Gathering customer feedback via the Internet: instruments and prospects

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For many years companies have collected feedback from customers through means such as comment cards and toll-free telephone numbers. The feedback data can be used by companies to track quality, locate quality problems, and identify suggestions for improvement. Gathering feedback from customers has become a recent but prevalent phenomenon on the Internet. Many companies designate an e-mail address for submitting comments and questions. Companies with information on the World Wide Web frequently include a feedback form that customers can complete on screen and send at the click of a mouse. This article considers current practice and the potential for customer feedback collection over the Internet. The nature of Web-based feedback forms is compared to corresponding features of conventional (paper) comment cards. Explanations for differences are supposed, and future prospects for Web-based feedback are discussed.

Introduction

A widely accepted objective in quality management is being customer driven. A common way companies work towards this objective is to provide systems to gather feedback from customers. Along comes the Internet, with its great potential to transform various business processes. One might wonder how Internet technologies might transform the means of gathering (and using) customer feedback.

This article presents an exploratory study of current practice of soliciting customer feedback over the Internet and discusses prospects for the future. The exploratory nature of the study is imposed because of the time frames of Internet technologies. Although this and other articles pertaining to the Internet are written as forward-looking treatises, within a few years of publication they will probably be regarded as historical documents. Not only is the technology changing rapidly, but the rate of change is increasing dramatically. As a civilization we are on the verge of a revolution in the way customers and companies communicate with one another. This revolution will influence how companies gather and use feedback from customers – the topic of this article.

The remainder of this section introduces ideas behind customer feedback, the Internet, and implementations of customer feedback on the Internet. The next major section looks at prior articles pertaining to Internet-based feedback. An exploratory study which compares Internet and conventional customer feedback instruments is then described. Results of the comparison are outlined and observations are made. The penultimate section considers prospects for customer feedback systems in light of Internet technologies, including potential problems and limitations. The final section offers a summary and conclusions.

Customer feedback

It is common for companies to gather feedback from customers. The feedback can take many forms, including on-site customer complaints, calls to toll-free customer-response phone numbers, and customer comment cards. In each of these forms, the feedback information is either unsolicited, or passively solicited (Sampson, 1996). Passive solicitation represents an appeal to customers in general without focusing on any specific customer.

In comparison, active solicitation is an appeal to specific customers, as with market research. The sample frame is usually selected with care to avoid sample frame bias. Further, active effort is taken to encourage response so as to avoid non-response bias.

With passive solicitation, the company has little or no control over sample frame and non-response bias, since the respondents are completely self-selected. Nevertheless, certain advantages exist with passive solicitation of feedback. The cost of gathering feedback is low. A passive appeal to each and every customer might represent no more cost than the staffing and maintenance of a toll-free telephone line and a sign at the service location or a notice on the product. Active solicitation is accomplished at moderate cost (e.g. mail surveys) to high cost (e.g. personal interviews) (Churchill, 1995, p. 377). It would probably be prohibitive to actively survey every single customer of a company.

Another advantage of passive solicitation of feedback is in the use of the data. Since the data is inherently biased, it is not as useful as market research is in estimating general consensus of a target market. However, the nature of the bias can be exploited. One might assume that customers with exceptionally positive or negative views of the company are more likely to respond than the customer population in general. This would result in an extreme-response bias that would be more likely to identify current quality problems than a controlled survey of equal sample size (Sampson, 1996). Therefore, passive data collection is particularly useful in monitoring and controlling quality in the day-to-day operations of the business, and in identifying ideas for quality improvement.

This article focuses on passive solicitations for feedback, and explores the implications of such data collection over the Internet. The next sub-section provides a brief description of the Internet and its provisions for customer feedback.

The Internet

It is assumed that many readers are both familiar and experienced with using the Internet, which has been called a "network of [computer] networks" (Kehoe, 1994). Yet, some readers (even academics) are unversed in the technology, and many others are unaware of its origins and history. Thus, this section is presented. The following is a brief summary, followed by a description of Internet faculties which are relevant to customer feedback.

The Internet began in 1969 as a US Department of Defense project called ARPANET (Stuart, 1994). By the end of that year, the first four "host" computers were attached to the network. (Other computers can access the Internet by connecting, or dialing-in, to a host which is already connected to the Internet.) Since its inception, the Internet has included provisions for person-to-person electronic communication, i.e. e-mail (Sproull and Kiesler, 1986). This opens the way for customer feedback. A market researcher might use e-mail as a means of contacting individuals to actively solicit their feedback about a company or a product. Prior to 1993, such surveys would be largely limited to scientists and military personnel, who represented most of the people with e-mail addresses. The mid-1990s saw explosive growth in Internet access among the general population of developed nations. For example, from January 1995 to January 1996 the number of hosts attached to the Internet increased from 4.9 million to 9.5 million (*Infoworld*, 1996). There is a large amount of speculation as to the scope of the Internet at present – as the Internet becomes larger and larger, it is increasingly difficult to determine what hosts are attached to other hosts. As the Internet's reach continues to expand, market researchers will have more opportunity to actively solicit feedback from various customer groups at lower cost than traditional mail and phone surveys.

