

NACIS Map Design Survey—Looking at the Results

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Download the survey data at: www.nacis.org/map_design

The results of the NACIS Map Design Survey are a snapshot of the opinions held by the mapping community on map design—a subject that means many things to many people. Each of us has distinct ideas about what constitutes good design, where the state of map design currently stands, and how to go about designing maps. Design is an integral part of mapmaking; as an example of this, NACIS meetings devote considerable time to map design. Despite this attention, little concrete information exists on the opinions of our diverse community on this varied subject. The survey we conducted, sponsored by NACIS, is a step toward filling this gap.

The questions asked in the survey are intentionally general in nature. You will find that the responses do not divulge how to design better maps per se. Instead, they provide broad insights on how map designers think and the work processes they employ—good map design is very much a state of mind. In composing the survey, we sought to cover a wide variety of topics within the field of map design and to satisfy our own curiosity.

The initial questions (numbers one through five) in the survey establish the characteristics of the respondents. Where are they from? What background do they have in cartography, mapmaking, or geospatial science? How long have they been involved in the field? Questions 6 through 14 address general ideas about map design quality, the nature of map design, and its current and future status. These questions were answerable by anyone with an interest in maps.

Question 15, which asks, “Do you make maps?” was a pivotal question. Answering “no” to this question would exit the respondent from the survey. Answering “yes” would bring the respondent to a final set of questions (16 through 27) designed specifically for practicing mapmakers. These questions delve deeper into the creation process and the practice of map design in the working world.

We created the survey at SurveyMonkey.com, a firm that provides affordable and easy-to-use services for creating, conducting, and analyzing surveys online. The survey was open for two months from February 6 to April 6, 2007. Before launching it, we asked two survey specialists to review the questions for possible bias. A non-native English speaker reviewed the questions for clarity. NACIS board members then beta tested the survey online and gave additional suggestions for improvement. Once launched, we announced the availability of the survey on several online mapping and GIS forums. Open to all comers, the survey attracted 322 respondents from 24 countries, the large majority of whom lived in the United States.

While monitoring responses during the open survey period, we found that after approximately 100 respondents the percentages of answers to each of the questions began to stabilize. Additional respondents failed to move the results more than a few percentage points. Adam Engst (2007) in the online newsletter Tidbits (<http://db.tidbits.com/article/8894>) noted how a small survey could predict a pattern of results similar to that of a survey with a much larger response. His observations drew on his experience with online surveys and summarized the work of Jon Krosnick at Stanford University. According to Krosnick (2007), computer surveys tend to be more accurate than phone surveys—in part because people can take the time to think about the question and do not suffer from awkward silences in the interview. He goes on to say that computer surveys are better than written surveys because people will tend to fill responses very quickly on a paper survey, working to just get it done instead of thoughtfully responding. Krosnick points out an important limitation of Internet surveys: they suffer from lack of random response. In our case we felt the prerequisite of an interest in map design and an awareness of our survey were key to the collection of a useful set of responses.

Our report on the survey contains no analysis—the responses largely speak for themselves and we encourage readers to draw their own conclusions. Readers wishing to dig deeper into the data can download the survey results in html, pdf, and spreadsheet format at www.nacis.org/map_design. Here you will also find the results filtered by demographic category. You can learn, for example, whether respondents over the age of 50 from Canada share the same views on map design as those under the age of 30 from Croatia. Your NACIS membership dues paid for the survey. We invite you to use these data for research projects or simply peruse the graphs presented on the following pages for enjoyment.

SOURCES

Engst, Adam C. "Lessons on Internet Surveys," TidBITS, number 869, 05-Mar-07, <<http://db.tidbits.com/article/8894>>

Krosnick, J. A., & Fabrigar, L. R. (forthcoming). The Handbook of Questionnaire Design. New York: Oxford University Press.

1. Which country do you live in?		Response Percent	Response Count
United States		72.7%	234
Croatia		5.0%	16
Canada		3.4%	11
United Kingdom		3.4%	11
Switzerland		2.5%	8
Slovenia		1.9%	6
Australia		1.9%	6
Austria		1.2%	4
Germany		1.2%	4
Netherlands		1.2%	4
New Zealand		0.9%	3
Poland		0.6%	2
United States Virgin Islands		0.6%	2
Bulgaria		0.3%	1
Hong Kong		0.3%	1
Hungary		0.3%	1
Italy		0.3%	1
Japan		0.3%	1
Norway		0.3%	1
Portugal		0.3%	1
Romania		0.3%	1
Saudi Arabia		0.3%	1
Spain		0.3%	1
Turkey		0.3%	1
		Answered question	322
		Skipped question	1

