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Department of Communications

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GUIDELINES ON IMPLEMENTATION AND EVALUATION OF A VOICE MESSAGING SYSTEM

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Canada

GUIDELINES ON IMPLEMENTATION[1] AND EVALUATION OF A VOICE MESSAGING SYSTEM

1 The section of the guidelines on implementation has been accepted for printing in *Optimum*.

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PREFACE

This guide was designed to assist managers, project managers and evaluators to design the implementation and the evaluation of a voice messaging system.

All the recommendations have been derived from pilot projects for different voice messaging systems. The methods, procedures, logs and questionnaires have all been tested in different studies and they proved to be effective and reliable.

In the field of office automation impact assessment, it seems that evaluators and managers alike are constantly "rediscovering the wheel" because few practical studies or tested procedures and tools are available. This is an attempt to share information in order that other evaluators may contribute to the evaluation process of voice messaging systems and that managers may save time and avoid misery when implementing such a system.

Maria M. Morin

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1. INTRODUCTION

A third of all the telephone calls placed in federal departments do not reach the intended party on the first try. Office workers perceive telephone tag as being unproductive and impeding the execution of their work.

A voice messaging system (VMS) has a lot to offer to the whole process of telephone communications. It can automatically answer the telephone when the called party is unavailable, it can record a relatively long message, and it allows message sending and retrieval any time from anywhere there is a touch-tone telephone. These characteristics have a lot of potential for messages which don't require dialogue, but which are too elaborate to leave with a secretary or a receptionist. VMS has also a lot of potential for communications which require a dialogue. In this case, the dialogue is not carried on synchronously, but rather with a delay before each intervention. This means that each telephone call in a telephone tag situation, instead of ending as a message with no content such as "call me back", conveys information which brings business transactions to a conclusion faster. In studies conducted by the Government Telecommunications Agency (GTA), messages with content are 250% higher in the group using VMS than in the group not using VMS. Users' perception of VMS is that it increases productivity.

A voice messaging system is more than a passive telephone answering service with message recording and retrieval capabilities. Systems now available on the market offer a wide array of communications options which give greater flexibility in handling verbal messages. Options such as editing, sending messages at a future date, sending the same message to a group of people and rerouting messages with appended comments give users the ability to handle messages in a similar fashion to written messages. Thus, voice messaging is a very active communications tool for information dissemination.

During the course of many field trials of different voice messaging systems in different federal departments, valuable information was gathered on the use of the telephone in the government and the impact of VMS on daily work.

Following are some general guidelines derived from all of this gathered information and experience with VMS. Careful consideration should be given to these guidelines in order to develop an effective implementation plan which will facilitate the introduction of VMS, either on a trial or a permanent basis, in federal organizations.

2. IMPLEMENTATION

2.1 Selecting a Voice Messaging System

At first glance, it appears that the most important thing about a VMS is its capability of answering the phone and taking a message without the intervention of a third party. If that were the case, any telephone answering machine would do. But with extensive use it becomes evident that a VMS requires at least three capabilities in order to be really functional in the government.

(a) The VMS should be integrated with the telephone system in order to pick up the messages automatically when the user is out of the office (call forward — no answer) or already talking on the phone (call forward — busy).

Where the voice messaging system is not integrated into the telephone system, our experience shows that users either forget to activate the VMS before leaving the office or forget to deactivate it when getting back to the office which means that either the VMS is not used at all or it is in use all the time.

(b) The VMS should have a signal, such as a flashing light, to alert the user that a new message is in the mailbox.

Without the message waiting signal, the user must log on to the system to determine whether or not there are any new messages. This has two drawbacks. Firstly, even if the user checks the mailbox two or three times per day, important messages could still remain unread in the mailbox for several hours. Secondly, if the regular check-in routine is not rewarded by new messages, the activity will quickly decrease and could even cease. Subsequently, any new messages will sit in the mailbox without being answered, and this will considerably lessen the effectiveness of the voice messaging service.

(c) The quality of the voice recorded on the VMS should be clear so as to allow recognition of the person talking.

