

# 2008 Microwave Client Satisfaction Survey

Final Report

Prepared for

Spectrum Management Committee Spectrum, Information Technologies and Telecommunications (SITT) Prairie and Northern Region Industry Canada

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Contact: Ron Hamelin

Prairie and Northern Region, Industry Canada

Canada



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### **Executive Summary**

#### **Overall Satisfaction Results**

Respondents to the 2008 microwave client satisfaction survey have expressed a high level of satisfaction with the services provided by the Spectrum, Information Technologies and Telecommunications (SITT) branch of Industry Canada.

In response to overall satisfaction, the survey respondents indicated that they are very satisfied (combining very satisfied and satisfied responses resulted in a 100% satisfaction rating) with the service they received from Industry Canada. A mean score of 92.0 was achieved which represents a 6.3 point increase from the results posted in the 2005 survey.<sup>1</sup>

All clients also stated that they in fact did receive what they required from Industry Canada.

#### **Observations on Client Interaction**

The two main areas of satisfaction investigated include overall satisfaction and satisfaction with eight specific aspects of service provided, namely:

- waiting time over the phone
- waiting time at the office
- knowledge and competence of staff
- courtesy of staff
- · time required to deliver service
- fairness and equity of service provided
- · all necessary information provided, and
- · accessibility of service

Respondents are increasingly taking advantage of electronic means of submitting applications. For a first time, clients have indicated that they are only using either Internet or email to submit their applications. They also suggest that Internet use would be even higher if more form options were available on the SpectrumDirect website.

<sup>&</sup>lt;sup>1</sup> Please refer to the methodology section (page 2) for a detail explanation of Mean Weighted Average.

#### Satisfaction and Importance Assessments of the Service Provided

The **courteousness** of service staff, **waiting time over the phone**, and the **knowledge and competence** of service staff were ranked as the top three areas of satisfaction for services provided.

The extent to which applicants were **informed about everything** throughout the process received the lowest satisfaction rating of all eight aspects of service listed, achieving a mean score of 84.

Comparing the satisfaction results of the 2005 study with those of the 2008 study, shows that gains were posted in the **waiting time over the phone** (+6.4), the **time required** to deliver the service (+3.6), and the **accessibility** of the service provided (+1.1).

With the exception of **fairness** of the service provided and **courtesy** of staff, all service categories have seen their importance rating increase in the past year indicating an increased expectation with regard to service delivery.

Using both the "top box" (or "very satisfied" responses) as well as mean score ratings, the three aspects of service considered most important include:

- 1) knowledge and competence of staff,
- 2) The extent to which you were informed about everything, and
- 3) timeliness of Service.

In mapping satisfaction versus importance, the areas targeted for improvement include: the extent to which you were **informed about everything**, **timeliness** of service, and to a lessor extent the **accessibility** of service.

The key strength identified from the satisfaction versus importance matrix is the **knowledge and competence** of service staff.

#### **Use of On-line Forms and Utilities**

There appears to be a high level of satisfaction with on-line filing of microwave applications, as all of those surveyed who had used the on-line

form were also interested in submitting their next application via the Internet.

It appears that the respondents to the survey are having some degree of difficulty accessing the information they require on-line. When asked how easy it was to navigate and access information on-line a mean score of only 63.6 was achieved. This is consistent with the value of 62.5 recorded in the 2005 survey.

#### Interference to System

The majority (92%) of respondents have not experienced interference to their microwave radio system.

#### **Procedures and Arrangements**

Over half (56%) of those surveyed were aware of the displacement procedures when vacating a frequency band. Nine out of ten respondents having an opinion on this subject indicated that these procedures were adequate.

Excluding those who were not in a position to comment, the majority (95%) indicated that they would encourage the co-location of antenna structures where practical.

Almost all respondents (92%) indicated that they have adequate access to the spectrum.

### **Service Expectations**

All respondents agreed that Industry Canada's current standard for authorizing microwave applications is acceptable.

#### **Review and Recommendations**

The results of this survey will be reviewed by the PNR Microwave Licencing Team for their analysis and further recommendations regarding future service improvements.

### Introduction

The purpose of the survey was to gather feedback regarding the quality of service provided during the microwave radio application process. From the initial application request (involving frequencies above 960 Mhz) to the final issuance of licences for operation in those frequency bands.

This survey was identified as a key priority in our Prairie and Northern Region's business plan under the "knowledge of our clients" strategic outcome. The feedback gained will be used to improve the microwave application process and will provide Industry Canada with a greater knowledge and understanding of our microwave clients' needs and expectations.

### <u>Methodology</u>

The microwave client satisfaction survey was first conducted in 2005. Only minor refinements were made to the original questionnaire thus ensuring comparable results between surveys.

The client contact list was extracted from Industry Canada's Spectrum Management Workflow and Electronic Application program (GDOC). The list included all applicants having submitted a microwave application during the period of April 01 to October 17, 2007.

Due to the relatively small population involved, the survey was conducted using a census approach (attempts were made to contact all clients on the contact list) over a four month period from November 14, 2007 to February 12, 2008. The total survey population was 42 entries of which five contacts were no longer employed by the company involved, six refused to participate in survey, and another six entries were unavailable or unable to contact. In total, twenty-five people participated in the survey.

The individuals surveyed were instructed to respond to a variety of questions related to different aspects of service using a 5 point ranking scale: Very Satisfied, Satisfied, Neutral, Dissatisfied, and Very Dissatisfied.

The average length of each telephone interview was approximately 20 minutes.

The interviewers identified themselves as employees of Industry Canada at the start of the survey.

Clients were asked to base their responses on their last submitted application should they have submitted multiple microwave radio station applications during the specified time period.

Telephone calls were made during regular business hours.

The survey sample was culled from the GDOC tables and included application types 20 through 24. Description of application types as follows:

Type 20 Microwave - Transportable Type 21 Microwave - Point to Point Type 22 Microwave - MCS Type 23 Microwave - Earth Station Type 24 Microwave - Space Station

Repeat client entries and accounts in cancelled status were also not considered for the survey.

