

PhUSE 2007

Paper MT01

How to write and track Additional Requests using Excel/Word

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ABSTRACT

Over the life of a project, numerous output and data requests, which are not part of the SAP process, are made from people outside the statistics department. A process that defines and allows statisticians to track these additional requests is essential for quality assurance, project management and documentation. Roche Products Ltd has a defined process for Additional Requests and this paper highlights how a tool, using Excel and Word, manages the different aspects of the process.

INTRODUCTION

Additional requests range from producing one output, to producing dozens, or can include providing datasets or subsets of data. In each case a formal request has to be made to the statistician and needs to comply with the Roche Adhoc Request SOP. However the SOP doesn't cover where documents should be stored, how they should be named and doesn't provide a technical framework to track these requests. Individual projects manage this on their own. This paper covers what goes on afterwards, once the statistician and the client agree to what needs to be produced. This includes describing how requests are logged in a database to allow progress to be tracked, how to share information amongst team members and how to organize documentation. The database is saved in an Excel workbook and VBA macros are used to manage the different functions, which includes updating Word documents from Excel. These technical aspects are also covered in this paper.

ADHOC REQUEST PROCESS

The Adhoc Request process is covered by a SOP at Roche. The basics of the SOP are that any request from outside the statistics department must be written in a standard document and both parties must sign it. The document includes information such as delivery date, study name, requestor, project statistician and so on. There are different versions of the document indicating what state the request is in.

1.0: means the request is signed by both parties and is ready to be produced.

2.0: means the request has been delivered to the client and the client confirms that the request meets their requirements.

There are other stages but this is outside the scope of the paper.

The purpose of using a standard document is :

- to avoid losing request information in Emails
- the signature indicates both parties know and agree to what is produced and when it should be delivered
- to provide enough information that the programmers know what is requested

However the SOP doesn't cover where documents should be stored, how they should be named and doesn't provide a technical framework to track these requests. Individual projects manage this on their own.

The following sections describe how a particular project manages this process with the help of the Adhoc Request Tracking Tool (ARTT)

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DIRECTORY AND FILENAME STRUCTURE

The programming/statistic teams are split between efficacy and safety. As such each request is either a safety or efficacy request and is stored in different sub-directories.

Each request created has its own sub-directories. The sub-directory and the request document name are identical.

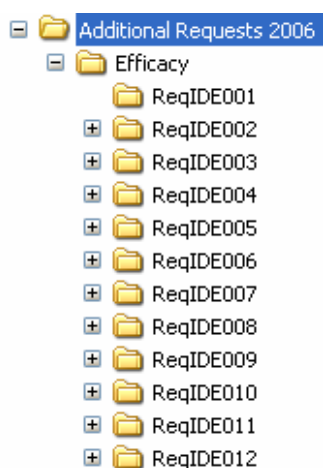
ReqID: Request ID

Letter: E for Efficacy, S for Safety

Numbers: Unique number within project

The sub-directory and document are created by ARTT.

Example:



(only efficacy requests are shown here)

In the sub-directory ReqIDE001, there is the request document, ReqIDE001.doc but may also contain previous versions of the document. This is at the discretion of the statistician.

Although ARTT uses a network drive, statistician copy sub-directories to shareweb or RAPID once the request has been agreed. This complies with another Roche SOP which states that changes to documents need to be tracked and documented.

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MODIFIED ADHOC REQUEST TEMPLATE

The standard template is modified and the text “&&xxxx” is added. This allows ARTT to communicate with the document. The special text is replaced by appropriate information entered by the user (usually the statistician) in ARTT. This information is particularly useful for information sharing, tracking and documentation summary. The rest of the template contains request specifics (section B and C), such as output shells with titles and footnotes.

A. SUMMARY OF INITIAL REQUEST

1. Project Number (Project name)	2. Request ID Number	3. Version number*	4. Requestor
PHuse	&&ID	0.1	&&AUTHOR
5. Protocol Number(s)			&&PROTO
6. Date request submitted			&&DATREQ
7. When is the request needed?			&&DATDUE
8. What is the request?			
&&DESC			
9. Why is this request being made?			
&&SOURCE			
10. Attach the initial request in here			

B. Outline Report Object Requirements

* The version number for Initial Requirement Document is 1.0.
Any modification or changes version numbers 1.1, 1.2 etc. should be used.
The Final Requirement Document will use 2.0.

C. Agreement

Agreed Delivery Date

ARTT - WRITE ADHOC REQUEST

The ARTT is an excel workbook with macros and two sheets. The only document ARTT needs is the modified Adhoc Request Template described above.

