

# Cati Call Management

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## 1. Cati call management at Statistics Netherlands

In and around the Blaise system, the CATI-call management system has been developed over the last decades. At Statistics Netherlands the system is a helpful tool to schedule, perform and evaluate telephone interviews. Different units of Statistics Netherlands use the system for various purposes. The division 'Gegevensverzameling' or in English 'Data collection' uses the system to optimise the data collection process when doing phone interviews.

The interviewers at Cotel (Cati unit at Statistics Netherlands) get their phone numbers "served on a disk". There is no need to update paper lists of phone numbers manually. The Cotel management uses the system to schedule interviewers day by day and use the results to analyse how much time an average interview takes (including time consumed by dials that did not result in a response). The survey divisions use the Cati call management system to analyse non-response figures, and to evaluate if the non-response has been measured satisfactory. The engineers use the system to adapt the contents of dial screens and interviews to enhance the production of non-response statistics.

Different ways to look at the Cati management system

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	<u>involved units</u>	<u>using the system for</u>
A	Cotel	Phone interviewing
B	Cotel management	Scheduling - process guiding
C	Account management	Analysing interview time
D	Research	Analysing non-

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The table shows that there are more ways to use the Cati call management system.

## 2. Cotel interviewing

Within the Cotel department, the system makes life easy to the interviewers when making appointments and to handle other events when dialling a number.

### The dial screen.

When trying to call a respondent, the Cati system shows up with a call screen. This screen shows the phone number. The developers of the interview mostly put more information in the dial screen. For example, the name of a key person in an organisation, the name of an institution, an address or a town name. This information may help the interviewer to check if the dialled number is correct. It may help to find a specific person within an institution. The concrete information varies with the target groups of the interview.

Forms Answer Navigate Window Options Help		-OLD	16:22
[■] Make dial			
Dial menu		Zoom...	Help
(*) Start interview			
( ) Nobody home			
( ) Busy		Dial	OK
( ) Answering service			
( ) Disconnected		Edit	Cancel
( ) Fax/Modem			
Questionnaire data			
NieuwTnr	06-932-132		
Contact	Jimmy Goodfellow		
BezTel			
CorTel	BE		
Naam	FOOT LOCKER NETHERLANDS B V		
Plaats	4131 PN VIANEN ZH		
Opmerk	dat is de accountant		
F1-Help		RAPDET	
F10-Menu			

Usually the information in the dial screen contains the following information (if available) :

usual information in dial screens

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Person surveys

Phone number

Person or  
family name

Address

Town

Remarks

Original phone  
number

Firm/Institution  
surveys

Phone Number

Name of the  
firm/institution

Department

Person to contact

Address

Town

Remarks

Original phone  
number

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The phone number may be changed by the interviewer. This can not only be done in the dial screen, but also during the interview, when making an appointment. When interviewing institutions it is common practice to allow interviewers to change the name of the addressed person. For each survey, specific information can be added, for example, in a specific survey about financial reports they can add an extra phone number (for example the phone number of an accountant of a firm).

After dialling the number, the interviewer selects one of the options in the upper part of the screen. If the call is answered, the interviewer selects 'Start interview'. Non-response treatment and making appointments is handled in the interview (see below). If nobody answers the call, the interviewer does not start the interview but selects one of the following options in the call screen :

- Nobody home (when no one picks up the phone),
- Busy (when the line is used by another call),
- Answering service (when connected to an answering service),
- Disconnected (after a specific message of the telephone company),

- Fax or modem sound (after squeezed arias and digital ballads).

If one of these options is selected, the dial screen for the next phone number appears and the system updates the administration of this form, defining at what time the same number should be dialed again, or, that it does not have to be dialed again.

### Making appointments.

At the beginning of the interview period, the Cati-call management system creates and constantly updates a history file. In this file, each dial is a record.

After dialling a number of a possible respondent, the interview enters the interview. If the addressed person is not available for the interview at that time, the interviewer can make an appointment. To do so, he or she enters the 'appointment block' which by default is available in each Cati survey at Cotel, using the standard appointment screen of the Blaise system :

An appointment may vary from a concrete time (or part of day) and date to an appointment without any time or date (just should be called again). The selected options are updated in the system.

After specifying the appointment, in most of the surveys there is room to specify additional information, such as the name of the firm and the person that should be addressed for the interview, his or her personal phone number and remarks.

