

EQM Ltd

the people involved

Fault Log User Manual



External Quality
Management Ltd

Fault Log User Manual

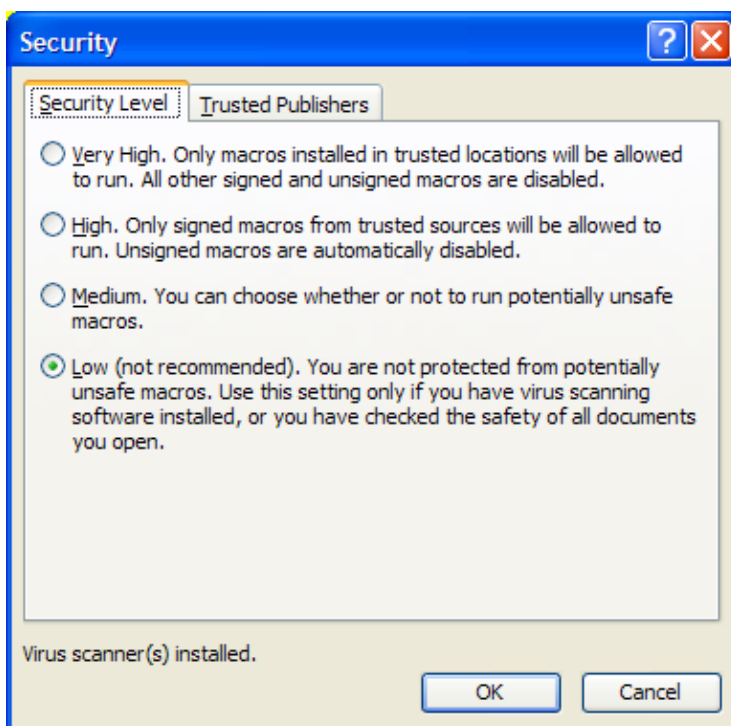
Introduction

The Fault Log.xls is a macro driven spreadsheet that will calculate the statistics of faults received in any given month. This User Manual gives instructions on how to use the spreadsheet to obtain the required reporting functionality.

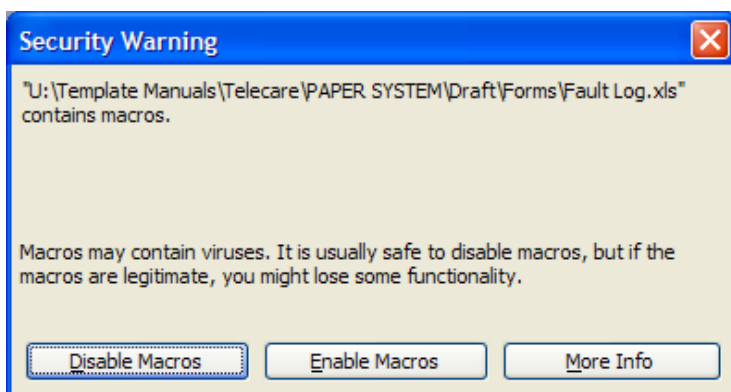
Getting Started

The spreadsheet is macro driven. However, Excel sees running macros as a potential threat to the integrity of the system and would rather macros were disabled i.e. not allowed to run. You have two choices:

1. Permanently enable macros. To do this, in Excel go to the "Tools" menu, select "Macros" and from the sub-menu select "Security". On the "Security Level" tab, select the "Low" option and press "OK".



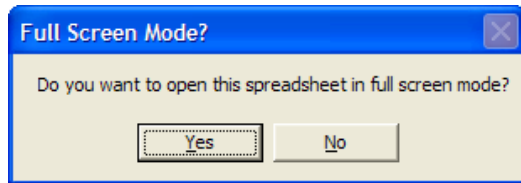
2. Enable macros on a session by session basis. To do this, leave the security setting at "Medium" and you will be presented with a warning screen when you open the Fault Log file. Then just select "Enable Macros" in the warning message.



