5. Implementation of the Final Survey

This chapter describes the processes followed to recruit for the two internet panels, the sample design, the data collection process, the administration period, the completed cases by panel, and the calculated response rates. The final survey instrument was administered to two independent internet panels: the American National Election Study (ANES) and Stanford University's Face-to-Face Recruited Internet Survey Panel (FFRISP). The ANES and FFRISP internet panels were part of a larger research project (designed by KN and Abt SRBI - a subsidiary of Abt Associates - in cooperation with Professor Jon Krosnick of Stanford University and others) to evaluate the representativeness of RDD-recruited internet panels. This research project was funded under a grant from the National Science Foundation (NSF). KN administered the coral reef survey instrument to the ANES and FFRISP research project panels.

5.1 Selection and Sample Design

KN recruited the ANES internet panel and Abt SRBI recruited the FFRISP internet panel. KN selected the ANES sample using RDD telephone methodology, providing a probability-based sample of U.S. telephone households (96% of population with a land line). Abt SRBI selected the FFRISP sample using in-person recruiting methods, providing a multistage probability sample of residential mailing addresses. The ANES and FFRISP web-enabled panels comprise both internet and non-internet households. For non-internet households in the ANES panel, professional installers provided MSN TV 2 devices; FFRISP households received a laptop and broadband internet access.

Data were collected from the full ANES and FFRISP panels. In both panels, each household had an equal probability of entering the sample (except for households without working telephones, which will have a zero probability of entering the telephone sample).

The discussion in Sections 5.1.1- 5.1.3 describe the selection and sample design for the two internet panels in more detail.

5.1.1 ANES sampling design

The sample universe of the ANES panel is the U.S. citizen population age 18 and older as of November 4, 2008. Teenagers who turned 18 prior to or on November 4, 2008, were included in the sample. The ANES panel was recruited using list-assisted RDD sampling techniques on the sample frame consisting of the entire U.S. residential telephone population. Only those banks of telephone numbers (consisting of 100 telephone numbers) that had zero directory-listed phone

numbers were excluded. The ANES panel sample is a stratified RDD sample of all residential phone numbers in the United States (including Alaska and Hawaii). Only two strata are necessary. The strata were defined by whether an address could be found for the telephone number using a service that provides the highest match rate available. The proportion of all telephone numbers for which a valid postal address could be recovered was about 70%. The sample of phone numbers was selected with equal probability within the two pre-identified strata. Stratum 1 included all phone numbers that could be matched with postal addresses. Stratum 2 included the remaining phone numbers that could not be matched beforehand to postal addresses. All numbers drawn from Stratum 1 were kept in the sample. One half of the numbers, randomly selected from Stratum 2, were kept in the sample.

Approximately 10 days prior to calling sampled phone numbers, households with address-matched telephone numbers were sent an advance mailing that informed them that they had been selected to participate in the Monthly Special Topics Study. The Stanford University Principal Investigator signed the advance letters. The respondents were told that the study was being conducted on behalf of Stanford University, with collaboration from the University of Michigan and funding from the NSF. The advance mailing, which included a $2 cash incentive, explained that participation in the study was voluntary and that there was a wide range of studies that they could take part in as representative of many people like themselves. The mailing also cited their burden as one survey per month. The advance letter also included answers to frequently asked questions that respondents might have.

Extra follow-up was done with the initial-refusal households, including use of a special refusal conversion package. The refusal package contained a refusal letter tailored to the reason for refusal. A monetary incentive of $5 was enclosed. However, in anticipation of some final refusals even with conversion efforts, respondents selected for the study were provided framed 8”×10” certificates of appreciation. A special 1-800 number specific to the study was also available for the households to call with questions or to authenticate the legitimacy of the study.

A short interview (10 minutes) was conducted with eligible, cooperating households. The interview included selected questions from national surveys to measure the attitudes of study respondents, as well as questions to gather identifying and contact information needed by KN. The interview was conducted with a randomly selected person age 18 or older as of November 4, 2008. If the selected study member was a minor, then parental consent to interview the minor was obtained on the phone from a parent or legal guardian. The telephone interviewer administering the recruitment survey instrument documented the consent.

5.1.2 FFRISP sampling design

Abt SRBI drew a multistage probability sample of residential mailing addresses. A sampling frame based on the U.S. Postal Service (USPS) mailing addresses allowed for the selection and enrollment of a sample of eligible households in the panel. This address frame is referred to as the Delivery Sequence File (DSF). The target population covered the 48 contiguous states and Washington, DC.

Research on the use of the DSF as an address-sampling frame for area probability samples has focused on the relative merits of using Census administrative units (e.g., blocks, block groups, tracts, counties) or USPS units (e.g., ZIP codes, carrier routes). For example, at the 2007 Joint Statistical Meetings, papers on the use of the DSF focused on geo-coding errors associated with assigning DSF addresses to Census geographic units such as block groups. The use of USPS Zip code carrier routes does not suffer from this problem, but it is more difficult to apply the half-open interval in the field to add missed housing units to the sample.

The basic design involved self-weighting, stratification, probability proportional to size sampling, and multiple stages. Abt SRBI used four stages of sampling. In the first stage, they chose 60 three-digit ZIP code areas[1] from a sampling frame of all three-digit ZIP code areas in the 48 continuous states and Washington, DC. Principal sampling units (PSUs) were sorted by geography (nine Census Divisions), metropolitan status, and total number of residential addresses. A systematic sampling scheme was applied with probabilities of selection being proportional to the total number of residential addresses in the three-digit ZIP code area. Some three-digit ZIP code areas may be sufficiently large to have more than one selection.

