GVU's WWW User Surveys

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Georgia Tech - CoC - GVU

Special thanks to:

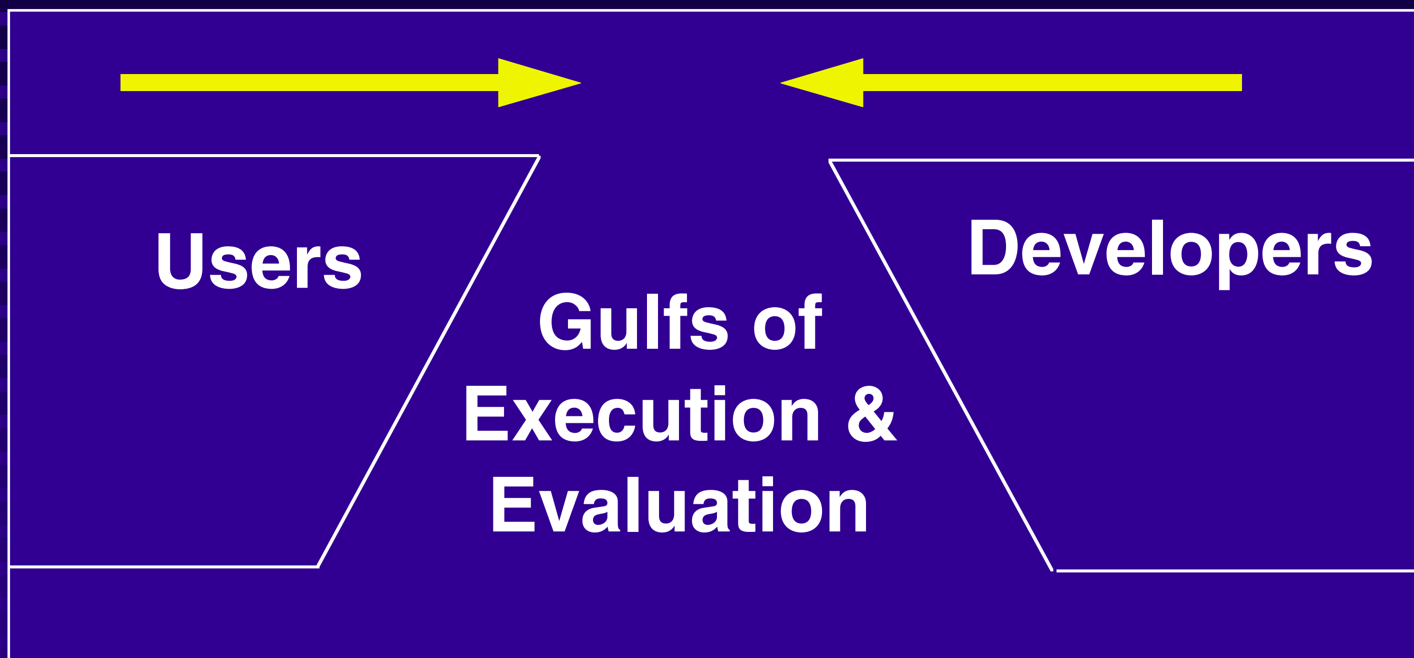
CNS, Randy Carpenter, Kipp Jones, Mike Mealling, Dr. James Foley, GVU, Sun Microsystems

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

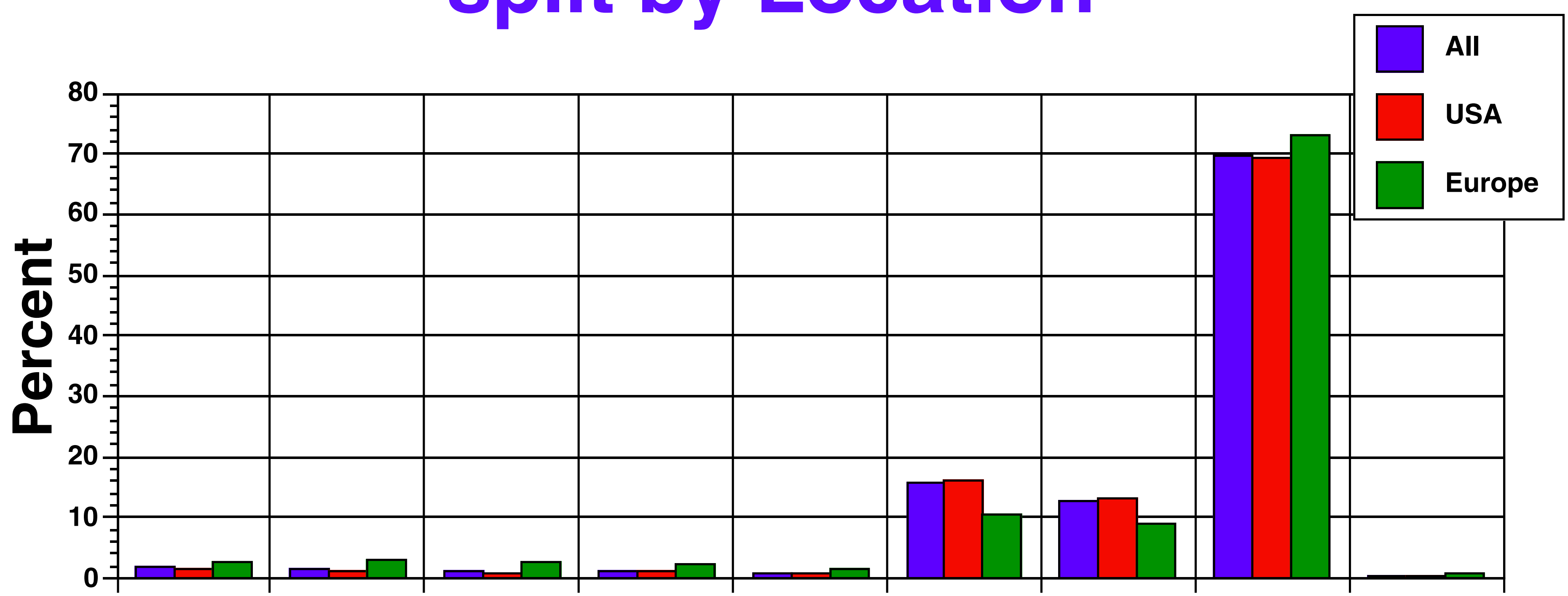
Java Prototype

- 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

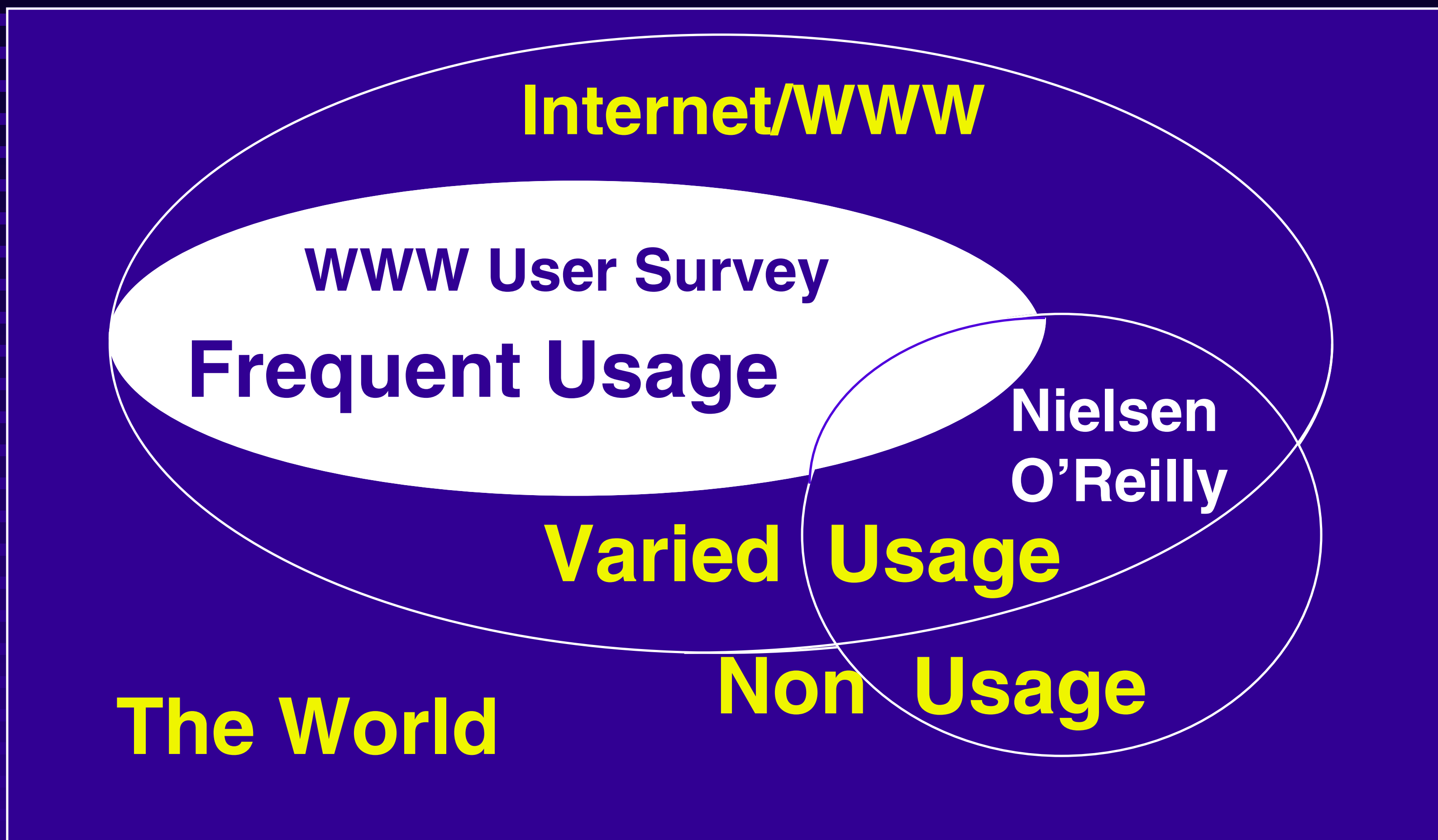


	friend	listserv	magazine	e-mailing	memory	usenet	other	other page	newspaper
All	1.76	1.42	1.04	1.18	0.74	15.7	12.78	69.61	0.53
USA	1.63	1.27	0.84	1.12	0.69	16.06	13.19	69.3	0.52
Europe	2.71	2.91	2.6	2.25	1.33	10.41	9.04	73.25	0.66