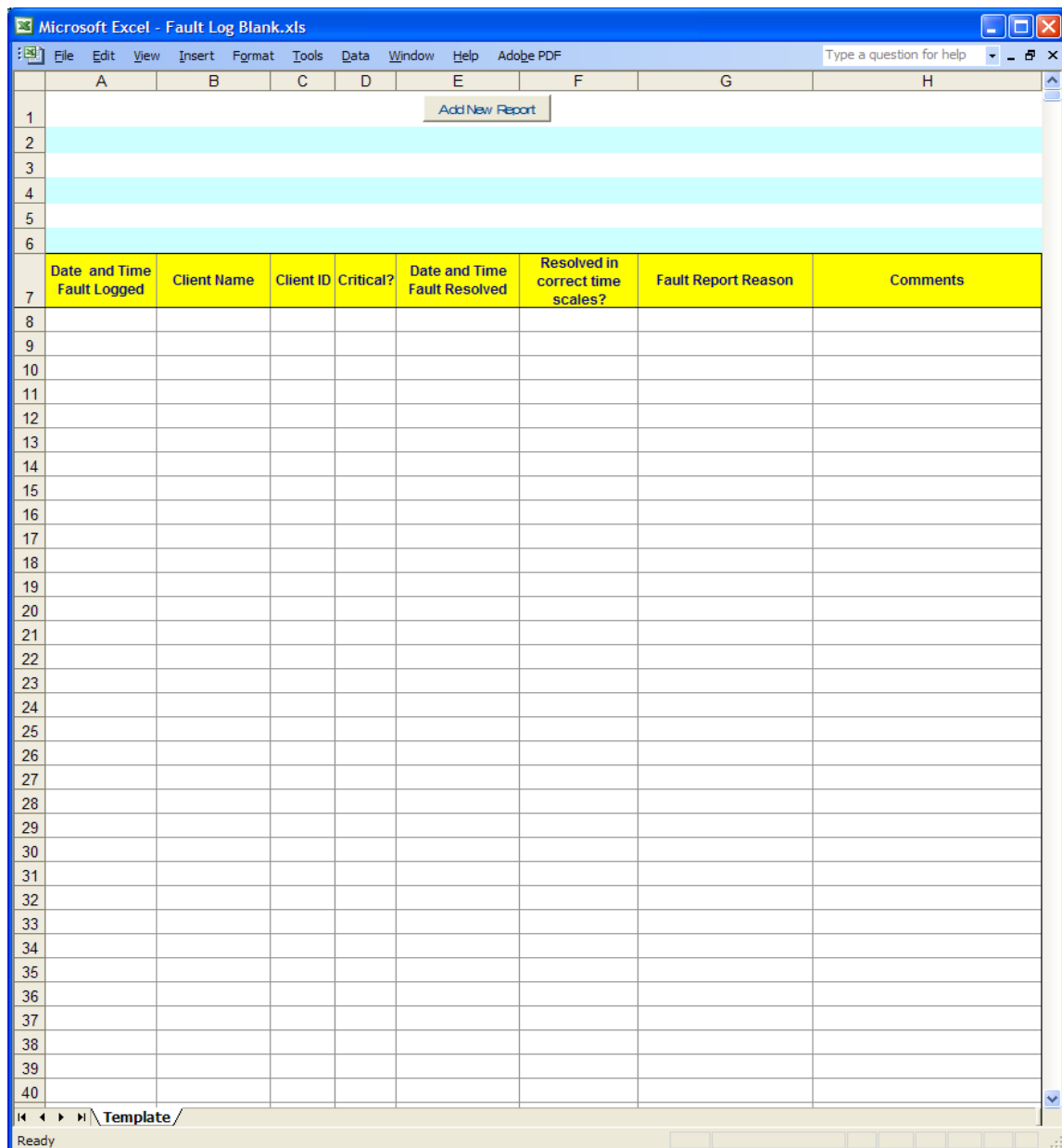
Fault Log User Manual

Note - Do not select the "High" or "Very High" security settings for the macros in your version of Excel as that would disable the macros and the functionality that you require in the Fault Log would not be available.

When you first open the spreadsheet you will be asked if you want to show the spreadsheet in full-screen mode. If your screen resolution is very high, it will look better in reduced screen mode so click "No". Otherwise click "Yes".