However, e-mail in and of itself does not lend itself to passive solicitation of feedback. A customer cannot go out and grab an e-mail message that has not been specifically sent to him or her (Sproull and Kiesler, 1986). Companies may put customer-response e-mail addresses on product labelling, however, such passive solicitation are through the product, not through electronic means.

The breakthrough for electronic passive solicitation of feedback came with the introduction of the World Wide Web (or "Web") in 1993-94. (The Web was prototyped at the European Laboratory for Particle Physics – CERN – in 1990-91). (Berners-Lee, *et al*. 1994). The Web represents an electronic communication medium which is user (i.e. customer) initiated – a fundamental requirement of passive solicitation of feedback. Documents (Web pages) are "posted" on the Web (i.e. made available for downloading). An uncountable number of organizations and individuals have Web sites which contain their Web pages. Among other things, companies can post general solicitations for feedback. Customers and others who access a company's Web pages may elect to respond to these passive solicitations, as they might if they were presented with comment cards or toll-free telephone numbers.

Feedback in HTML

In addition to requests for response, the Web contains provisions which facilitate the feedback process. These provisions are components of the language of Web: HTML, or HyperText Markup Language. Typically, HTML documents contain formatted text and hyperlinks (or "links") which guide the user to other Web pages or other resources. HTML also includes provisions for forms and "*mailto*" links which can be used to gather feedback (Hoffman *et al.,* 1995)

A *mailto* (as in "mail a message to someone") link is a code in an HTML document which, when selected by the user, opens an e-mail window on the user's screen so that a message may be sent to a pre-specified e-mail address at the company. The e-mail window is simply a box for composing any textual message. The message is unstructured, thus is an Internet version of a toll-free telephone number to a customer service employee, but without personal interaction.

Of even greater feedback potential are the form provisions of HTML. An HTML document structured as a form may contain text fields, check boxes, and/or drop-down lists of selections. An example of code for an HTML form is shown in Figure 1, and a depiction of the resulting form is shown in Figure 2. After the user has entered information to such an on-screen form, a "submit" button can be selected to automatically send the information to the company's computer. The company receives the information in a structured format which allows various options for handling the data – a topic which will be revisited later.

Prior research

Much research pertaining to active solicitation of customer feedback has been published. However, research regarding passive solicitation of customer feedback is scarce, to say the least. Since research pertaining to the Web is still in its genesis, it is particularly hard to find articles that address the feedback

potential of the Web. Most of the writing about such applications of the Web is in popular press and trade publications.

Murphy, Forrest and Wotring (1996) consider customer feedback one of four Web-site communications functions for businesses. They do not go beyond just saying that feedback will provide ideas and ways for improvement.

Hoffman *et al.* (1995) identify the potential for engaging customers in communication with the firm in order to receive information from customers about their needs. They indicate that "e-mail buttons" (i.e. *mailto* links) and forms can be used for such feedback, but do not discuss the implementation of feedback systems.

Figure 1
HTML code for a sample form

```
<TITLE>sample Feedback Page</TITLE>
<FORM ACTION="/cgi-bin/formdata" method="POST">
<CENTER><H2>YOur feedback is important to us!</H2></CENTER>
Which of our services have you used? (check all that apply)<BR>
<INPUT NAME="regular" TYPE="CHECKBOX>regular
<INPUT NAME="custom" TYPE="CHECKBOX>custom
<INPUT NAME="express" TYPE="CHECKBOX>express<BR>
Overall, how would you rate our company's services?<SELECT NAME="rating">
<OPTION>excellent<OPTION>adequate<OPTION>inadequate</select><BR>
How might we improve our services?<BR>
<TEXTAREA NAME="howimprove" cols=35 rows=4></TEXTAREA><BR>
What is your e-mail address? <INPUT TYPE="text" NAME="email" SIZE="30"
MAXLENGTH="80"><BR><CENTER>
<INPUT TYPE="SUBMIT" VALUE="Click here to submit feedback"></CENTER>
</FORM>
```
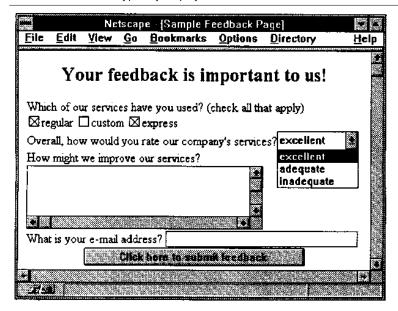
Figure 2
How that form would typically display

Emerick (1995) discusses Internet feedback and gives some suggestions such as to keep forms simple and ask open-ended questions when appropriate. Emerick also talks about using the feedback to capture e-mail addresses for future contact (which one may suppose is a less altruistic motive than quality improvement).