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

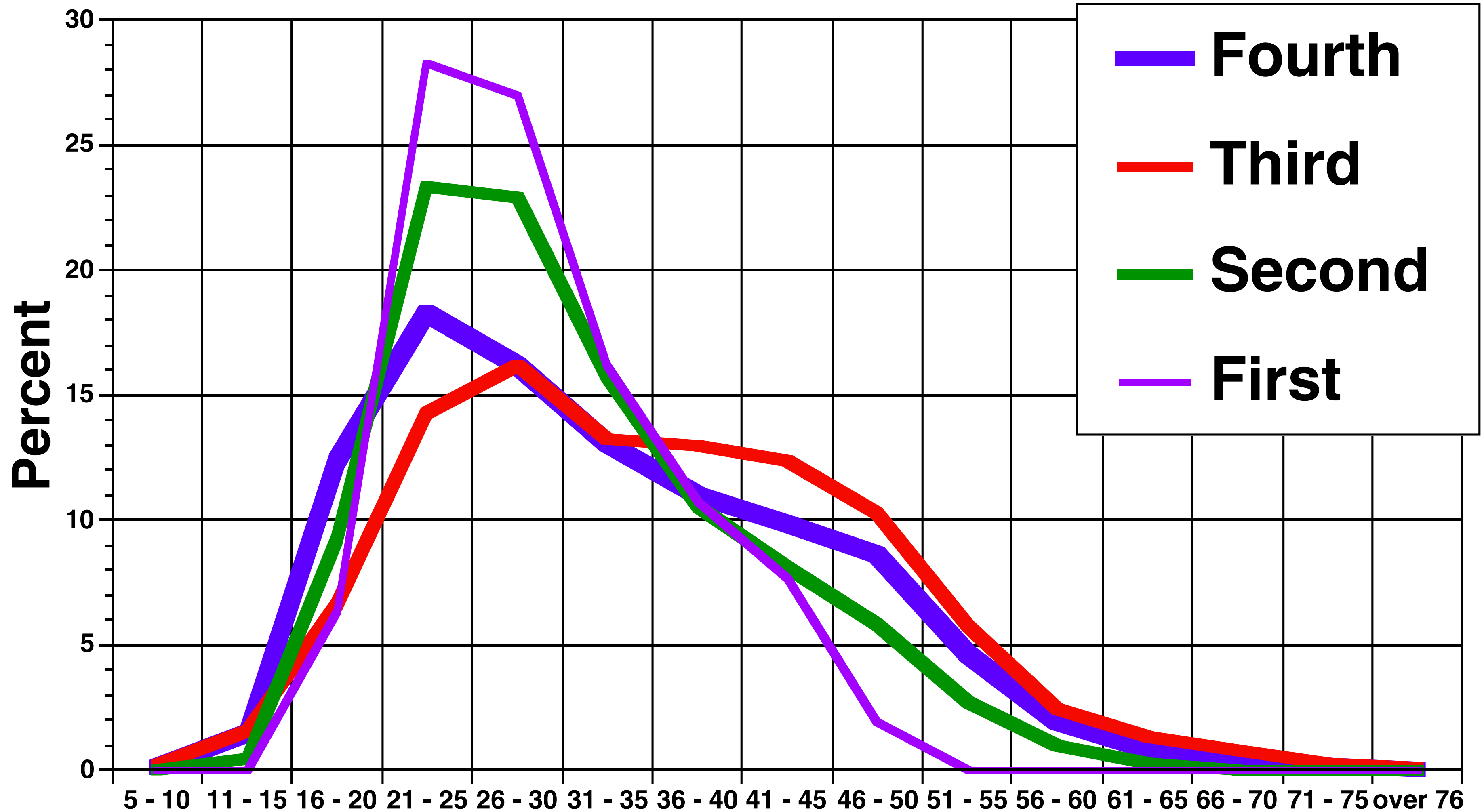
User Populations



Presentation of the Results

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

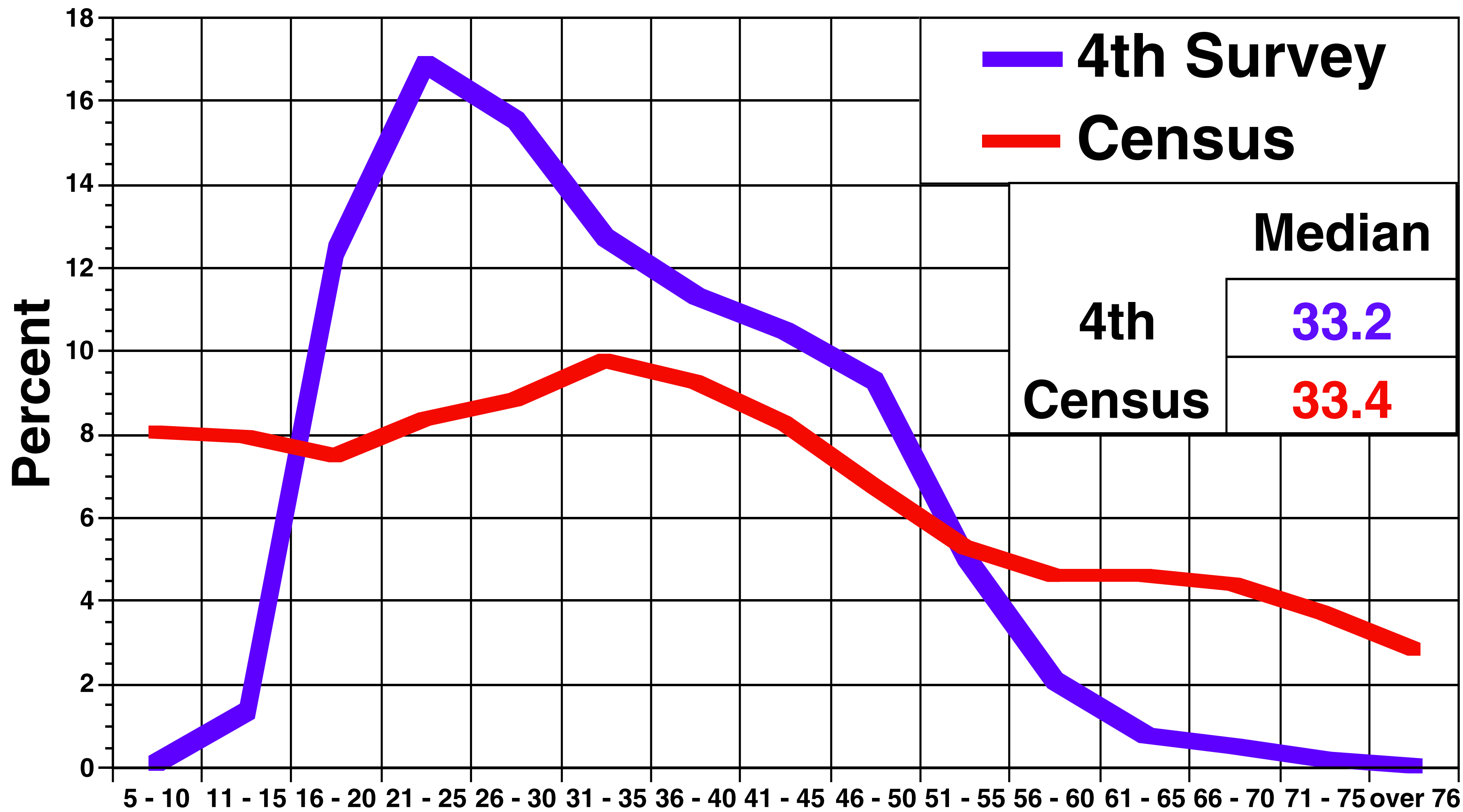
Age Distributions Across Surveys



Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

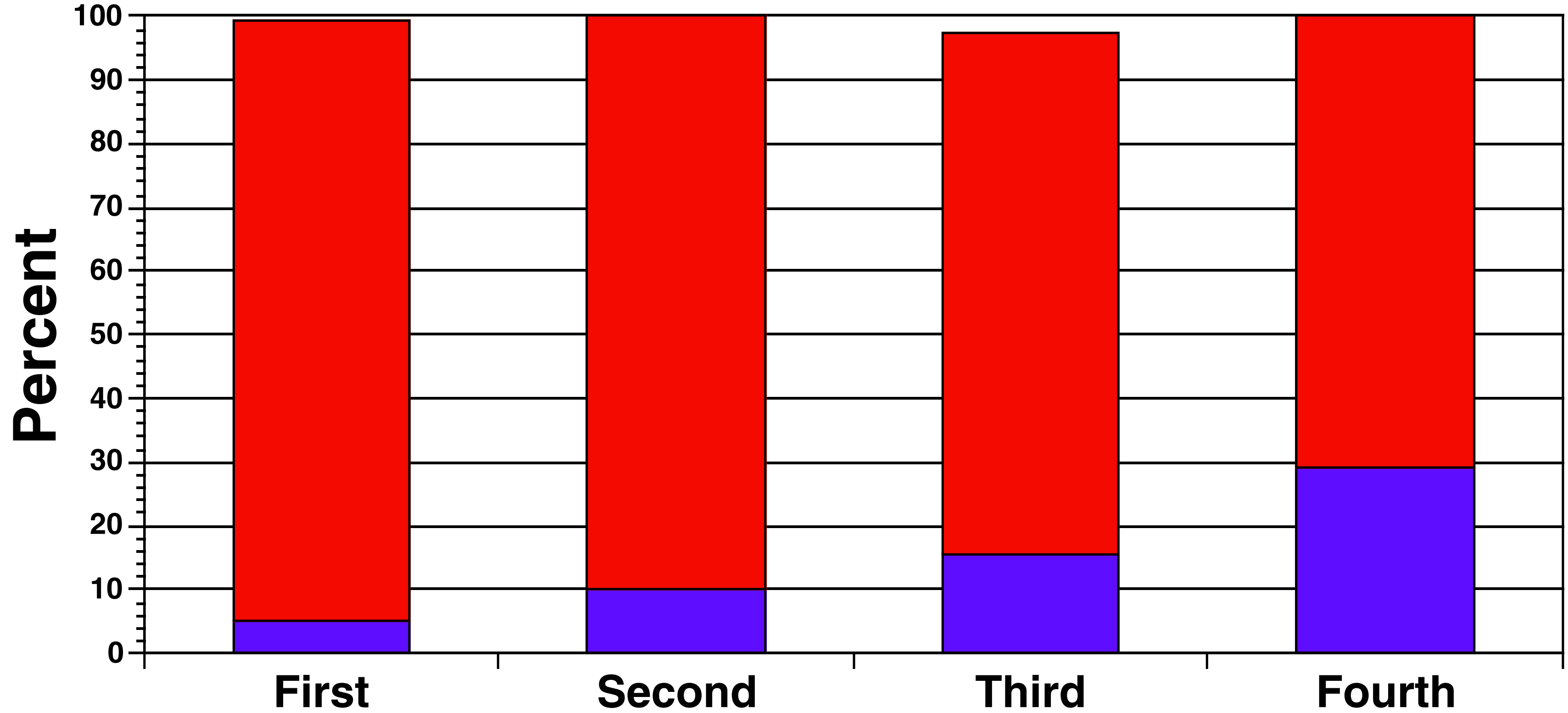
4th Survey USA Age Distributions Compared to USA Census Data



Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Gender Distributions Across Surveys

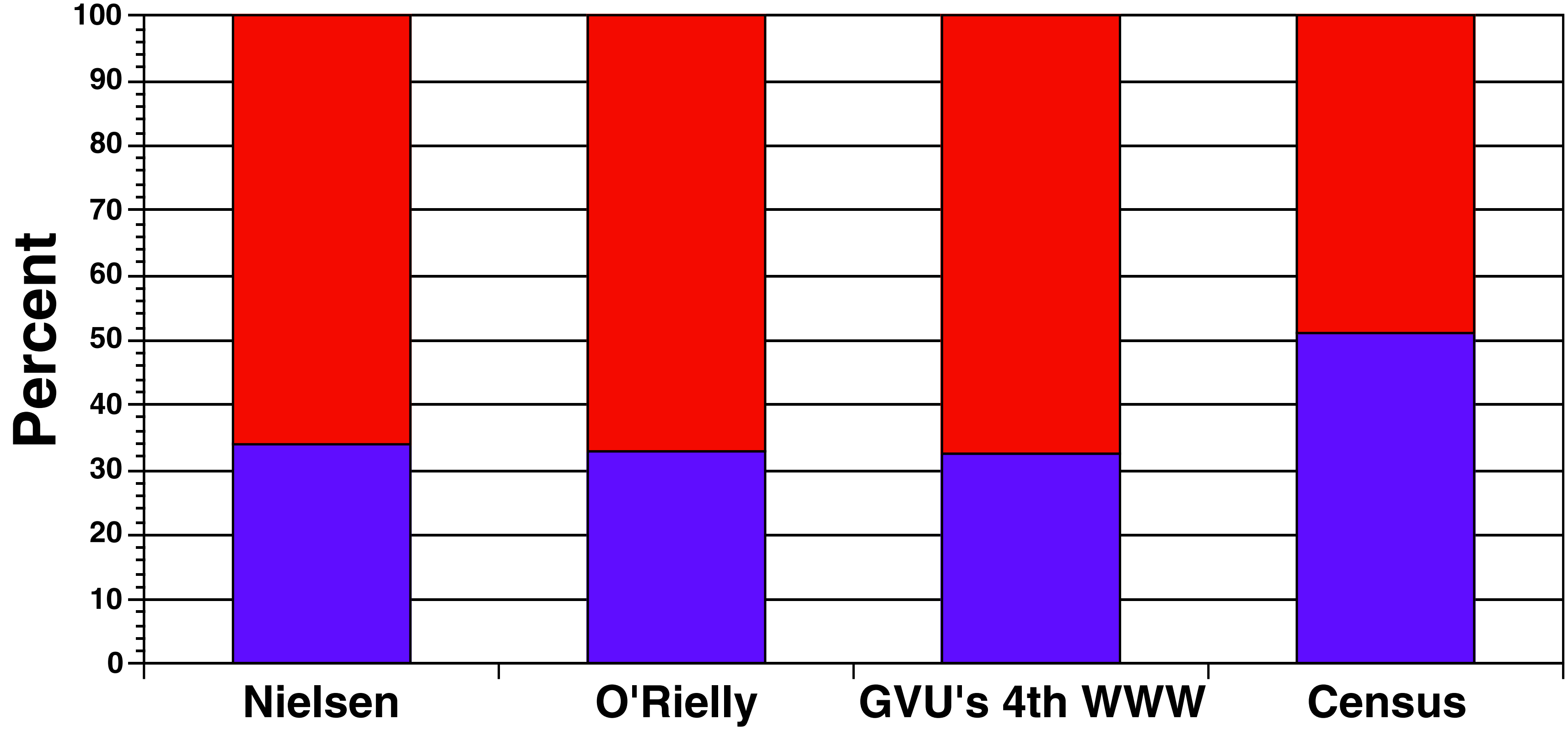


	First	Second	Third	Fourth
Female	5.1	10	15.5	29.3
Male	94.4	90	82	70.7

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Gender Distributions Across Different Surveys