When the spreadsheet opens, it will look like this:



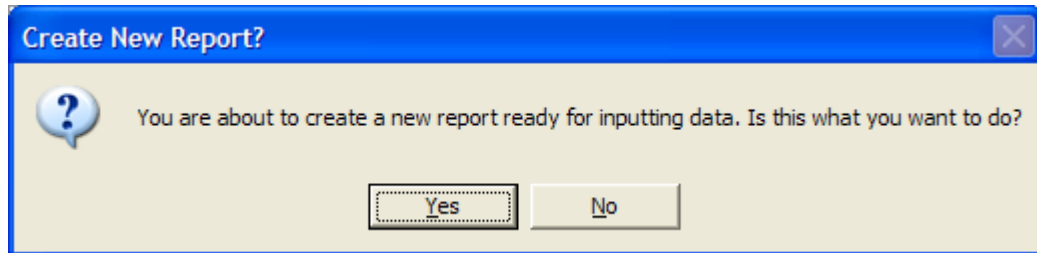
Fault Log User Manual

You cannot enter any information in the various cells as they are protected. All you can do is click on the button marked "Add New Report".

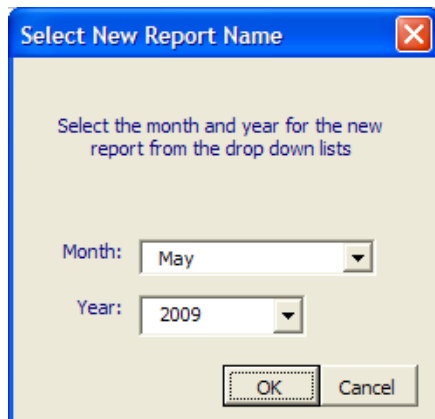
Creating a New Report

Clicking on the button "Add New Report" will allow you to create a similar sheet where you can enter all of the Fault Log information. Clicking this button also protects the worksheet and the workbook.

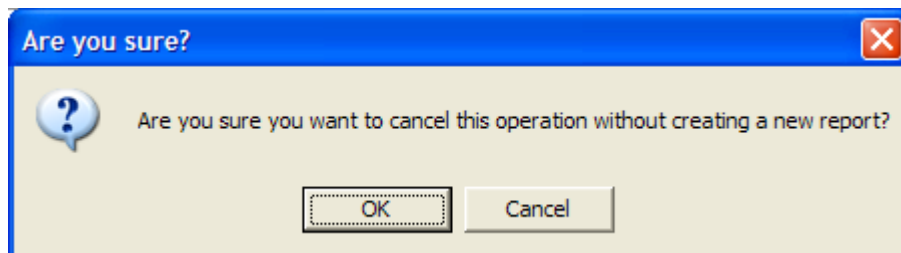
You will be asked whether you actually want to create a report:



Clicking "No" cancels the operation (in case the button was pressed in error). Clicking "Yes" takes you to a screen where you can denote the name of the "tab" for this report. It is envisaged that a new report will be started each month, so the tabs will be named by month and year. The system will always select the month and year of the month following the month in which you are carrying out this task but this can be changed from the drop down boxes.



Clicking on Cancel will cause a prompt to ask whether you really meant to cancel the operation.



Clicking on "OK" cancels the "Add New Report" operation and returns you to the "Template" tab. You will receive confirmation that the operation was cancelled. Clicking on the "Cancel"

