

REtool User Guide

for REtool version 1.9

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For a quick start, focus on bold text in the paragraphs marked with a green circle:

Table of Contents

On REtool	3	
Objectives of REtool	3	●
Using REtool to read and compare drafts	6	●
Using REtool to manage Review Comments	11	●
Searching comments.....	15	●
Entering Author Responses	21	●
Entering RE Annotations	24	●
Collaboration	26	
Generate a Review Comments spreadsheet for a colleague.....	26	
E-mail data base to a colleague.....	28	
Share a spreadsheet with a colleague.....	29	
Import a colleague's work into the master data base.....	30	
Managing histories	34	
Managing author histories.....	35	
Managing RE histories.....	38	
Making a backup	42	
Restoring your REtool data base	44	

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Importing from another REtool data base	47
Importing data via Pro mode	50
How to correct for a bad import?	55
Check internal consistency of your REtool data base	58
Resolving conflicts from redundancies (duplicates)	59
Analysing Comments	61
Finding comments via clipboard	63
Using shortcuts	64
Archiving REtool data	65

● This guide has been written in a modular manner. Each module comes in a separate section that can be consulted or read alone. If needed cross-references point at the other modules of the guide. Moreover, the green circles direct the reader at the most important aspects in an attempt to grasp quickly the essentials and hereby attempts to minimise the time needed to get going with REtool. Enjoy!

Last modification of this guide was made as of 9.Jul.2019

On REtool

REtool supports the management of review comments that accrue during the preparation of IPCC (Intergovernmental Panel on Climate Change) reports. It is highly specialised and designed for internal use by IPCC only. It was originally designed to support only the IPCC Review Editors (REs) in their work. This led to the name of the tool, 'REtool'. However, in its current version 'REtool' is designed such that it is useful for anyone handling IPCC drafts and review comments, notably Co-chairs and other Bureau members, REs (Review Editors), authors such as CLAs (Coordinating Lead Authors) or LAs (Lead Authors) and chapter scientists, as well as for TSUs (Technical Support Units). To this end REtool offers and knows three roles: RE, Author, and Other.

REtool is a freely available software that can be downloaded from its home page:



www.sysecol3.ethz.ch/REtool/

Objectives of REtool



REtool helps

- **to read Review Comments and IPCC drafts** (all roles)
- **to enter Author Responses to Review Comments** (authors)
- **to annotate Review Comments and Author Responses** (REs)
- **to analyze Review Comments and produce statistics** (all roles)



One particular strength of REtool is to help the user to immediately **jump to the passage in the draft**, which is referenced by a Review Comment.² REtool can do this not only for the draft to which the comment pertains, but also to a second draft, the so-called **comparison draft**. Say a comment pertains to a figure, then REtool allows you to jump not only to the original figure commented on, but also to the new figure in the next draft the authors have prepared in responding to the comment. A comparison can also be made backwards, i.e. you can jump directly to the old figure in the previous draft. Such comparisons can be done freely among any draft of an IPCC report, i.e. the ZOD³, FOD⁴, SOD⁵, and FGD⁶.

² Note, this feature is currently not available on iOS devices

³ ZOD stands for Zero Order Draft, sometimes also called Internal Draft

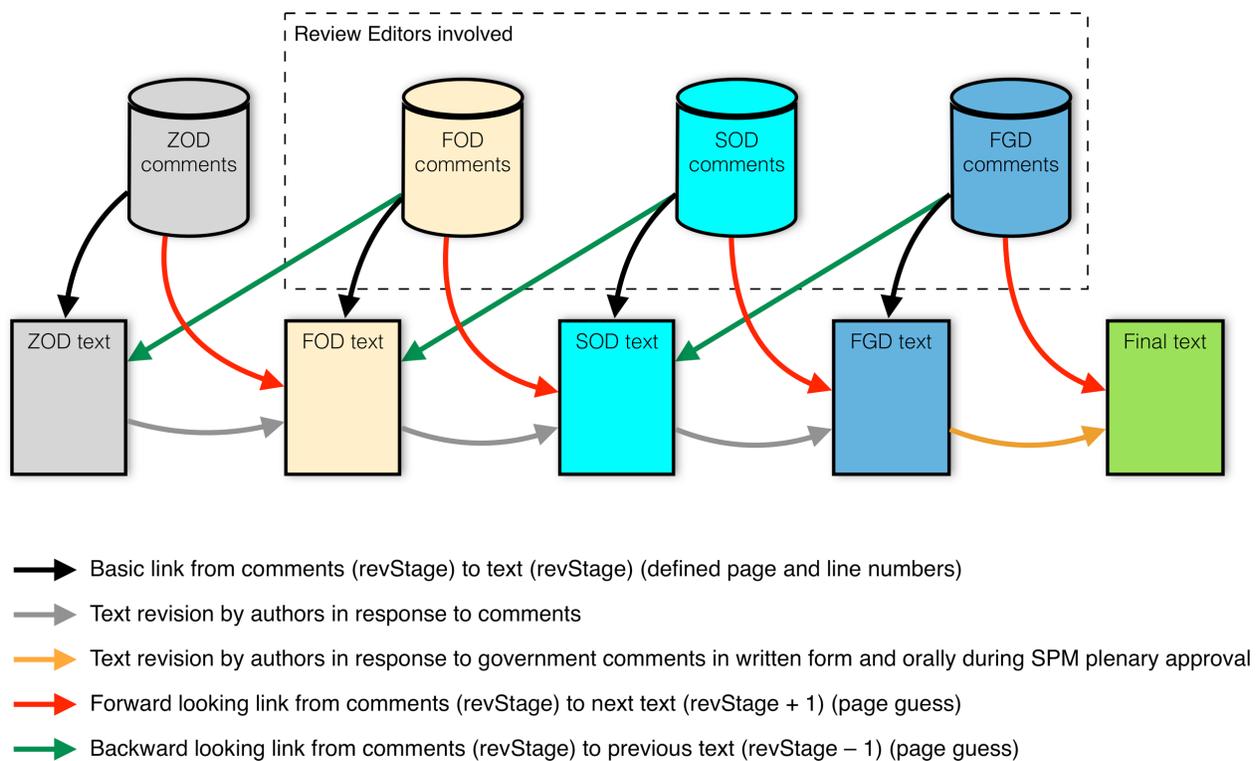
⁴ FOD stands for First Order Draft, also called Document for Expert Review

⁵ SOD stands for Second Order Draft, also called Document for Government and Expert Review

⁶ FGD stands for Final Government Draft

● Another strength of REtool is that it provides means of smooth **collaboration among team members**, may this be a team of REs or a team of authors as the drafting advances over the years. In general REtool provides a wealth of features and functions. It is highly flexible and can be customized to specific needs. All these features are too numerous to describe fully. Instead this guide describes typical uses and the most basics of the user interface to get quickly familiar with REtool. Pick and choose whatever you are interested in.

Finally note that REtool supports every stage of a draft preparation up to the final release. Hereby following overview may be helpful in understanding how an IPCC report is prepared and the workings of REtool:



REtool supports its users in all steps at all stages. It has been designed to accumulate and hold all review stages and work with all drafts for any particular IPCC report. However, it does not work with multiple IPCC reports at once. You need a separate REtool data base for each IPCC report.

Following modular guide describes the use of REtool from a particular user perspective pursuing a particular goal. There is no need to read everything.

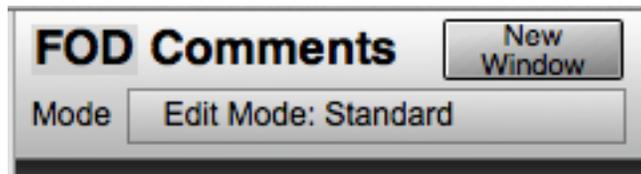
This guide will always assume that you have installed REtool and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁷.

⁷ This file comes with every release of REtool and is also available from the home page of REtool

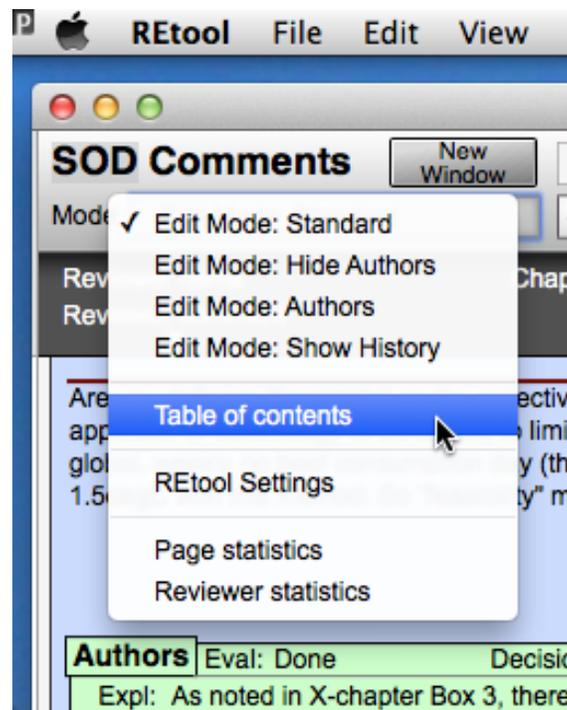
Using REtool to read and compare drafts

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁸.

● REtool fed with the meta data on a draft offers a flexible Table Of Content (TOC) mode in which you can conveniently jump to any listed item in the PDF of that draft. In the top left corner of the REtool window you see a pop-up menu showing the current mode, i.e. 'Edit Mode: Standard':



Use this pop-up menu to switch to mode 'Table of contents':



Once in that mode you have a flexible TOC at your fingertips that allows you focus on particular elements such as FAQs or Cross-Chapter Boxes, figures, sections etc. of any of the four drafts, i.e. from ZOD, FOD, SOD, and FGD. For the SR1.5 the TOC for all drafts looks as follows, i.e. it starts with the ZOD followed by FOD, SOD, and FGD:

⁸ This file comes with every release of REtool and is also available from the home page of REtool

REtool: Review Comments SR1.5

ALL Table of Contents SR1.5

Mode: Table of contents Open REtool-textlinks Quick Search Advanced search Version <Table

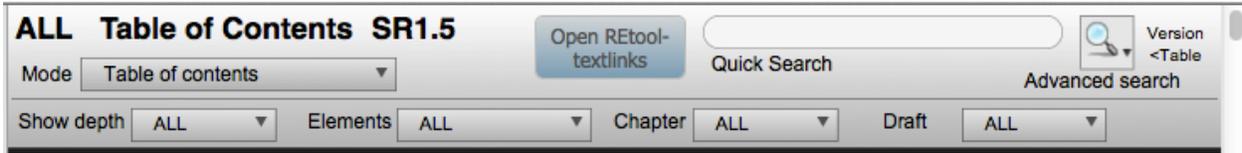
Show depth: ALL Elements: ALL Chapter: ALL Draft: ALL

Section	Title	Page In chap.	Page In rep.	Line	
1	Framing And Context	1	1	1	
FM 1	Frontmatter	1	1	1	<i>FM</i>
ES 1	Executive Summary	4	4	1	<i>ES</i>
1.1	Human, ecological, and physical dimensions	6	6	1	
1.1.1	The challenge of 1.5°C: human rights, ethics and governance	6	6	41	
1.1.2	1.5°C and Pathways	7	7	47	
1.1.3	Sustainable Development and 1.5°C	8	8	22	
1.2	Understanding 1.5°C: reference levels, probability, transience, overshoot, stabilization	9	9	24	
1.2.1	Working definitions of 1.5°C and 2°C for use in this report	9	9	26	
1.2.1.1	Definition of global average temperature	9	9	38	
Figure 1.1	Evolution of global warming over the observed period	10	10	18	<i>Fig</i>
1.2.1.2	Choice of reference period	11	11	7	
1.2.1.3	Total versus human-induced warming	11	11	34	
1.2.1.4	Summary	12	12	17	
1.2.2	Global versus regional and seasonal warming	12	12	26	
Figure 1.2	Regional human-attributable warming	13	13	1	<i>Fig</i>
1.2.2.1	Definition of regions	13	13	10	
1.2.3	Definition of 1.5°C consistent pathways and associated emissions	13	13	21	
1.2.3.1	Temperature stabilization pathways	14	14	13	
1.2.3.2	Temperature overshoot pathways	14	14	35	
1.2.3.3	Continued warming pathways	14	14	46	
Figure 1.3	Categories of temperature pathways	15	15	1	<i>Fig</i>
1.2.3.4	Prospective versus adaptive mitigation pathways	15	15	13	