In the second stage, they sampled two five-digit ZIP codes per three-digit ZIP code area for 120 total. Abt SRBI did this by preparing a complete list of five-digit ZIP codes in each PSU, sorting them in numerical sequence (which reflects geography) and selecting two ZIP codes by systematically using probabilities proportional to the total number of residential addresses in each ZIP code.

In Stage 3, Abt SRBI sampled two carrier routes per ZIP code for a total of 240. They prepared a complete list of carrier routes in each ZIP code area, sorting them in numerical sequence to reflect geography, and selected two carrier routes systematically using probabilities proportional to the total number of residential addresses in each carrier route.

In Stage 4, the final stage, Abt SRBI obtained a complete list of all residential addresses in each of the 240 carrier routes. A systematic sample of addresses was drawn from each carrier route. The target number of completed household interviews, the expected response rate, and the

1. For example, the three-digit ZIP code for Boulder, Colorado, is 803XX.

expected vacancy rate determined the sample size of addresses per carrier route. The initial sample size of residential addresses was in the range of 1,300 to 1,400 housing units.

The target sample size for the study was approximately 990 completed household interviews for the FFRISP panel.The sample was limited to households, with group quarters excluded from the eligible target population.

5.2 Data Collection Process

This section describes the data collection process for the two internet panels. For each internet panel, respondents took a self-administered survey, which allowed them to complete the surveys at their convenience and own pace, in the comfort and privacy of their homes. The electronic survey system supports the inclusion of video, audio, and graphics in the questionnaire. Respondents could break off and return to complete an interview during a second or later session. The electronic data collection tracks how long respondents spent on each screen.

KN administered both internet panels, primarily because of their data-capture survey system. This system, owned by KN, was designed to meet the specific needs of web-based surveys. The system supports all types of questions commonly used in complex, computer-based interviewing systems. It uses advanced scripting techniques for customization of individual questions to meet the needs of researchers proposing innovative designs. The data capture platform supports the complexity and type of questions proposed in our study, including multimedia graphics and voice-over presentation.

The system also supports the importation of auxiliary data, such as demographic information collected as part of the screening.

5.2.1 ANES and FFRISP data collection procedures

Respondents participated in the survey using a home-based PC connected to the internet, a personal laptop computer with internet service, or a web-capable appliance such as the MSN TV 2 with internet service. Because our survey was one part of a larger scientific study, it was possible to give a web-capable appliance and/or internet access to panelists who did not already have them. Non-internet households participating in the ANES panel received MSN TV 2 internet and Media Player and internet service at no cost to them. For the FFRISP panel, non-internet households received laptops with broad band internet access at no cost to them.

5.3 Administration Period

Data collection for the ANES panel began on June 4, 2009, and ended on July 9, 2009. Data collection for the FFRISP panel began on June 4, 2009, and ended on October 27, 2009.

5.4 Completed Cases by Panel

Table 5.1 shows the number of completed cases for each panel along with the total number of cases in the pooled dataset. The total number of cases in the pooled dataset is simply the sum of completed cases from each panel.

Table 5.1. Completed cases by panel

Panel	Completed cases
ANES	2,335
FFRISP	942
Pooled	3,277

5.5 Response Rates

Below we provide descriptions of the overall panel response rates. For each rate, we multiply our survey completion rate by the panel response rate to determine the final Coral Reef Survey Instrument response rate by panel.

5.5.1 ANES response rate statistics

The Coral Reef Survey was administered to the entire ANES panel. In development of the ANES panel for the national elections study, a number of recruitment steps were followed. Initial recruitment interviews in the ANES panel were completed with 2,371 of the 12,809 sampled telephone numbers. Completion of a recruitment interview is the operational definition of joining the panel. All sample cases fall into one of four categories: completed interviews (2,371), eligible nonresponse (808), unknown eligibility (5,601), and not eligible (4,029). Completed interviews are broken down into three categories: those completed through the standard telephone interview (2,222), those who initially refused but were converted to a completed interview (85), and those who completed the interview through the internet (64).

} Response rate (AAPOR response rate 3)[2]: 31%
} Refusal rate (estimated): 38%
} Cooperation rate (estimated): 34%
} Contact rate (estimated): 92%

Table 5.2 summarizes the disposition of the ANES panel recruitment sample.

Table 5.2. Final case-level disposition of ANES panel study recruitment sample

Disposition	Number
Total sampled telephone numbers	12,809
Completed interviews	2,371[3]
Standard telephone interview	2,222
Refusal conversion interview	85
Internet-only recruitment interview	64
Eligible nonresponse	808
Eligible non-contacts	0
Eligible contacts not complete	808
Refusals, post-selection	558
Language barrier, post-selection	16
Physical or mental impairment, post-selection	25
MSN TV 2 setup not possible, post-selection	19
Respondent never available, post-selection	190
Unknown eligibility	5,601
Contacts	4,063
Refusals, pre-selection	2,376
Informant pre-selection contact, but never available	1,288
Language barrier, pre-selection	291
Physical or mental impairment, pre-selection	93
MSN TV 2 setup not possible, pre-selection	15
Non-contacts	1,538
Computer/fax tone (on all attempts)	241
No answer (on all attempts)	198
Information never available, non-contact, pre-selection	1,099

2. The American Association for Public Opinion Research.

3. Note that 2,335 of the 2,371 respondents who completed the recruitment interviews went on to complete the survey instrument.

Table 5.2. Final case-level disposition of ANES panel study recruitment sample (cont.)

Disposition	Number
Not eligible	4,029
Disconnected phone	3,457
Non-residential/business/government	518
Number changed	11
No age-eligible U.S. citizen in household	43

Source: ANES staff analysis of the 2008- 2009 ANES Panel Study sample file.

5.5.2 FFRISP response rate statistics

The overall response rate for the FFRISP panel was 41% (AAPOR response rate 4).