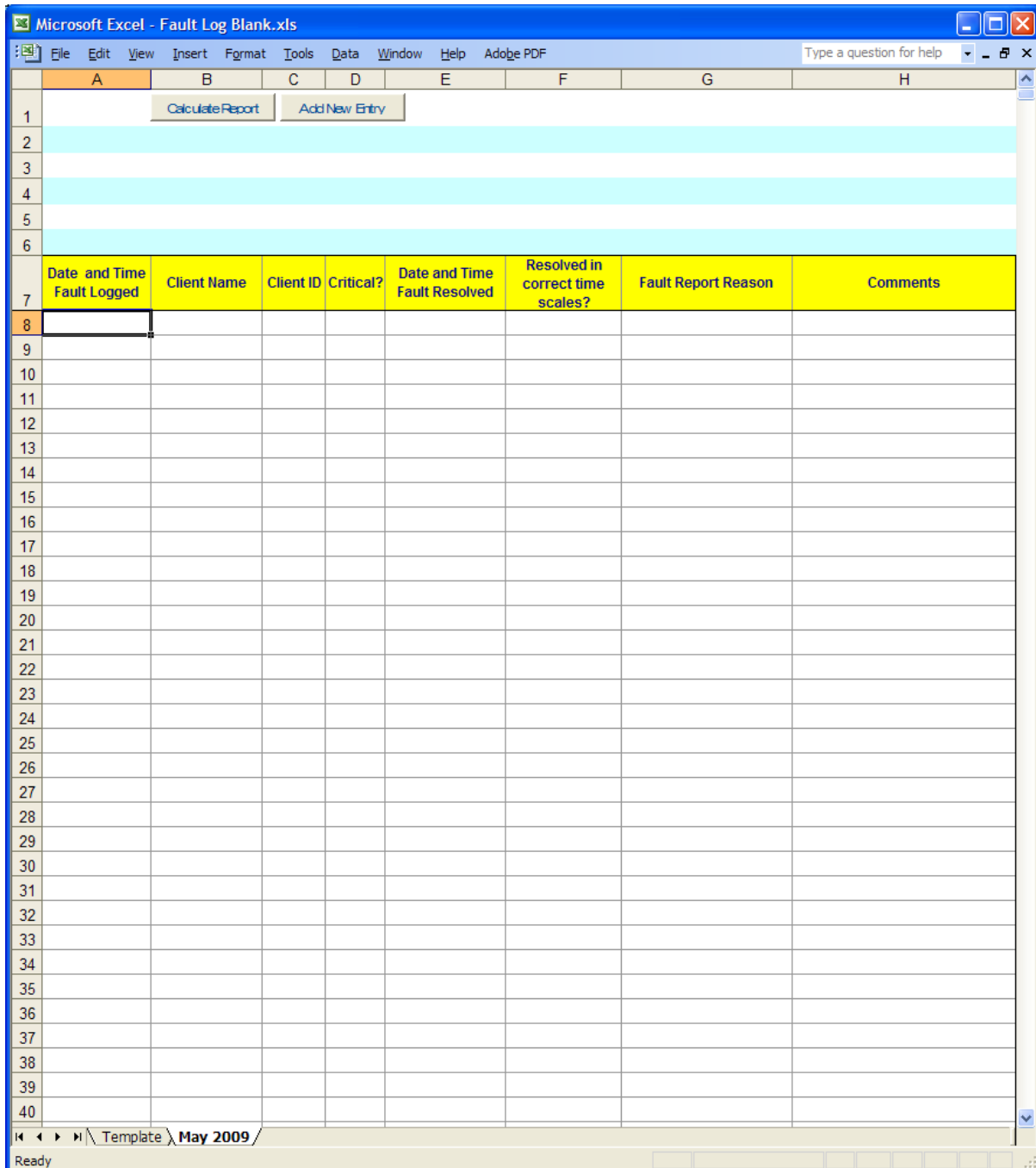
Fault Log User Manual

button cancels the cancelling operation and leaves you with the "Select New Report Name" box open.

With the "Select New Report Name" box open insert a Month and Year into the two boxes and click on "OK". This will create a new report and place it directly behind the "Template" sheet. Over time, this has the effect of pushing older reports further to the right. You have now created a new Fault Log Report to track all faults notified in the specified month.

Using the New Report

The new report looks like:



You can now populate the sheet with data in preparation for calculating the report analysis.