Very often people who have frequent contact with a user don't identify themselves. If they leave only a message to call back and if the resolution of the recorded voice is not high enough to allow recognition of the callers, the messages are virtually useless.

These are three basic capabilities to look for in a VMS. All the other capabilities (i.e., ease of use or special features) will make use of the VMS more flexible, but not one will be as determinant on the adoption and wide use of the system in the Government as the three mentioned above.

2.2 Selecting a User Community

Selection of users is critical to the efficiency of a VMS system. Therefore, proper consideration should be given to this task during the planning of the overall project. There are several ways of making a selection:

- Users could be selected on an arbitrary basis. With such a process, we usually observed that users complained that the people in the organization with whom they are the most in contact do not have a VMS. This limitation decreases their effective use of the system.

- All the personnel from one Division could be selected to have access to VMS. This is a fast process of selection, but not necessarily economical in the long run. In previous trials, it became rapidly apparent that due to the directors' position and the availability of secretaries for back-up answering, it was inappropriate for a machine to answer their phones. Therefore, on a cost/benefit basis, directors and their personal secretaries shouldn't be included in a user community unless the directors wish to use the voice mail capability to send messages to other members of their staff. Also, staff who placed/received less than ten calls per week recognize that they have very little use for a VMS.

- The user community could be selected on a cost/benefit basis. It has been shown that high users of the telephone, i.e., those who place or receive an average of at least 70 calls per week, see the most significant decrease in their total number of calls because of VMS use — as much as 26%. Therefore, we suggest that a survey of telephone use of all personnel (except secretaries and directors) be conducted before selecting users in the division.[2] From the telephone use survey, those who use the telephone the most should be selected and asked to identify the people with whom they are the most in contact in the organization. This method of selection based on a functional community of users[3] is the best way to maximize the return on the investment in a VMS system.

It has been observed that 63% of all the calls placed or received are within the department. Therefore, the functional communications network lies primarily within each department. Given this, planning for the introduction of a VMS should take place at the departmental level, not the work unit level. With a wider community of users of the same VMS system, there is greater use of the communications options of the VMS, and not just of its telephone answering options.

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2 See Section 3.1 for the procedures and Annex A for the logs to survey telephone use.

3 A functional user community is a group of people who need to communicate with one another.

Besides the functional user community, other people could have access to VMS, notably those who are away often from their office (e.g., those who attend a lot of meetings or who travel a lot) and those who have a need to distribute messages (such as chairs of committees).

2.3 Presentation to the Users

Experience has shown that a formal presentation made to the users before installing the VMS system is of great assistance in ensuring a smooth implementation process.

The formal presentation should contain at least the following information:

- the extent of the implementation or, if it's a trial, the extent of the trial, e.g., users selected, time frame, etc.;
- the description of the capabilities of the system being implemented;
- if an evaluation is going to be performed on this system, an explanation of all the activities of the evaluation process involving users;
- the project team for the implementation including trainers, and evaluators (if an evaluation is performed);
- the training schedule; and
- the trouble-reporting procedures.

The benefits of a formal presentation are the following:

- it gives the eventual users a preview of what to expect during the implementation phase (they can decide at this point if they want to be involved now as users);
- it gives standardized information to everybody — bits and pieces of information given on an individual basis are likely to create rumours, more often than not negative, which bias the implementation of the system;
- generally, it gives the users a greater sense of being an important part of the implementation process, which is an incentive for them to really use the system and report any trouble instead of just disconnecting the VMS and ignoring it when problems occur.

2.4 Training

Even if the voice messaging system that is being implemented is user friendly, it is still a good practice to:

- provide a formal training session which includes some hands-on experience through the use of carefully designed exercises;
- follow up the next day or so to find out if the users have encountered any problems and, if they have encountered problems, assist them on an individual basis;
- ensure that all documentation given to the users, such as user manuals, is clear and that information is easy to retrieve.

For users who travel a lot, the VMS is a flexible and efficient link with the office. Trainers should give these users more individual assistance and review with them procedures to access VMS while away from their work station, procedures to transfer messages to colleagues, etc. Summaries of procedures could be given to them to facilitate their use of the VMS.

User support should always be available to the users when they encounter problems at least until the implementation phase for the whole organization is completed.