Questions were scored and compared using the Mean Weighted Average (MWA) calculation. Using this method, each response is assigned a value and then the corresponding values are averaged to find one weighted score for each question:

| Very Satisfied/Important      | 100 |
|-------------------------------|-----|
| Satisfied/Important           | 75  |
| Neutral                       | 50  |
| Dissatisfied/Unimportant      | 25  |
| Very Dissatisfied/Unimportant | 0   |

MWA (simply referred to as 'mean score') allows for better comparison of results over time. Generally, a score of 80 to 100 is considered to be very good to excellent. Lower scores (<70) may indicate service delivery issues. Unless otherwise indicated, all analysis and numbers reported reflect the mean score for each question throughout this report.

Responses were recorded on-line at the time of the interview using Apian SurveyPro software Version 3.0 (software that includes questionnaire design, data collection, reporting, and data import/export for multimedia surveys). All responses were kept completely anonymous and confidential.

# **Client Interaction**

This section provides overall results on the type of stations applied for, the applicant type, and the method of filing the microwave application.

Just over half of the total applications received were submitted for a completely new microwave system.

Exhibit 2.1 - Type of Station

| What type of microwave radio station did you apply for? Was it: |       |                |                  |  |  |
|---|-------|----------------|------------------|--|--|
|   | Count | Percent<br>(%) | Percent<br>0 100 |  |  |
| Completely new microwave radio station                          | 13    | 52%            |                  |  |  |
| Additions or changes to an existing microwave radio system      | 9     | 36%            |                  |  |  |
| Both  | 2     | 8 %            |                  |  |  |
| Short term licences   | 1     | 4%             | ı                |  |  |
| Other   | 0     | 0%             |                  |  |  |
| Totals  | 25    | 100%           |                  |  |  |

Exhibit 2.2 - Applicant Type

| Who submitted the microwave application? |       |                |                  |  |  |
|--|-------|----------------|------------------|--|--|
|  | Count | Percent<br>(%) | Percent<br>0 100 |  |  |
| In-house Engineer                        | 18    | 72%            |                  |  |  |
| Outside Consultant                       | 7     | 28%            |                  |  |  |
| Totals                                   | 25    | 100%           |                  |  |  |

The majority of applications received were from an in-house engineer. Less than a third of submissions were received from outside consultants.

Exhibit 2.3 - Ease of Completing Radio Station Application

Approximately 80% of respondents indicated that they found the radio station application process easy to complete. A mean score of 81.3 was achieved which is slightly lower (1.1 points) than the results recorded in the 2005 survey

Only one client indicated that they had difficulty in this area.

| In your opinion how easy was it to complete and file your radio station application ? |       |                |               |  |  |  |
|---|-------|----------------|---------------|--|--|--|
|   | Count | Percent<br>(%) | Percent 0 100 |  |  |  |
| Very Easy   | 12    | 48%            |               |  |  |  |
| Easy  | 8     | 32%            |               |  |  |  |
| Neutral   | 3     | 12%            |               |  |  |  |
| Difficult   | 0     | 0%             |               |  |  |  |
| Very Difficult  | 1     | 4%             | I             |  |  |  |
| Don't Know  | 1     | 4%             | I             |  |  |  |
| Totals  | 25    | 100%           |               |  |  |  |

When asked in an open ended question how this process could be improved, the majority of responses surrounded enhancements to either:

- a) the on-line forms (ie: missing check boxes, ability to enter decimal places for certain fields, cumbersome short-term forms, etc...)
- b) the steps of the current application process (ie: delays with the issuance of temporary authority, quicker coordination between headquarters and the regions, etc...)

Some respondents suggested that Industry Canada host a workshop detailing the steps of the microwave application process.

**Exhibit 2.4 - Method of Filing Application** 

| Method used to file radio station                           | 2005 n=35      | 2008 n=25      | Difference    |
|---|----------------|----------------|---------------|
| application   | Percentage (%) | Percentage (%) |               |
| By the Internet using the Industry Canada website.          | 40%            | 76%            | <b>≯</b> 36.0 |
| By email using a published Industry Canada<br>Email account | 28%            | 24%            | <b>\4</b> .6  |
| Mailing your application to Industry Canada.                | 17.1%          | 0%             | <b>≥</b> 17.1 |
| By telephone or fax direct to Industry Canada               | 14.3%          | 0%             | <b>14.3</b>   |
| In-person at an Industry Canada office location             | 0%             | 0%             |               |
| Totals  | 100%           | 100%           |               |

Clients indicated that they are no longer using the traditional methods (mail or fax) of filing the radio station application. Internet usage has become increasingly popular resulting in over three quarters of clients (19 responses) indicating this is the preferred method to submit microwave applications.

When the six remaining respondents were asked if they were aware of the option to submit on-line, only two indicate that they were not familiar with this method. Of the four who were aware, all indicated that the website did not have a suitable form or that the form that was available was too cumbersome for their needs.

### **Client Service Satisfaction**

As the title of the survey indicates, the majority of the questions asked are directly focussed on client satisfaction. The two main areas of satisfaction investigated include overall satisfaction and satisfaction with eight specific aspects of service provided, namely:

- waiting time over the phone
- waiting time at the office
- knowledge and competence of staff
- courtesy of staff
- · time required to deliver service
- fairness and equity of service provided
- · all necessary information provided, and
- · accessibility of service

The satisfaction questions were designed using a five-point scale and respondents were asked to indicate their level of satisfaction when dealing with Industry Canada staff regarding each aspect of service as one of *very satisfied*, *satisfied*, *neutral*, *dissatisfied*, *or very dissatisfied*.

This report focuses on two indicators of client service – firstly, the percentage of clients satisfied with the service received (this includes the "satisfied" and "very satisfied" responses) and second, the "mean" satisfaction rating. The mean average rating was coded to a range from zero to 100 using a 50-point scale corresponding to the neutral category.<sup>2</sup>

Comparisons to the 2005 Microwave Client Satisfaction Survey are also presented in the report.

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<sup>&</sup>lt;sup>2</sup> Please refer to the methodology section (page 2) for a detail explanation of Mean Weighted Average.