2. Gender:			Response Percent	Response Count
Female			27.9%	90
Male			72.1%	233
			Answered question	323
			Skipped question	0

3. Age:			Response Percent	Response Count
Under 19			0.9%	3
20 to 29			26.3%	84
30 to 39			33.5%	107
40 to 49			22.9%	73
50 to 59			11.9%	38
60 to 69			4.1%	13
Over 70			0.3%	1
			Answered question	319
			Skipped question	4

4. What is your primary involvement with maps?			Response Percent	Response Count
Cartographer			35.1%	113
GIS specialist			28.0%	90
Software developer			2.8%	9
Data developer			1.2%	4
Professor			4.7%	15
Educator			4.7%	15
Researcher			4.7%	15
Student			10.3%	33
Map librarian			1.6%	5
Map collector			1.2%	4
Map dealer			0.3%	1
Map enthusiast			1.6%	5
Other			4.0%	13
Not applicable			0.0%	0
			Answered question	322
			Skipped question	1

5. For how many years have you been professionally involved with maps?			Response Percent	Response Count
0 to 4			22.1%	71
5 to 9			25.2%	81
10 to 19			30.4%	98
20 to 29			14.0%	45
More than 30			6.2%	20
Not applicable			2.2%	7
			Answered question	322
			Skipped question	1

6. In general, how do you rate the design of maps made today?

		Response Percent	Response Count
Very bad		0.3%	1
Bad		14.0%	41
Adequate		46.1%	135
Good		36.5%	107
Very Good		3.1%	9
Answered question			293
Skipped question			30

7. Compared to manual maps made twenty or thirty years ago, how do you rate the design of digital maps today?

		Response Percent	Response Count
Much worse		3.8%	11
Worse		32.2%	94
About the same		19.2%	56
Better		33.2%	97
Much better		11.6%	34
Answered question			292
Skipped question			31

8. Do you think map design will generally get worse or better in the next 10 to 20 years?

		Response Percent	Response Count
Get worse		13.7%	40
Stay the same		20.6%	60
Get better		65.8%	192
Answered question			292
Skipped question			31

9. For much of the twentieth century, maps designed in North America and Europe often looked different from each other. Is this still the case today?

		Response Percent	Response Count
Yes		28.0%	77
Yes, but not so much		63.6%	175
No		8.4%	23
		Answered question	275
		Skipped question	48

10. According to a popular definition, cartography is a discipline that combines art and science. Looking broadly at the profession today, how would you rate this balance?

		Response Percent	Response Count
Entirely art		0.0%	0
More art		14.4%	42
Equal art and science		29.1%	85
More science		55.5%	162
Entirely science		1.0%	3
		Answered question	292
		Skipped question	31

11. In your experience, how unusual is it for a cartographer to have both design and technical ability?

		Response Percent	Response Count
Very rare		5.5%	16
Rare		24.7%	72
Sometimes		36.4%	106
Common		27.8%	81
Very common		5.5%	16
		Answered question	291
		Skipped question	32

12. *Nature vs. nurture*: both natural aptitude and education are factors determining whether a person is good at map design. Which do you consider most important?

		Response Percent	Response Count
Entirely aptitude		0.0%	0
More aptitude		37.2%	109
Equal aptitude and education		35.2%	103
More education		26.6%	78
Entirely education		1.0%	3
		Answered question	293
		Skipped question	30

13. If you *HAD* to hire someone to design custom maps for a magazine like *National Geographic* and the choice was between a GIS specialist with no graphical experience and a graphic designer with no GIS experience, whom would you choose?

		Response Percent	Response Count
GIS specialist		27.8%	81
Graphic designer		72.2%	210
		Answered question	291
		Skipped question	32

14. Is map design a mature field with little room for innovation or do new design techniques still await discovery? Rate the likelihood for future map design innovation:

		Response Percent	Response Count
Very unlikely		1.4%	4
Unlikely		6.8%	20
Likely		57.3%	168
Very likely		34.5%	101
		Answered question	293
		Skipped question	30

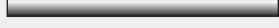
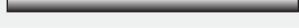
15. Do you make maps?				
			Response Percent	Response Count
Yes		93.9%	275	
No		6.1%	18	
			Answered question	293
			Skipped question	30

16. How do you rate yourself as a map designer?				
			Response Percent	Response Count
Bad		0.4%	1	
Not so good		2.8%	7	
Average		33.5%	84	
Pretty good		53.8%	135	
Excellent		9.6%	24	
			Answered question	251
			Skipped question	72