In order to be able to devote enough time and effort to training, follow-up and user support, trainers should be permitted to concentrate on this task. Thus, they should be relieved of other duties for the duration of the implementation period.

2.5 Effective Use of Greetings

The greeting is the recorded message that callers hear when they reach the mailbox. It tells them that they have reached a VMS; it contains also instructions on leaving a message. VMS systems allow for the recording of a personal greeting by users in their own style. VMS users report that if a personal greeting is well designed, it plays a role in reducing the reticence of certain people when leaving messages on recording machines.

The following are a few pointers to help the users design an effective greeting:

(a) Greetings should be clear and concise. Therefore, it is recommended that they be composed in writing before recording them.

(b) To conform to the Government's bilingual policy on answering the telephone, the organization should establish procedures concerning greetings recorded on the VMS. Recording the greeting in both official languages may result in a long

message, but callers can always skip the greeting in part or in whole by pressing a button.

(c) VMS users should update their greetings in order to let callers know if they are away for days, weeks, etc. New greetings should be checked by users before being activated.

(d) A telephone number of a secretary, a receptionist or someone who isn't on VMS should be included in the greetings. Callers then have the option of reaching someone else in the office in "real time" if need be. If the VMS has a feature which allows callers to reach the operator/receptionist, instructions should be given in the greeting on how this can be done.

(e) Users should check their greetings regularly to ensure that they are appropriate and are activated.

(f) Trainers could call users' mailboxes and listen to the greetings to see if they are recorded properly and still are activated. To be reminded that their greetings are ineffective encourages users to check their greetings regularly and to update them.

3. EVALUATION

The purpose of an evaluation is to study the impact of change in order to guide decision-making when a new system, such as a voice messaging system, is introduced.

In order to be able to guide decision-making in introducing a VMS, the evaluation process will have to be designed in such a way as to answer at least the following questions: What is the performance of the VMS and is it doing what we need it to do? Is it productive to use a VMS and what is its impact on office communications?

The evaluation is a continuous activity, but it is divided into three phases: pre-implementation, implementation, and post-implementation. During each phase, specific data are collected and the results of each set of data will complement one another, and answer the two main questions stated above.

3.1 Pre-implementation Phase

This phase takes place when management is planning to introduce a VMS, before the equipment is installed.

During this phase, two types of data are collected: objective data on telephone use and messaging (see log in Annex A) and subjective data on participants' attitudes towards telephone communications and their expectations of the VMS (see questionnaire in Annex B).

These data will be compared later to the data collected after the VMS has been implemented in order to determine the impact of introducing the system. Secondly, during the pre-implementation phase, the selection of a user community for implementing the VMS will be based on the data.

As was mentioned in Section 2, the VMS has a significant impact on the telephone communications of people who place or receive telephone calls frequently. Therefore, those who use the telephone frequently should be selected from the logs and their functional telephone communications community should be identified from the questionnaire.

The first users to have access to the VMS should be the functional group or groups with members who have indicated, on the questionnaire, that telephone tag is a major problem and that VMS seems a very promising solution. It is common, at the beginning of implementation of any office automation system, that things don't always go as planned (i.e., training, implementation schedules, or the system itself). If the first people to have access to the system are positive about it, they will be more tolerant if anything goes wrong; they will also be more cooperative.

3.2 Implementation Phase

Ideally, the first group to have access to the VMS should comprise approximately ten people. They should receive training, have access to the system and use it for a few weeks.

This whole process should be evaluated as it evolves. Anything that has a negative impact on the use of the system should be brought to the attention of the project manager in order that corrections may be made as soon as possible.

Once all the quirks have been ironed out in the process/system, implementation should proceed with the rest of the users.

The implementation phase is considered complete after all the users have had access to the system for a minimum of three months. During this phase, all the variables which affect use of the system should be documented. These could be positive comments from the users as well as the negative aspects such as the system's shortcomings or failures. Users should know the trouble-reporting procedures and that there is a mechanism in place to record them.

This type of information helps the project manager to adjust the process as it evolves; it also helps support the evaluator's conclusions and is an indication of whether or not the system has performed as expected.