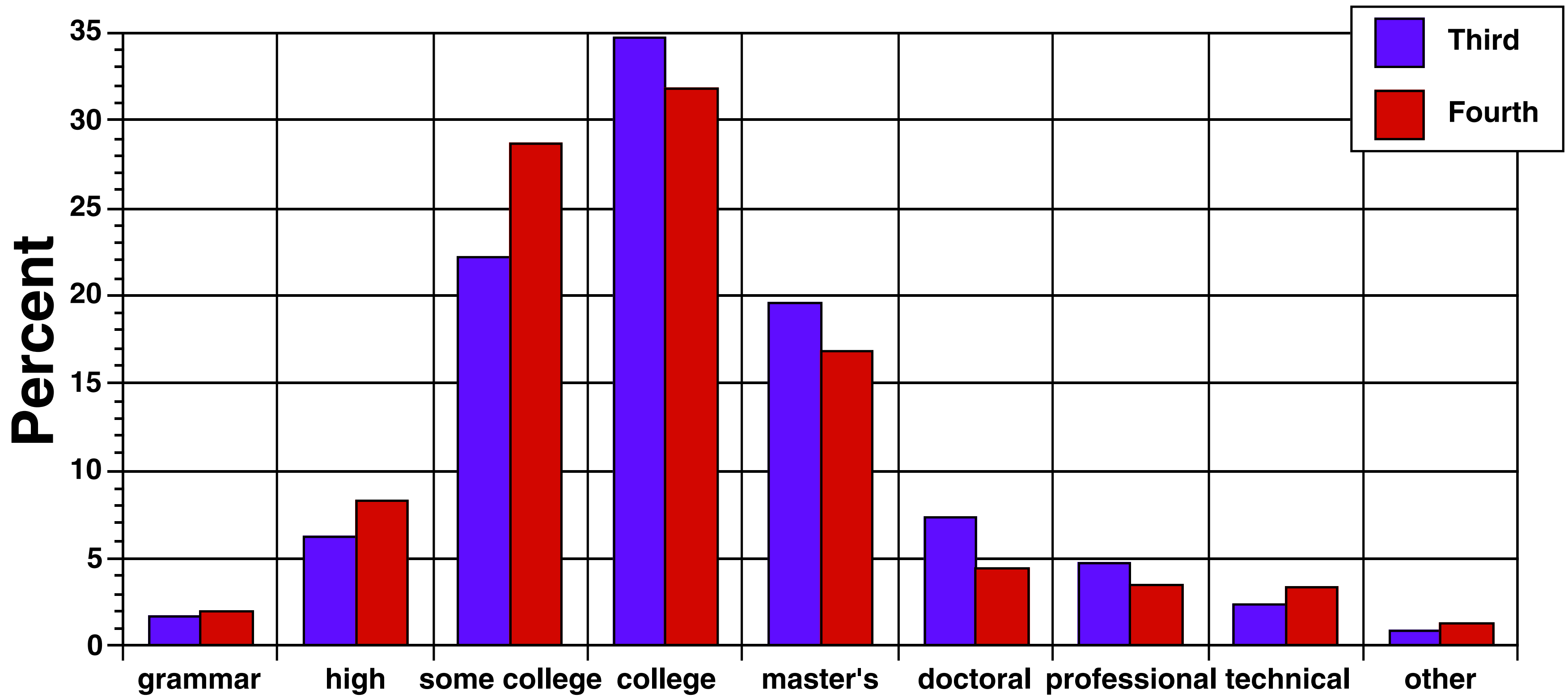


	Nielsen	O'Rielly	GVU's 4th WWW	Census
Female	34	33	32.5	51.2
Male	66	67	67.5	48.8

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Education Across Surveys



	grammar	high	some college	college	master's	doctoral	professional	technical	other
Third	1.7	6.3	22.21	34.75	19.52	7.36	4.78	2.45	0.94
Fourth	1.91	8.29	28.64	31.76	16.88	4.39	3.53	3.38	1.23

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

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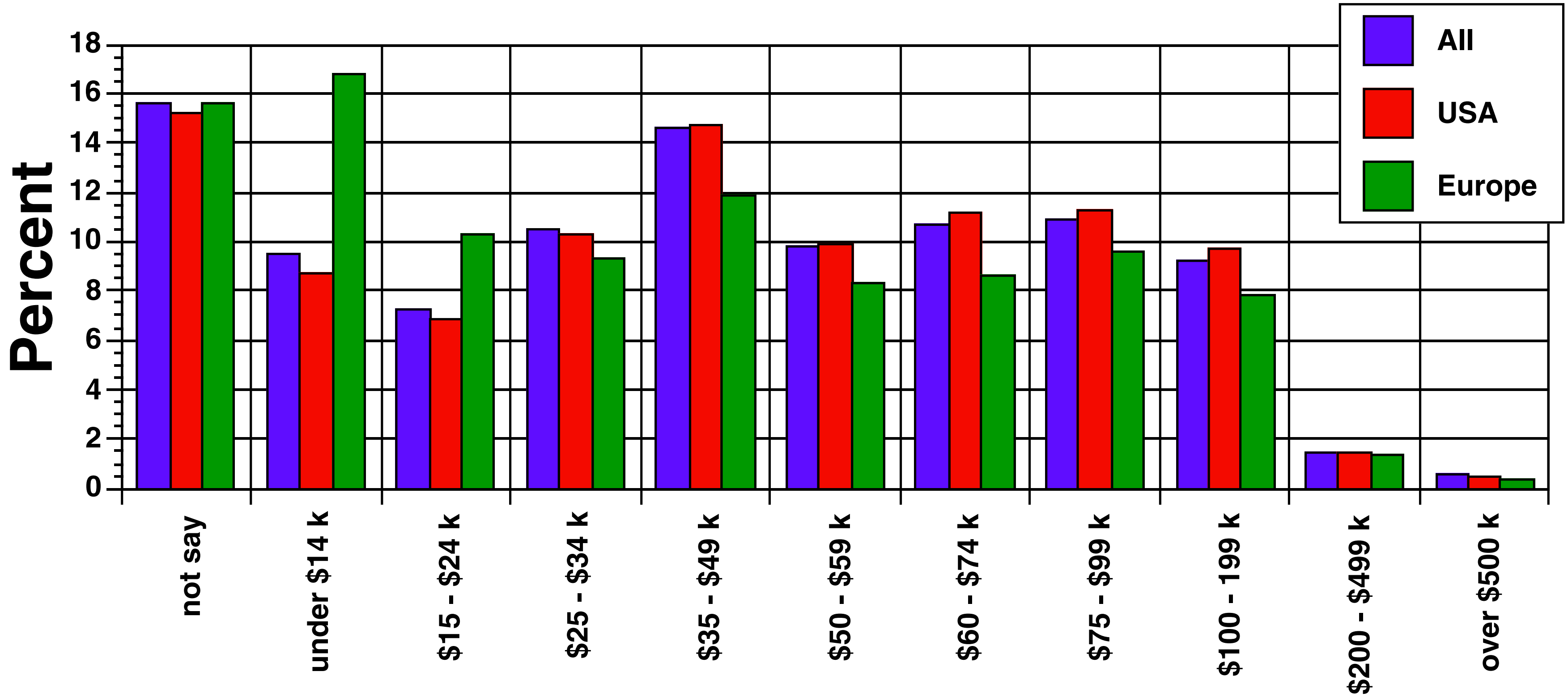
Income split by Location



	not say	under $14 k	$15 - $24 k	$25 - $34 k	$35 - $49 k	$50 - $59 k	$60 - $74 k	$75 - $99 k	$100 - 199 k	$200 - $499 k	over $500 k
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)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

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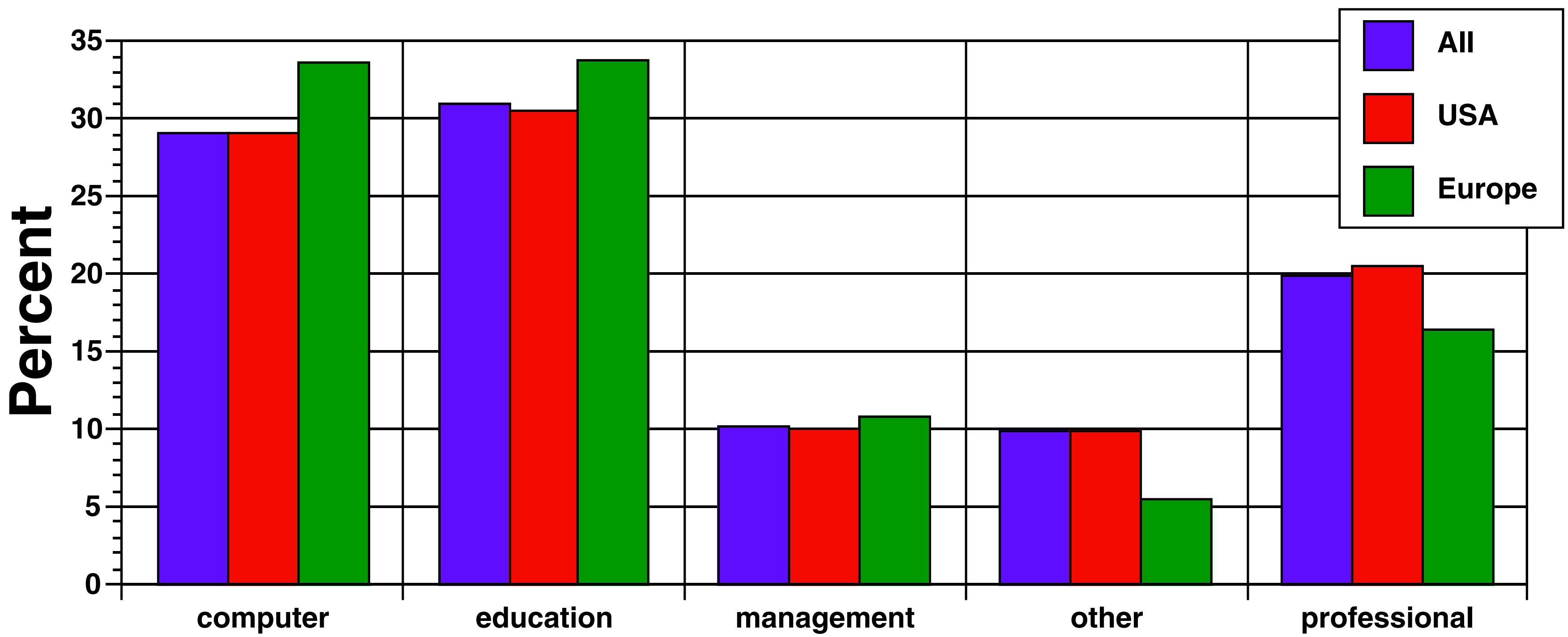
Occupation
split by Location