The next four service areas involve having direct contact with Industry Canada staff. Twenty of the total twenty five respondents interacted directly with Industry Canada staff.

#### **Waiting Time at the Office**

All responses recorded were deemed "not applicable" indicates that there were no inperson visits to the local Industry Canada office. No further reporting will be available for this aspect of service.

Excluding the one "not applicable" reply, all respondents were either satisfied or very satisfied with waiting time over the phone. Waiting time over the phone was the second highest ranked aspect of service for satisfaction.

Exhibit 3.1 – Waiting Time Over the Phone

| Your satisfaction with waiting time over the phone. |       |                |   |                |  |
|---|-------|----------------|---|----------------|--|
|   | Count | Percent<br>(%) | 0 | Percent<br>100 |  |
| Very Satisfied                                      | 13    | 65%            |   |                |  |
| Satisfied   | 6     | 30%            |   |                |  |
| Neutral   | 0     | 0%             |   |                |  |
| Dissatisfied  | 0     | 0%             |   |                |  |
| Very Dissatisfied                                   | 0     | 0%             |   |                |  |
| Not Applicable                                      | 1     | 5%             |   |                |  |
| Totals  | 20    | 100%           |   | _              |  |
| Mean  | 9     | 2.1            |   |                |  |

Exhibit 3.2 – Knowledge and Competence of Staff

Approximately 95% of respondents expressed satisfaction (that is, they responded 'very satisfied' or 'satisfied') in this area. A mean score of 91.3 was recorded in 2008, this is within a similar range as the results obtained in the 2005 survey (91.7).

| Your satisfaction with the knowledge and competence of staff. |       |                |         |              |  |  |
|---|-------|----------------|---------|--------------|--|--|
|   | Count | Percent<br>(%) | Pe<br>0 | rcent<br>100 |  |  |
| Very Satisfied  | 14    | 70.0%          |         |              |  |  |
| Satisfied   | 5     | 25.0%          |         |              |  |  |
| Neutral   | 1     | 5.0%           | 1       |              |  |  |
| Dissatisfied  | 0     | 0.0%           |         |              |  |  |
| Very Dissatisfied   | 0     | 0.0%           |         |              |  |  |
| Totals  | 20    | 100.0%         |         |              |  |  |
| Mean  | (     | 91.3           |         |              |  |  |

**Exhibit 3.3 - Courtesy of Staff** 

| Your satisfaction with the courtesy of staff. |       |                |   |             |  |
|---|-------|----------------|---|-------------|--|
|   | Count | Percent<br>(%) | 0 | Percent 100 |  |
| Very Satisfied                                | 14    | 70%            |   |             |  |
| Satisfied                                     | 6     | 30%            |   | •           |  |
| Neutral                                       | 0     | 0%             |   |             |  |
| Dissatisfied                                  | 0     | 0%             |   |             |  |
| Very Dissatisfied                             | 0     | 0%             |   |             |  |
| Totals  | 20    | 100%           |   |             |  |
| Mean  | 92.5  |                |   |             |  |

There were no dissatisfied clients when it came to the courteousness of staff. This aspect of service received a mean score of 92.5 which was the highest ranked aspect of service recorded.

The following four aspects of service are general in nature and were asked to all of the twenty five respondents.

Exhibit 3.4 – Time Required to Deliver the Service

| Your satisfaction with the time required to deliver the service. |       |                |   |                |  |
|--|-------|----------------|---|----------------|--|
|  | Count | Percent<br>(%) | 0 | Percent<br>100 |  |
| Very Satisfied   | 13    | 52%            |   |                |  |
| Satisfied  | 9     | 36%            |   | •              |  |
| Neutral  | 3     | 12%            |   |                |  |
| Dissatisfied   | 0     | 0%             |   |                |  |
| Very Dissatisfied  | 0     | 0%             |   |                |  |
| Totals   | 25    | 100%           |   |                |  |
| Mean   | 85.0  |                |   |                |  |

Just over half of respondents indicate that they were very satisfied with the timeliness of service provided.

A mean score of only 85 was achieved in this area which represents the second lowest score of all eight aspects of service listed.

Exhibit 3.5 - Fairness and Equity

This aspect of service earned a 96% satisfaction rating from clients indicating they were either satisfied or very satisfied, and a mean score of 88.

| equitable manner. |       |                |   |                |  |
|-------------------|-------|----------------|---|----------------|--|
|                   | Count | Percent<br>(%) | 0 | Percent<br>100 |  |
| Very Satisfied    | 14    | 56.0%          |   |                |  |
| Satisfied         | 10    | 40.0%          |   |                |  |
| Neutral           | 1     | 4.0%           | - |                |  |
| Dissatisfied      | 0     | 0.0%           |   |                |  |
| Very Dissatisfied | 0     | 0.0%           |   |                |  |
| Totals            | 25    | 100.0%         |   |                |  |
| Mean              | 88.0  |                |   |                |  |

### Exhibit 3.6 – All Necessary Information was Provided

Although receiving a 92% satisfaction rating, satisfaction with the information provided ranked the lowest of all aspects of service provided. The only negative response received was recorded for this aspect of service.

| Your satisfaction that you were informed of everything you had to do in order to get the service. |       |          |   |                 |
|---|-------|----------|---|-----------------|
|   | Count | Percents | 0 | Percents<br>100 |
| Very Satisfied  | 12    | 48%      |   |                 |
| Satisfied   | 11    | 44%      |   |                 |
| Neutral   | 1     | 4%       | ı |                 |
| Dissatisfied  | 1     | 4%       | ı |                 |
| Very<br>Dissatisfied  | 0     | 0%       |   |                 |
| Totals  | 25    | 100%     |   |                 |
| Mean  | 8     | 4.0      |   |                 |

Exhibit 3.7 – Accessibility of the Service

| Your satisfaction with the accessibility of the service. |                         |      |                |   |  |
|--|-------------------------|------|----------------|---|--|
|  | Count Percent Per (%) 0 |      | Percent<br>100 | ) |  |
| Very Satisfied   | 14                      | 56%  |                |   |  |
| Satisfied  | 11                      | 44%  |                |   |  |
| Neutral  | 0                       | 0%   |                |   |  |
| Dissatisfied   | 0                       | 0%   |                |   |  |
| Very Dissatisfied  | 0                       | 0%   |                |   |  |
| Totals   | 25                      | 100% |                |   |  |
| Mean   | 8                       | 39.0 |                |   |  |

Accessibility of service scored a 100% satisfaction rating and a mean score of 89 was achieved.

