

## 2.0 Requirements as Set Forth in the RFQ

### 2.1 Survey/Project Management

In order to meet the timeline for deliverables and the technical requirements of this work, Westat proposes a strong management structure with ample technical knowledge of USPTO's research needs, flexibility, and staff coordination to collect, analyze, and report on the EQS. The assignment of responsibilities to staff are based on matching appropriate corporate and individual skills to the tasks and timeline. It emphasizes complementary skills, role relationships, and provision of sufficient resources to maintain the work schedule at the high levels of quality that the EQS demands. Our project plan, developed and refined over the course of 16 administrations of the EQS, details major milestones in data collection, data processing, and data delivery. In keeping with our current practice, discrepancies between proposed and actual dates will be documented along with remedies for resuming project progress.

### 2.2 Design, Recruit, and Maintain Customer Panel

Under this task, we will design, select, and maintain a sample of rotating panels of continuous patent customers. We understand that the current as well as intended field schedule for the EQS requires two data collection waves per year (January and July). The sample design objectives include:

1. Minimizing reporting burden;
2. Accounting for, at a minimum, the frequency of customer contact, volume of patent activity, and technology areas;
3. Producing reliable estimates of wave-to-wave change;
4. Producing estimates for each of the waves;
5. Maintaining the customer panel to preserve representativeness;
6. Adding new members to the panel to compensate for attrition; and
7. Tracing lost members to maintain high response rates.<sup>1</sup>

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<sup>1</sup> Since FY09-Q1, weighted response rates to the EQS have averaged about 50 percent.

Westat has completed work on the next sample frame for the EQS. Having conducted this task twice before, we employed proven processes and procedures to execute the necessary steps to obtaining the cleaned frame.

### ***Step 1: Creating the FIRMS File***

Below is a description of the processes and procedures involved in creating the FIRMS file. An initial listing of 4,938 top-filing firms was provided for use in sampling frame development and matching to a separate file of customers. From this initial file, 192 firms were dropped due to a location outside of the United States. The sample cleaning process began by de-duplicating the file of top-filing firms. In addition to creating a single record for each of the top-filer firms, it was necessary to sum the number of patent applications filed by the firm across all duplicate entries. De-duplication involved a combination of an iterative automated process using SAS and manual cleaning. We began by running a SAS program to identify all exact duplicate entries in the firms file, based on state, city, and organization name. However, as the information for the firms was not entered in a standardized fashion (both the text entry for a single firm differed across duplicate records as well as the placement of the information across the columns), extensive manual review and editing were required to de-duplicate the firms records.

Manual cleaning involved arranging the file so information was placed in the appropriate columns, sorting the file by state, city, and organization name and then reviewing the file to identify and standardize duplicate firms. During this process we used the following guidelines:

- If multiple locations were listed for a top filing firm, these different locations were retained as separate records in the firms file.
- If there were separate records for different people at a top filing firm, these records were de-duplicated to a single listing for the top filing firm.

A total of 535 records were identified as duplicate firms. The final number of firms available for sampling and matching was 4,211. A total of 807 of these firms did not have matches to the customer file; therefore, as discussed in the next section, 3,404 firm records had at least one matching customer record, and comprise the dataset referred to as FIRMS.

## ***Step 2: Creating the CUSTOMERS File***

An initial file of 41,981 customers was provided to match to the listing of top-filer firms. From this initial file, 1,170 customers were dropped due to a location outside of the United States; 1,330 were dropped due to recent registration; and 27 customers were dropped due to both issues. The final number of customers available for sampling and matching was 39,454.

## ***Step 3: Matching the FIRMS file to the CUSTOMERS File***

The process of matching top-filing firms with registered customers also consisted of several phases. First, a shortened version of organization name, with all commas, spaces, and other characters removed was created. Then the FIRMS file and the CUSTOMER files were sorted by STATE, ORG NAME, and CITY, and automated matching was done. A flag was set for any records where a firm matched to a customer record. A total of 10,980 records were matched to a firm during this process.

Next, the matched customer file was split into three files for research assistants to do manual matching. Again, the matching was based on STATE, ORG NAME, and CITY, and if the matcher found a match between the files, the value for the matching firm, FIRMSID, was entered in Excel on the customer file. An additional 4,567 customer records were matched to firms during this process, including reviewing all non-matching firms manually in an attempt to match the records.

## ***Sample Selection Summary***

Now that the cleaned frame is ready, we are prepared to select the next four waves of customers to contact for the next four administrations of the EQS. The USPTO sample is drawn from a frame of PTO customers, all of whom are either associated with a particular firm or are considered independent. There are six sampling domains for which different sampling rates are used. These are described generally as follows:

1. Large firms (more than 275 applications) with 50 or fewer customers, where all customers will be sampled;
2. Large firms (more than 275 applications) with more than 50 customers, where a sample of customers will be drawn;

3. Firms with 150 to 275 applications where a sample of customers will be drawn;
4. Firms with less than 150 applications where a sample of customers will be drawn;
5. Non-matched firms and independent inventors with an associated last name, where a sample of customers will be drawn; and
6. Non-matched firms and independent inventors without an associated last name, where no sample will be drawn.

One of these six sampling domains is identified for each customer on the frame, using counts of the number of applications within each firm in conjunction with a count of agents associated with that firm. A sampling rate is then computed for each domain.

The USPTO uses a rotating panel design for the sample, so that sampled cases are assigned to waves and then to two panels within each wave. The second panel from each wave is fielded in the subsequent wave, along with a new panel.

Once the sampling rates have been determined and the sample of customers drawn, sample cases are assigned to the waves (which occur 6 months apart) and also to the two panels within each wave. Customers must stay out of the sample for at least 18 months. Because of this 18-month leave of absence from the sample, it is necessary to control for when the old sample can rotate back into the sample. Complicating this is the potential for panel conditioning effects from being in the old cycle. Therefore, to reduce the impact from the distributional differences between frames, newly sampled cases from old panels are spread out evenly across the new panels.

## 2.3 Survey Instruments

With each approaching wave of data collection, Westat staff will prepare the mail and Web versions of the surveys. Each will be updated to reflect the current wave date and checked for accuracy in printing. The survey currently covers examination quality concerns, importance of targeted improvement areas, and assessment of USPTO progress from the previous wave time period. In addition to ongoing measurement of customers' perceptions about these core survey topics, the USPTO plans to use the panel study to provide timely information about emerging issues. That goal will be accomplished by adding new modules to the core survey as needed. We will follow the same guidelines and procedures (starting with discussions with the client) used for the core survey to develop the new modules. We recommend including new modules as a single section, located at or