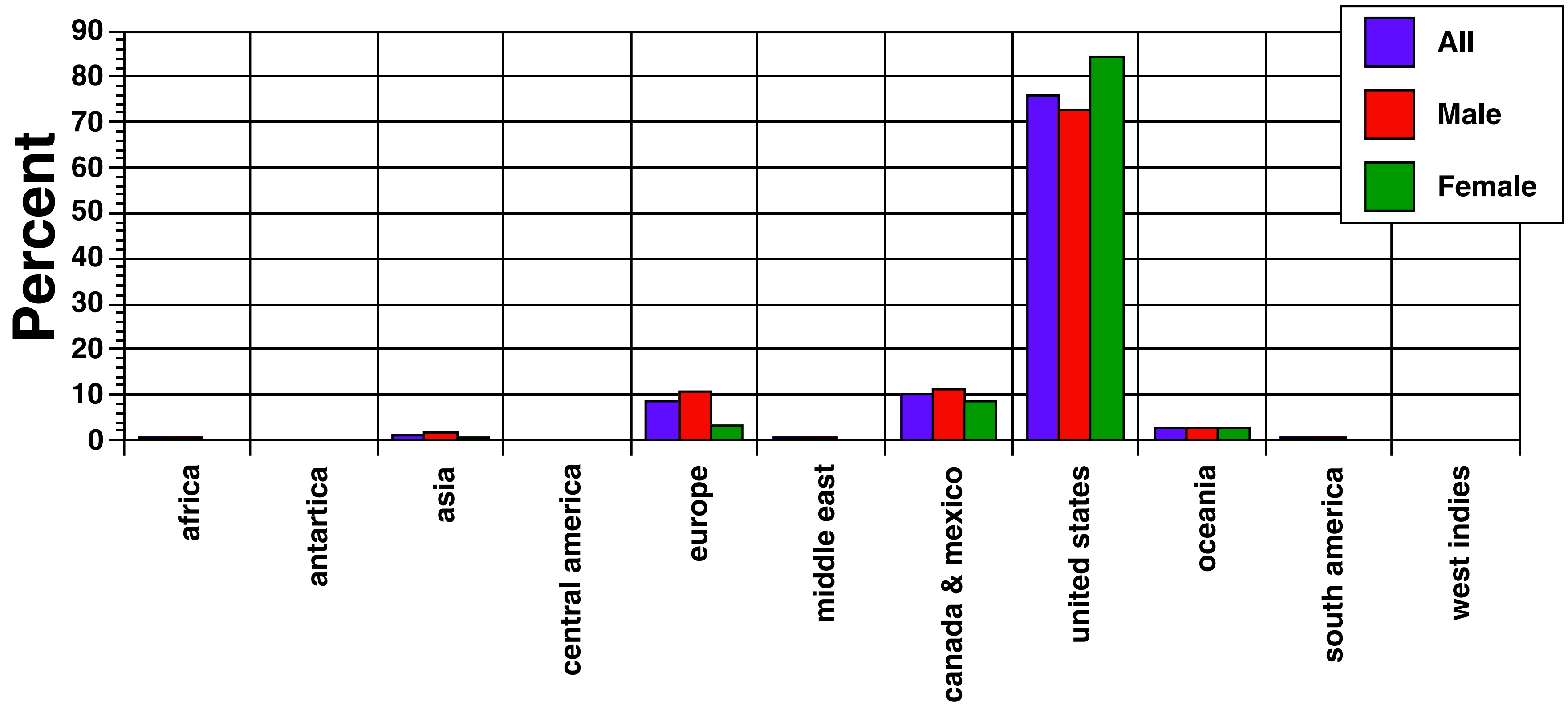


	computer	education	management	other	professional
All	29.12	30.97	10.21	9.83	19.88
USA	29.14	30.57	9.98	9.88	20.42
Europe	33.64	33.79	10.72	5.46	16.39

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Location split by Gender

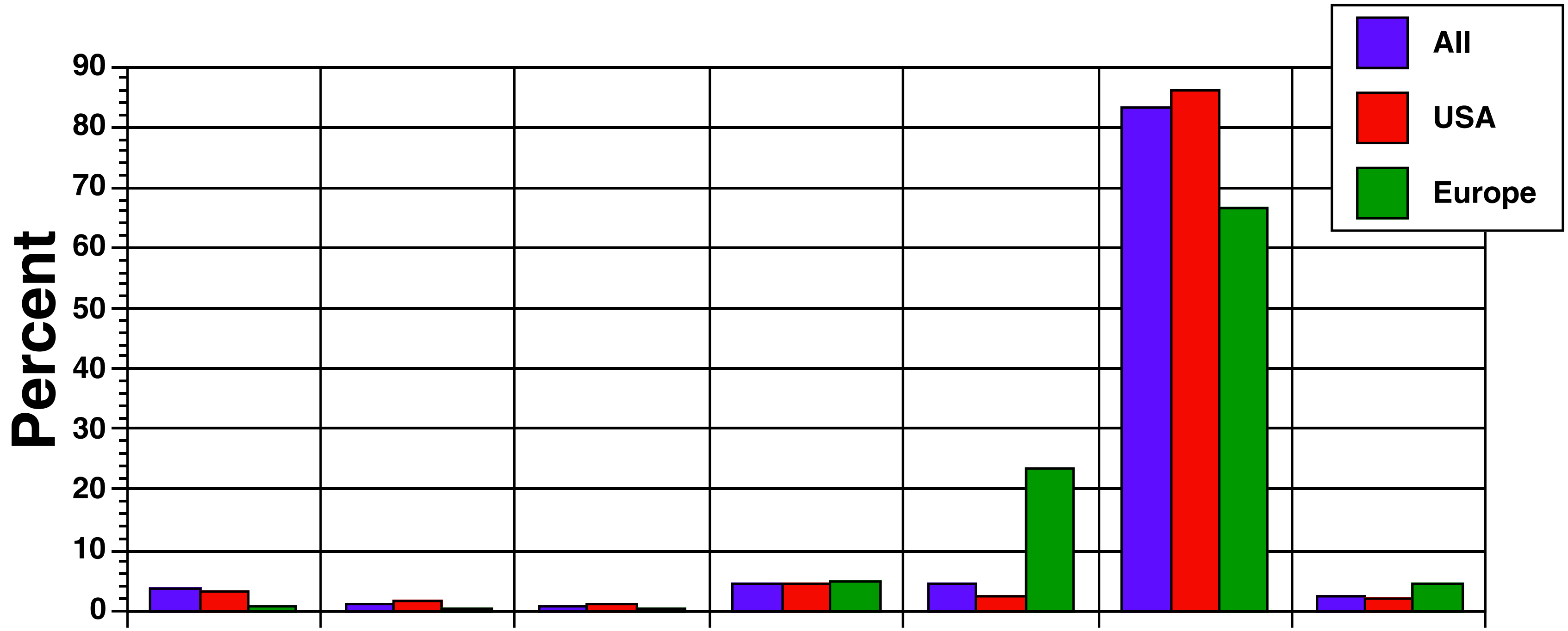


	africa	antartica	asia	central america	europe	middle east	canada & mexico	united states	oceania	south america	west indies
All	0.38	0.09	1.32	0.05	8.39	0.37	10.17	76.19	2.63	0.32	0.1
Male	0.44	0.07	1.55	0.05	10.63	0.41	10.92	72.73	2.67	0.43	0.11
Female	0.23	0.13	0.79	0.04	3	0.26	8.32	84.61	2.49	0.04	0.07

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Race split by Location



	asian	african amer.	native amer.	rather not say	other	white	hispanic
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

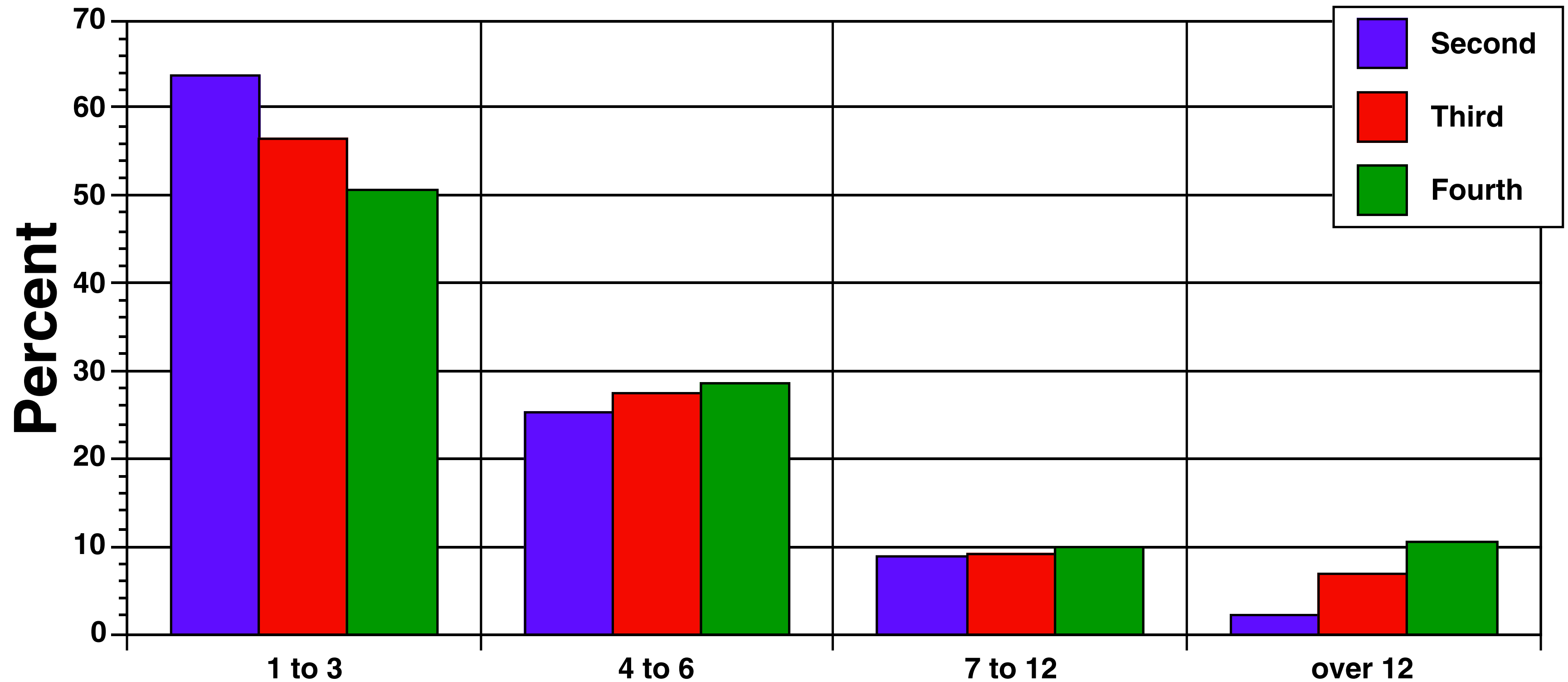
Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Content Authoring

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

Hours Learning HTML Across Surveys

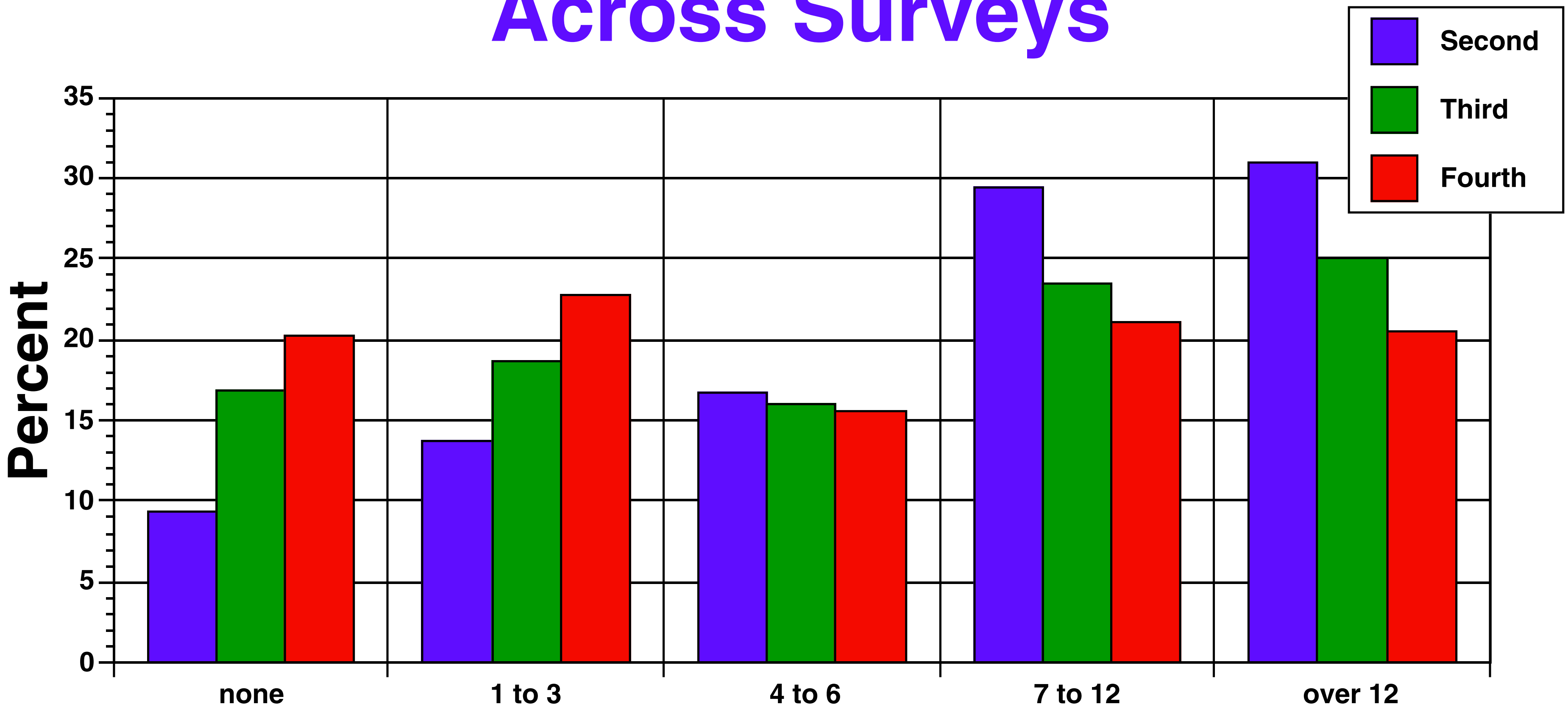


	1 to 3	4 to 6	7 to 12	over 12
Second	63.87	25.28	8.69	2.16
Third	56.50	27.43	9.18	6.89
Fourth	50.72	28.71	10.03	10.54

