



# **GVU's WWW User Surveys**

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**Georgia Tech - CoC - GVU**

**Special thanks to:**

**CNS, Randy Carpenter, Kipp Jones,  
Mike Mealling, Dr. James Foley,  
GVU, Sun Microsystems**



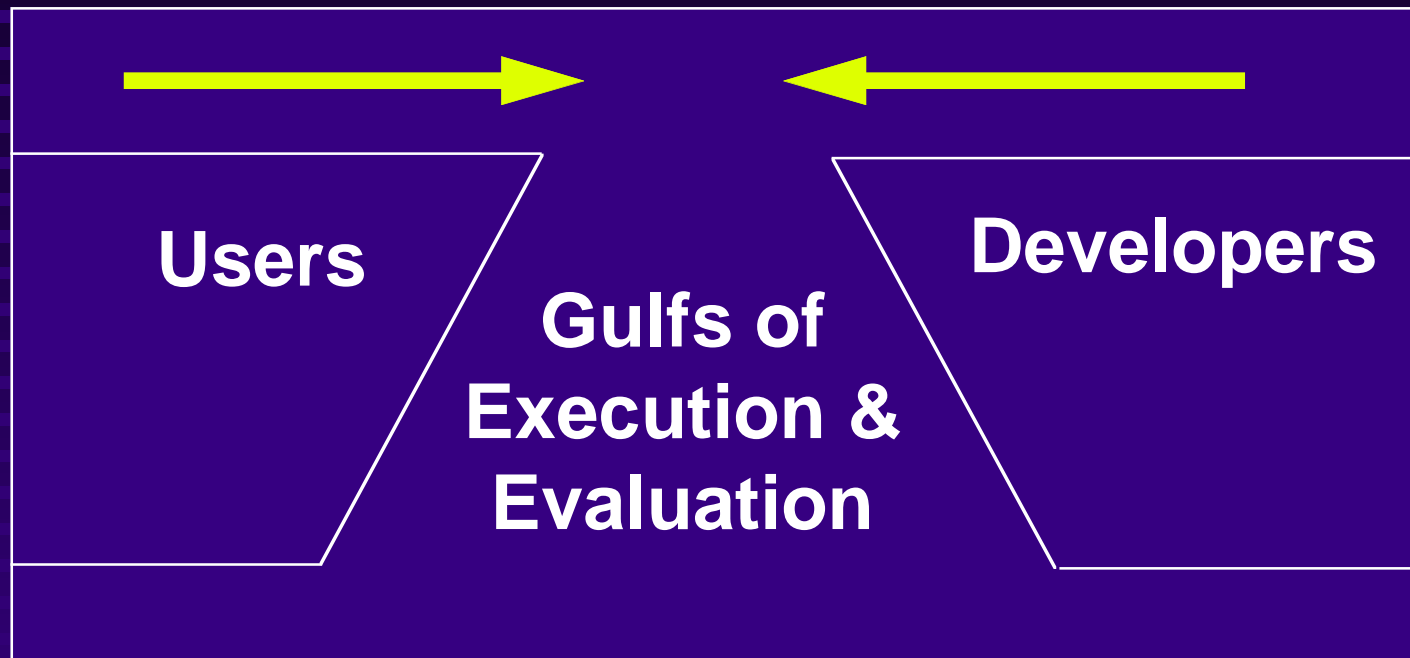
# GVU's WWW User Surveys

- \* GVU public service run twice a year
- \* Questionnaires on demographics, usage, attitudes, technical issues, ...
- \* Participation encouraged by the World-Wide Web Consortium, INRIA, and NCSA



# Why Survey the Web?

\* Golden rule of Human-Computer Interaction



# Well, the Web is Good



- \* **Proof of concept for Web based surveys**
- \* **Previous attempts typically used Usenet/  
email combination**
- \* **Many advantages: point & click interface,  
low cognitive overhead, no time  
constraints, etc.**

# G7 Conclusions from February 1995 Meeting



- \* These principles will apply to the  
Global Information Society  
Infrastructure by means of:

[...]

- \* Monitoring of the social and  
societal implications of the  
information society.

# The Killer Application is almost never Intended



- \* E.g., speech recognition and AT&T
- \* Marketers and electronic commerce
- \* Journalists and the popular media
- \* Academic interests and research

# History of the Surveys



- \* **First WWW User Survey conducted in January 1994**
- \* **First publicly accessible Web-based survey**
- \* **Over 1,500 users responded**



# Second Survey

- \* **Conducted October 1995 and received over 4,500 respondents**
- \* **Consumer Survey pre-test developed by the Hermes team at the University of Michigan's Business School**
- \* **Changing of the guard: Mimi Recker left, Colleen Kehoe & Laurie Hodges joined**





# Third Survey

- \* **Conducted April 1995 and received over 13,000 responses**
- \* **First independent analysis of a major online Service Provider - Prodigy**
- \* **Web Service Providers pre-test added and Consumer Sections moved out of beta**



# Time for a Brief Pit Stop

- \* **Architecture**
- \* **Latest Developments**
- \* **Methodology**
- \* **Results**



# Architecture



- \* adaptive questions
- \* enforce questionnaire completion
- \* detect multiple submissions



# Longitudinal Tracking

- \* track a group of users across surveys
- \* reduce completion time for return users
- \* user-selected IDs
- \* weak authentication used to verify ID



# Java Prototype

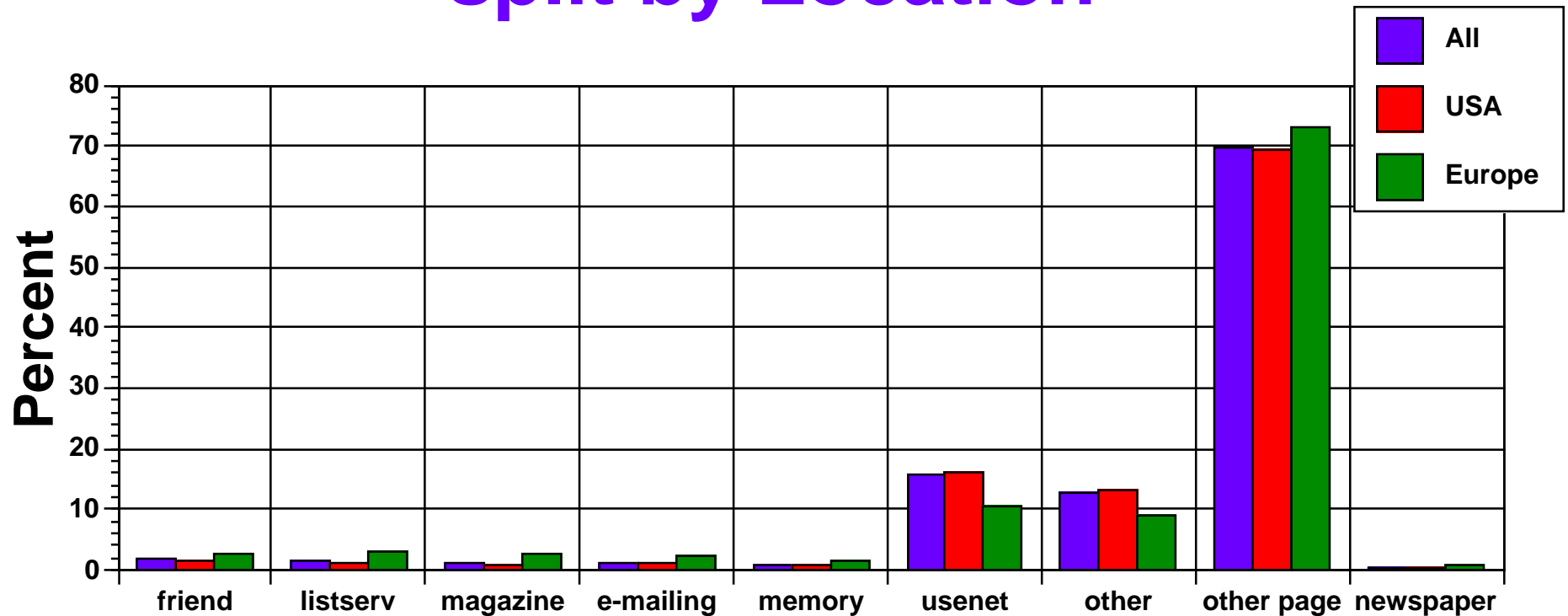
- \* will run in parallel with the 5th survey
- \* benefits in both user-interface and reduced code complexity
- \* clean separation between code and questions



# Limitations & Methodology

- \* **self-selection & non-random sampling**
  
- \* **announcements in diverse media**
  - links on high exposure Web pages
  - announcements in related Usenet newsgroups
  - write-ups in national newspapers & magazines
  - articles in trade journals
  
- \* **“How did you hear about the survey?”**

# How You Heard About Survey split by Location



All	1.76	1.42	1.04	1.18	0.74	15.7	12.78	69.61	0.53
USA	1.63	1.27	0.84	1.12	0.69	16.06	13.19	69.3	0.52
Europe	2.71	2.91	2.6	2.25	1.33	10.41	9.04	73.25	0.66

Source: Gvu's Fourth WWW User Survey (Conducted October 1995)

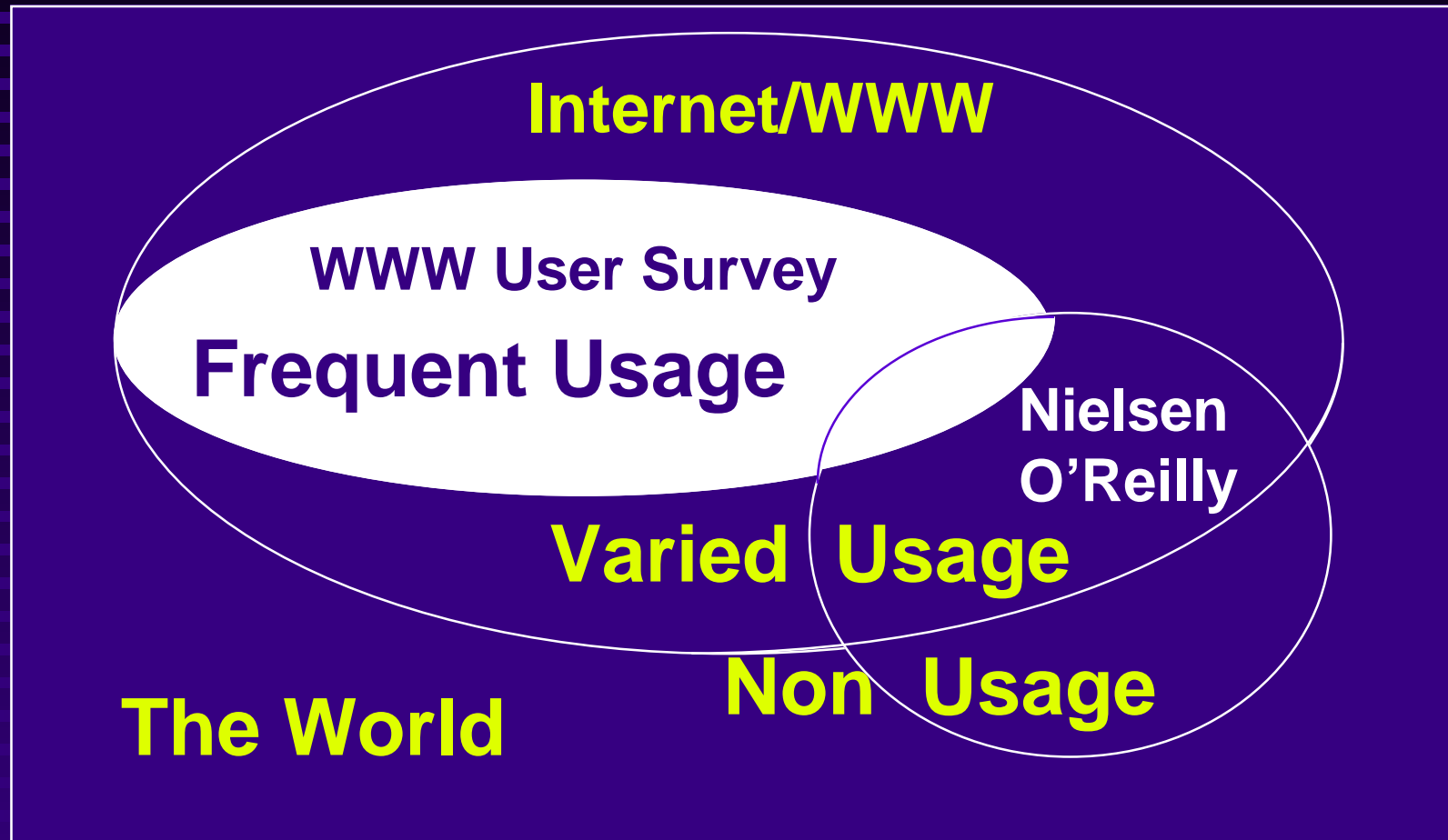
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# User Populations