**Exhibit 3.8 – Summary of Expressed Satisfaction** 

| Aspect of Service   | 2005 n=35       | 2008 n=25       | Difference   |
|---|-----------------|-----------------|--------------|
|   | Mean (0 to 100) | Mean (0 to 100) |              |
| The courteousness of service staff  | 93.9            | 92.5            | <b>\1.4</b>  |
| Waiting time over the phone   | 85.7            | 92.1            | <b>≁</b> 6.4 |
| Knowledge and competence of service staff                                     | 91.7            | 91.3            | <b>≥</b> 0.4 |
| Accessibility to service provided   | 87.9            | 89.0            | <b>≯</b> 1.1 |
| The extent to which the service was provided in a fair and equitable manner   | 88.6            | 88.0            | <b>№</b> 0.6 |
| The time required to deliver the service                                      | 81.4            | 85.0            | <b>≯</b> 3.6 |
| The extent to which you were informed about everything throughout the process | 89.3            | 84.0            | <b>≒</b> 5.3 |
| Waiting time at the office  |                 |                 | N/A          |

A comparison of the results from the 2005 study with those of the 2008 study shows significant gains were posted in the **waiting time over the phone** (+6.4) and the **time required to deliver the service** (+3.6).

The extent to which applicants were **informed about everything** throughout the process saw a drop of 5.3 points from the results posted in 2005, suggesting an increase in the unfamiliarity of the microwave application process.

All other aspects of service received only nominal increases or decreases in satisfaction.

### **Importance of Service**

Respondents were then asked to rank the importance of the eight service areas. The chart below provides a summary of the **importance** placed upon each aspect of service.

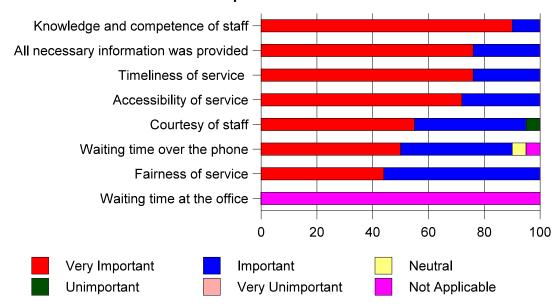


Exhibit 4.1 – Perceived Importance of Service Provided

Using the "top box" (or the number of "very important" responses) representation, the three aspects of service considered most important include:

- 1) knowledge and competence of staff,
- 2) The extent to which you were informed about everything, and
- 3) **timeliness** of Service.

Table 4.2 – Summary of Perceived Importance

| Aspect of Service   | 2005 n=35       | 2008 n=25       | Difference   |
|---|-----------------|-----------------|--------------|
|   | Mean (0 to 100) | Mean (0 to 100) |              |
| Knowledge and competence of service staff                                     | 96.2            | 97.5            | <b>≠</b> 1.3 |
| The extent to which you were informed about everything throughout the process | 90.0            | 94.0            | <b>≠</b> 4.0 |
| The time required to deliver the service                                      | 87.9            | 94.0            | <b>≠</b> 6.1 |
| Accessibility to service provided   | 90.7            | 93.0            | <b>≠</b> 2.3 |
| Waiting time over the phone   | 83.3            | 86.8            | <b>≠</b> 3.5 |
| The extent to which the service was provided in a fair and equitable manner   | 89              | 86.0            | <b>3</b> .0  |
| The courteousness of service staff  | 90.2            | 86.3            | <b>3</b> .9  |
| Waiting time at the office  | n/a             | n/a             |              |

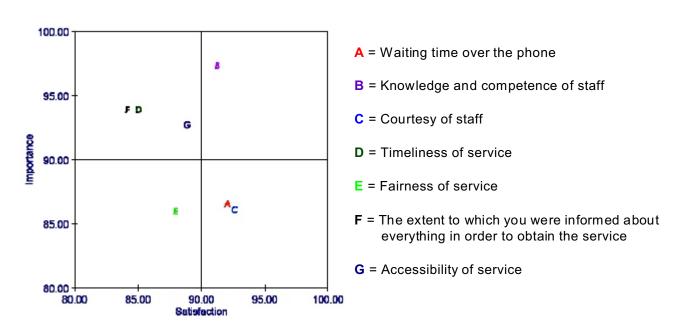
The survey results indicate that **all** aspects of service tested were of significant importance with the exception of **waiting time at the office** which can be explained by the fact that none of the applicants made an in-person visit to a local Industry Canada office.

Clearly clients value **knowledge and competence** of staff the most. In 2008, very much like the case in 2005, clients ranked **staff competence** as the most important aspect of service.

With the exception of **fairness and equity** of service and **courteousness** of staff all service categories have seen their importance rating increase in the past three years indicating an increased expectation with regard to service delivery.

# Satisfaction vs Importance

Exhibit 5.1 – Satisfaction vs Importance Matrix



**Note:** The above figures use a weighted average which essentially combines the 5 level choices (from very dissatisfied to very satisfied) to a single "mean" value. The top possible score is 100. This single value can then be used to make comparisons between past and present surveys (refer to the Methodology section on page 2 for a more detailed explanation).

Mapping satisfaction levels of a particular service against the perceived importance of that service aspect provides insight into the key strengths as well as the opportunities for improvement.

Low satisfaction and high importance components (top left quadrant) are targeted as the top priority areas for service improvement. In the case above, **information** 

**provided**, **timeliness** of service, and to a lessor extent, **accessibility** of service, can be targeted for areas of improvement.

High satisfaction and high importance service components (top right quadrant) are viewed as key strengths. The key strength identified in this area is the **knowledge** and **competence** of service staff.

High satisfaction and low importance components (bottom right quadrant) are considered areas where an organization over-delivers. **Waiting time over the phone** and **courtesy of staff** fall within this area.