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Number of Years Programming Across Surveys

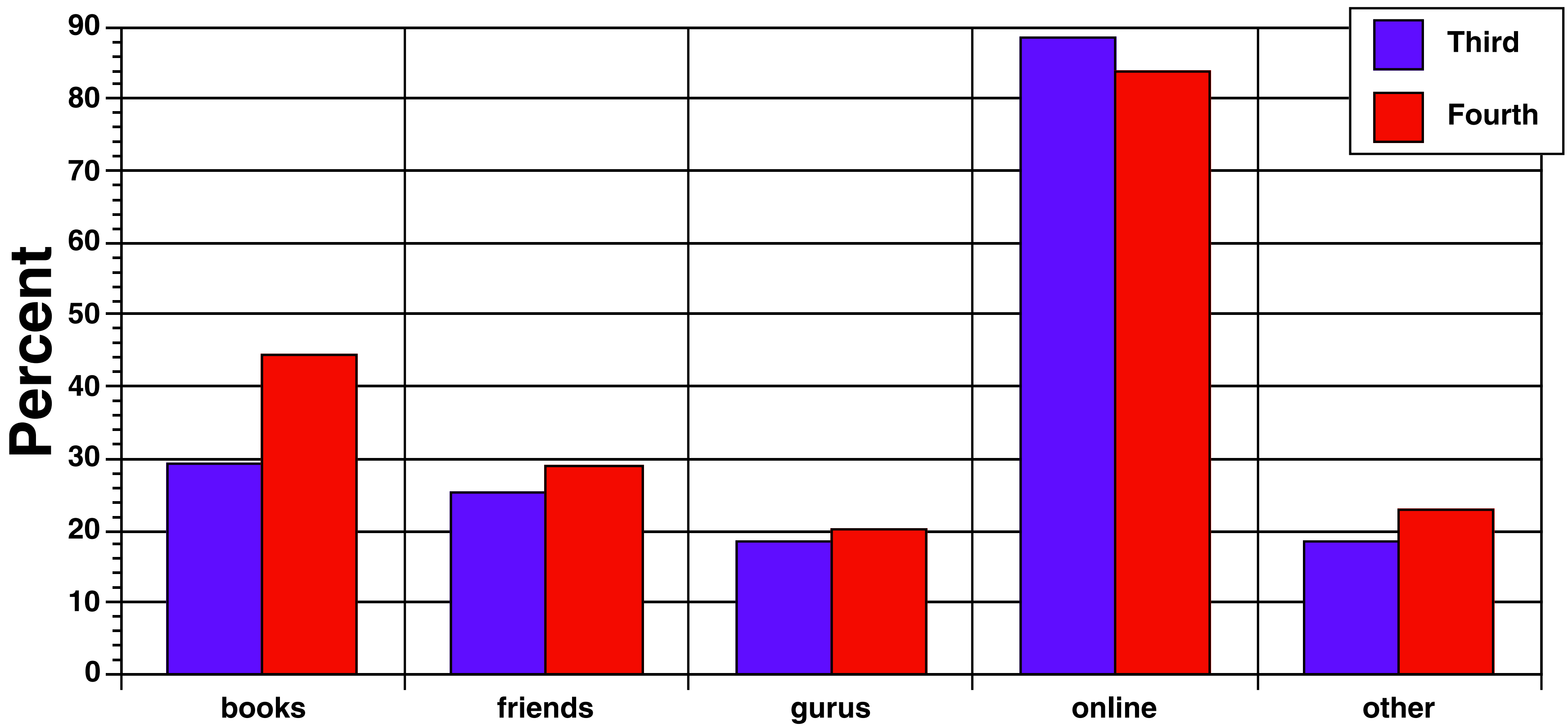


	none	1 to 3	4 to 6	7 to 12	over 12
Second	9.35	13.72	16.66	29.36	30.92
Third	16.78	18.72	15.98	23.55	24.98
Fourth	20.21	22.72	15.58	21.04	20.45

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Sources Consulted Learning HTML Across Surveys



	books	friends	gurus	online	other
Third	29.24	25.19	18.48	88.41	18.63
Fourth	44.47	29.02	20.17	83.92	22.77

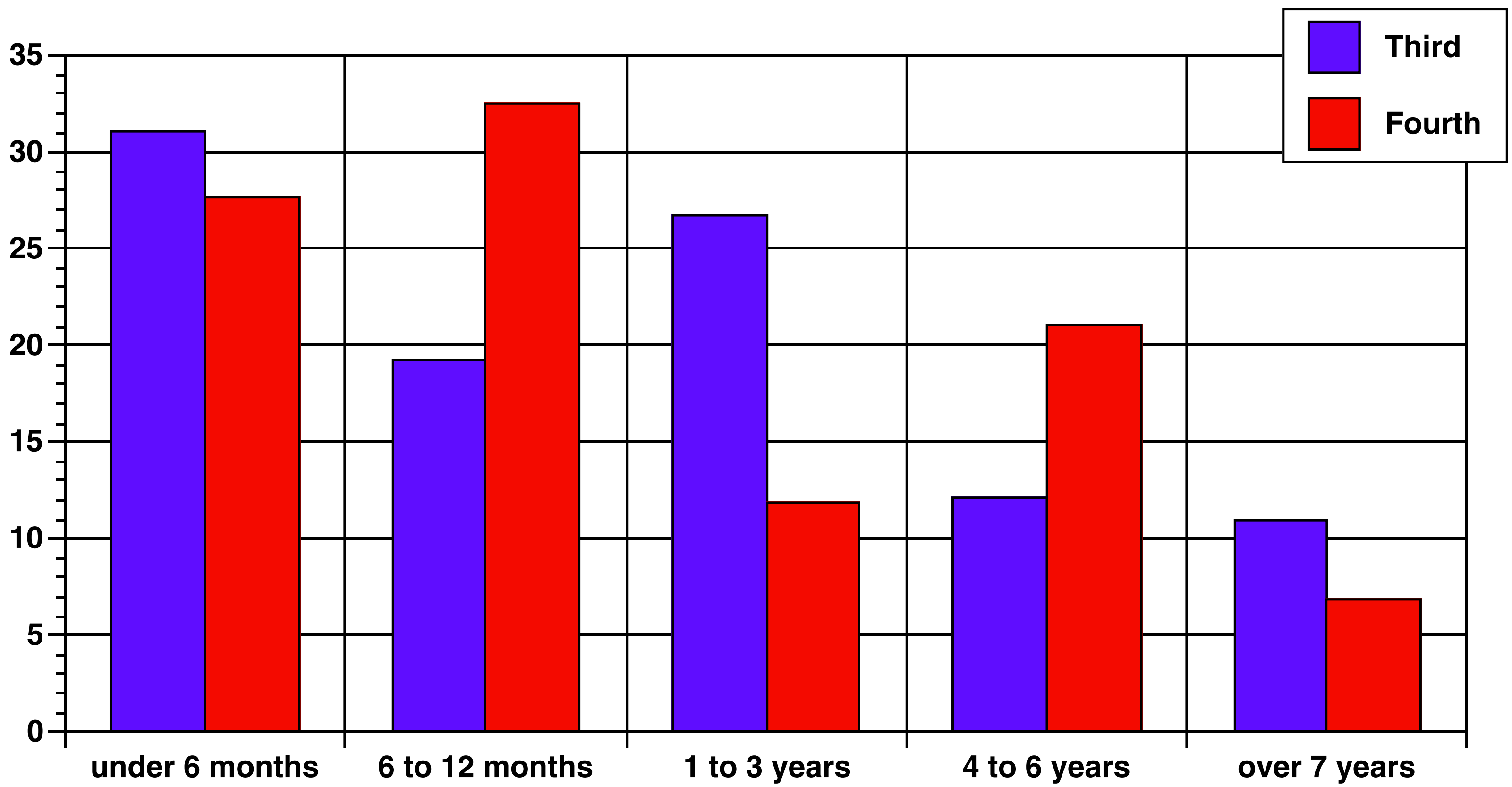
Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

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

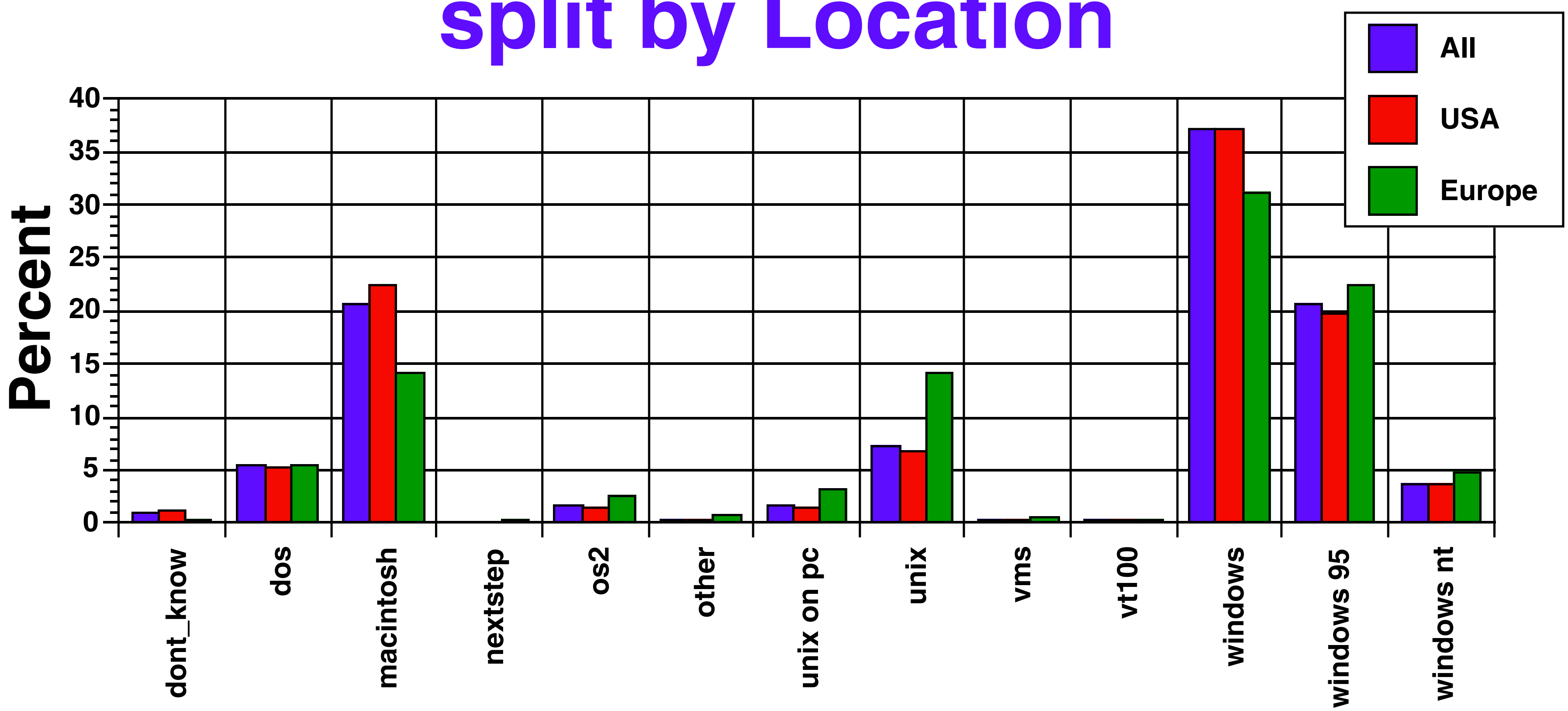


	under 6 months	6 to 12 months	1 to 3 years	4 to 6 years	over 7 years
Third	31.04	19.17	26.73	12.18	10.89
Fourth	27.7	32.58	11.88	21.01	6.84

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Primary Computing Platform split by Location