3.3 Post-implementation Phase

Data collection in the post-implementation phase should be started no earlier than three months after all the users have had access to the VMS. The same log should be used as during the pre-implementation phase (Annex A) to gather data on telephone communications. The questionnaire (Annex C) contains sections on the formal presentation, the training, the field trial and on the VMS.

By comparing results from the pre-implementation and the post-implementation logs, it will be possible to determine the VMS' impact on such things as the total number of calls, the total number of messages with content, etc. To determine if the differences between the means are significant or real differences or just random occurrences, statistical analyses such as an analysis of variance or a t-test for dependent means may be used.[4]

The questionnaire reflects users' perceptions of the VMS. The data are subjective, but reveal the value-added properties of VMS and, therefore, are a good complement to the hard data collected by means of the log.

4. REMARKS ON PROCEDURES

4.1 Confidentiality of Questionnaires

In the introduction of the questionnaires, the participants are assured that no individual data will be reported; only group averages will be made public. But, the experimental design described in Section 3 calls for the comparison of each person's responses during the pre-implementation phase to that person's responses during the post-implementation phase as a first step in the data analysis. The data collected in this first step of analysis are not made public, but since the data are handled by the evaluators, certain procedures have to be followed to ensure that the privacy of individuals and the confidentiality of their answers are respected.

The recommended procedure to maintain total confidentiality is to request that respondents create their own code[5] by answering the following questions:

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4 The models for these analyses may be found in any parametric statistical manual.

5 This method was adapted from a similar method used by the Program Evaluation Division, Department of Communications.

(a) In what month were you born? Please enter the number corresponding to the month.

___ ___

(b) What are the last two letters of your *mother's first* name? Please print in clear block letters.

___ ___ LAST TWO LETTERS

(c) What are the last two letters of your *father's first* name? Please print in clear block letters.

___ ___ LAST TWO LETTERS

(d) What are the last two letters of your *mother's maiden* name? Please print in clear block letters.

___ ___ LAST TWO LETTERS

The personal code is made up of these eight characters.

With this procedure, it is possible to match questionnaires without knowing who the respondent is. If the participants are requested to transfer their personal code to the logs, the logs also become confidential. The only inconvenience of this procedure is that, if the questionnaires and logs are not filled in and returned, it is impossible to make an individual appeal to the participants to do so.

Without individual follow-up, the number of completed questionnaires which are returned will be significantly less. With a large group of participants (over 100), the evaluator might decide to favour total confidentiality over having all the questionnaires returned.

With a small group of participants, all the participants have to contribute to the evaluation in order for the statistics to be meaningful.

For this situation, another method has been designed.

- The first three pages of the questionnaires are stamped with a number.
- Respondents are required to write their names on the second page and return them to the evaluators separately from the completed questionnaire. (In this way, if questionnaires are lying about in the evaluator's office, the originators cannot be identified since there is only a number on them.)
- All the names with their corresponding numbers are kept in a locked cabinet separate from the completed questionnaires.

- During the post-implementation phase, the questionnaires to be filled in are forwarded to the participants with their assigned numbers.

- As soon as all the questionnaires are returned, the names with their corresponding numbers are destroyed.

- As soon as the evaluator's final report is completed, all the filled in questionnaires are destroyed.

This method does not ensure total confidentiality since at least one evaluator has access to the names. It requires participants to have faith in the evaluator's professional ethics. In return, the evaluator never uses an individual as a case-in-point.

The advantage of this method is that the evaluator can make a personal appeal to individuals to return their completed questionnaires and logs.

4.2 Distribution of Questionnaires and Logs

It can be very tedious to schedule and meet all participants and explain to them on an individual basis the implementation and evaluation process.

The most efficient method is to plan some time at the end of the official presentation on the implementation when participants are informed about the evaluation. Since the pre-implementation questionnaire takes only a few minutes to complete, users should be requested to fill it in immediately. They should also be requested to start filling in the logs the very next day. The next day, the participants should be reminded by a phone call to start completing their logs (a task they will be performing for five days, all consecutive if possible). To give more incentive to the participants to complete the logs, the logs should be collected every day. Depending on the number of presentations and the number of people scheduled to attend each presentation, the pre-implementation data collection can be completed fairly rapidly.

