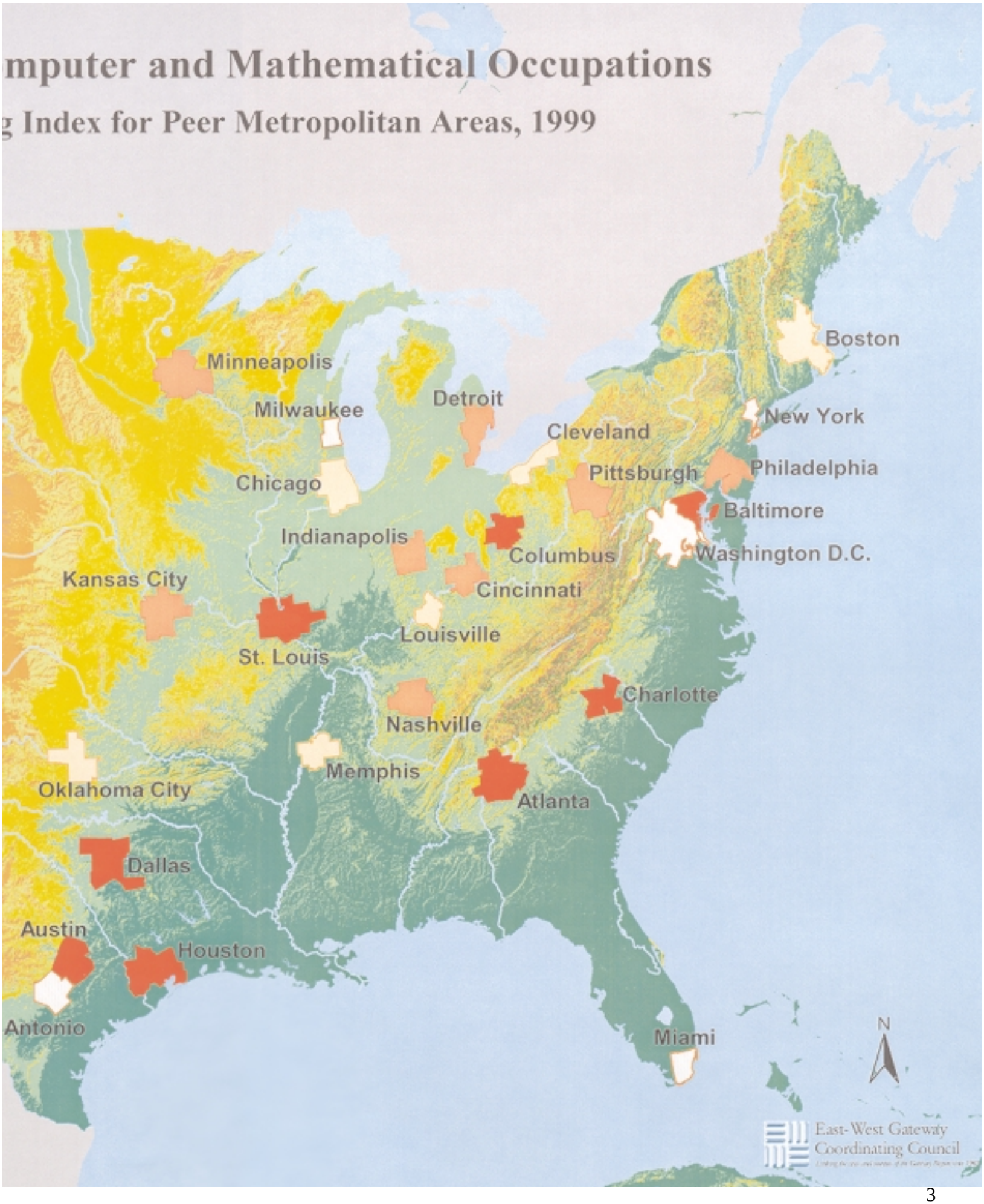
**Average annual salary ($) for computer and mathematical jobs adjusted by cost of living index, 1999**

Source: U.S. Bureau of Labor Statistics

WHERE WE STAND

# Mean Annual Salaries for Compu

## Adjusted by the Cost of Living Inde


mputer and Mathematical Occupations
g Index for Peer Metropolitan Areas, 1999
Boston
Minneapolis
Detroit
Milwaukee
New York
Cleveland
Pittsburgh
Philadelphia
Chicago
Baltimore
Indianapolis
Columbus
Washington D.C.
Kansas City
Cincinnati
Louisville
St. Louis
Charlotte
Nashville
Memphis
Oklahoma City
Atlanta
Dallas
Austin
Houston
Antonio
Miami
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| Computer and Mathematical Occupations in the St. Louis MSA, 1999 | Employment | Average Annual Salary | Average Adjusted Annual Salary |
|---|---|---|---|
| Computer Systems Analysts | 7,480 | $55,830 | $57,380 |
| Computer Programmers | 4,180 | 53,110 | 54,580 |
| Computer Support Specialists | 3,770 | 40,050 | 41,160 |
| Computer Software Engineers, Applications | 3,440 | 65,460 | 67,280 |
| Computer Software Engineers, Systems Software | 2,780 | 58,320 | 59,940 |
| Network and Computer Systems Administrators | 1,920 | 49,300 | 50,670 |
| Network Systems and Data Communications Analysts | 1,080 | 48,830 | 50,180 |
| Database Administrators | 760 | 53,190 | 54,670 |
| Actuaries | 510 | 90,260 | 92,760 |
| Operations Research Analysts | 390 | 48,260 | 49,600 |
| Statisticians | 40 | 48,350 | 49,690 |

Source: Occupational Employment Statistics, U.S. Bureau of Labor Statistics

The second chart and the map on pages 2 and 3 reflect adjustments to salary to account for cost of living differences for metropolitan areas. Interestingly, when adjusted for cost of living, St. Louis leaps to fourth among the 35 peer regions in average annual salary for computer and mathematical occupations. In St. Louis, workers in computer and mathematical occupations have an annual buying power of $55,880. The average adjusted salary among the 35 peer regions is $48,250. Adjusted salaries in the St. Louis MSA only trail those in Houston, Austin, and Dallas.

**Some Questions for the Region**

- In the competition for human capital, it is vital to emphasize a region's best qualities. Research has shown that "community quality-of-life" factors are especially important for young new economy workers. But this same research shows that salary is still the number one factor in attracting these workers to areas.[3] How can the St. Louis region best parlay its low cost-of-living and competitive salaries in a campaign to attract and retain qualified new economy workers?

- Do high-tech workers in the region understand how well their salaries compare to salaries in other areas of the country? Is cost-of-living a consideration? Do employers of these workers emphasize cost-of-living when trying to attract and retain qualified workers?

- If high-tech jobs in the region pay so well, why isn't the region thriving as a high-tech capital? Are these salaries so high (when adjusted for cost of living) because that is the only way that workers will stay here? Do higher salaries compensate for other deficiencies? If so, where are these deficiencies? Are they things that we can change?

**For more information**

For more information on employment and wage estimates in the new economy, the reader may want to consult the following web sites.

**U.S. Bureau of Labor Statistics**
http://www.bls.gov

**American Chambers of Commerce Researchers Association**
http://www.accra.org

**Missouri Works! Labor Market Information**
http://www.works.state.mo.us/lmi/index.htm

**Illinois Occupational Informational Coordinating Committee**
http://www.ioicc.state.il.us

**The State New Economy Index**
http://www.neweconomyindex.org

3 See "Competing in the Age of Talent: Environment, Amenities, and the New Economy" by Richard Florida, January 2000.