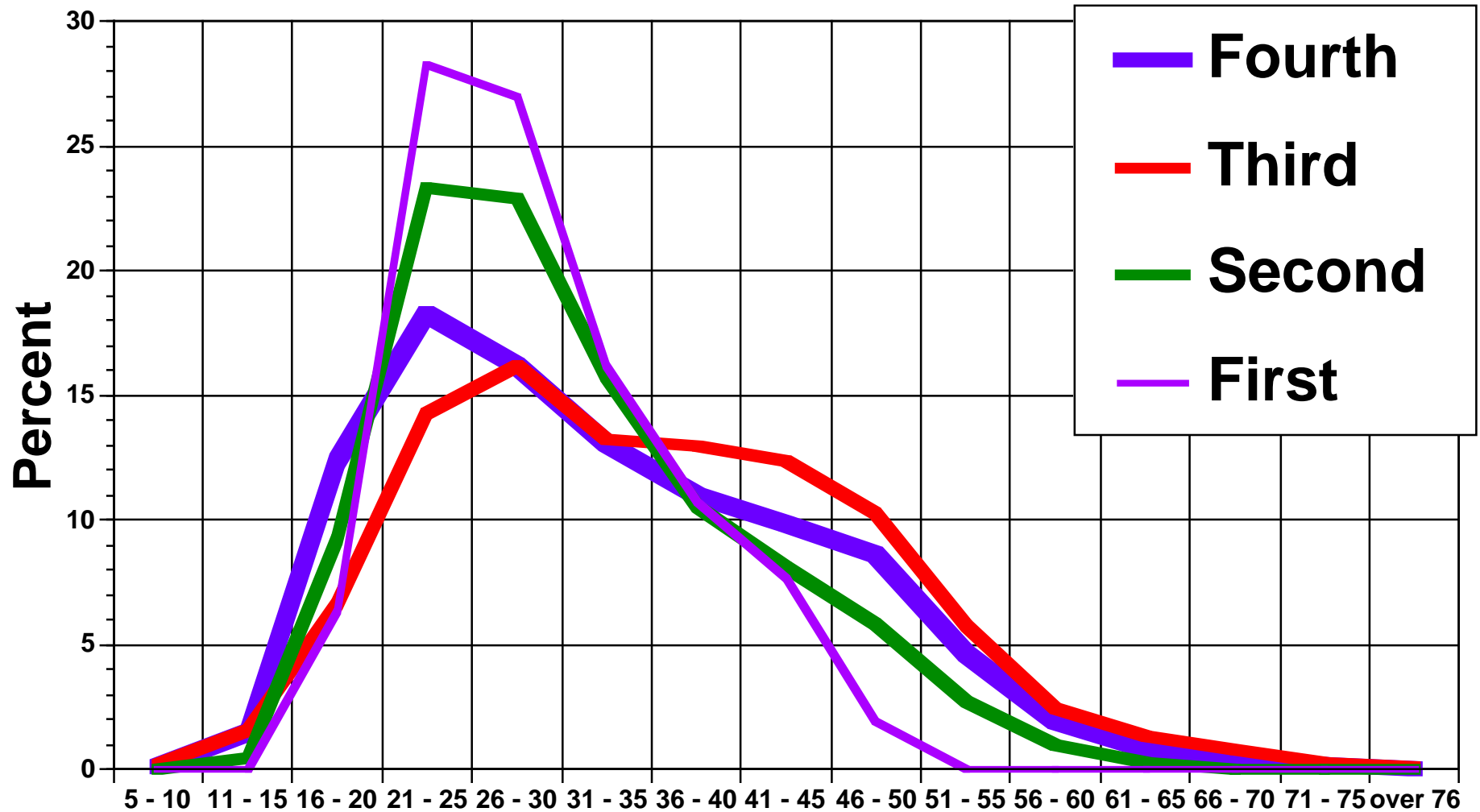




# Presentation of the Results

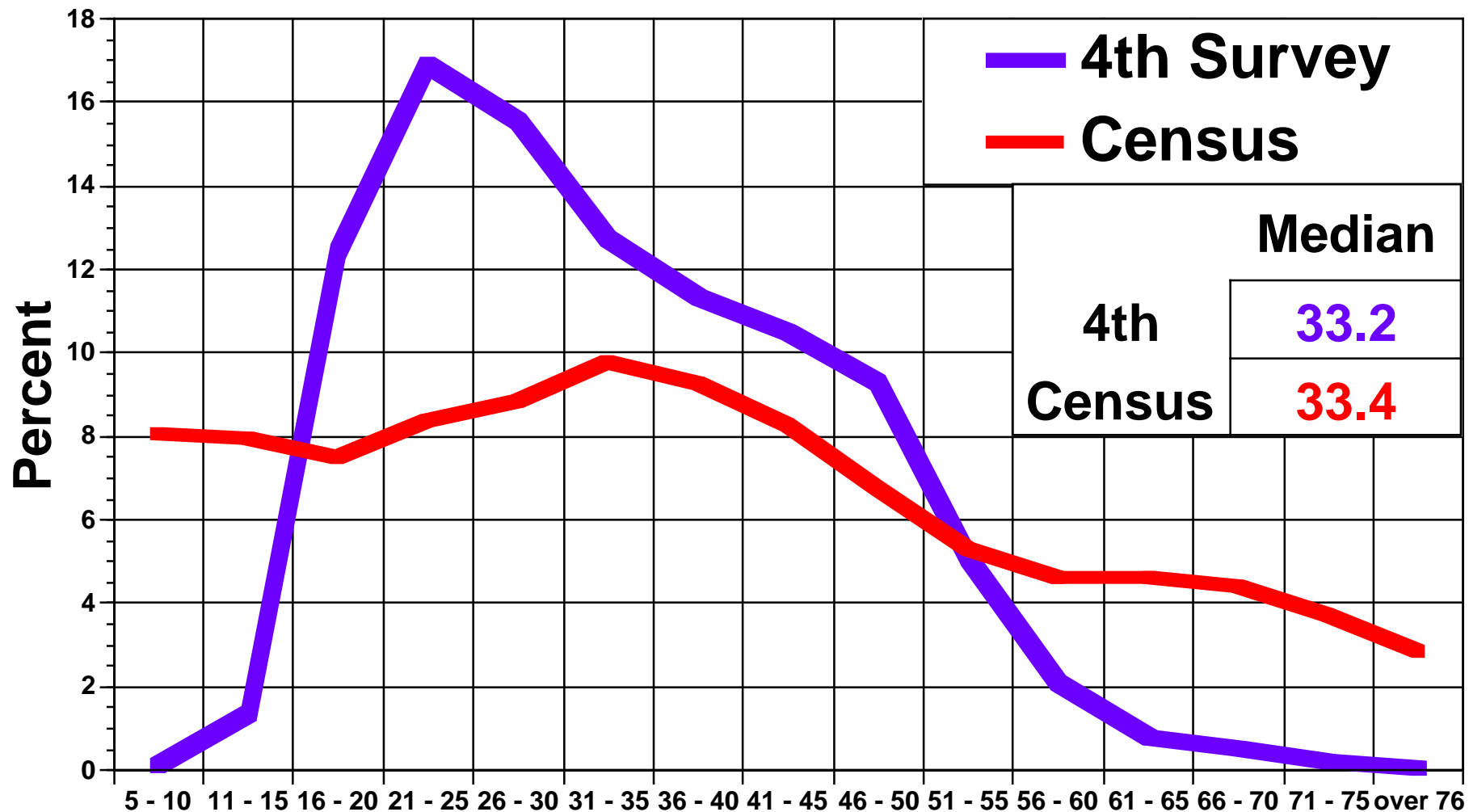
- \* **Fourth Survey results are in!**
- \* **General Demographics**
- \* **Content Providers**
- \* **Usage Patterns**

# Age Distributions Across Surveys



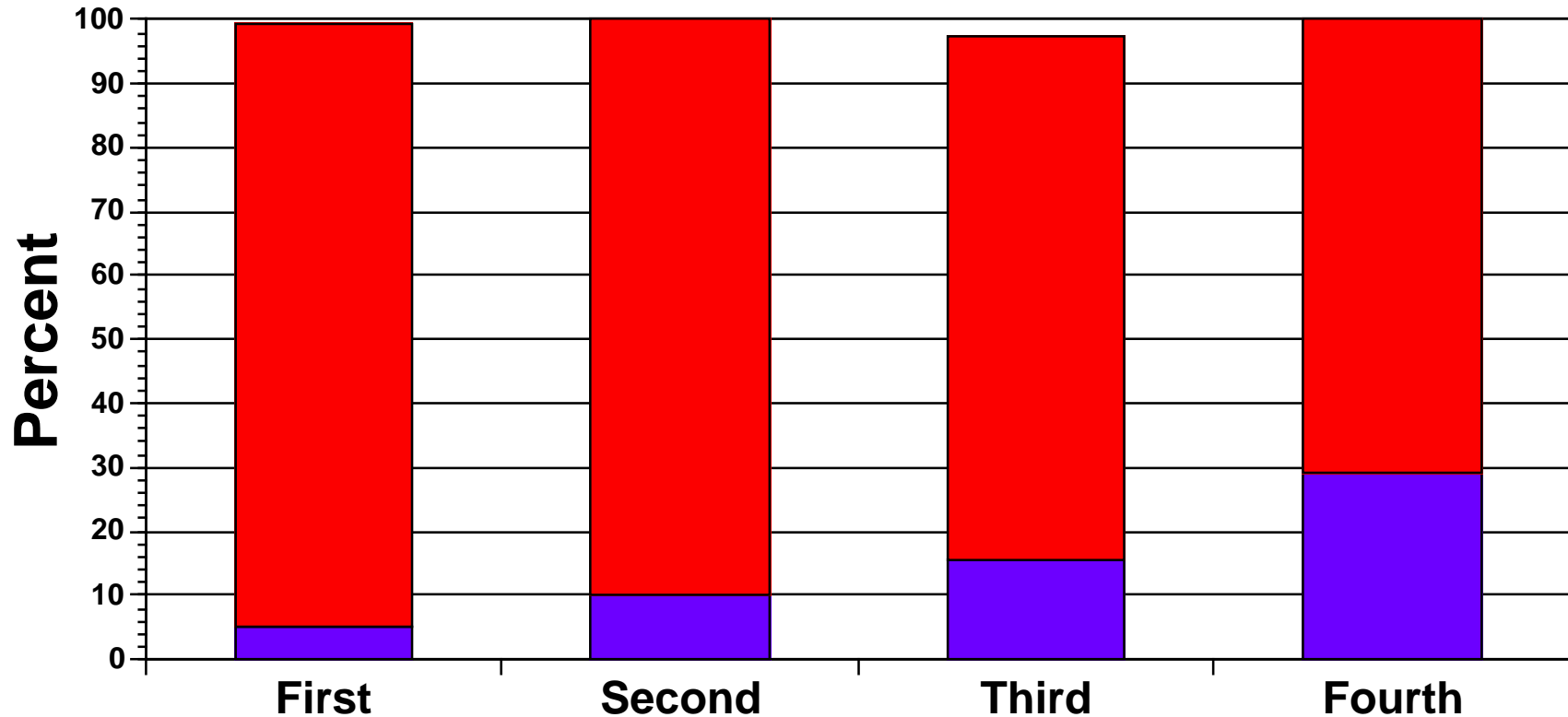
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# 4th Survey USA Age Distributions Compared to USA Census Data



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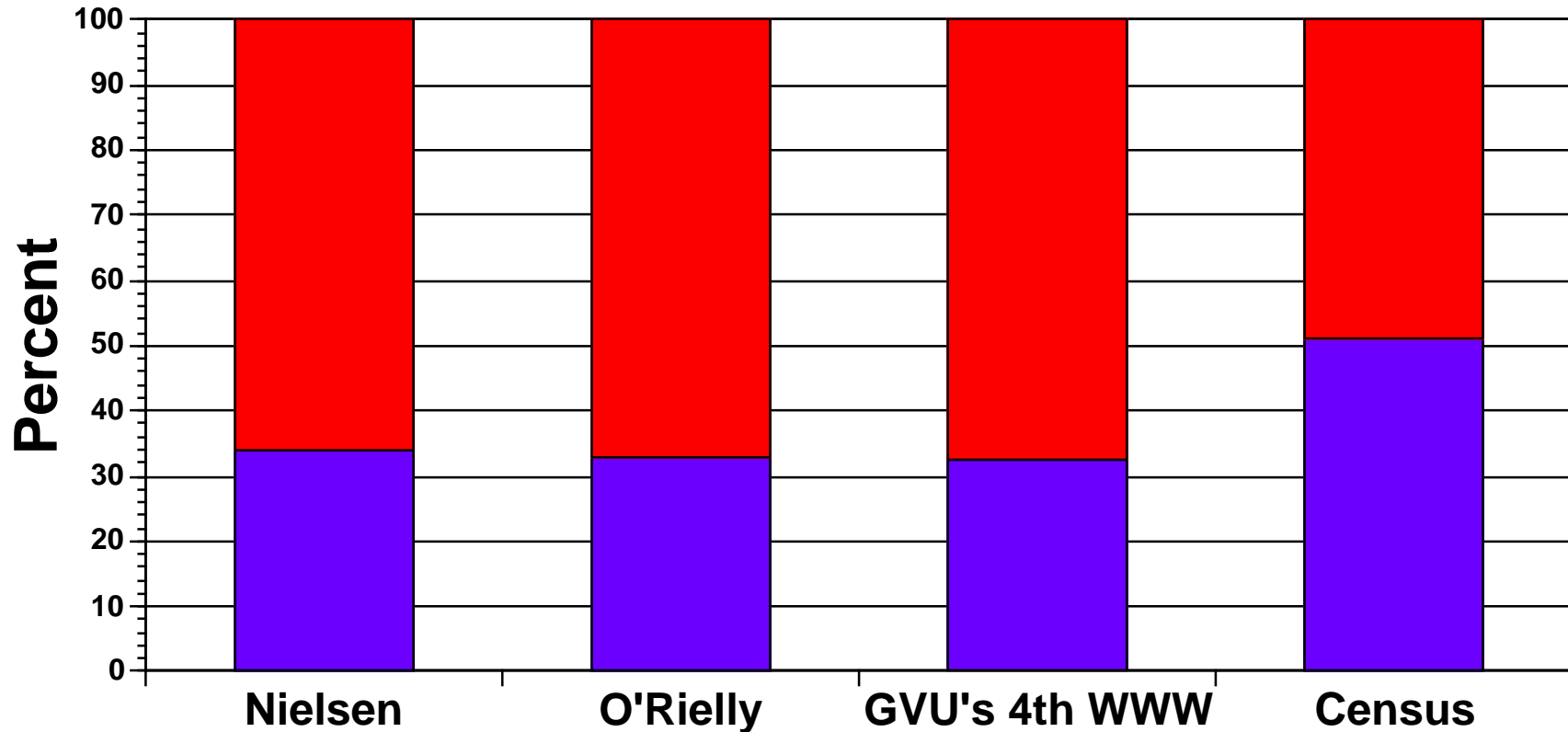
# Gender Distributions Across Surveys