Fault Log User Manual

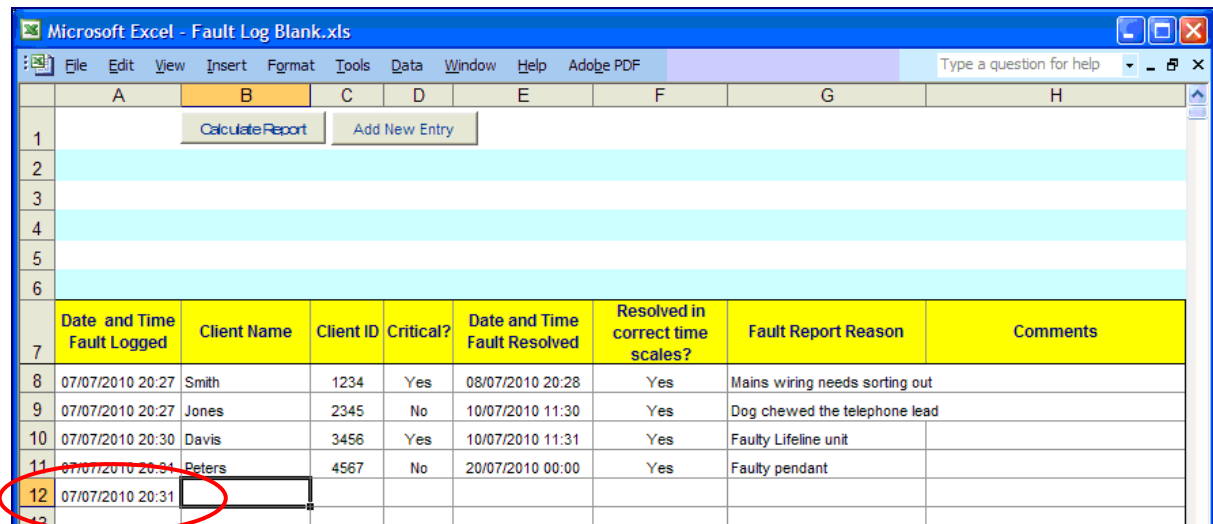
As faults are reported to you, it is very important that you enter the date and time into the "Date and Time Fault Logged" column in the format "dd/mm/yyyy hh:mm". This should be the time that the fault was made known to you. Then enter the Client Name and Unit ID into the next two columns and in "Critical?" column, indicate whether this is a critical fault or not by entering either "Yes" or "No".

You have a button to assist you with entering data into the sheet, the "Add new Entry" button.

"Add New Entry" Button

Creating a New Entry

- With the cursor in any cell, clicking on the "Add New Entry" button adds the current date and time, in the correct format, into the next empty cell in the "Date and Time Fault Logged" column and steps you one column to the right ready for data entry.



	A	B	C	D	E	F	G	H
1		Calculate Report	Add New Entry					
2								
3								
4								
5								
6								
7	Date and Time Fault Logged	Client Name	Client ID	Critical?	Date and Time Fault Resolved	Resolved in correct time scales?	Fault Report Reason	Comments
8	07/07/2010 20:27	Smith	1234	Yes	08/07/2010 20:28	Yes	Mains wiring needs sorting out	
9	07/07/2010 20:27	Jones	2345	No	10/07/2010 11:30	Yes	Dog chewed the telephone lead	
10	07/07/2010 20:30	Davis	3456	Yes	10/07/2010 11:31	Yes	Faulty Lifeline unit	
11	07/07/2010 20:31	Peters	4567	No	20/07/2010 00:00	Yes	Faulty pendant	
12	07/07/2010 20:31							
13								

Click on the "Add New Entry" button to enter the current system date and time in the next available row or scroll to the bottom of the data and place the cursor in the next available row and enter the date and time the fault is being logged. (It is important to add the date in the format: "dd/mm/yyyy" then press the space bar to add two spaces and then add the time in the format: "hh:mm").

Add the Client Name and the Unit ID in the next two columns, using the tab button to move across the row. Determine whether this is a Critical Fault or not. The TSA Code of Practice 2009 defines a critical fault as one where the failure of the telecare equipment could result in a life critical situation not being received by the Telecare Service Centre (Control Room). If this request fits this description, enter "Yes" in the "Critical?" column. Otherwise, enter "No" to denote that it is a non-critical fault. If the Client particularly requests an appointment be set at some future date, for example because of holiday plans or visiting relatives, etc. then enter any other designator into this field i.e. "CD" for "Client Deferred" or "NA" for "Not Applicable" - any combination of letters and characters will do as long as it is other than "Yes" or "No". Then add a reason into the "Notes" column i.e. "Admitted to hospital", "Cancelled - no reason given", etc.

Complete all other columns in that row by pressing the tab button to move to the next column and add the required data.