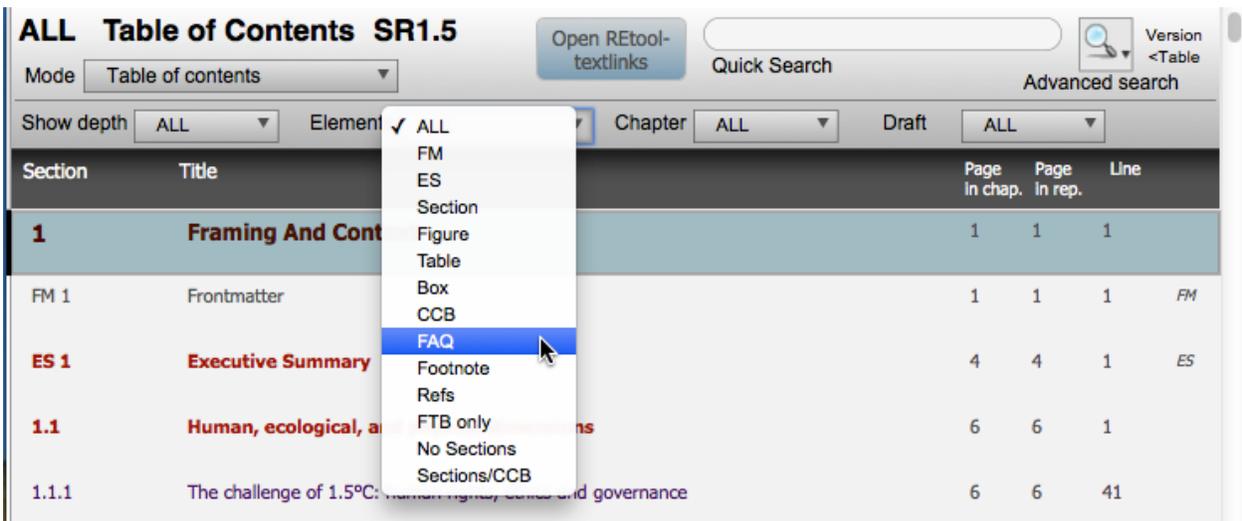
100 Browse

Any element listed is a “link” or button, when clicked brings you immediately to the right location in the associated PDF.

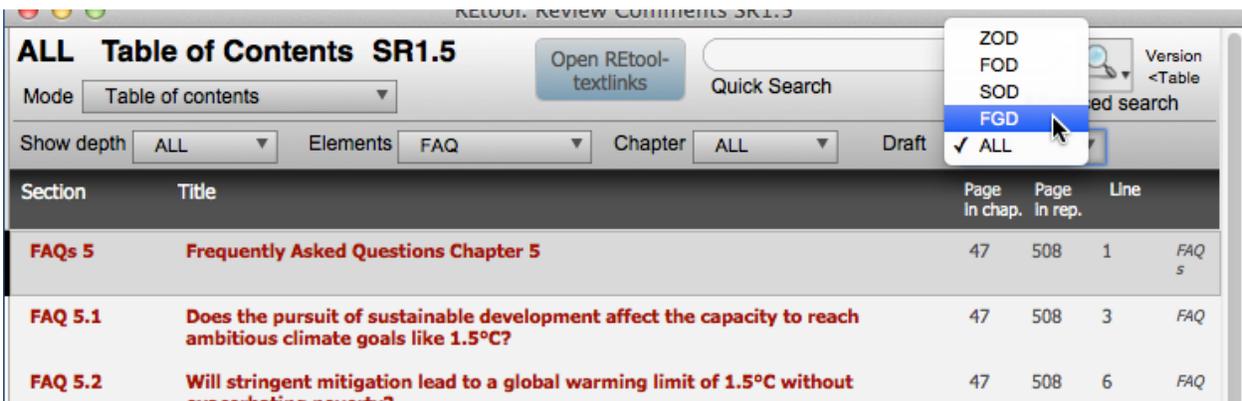
The strength of REtool is however with its ability to focus on particular aspects. At the top you find several pop-up menus that allow you to narrow your focus:



Say you wish to focus on FAQs. Simply choose FAQ from the Elements pop-up menu



You will get a list of all FAQs as they evolved from draft to draft. You can further narrow the focus by choosing from pop-up menu Draft the FGD:



Resulting in following view showing you to what the FAQs evolved from the FOD (partly shown above) into the final FAQs of the FGD (shown below):

FGD Table of Contents SR1.5

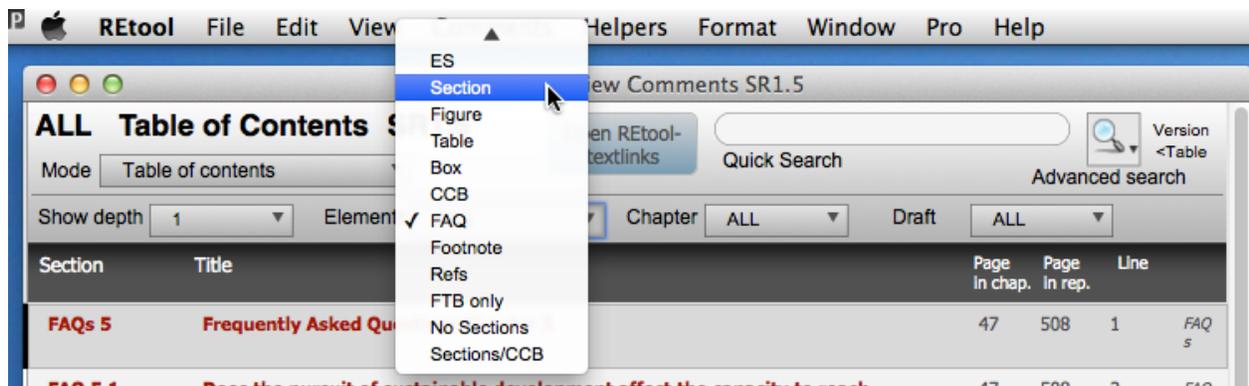
Mode: Table of contents

Open REtool-textlinks Quick Search Advanced search

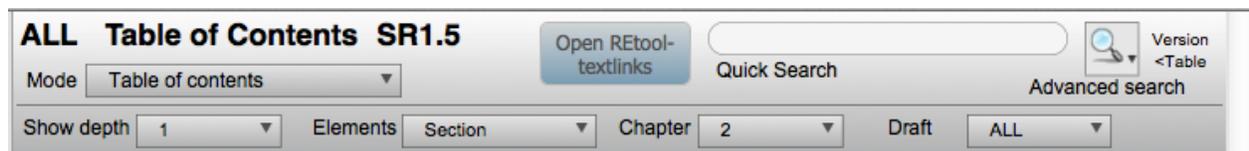
Show depth: ALL Elements: FAQ Chapter: ALL Draft: FGD

Section	Title	Page In chap.	Page In rep.	Line	
FAQ 1.1	Why are we talking about 1.5°C?	43	43	3	FAQ
FAQ 1.2	How close are we to 1.5°C?	45	45	1	FAQ
FAQ 2.1	What kind of pathways limit warming to 1.5°C and are we on track?	89	150	3	FAQ
FAQ 2.2	What do energy supply and demand have to do with limiting warming to 1.5°C?	91	152	2	FAQ
FAQ 3.1	What are the impacts of 1.5°C and 2°C of warming?	177	177	3	FAQ
FAQ 4.1	What transitions could enable limiting global warming to 1.5°C?	119	535	3	FAQ
FAQ 4.2	What are Carbon Dioxide Removal and negative emissions?	121	537	1	FAQ
FAQ 4.3	Why is adaptation important in a 1.5°C warmer world?	123	539	1	FAQ
FAQ 5.1	What are the connections between sustainable development and limiting global warming to	45	659	3	FAQ
FAQ 5.2	What are the pathways to achieving poverty reduction and reducing inequalities while reaching	47	661	2	FAQ

Another example is focusing on the evolution of the main structure, i.e. sections at level 1 of a chapter, say chapter 2. Set such a focus by using pop-up menu 'Elements' to focus on element 'Section':



Then set 'Chapter' to 2, 'Show depth' to 1 (top level), and set Draft back to 'ALL' (the sequence does not matter at all). The settings should then look similar to this:



The resulting view gives you an overview how the main structure of the chapter evolved:

Section	Title	Page in chap.	Page in rep.	Line
2.2	Geophysical relationships and constraints	13	13	1
2.3	Overview of 1.5°C mitigation pathways	26	26	9
2.4	Disentangling the whole-system transformation	61	61	1
2.5	Challenges, opportunities and co-impacts of transformative mitigation pathways	85	85	5
2.6	Assessment tools and knowledge gaps	107	107	2
2	Chapter 2: Mitigation Pathways Compatible With 1.5°C In The Context Of Sustainable	1	62	3
2.1	Introduction to Mitigation Pathways and the Sustainable Development Context	8	69	1
2.2	Geophysical relationships and constraints	13	74	1
2.3	Overview of 1.5°C mitigation pathways	23	84	1
2.4	Disentangling the whole-system transformation	50	111	1
2.5	Challenges, opportunities and co-impacts of transformative mitigation pathways	74	135	1
2.6	Knowledge gaps	86	147	1
2	Chapter 2: Mitigation Pathways Compatible With 1.5 °c	1	46	1
2.1	Introduction to Mitigation Pathways and the Sustainable Development Context	1	46	18
2.2	Assessment methods	2	47	79
2.3	Geophysical relationships and constraints	7	52	277
2.4	General characteristics of stringent global mitigation pathways	13	58	566
2.5	Transition characteristics of 1.5 °C pathways in the near-to-medium term	14	59	591
2.6	Properties of 1.5 °C pathways after mid-century	15	60	634
2.7	Co-impacts, opportunities, and challenges	20	65	823
2.8	Knowledge gaps	28	73	1275
2.9	Cross-cutting boxes [potential ideas]	28	73	1278
2.10	Case studies [potential ideas]	28	73	1283

Remember, you can quickly and efficiently jump to any of the sections listed in all the referenced PDF's using one of the PDF readers supported by REtool by clicking on the wanted element. In cases where actual figures are appended to the text, e.g. SR1.5 ZOD, the page numbers to the right allow you to jump to the actual figure in the annex as well as the location in the text where the figure is introduced.

Using REtool to manage Review Comments

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file ‘REtool Read Me.pdf’⁹.

REtool stores Review Comments, Author Responses, and RE Annotations. The data are present at all times, i.e. stored in the underlying REtool data base, yet may be currently hidden, depending on REtool’s state. REtool offers **different views to the underlying data base, allowing the user to focus on particular aspects.** A great strength of REtool.