<b>Female</b>	<b>5.1</b>	<b>10</b>	<b>15.5</b>	<b>29.3</b>
<b>Male</b>	<b>94.4</b>	<b>90</b>	<b>82</b>	<b>70.7</b>

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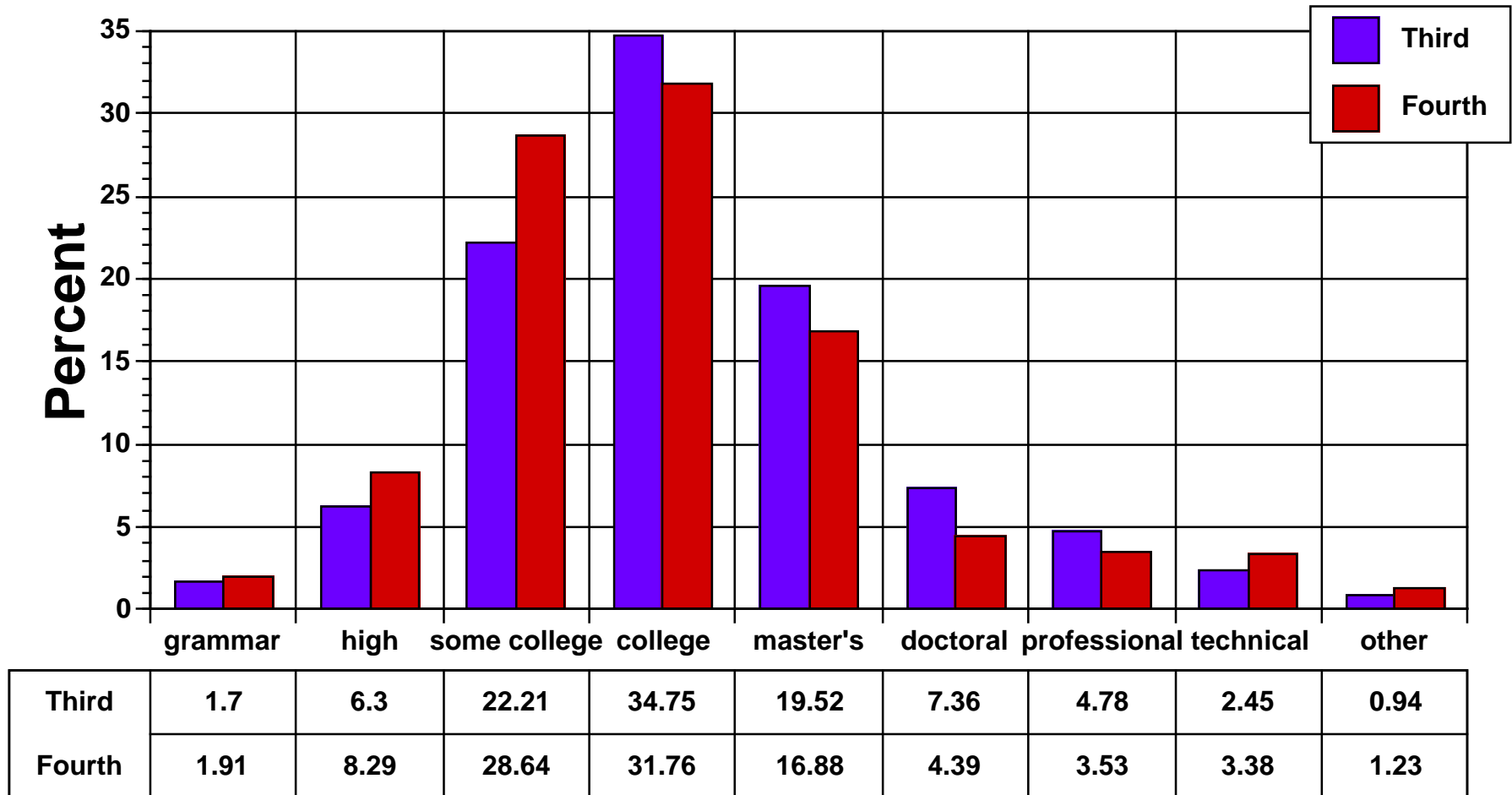
# Gender Distributions Across Different Surveys



<b>Female</b>	<b>34</b>	<b>33</b>	<b>32.5</b>	<b>51.2</b>
<b>Male</b>	<b>66</b>	<b>67</b>	<b>67.5</b>	<b>48.8</b>

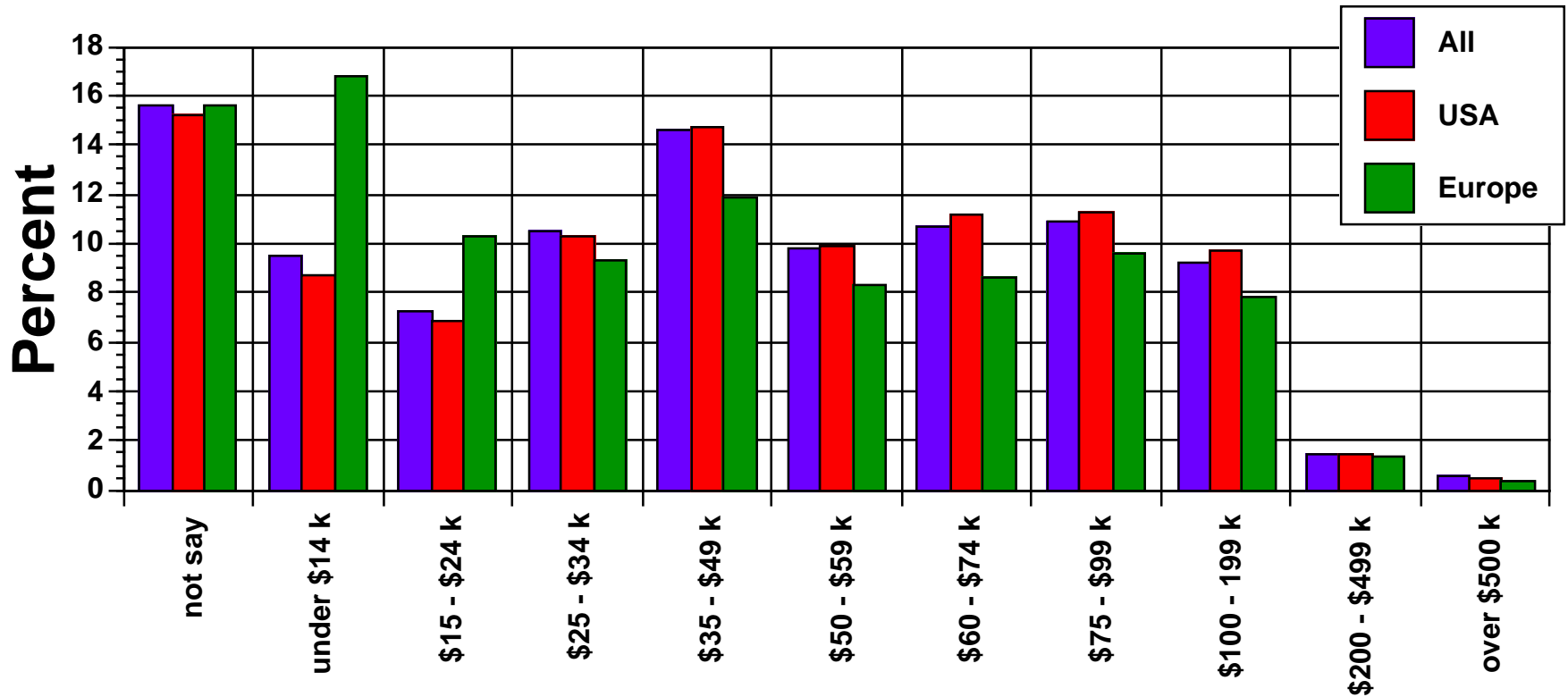
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# Education Across Surveys



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# Income split by Location



All	15.64	9.49	7.29	10.44	14.62	9.78	10.65	10.88	9.23	1.45	0.53
USA	15.23	8.74	6.89	10.28	14.76	9.91	11.15	11.3	9.74	1.49	0.51
Europe	15.62	16.74	10.26	9.34	11.84	8.32	8.58	9.65	7.86	1.38	0.41

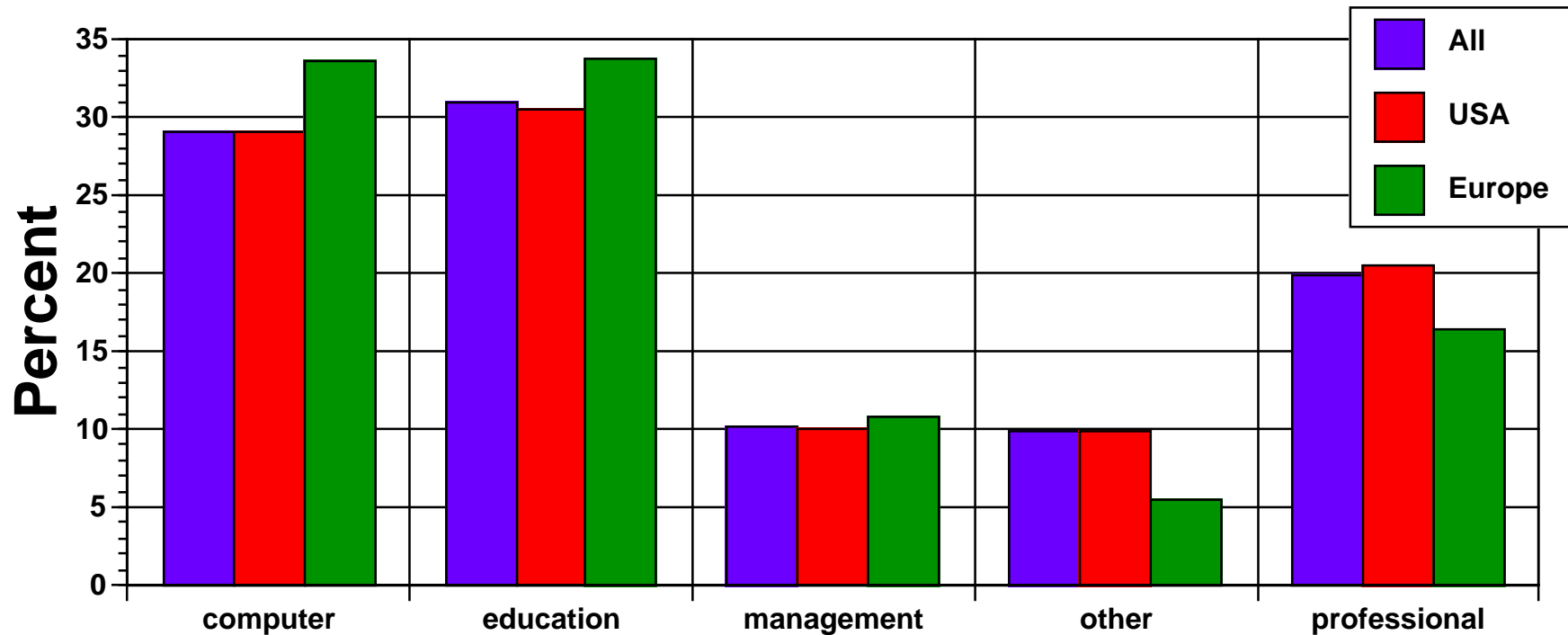
Source: Gvu's Fourth WWW User Survey (Conducted October 1995)

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# Occupation split by Location



All	29.12	30.97	10.21	9.83	19.88
USA	29.14	30.57	9.98	9.88	20.42
Europe	33.64	33.79	10.72	5.46	16.39

Source: GVU's Fourth WWW User Survey (Conducted October 1995)