The post-implementation data collection starts with the distribution of the questionnaires and logs to the participants. It will be followed by a VMS message to all users to remind them of the day when they should start filling in the logs and another VMS message on that day.

4.3 Use of Control Groups

Those who have already conducted evaluation research are probably wondering at this moment if a pre- and post-implementation comparison is an adequate measure of change. If the post-implementation data collection is carried out during a different period of the fiscal year than the pre-implementation data collection, how can we be sure that the change in telephone communications is not due to a change in the workload instead of being caused by the introduction of the VMS?

In a previous study, we were confronted with the same question. The solution was to compare a small group of people using VMS with a similar-sized group not using VMS, based on logs filled in during the same week. In this case, the difference between these two groups was similar to the difference recorded between the pre- and post-implementation data for all the participants.

Therefore, it is recommended that during the pre-implementation phase, such a control group be identified and integrated into the whole process. In order to achieve this, two groups of ten people, each group having a similar number of calls, messages, etc. should be identified from the pre-implementation logs. One group of ten people will have access to the VMS along with the rest of the participants. The other group will not receive the VMS and will be retained as the control group.

5. FOR MORE INFORMATION

If you would like more information about VMS or extra copies of these guidelines, please contact your local Government Telecommunications Agency (GTA) consultant.

AUTHOR'S NOTE

As you may have noticed while reading this guide, the recommendations apply specifically to the implementation of a voice messaging system, but the evaluation procedures may be extended to other systems.

Eventually, there may be other guides produced by the Government Telecommunications Agency in the office automation implementation and evaluation fields. Meanwhile, if you develop new methods of evaluating the impact of a voice messaging system on office productivity and would like to share the information, this guide could be revised to contain this new information.

ANNEX A

TELEPHONE CALLS/MESSAGES LOG

This log was prepared by:

Maria M. Morin, Ph.D.
Division of Development and Engineering
Government Telecommunications Agency
Department of Communications

1988

TELEPHONE CALLS/MESSAGES LOG

Instructions

This log is part of the evaluation process of the voice messaging system.

The log is designed in such a way that, for every call you make or receive, you go down the nine sections; you have to choose one alternative in every section as described below:

1. If you *place or receive* a call and the contact is established on the first trial, please select an alternative in each section, from Sections 1 to 6.

2. If you *place* a call and the called party doesn't answer, select an alternative in each section, from Sections 1 to 8.

3. If you *receive* a call but are not there to take it, and a message is left for you, select an alternative in each section, from Sections 1 to 3 and from Sections 5 to 9.

There are spaces for up to 15 calls per sheet. If you make or receive more than 15 calls a day, please use a new sheet.

You will start filling in these logs tomorrow, and you will fill them in for five days, starting with a new sheet each day.

Don't forget to write down your personal code or number on as well as the date on each sheet.

Your responses will be used by the Department to evaluate the system's impact in the office. All data made public will be averaged across many individuals in order to guarantee the anonymity of the participants.

If you have any questions, you may call

_____

at _____.

Thank you for your co-operation.

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TELEPHONE CALLS MESSAGES LOG