Lastly, the bottom left quadrant contains the low importance and low satisfaction service component and are associated with lower priorities for service improvement. The aspect of service listed here is **fairness of service provided**.

# On-line Forms and Utilities

Exhibit 6.1 - On-line Application Form ease of use

| Do you consider the online application form user friendly? |                                 |      |  |  |  |  |
|--|---------------------------------|------|--|--|--|--|
|  | Count Percent (%) Percent 0 100 |      |  |  |  |  |
| Yes  | 19                              | 100% |  |  |  |  |
| No   | 0                               | 0%   |  |  |  |  |
| Totals   | 19                              | 100% |  |  |  |  |

Of the 19 respondents that have used the Internet to file their application, all indicated that the forms supplied was user friendly.

### **Exhibit 6.2 Frequency Search Utilities**

The majority of those who have submitted a microwave application have also used the frequency search tool.

| Have you ever used the frequency search utilities at the Spectrum Direct website? |          |  |  |  |  |  |
|---|----------|--|--|--|--|--|
| Count Percent (%) Percent 0 100   |          |  |  |  |  |  |
| Yes   | 17 89.5% |  |  |  |  |  |
| No 2 10.5%  |          |  |  |  |  |  |

When asked how satisfied they were with the frequency search utility, the majority (84%) indicated that they were either satisfied or very satisfied with the system. A mean score of 81.6 was recorded regarding the satisfaction with the frequency search utility.

**Exhibit 6.3 - Use of Spectrum Website for informational purposes** 

| Have you ever used the Spectrum website for informational purposes?                                    |       |             |               |   |  |
|--|-------|-------------|---------------|---|--|
|  | Count | Percent (%) | Percent 0 100 |   |  |
| Yes  | 22    | 88%         |               |   |  |
| No   | 3     | 12%         | •             |   |  |
| Totals   | 25    | 100%        |               |   |  |
| Of Yes responses: In your opinion how easy was it to navigate and access the information you required? |       |             |               |   |  |
| Very easy  | 4     | 18.2%       |               |   |  |
| Easy   | 7     | 31.8%       |               |   |  |
| Neutral  | 8     | 36.4%       |               | _ |  |
| Difficult  | 3     | 13.6%       |               |   |  |
| Very difficult   | 0     | 0%          |               |   |  |
| Totals   | 22    | 100%        |               |   |  |
| Mean   |       | 63.6        |               |   |  |

All of the respondents indicated they had Internet access, and almost all have used the Spectrum website for informational purposes.

Only half of the respondent have found navigating the spectrum website for information to be easy or very easy. The mean score of 63.6 reflects the lowest rating of all questions asked.

When asked if they had any suggestions for improving the access to the on-line licencing information, the comments received were mostly related to: having contact information for district offices easily available, defining district office boundaries, better description (title) of publications, and having more pertinent information available regarding the microwave application process.

**Exhibit 6.4 - Use of Virtual Licence Option** 

| Have you ever obtained a licence printout at the Spectrum Direct website? |   |        |  |   |  |  |
|---|---|--------|--|---|--|--|
|   | Count Percent (%) Percent 100                           |        |  |   |  |  |
| Yes   | 15  | 60%    |  |   |  |  |
| No  | 10  | 40%    |  | I |  |  |
| Did not know about it   | 0   | 0%     |  |   |  |  |
| Totals  | 25  | 100%   |  |   |  |  |
| Of Yes responses : D  | Of Yes responses: Did you find this option easy to use? |        |  |   |  |  |
| Yes   | 14  | 93.3%  |  |   |  |  |
| No  | 1   | 6.7%   |  |   |  |  |
| Totals  | 15  | 100.0% |  |   |  |  |

When asked whether they had ever obtained a licence print-out at the Spectrumdirect website, sixty percent indicated that they had done so. The majority (93%) of respondents having accessed this utility found it easy to use.

Recommendations for improvement to the system included, faster update, ability to search by company name, ability to print multiple licences at a time, and easier access to the system (currently too many layers to sift through).

Exhibit 6.5 - Fee Payment Method

The majority of those surveyed indicated that they did not pay their invoices online. Similar results were recorded in the 2005 survey where 21% of respondents paid on-line.

| Have you paid your new licence or licence renewal fees online? |              |                |               |           |  |
|--|--------------|----------------|---------------|-----------|--|
| Trave you paid your flet                                       | w licelice c | i licerice re  | illewal lees  | Orinine : |  |
|  | Count        | Percent<br>(%) | Percent 0 100 |           |  |
| Paid new licence   | 1            | 5%             | I             |           |  |
| Paid licence renewal   | 0            | 0%             |               |           |  |
| Both   | 3            | 15%            |               |           |  |
| Did not pay  | 16           | 80%            |               |           |  |
| Totals   | 20           | 100%           |               |           |  |

#### Exhibit 6.6 - I.C. Headlines Awareness

Almost all of the respondents were unaware of the IC Headlines e-bulletin; however the majority (71%) were interested in obtaining (and were provided with) the web address to subscribe.

"I.C. Headlines" is a weekly e-mail bulletin that helps you locate the latest information and resources in the areas of small business, exporting, technology, Canadian industries, legislation and regulations.

Do you subscribe to I.C. headlines?

|  | Count | Percent<br>(%) | Percent<br>0 100 |  |  |
|--|-------|----------------|------------------|--|--|
| Yes  | 1     | 4%             | 1                |  |  |
| No   | 24    | 96%            |                  |  |  |
| Totals   | 25    | 100.0%         |                  |  |  |
| Of No responses: Would you like to obtain the web address for subscribing to I.C. headlines? |       |                |                  |  |  |
| Yes  | 17    | 70.8%          |                  |  |  |
| No   | 7     | 29.2%          | _                |  |  |
| Totals   | 24    | 100.0%         |                  |  |  |

### Submitting On-line in the Future

All of those surveyed who had used the on-line application form were also interested in submitting their next application via the Internet. This suggests a high level of satisfaction with the method of filing microwave applications via the Spectrumdirect website.

This represents a 7.1% increase from those indicating that they would likely submit their application online in 2005.