Forms Answer Navigate Window Options Help		-OLD δ 16:23
afspraak: 1/1		
<p>&gt;&gt;ENQ: hier kunt U eventueel een naam of een toestel-nr intikken waarnaar gevraagd moet worden bij de afspraak. &lt;&lt;</p> <p>Indien geen opmerking : Druk &lt;ENTER&gt;</p>		
Plaats	4131 PN VIANEN ZH	
Naam	FOOT LOCKER NETHERLANDS	
Contact	Jimmy Goodfellow	
NieuwTnr	06-932-132	
opmerk	dat is de accountant	
F1-Help Alt : X-Quit Alt-F1-Previous help F3-Close		RAPDET

The additional information is useful, for example in this survey, in which financial data are gathered. The addressed firm name may refer to an accountant. The name of the accountant may be added, his phone number and a remark, in this case possibly 'it's the accountant'. The fields may also be left empty.

After finishing this appointment block, the appointment have been stored in the data and when the time is right the form will automatically show up. The added information about the firm will be displayed in the dial screen (see figure 1).

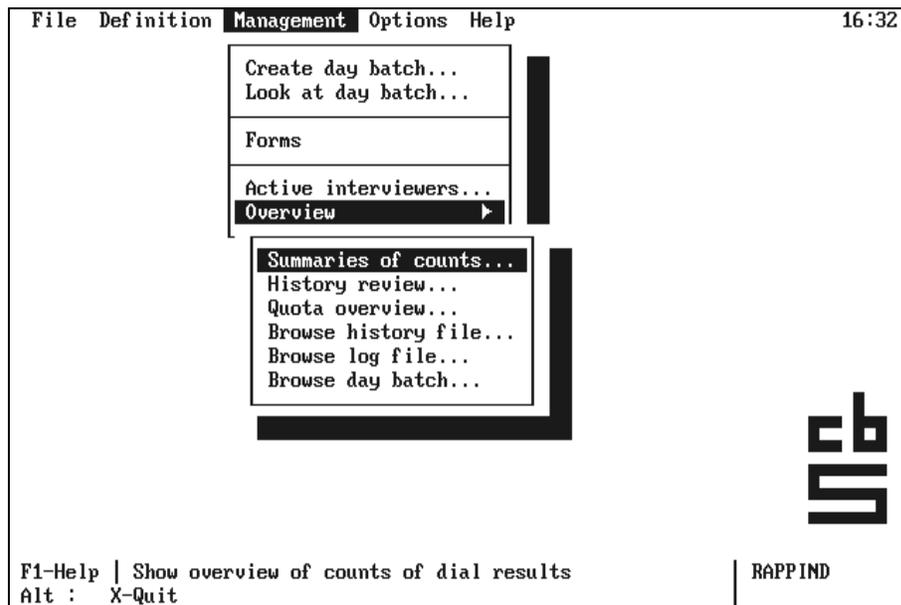
### Scoring non-response.

If, for whatever the reason is, an interviewee does not (any longer) participate in the interview, the non-response block will be activated by the interviewer. The interviewer will determine the reason for non-response. The non-response block shows a number of categories, such as 'refuses to corporate', 'language problem'. These categories are not the same in each survey. Apart from that, there is room for the interviewer to make a remark. After the non-response has been scored, it will automatically be updated in the call-management system and the person or firm will not be called again. The dial result, stored in the data is 'non-response'.

The system keeps track of the number of call-attempts in the *Cati call management system*. Additional information about non-response and appointments may be available in the *appointment block* and the *non-response block*, which are integrated in the interview. During the interview sessions, the system also updates a *history file* in which each dial result is a record. These components are the main ingredients for the Cotel manager and the analysts.

## 3. Cotel management

When the Cotel manager has started up his computer, the first thing to do is to check the results of the past day, and to prepare the day portion for today. This is done for every research separately. After that the over the current researches interviewers can be scheduled for the day. After that the manager is stand by when the interviewers are calling. It may be that a new research has to be installed for Cotel. In that case he checks whether the right options for Cotel are installed.