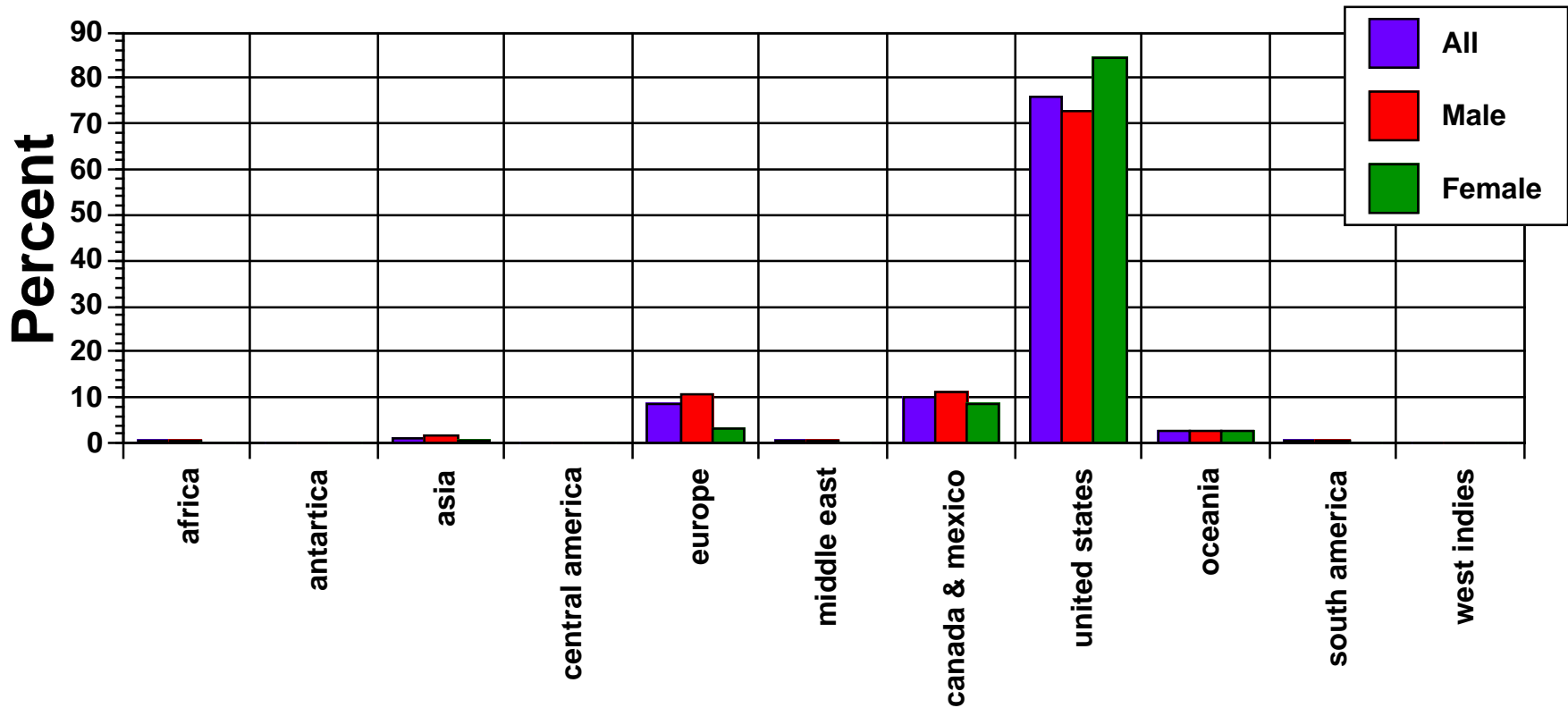
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# Location split by Gender



All	0.38	0.09	1.32	0.05	8.39	0.37	10.17	76.19	2.63	0.32	0.1
Male	0.44	0.07	1.55	0.05	10.63	0.41	10.92	72.73	2.67	0.43	0.11
Female	0.23	0.13	0.79	0.04	3	0.26	8.32	84.61	2.49	0.04	0.07

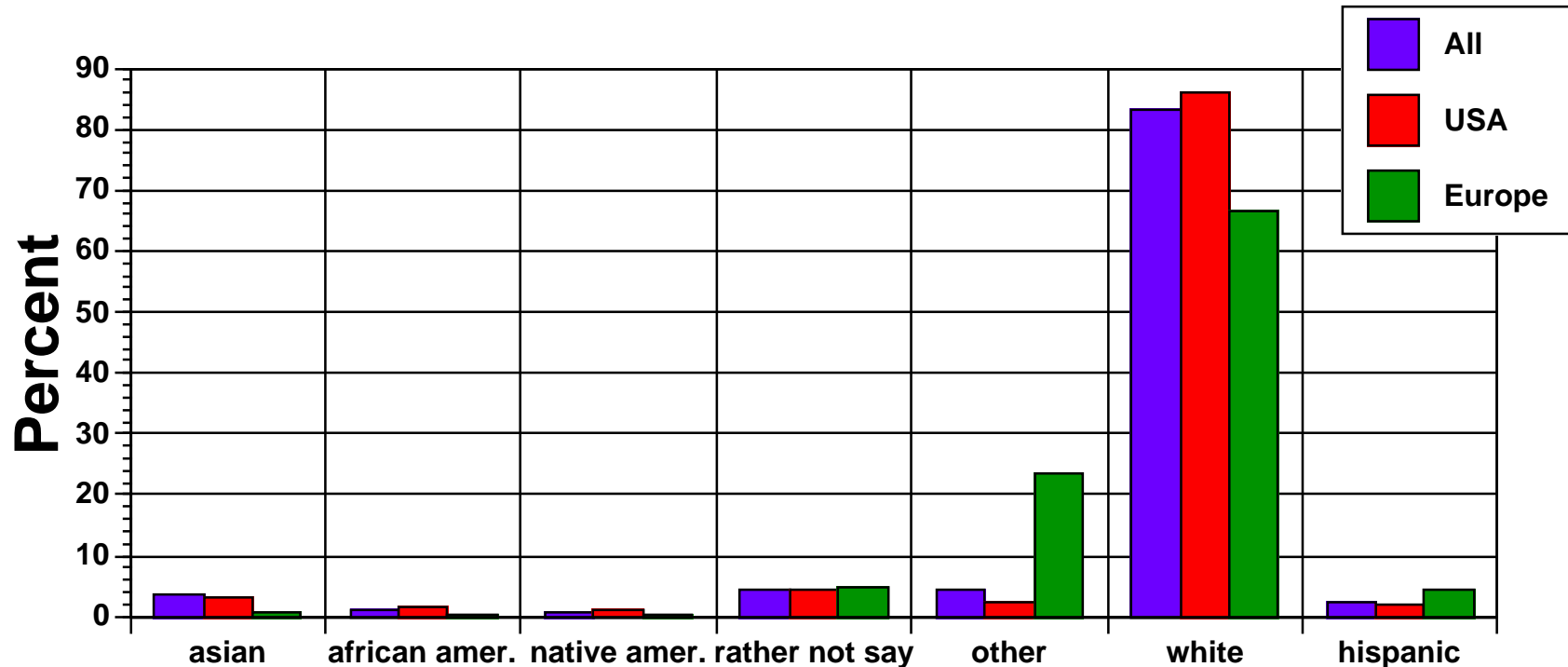
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# Race split by Location



All	3.69	1.19	0.82	4.39	4.48	83.21	2.21
USA	3.02	1.47	0.92	4.56	2.21	85.97	1.84
Europe	0.56	0.1	0.31	4.65	23.63	66.51	4.24

Source: GVU's Fourth WWW User Survey (Conducted October 1995)

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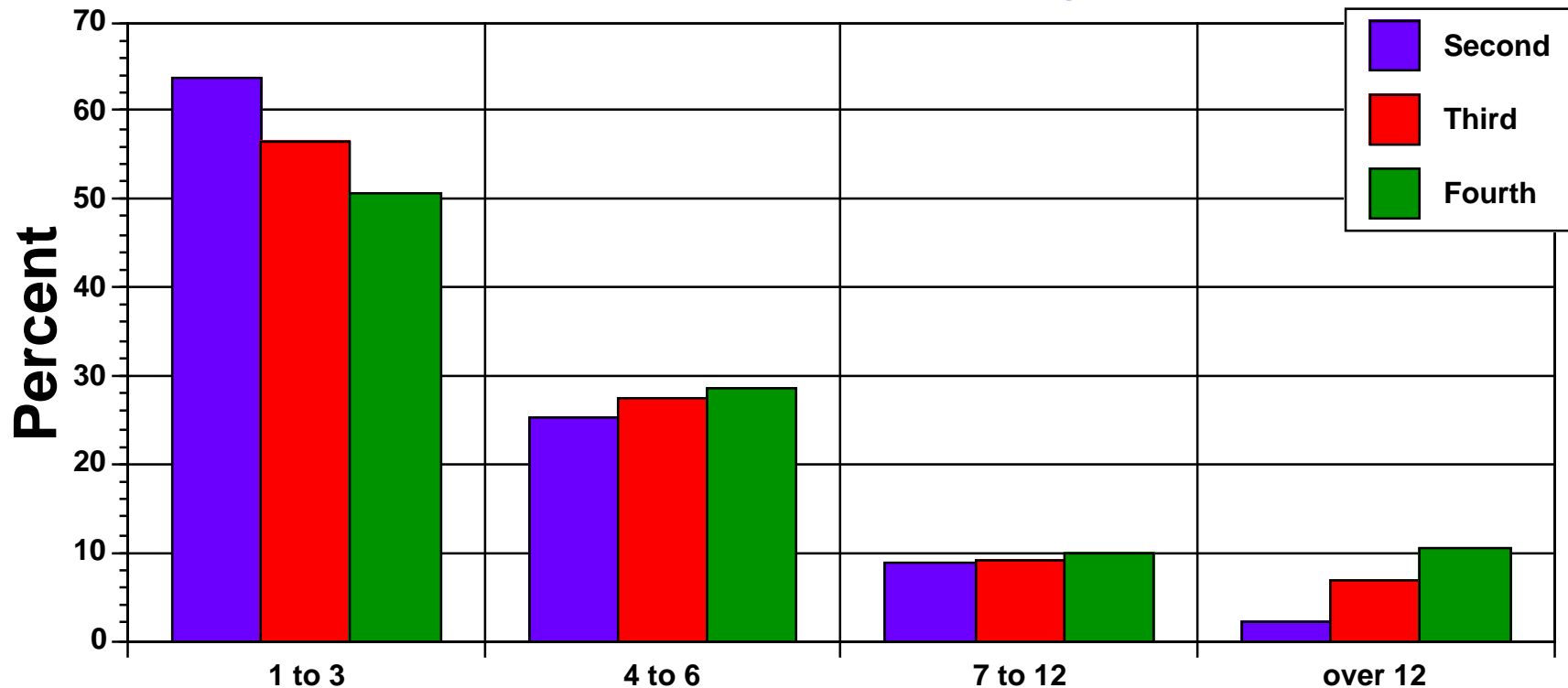
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# Content Authoring

- \* Questions about HTML authoring
- \* Special section for Webmasters
- \* Vital feedback for developers and designers

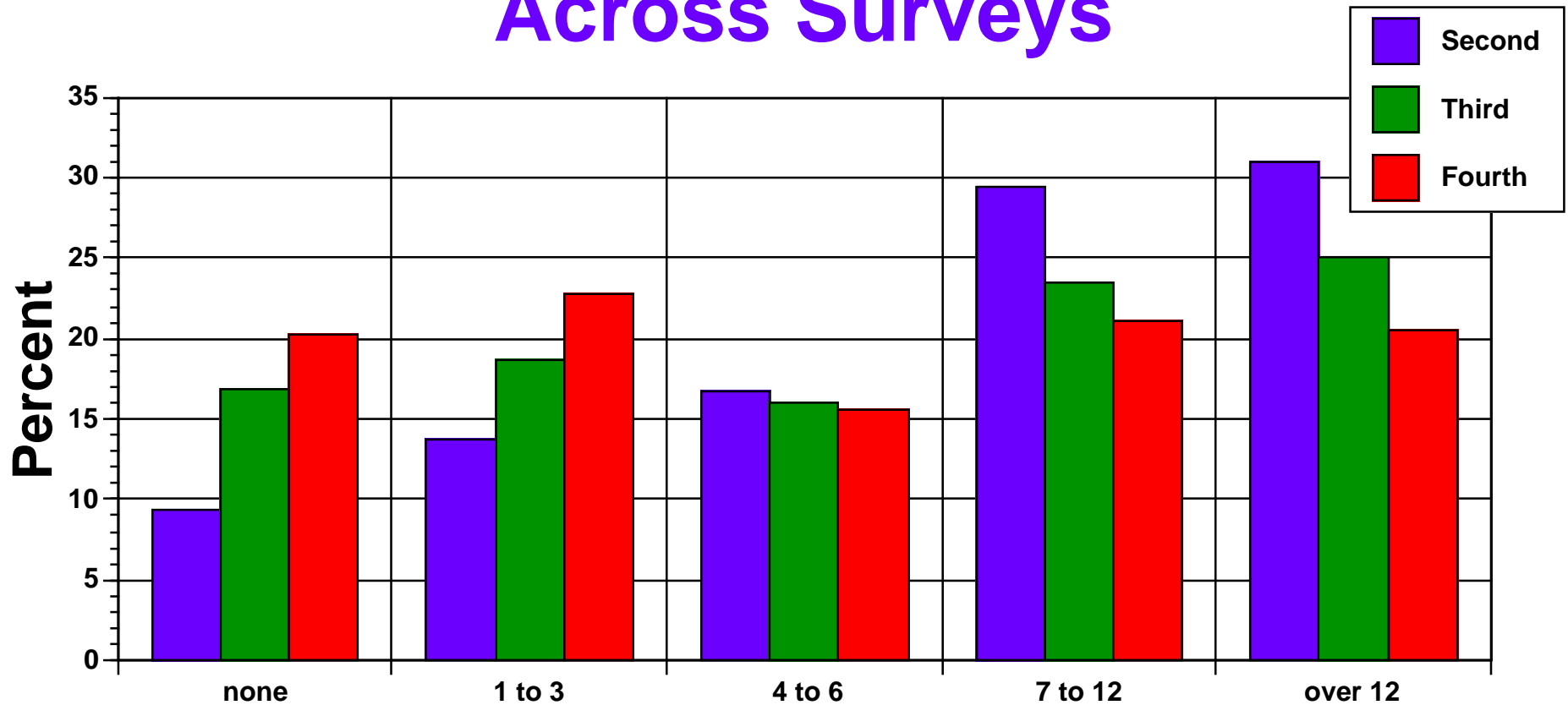
# Hours Learning HTML Across Surveys



Second	63.87	25.28	8.69	2.16
Third	56.50	27.43	9.18	6.89
Fourth	50.72	28.71	10.03	10.54

