

# Census Update Survey 2003

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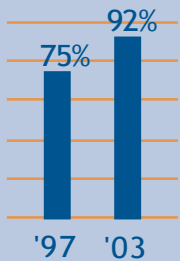
## The digital gap is closing in Montgomery County.

by Gary Goodwin, Research Planner/Web Coordinator

Exhibit 1

### Home computer ownership approaches 100%

Percent of Montgomery County population with access to computers at home, 1997 and 2003



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Unless otherwise noted, the source of all data is: Census Update Survey; M-NCPPC Research & Technology Center; 1987, 1994, 1997, and 2003.

With the advent of home computing and the World Wide Web, there has been concern that a "digital gap" would separate those who have access to this new technology from those left without it. In the 1990s, this gap looked to be considerable and possibly persistent. But new demographic and economic data collected in the spring of 2003 shows a small and quickly narrowing gap in Montgomery County.

### Census Update Survey 2003

Since 1974, the M-NCPPC Research Center has conducted a survey of households approximately every three years preceding a U.S. decennial census and four years following it. In 2003, surveys were mailed to a sample of Montgomery County households. These data were representative of demographic and economic trends found in each area of the County and the County as a whole.

Three key questions were asked of households relevant to exploring the presence and extent of a County digital gap: How many personal computers are used in your residence? Does your residence have an Internet connection? If yes, do you use dial-up or high-speed (cable, DSL, or satellite) access? The first two questions were also asked six years earlier when we conducted the 1997 Census Update Survey and the results are included here to show how computer and Internet access has changed over the 1997 to 2003 period.

### Access to Computers

Between 1997 and 2003, home computing reached new levels of popularity. Falling

prices, greater computing power, sales of increasingly entertaining computer games, and use of computers in primary, middle and high school education, led most households to add at least one computer. Growth of the Internet also has been compelling and almost a necessity for a person looking for fast and convenient access to a wide range of information, and E-mail has reshaped personal and business communication.

By 2003, 92 percent of the County's 914,900 residents had access to at least one computer at home. This is 17 percentage points higher than the 75 percent of the population that had personal computers in 1997.

When comparing Montgomery County households to the nation's households, we see Montgomery County computer access running well ahead of the national access level (Exhibit 2). In 2003, the County exceeded estimated U.S. computer ownership by 19 percentage points. Eighty-seven percent of the County's 338,445 households owned computers to the nation's 68 percent.

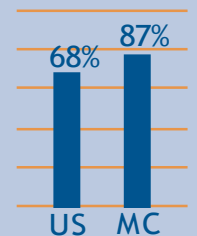
### Computer Access Gap

In 1997, access to computers varied greatly by race and Hispanic origin (Exhibit 3). Asian

Exhibit 2

### County households lead US in computers

Percent of US and Montgomery County households with computers, 2003

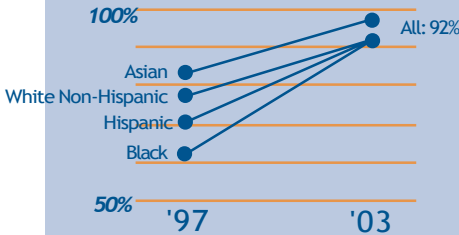


U.S. Computer data estimated from 2000 & 2001 data, U.S. Dept. of Commerce, NTIA.

Exhibit 3

**Computer ownership converges and gap diminishes**

Percent of Montgomery County population with access to computers at home, 1997 and 2003



residents had the greatest access and the Black population had the least. By 2003, the differences between all groups had greatly diminished. Black, Hispanic, and White population access converged around a single point, near the access level enjoyed by the County as a whole. Ninety-two percent of the County's population had access to a computer at home when the survey was conducted last year.

Black residents saw the greatest growth in computer access, 27.9 percentage points (Table 1). Hispanics followed with a growth of 20.9 percentage points. In the same period, Asian and White access grew at a more modest level, 13.9 and 15.1, respectively.

Table 1

**Computer Access by Major Population Group**

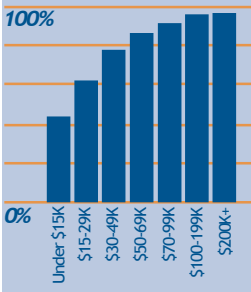
Percentage of each major of Montgomery County population group that has access to a computer at home, 1997 and 2003

Group	1997	2003	Growth
Asian	82.8	96.7	13.9
Black	62.6	90.5	27.9
Hispanic	70.2	91.1	20.9
White, Non-Hispanic	76.7	91.8	15.1

Exhibit 4

**Home computer ownership falls below 50% at incomes < \$15K**

Percent of Montgomery County households by income group with computers, 2003



As expected, computer ownership follows household income. As income increases, the greater is the share of households with at least one computer. When median incomes fall to under \$15,000, less than 50 percent of households in that income range have computers at home (Exhibit 4).