Depending on the realised response and the target response the Cotel manager concludes how many interviewers should be activated that day. The crucial information is available in the Cati management system. After selecting the "overview" option in the management menu, the following information appears :

Dial results		Appointments	
No call	622	No appointment	1036
No answer	311	No preference	32
Busy	7	Date and time	12
Appointment	68	Period and day part	31
Answering	105	Weekday and daypart	0
Not yet done	1113	Only period	2
Response	797	Only week day	0
Non response	82	Only day part	0
Disconnected	1		
Others	4		
Done	884		

F1-Help      A97\_EURO  
 F3-Open    F10-Menu

The manager prints these overviews for each survey, checks the planning and, makes up today's schedule for each survey and, if needed, activates the right number of interviewers.

#### 4. Account management

When a client (a research Division of Statistics Netherlands, or sometimes an external research lab) wants to use the facilities of Cotel at Statistics Netherlands, their will have to be made a calculation about the size of the job in terms of interview time. One reason is to make a adequate planning. The available number of trained interviewers must be appropriate to handle the job in a certain amount of time. The other reason is to calculate how much the data collection will eat from the clients budget. At first the impact on the interviewers capacity of a survey is calculated with an available method. Different question types take a different amount of time. If the number of questions is known, then the calculation can be done. Later on, when the interview is started, it may come out the interview times are more or less.

At Statistics Netherlands, the duration of one interview is available in two ways. First, the time the interviewer really is interviewing is measured in the questionnaire. Second, for each form, the overall time the interviewer spends in dialling a number, making appointments, scoring a non-response, repeated dialling and other events is available in the history file.

During the interview period, the Cati-call management system creates and constantly updates this history file. In this file, each dial is a record. For each dial, the key of an interview form, the used time and the dial result are available. Hence, for each form the number of dials and the overall consumed time is available.

For the account managers the second way of measuring time is important to answer the question: how much time does on average one interview

take. This is relevant for evaluating and updating the calculation method, getting a better picture of the amount of resources, required for the job.

## **5. Analysing non-response and the Cati process**

If the data entry part of a research has been completed, all dial results are available in the history file and the Cati call management block of the data file. The data enable the researchers to evaluate non-response. If they use the standard Blaise options, extended with a self-defined Non-response block, the data are available. At the end of a data collection period, there are more or less two administrations in the data.

The first is the Cati call management block. In this block, the dial results have been stored, including the scores for 'Nobody home', 'Busy', 'Answering service', 'Disconnected' or 'Fax or modem sound'.

The second is the Non-response block, designed by developers of the survey. In the non-response block, the interviewer can add a code for the reason of the non-response. The non-response block is part of the interview, and can only be activated if an interviewer has started the interview. Hence, if a 'busy' dial result was the last attempt, this cannot be present in the non-response block. However, the researchers often want these cases listed in the non-response statistics.

When analysing non-response, the researchers combines the two administrations to get non-response statistics. If we know that, literally none of the Cati-surveys at Statistics Netherlands have a similar non-response block, there is no standard tool to integrate these figures into a standard non-response-statistic. The expectations for the future are to pay some more attention to this topic of non-response statistics and to develop tools to increase the uniformity of non-response statistics, as used by the researchers in publications and by the data collection department to make trends in the non-response over all surveys more comparable.

## **6. New options for Cati-call management in Manipula**

New options in Blaise III and Manipulus make it possible to increase the amount of control over the interviewing process.

The following situation is not implemented at Statistics Netherlands, but nothing more than an idea for the future. So, what is this idea ? As already mentioned, the system creates and updates history files with dial results during the interview period. If the right tools are there, Manipulus enables you to read the history file after each call, and to control tools to signal if something is out of the ordinary.

Data can be read from the history file. The point here is that Manipulus (using additional tools) can update the day-batch. This can be very helpful when the desired response has not been reached and the number of interviews in the day batch should be increased (or vice versa).

Maniplus can control the tools that can signal the Cotel manager the status quo concerning the reached response. He or she can adapt his planning and take action earlier (for example, changing the schedule for the interviewers). Or, still more advanced, a tool (the algorithm is still unknown) may decide that the number of interview in the day portion should be increased or decreased, and update the day-batch.

If the right tools are there, Maniplus enables you to increase the amount of control over all surveys at once. For example, you could have a quick look at the response figures for all surveys at once, while, in the usual Blaise Overview, you can only look at one survey at the time.

At this moment time these options are only available in mind. Maniplus can help you to realise this type of tools.