Source: GVU's WWW User Surveys  
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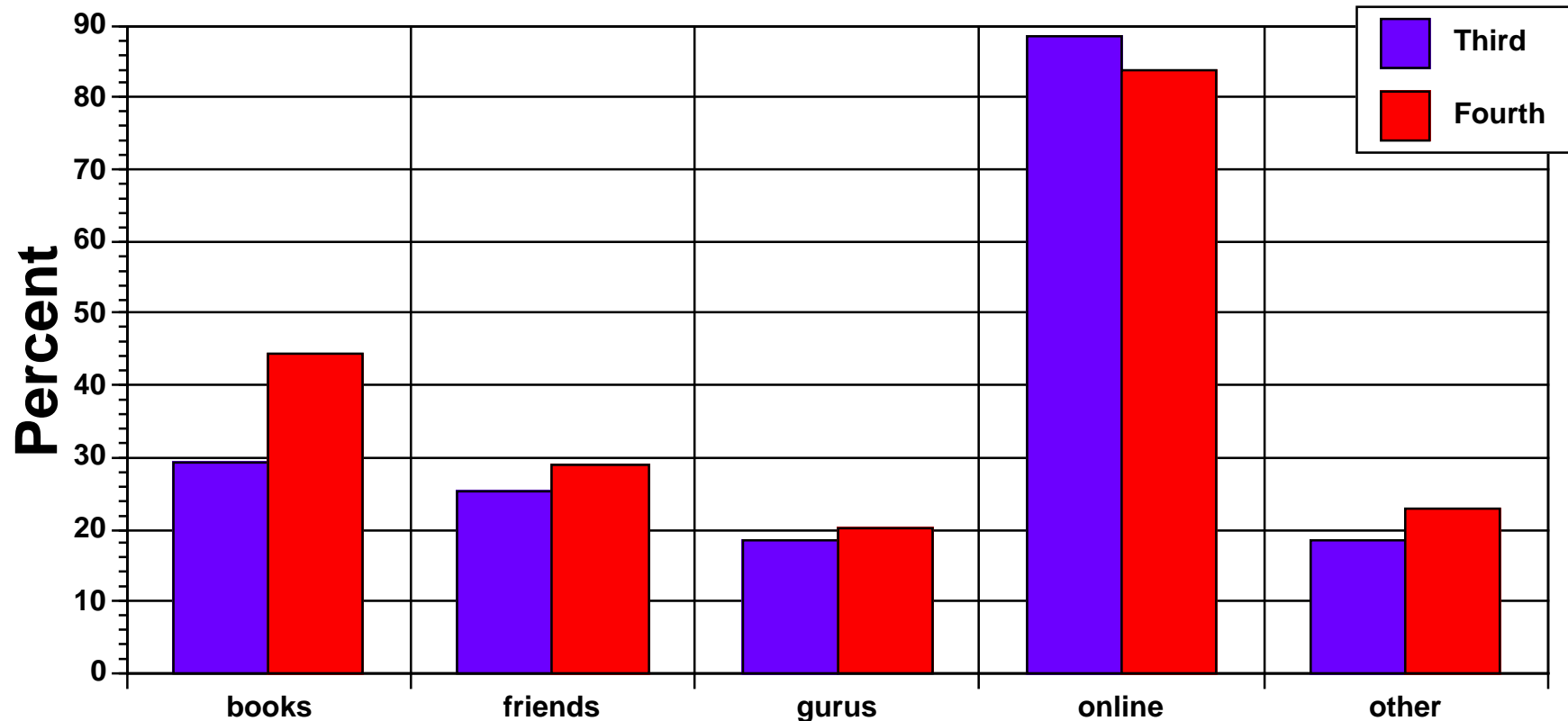
# Number of Years Programming Across Surveys



Second	9.35	13.72	16.66	29.36	30.92
Third	16.78	18.72	15.98	23.55	24.98
Fourth	20.21	22.72	15.58	21.04	20.45

Source: GVU's WWW User Surveys  
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# Sources Consulted Learning HTML Across Surveys



Third	29.24	25.19	18.48	88.41	18.63
Fourth	44.47	29.02	20.17	83.92	22.77

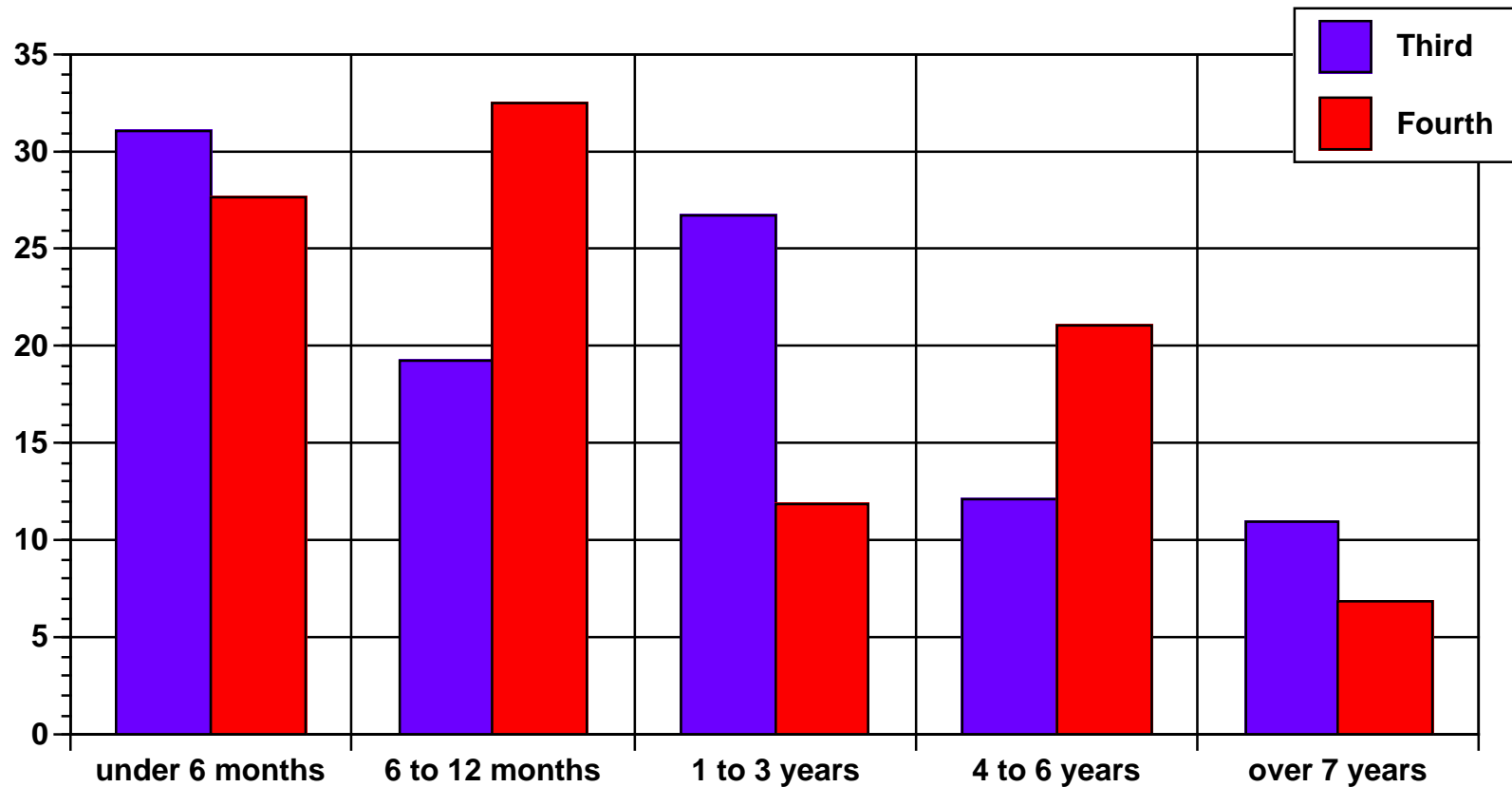
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# Usage Patterns

- \* How exactly is the Web being used?
- \* Frequency, duration, access patterns, etc.
- \* Enables for the monitoring of the evolution of Web use over time

# Years on Internet Across Surveys

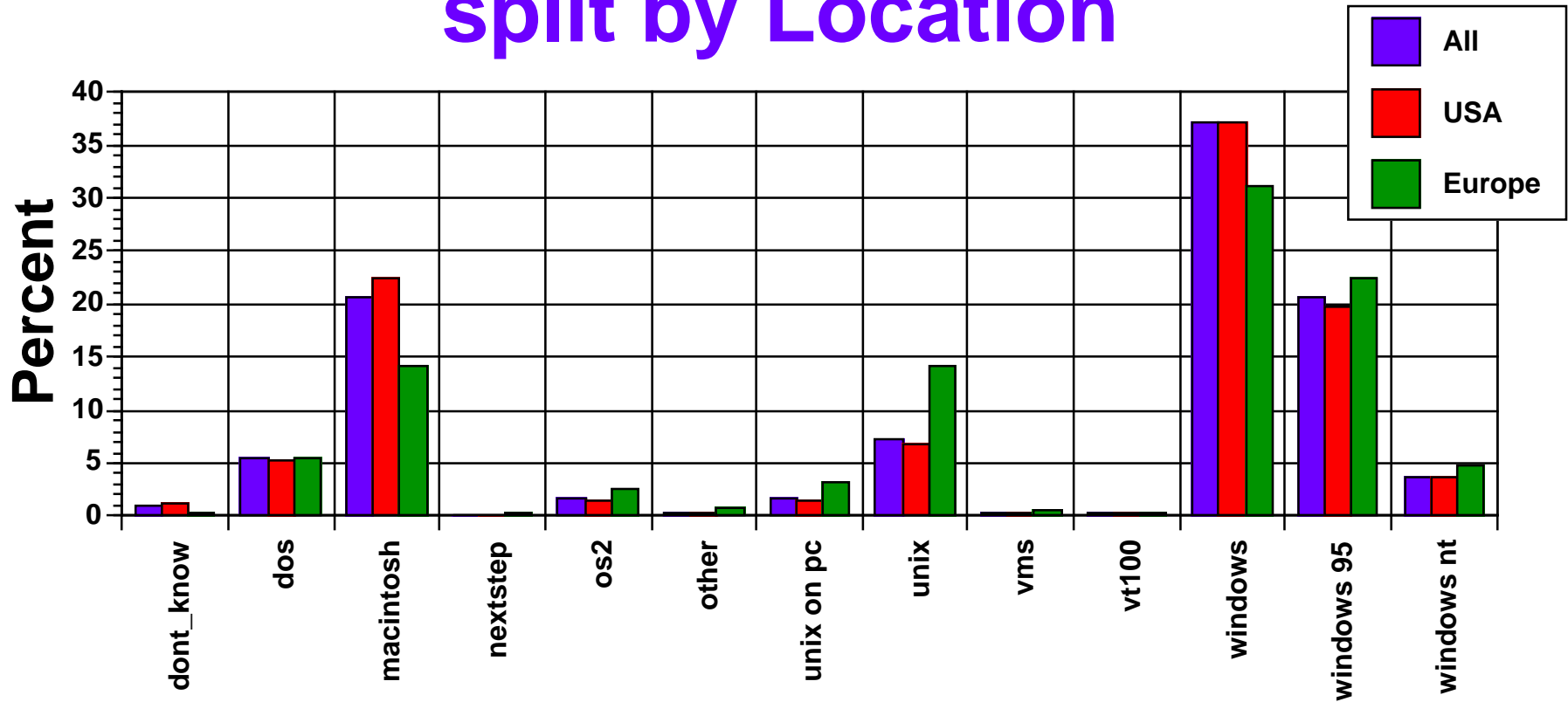


Third	31.04	19.17	26.73	12.18	10.89
Fourth	27.7	32.58	11.88	21.01	6.84

Source: GVU's WWW User Surveys  
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# Primary Computing Platform split by Location