For each role of the user, REtool offers different basic modes:

- • **Edit Mode: Standard** for REs and other users to enter annotations on Review Comments, e.g. assigning a priority to the Review Comment. All data entered in that mode form the so-called RE Annotations, which include the RE Evaluations of the Author Responses.
- Edit Mode: Hide Authors for REs a mode that is basically the same as ‘Edit Mode: Standard’. The only difference is that Author Responses are not shown, which is mostly then useful, when Author Responses are not yet available.
- • **Edit Mode: Authors** for authors to enter Author Responses
- Edit Mode: Show History for all users resolving conflicting Author Responses or RE Evaluations as may result from collaboration
- • **Retool Settings** for all users to view and set settings of REtool
- Page statistics for every user wishing to generate statistics on the Review Comments, i.e. statistics on how many Review Comments were received for each page. The statistics can be exported and histograms drawn using e.g. R.¹⁰
- Reviewer statistics for every user wishing to generate statistics on the reviewers, e.g. statistics on how many Review Comments each reviewer made. The statistics can be exported and histograms drawn using e.g. R.⁹

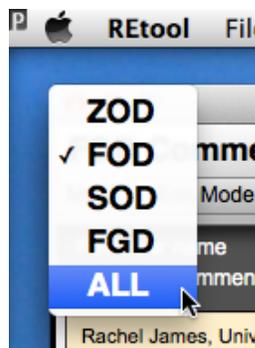
⁹ This file comes with every release of REtool and is also available from the home page of REtool

¹⁰ R is an open source statistics package available from <https://cran.r-project.org>

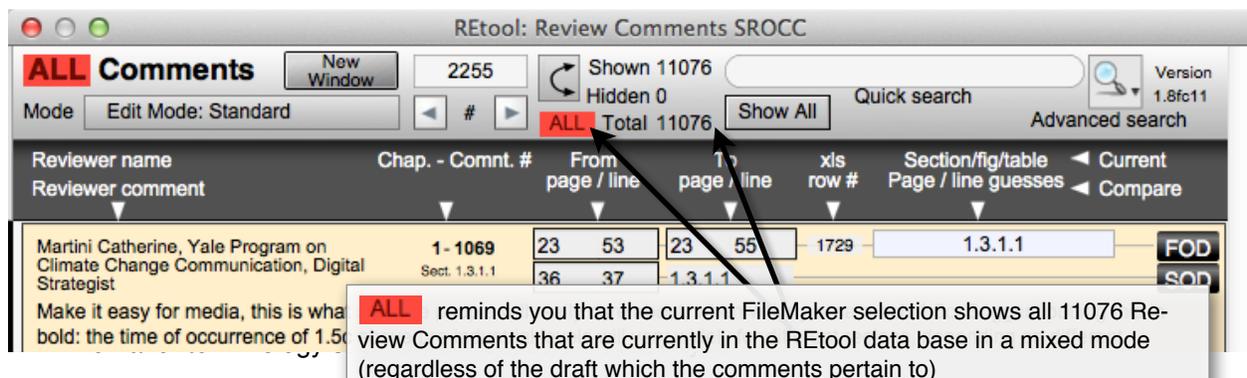
In addition to above modes, each offered within a particular view¹¹, there are many more modal views available, e.g. for administrators.

By default REtool offers a set of menus, the **standard REtool menus**. REtool offers also a set of extended menus in the so-called Pro mode for advanced usage¹². The **Pro mode** menus contain additional menu commands and offer an access to the standard FileMaker menus.¹³ For several commands also offered in the REtool menus, it may be of advantage to consult the FileMaker help information, since these commands are not customized and simply offer FileMaker's standard functionality.

● **At any time REtool shows typically the Review Comments of only a single draft.** Depending on which Review Comments have been imported into the data base, comments for the ZOD (Zero Order Draft or Internal Draft), the FOD (First Order Draft reviewed by Experts), the SOD (Second Order Draft reviewed by Governments and Experts), and the FGD (Final Government Draft reviewed by Governments, focusing on the SPM) can be viewed. The pop-up menu in the top left corner offers not only the possibility to switch among the four drafts, but offers also an **option to show all comments from all review stages at once (mixed mode)**:



To remind the user clearly of this mode, red colours highlight this f



¹² Activate this mode by menu command 'Help -> Set Pro Mode -> On'. Deactivate it by 'Help -> Set Pro Mode -> Off'.

¹³ Switch to the standard FileMaker menus by 'Pro -> Use FileMaker menus'. Return to the REtool menus by 'Scripts -> About & Help -> Set Pro Mode -> On' or 'Scripts -> About & Help -> Set Pro Mode -> Off'.

REtool offers in its **standard mode or view** many **elements**. The following describes their basic functionality and purpose:

The screenshot shows the REtool interface with several callouts explaining its features:

- Shows the current draft and allows to select another one:** Points to the 'Mode' dropdown menu.
- «Mode» menu: click to switch to another mode (view) of the data:** Points to the 'Mode' dropdown menu.
- Number of the currently selected Review Comment out of all currently viewable (selected) comments: Type a Review Comment's number to view it:** Points to the '2' in the 'Comnt. #' column.
- Move to previous Review Comment:** Points to the left arrow button.
- Move to next Review Comment:** Points to the right arrow button.
- Element the Review Comment references, e.g. section or figure:** Points to the 'Section/fig/table' column.
- Tip: Hover the mouse over this field to see the title. E.g. if this field contains 1.2.1, the title of section 1.2.1 is displayed:** Points to the 'Section/fig/table' column.
- Open another window, e.g. to display other Review Comments:** Points to the 'New Window' button.
- Review Comment:** Points to the main text area of a review comment.
- Author Response:** Points to the 'Author Response' section.
- RE Annotation:** Points to the 'RE Annotation' section.
- The vertical black line in the margin shows the currently selected comment:** Points to the vertical line in the left margin.
- Link to the FOD PDF: Click to open the PDF at the referenced page:** Points to the 'FOD' button.
- The second row is for the comparison draft, here the SOD (looking forward from the FOD). The black button to the right shows which draft the FOD is compared to and is at the same time a button, if clicked opens the SOD PDF at the comparable page. E.g. if the comment references section 1.2.1 or Figure 2.1, the SOD PDF is opened at the page with a section 1.2.1 or a figure 2.1 (may be another than the wanted one):** Points to the 'SOD' button.
- Menu to enter the RE Evaluation of the Author Response:** Points to the 'Rev Edit' section.

A more zoomed in view:

Chapter number, which may be SPM or ALL, the latter if comment refers to entire report

The number of the Review Comment (is unique within the draft)

The page and line number of the begin of the referenced text passage

The page and line number of the end of the referenced text passage

The page and line number of the begin of the referenced element in the comparison draft. E.g. section 1.3.1.1 starts in the SOD on page 36 at line 37. *Hint: If these values automatically guessed by REtool are wrong, you can overwrite them by entering the correct values (menu command 'Helpers -> Enter page and line for comparison draft...'). The field to the right (without frame) may adjust its value accordingly and change to the section in which the comparison text passage actually lies.*

The referenced text passage starting on page 23 at line 53 and ending on page 23 at line 54 lies within section 1.3.1.1. Hovering with the cursor over this field shows also the title of this section.

REtool: Review Comments SROCC

FOD Comments

New Window 32

Shown 78

Hidden 3069

FOD Total 3147

Show All

Quick search

Version 1.8fc11

Advanced search

Mode Edit Mode: Standard

Reviewer name	Chap. - Comnt. #	From page / line	To page / line	xls row #	Section/fig/table Page / line guesses	Current
Rachel James, University of Oxford	1- 6039	23 53	23 54	1731	1.3.1.1	FOD
		36 37	1.3.1.1			SOD

Reviewer comment

I think it's a bit confusing to say that the time of occurrence of 1.5C will vary widely between regions. It makes sense because it refers to "local" 1.5C, but it's confusing if read quickly, given the report's focus on the 1.5C global, and all the other things in the report about when 1.5C might occur globally. Suggest highlighting that it refers to local warming or removing...

AF 27/09/2018 11:48:57

Other elements:

Click to toggle current selection for the hidden, i.e. currently shown comments will be hidden, currently hidden comments will become selected and visible

78 comments are currently shown, i.e. are in the current FileMaker selection. *Hint: If the current selection shows only comments from the same reviewer, she provided a total of 78 comments*

3069 comments are currently NOT shown, i.e. are NOT in the current FileMaker selection, yet are still in the REtool data base. *Hint: Click button 'Show All' to no longer hide any comments.*

This is comment 32 in the current FileMaker selection. *Hint: If the current comment selection shows only comments from the same reviewer, this is the reviewers's 32nd comment.*

A total of 3147 comments on the FOD are currently in the REtool data base

REtool: Review Comments SROCC

FOD Comments

New Window 32

Shown 78

Hidden 3069

FOD Total 3147

Show All

Quick search

Version 1.8fc11

Advanced search

Mode Edit Mode: Standard

Reviewer name	Chap. - Comnt. #	From page / line	To page / line	xls row #	Section/fig/table Page / line guesses	Current
Rachel James, University of Oxford	1- 6039	23 53	23 54	1731	1.3.1.1	FOD
		36 37	1.3.1.1			SOD

Reviewer comment

I think it's a bit confusing to say that the time of occurrence of 1.5C will vary widely between regions. It makes sense because it refers to "local" 1.5C, but it's confusing if read quickly, given the report's focus on the 1.5C global, and all the other things in the report about when 1.5C might occur globally. Suggest highlighting that it refers to local warming or removing...

AF 27/09/2018 11:48:57

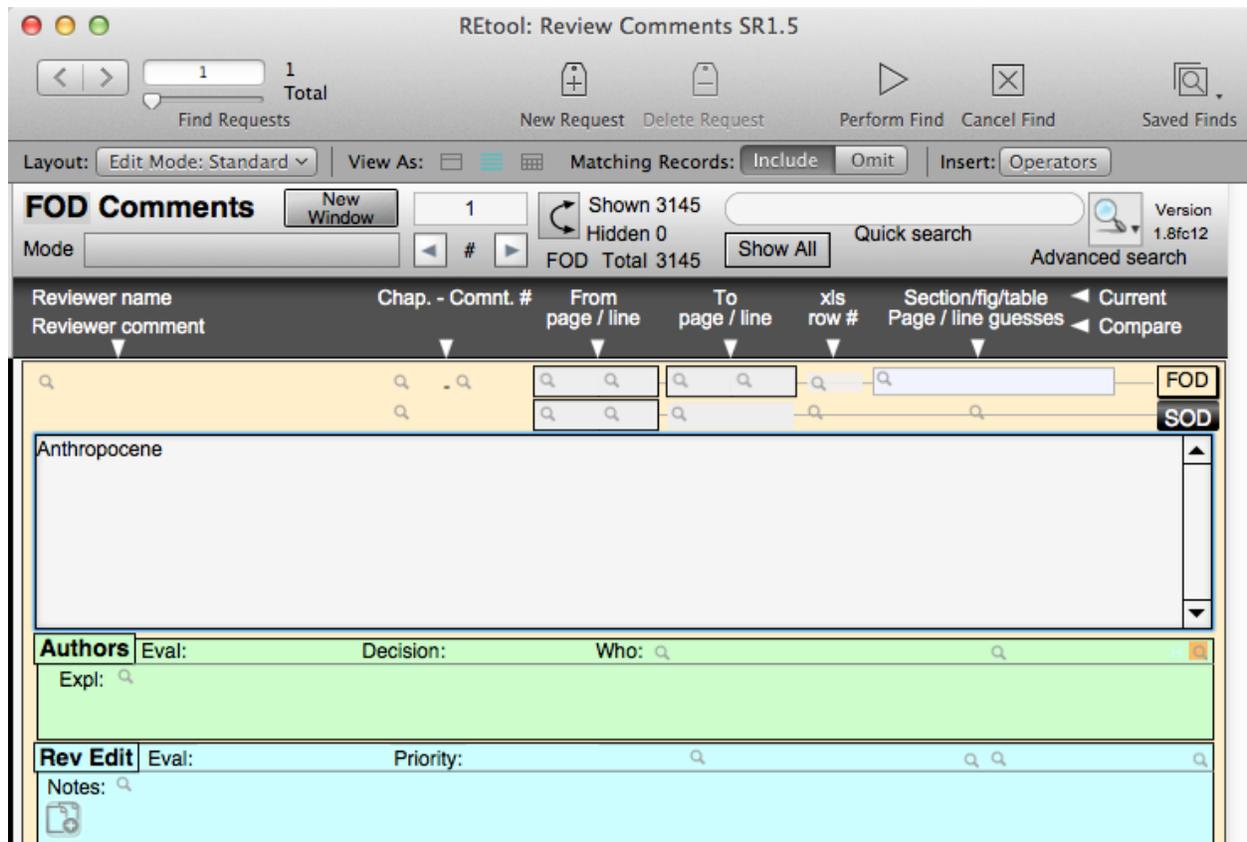
Note, the elements and tools described above offer also context specific help when hovering with the cursor over them.