Although there is loyalty towards using this method of electronic submission, it appears there is still room for improvement. When asked if there were any features or options that they would like added to the Spectrumdirect website, most responses involved technical enhancements to the existing on-line utilities (ie: additional links and calculation tools, consolidated invoice option, the creation of a tower ownership database, etc...). The viability of all options presented will be further reviewed by the PNR microwave licencing team.

### Radio Interference

Table 7.1 - Interference Experienced

| Within the last year have you experienced interference to your microwave radio communication system? |          |                |          |                |
|--|----------|----------------|----------|----------------|
|  | Count    | Percent<br>(%) | 0        | Percent<br>100 |
| Yes  | 2        | 8%             |          |                |
| No   | 23       | 92%            |          |                |
| Totals   | 25       | 100%           |          |                |
| Of Yes responses: To   | whom did | you report the | radio ir | nterference?   |
| Did not report   | 2        | 100%           |          |                |
| Industry Canada  | 0        | 0%             |          |                |
| Engineering<br>Consultant  | 0        | 0%             |          |                |
| Totals   | 2        | 100%           |          |                |

The majority (92%) of respondents have not experienced interference to their microwave radio system. Of the 2 respondents who have received interference, none thought the interference was significant enough to call for assistance, or they were able to remedy the situation on their own.

### Procedures and Arrangements

Table 8.1 - Frequency Band Displacement

As circumstances dictate, it may be necessary for Industry Canada to displace current users from certain frequency bands. Have you been displaced from a frequency band in the past 2 years?

Count Percent Percent (%)

Yes

7

28%

that they have experienced being displaced from a frequency band in the past.

Almost one third of

respondents indicated

18 72% 25 100% Table 8.2 – Displacement F

**Table 8.2 – Displacement Procedures Awareness** 

Over half (56%) of those surveyed expressed an awareness with the displacement procedures.

No

Totals

Those who had suggestions on how to improve this process included lengthening the current time-frame for vacating the frequency band, and being advised of who the new user of the band will be.

| Are you aware of Industry Canada's displacement procedures? |            |                |               |              |  |
|---|------------|----------------|---------------|--------------|--|
|   | Count      | Percent<br>(%) | Percent 0 100 |              |  |
| Yes   | 16         | 64%            |               |              |  |
| No  | 9          | 36%            |               |              |  |
| Totals  | 25         | 100%           |               |              |  |
| Of Yes response   | s: Are the | displacemen    | t procedur    | es adequate? |  |
| Yes   | 9          | 56.3%          |               |              |  |
| No  | 1          | 6.3%           | -             |              |  |
| Don't know  | 6          | 37.5%          |               |              |  |
| Totals  | 16         | 100.0%         |               |              |  |

Table 8.3 – Access to the Spectrum

Almost all respondents indicated that they have adequate access to the spectrum.

| Do you believe that you have adequate access to the Spectrum? |       |                |               |  |  |  |
|---|-------|----------------|---------------|--|--|--|
|   | Count | Percent<br>(%) | Percent 0 100 |  |  |  |
| Yes   | 23    | 92%            |               |  |  |  |
| No  | 2     | 8%             |               |  |  |  |
| Totals  | 25    | 100%           |               |  |  |  |

From those who indicated otherwise, one response suggested that the spectrum in the Fort McMurray, AB area was becoming very congested. Another recommendation was for Industry Canada to explore and make available more frequency bands between 24 and 28 Ghz.

**Table 8.4 – Tower Sharing Arrangement** 

or don't know

Totals

Industry Canada encourages the co-location of antenna structures whenever practical. Is your organization willing to consider entering into sharing agreements with other users? Count Percent Percent 100 0 (%) Yes 21 84% No 1 4% 3 Unable to comment 12%

25

The majority (84%) indicated that they would encourage the colocation of antenna structures where practical.

Prairie and Northern Region Industry Canada

100%

### Service Expectations and Overall Satisfaction

When asked, "Industry Canada strives to provide authorization to microwave radio station clients before the proposed in-service date that was requested on the submitted application. Is this standard acceptable to you?", all respondents agreed with this statement. Of the two respondents offering input into how the service can be further improved, one indicated that it was almost too efficient, while the other requested further guidance around the entire application process.

Exhibit 9.1 – Overall Satisfaction Results

| Overall, how satisfied were you with our service at Industry Canada? |       |                |                  |  |  |
|--|-------|----------------|------------------|--|--|
|  | Count | Percent<br>(%) | Percent<br>0 100 |  |  |
| Very Satisfied   | 17    | 68%            |                  |  |  |
| Satisfied  | 8     | 32%            |                  |  |  |
| Neutral  | 0     | 0%             |                  |  |  |
| Dissatisfied   | 0     | 0%             |                  |  |  |
| Very Dissatisfied  | 0     | 0%             |                  |  |  |
| Totals   | 25    | 100%           |                  |  |  |
| Mean   |       | 92.0           |                  |  |  |

No applicant was dissatisfied with the overall service provided by Industry Canada. A mean score of 92.0 was achieved which is 6.3 points higher than the results posted in the 2005 survey.

When asked, "In the end, did you get what you needed from Industry Canada?" all clients survey stated that they did get what they needed from Industry Canada.

# Appendix A Questionnaire

# Microwave Radio Station Client Survey P&NR REGION (version 1.3) 09/2007

#### **INTERVIEWER NOTES:**

If respondent questions validity of the survey, please ask him/her to call Barry Kram at (306) 780-6982 for follow-up.

Note, there are two possible client types:

- direct 'core' clients(applied for license through an in-house engineering department)
- third party clients (all dealings were with an outside engineering consultant)

Ensure respondent focuses on service received from Industry Canada, not on service related to any other parts of the federal or provincial governments that they may have dealt with.

Ensure that respondent is the person that had hands-on experience with the application process. If necessary, get referral from initial contact.

Note: that radio <u>station</u> license does not mean radio broadcasting station, but rather microwave radio station.

Please record <u>all</u> open ended question responses as close as possible to the client's actual response, ensuring that sufficient information is captured to accurately determine the intent of the client's comment. All questions should be asked exactly as they appear on the survey template. Please ensure that the available responses are also provided for each question.