All	1.02	5.41	20.52	0.18	1.64	0.37	1.6	7.16	0.34	0.24	37.16	20.67	3.71
USA	1.1	5.21	22.38	0.17	1.49	0.32	1.52	6.77	0.3	0.25	37.24	19.67	3.56
Europe	0.36	5.46	14.14	0.31	2.45	0.82	3.22	14.19	0.46	0.2	31.19	22.51	4.7

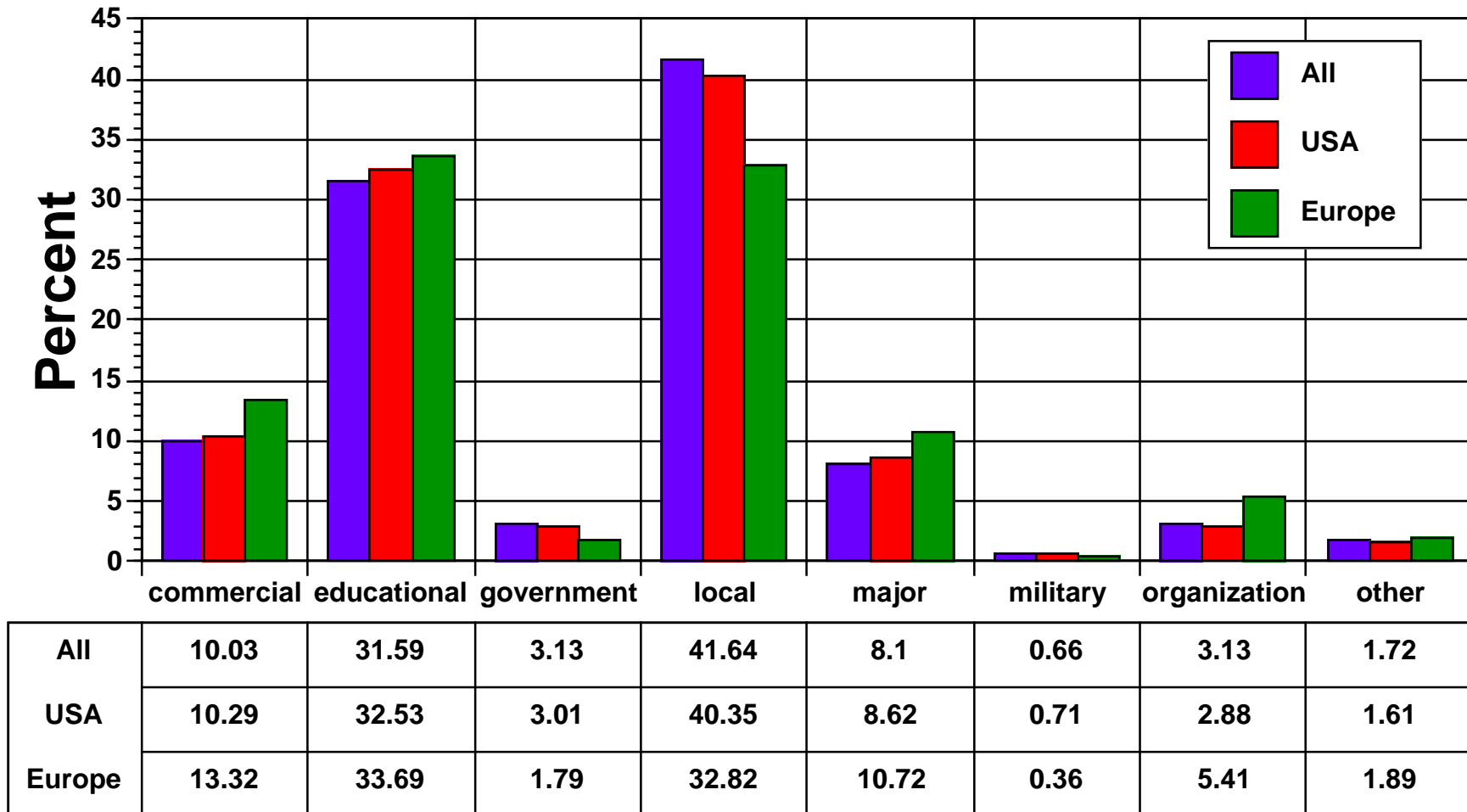
Source: Gvu's Fourth WWW User Survey (Conducted October 1995)

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# Nature of Primary Internet Provider split by Location



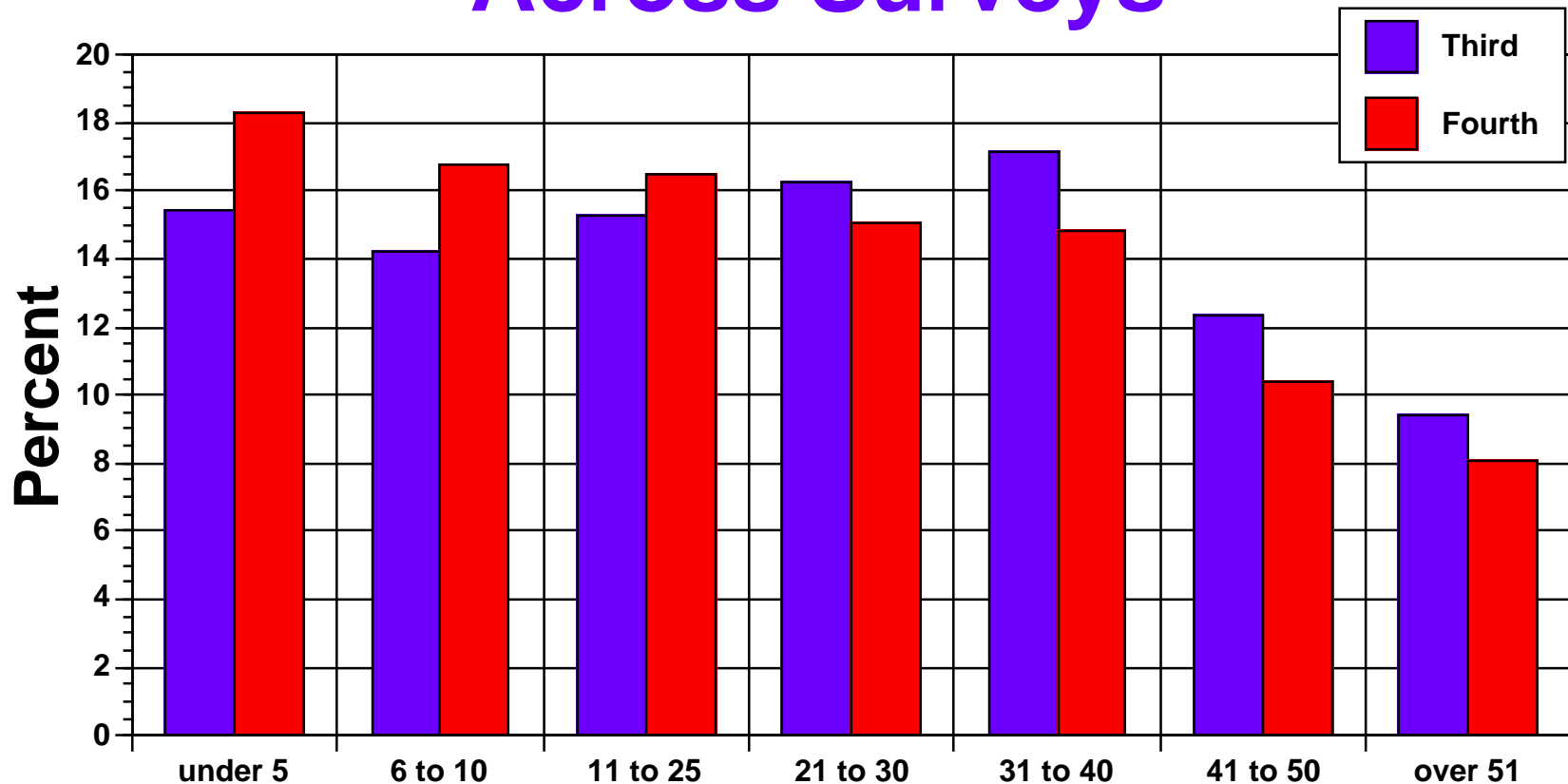
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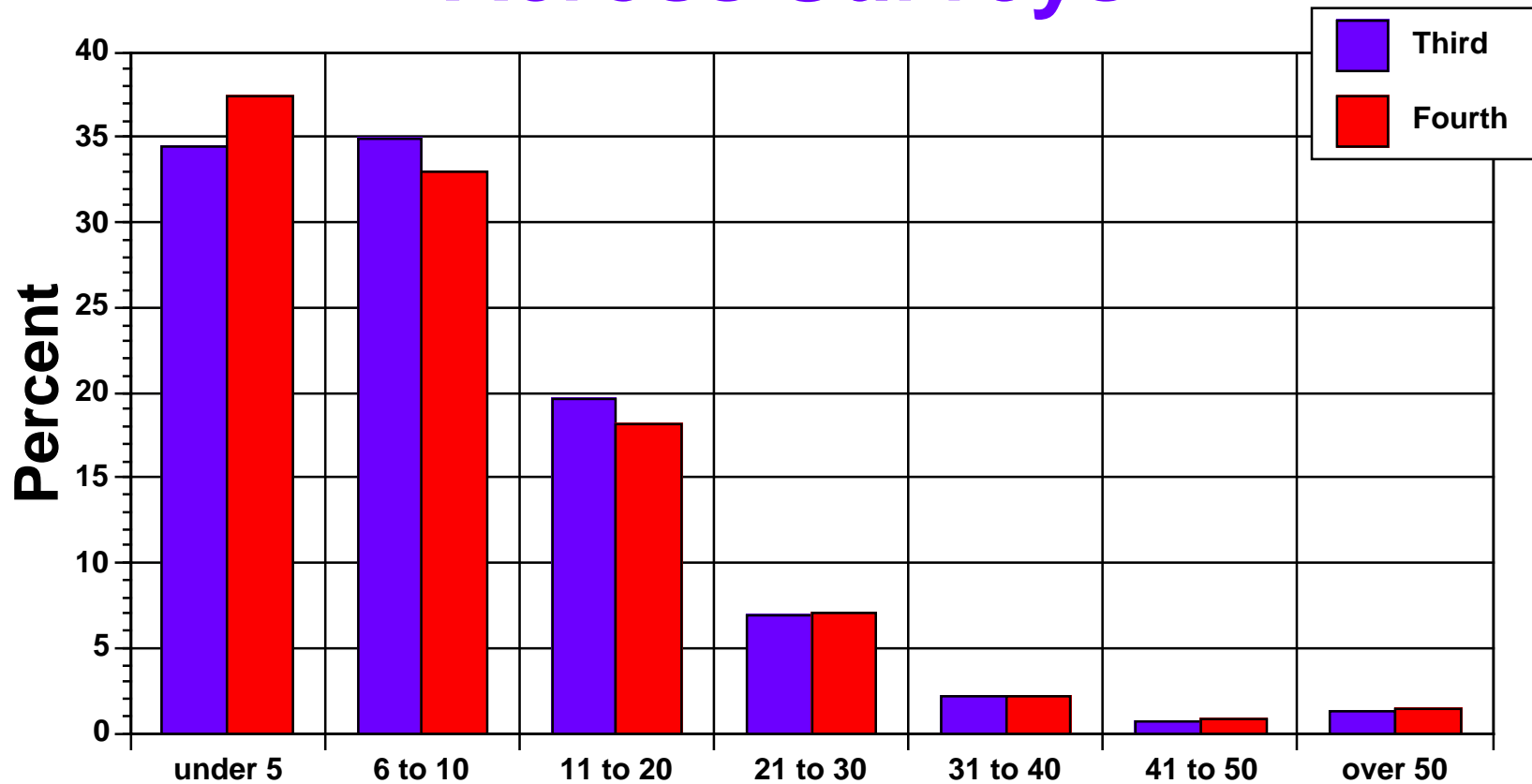
# Hours per Week Work Computing Across Surveys



Third	15.39	14.22	15.28	16.22	17.14	12.36	9.4
Fourth	18.32	16.8	16.48	15.07	14.81	10.42	8.09