Fault Log User Manual

Updating an entry

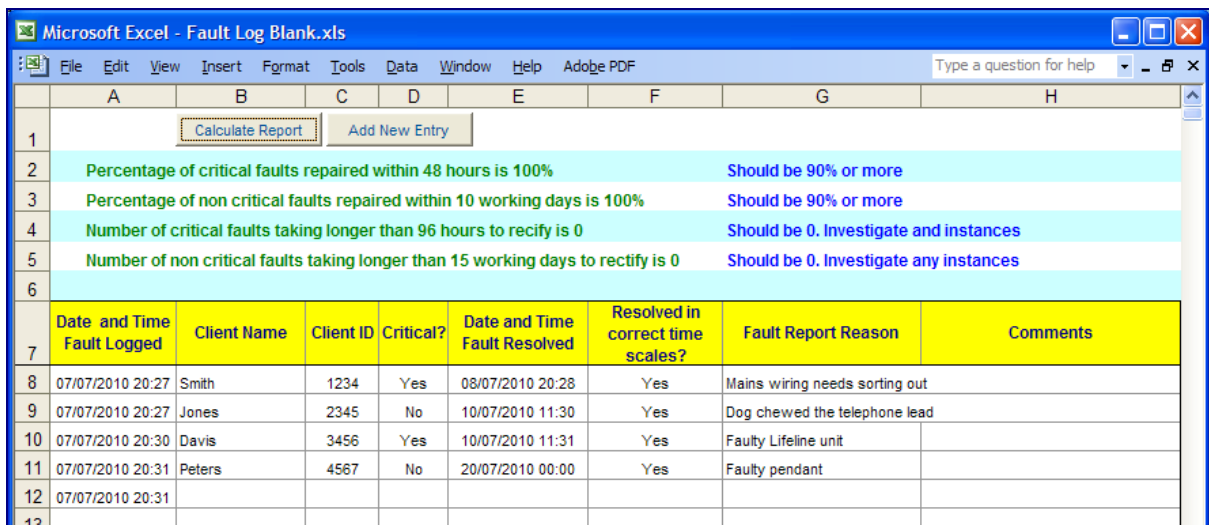
Once the date and time of resolving the fault are available, find the correct entry and input that data into the relevant column. The spreadsheet automatically calculates whether the fault was resolved in the correct time scales.

If the word "N/A" appears in the "Resolved in correct time scales?" column and you were not expecting it to, check that the entry in the "Critical?" column does not have a space before or after the word "Yes" or "No". (Anything other than "Yes" or "No" will produce an "N/A")

“Calculate Report” Button

The purpose of the foregoing data entry regime is so that you can track your compliance with regard to the number of faults that get rectified within certain time scales. To achieve that, simply press the “Calculate Report” button. Clicking the “Calculate Report” button protects the work sheet. Then a small program will run and it will compare the entries in the “Date and Time Fault Logged” column with those in the “Date and Time Fault Resolved”, using the information in the “Critical?” column and present the results of various analyses at the top of the report. You do not need to wait until the end of the month to do this, as the report now created will overwrite any earlier reports. Just before the end of the month, create next month’s blank report by going to the Template sheet and clicking on the “Add New Report” button.

After the end of this month, calculate this month’s report. This should be the final version of the report and it should not change, as no further entries should be added to this sheet.



The screenshot shows a Microsoft Excel spreadsheet titled "Fault Log Blank.xls". The spreadsheet has columns A through H. Row 1 contains buttons for "Calculate Report" and "Add New Entry". Rows 2-6 contain summary statistics:

- Row 2: Percentage of critical faults repaired within 48 hours is 100% (green text) Should be 90% or more
- Row 3: Percentage of non critical faults repaired within 10 working days is 100% (green text) Should be 90% or more
- Row 4: Number of critical faults taking longer than 96 hours to rectify is 0 (green text) Should be 0. Investigate and instances
- Row 5: Number of non critical faults taking longer than 15 working days to rectify is 0 (green text) Should be 0. Investigate any instances

Row 7 is the start of a table with the following columns: Date and Time Fault Logged, Client Name, Client ID, Critical?, Date and Time Fault Resolved, Resolved in correct time scales?, Fault Report Reason, and Comments.