The most descriptive report of electronic feedback data use is a case study by Marelli (1995). Marelli describes a beverage company which collects customer feedback via their Web site and uses the data a number of ways. They discuss automatic acknowledgment of feedback, personal response, monthly evaluation of feedback by a team, and communication with repeat customers. Such ideas will be visited in a later section of this article.

In an article about the role of the Web in marketing communication, Berthon *et al.* (1996) cite customer feedback as the sixth and final stage of the buying and selling process. However, they make no observations about implementation or effectiveness, stating "… we re-emphasize the fact that the Web is still in its infancy, which means that no identifiable attempts have so far appeared in scholarly journals that methodically clarify its anticipated role and performance" (Berthon, *et al.* 1996, p. 46). This being the case, it is not difficult to consider the present report to be foundational.

Instrument comparison study

Given the lack of prior research in this area, a descriptive exploratory study is warranted. This will help us understand what potential research would be interesting and useful to pursue in the future. Even though research in Web-based feedback is scarce, passive solicitations of feedback are common on the Web. This study is an attempt to characterize current implementations of Web-based customer feedback mechanisms. The content and format of customer feedback instruments are analysed with Web-based instruments being compared with conventional instruments, i.e. customer comment cards.

Including an analysis of conventional instruments will serve two purposes. First, it will help devise a taxonomy of instrument content components. The content of conventional instruments is expected to be more diverse than the content of Web-based instruments, since conventional instruments have been in existence much longer. Web-based instruments were not assumed a priori to be completely homogenous, but more homogeneous than conventional instruments. The diversity of conventional instruments will

lead to a taxonomy of instrument elements that is more extensive. Details of the taxonomy will be published elsewhere, but key elements will be presented herein (such as the categorization of questions in Figure 3 and Table III, and the general types of textual feedback appeals of Table II).

The second purpose for analysing conventional instruments is to provide a basis for comparison. Such an exploratory comparison will give clues as to how Web-based and conventional gathering of customer feedback differs, and inferences will be made about how the use of feedback from the two methods may differ.

Data collection

Two features of HTML were described as mechanisms for feedback: *mailto* links and forms. A *mailto* link is analogous to toll-free telephone numbers, being virtually free of any structure. As such, *mailto* links (and toll-free numbers) will not be included in this analysis. Neither will mere descriptions of customer-response e-mail addresses. Instead, the analysis will focus exclusively on HTML forms, and correspondingly, customer comment cards.

The author created a database of 71 HTML feedback forms and 176 comment cards. The forms and comment cards were collected in an unscientific manner: The forms were discovered by "browsing" the Web or searching for postings with words like "feedback" and "comments" on them. The comments cards were likewise obtained by asking various businesses and organizations for them. Table I summarizes sources of the instruments (by US Standard Industrial Code categorizations). Observe that most of the HTML forms and all of the comment cards in the database are from the service sector.

Table I
Industries of feedback instruments

Comment cards (# = 176)	HTML forms (# = 71)
81 Retail trade	17 Data processing
49 Restaurants and lodging	15 Miscellaneous service
27 Miscellaneous service	9 Restaurants and lodging
7 Air transportation	7 Electrical and electronics
3 Photography	6 Printing and publishing
2 Printing and publishing	4 Computers and office equipment
2 Banking	4 Telecommunications services and equipment
1 Broadcasting/cable TV	2 Wholesale trade
1 Recreation and entertainment	2 Retail trade
1 Data processing	1 Recreation and entertainment
1 Insurance	1 Paper and wood products
1 Health care	1 Chemicals
	1 Automotive
	1 Miscellaneous manufacturing

Nevertheless, the present study is exploratory and will not control for differences in company type. A separate study is underway involving a more systematic collection of instruments in a single industry.

The initial database contained nine other HTML customer-feedback pages which were not included in the analysis: Seven had no fields but only *mailto* links, and two were marketing information request forms with a comment field. Eliminating those nine entries assured focus on forms which contain fields with the primary purpose being customer feedback. Likewise, 28 out of 204 conventional instruments were omitted from analysis for similar reasons: The remaining 176 conventional instruments were comment cards with a distinct customer feedback purpose.

The primary reason so many fewer HTML forms were entered into the database than comment cards is that after collecting about half of the forms it became obvious that Web-based instruments were in fact quite homogenous. This will be seen in the next section.

For each instrument, 170 different characteristics were recorded in the database. Examples of characteristics include numbers and types of questions, response format (e.g. open-ended or rating scales), and types of textual appeals for feedback. The following highlights that data.