Searching comments

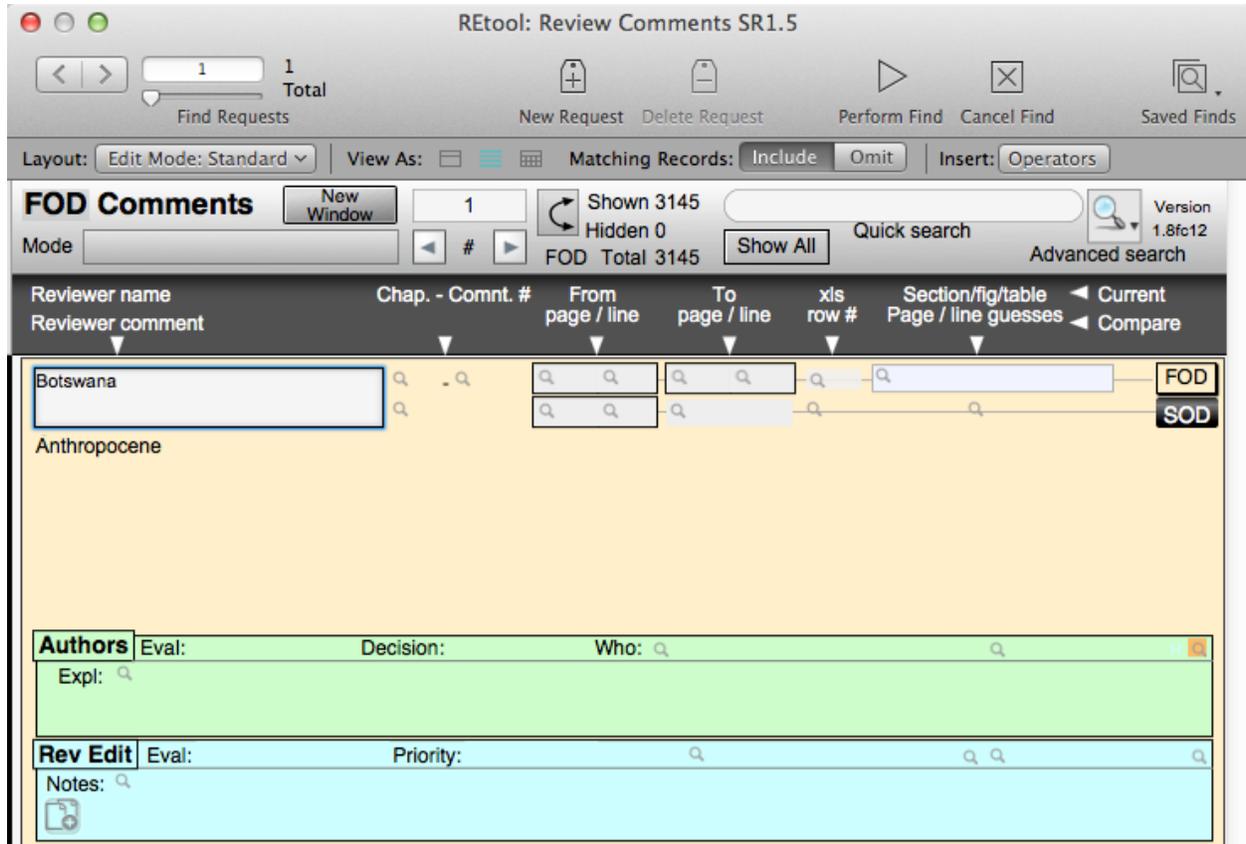
REtool offers numerous **menu commands and features to search** for particular Review Comments, Author Responses, and/or RE Annotations and to sort them. These features are offered via menu 'Comments'. Many commands available in that menu offer the same basic functionality as that of any FileMaker data base. Thus any FileMaker tutorial can help you here. Understand simply that a Review Comment is called a record. Similarly every Author Response or RE Annotation is also called in the FileMaker terminology a record (albeit each of a different type).

REtool offers Quick search (top right). While this search is convenient, it may not always be the most efficient method, since it searches in all fields and all records of the entire data base. If you know that you are only interested in finding review comments that mention a particular keyword, say 'Anthropocene', then it is far more efficient to use the

Advanced search instead of the Quick search feature. The advanced search offers you an empty record in which you can simply type your search criteria into the field where you wish to find the wanted information. E.g. to find all comments where the reviewer mentions 'Anthropocene' you simply type this word into the Review Comments section:



Then perform the search (click on Perform Find in toolbar or simply press Enter). If you wish to add another search criteria, e.g. all comments on ‘Anthropocene’ from a particular reviewer, say one from Botswana University, then enter also Botswana into the top left corner, that is the field where you normally find the reviewer’s name and affiliation.



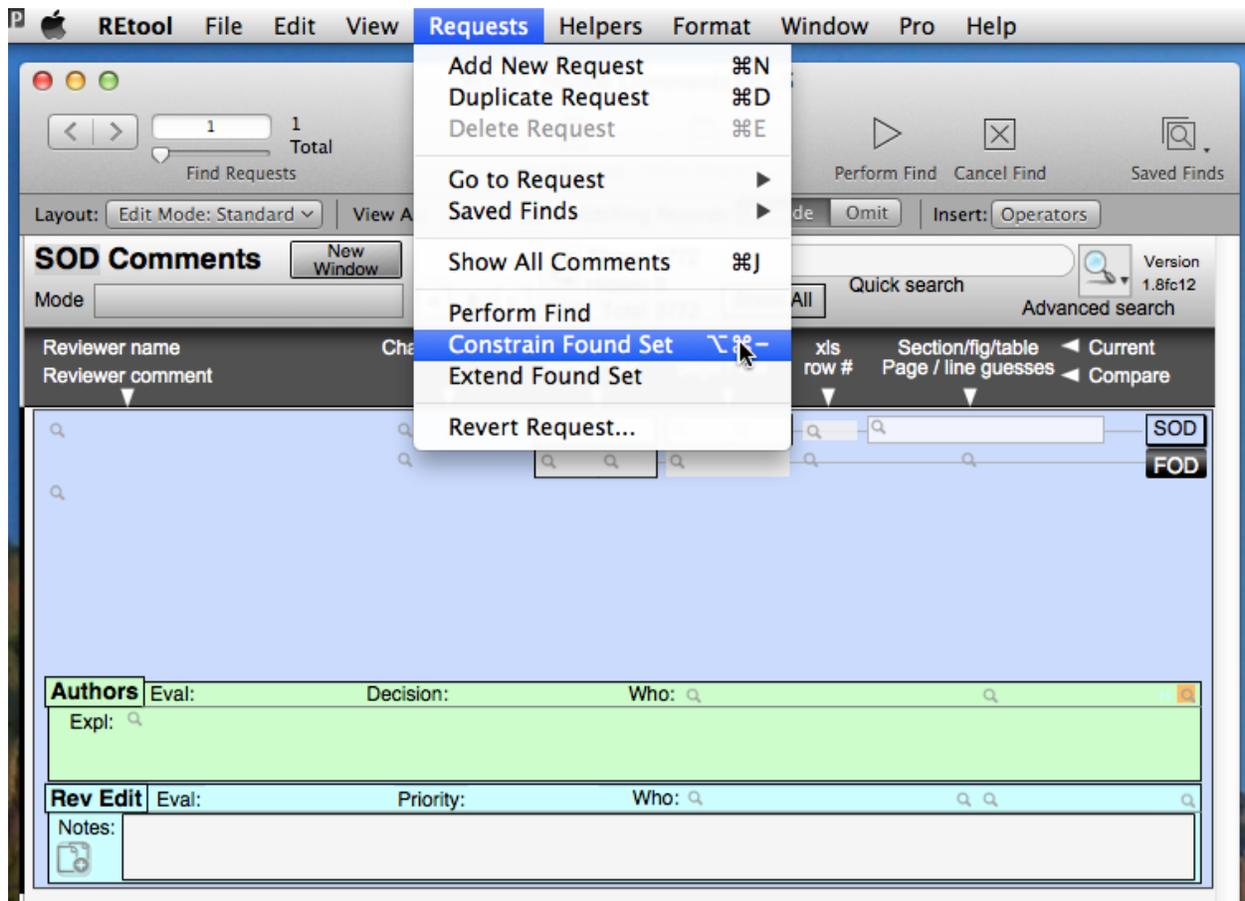
Only then perform the search, which will find all Review Comments anywhere where the word Anthropocene is contained in the comment AND the reviewer’s data contains anywhere the word Botswana. It may well be that there is no such comment present in your data base, since no reviewer from Botswana has mentioned the word Anthropocene in her/his comment. REtool will inform you about this fact and allow you modify your search criteria or give up and return to the normal browse mode. Note, these searches are not case sensitive, yet typos matter of course. Search criteria need not be entire words, but can be just the beginning. E.g. ‘climat’ finds ‘climate’, ‘climatic’, ‘climatology’ etc. But ‘limat’ finds none of those. Remember, any logical AND is specified by entering the search criteria within the same so-called search record as shown above.

Say you wish to find all comments that mention SPM or “Summary for Policymakers” or “Summary for Policy Makers” (note the latter is not written in the IPCC tradition). The search criteria is then based on two logical ORs, which connect the three variants of mentioning the same thing. Such OR searches are built by using several search records (requests), not only a single one as used above with the AND search criteria. The advanced search criteria for this example looks then as follows using three different search

records (requests) made by duplicating the first, the third one being edited at the moment of this snapshot:

The screenshot displays the REtool: Review Comments SR1.5 application window. At the top, there are navigation controls including a 'Find Requests' field with the value '3' and a 'Total' of '3'. Below this are buttons for 'New Request', 'Delete Request', 'Perform Find', 'Cancel Find', and 'Saved Finds'. The interface includes a 'Layout' dropdown set to 'Edit Mode: Standard', a 'View As' section, and 'Matching Records' options for 'Include' and 'Omit'. The main content area is titled 'FOD Comments' and shows a list of review comments. The first comment is 'SPM', the second is '"Summary for Policymakers"', and the third is '"Summary for Policy Makers"'. Each comment entry includes a search bar, a 'Chap. - Comnt. #' field, 'From page / line' and 'To page / line' fields, an 'xls row #' field, and a 'Section/fig/table Page / line guesses' field. The interface also features a 'Current Compare' section with 'Authors Eval: Decision: Who: Expl:' and 'Rev Edit Eval: Priority: Notes:' fields. At the bottom, there are summary statistics: 'Authors: # responses:', 'REs: # evaluated:', and 'REs % declared ~OK:'. The status bar at the very bottom shows '100' and 'Find'.

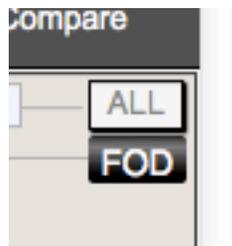
● REtool does also allow you to constrain a set of comments as resulting from a previous search or to extend such a set. Note, the menu 'Comments' becomes 'Requests' when you are setting up an advanced search (FileMaker calls this the "Find Mode") and you find in this menu the commands that allow you to constrain or extend the current set. Simply activate Find Mode from any current set, enter your search or omit criteria and instead of performing the search choose menu command "Requests -> Constrain Found Set" or "Requests -> Extend Found Set".



● REtool offers a **wealth of menu commands that are dedicated to particular and common advanced searches**. E.g. the menu command 'Comments -> Find comments -> Find critical comments...' offers to find quickly potentially critical comments that may deserved particular attention at the begin of a review round. The submenus 'Comments -> Find comments' and 'Comments -> Show comments' offer many more such commands that let you manage your data conveniently. You can also customise searches and save commonly used searches (menu commands 'Comments -> Saved Finds -> Save Current Find...' and 'Comments -> Saved Finds -> Edit Saved Finds...').

● You can revisit any search you just made by using menu command 'Comments -> **Modify Last Find**'. This helps also to learn about the searches that REtool already provides and makes it also possible for you to customise or extend any current search, may that be your own search or one that is provided by REtool.