Date and Time Fault Logged	Client Name	Client ID	Critical?	Date and Time Fault Resolved	Resolved in correct time scales?	Fault Report Reason	Comments
07/07/2010 20:27	Smith	1234	Yes	08/07/2010 20:28	Yes	Mains wiring needs sorting out	
07/07/2010 20:27	Jones	2345	No	10/07/2010 11:30	Yes	Dog chewed the telephone lead	
07/07/2010 20:30	Davis	3456	Yes	10/07/2010 11:31	Yes	Faulty Lifeline unit	
07/07/2010 20:31	Peters	4567	No	20/07/2010 00:00	Yes	Faulty pendant	
07/07/2010 20:31							

The four elements to the report are:

1. **Percentage of critical faults repaired within 48 hours.** This figure should be above the percentage stated next to it. If so, it is shown in green otherwise it shows up in red.
2. **Number of critical faults taking longer than 96 hours to rectify.** This should be zero. If so, it is shown in green otherwise it shows up in red.
3. **Percentage of non-critical faults repaired within 10 days.** This figure should be above the percentage stated next to it. If so, it is shown in green otherwise it

Fault Log User Manual

shows up in red.

4. **Number of critical faults taking longer than 15 days to rectify.** This should be zero. If so, it is shown in green otherwise it shows up in red.

The report should be printed off, preferably in colour. Any items showing up in red are to be investigated and the reasons for the shortfall should be explained in writing to the satisfaction of the Control Room Manager. (You may have a separate form for this purpose called an "Exceptions Report".) The explanation should also indicate the actions needed to prevent a recurrence of this shortfall in the future. These recommendations may be by action plan, corrective actions, list of things to do, written into the explanation document (exception report) or appended to the Fault Log by hand. The key thing is that correct control is exercised to ensure that the rectification actions are carried out and verified later as having been effective in closing down the original problem.

This explanation should be attached to the printed copy of the report and filed with it. The explanation should be signed and dated by the Control Room Manager to show that it has been reviewed satisfactorily. Then, it should be filed in a folder or drawer that is specifically for these reports. This makes the records easily retrievable for audit and review purposes.

IMPORTANT NOTE

The formulae in this spreadsheet are dependent upon the Analysis Toolpaks being enabled in Microsoft Excel 2003. Go to the "Tools" menu, select "Add Ins" select the "Analysis Toolpak" and the Analysis Toolpak for VBA then press OK. Do not save the work sheet until after this has been done.

Other versions of Microsoft Excel may already have this feature enabled, but probably not.

OTHER NOTES

WHY THE VARYING TARGET PERCENTAGES?

The TSA Code of Practice states that the analysis should be carried out to ensure you are responding to fault reports to determine that you have enough resources available to support the Service Users using your service. It states "in 9 out of every 10 cases", which has commonly been accepted as 90%. However, that is not the case. If you only have one fault reported in a given month and your target is "9 out of every 10", this means that you could legitimately not achieve that target time and still be compliant. To achieve compliance with two requests, you must hit the target at least once and so the percentage skyrockets to 50%. The sliding scale for percentage achievement against actual numbers for fault requests is shown at Appendix A. These are the percentages that are taken as the targets for the monthly achievement figures and to determine compliance.

A GOOD ROUTINE

It is recommended that you create a copy of the "Fault Log Blank.xls" and rename it to "Fault Log Live.xls". Then follow the routines below on the live version of the spreadsheet.

After a period of time, when there are thousands of entries in it, the spreadsheet will take longer and longer to open. At that point, simply rename the existing live file to include

Fault Log User Manual

"Archive 01" in the file name or dates such as "2010 to 2012". Then create a copy of the "Fault Log Blank.xls" and rename it to "Fault Log Live.xls". Then follow the routines above on the new live version of the spreadsheet.

PROTECT ME

This spreadsheet needs to be protected in order for the automated functionality to work correctly. However, as it is your spreadsheet, you may have a need to change the spreadsheet from time to time. To access this spreadsheet's protected areas, unprotect the worksheets using the password "12345qwertasdfgzxcvb". When finished with your changes go to the "Template" page and press the "Add New Report" button. This applies all of the protection to the worksheet and the workbook. When asked if you want to create a new report, click on the "No" button and then save the worksheet to save your changes.

HOW IT'S DONE

The formula used in the "Resolved in correct time scales?" column is calculated using the Networkdays function in Microsoft Excel. Networkdays calculates the net working days between two dates. The problem is that it doesn't take working times into account. As an example, if the date and time in cell A1 is "10/05/2010 23:59:59" (a Monday) and the date and time in cell B1 is "11/05/2010 00:00:01" (i.e. two seconds later) the formula Networkdays(A1,B1) would give the answer of 2. Clearly, this is incorrect.