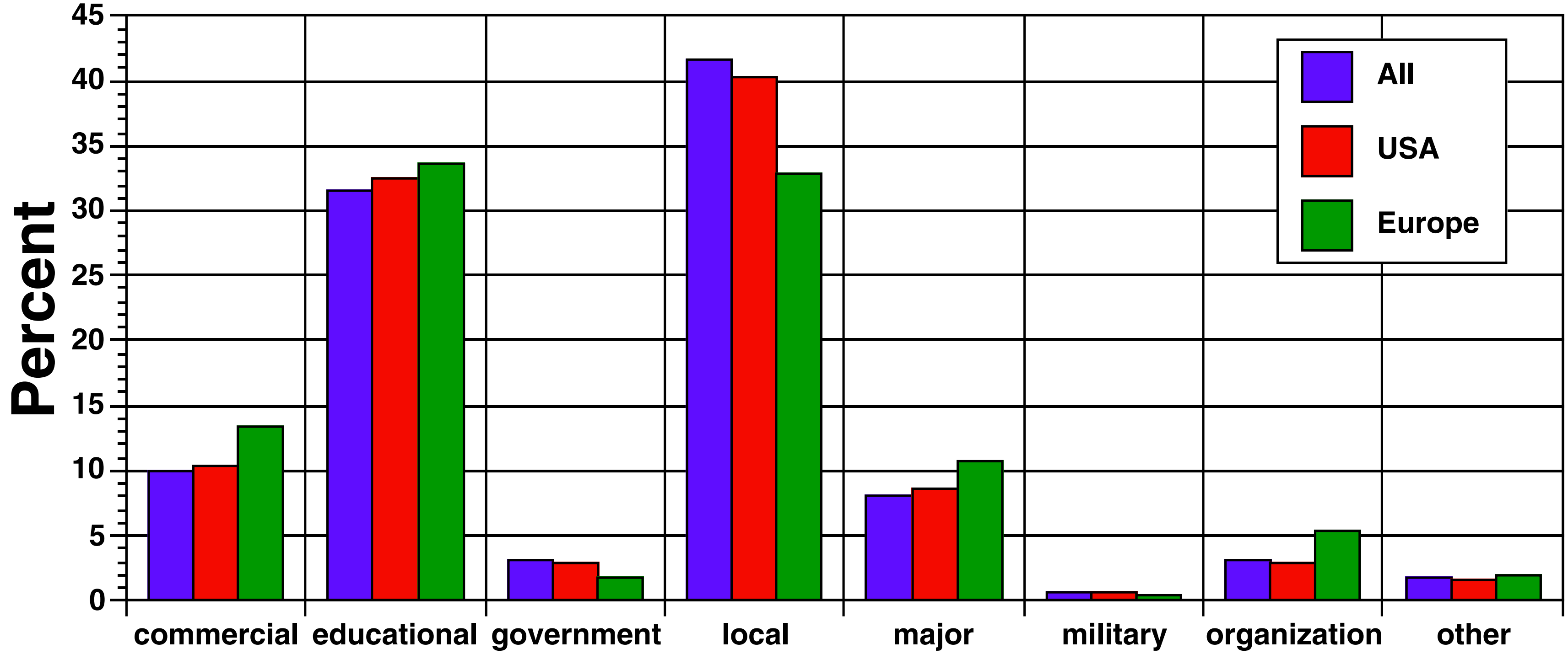


	dont_know	dos	macintosh	nextstep	os2	other	unix on pc	unix	vms	vt100	windows	windows 95	windows nt
All	1.02	5.41	20.52	0.18	1.64	0.37	1.6	7.16	0.34	0.24	37.16	20.67	3.71
USA	1.1	5.21	22.38	0.17	1.49	0.32	1.52	6.77	0.3	0.25	37.24	19.67	3.56
Europe	0.36	5.46	14.14	0.31	2.45	0.82	3.22	14.19	0.46	0.2	31.19	22.51	4.7

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Nature of Primary Internet Provider split by Location

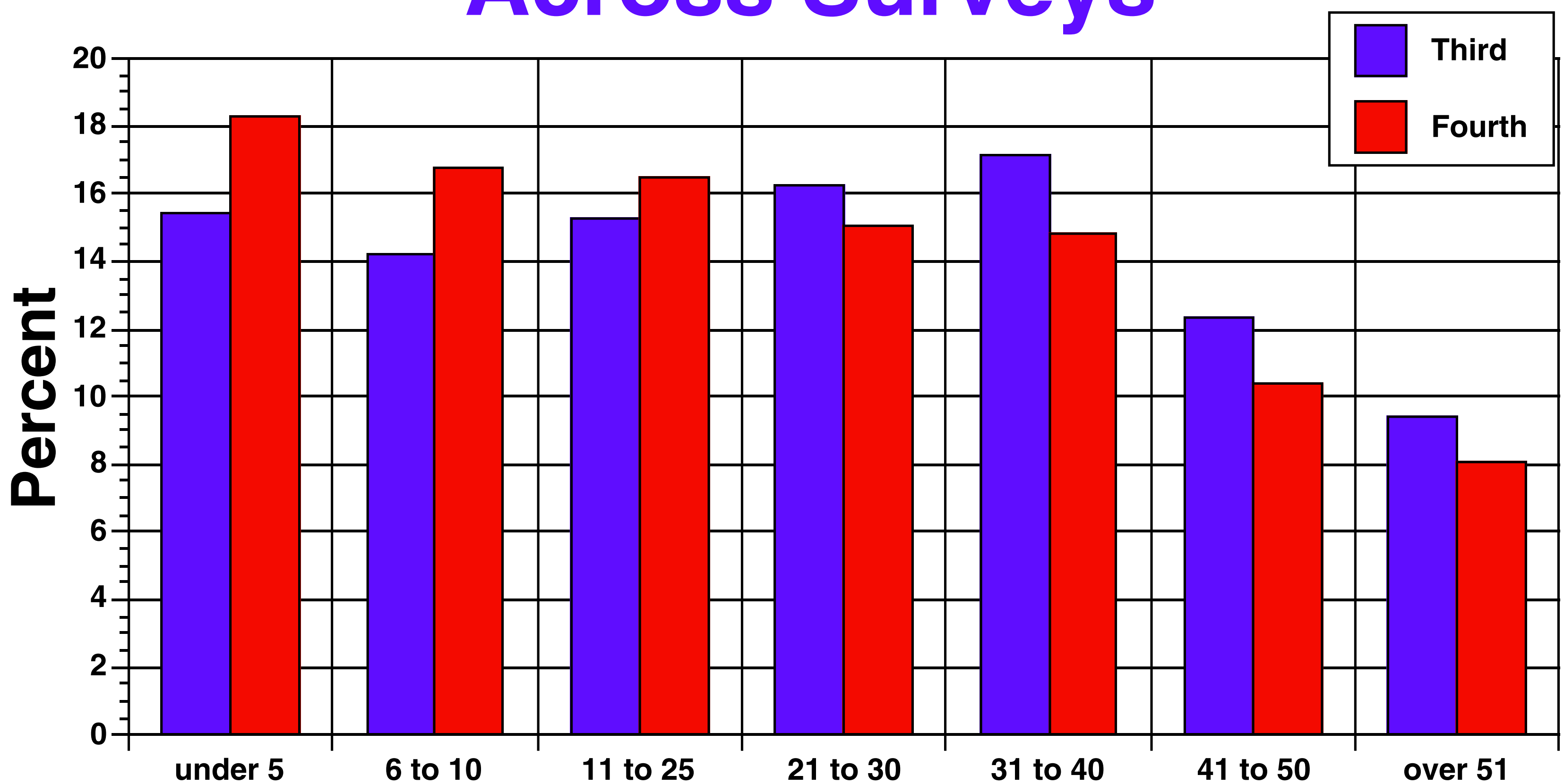


	commercial	educational	government	local	major	military	organization	other
All	10.03	31.59	3.13	41.64	8.1	0.66	3.13	1.72
USA	10.29	32.53	3.01	40.35	8.62	0.71	2.88	1.61
Europe	13.32	33.69	1.79	32.82	10.72	0.36	5.41	1.89

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Hours per Week Work Computing Across Surveys

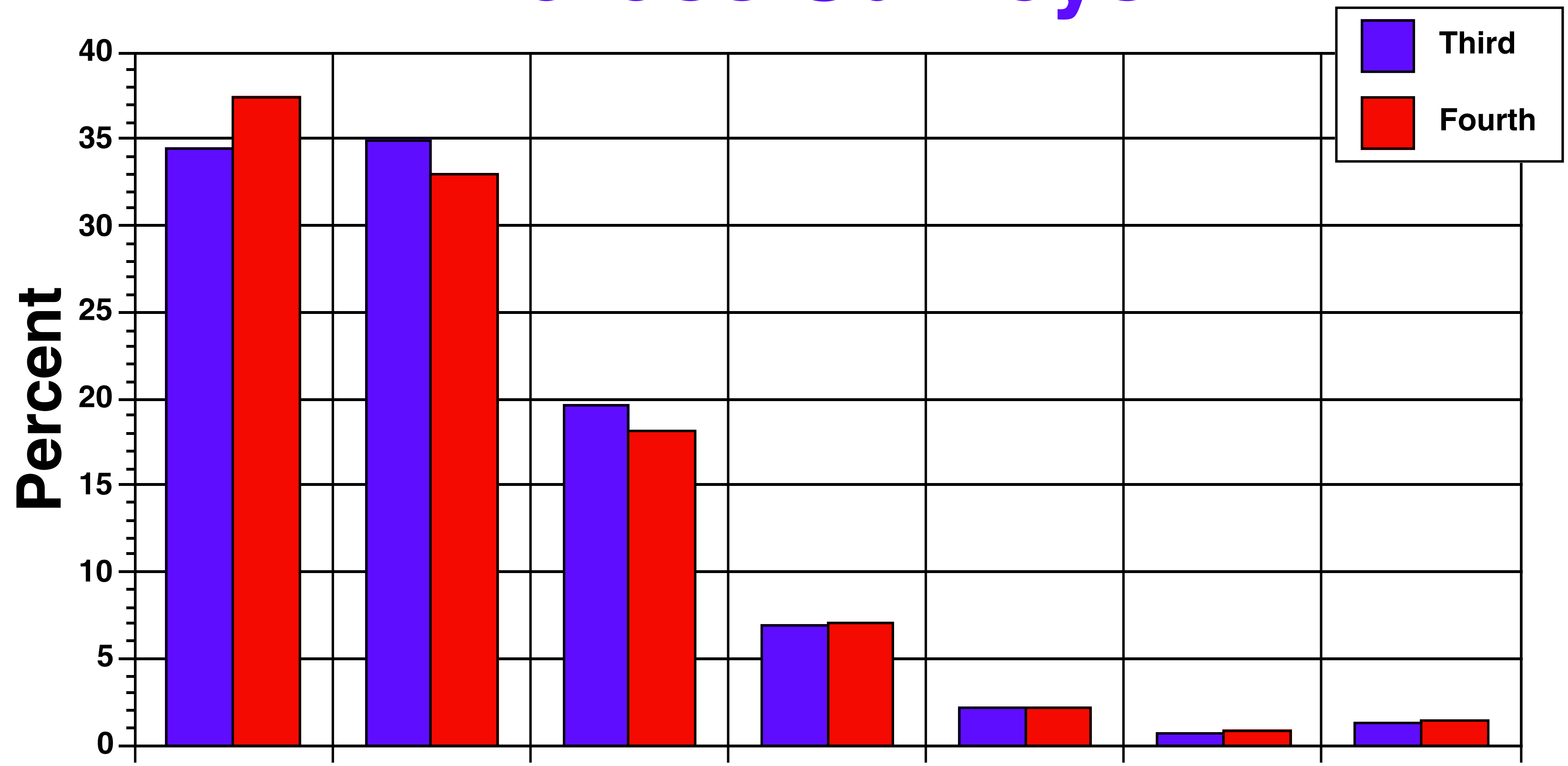


	under 5	6 to 10	11 to 25	21 to 30	31 to 40	41 to 50	over 51
Third	15.39	14.22	15.28	16.22	17.14	12.36	9.4
Fourth	18.32	16.8	16.48	15.07	14.81	10.42	8.09

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Hours per Week Fun Computing Across Surveys