Source: GVV's WWW User Surveys  
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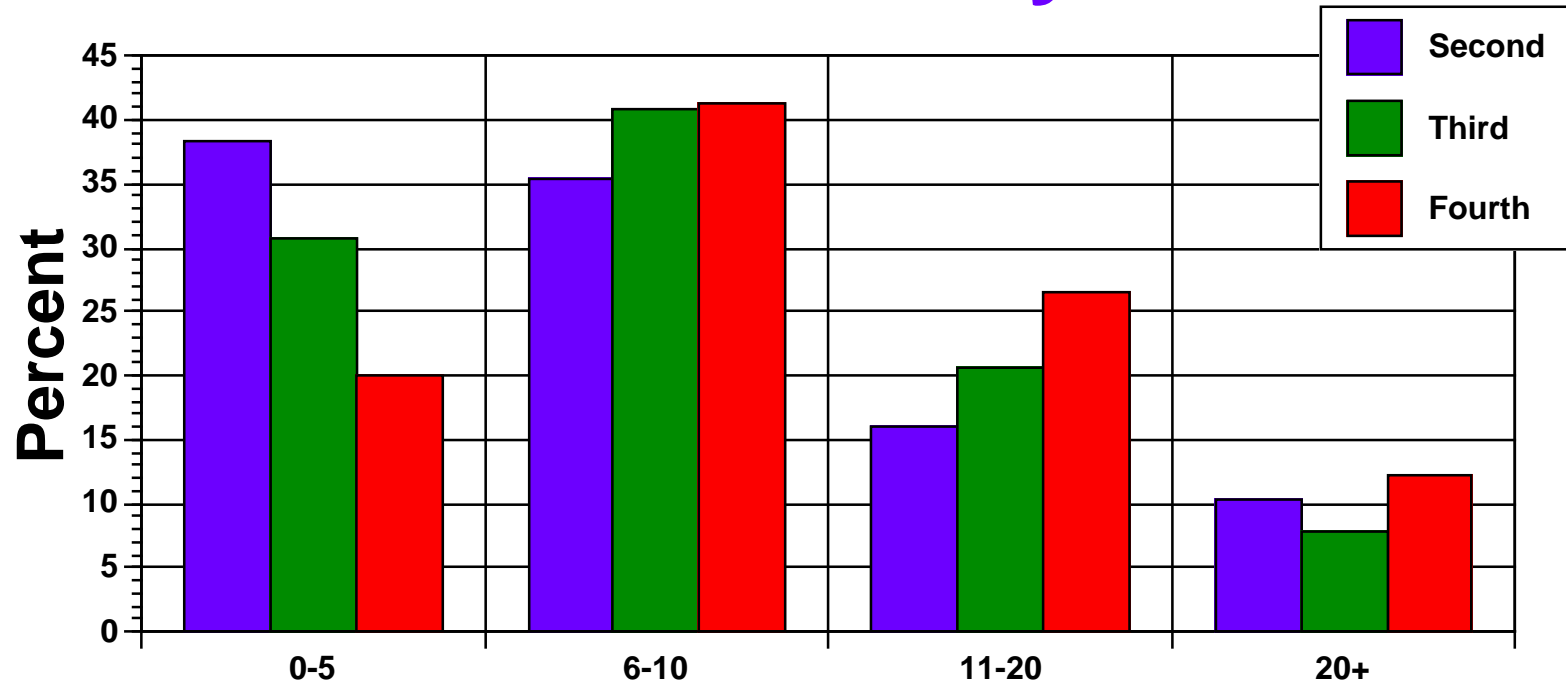
# Hours per Week Fun Computing Across Surveys



Third	34.51	34.85	19.61	6.93	2.17	0.71	1.23
Fourth	37.43	32.98	18.17	7.1	2.15	0.78	1.39

Source: GVU's WWW User Surveys  
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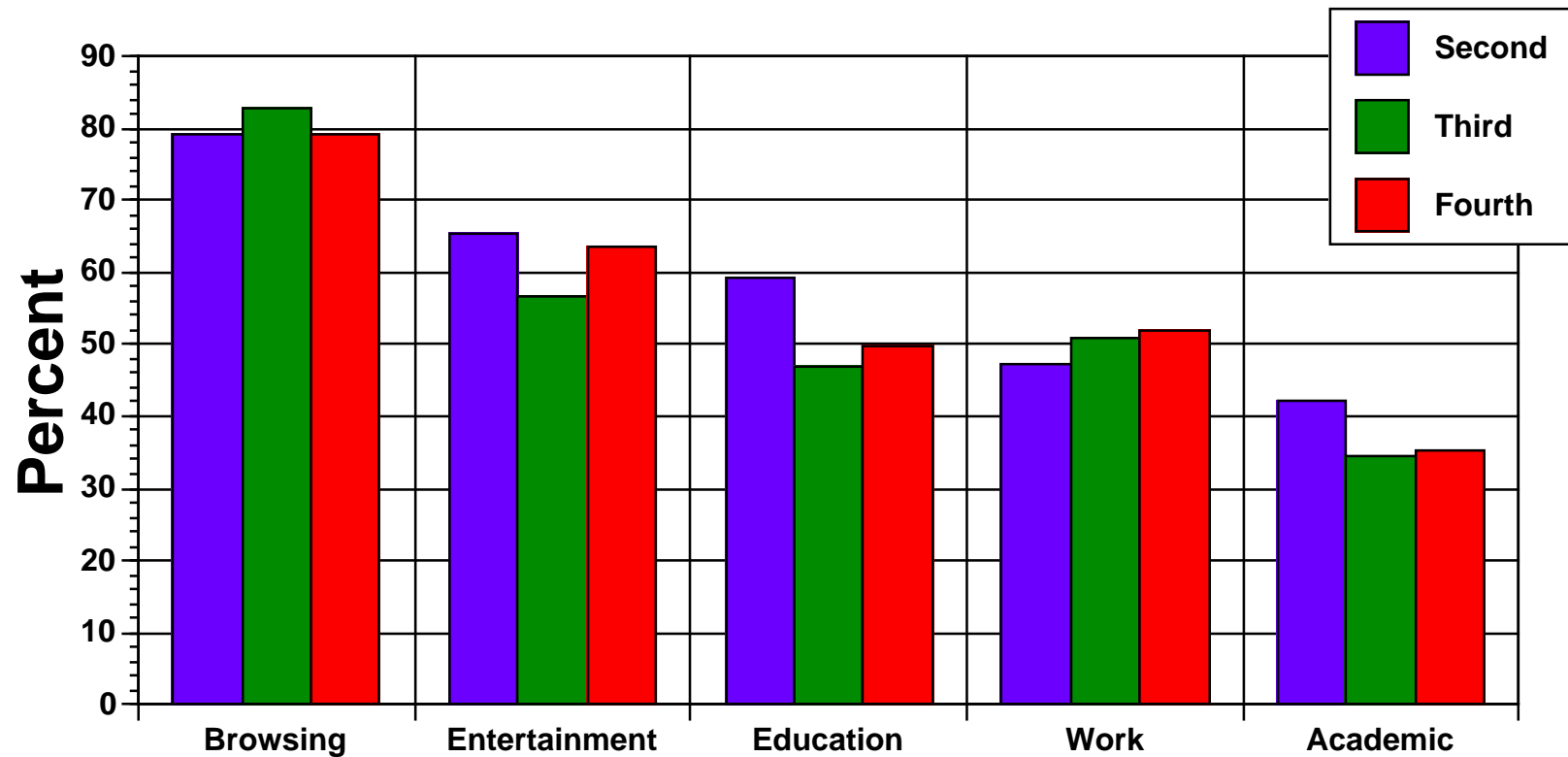
# Hours per Week Browser Used Across Surveys



<b>Second</b>	<b>38.31</b>	<b>35.33</b>	<b>15.95</b>	<b>10.41</b>
<b>Third</b>	<b>30.73</b>	<b>40.82</b>	<b>20.69</b>	<b>7.77</b>
<b>Fourth</b>	<b>20.01</b>	<b>41.17</b>	<b>26.56</b>	<b>12.26</b>

Source: GVU's WWW User Surveys  
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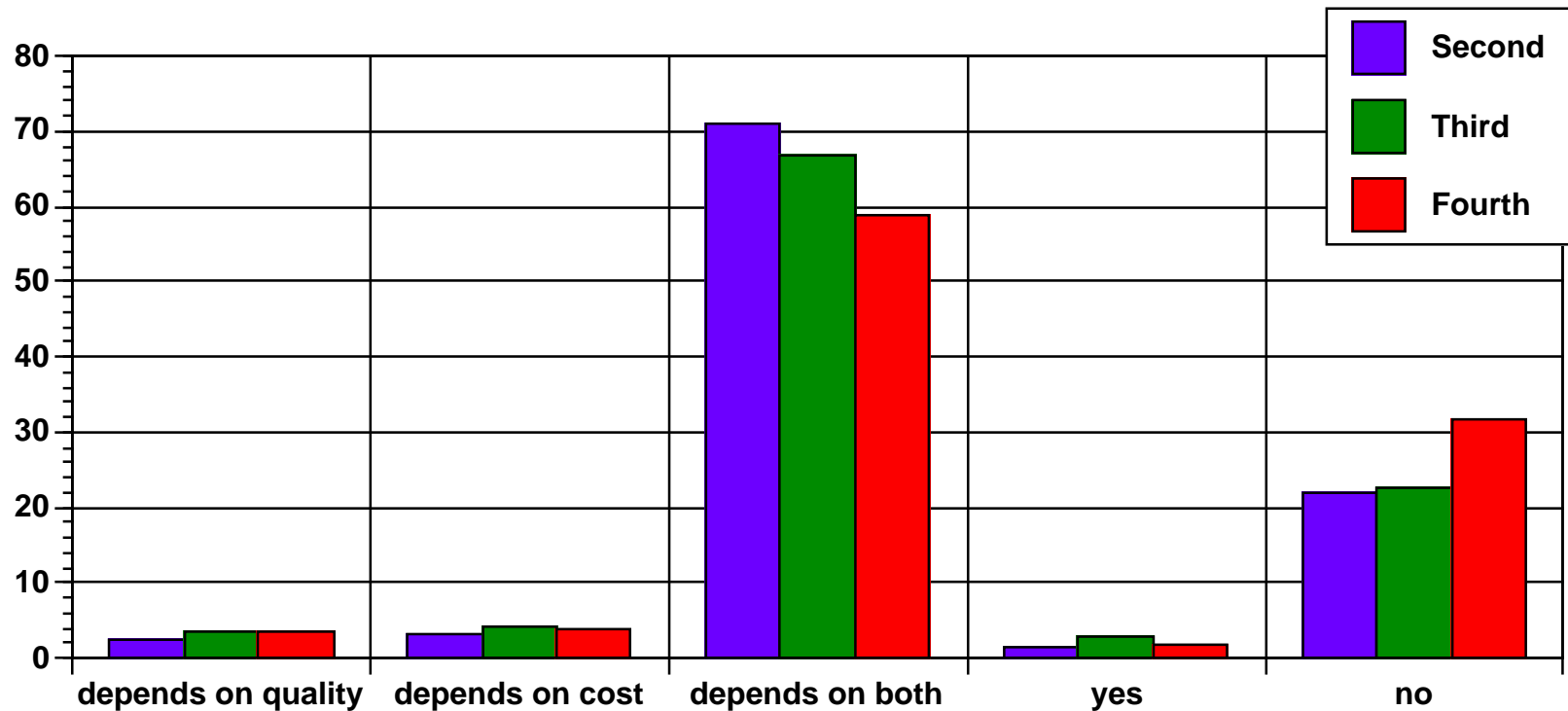
# Primary Use of Browser Across Surveys



Second	79.12	65.46	59.26	47.21	42.11
Third	82.63	56.6	46.94	50.88	34.69
Fourth	79	63.63	49.7	51.81	35.09

Source: GVU's WWW User Surveys  
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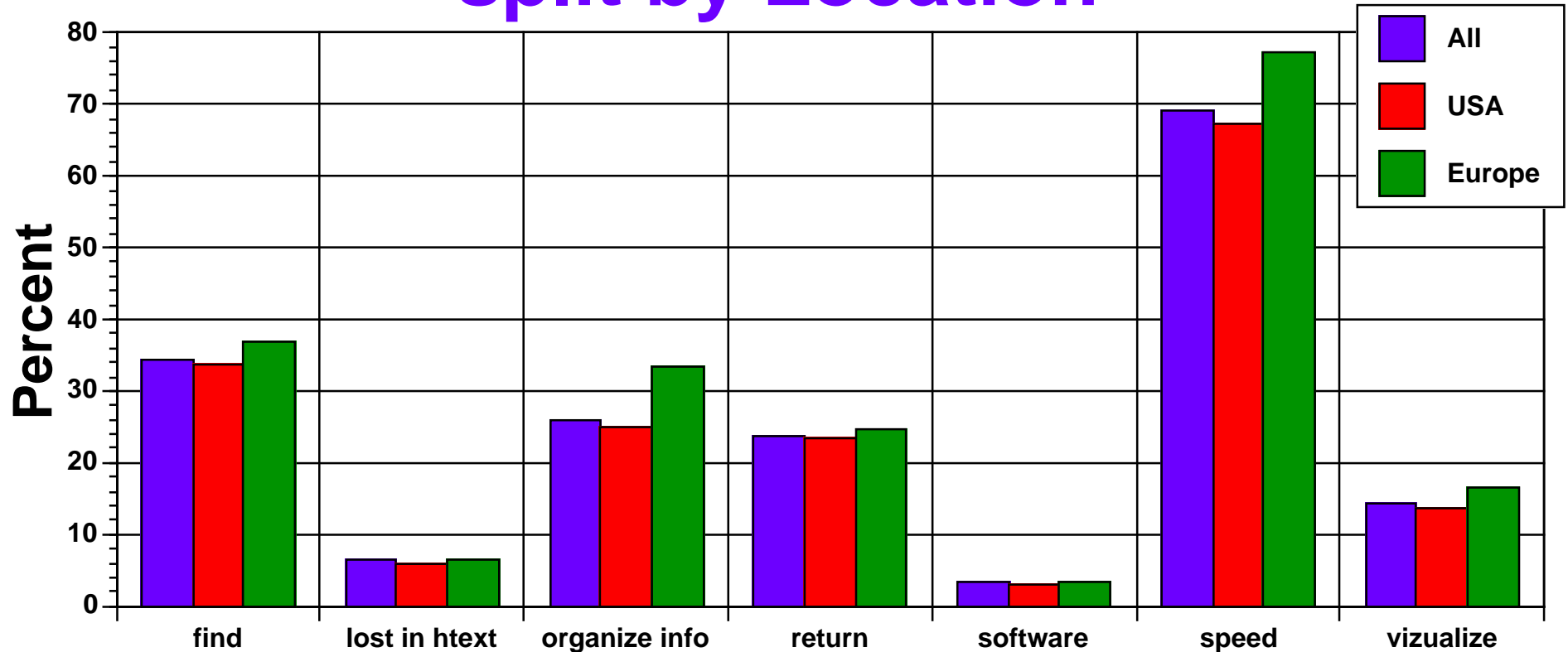
# Willingness to Pay Fees Across Surveys