REGISTRE DES APPELS OU MESSAGES TÉLÉPHONIQUES

IDENTIFIER
CODE D'IDENTIFICATION ▶

DATE ▶

DESCRIPTION	CALL NUMBER / NUMÉRO DE L'APPEL														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. TYPE OF CALLS / TYPE D'APPELS															
A call you make Un appel que vous faites															
A call you receive Un appel que vous recevez															
2. TRIAL / ESSAI															
Is it a returned call? Est-ce un appel qui est retourné?															
Original call Premier appel															
3. SOURCE / DESTINATION															
To/from within Department À/de l'intérieur du Ministère															
To/from outside Department À/de l'extérieur du Ministère															
To/from outside government À/de l'extérieur du réseau de l'état															
4. REASON FOR CALLING / MOTIF DE L'APPEL															
To request information Pour demander des renseignements															
To give information Pour donner des renseignements															
To discuss Pour discuter															
To negotiate Pour négocier															
5. TIMELINESS OF INFORMATION / TEMPS OPPORTUN POUR LES RENSEIGNEMENTS															
Information required immediately Renseignements requis immédiatement															
Information required for today Renseignements requis pour aujourd'hui															
Information required within the next few days Renseignements requis dans les prochains jours															
6. RESULT / RÉSULTAT															
Answer Réponse															
No answer Aucune réponse															
Line busy Occupé															
Wrong number Mauvais numéro															
Message left Message laissé															
7. MESSAGE TAKEN / MESSAGE NOTÉ															
Nobody answered telephone Personne n'a répondu au téléphone															
Secretary or colleague took the message Une secrétaire ou un collègue a pris le message															
Voice messaging system recorded the message Message sur système d'audio-messagerie															
8. MESSAGE CONTENT / CONTENU DU MESSAGE															
Name and number only Nom et numéro seulement															
Name and number and reason for calling Nom et numéro et motif de l'appel															
Name and number and complete message Nom et numéro et message complet															
9. MESSAGE RECEIVED / MESSAGE REÇU															
When did you receive the message after you were available? Quand avez-vous reçu le message après le moment où vous avez été disponible?															
within 30 minutes moins de 30 minutes															
within two hours moins de deux heures															
beyond two hours plus de deux heures															

ANNEX B

TELEPHONE MESSAGING SURVEY

PRE-IMPLEMENTATION[6]

This questionnaire was developed by:

Maria M. Morin, Ph.D.
Lucie Côté, M.Ps.
Division of Development & Engineering
Government Telecommunications Agency
Department of Communications
Ottawa, Ontario

October 10, 1986

6 **NOTE**

You could personalize this questionnaire by adding your department's logo on the front page.

If the questionnaire is to be filled in and returned at a later date, insert in the Instructions the name and the address of the person to whom it should be returned.

TELEPHONE MESSAGING SURVEY

PRE-IMPLEMENTATION

This survey is part of the evaluation process of the voice messaging system that you will be receiving shortly.

We would like to compare each individual's attitudes and expectancies before and after the implementation of the system. You will therefore receive a similar survey after the implementation period.

We would ask you to write your name on this sheet, to detach it and return it separately from the survey. Your confidentiality will therefore be ensured, while allowing us to compare answers on an individual basis.

Your responses will be used by the Department to evaluate the system's impact in the office. All data made public will be averaged across many individuals in order to guarantee the anonymity of the participants.

Thank you for your co-operation.

NAME:

DEPARTMENT:

TELEPHONE MESSAGING SURVEY

PRE-IMPLEMENTATION

Instructions:

Read the question carefully. To rate a given question please circle the number that best describes it. For example:

Do you often use a hand calculator?

not at all 1 2 3 (4) 5 6 7 very often

A response of 4 on the frequency scale indicates that you have an average use for a hand calculator. Please use the extremes of the scales (i.e., 1 and 7) only if you think that it truly reflects your evaluation of this aspect.

Work rapidly through the questionnaire, without pausing more than a few seconds on each question and without returning to ones you have already completed.

1. On average, how many telephone calls do you receive each day?

   _____

2. How frequently are written telephone messages misplaced, illegible, and/or incomplete?

   not often 1 2 3 4 5 6 7 very often

3. Do you feel that you waste time returning telephone calls and leaving messages (telephone tag) because people you are trying to reach are unavailable?

   no time wasted 1 2 3 4 5 6 7 a lot of time wasted

4. How much use would you make of a feature which would enable you to leave a voice message with the person you are calling, when s/he is away from his/her desk?

   very little use 1 2 3 4 5 6 7 a lot of use

5. How much would you use a feature allowing you to retrieve voice messages any time, day or night?

   very little use 1 2 3 4 5 6 7 a lot of use

6. During an average day, what proportion of your incoming calls are from:

   Within your department _____ %

   Outside your department, but within the government _____ %

   Outside the government _____ %

7. When people are unable to reach you, do they leave a message to call back or leave a message with content? State approximate percentage in each case.