The example below (sheet REQUEST_FORM) is the form used to write and log new requests. ARTT has no menu bar but instead there are buttons (in blue) that perform the different tasks.

To create a new request, the user clicks on “**New Request**” button. The request number is filled in automatically as well as the user name and the current date. The rest of the form is filled in as much as can be done at this stage. Usually the completion section is done later on.

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	A	B	C	D
1	Phase 2007 - Additional Request Form			
2	New Request	Save Request	Copy Request	  Goto Request  
4	ID Number	108		2. Request ID Number (Automatically filled in)
5	Date of Request	Monday 13 August 2007		6. Date request submitted (Automatically filled in)
6	Author of Document	passerax		Automatically filled in.
7	Author of Request			4 - Requestor
8	Due Date		(V)	7. When is the request needed?
9	Protocol Number		(!)	5. Protocol Number(s) WA17044 WA17045 WA17047
10				
11	Request Information		Help information	
12	Brief description of request			8. What is the request?
13	Source of Request			9. Why is this request being made?
14	Link to Request Details Document			Automatically filled in when the request is saved
15	Type of Request		(!)	Efficacy or Safety request ?
16				
17	Completion Information		Help information	
18	Assigned Programmer			Name of person(s) doing the request
19	Request Version		(!)	0.x=Draft, 1.0=Final, 1.x=Request Change, 2.0=Delivery accep
20	Date Completed		(V)	Date when the request is done and has passed QC
21	UNIX/MARS directory			Unix/MARS directory where the program is located
22	Program name(s)			Name of program(s) on unix
23	Location of Output(s)		(!)	Location of final output (RAPID/Shareweb/Unix/MARS/CD)

Once the request is filled in, the user clicks on “**Save Request**”. This will create a sub-directory and a word document with all the information entered. A hyperlink to the word document is created and the user can follow it to complete the request with further detailed information.

The excel workbook has to be saved as it also acts as a database.

DESCRIPTION OF REQUEST_FORM

The blue buttons perform certain tasks which are self-explanatory or are used to navigate between requests.

- Column A: brief description of information required to create, log, manage request
- Column B: user enters information in this column or uses drop-down menus to select options
- Column C: (V) indicates that a valid answer must be entered. Eg. a valid date.
(!) indicates that the user must select answer from drop-down menu
- Column D: Provides further information for the user on how to fill in the form. Numbers indicate the corresponding item of the standard request document.

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EXAMPLE OF A REQUEST

A. Summary of initial Request			
1. Project Number (Project name)	2. Request ID Number	3. Version number [*]	4. Requestor
Mabthera	67	1.0	Tim Toml
5. Protocol Number(s)			wa17042
6. Date request submitted			Wednesday 22 November 2006
7. When is the request need?			1st December 2006
8. What is the request?			
Repeat analyses of sharp-genart score, total erosion score and joint space narrowing score including ALL patients in the original ITT population (N=517) and using some conservative imputation methods.			
9. Why is this request being made?			
Answer CHMP questions for X-ray File			
10. Attach the initial request in here			
Questions attached however requests were thoroughly checked during a meeting.			
 U:\My Documents\ WA 17042\RSI Mabth			
B. Outline Report Object Requirements			
All the following should include all patients in the original ITT population (N=517) i.e. All randomised patients who have received any part of an infusion of study medication (excluding vial breakage patients and audit patients – see 24 week CSR DRAM for more details).			

ARTT - LOG ADHOC REQUEST

When the user clicks on “Save Request” the request is logged in the database. This is another sheet on the workbook called “**TRACKING**”. All the information entered is copied on this sheet.

The sheet structured in different sections:

REQUEST HEADER SECTION

Request Header					
ID Number	Date of Request	Author of Document	Author of Request	Due Date	Protocol Number
ID	D_REQ	WRITER	AUTHOR	D_DUE	PROTO
55	Friday 13 October 2006	willis18	Sarah Williams	11-Dec-06	HLS 4MSU
56	Friday 13 October 2006	willis18	Matt Cravetts	11-Dec-06	HLS 4MSU
57	Friday 13 October 2006	willis18	Matt Cravetts	26-Oct-06	wa17043

All the information

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REQUEST INFORMATION SECTION

Request Information			
Brief description of request	Source of Request	Link to Request Details Document	Type of Request
DESC	SOURCE	LINK	TYPE
Summary of rate of SAE's per 100 patient years	Additional request for the RMP from	ReqIDS055.doc	Safety
Produce all adverse events by treatment course and	additional request for the RMP requir	ReqIDS056.doc	Safety
Produce a summary of the duration of infections	Additional request to the RMP for the	ReqIDS057.doc	Safety

COMPLETION INFORMATION SECTION

Completion Information					
Programmer(s)	Request Version	Date	Unix directory	Program Name(s)	RAPID Location
LEAD	VERSION	D_COMP	UNIXDIR	UNIXPGM	OUTPUT
Deepshikha	2.0		cd11295y	AR_STinfer.sas	Clinical Other S
Paul/Dean	2.0		cd11295y	AR_*	Clinical Other S

COMMENTS SECTION

Comments
Any Other Comments
COMMENT
Creates ANA.AE2 (version of ANA.AE1 with LLT added).