**Internet Access**

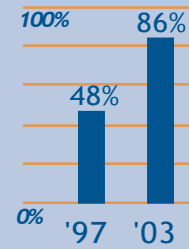
In the past six years, Internet access jumped by 38 percentage points. By 2003, 86 percent of all residents had access in their homes via dial-up or high-speed technologies (Exhibit 5).

As was the case with computer ownership, Montgomery County also widely exceeds the nation in Internet access. When looking at household data, we can see that the County's

Exhibit 5

**Home internet access jumps 38 percentage points**

Percent of Montgomery County population with access to internet at home, 1997 and 2003

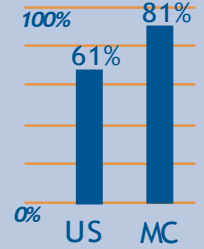


U.S. Computer data estimated from 2000 & 2001 data, U.S. Dept. of Commerce, NTIA.

Exhibit 6

**County leads US in household internet access**

Percent of United States and Montgomery County households with access to internet at home, 2003



access exceeded national access by 20 percentage points (Exhibit 6).

Persons 19 and under enjoy an extremely high level of access to computers at home; 97 percent of all children in the County have computer access at home. Exhibit 7 shows this age group split into three sub-segments: under 10, 10 to 14, and 15 to 19 years old. A clear trend can be seen. As children get older, access increases. By high school age, nearly 98 percent have access.

Internet access is also seen at high levels in the 19 and under age group where nearly 91 percent have access to the Internet at home in

Exhibit 7

**Computer access for children approaches 100%**

Percent of Montgomery County children with access to computer at home, 2003

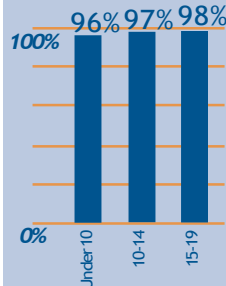
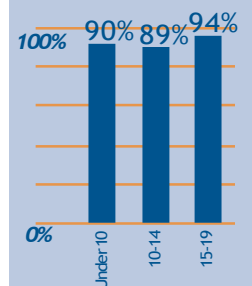


Exhibit 8

**Few Children Without Internet Access at Home**

Percent of Montgomery County children with internet access at home, 2003



## The digital gap is closing in Montgomery County.

2003. A slightly different trend is revealed in the data (Exhibit 8). A small drop-off in access can be seen between the under-10 age group and the 10 to 14 children. Only a percentage point separates these two groups. The 15 to 19 years old group had the greatest level of access (93.7 percent).

As is expected, Internet access by adults is high and remains so across many age groupings (Exhibit 9). Access reaches a peak as early as the 40 - 44 age group (90 percent with access) and remains pretty much unchanged until 54. Starting at age 55, access falls off, reaching its lowest point in the 75+ age grouping (52.2 percent with access).

### Broadband Internet Access

In addition to the changing capabilities of home computers and the expanding number of persons accessing the Internet since 1997,

the means of accessing the Internet have also changed. In 1997, the majority of Internet users used a modem to dial-up to an Internet service provider to gain access. By 2003, the number of access choices had increased with the addition of cable, DSL (uses dedicated phone lines), and satellite technology. High-speed access helps the user unlock more advanced capabilities of the Internet, such as audio and video streaming and telecommuting options. Five years ago, communities were measured how "wired" they were by marketers and those making technology policies. The presumption is that the more wired, the more technologically savvy and leading edge are the residents. Now, the new measure is how "broadband wired" we are.

The 2003 Census Update Survey data at the household level shows we are more broadband wired than the nation as a whole. The County households' high-speed usage runs 19 percentage points higher than the U.S. usage level (Exhibit 10).

### Internet Access Gap

Between 1997 and 2003, each major population group saw growth in Internet access (Exhibit 11). However, convergence has not been seen across all these groups. Asian and White groups have the highest level of access and Black and Hispanic populations share the lowest.

As was the case with computer access, Black residents saw the greatest growth in Internet access

### Internet Access by Major Population Group

*Percentage of each major of Montgomery County population group that has internet access at home, 1997 and 2003*

Group	1997	2003	Growth
Asian	52.9	90.6	37.7
Black	35.8	80.2	44.4
Hispanic	44.6	79.7	35.1
White, Non-Hispanic	50.1	87.9	37.8

between 1997 and 2003, increasing by slightly more than 44 percentage points. The other population groups had nearly the same amount of growth: Asians and non-Hispanics saw a 37.8 and 37.7 percentage point increase, respectively, with non-Hispanic Whites following closely behind at 35.1 percentage points.