If the client requires additional information/services during the course of the survey, please record his name and phone number along with his question and forward it to the appropriate manager for follow-up.

Should the contact person have submitted multiple applications or applications for multiple clients during this time period, please request that their survey responses be based on their last submission to Industry Canada.

The satisfaction scale response categories (very satisfied...very dissatisfied) are repetitive. Adjust repetition frequency to ensure clarity but avoid tedium.

| Preamble to be used for interviews:  |
|--|
| Hi, may I speak to(insert client's name if known)  |
| - if person is available, continue.  |
| - if not available, arrange call-back or get new number where person can be reached If necessary, explain purpose of phone call (use information from introduction below)  |
| - if asked how we received the person's name, inform the client that it was obtained from our database of individuals and businesses that have submitted a microwave radio application to Industry Canada in the past 6 months.  |
| My name is I'm with Industry Canada and I am calling to conduct a survey of individuals or businesses that have recently been granted a microwave radio station license.   |
| Participation in the survey is voluntary. However, your feedback would be extremely valuable and will help improve the service provided by Industry Canada. Your decision to participate or not will not affect any dealings you may have with the federal government. The full names of participants will not be recorded as part of this survey or shared with any other third party. The report following this survey will contain only non-identifying aggregate information. The information you provide will be used for research purposes only and will be administered in accordance with applicable privacy laws. |
| The survey will take approximately 15 minutes to complete depending on your responses. Do you have time now to take part in this survey?   |
| If no, ask if you can call back later at a more convenient time.   |
| Note to interviewer: Should anyone request a copy of the privacy act it can be accessed at: http://laws.justice.gc.ca/en/P-21/   |
| I'd like to begin by asking you a few questions about what type of radio station application you applied for and with whom you dealt during the application process.   |

| (6) What type of response only)                 | radio station di   | d you apply                             | tor? Was it: (Re    | ad list, accept one                           |       |
|---|--|---|---------------------|---|-------|
| ☐ Additions o                                   | new microwaver changes to an                               | existing mi                             | crowave radio sy    | stem  |       |
| (7) In your opinion                             | on, how easy wa  | as it to com                            | plete and file you  | radio station applicat                        | ion?  |
| □ Very Easy □ E                                 | asy 🗅 Neutral  | □ Difficult                             | ☐ Very Difficult    | ☐ Don't Know (skip to 9                       | 1)    |
| (8) How could thi                               | s process be im  | nproved?                                |                     |   |       |
| (9) Which of the (Read list and ac              | •  | •                                       | use to file your ra | dio station application                       | ?     |
| ☐ By Email us<br>☐ By telephos<br>☐ Mailing you | _  | Industry (<br>to Industry<br>Industry C | anada.              | • •   |       |
| (10) Did you kno<br>to Industry Cana<br>☐ Yes   |  |   |                     | application via the Inte                      | ernet |
| (10A) What was                                  | the main reasor  | n for not usi                           | ng the Internet to  | file your application?                        |       |
| □ No Internet acc □ Other (please               |  |   | ) (SI               | kip to 20)                                    |       |
| regarding the on-<br>forward to the ori         | -line application<br>iginating district<br>ease enter name | process? (I office mana                 | f yes, record con   | with more information<br>tact name and number |       |
| (12) Do you cons ☐ Yes                          | sider the on-line<br>□ No                                  | application                             | form user friendly  | γ?  |       |
| (13) Can you sug                                | ggest any impro  | vements re                              | garding the on-lin  | e application form?                           |       |
|   |  |   |                     |   |       |

| (14) Have you ever used the frequency search utilities at the Spectrum Direct website?  ☐ Yes ☐ No ☐ Unaware it existed (skip to 17)   |  |  |  |  |  |
|--|--|--|--|--|--|
| (15) How satisfied are you with the frequency search utility? □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied  |  |  |  |  |  |
| (16) Can you suggest any improvements to the search utility?   |  |  |  |  |  |
|  |  |  |  |  |  |
| (17) Are there any additional features or options that you would like to see added to the Spectrum Direct website?   |  |  |  |  |  |
| (18) If you had to submit another radio application, how likely would you do it on-line with Industry Canada? (Read options)   |  |  |  |  |  |
| □ very likely (Skip to 20)   |  |  |  |  |  |
| □ somewhat likely (Skip to 20) □ not very likely   |  |  |  |  |  |
| ☐ not at all likely ☐ don't have access to the Internet (Skip to 20)   |  |  |  |  |  |
| (19) Why not? (Specify)  |  |  |  |  |  |
|  |  |  |  |  |  |
| (20) Were you in contact with Industry Canada staff at any time regarding your radio station application?  ☐ Yes ☐ No Skip to (29)   |  |  |  |  |  |
| Using the scale of: very satisfied, satisfied, neutral, dissatisfied, and very dissatisfied, please indicate your level of satisfaction when dealing with Industry Canada staff regarding: |  |  |  |  |  |
| (21) Waiting time at the office. Would you say you were: ☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied ☐ Not Applicable  |  |  |  |  |  |
| (22) Waiting time over the phone. □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied □ Not Applicable   |  |  |  |  |  |
| (23) Competency of the service staff. □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied  |  |  |  |  |  |
| (24) Courteousness of the service staff. □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied   |  |  |  |  |  |

unimportant, could you please rate the importance of these aspects of service: (25) Waiting time at the office? ☐ Very Important ☐ Important ☐ Neutral ☐ Unimportant ☐ Very Unimportant ☐ Not Applicable (26) Waiting time over the phone? □ Very Important ☐ Important ☐ Neutral ☐ Unimportant ☐ Very Unimportant ☐ Not Applicable (27) Competency of staff? □ Very Important □ Important □ Neutral □ Unimportant □ Very Unimportant (28) Courteousness of staff? □ Very Important □ Important □ Neutral □ Unimportant □ Very Unimportant (29) Do you have access to the Internet at your workplace? ☐ Yes □ No (Skip to 41) (30) "I.C. Headlines" is a weekly e-mail bulletin that helps you locate the latest information and resources in the areas of small business, exporting, technology, Canadian industries, legislation and regulations. Do you subscribe to I.C. headlines? ☐ Yes □ No (Skip to 31) (30A) Would you like to obtain the web address for subscribing to I.C. headlines? ☐ Yes then, http://ic.gc.ca/headlines (31) Have you ever used the Spectrum Website (www.ic.gc.ca) for informational purposes? ☐ Yes ■ No (Skip to 34) (32) In your opinion, how easy was it to navigate and access the information via the new Industry Canada website? ☐ Very Easy ☐ Easy (skip to 34) □ Neutral □ Difficult ☐ Very Difficult (33) Do you have any suggestions on how Industry Canada could improve access to online radio licencing information? (34) Did you know that you can pay for a new licence or licence renewal on-line at the Spectrum Direct website? \*Please note that \$5,000 is the online payment limit\* □ Yes (skip to 38) 