Results and observations

In this section, instrument characteristics are summarized in four general areas: feedback method and location, methods for encouraging feedback, types of questioning, and apparent uses of feedback data.

Feedback method and location

The means of submitting feedback for all HTML forms was the same. The customer calls up the HTML form and enters feedback information on the computer screen. When the customer selects the form's "submit" button (which may be labelled something else such as "send comments"), the completed field information is returned to the company's host computer. The data are submitted as an ASCII string with field identifiers in what is known as Common Gateway Interface (CGI). A program (or script) residing on the company's host computer can react to the submission.

Comment cards, on the other hand, can be submitted in a number of ways. Of course, any comment card could be handed to an employee of the company. Of the cards, 21 per cent (37 of 176) actually included text stating that the customer can leave the completed card with a company employee if they care to.

The majority of the cards (77 per cent or 136 cards) included an address for return mail, and 87 per cent of these (118 cards) included pre-paid postage (generally business reply mail).

Thus we see a first major distinction between HTML forms and comment cards: HTML forms must be submitted from a computer which is connected to the Internet; comment cards can be submitted at a company location or, in most cases, at any mailbox. (An exception was that 8 per cent of the comment cards and 1 per cent of the HTML forms listed a customer response phone number, allowing submission of feedback from any phone.) Further, comment cards can be completed at any time, whereas HTML forms are typically completed only when they are displayed on the customer's screen. The method of submitting feedback may have significant ramifications for response rates: One might suppose that response rates would correlate with the opportunities for completing and submitting the feedback instrument.

Response rates for comment cards are generally not high. In a couple of customer feedback studies, response rates were 3.5 per cent (auto service industry) and 8.6 per cent (hotel industry) (Sampson, 1996; Sampson and Weiss, 1993). Such response rates may seem low, but since they are based on a passive sampling of entire customer populations, the absolute number of responses is quite high. Nevertheless, if response rates are too low the potential for accurately monitoring quality and identifying improvement opportunities is diminished.

It would be difficult to tabulate response rates with passively solicited Web-based feedback, since companies generally do not know what portion of the customer population sees the solicitation. (Companies can easily tabulate the number of times the feedback form is downloaded, but it would be difficult if not impossible to know what per cent of those downloads are by customers.) However, the results of a CommerceNet/Nelson Internet Demographics Survey (1995) suggest that response rates to passive solicitations over the Web might be quite high. A questionnaire that was placed on a Web site for four weeks resulted in more than 32,000 responses. (During the same four weeks, telephone surveyors made 280,000 calls which yielded approximately 4,200 completed interviews.) Again, the surveyors would not know how many unique individuals accessed the Web survey form or saw the solicitation for response, but 32,000 responses does suggest that it is not too difficult to get Web users to submit feedback.

Perhaps an explanation for potentially high response rates with Web-based feedback solicitations is the ease of response (typing or clicking boxes with a mouse), and ease of submission (clicking the "submit" button). Comment cards involve a more complex process, including locating a pen or pencil, writing the feedback information, and locating an employee or mailbox. (We assume that there is little hope for cards which require finding a stamp.) If submitting feedback is perceived as requiring too much effort, customers are likely to complain with their feet (Hirschman's (1970) "exit" category) instead of with their comments (the "voice" category). This can be a serious problem – one study estimates the general ratio of exit to voiced complains (TARP, 1979, 1986) at 25 to 1.

Anonymity may also positively effect response rates. Customers may have complaints or negative ratings and may not want to be identified. The 40 comment cards that must be presented at the company location (i.e. the 23 per cent with no addresses) limit the potential for anonymity. A total of 86 per cent of the comment cards ask for the customer to identify himself or herself (34 per cent of these indicate it is "optional", although completing any field is always optional).

Submitting HTML forms can always be done anonymously. Clicking the "submit" button does identify the computer host to which the customer is attached, but does not identify the specific customer. Further, the company cannot respond to the customer at a future date unless the customer has submitted identification information. Of the HTML forms, 86 per cent asked for some type of identification, the most common of which is for the customer's e-mail address (asked for on 94 per cent of the HTML forms which asked customer identification questions). A total of 13 per cent of the forms asking for customer identification indicate that identification is optional.

Another difference between electronic and conventional feedback is the temporal response frame. Comment cards with pre-printed addresses have the advantage of potentially being completed during, subsequent to, or well after service is received. Again, comment cards without return addresses are at a disadvantage, since the feedback must be submitted when the customer is present at the company location (either at that visit or another visit to the service location). HTML forms may also be at a disadvantage since the customer can only complete them when they are accessing the Web. (Of course, HTML forms could be printed, completed, and mailed, but at a significant sacrifice of convenience. Besides, only a small percentage of the HTML forms in

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