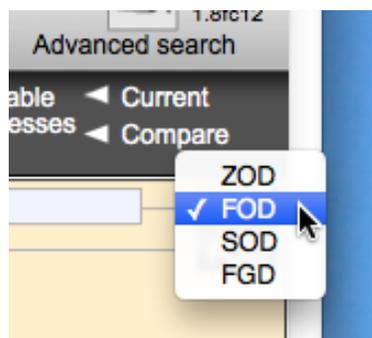
There is only one thing to remember well when defining your own advanced searches: Your REtool data base accumulates your work and typically contains data from several review rounds, i.e. multiple drafts. A search that is targeted only at the comments within the current review round, say the FOD, such a search needs therefore to be constrained to the FOD. REtool offers you this constrain by default when setting up an advanced search. However, if you wish to add additional criteria, e.g. to define a logical OR as described above for the SPM example, make sure you keep that constrain in every search record, e.g. by duplicating the search record instead of creating an empty one from scratch while defining the search. In fact every example shown above uses an AND criteria by having FOD (or SOD) in the top right corner of each search request. Searching for 'Anthropocene' in all review rounds would require to use in the top right corner nothing, which is shown as greyed out ALL:



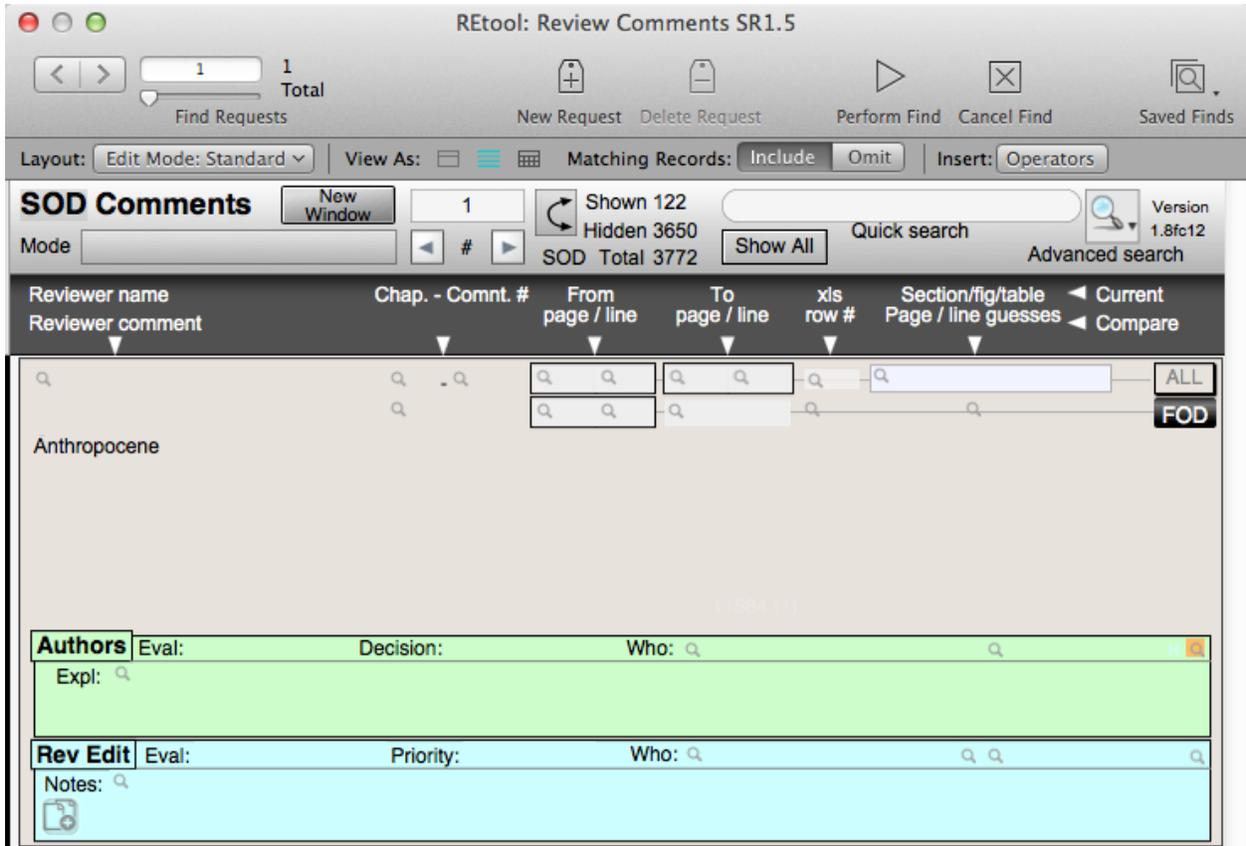
This is only the default in advanced search when first selecting ALL in the top left corner. In all other cases, say you are working with the FOD, that corner looks like this:



and you can't choose ALL from the offered pop-up menu:



To accomplish that nevertheless, simply renew your Find Mode activation by repeating the shortcut (Cmd^F on Macintosh). Alternatively create a new request (click on toolbar 'New Request' and delete the first you obtained by default. The window should then look similar to this one:



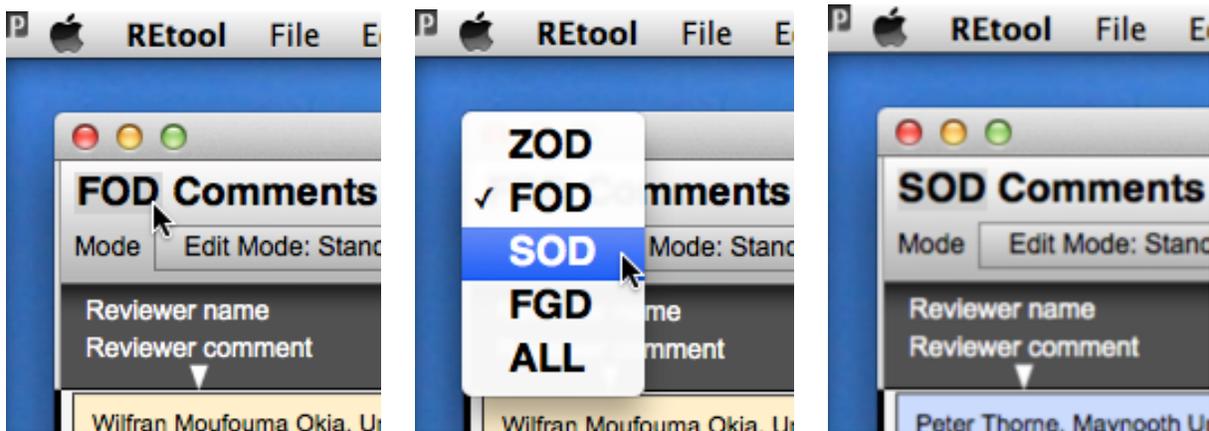
Clicking 'Perform Find'¹⁴ or alternatively choosing menu 'Requests -> Extend Found Set' or 'Requests -> Extend Found Set' produces then as you wish the wanted set of Review Comments.

¹⁴ or pressing Enter or choosing menu 'Requests -> Perform Find'

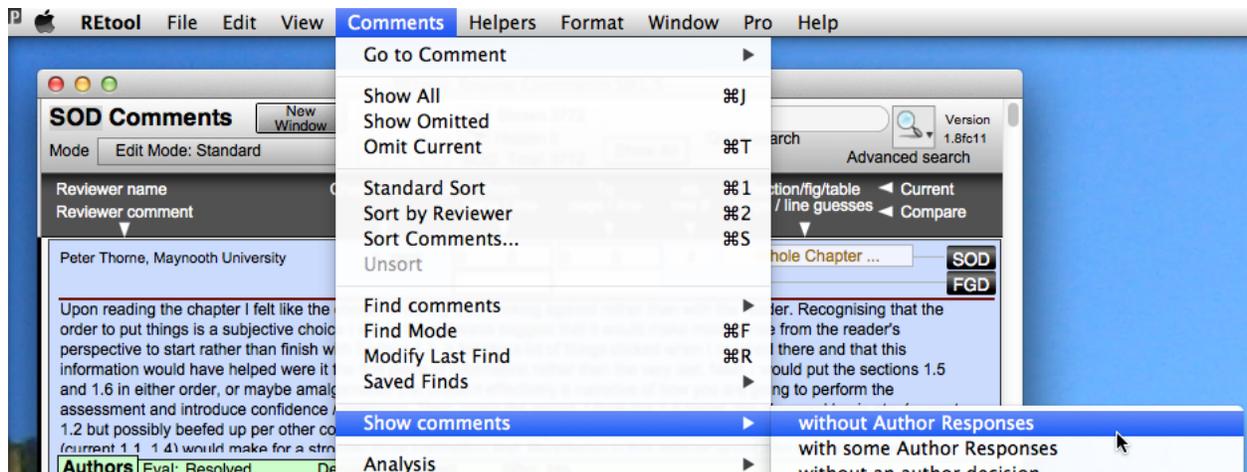
Entering Author Responses

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'¹⁵.

- 1) Choose the draft ● you want to work with, e.g. the SOD:

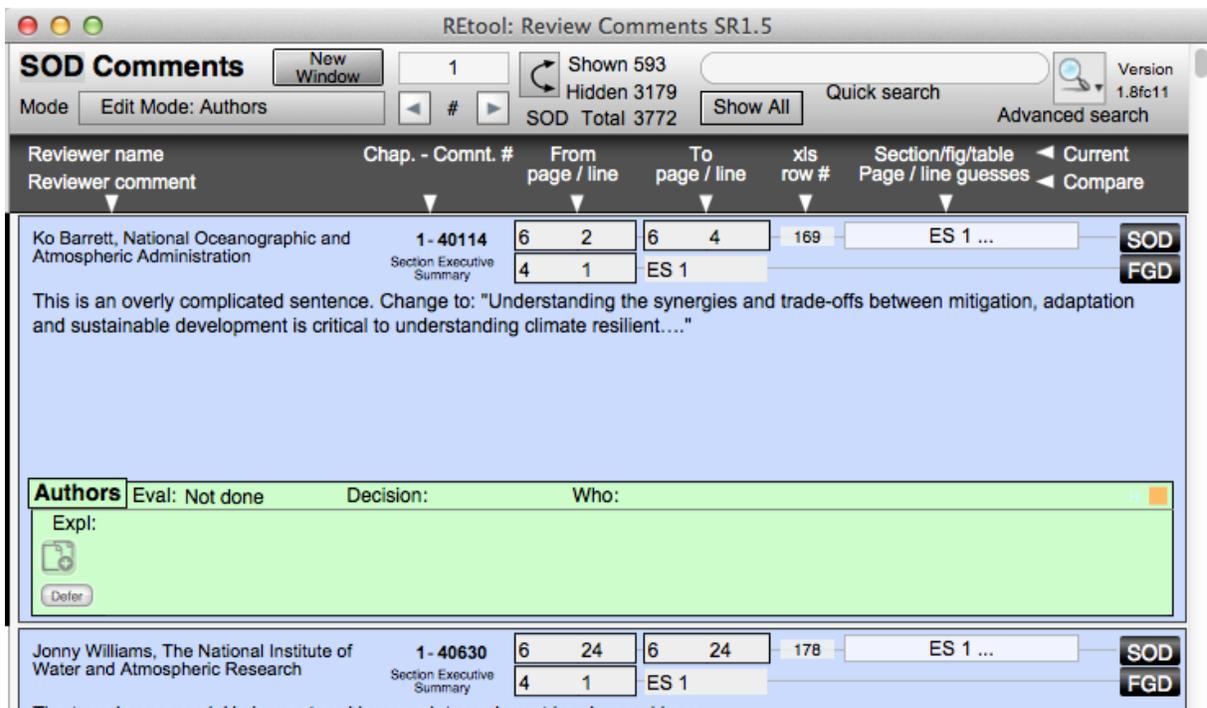


- 2) Find the comments not yet responded to ● by choosing menu command 'Comments -> Show comments -> without Author Responses':