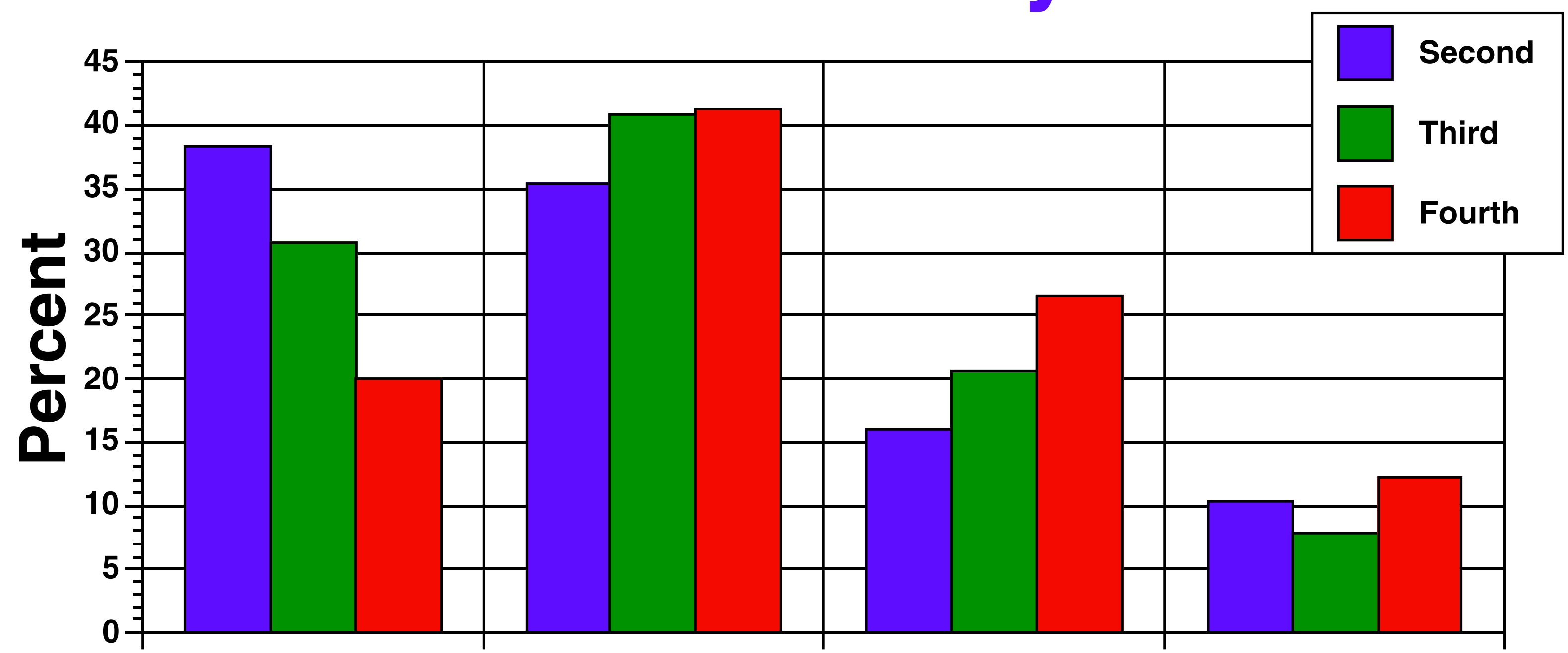


	under 5	6 to 10	11 to 20	21 to 30	31 to 40	41 to 50	over 50
Third	34.51	34.85	19.61	6.93	2.17	0.71	1.23
Fourth	37.43	32.98	18.17	7.1	2.15	0.78	1.39

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Hours per Week Browser Used Across Surveys

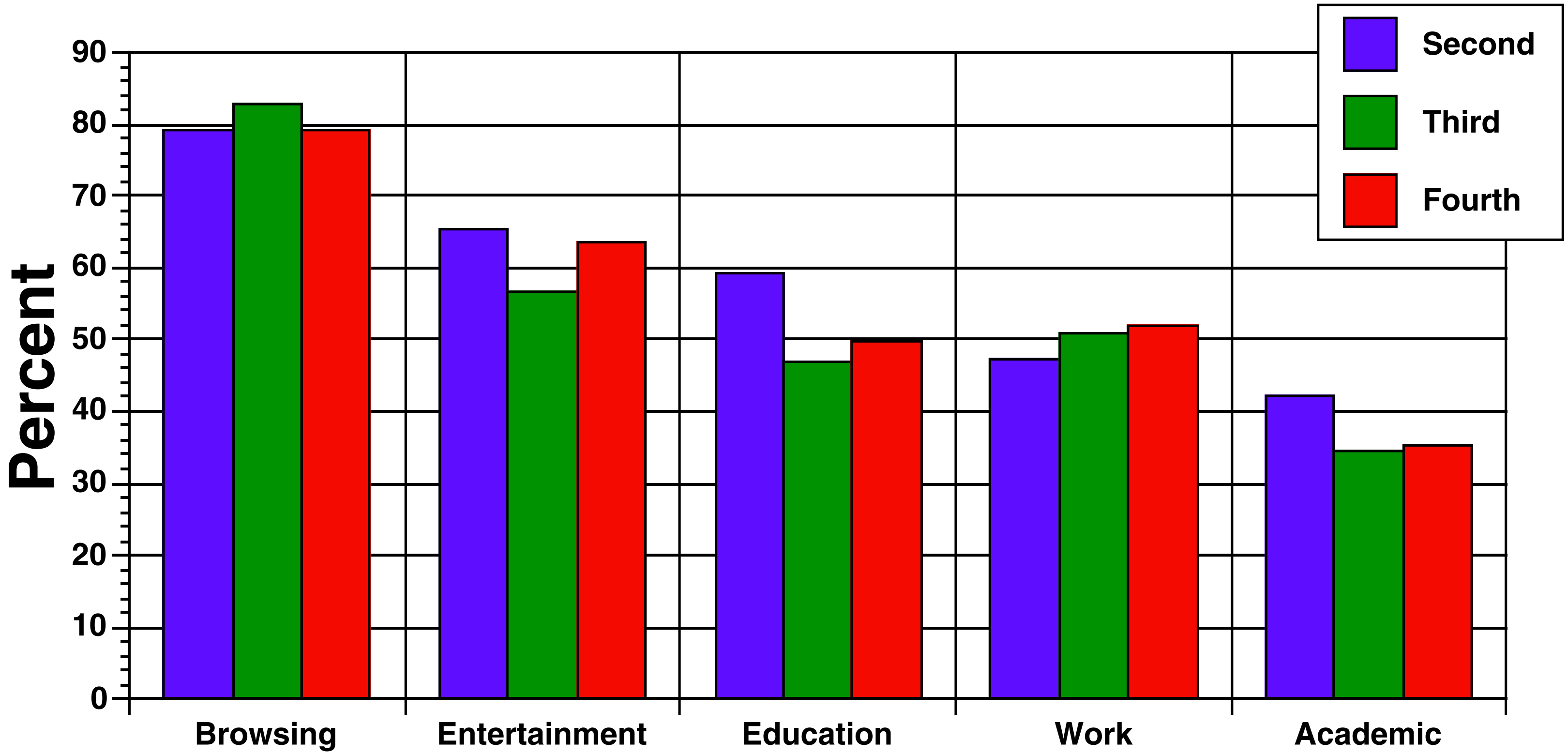


	0-5	6-10	11-20	20+
Second	38.31	35.33	15.95	10.41
Third	30.73	40.82	20.69	7.77
Fourth	20.01	41.17	26.56	12.26

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Primary Use of Browser Across Surveys

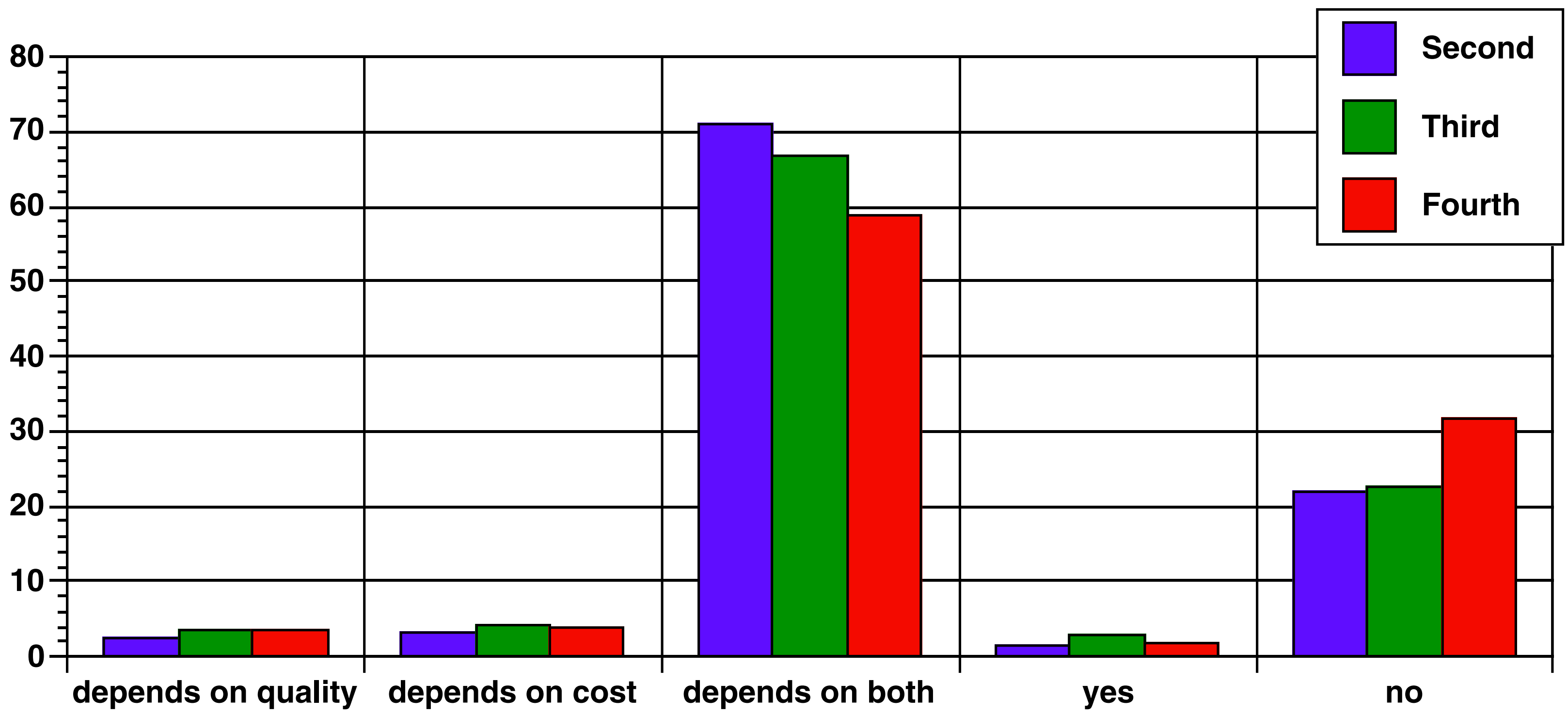


	Browsing	Entertainment	Education	Work	Academic
Second	79.12	65.46	59.26	47.21	42.11
Third	82.63	56.6	46.94	50.88	34.69
Fourth	79	63.63	49.7	51.81	35.09

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Willingness to Pay Fees Across Surveys

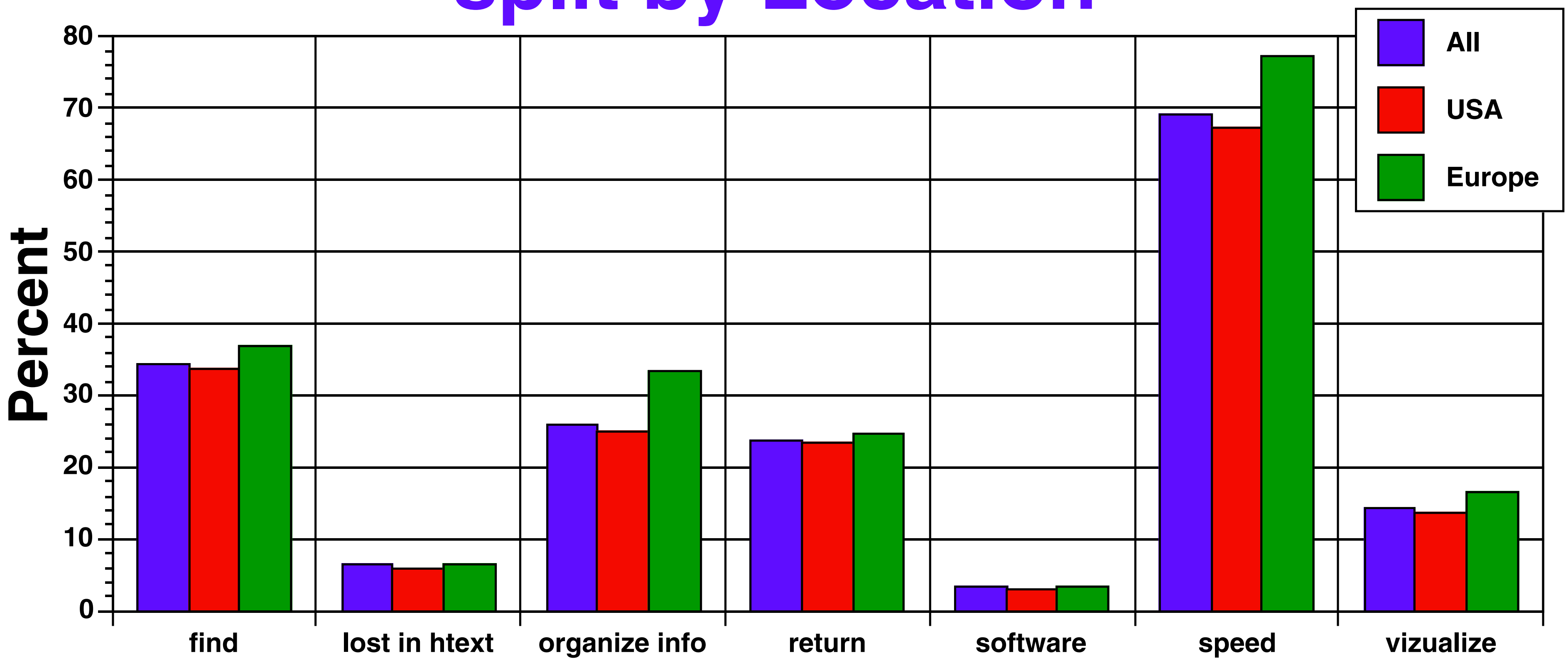


	depends on quality	depends on cost	depends on both	yes	no
Second	2.50	3.12	70.93	1.59	21.86
Third	3.44	4.39	66.82	2.71	22.64
Fourth	3.65	3.97	58.73	1.8	31.84