No particular protection/security exists on the workbook and cells can be modified by everybody. The precaution is to save all documents in a secure area for backup purposes on a regular basis. If word documents are modified then ARTT has to be modified manually.

ARTT - TRACK ADHOC REQUEST

A new request has been logged and the statistician informs the lead programmer (LP) that it needs to be dealt with. ARTT is used to find the information about the request and the LP enters information regarding the technical aspects of the request. They then dispatch the work to a programmer.

While the programming is ongoing ARTT doesn't change. Once the request has passed QC, ARTT will be updated and the statistician will be informed.

If there are many requests overlapping the TRACKING sheet can be used to manage resources and set priorities.

ARTT - SHARE ADHOC REQUEST

An important aspect of ARTT is to share information amongst statisticians and programmers working on the project. The TRACKING sheet can be used to search for previous requests, to delegate work, to know the status of all requests on the project at a particular time.

The filters in excel can be used to search for groups of requests, such as requests written by a person.

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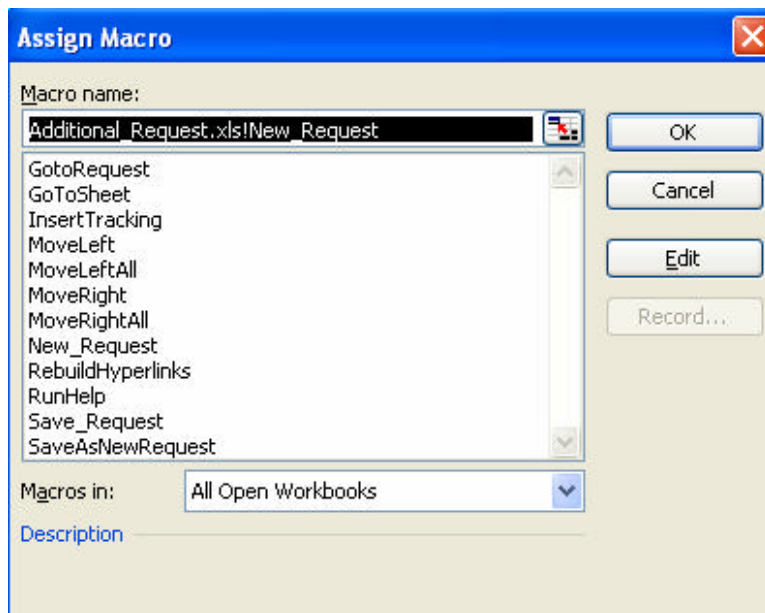
TECHNICAL ASPECTS

VBA is used to perform tasks in ARTT. Creating basic VBA macros can be done using the macro recorder function in Excel or Word. Press ALT-F11 and the actual code can be seen. Learning about VBA functions can be done using the VBA help and this is most useful for syntax checking and examples. But the internet is best for searching “how to do this and that”.

This section goes through a few macros used.

NEW REQUEST

This button is created using the Drawing toolbar.
Right-click on the button and click on “Assign Macro”



This button is linked to the macro New_Requests which performs a certain task. It clear the cells in REQUEST_FORM and fills in rows 4 to 6

```
Sub New_Request()  
' *****  
' Author      : Xavier Passera  
' Name        : New_Request  
' Date        : 31 August 2005  
' *****  
Dim i          As Integer  
Dim iMaxRow    As Integer  
  
'*** Clear Request Form ***  
Worksheets("Request_Form").Activate  
For i = 5 To 24  
    Cells(i, 2).Value = ""  
Next i
```

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```
'*** Get new request ID number based on number of records in TRACKING ***  
iMaxRow = Worksheets("TRACKING").Cells(4, 1).CurrentRegion.Rows.Count - 3  
  
'*** Fill in rows 4 to 6 ***  
  
'*** New Request number ***  
Cells(4, 2).Value = iMaxRow  
  
'*** Todays date ***  
Cells(5, 2).Value = WeekdayName(Weekday(Date), False, vbSunday) & " " & _  
    FormatDateTime(Date, vbLongDate)  
  
'*** username. Usually windows log on name ***  
Cells(6, 2).Value = Application.UserName  
  
End Sub
```

SAVE REQUEST

This macro saves the request by copying the information in the TRACKING sheet, and fills in the word template. The template is saved as word document in a directory on the network drive. Finally, in Excel a hyperlink is created to the word file.