17. What has influenced your development as a map designer?						
	Not important	Somewhat important	Important	Rating Average	Response Count	
Cartography classes	12.5% (33)	28.3% (75)	59.2% (157)	2.47	265	
GIS classes	27.7% (73)	41.7% (110)	30.7% (81)	2.03	264	
Art/Design classes	31.2% (81)	38.1% (99)	30.8% (80)	2.00	260	
Self taught	3.7% (10)	33.3% (89)	62.9% (168)	2.59	267	
Internship/apprenticeship	28.8% (74)	36.2% (93)	35.0% (90)	2.06	257	
A mentor	24.0% (63)	32.4% (85)	43.5% (114)	2.19	262	
Work experience	3.4% (9)	15.0% (40)	81.6% (218)	2.78	267	
Professional outreach (conferences, online forums, etc.)	14.8% (39)	50.4% (133)	34.8% (92)	2.20	264	
					Answered question	269
					Skipped question	54

18. Do you seek advice from others when designing maps?			Response Percent	Response Count
Never			0.7%	2
Not often			14.9%	40
Sometimes			40.2%	108
Very often			34.2%	92
Always			10.0%	27
			Answered question	269
			Skipped question	54

19. Have you ever submitted a map to a design contest?			Response Percent	Response Count
No			63.7%	170
Yes			13.9%	37
Yes, and won an award			22.5%	60
			Answered question	267
			Skipped question	56

20. Looking beyond maps, how do you rate your ability in the broader field of graphic design?			Response Percent	Response Count
Bad			0.4%	1
Not so good			9.7%	26
Average			41.6%	112
Pretty good			44.2%	119
Excellent			4.1%	11
			Answered question	269
			Skipped question	54

21. When making a map, how closely does your initial concept (minds-eye view) match the final design?

		Response Percent	Response Count
Never		0.8%	2
Not often		8.3%	22
Sometimes		32.7%	87
Very often		55.3%	147
Always		3.0%	8
Answered question			266
Skipped question			57

22. On a typical map project, about what percentage of the total project time do you devote to map design?

		Response Percent	Response Count
Little or none		0.0%	0
5 percent		3.0%	8
10 percent		8.7%	23
20 percent		18.1%	48
30 percent		19.2%	51
40 percent		9.8%	26
50 percent		13.5%	36
60 percent		7.9%	21
70 percent		10.5%	28
80 percent		6.8%	18
90 percent		1.9%	5
100 percent		0.8%	2
Answered question			266
Skipped question			57

23. When making a map, to what extent do you integrate design with other mapping tasks such as research, compilation, and production?

		Response Percent	Response Count
Completely integrated		18.4%	49
Mostly integrated		39.7%	106
Sometimes integrated, sometimes separate		32.2%	86
Mostly separate		9.7%	26
Completely separate		0.0%	0
Answered question			267
Skipped question			56

24. Looking at one of your typical map projects from start to finish, when does most design effort occur?

		Response Percent	Response Count
Beginning		11.3%	30
Middle		5.6%	15
End		15.4%	41
Beginning and end		19.9%	53
Throughout the project		47.7%	127
Answered question			266
Skipped question			57

25. Of the maps you make, how many are custom designed versus made to already existing design standards or from default software settings?

		Response Percent	Response Count
Entirely custom		22.4%	60
Mostly custom		32.5%	87
Both custom and standardized		33.2%	89
Mostly standardized		11.2%	30
Entirely standardized		0.8%	2
Answered question			268
Skipped question			55

26. Does software influence map design?				
			Response Percent	Response Count
Not often			9.3%	25
Sometimes			41.4%	111
Very much			49.3%	132
			Answered question	268
			Skipped question	55

27. Not every map can be a design masterpiece. What factors <i>LIMIT</i> the quality of maps you design?						
	Infrequent	Sometimes	Frequent	Rating Average	Response Count	
Not enough time	3.4% (9)	42.5% (114)	54.1% (145)	2.51	268	
Not enough funding	25.0% (67)	38.4% (103)	36.6% (98)	2.12	268	
Pre-existing map design standards	31.1% (83)	52.4% (140)	16.5% (44)	1.85	267	
Strict supervisor or client control	45.7% (121)	37.7% (100)	16.6% (44)	1.71	265	
Lack of manual/artistic skill	51.7% (138)	38.6% (103)	9.7% (26)	1.58	267	
Inadequate software	43.7% (117)	39.6% (106)	16.8% (45)	1.73	268	
Data problems	20.9% (56)	50.7% (136)	28.4% (76)	2.07	268	
Just feeling lazy	62.3% (167)	32.8% (88)	4.9% (13)	1.43	268	
					Answered question	269
					Skipped question	54