Second	2.50	3.12	70.93	1.59	21.86
Third	3.44	4.39	66.82	2.71	22.64
Fourth	3.65	3.97	58.73	1.8	31.84

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# Problems with Using the Web split by Location



All	34.48	6.54	25.82	23.67	3.2	69.11	14.34
USA	33.63	5.9	25.07	23.48	3.12	67.19	13.64
Europe	36.98	6.53	33.45	24.8	3.44	77.23	16.59

Source: Gvu's Fourth WWW User Survey (Conducted October 1995)

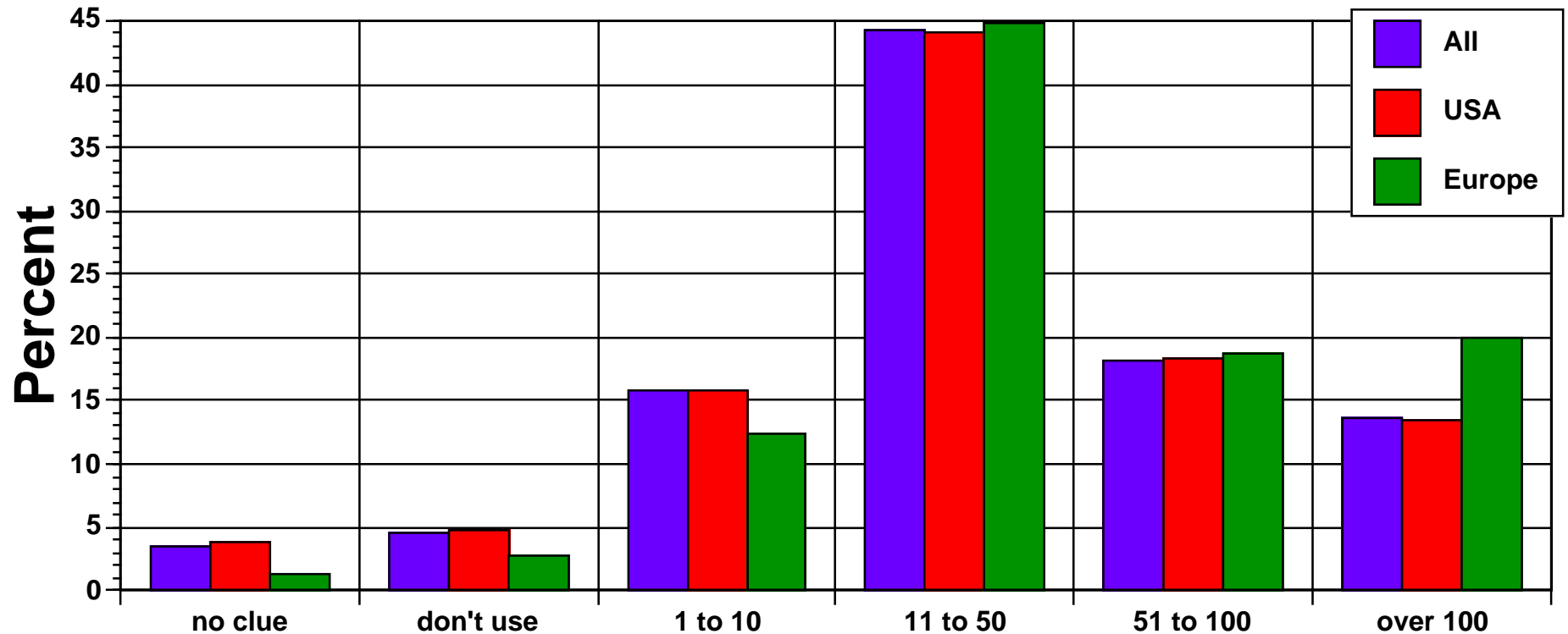
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# Number of Items Hotlisted/ Bookmarked split by Location



All	3.45	4.5	15.81	44.3	18.25	13.69
USA	3.77	4.7	15.73	44.06	18.39	13.36
Europe	1.32	2.82	12.36	44.84	18.71	19.95

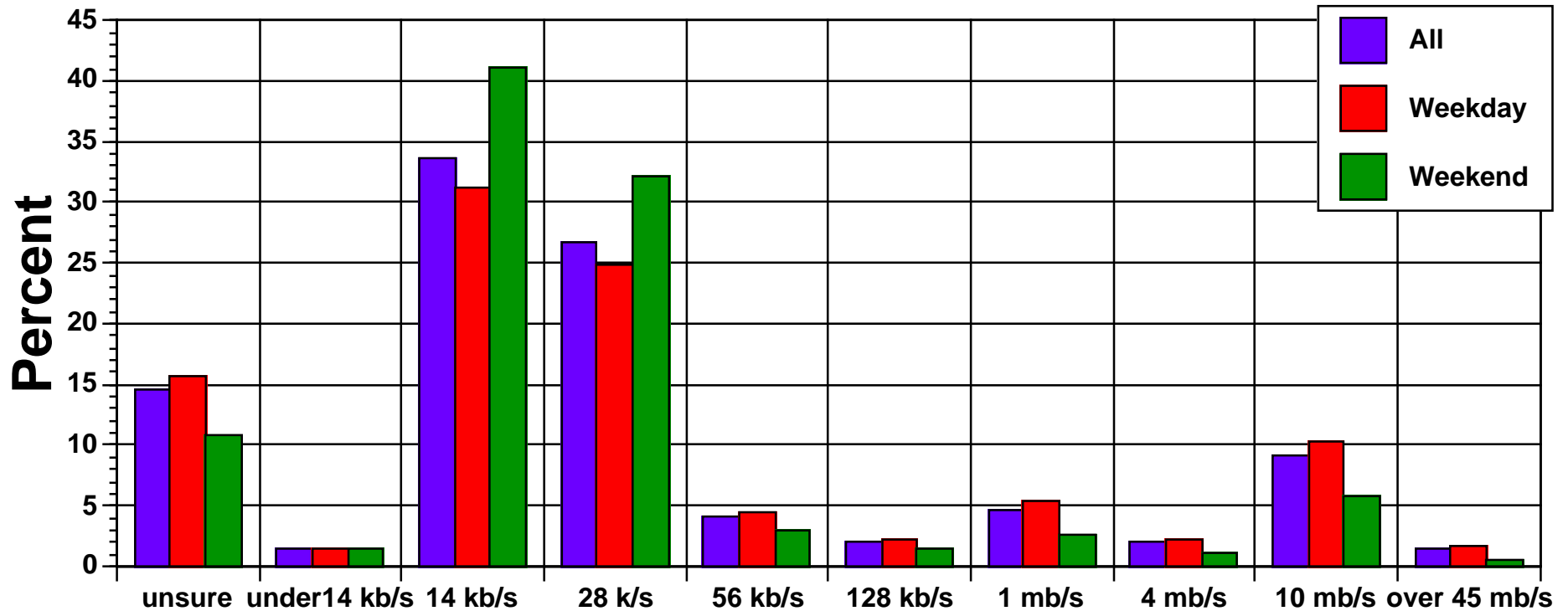
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# Speed of Connection to Internet split by Access Time



All	14.53	1.5	33.7	26.63	4.14	2.08	4.66	1.99	9.08	1.44
Weekday	15.77	1.53	31.25	24.8	4.53	2.28	5.34	2.26	10.19	1.73
Weekend	10.8	1.41	41.06	32.12	2.96	1.47	2.6	1.16	5.76	0.55

Source: GVU's Fourth WWW User Survey (Conducted October 1995)

<URL:[http://www.cc.gatech.edu/gvu/user\\_surveys](http://www.cc.gatech.edu/gvu/user_surveys)>

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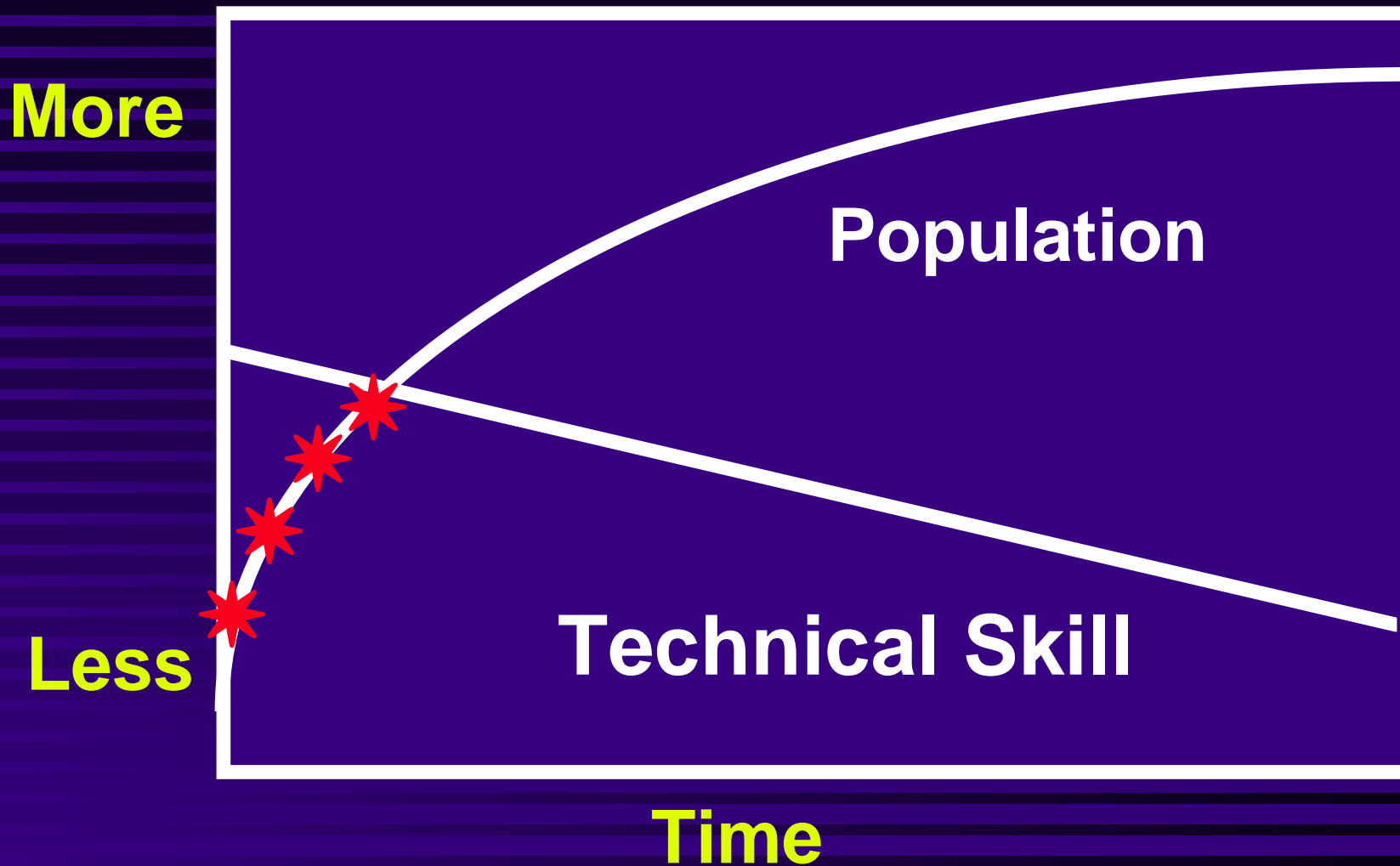
# Summary of the Results



- \* Clear movement from 'Original Developers' to the 'Early Adopters'
- \* Least number of differences between female and male segments
- \* Slightly younger, less techy, higher income, etc.



# Population Shift





# Weekend vs Weekday Users

- \* **Weekend:** More younger and older users; make slightly more money (more above \$100k); less likely to be in computer related job; hobbyists
- \* **Weekday:** Composed over 80% of the responses; most gained access via work or school; less likely to spend recreational time computing; information workers



# Europe vs US Users

- \* **Europe:** More likely to be younger (29.6 median age) students with less income; higher representation from computer and educational fields
- \* **US:** Older, stronger presence of the professional/management types; average income above \$50k; lower educational attainment



# Female vs Male Users

- \* **Female: Younger (31.8 median age) with strong presence from education/college users; less willing to disclose income (lower); less technical background**
- \* **Male: Older (33.1 median age) typically employed in the computer industry; spend more time computing; higher income; more years on Internet**



**For More Information  
and Results See:**

**<http://www.gatech.edu>**

**and follow the link from there**