```
Sub Save_Request()  
'*****  
' Author      : Xavier Passera  
' Name        : Save_Request  
' Date        : 31 August 2005  
'*****  
  
Dim i          As Integer  
Dim iMaxRow    As Integer  
Dim sName      As String  
Dim sDate      As String  
Dim sText      As String  
Dim sRequest   As String  
Dim objFSO  
Dim sWDtemplate As String  
Dim WordMyDoc  As Object  
  
On Error Resume Next  
  
'*** Last row in Tracking sheet ***  
iMaxRow = Worksheets("TRACKING").Cells(4, 1).CurrentRegion.Rows.Count + 1  
  
'*** Check that Request ID number is within range ***  
If Cells(4, 2).Value > (iMaxRow - 4) Then Cells(4, 2).Value = iMaxRow - 4  
If Cells(4, 2).Value < 1 Then Cells(4, 2).Value = 1  
  
sName = "TRACKING"  
Worksheets("Request_Form").Activate
```

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```
'*** Due Date / Type of Request must be filled in ***
If Cells(8, 2) = "" Then
    MsgBox "Due Date must be entered to save the request"
    GoTo fin
End If
If Cells(15, 2) = "" Then
    MsgBox "Please select type of Request, either Efficacy or Safety"
    GoTo fin
End If

iMaxRow = Cells(4, 2).Value + 4

'*** Fill in TRACKING with information on REQUEST_FORM ***
With Worksheets("Request_form")
    Worksheets(sName).Cells(iMaxRow, 1).Value = Cells(4, 2).Value
    Worksheets(sName).Cells(iMaxRow, 2).Value = Cells(5, 2).Value
    Worksheets(sName).Cells(iMaxRow, 3).Value = Cells(6, 2).Value
    Worksheets(sName).Cells(iMaxRow, 4).Value = Cells(7, 2).Value
    Worksheets(sName).Cells(iMaxRow, 5).Value = Cells(8, 2).Value
    Worksheets(sName).Cells(iMaxRow, 6).Value = Cells(9, 2).Value
    Worksheets(sName).Cells(iMaxRow, 7).Value = Cells(12, 2).Value
    Worksheets(sName).Cells(iMaxRow, 8).Value = Cells(13, 2).Value
    Worksheets(sName).Cells(iMaxRow, 9).Value = Cells(14, 2).Value
    Worksheets(sName).Cells(iMaxRow, 10).Value = Cells(15, 2).Value
    Worksheets(sName).Cells(iMaxRow, 11).Value = Cells(18, 2).Value
    Worksheets(sName).Cells(iMaxRow, 12).Value = Cells(19, 2).Value
    Worksheets(sName).Cells(iMaxRow, 13).Value = Cells(20, 2).Value
    Worksheets(sName).Cells(iMaxRow, 14).Value = Cells(21, 2).Value
    Worksheets(sName).Cells(iMaxRow, 15).Value = Cells(22, 2).Value
    Worksheets(sName).Cells(iMaxRow, 16).Value = Cells(23, 2).Value
End With

'*** Directory path is stored in workbook properties ***
sText = ActiveWorkbook.BuiltinDocumentProperties.Item(18)

sDate = Year(Mid(Cells(8, 2).Value, InStr(1, Cells(8, 2).Value, " ") + 1))
sIDnum = Cells(4, 2)
For i = 1 To 3 - Len(sIDnum)
    sIDnum = "0" & sIDnum
Next i

'*** Store directory path and full filename in variables ***
sFolder = sText & sDate & "\" & Cells(15, 2) & "\ReqID" & Mid(Cells(15, 2), 1, 1) &
sIDnum
sFileName = sFolder & "\ReqID" & Mid(Cells(15, 2), 1, 1) & sIDnum & ".doc"

'*** Create object ***
Set objFSO = CreateObject("Scripting.FileSystemObject")

'*** Create Request Directory ***
If (objFSO.FolderExists(sFolder)) Then
    '*** Exists already, do nothing ***
```

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```
Else
    If (objFSO.FolderExists(sText & sDate & "\" & Cells(15, 2))) Then
    Else
        Mkdir sText & sDate & "\" & Cells(15, 2)
    End If