Source: GVU's WWW User Surveys
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Problems with Using the Web split by Location

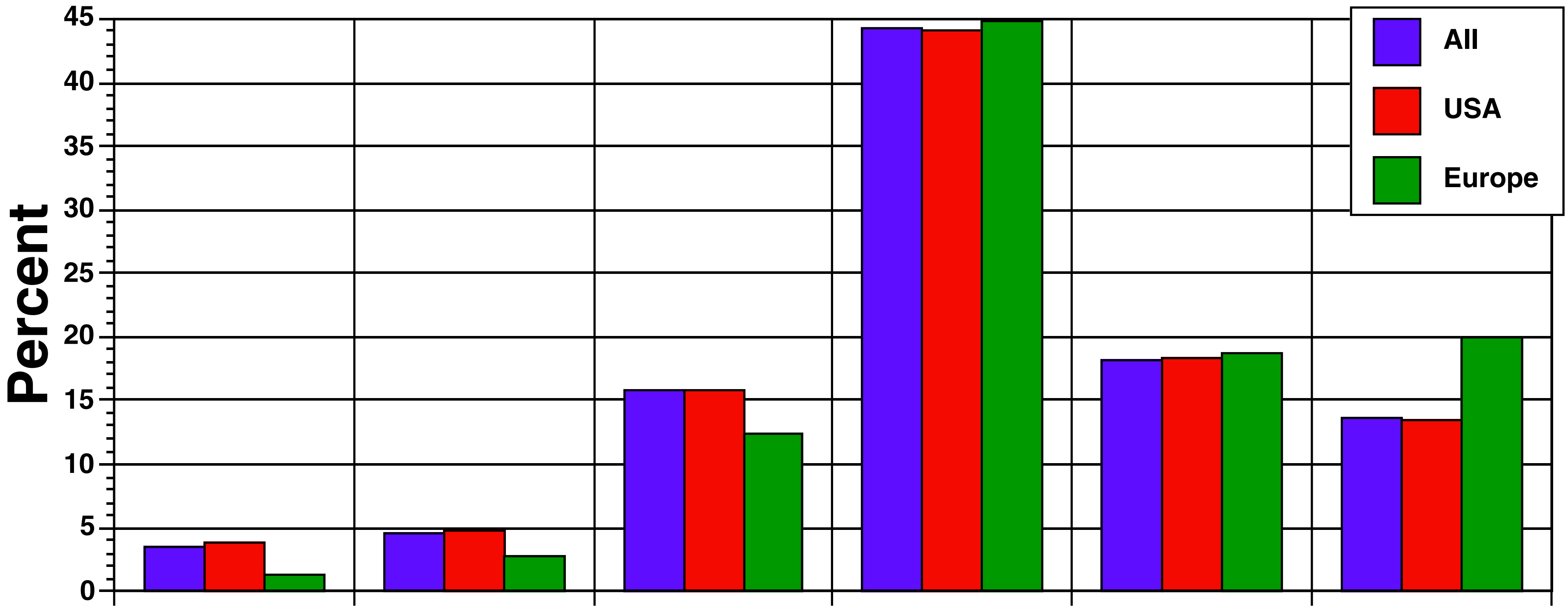


	find	lost in htext	organize info	return	software	speed	vizualize
All	34.48	6.54	25.82	23.67	3.2	69.11	14.34
USA	33.63	5.9	25.07	23.48	3.12	67.19	13.64
Europe	36.98	6.53	33.45	24.8	3.44	77.23	16.59

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Number of Items Hotlisted/ Bookmarked split by Location

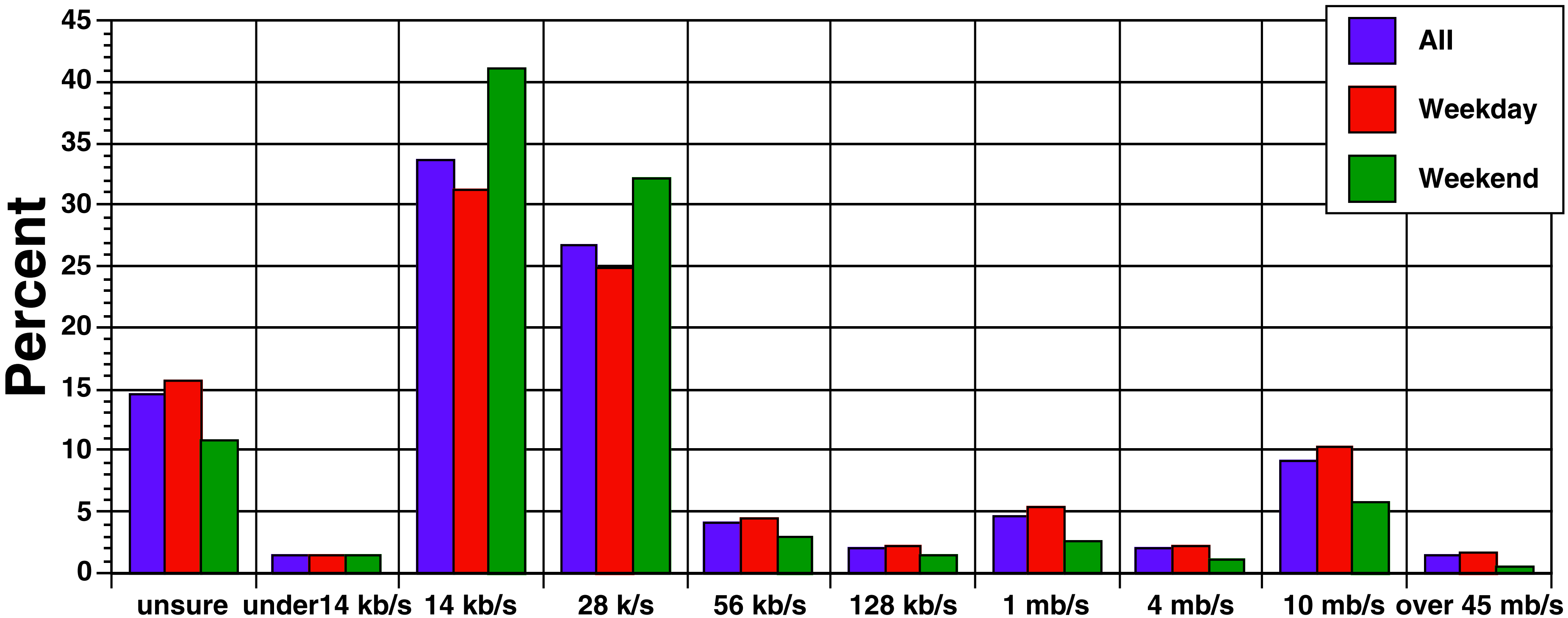


	no clue	don't use	1 to 10	11 to 50	51 to 100	over 100
All	3.45	4.5	15.81	44.3	18.25	13.69
USA	3.77	4.7	15.73	44.06	18.39	13.36
Europe	1.32	2.82	12.36	44.84	18.71	19.95

Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Speed of Connection to Internet split by Access Time



	unsure	under14 kb/s	14 kb/s	28 k/s	56 kb/s	128 kb/s	1 mb/s	4 mb/s	10 mb/s	over 45 mb/s
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

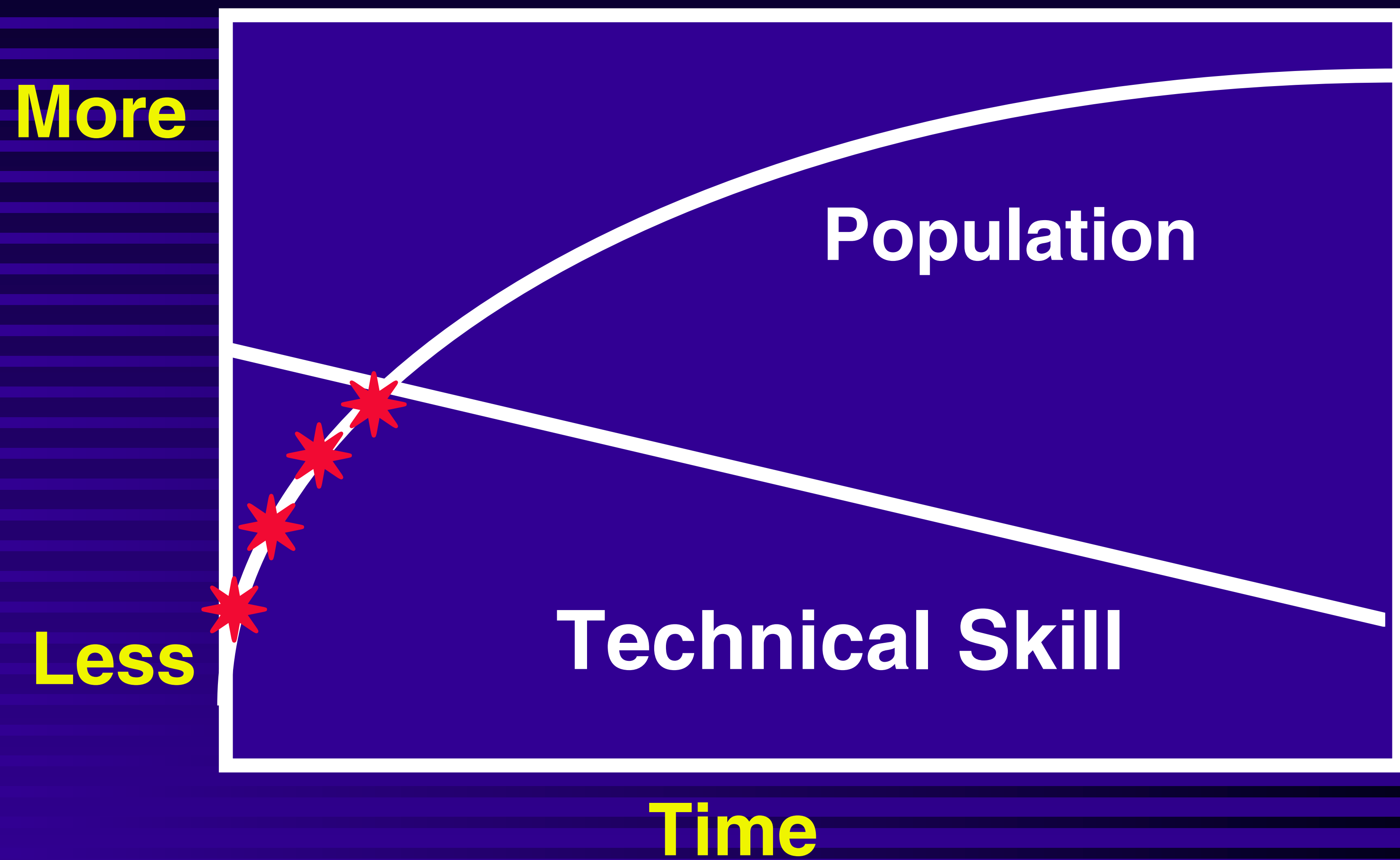
Source: GVU's Fourth WWW User Survey (Conducted October 1995)
<URL:http://www.cc.gatech.edu/gvu/user_surveys>

Contact: www-survey@cc.gatech.edu

Summary of the Results

- Clear movement from ‘Original Developers’ to the ‘Early Adopters’
- Least number of differences between female and male segments
- Slighlty 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