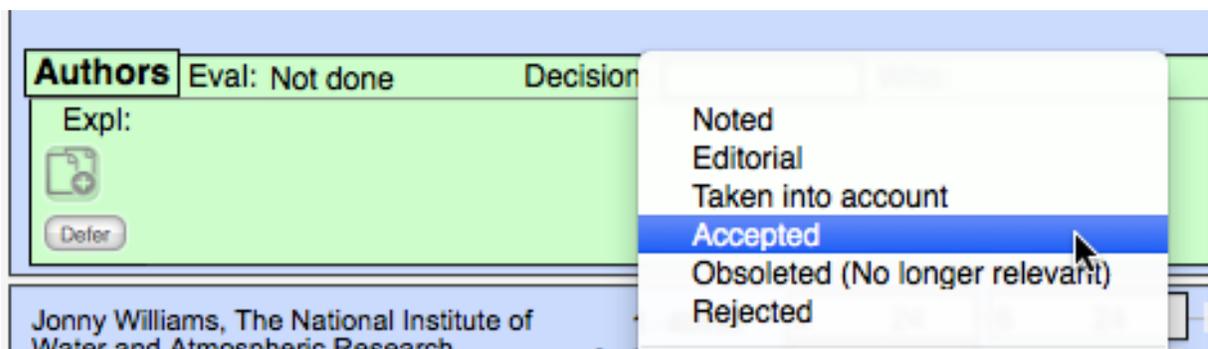


- 3) Switch to mode 'Edit Mode: Authors' if REtool should be in another mode. Your REtool window should then look similar to this:

¹⁵ This file comes with every release of REtool and is also available from the home page of REtool



- 4) **Enter in the green area your Author Response** ●: This may entail to first jump to the text passage by clicking on the black button in the top right corner, which should open the PDF of the SOD at the referenced location. Having considered the comment next enter your response. Best do that with the Decision, say you intend to accept the suggested change:



Alternatively you can also type the letter A in the main field (labelled 'Expl:') and press Enter

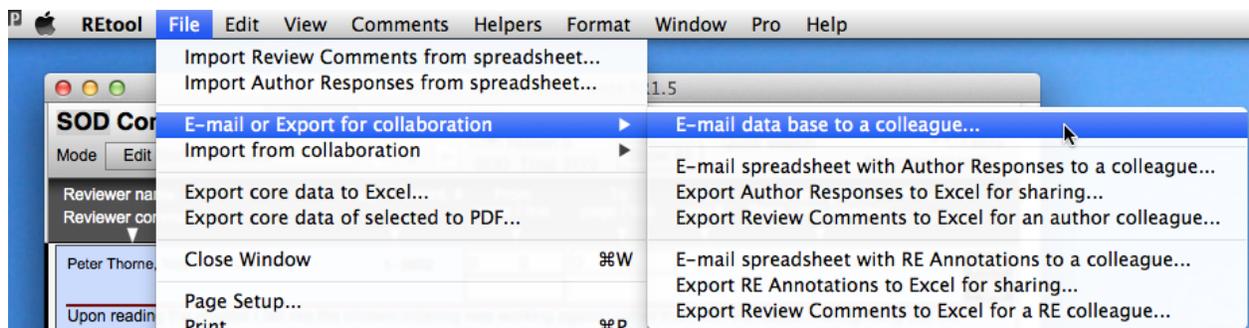


That will also enter your Decision in the middle top as if you would have made the choice via aforementioned pop-up menu.

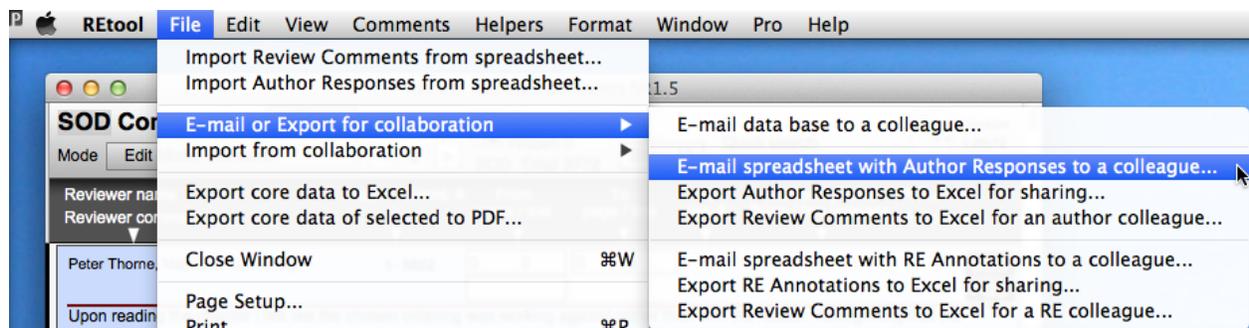
Then of course do the change in the Word file for the next draft, in this case the FGD. You may return to REtool to add further texts to your response. That would be particularly necessary if you would have rejected the comment. Remember, whatever you enter here in the green response area will later be made publicly available.

5) Proceed to your heart's content with other not yet responded to comments. ●

Once you have finished your work it may be wise to make a backup, in particular after a long working session (see section «Making a backup»). You may then also share your work with colleagues. Say your chapter scientists collects all Author Responses. You may sending her or him the entire data base using the menu command 'File -> E-mail or Export for collaboration -> E-mail data base to a colleague...'.
1.5



Alternatively, in particular if that file should be too large, you may also send the result of your efforts by using a spreadsheet. Then choose menu command 'File -> E-mail or Export for collaboration -> E-mail spreadsheet with Author Responses to a colleague...'.
1.5

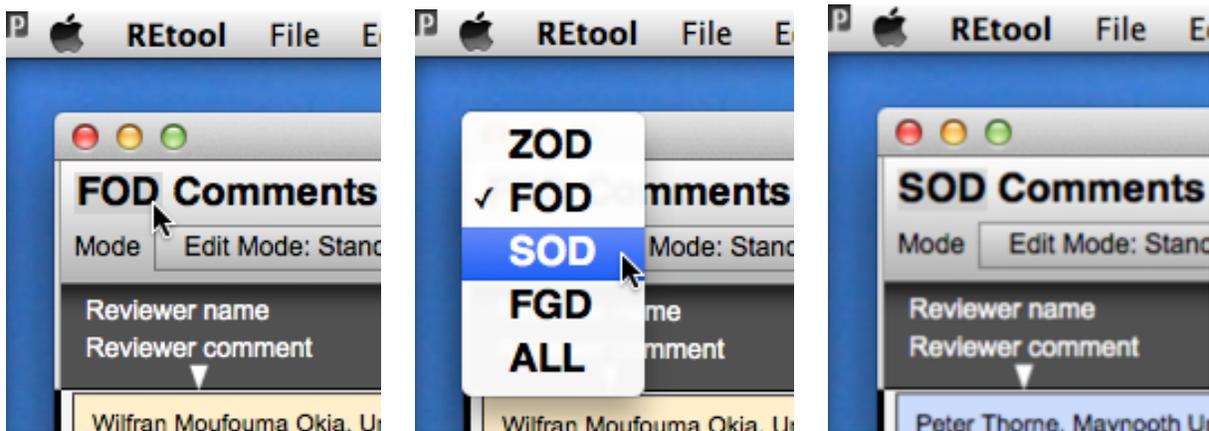


How the receiver of this e-mail can handle your output and to merge it with her or his work is described under section «Collaboration».

Entering RE Annotations

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'¹⁶.

1) **Choose the draft** ● you want to work with, e.g. the SOD:



2) **Find the comments not yet annotated** ● by choosing menu command 'Comments -> Show comments -> without RE evaluations':

3) **Make your RE Annotation** ●. Typically you start by setting a priority¹⁷. Then you may wish to enter some considerations by typing those into the large blue rectangle. If you already have received the Author Responses you can finish your RE Annotation by also making the evaluation of the Author Response. Do this with the menu in top left corner.

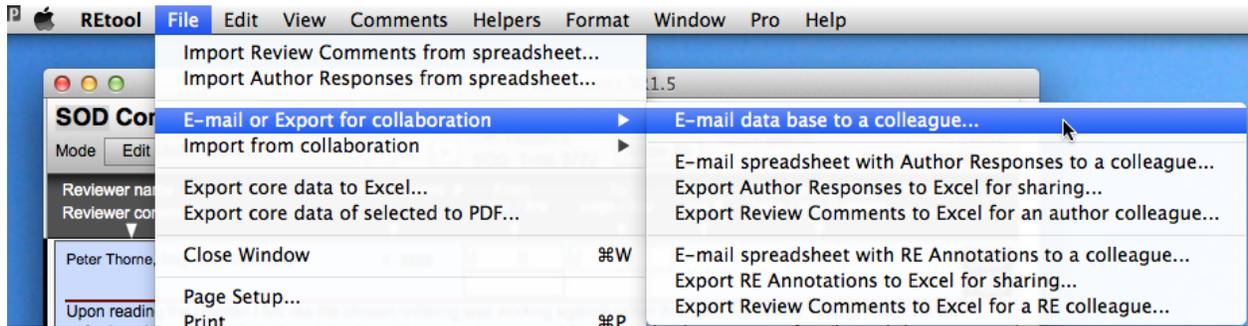
4) Proceed to your heart's content with other comments you have not yet looked at. ●

Once you have finished your work it may be wise to make a backup, in particular after a long working session (see section «Making a backup»). You may then also share your work with colleagues. Say one of your RE colleagues collects all RE Annotations for comparing notes, in particular relevant for critical comments. You may sending him or

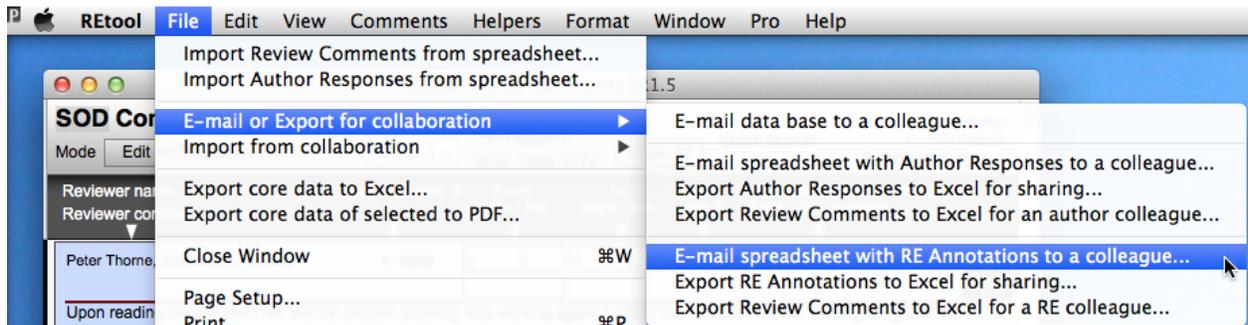
¹⁶ This file comes with every release of REtool and is also available from the home page of REtool

¹⁷ For those common choices is also a menu command available. See menu "Helpers -> Set priority to 'xyz'". This may come handy if you wish to use a shortcut for that menu command on your system. E.g. on the Macintosh platform you can use 'Apple -> System Preferences... -> Keyboard -> Shortcuts -> App Shortcuts' and enter there for REtool every menu command with its shortcut for which you wish to use a shortcut. This comes very handy when having to process thousands of comments. I use on my Mac e.g. Ctrl^N for priority 'Normal', Ctrl^V for priority 'Very high', Ctrl^H for priority 'High', and Ctrl^E for priority 'Editorial'. But this all depends of course on your preferences, taste, and working style.

her the entire data base using the menu command 'File -> E-mail or Export for collaboration -> E-mail data base to a colleague...'



Alternatively, in particular if that file should be too large, you may also send the result of your efforts by using a spreadsheet. Then choose menu command 'File -> E-mail or Export for collaboration -> E-mail spreadsheet with RE Annotations to a colleague...'



How the receiver of this e-mail can handle your output and to merge it with her or his work is described under section «Collaboration».

Collaboration

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'¹⁸.