    Mkdir sFolder

End If

*** Create template, if not found ***
If (objFSO.FileExists(sFileName)) Then
    *** Exists already, do nothing ***
    objFSO.DeleteFile (sFileName)
Else
    *** location of request template ***
    sWDtemplate = sText + "2006" & "\" & "Request_template.doc"

    If Not (objFSO.FileExists(sWDtemplate)) Then GoTo fin

    *** Open word and load request template ***
    Set WordMyDoc = GetObject(sWDtemplate)
    WordMyDoc.Application.Visible = True
    WordMyDoc.Activate
    WordMyDoc.Application.Selection.MoveUp Unit:=wdLine, Count:=100000

    *** Search for "&&" ***
    With WordMyDoc.Application.Selection.Find
        .Text = "&&"
        .Forward = True
        .Wrap = wdFindContinue
        .Format = False
    End With

    *** Search for "&&" and replace word with information in REQUEST_FORM ***
    Do While WordMyDoc.Application.Selection.Find.Execute
        WordMyDoc.Application.Selection.MoveRight Unit:=wdWord, Count:=1,
            Extend:=wdExtend

        Select Case Trim(WordMyDoc.Application.Selection.Text)
            Case "&&ID"
                sRequest = Cells(4, 2).Value
                WordMyDoc.Application.Selection.TypeText Text:=sRequest
            Case "&&AUTHOR"
                sRequest = Cells(7, 2).Value
                If sRequest = "" Then sRequest = "Unknown"
                WordMyDoc.Application.Selection.TypeText Text:=sRequest
            Case "&&DATREQ"
                sRequest = Cells(5, 2).Value
                If sRequest = "" Then sRequest = "Unknown"
                WordMyDoc.Application.Selection.TypeText Text:=sRequest
            Case "&&DATDUE"
                sRequest = Cells(8, 2).Value
                If sRequest = "" Then sRequest = "Unknown"
                WordMyDoc.Application.Selection.TypeText Text:=sRequest
```

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```
Case "&&PROTO"
    sRequest = Cells(9, 2).Value
    If sRequest = "" Then sRequest = "Unknown"
    WordMyDoc.Application.Selection.TypeText Text:=sRequest
Case "&&DESC"
    sRequest = Cells(12, 2).Value
    If sRequest = "" Then sRequest = "NONE"
    WordMyDoc.Application.Selection.TypeText Text:=sRequest
Case "&&SOURCE"
    sRequest = Cells(13, 2).Value
    If sRequest = "" Then sRequest = "NONE"
    WordMyDoc.Application.Selection.TypeText Text:=sRequest
Case Else
    WordMyDoc.Application.Selection.TypeText Text:="(Text Not Found)"
    Exit Do
End Select
Loop

'*** Save word document and quit Word ***
WordMyDoc.Application.ActiveDocument.SaveAs Filename:=sFileName
WordMyDoc.Application.Quit
Set WordMyDoc = Nothing

End If

'*** Create Hyperlink to file in REQUEST_FORM ***
Cells(14, 2).Activate
ActiveSheet.Hyperlinks.Add Anchor:=Selection, Address:= _
    sFileName, TextToDisplay:="ReqID" & Mid(Cells(15, 2), 1, 1) & sIDnum & ".doc"

'*** Create hyperlink in TRACKING ***
Worksheets("Tracking").Activate
Cells(iMaxRow, 9).Activate
ActiveSheet.Hyperlinks.Add Anchor:=Selection, Address:= _
    sFileName, TextToDisplay:="ReqID" & Mid(Cells(iMaxRow, 10), 1, 1) & sIDnum & ".doc"

'*** Inform user that document has been created ***
Worksheets("Request_Form").Activate
MsgBox " Request #" & Cells(4, 2).Value & " has been saved"

fin:
'***
End Sub
```

CONCLUSION

Overtime a project has a number of outputs and data requests which are not covered in the SAP process. These follow the Adhoc Request process when it's defined. ARTT can be used with this process and help organize, manage and track these requests.

The key points are to define a directory structure, use a file naming convention, log and track the requests using ARTT. This system can be used to fit a SOP and provides valuable documentati on to people involved in the project.

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Lastly, it doesn't require extensive training or use pharmware, allowing information sharing accessible to everyone.

GLOSSARY

SAP	Statistical Analysis Plan. Document written by Statisticians describing how a study is to be reported
SOP	Standard Operating Procedure. Guidelines and rules governing processes for a company.
ARTT	Adhoc Request Tracking Tool. Excel tool used to manage requests
LP	Lead programmer. Programmer responsible for managing programming resources
VBA	Visual Basic for Applications. Microsoft Office programming tool.
Pharmware	Pharmaceutical company software that is proprietary and not easily shareable.

CONTACT INFORMATION

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