   Message to call back _____ %

   Message with content _____ %

8. Do you feel that people trying to reach you by phone would make use of the voice messaging capability?

very little use 1 2 3 4 5 6 7 a lot of use

9. What percentage of people trying to reach you do you feel would leave a message to call back or a message with content using the voice messaging facility?

Message to call back _____ %

Message with content _____ %

10. Do you receive complaints from people who find it difficult to reach you by phone?

never 1 2 3 4 5 6 7 very often

11. List the names of people in your department with whom you exchange many telephone calls each week and with whom you would like to leave voice messages.

Name	Division

ANNEX C

VOICE MESSAGING SURVEY

POST-IMPLEMENTATION[7]

This questionnaire was developed by:

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Division of Development & Engineering
Government Telecommunications Agency
Department of Communications
Ottawa, Ontario

July 14, 1987

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7 **NOTE**

This questionnaire is generic; it does not make reference to any specific system. You could revise the text and replace "the voice messaging system" by the specific name of the system.

Also, **question 20** should be revised. Either you should insert the command keys for your specific VMS system in the now empty parenthesis or you should remove the parenthesis along with the sentence "(The command keys are in parenthesis.)"

You could put your department's logo on the front page.

If the questionnaire is distributed by mail, insert in the *Instructions*, the name and the address of the person to whom it should be returned.

VOICE MESSAGING SURVEY

POST-IMPLEMENTATION

This survey is part of the evaluation process of the voice messaging system and deals specifically with the voice messaging feature of the system.

We would ask you to write your name on this sheet, to detach it and return it separately from the survey. Your confidentiality will therefore be ensured, while allowing us to compare answers on an individual basis.

Your responses will be used by the Department in order to evaluate the system's impact in the office. All data made public will be averaged across all individuals in order to guarantee the anonymity of the participants.

Thank you for your co-operation.

NAME:

DEPARTMENT:

VOICE MESSAGING SURVEY

POST-IMPLEMENTATION

Instructions:

Read the question carefully. To rate a given question please circle the number that best describes it. For example:

Do you often use a hand calculator?

not at all 1 2 3 (4) 5 6 7 very often

A response of 4 on the frequency scale indicates that you have an average use for a hand calculator. Please use the extremes of the scales (i.e., 1 and 7) only if you think that it truly reflects your evaluation of this aspect.

Work rapidly through the questionnaire, without pausing more than a few seconds on each question and without returning to ones you have already completed.

SECTION I — FORMAL PRESENTATION

A formal presentation was given before the implementation of the voice messaging system.

1. Did you attend that presentation?

   Yes _____ No _____ **(If the answer is "no", go to Section II)**

2. How would you rate the quality of that presentation?

   poor 1 2 3 4 5 6 7 excellent

3. How would you rate the quantity of information you got at that presentation?

   very little information 1 2 3 4 5 6 7 a lot of information

4. How would you rate the degree of your personal commitment in using a voice messaging system?

   Before the presentation

   no personal commitment 1 2 3 4 5 6 7 high personal commitment

   After the presentation

   no personal commitment 1 2 3 4 5 6 7 high personal commitment

5. Do you have any comments regarding the formal presentation?

SECTION II — TRAINING

Formal training was given either by the vendor or by departmental trainers/coordinators.

6. Did you receive formal training on the voice messaging system?

   Yes _____ No _____
   (If the answer is "no", go to Section III).

7. Who gave you your training on this system?

   Vendor _____
   Departmental trainers/coordinators _____
   Other — Name_____

8. How would you rate the training you received?

   poor 1 2 3 4 5 6 7 excellent

9. How would you rate the length of the training you received?

   too short 1 2 3 4 5 6 7 too long

10. How would you rate the support you got from trainers/ coordinators?

    poor 1 2 3 4 5 6 7 excellent

11. Which of the following statements would best fit your experience *after you completed the training* (if necessary, check more than one statement):

_____ I was able to use the voice messaging system efficiently without further help from the trainers/coordinators and the user's manuals.

_____ I was able to use the voice messaging system efficiently by consulting the user's manuals.

_____ I was able to use the voice messaging system efficiently after calling the trainers/coordinators once or twice.

_____ I was able to use the voice messaging system efficiently after calling the trainers/coordinators three times or more.