● Collaboration among members of a team are supported by REtool in many ways. First collaboration is supported among team members who use REtool. But collaboration is also supported among team members where some colleagues use REtool and others do not use REtool. REtool is then designed such that typically one REtool user collates all contributions from the team by importing and merging them into a single REtool data base. For authors this role may be taken on by a CLA or the chapter scientist (if the chapter has one) and for RE teams this role needs to be taken up best by a single RE. In the following the person collating the REtool data is called the REtool coordinator.

The features supporting collaboration can then be grouped in two categories:

- Collaboration among REtool users
- Collaboration between REtool users and non REtool users

Furthermore, all these collaborations consist of two parts each:

- Exporting a finished work to the coordinator
- The coordinator importing and merging the received work

● To maximally facilitate the collaboration also in the case where data are shared between REtool and other techniques, e.g. Excel spreadsheets, REtool provides means to generate a spreadsheet that is easier to use than the spreadsheets provided by the TSU. This is particularly relevant for REs, since the TSU may provide spreadsheets that are designed to hold only Review Comments and Author Responses, but no RE Annotations. To enable a smooth collaboration it is therefore beneficial that REtool coordinators generate the needed spreadsheets for colleagues who prefer to work with spreadsheets instead of REtool as soon as possible. However, this is not a prerequisite and REtool is able to handle also other cases.

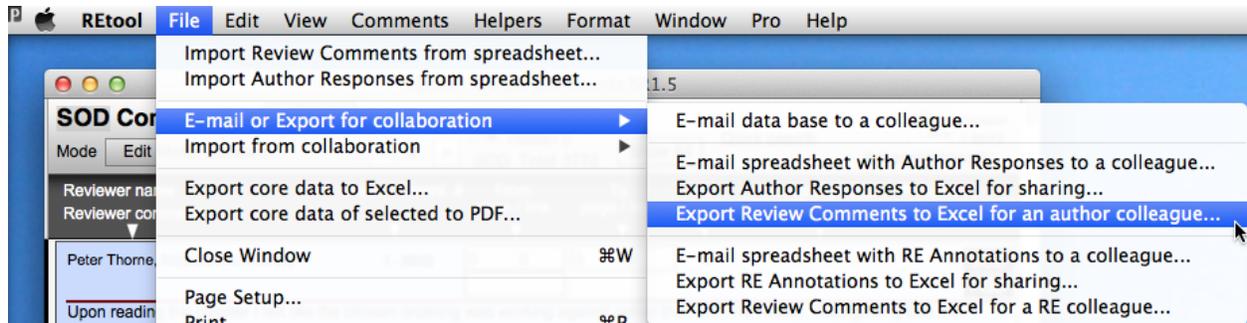
Generate a Review Comments spreadsheet for a colleague

● This consists of three steps to be done by the REtool coordinator:

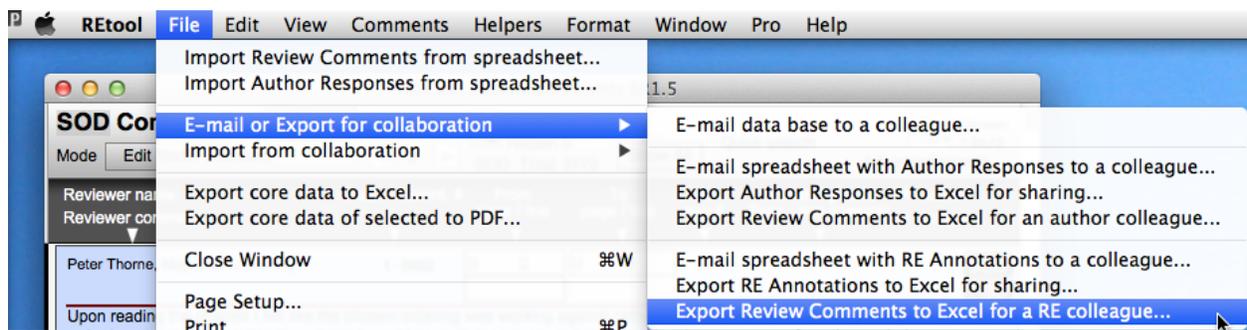
- (i) select the Review Comments (even if that should mean all comments),
- (ii) assign the responsibility to the selected comments using the colleague's initials, and
- (iii) choose a menu command to generate the spreadsheet.

¹⁸ This file comes with every release of REtool and is also available from the home page of REtool

Depending whether you generate the spreadsheet for a RE colleague or an Author colleague, choose another menu command. For an Author colleague choose 'File -> E-mail or Export for collaboration -> Export Review Comments to Excel for an author colleague...';



or for a RE colleague choose 'File -> E-mail or Export for collaboration -> Export Review Comments to Excel for a RE colleague...';



A spreadsheet is generated in the REtool work folder. That spreadsheet is also automatically opened for inspection and/or further formatting to suit the purpose.

Note that additional columns have been added that were not present in the original Review Comments file as you may have received once. All these additional columns facilitate collaboration and the later collation in a single REtool data base.

Once all is ready send the spreadsheet to the colleague and ask her or him to NOT change any columns, neither by sequence nor other rearrangements. If someone prefers to ignore some columns, it may help to hide those columns, but never delete them or move them somewhere else. No additional columns should be added either, unless they are added to the very right after the very last column generated by REtool.

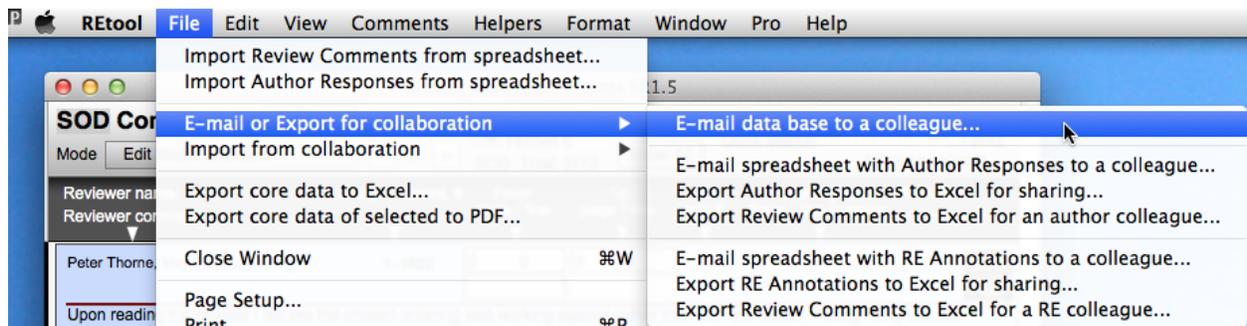
For a full understanding: Note, the spreadsheet structures REtool uses for sharing data remains basically the same, yet the number of rows and hereby the data may differ depending whether you generate the spreadsheet with the method described here or one described further below. As described under this section all currently selected Review Comments determine how many rows are written to the spreadsheet. Using the method as described in the section «Share a spreadsheet with a colleague», only those com-

ments are written to the spreadsheet for which you have actually entered as author either some Author Responses or as review editor some RE Annotations.

Only if you have entered Author Responses and/or RE Annotations for all review comments, will the exported spreadsheets contain similar data. However, there may still be differences depending on whether some histories in Author Responses or RE Annotations are present in your data base. Neither a history of Author Responses nor of RE Annotations is written to the spreadsheet if you use either 'Export Review Comments to Excel for an author colleague...' or 'Export Review Comments to Excel for a RE colleague...'. A history of Author Responses is only written to the spreadsheet when using either 'E-mail spreadsheet with Author Responses to a colleague...' or 'Export RE Annotations to Excel for sharing...'. Similarly a history of RE Annotations is only written to the spreadsheet when using either 'E-mail spreadsheet with RE Annotations to a colleague...' or 'Export RE Annotations to Excel for sharing...'. For more details on histories see section «Managing histories».

E-mail data base to a colleague

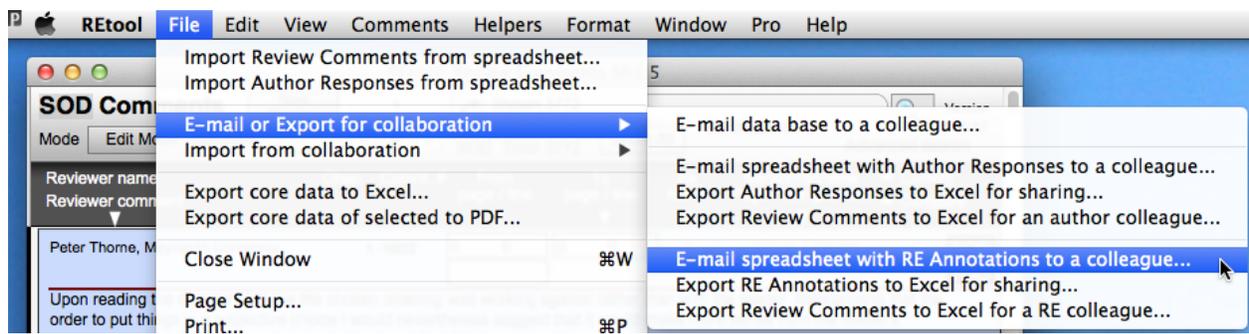
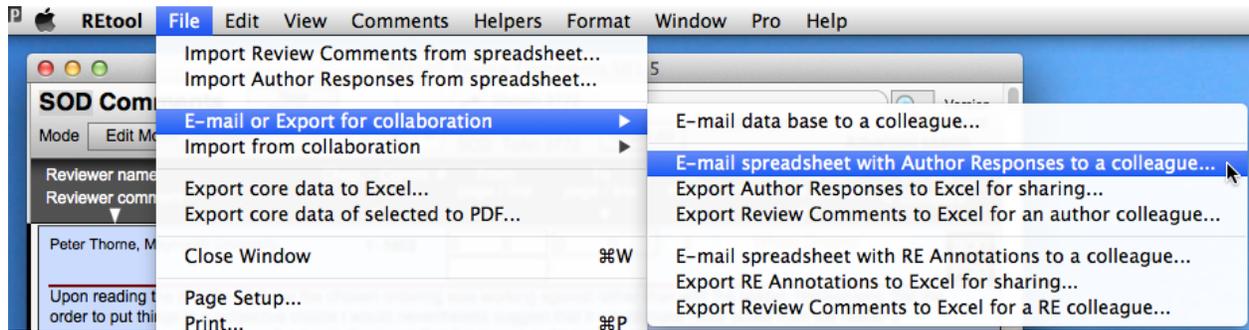
● Sharing either your Author Responses or RE Annotations you have entered so far with another REtool user is very simple and straightforward. REtool even offers a single menu command to not only generate the needed file but also to generate an e-mail, attach the file to that e-mail and offers the user the e-mail for editing and sending. Choose the following menu command to achieve this:



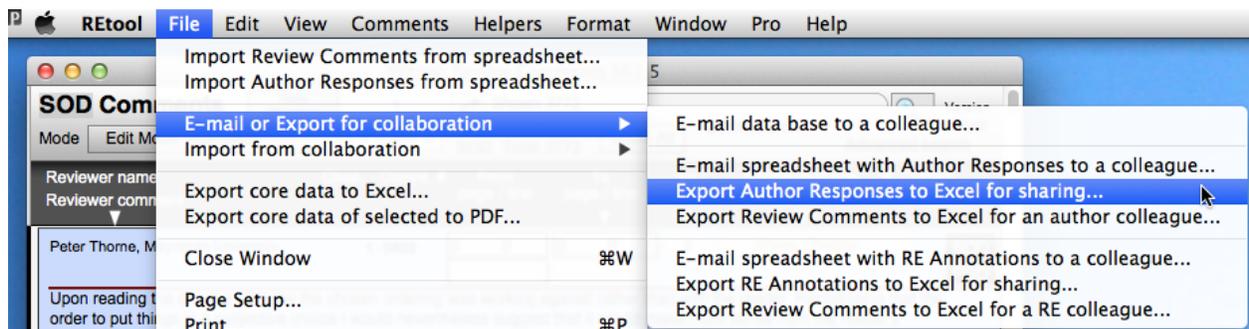
To avoid the e-mailing of large attachments, this process does not generate an exact copy of your data base. It deletes all Review Comments and retains only the data that correspond to the role of the user, i.e. if you are an author only Author Responses or if you are a RE only RE Annotations will be retained in the file. Note, as of 1.8fc12 this feature is not yet implemented and attachments need to be sent in full size or then use a spreadsheet to share your work with a colleague.