To get the answer we want, we must assume that the service being offered can be continued on a 24/7 basis. Therefore, we use the above formula and subtract 1 from the total. However, if the date and time in cell B1 is smaller than the date and time in cell A1, then we must also subtract 1 day from the total. To do that and assuming for this example that the limit we are monitoring is 5 days, we use a formula that looks more like this:

```
=IF(NETWORKDAYS(A1,B1)+((B1-A1)-INT(B1-A1))-  
(IF(Time(HOUR(A1),MINUTE(A1),SECOND(A1))>TIME(HOUR(B1),MINUTE(B1),SECOND(B1)),2,1))>5,"No", "Yes")
```

This gives a "Yes" if date and time in cell B1 is less than 5 days (and 0 seconds) later than the date and time in cell A1 otherwise it gives a "No". The (B1-A1-INT(B1-A1)) part of the formula adds in the "part" of a day difference between the two date-times. This does not equate exactly to hours (although it could be made to do so), but it gets closer and closer to 1 as the time in cell B1 gets closer and closer to the time in cell A1. If the times are exactly the same (to the second) then this part of the formula equates to zero and as the time in B1 gets greater with the passing of time, the differential increments from zero to 0.99999.

The formulae in the spreadsheet are a little more complicated than this example. One simplification is that the dates in column A and column E can be subtracted from each other to give a number equivalent to the number of days between them. This takes into account the hours and minutes as well. This means that the simple IF(E8 - A8 > 2 is true for 2 days and One second and false for 1 day 23 hours 59 minutes and 59 seconds. This is a bonus that the spreadsheet works exactly as we would have wanted. The actual formula used in the Fault Log looks like:

```
=IF(COUNT(A8,E8)>1,IF(D8="", "", IF(D8="Yes",IF(E8-A8>2,"No", "Yes"), IF(D8="No",  
IF(NETWORKDAYS(A8,E8)+(E8-A8)-INT(E8-A8)-(IF(TIME(HOUR(A8),MINUTE(A8),
```

Fault Log User Manual

SECOND(A8))>TIME(HOUR(E8),MINUTE(E8),SECOND(E8)),2,1))>10,"No","Yes"),"N/A"))),"")
)

Similar techniques have been used in the programme script to calculate the report based on workdays rather than just days.

Copyright Notice

This User Manual and the spreadsheet to which it refers is the work of Andy Galloway of External Quality Management Ltd, Southampton SO19 4DJ, England. T: 023 8044 0866.

Please feel free to share this spreadsheet with friends and colleagues. However, please also ensure that a copy of this User Manual always accompanies the associated spreadsheet.

Copyright © External Quality Management Ltd.

Appendix A - Achievement Targets

Fault Log User Manual

Actual Quantity of Events	Min Target to comply	Compliant %		Actual Quantity of Events	Min Target to comply	Compliant %
1	0	0.00%		31	27	87.10%
2	1	50.00%		32	28	87.50%
3	2	66.67%		33	29	87.88%
4	3	75.00%		34	30	88.24%
5	4	80.00%		35	31	88.57%
6	5	83.33%		36	32	88.89%
7	6	85.71%		37	33	89.19%
8	7	87.50%		38	34	89.47%
9	8	88.89%		39	35	89.74%
10	9	90.00%		40	36	90.00%
11	9	81.82%		41	36	87.80%
12	10	83.33%		42	37	88.10%
13	11	84.62%		43	38	88.37%
14	12	85.71%		44	39	88.64%
15	13	86.67%		45	40	88.89%
16	14	87.50%		46	41	89.13%
17	15	88.24%		47	42	89.36%
18	16	88.89%		48	43	89.58%
19	17	89.47%		49	44	89.80%
20	18	90.00%		50	45	90.00%
21	18	85.71%		51	45	88.24%
22	19	86.36%		52	46	88.46%
23	20	86.96%		53	47	88.68%
24	21	87.50%		54	48	88.89%
25	22	88.00%		55	49	89.09%
26	23	88.46%		56	50	89.29%
27	24	88.89%		57	51	89.47%
28	25	89.29%		58	52	89.66%
29	26	89.66%		59	53	89.83%
30	27	90.00%		60	54	90.00%

To demonstrate percentage target to maintain compliance based on a criterion of “in 9 out of 10 cases”. This only equates to 90% when the total number of events is wholly divisible by 10.