_____ I was never able to use the voice messaging system efficiently.

12. Do you have any comments regarding the training received on the voice messaging system?

SECTION III — SYSTEM USAGE

13. When did you obtain access to the voice messaging system? (Indicate the month.)

14. Have you used the voice messaging system on a regular basis after obtaining access to it?

    Yes _____ No _____

15. If you haven't used it on a regular basis, please state the reason(s).

16. Do you feel you have used the voice messaging system sufficiently to be able to answer questions about it?

    Yes _____ No _____
    (If the answer is "no", you may stop filling in the questionnaire.)

17. How would you rate the usefulness of the following:

    Prompts on the voice messaging system

    not useful 1 2 3 4 5 6 7 very useful

    On-line help on the voice messaging system

    not useful 1 2 3 4 5 6 7 very useful

    User's manuals

    not useful 1 2 3 4 5 6 7 very useful

    Summary of the voice messaging system's commands on the pocket-size card

    not useful 1 2 3 4 5 6 7 very useful

18. How would you rate the user friendliness of the voice messaging system?

Learning the voice messaging system

very difficult 1 2 3 4 5 6 7 very easy

Using the voice messaging system

very difficult 1 2 3 4 5 6 7 very easy

19. How would you rate the quality of the voice in the recorded messages left in your voice mailbox?

poor 1 2 3 4 5 6 7 excellent

20. How often did you use the following commands on the voice messaging system? (The command keys are in parentheses.)

Help ( )

very rarely 1 2 3 4 5 6 7 very often

Stop ( )

very rarely 1 2 3 4 5 6 7 very often

Skip backward ( )

very rarely 1 2 3 4 5 6 7 very often

Play ( )

very rarely 1 2 3 4 5 6 7 very often

Skip Forward ( )

very rarely 1 2 3 4 5 6 7 very often

Previous message ( )

very rarely 1 2 3 4 5 6 7 very often

Record ( )

very rarely 1 2 3 4 5 6 7 very often

Next Message ( )

very rarely 1 2 3 4 5 6 7 very often

Call sender ( )

very rarely 1 2 3 4 5 6 7 very often

Reply ( )

very rarely 1 2 3 4 5 6 7 very often

Play envelope ( )

very rarely 1 2 3 4 5 6 7 very often

Forward ( )

very rarely 1 2 3 4 5 6 7 very often

Reply all ( )

very rarely 1 2 3 4 5 6 7 very often

Compose ( )

very rarely 1 2 3 4 5 6 7 very often

Delete ( )

very rarely 1 2 3 4 5 6 7 very often

Send ( )

very rarely 1 2 3 4 5 6 7 very often

Log on ( )

very rarely 1 2 3 4 5 6 7 very often

Change greeting or record personal greeting ( )

very rarely 1 2 3 4 5 6 7 very often

Disconnect ( )

very rarely 1 2 3 4 5 6 7 very often

Go to a specific message number ( )

very rarely 1 2 3 4 5 6 7 very often

21. Does the present voice messaging system offer you all the features or commands you need from such a system?

Yes _____ No _____

22. If no, which features would you like to see added? Specify.

23. Which modifications would you suggest be brought to the present voice messaging system?

24. How would you rate the usefulness of voice messaging in your daily work?

not very useful 1 2 3 4 5 6 7 very useful

25. How would you rate the time saved by using the voice messaging system?

no time saved 1 2 3 4 5 6 7 a lot of time saved

26. How often did callers hang up after hearing all of your greeting message?

never 1 2 3 4 5 6 7 very often

27. Has anybody told you that your voice messaging system bothered them to the point of not leaving a message?

    Yes _____ No _____

28. Do you agree with the following statement: "People don't like to leave messages on voice messaging systems"?

    Yes _____
    No _____
    Somewhat _____

    Explain:

29. When people leave a message on your voice messaging system, what percentage leave

    Only their name and telephone number _____ %
    A message with content _____ %

30. In your opinion, is it worthwhile for government employees to have access to a voice messaging system? Explain.

31. Do you have any comments on voice messaging systems in general or on the present voice messaging system specifically?