There are some moderate disparities in levels of high-speed access between major population groups. When data is cast in terms of population (not to be confused with household data shown in Exhibit 10), we see that 34 percent of the total population has access to the Internet via high-speed means (Exhibit 12). Lagging the level of access enjoyed as a County as a whole, are the Hispanic and the Black groups with 27 and 25 percent access levels, respectively. These differences are likely driven

Exhibit 9

### Internet access decreases with age

*Percent of Montgomery County adults with internet access at home, 2003*

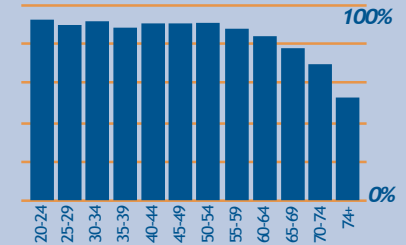
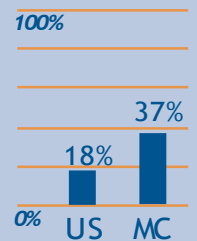


Table 2

Exhibit 10

### County broadband usage exceeds U.S.

*Percent of households with broadband internet access (cable, DSL, satellite), 2003*



*U.S. broadband usage: RHK, Inc. cited in BusinessWeek Online, Sept. 9, 2003*

Exhibit 11

### Home internet access jumps; some disparity by group

*Percent of Montgomery County population with internet access at home by group, 1997 and 2003*

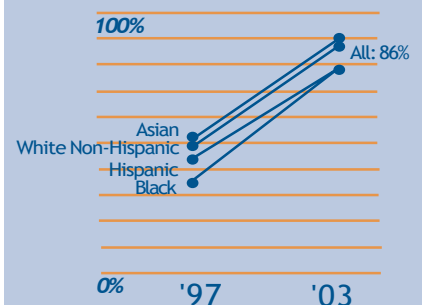
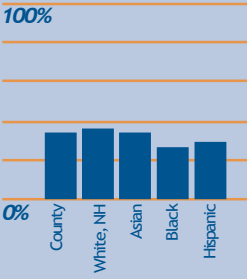


Exhibit 12

**Hispanic, Black groups lag in high-speed internet access**

Percent of Montgomery County population by group with broadband internet access, 2003



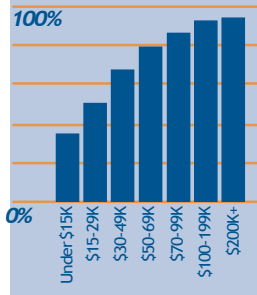
by differences in income. Black and Hispanic groups have lower median incomes than the other major population groups. Since broadband access is nearly twice the cost of popular dial-up access (i.e., AOL), households within these groups have passed up this more costly service in favor of dial-up service. As high speed Internet services become more affordable (typically costing \$50 per month for cable and \$39 per month for DSL service) differences in access between these groups are expected to greatly diminish.

Income also influences home access to the Internet. Access falls off most sharply in those households with incomes under \$30,000 (Exhibit 13). Only 50 percent of households in the \$15,000 to \$29,999 income group have access and, if the household has an income under \$15,000, only 35 percent can access the Internet at home.

Exhibit 13

**Home computer ownership falls below 50% at incomes < \$15K**

Percent of Montgomery County households by income group with computers, 2003



**Conclusion**

The assumption that there is some degree of digital gap in Montgomery County is correct; however, the gap has receded since 1997, and, in most cases, is quite small.

This report did not compare any gaps to a standard to determine whether our situation is one for concern or how it might compare to other communities.

The County enjoys a higher level of Internet access and use of high-speed access than is found at the national level. Ninety-two percent of the population has access to computers at home and 86 percent have access to the Internet. Nearly 100 percent of children and young adults (19 and younger), have a computer at home and 91 percent have access to the Internet in their homes.

Populations that may need additional help in terms of digital access could include lower income households and seniors 75 and older. Internet access falls off sharply as household income decreases below \$30,000. At those income levels, fewer than 50 percent of households in this group can access the Internet at home. The older a senior is, the

less likely her or she is to have access to the Internet. The recurring monthly costs, lack of familiarity with this new technology, and little need for job-related or educational tasks are probably the main reasons for such a low level of Internet access among the elderly.

Black and Hispanic population groups may also benefit from measures to raise their Internet access levels closer to the County's other population groups; however, all groups enjoy very high levels of access (79.7 percent or greater).



For More Information

**Census Update Survey 2003**

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The Census Update Survey 2003 is a project of:

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Additional results from the Census Update Survey 2003, as well as other demographic data about Montgomery County, are available on-line from the Research & Technology Center at [www.mcfacts.org](http://www.mcfacts.org)