Now, using the following scale very important, important, neutral, unimportant, and very

| (35) Have you paid your new licence or licence renewal fees online?   |
|---|
| □ Paid new licence □ Paid licence renewals online □ Paid both new licence and renewals online □ Did not pay online (skip to 38)   |
| (36) Was this option easy to use?  ☐ Yes (skip to 38) ☐ No  |
| (37) Do you have any suggestions on how this option could be improved?  |
| (38) Have you ever obtained a licence printout at the Spectrum Direct website?  ☐ Yes ☐ No (skip to 41)   |
| (39) Was this option easy to use? □ Yes □ No  |
| (40) Do you have any suggestions on how this option could be improved?  |
| A few more questions related to the levels of service provided by Industry Canada. Using the scale of: very satisfied, satisfied, neutral, dissatisfied, and very dissatisfied, please indicate your level of satisfaction when dealing with Industry Canada staff regarding: |
| (41) Time required to deliver the service.  □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied   |
| (42) The service was provided in a fair and equitable manner? □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied   |
| (43) I was informed by Industry Canada of everything I had to do in order to get the service.  □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied  |
| (44) I was satisfied with the ease of access to the service?  □ Very Satisfied □ Satisfied □ Neutral □ Dissatisfied □ Very Dissatisfied   |

|   |                        |              |                              | , neutral, unimportant, and very ese aspects of service:         |  |
|---|------------------------|--------------|------------------------------|--|--|
| (45) Timeliness  ☐ Very Importar  | •                      |              | ☐ Unimportant                | □ Very Unimportant   |  |
| (46) Fairness o<br>☐ Very Importar  |                        |              | ☐ Unimportant                | □ Very Unimportant   |  |
| (47) All necess<br>☐ Very Importar  | •                      | · , ,        | orovided?  Unimportant       | □ Very Unimportant   |  |
| (48) Accessibi □ Very Importar  |                        |              | ☐ Unimportant                | □ Very Unimportant   |  |
|   | osed in-servic         | e date that  |                              | microwave radio station clients on the submitted application. Is |  |
| □Yes  | □ No                   |              |                              |  |  |
| (50) In your op   | oinion what cou        | uld we do to | o improve this se            | ervice delivery time?  |  |
| (51) As circumstances dictate, it may be necessary for Industry Canada to displace current users from certain frequency bands. Have you been displaced from a frequency band in the past 2 years? (Note to surveyor: this is a general statement only used to gauge the respondents knowledge of our displacement procedures) |                        |              |                              |  |  |
| ☐ Yes   | □ No                   |              |                              |  |  |
| (52) Are you av   | ware of Industr        | y Canada's   | s displacement p             | procedures?  |  |
| ☐ Yes   | □ No (skip to          | 55)          |                              |  |  |
| (53) Are the dis  | splacement pro<br>□ No |              | dequate?<br>(now (skip to 55 | )  |  |
| (54) Can you re   | ecommend any           | / improvem   | nents to the disp            | lacement process?  |  |
|   |                        |              |                              |  |  |
|   |                        |              |                              | <del> </del>   |  |

| (55) Do you bel ☐ Yes                          | lieve that you h<br>(skip to 57) | nave adequa    | te access to the<br>□ No | spectrum?                              |              |
|--|----------------------------------|----------------|--------------------------|--|--------------|
| (56) Why not? (                                | (Ask for specif                  | ic examples    | or frequency ba          | nds)                                   |              |
|  |                                  |                |                          |  |              |
| (57) Within the communication                  | •                                | e you experie  | nced interferen          | ce to your microwa                     | ave radio    |
| ☐ Yes  | □ No (skip to                    | 60)            |                          |  |              |
| (58) To whom on Industry Can  ☐ Did not report | ada directly (S                  | kip to 60)     |                          | onsultant                              |              |
| (59) Would you interference pro                |                                  | from Industr   | y Canada to giv          | e you a call regard                    | ding your    |
| ☐ Yes (forwar                                  |                                  | umber to dist  | rict office mana         | ger ASAP)                              | □ No         |
| (60) In general, currently not pre             |                                  | io licencing s | ervice or produ          | ct you need from u                     | s that we're |
|  |                                  |                |                          |  |              |
|  |                                  |                |                          | nna structures whe into sharing agreer |              |
| ☐ Yes  | □ No                             | ☐ Unable to    | Comment or D             | Oon't Know                             |              |
| (62) Do you find radio frequency ☐ Yes         | spectrum?                        | siness is mor  | e competitive as         | s a result of the us                   | e of the     |
| (63) In the end ☐ Yes (skip to 6               |                                  | -              |                          | ry Canada?<br>t of what I needed       |              |
| (64) From your                                 | · experience, h                  | now could Inc  | lustry Canada i          | mprove its service                     | to you?      |
| (GE) Oursiall I                                | ow opticfied                     |                |                          | advator ( Ocio a da O                  |              |
| (65) Overall, he                               | ow satisfied we □ Satisfied      | ere you with o |                          | ndustry Canada?  O Very Dissatisfied   | Dan't know   |
| u very satisfied                               | u Salistieu                      | u Neutral      | a Dissausiled C          | a very Dissausileu u                   | DOII I KIIUW |

This completes our survey ... thank you for your time.