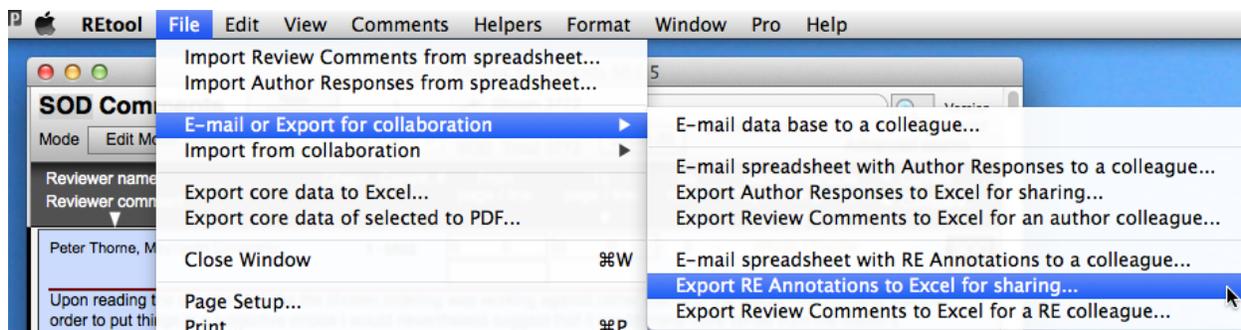
Share a spreadsheet with a colleague

REtool supports also the sharing of data that you have produced using REtool by using spreadsheets instead of the entire REtool data base file (as described above). This method is also supported via a menu command that allows you to E-mail the spreadsheet right away. Following two commands support such sharing of your work with a colleague, depending whether your role is that of an author or a review editor:



Alternatively you can also first simply generate the spreadsheet without E-mailing that directly. Use one of these commands to accomplish this:





The exactly same spreadsheet is generated in the folder where the application REtool resides. You can use that spreadsheet for whatever you want, but typically you would use that to share it with a colleague via E-mail or Dropbox or whatever arrangement you have decided to use within your team to share your work.

For a full understanding: Note, the spreadsheet structures to share data remains the same, yet the data may differ. As described under section «Generate a Review Comments spreadsheet for a colleague» all currently selected Review Comments determine how many rows are written to the spreadsheet. Using the method as described in this section, only those comments are written to the spreadsheet for which you have actually entered as author either some Author Responses or as review editor some RE Annotations.

Only if you have entered Author Responses and/or RE Annotations for all review comments, will the exported spreadsheets contain similar data. However, there may still be differences depending on whether some histories in Author Responses or RE Annotations are present in your data base. Neither a history of Author Responses nor of RE Annotations is written to the spreadsheet if you use either 'Export Review Comments to Excel for an author colleague...' or 'Export Review Comments to Excel for a RE colleague...'. A history of Author Responses is only written to the spreadsheet when using either 'E-mail spreadsheet with Author Responses to a colleague...' or 'Export RE Annotations to Excel for sharing...'. Similarly a history of RE Annotations is only written to the spreadsheet when using either 'E-mail spreadsheet with RE Annotations to a colleague...' or 'Export RE Annotations to Excel for sharing...'. For more details on histories see section «Managing histories».

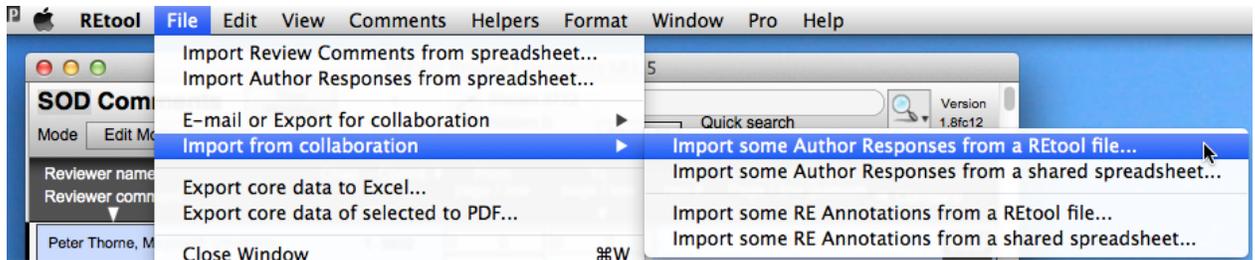
Import a colleague's work into the master data base

● The import depends in which form your colleague has sent you her or his work. Two types of data are ready to be imported easily. You received:

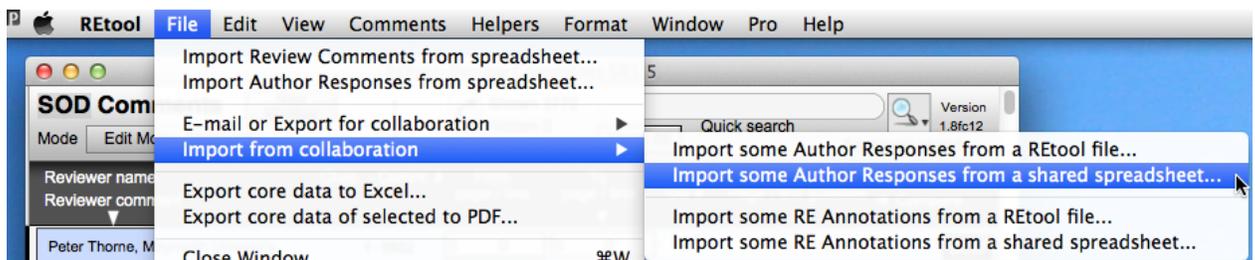
- an entire REtool data base
- a shared spreadsheet that holds the colleague's work (Author Responses or RE Annotations)

In both cases use the submenu 'File -> Import from collaboration -> '. In case of Author Responses use one of following two menu commands:

1. 'Import some Author Responses from a REtool file...'

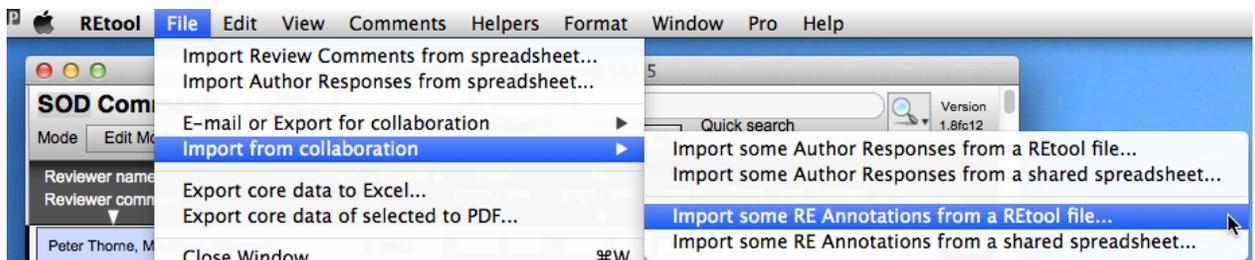


2. 'Import some Author Responses from a shared spreadsheet...'

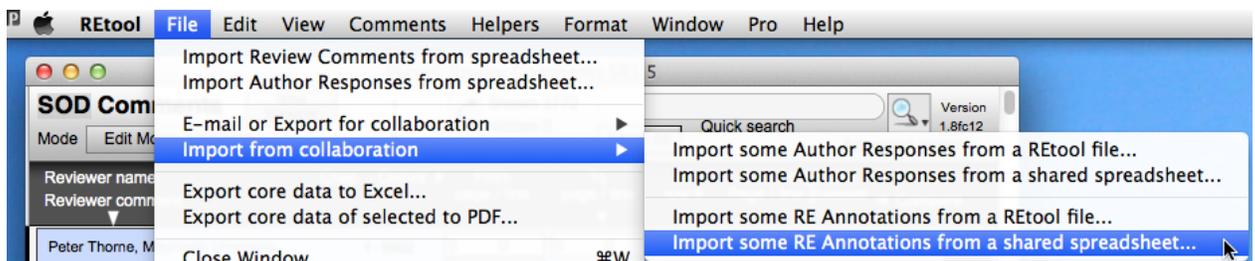


In analogy to above instructions use one of following two menu commands to import RE Annotations data:

1. 'Import some RE Annotations from a REtool file...'

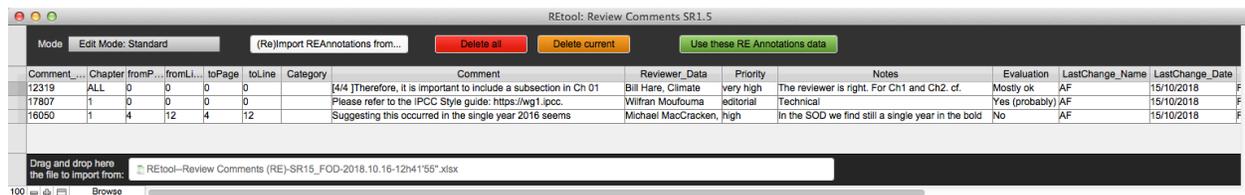


2. 'Import some RE Annotations from a shared spreadsheet...'



You will be asked from which file to import the colleague's data. Select either the REtool file or the shared spreadsheet, depending which menu command you used.

● Whenever you import a collaboration spreadsheet, the data are not imported directly. This means they are not merged directly into your main Retool data base as contained in file REtool-main. Instead the **data are imported into a quarantine environment**, which is also offered by the REtool-Main data base. There you can inspect the data, edit or discard them, reimport them, and finally if you are happy with the data, transfer all or only some for actual use into your main data base. The quarantine environment looks similar to this:



The screenshot shows the REtool: Review Comments SR1.5 interface. At the top, there are buttons for '(Re)Import REAnnotations from...', 'Delete all', 'Delete current', and 'Use these RE Annotations data'. Below these is a table with columns: Comment, Chapter, fromPage, toPage, toLine, Category, Comment, Reviewer, Data, Priority, Notes, Evaluation, LastChange_Name, and LastChange_Date. The table contains three rows of data. At the bottom, there is a text box for 'Drag and drop here the file to import from:' with the file name 'REtool-Review Comments (RE)-SR15_FOD-2018.10.16-12H41'55'.xlsx and a 'Browse' button.

Comment	Chapter	fromPage	toPage	toLine	Category	Comment	Reviewer	Data	Priority	Notes	Evaluation	LastChange_Name	LastChange_Date
12319	ALL	0	0	0		[44]therefore, it is important to include a subsection in Ch 01	Bill Hare	Climate	very high	The reviewer is right. For Ch1 and Ch2. cf.	Mostly ok	AF	15/10/2018
17807	1	0	0	0		Please refer to the IPCC Style guide: https://wg1.ipcc .	Wilfran Moufouma	editorial	Technical		Yes (probably)	AF	15/10/2018
16050	1	4	12	4	12	Suggesting this occurred in the single year 2016 seems	Michael MacCracken		high	In the SOD we find still a single year in the bold	No	AF	15/10/2018

At the bottom of the table (footer) is the colleague's spreadsheet file shown from which you intend to import her data. You should see there the file you have selected in the previous file selection dialogue while entering the quarantine.

The white button on the top imports the data from the spreadsheet. Note, this button always purges first all data from the quarantine before importing the ones from the file shown in the footer at the bottom. The red button deletes all data in the quarantine, the orange button only the currently selected row. The area at the button showing the file name is also a button. You can click it anytime to select another file to be used for subsequent imports.

The green button serves to really use the data, i.e. to transfer them out of the quarantine into the main data base. Click this button once you decide to use the data that are currently shown in the table. Hereby any entries that are identical to those that are already in the main data base will be ignored and only those data that are unique – either Author Responses or RE Annotations – will actually be stored in the main data base. This supports an easy, yet selective merging of the data and makes it possible to repeatedly import work from your colleagues and accumulating all data as you receive them without creating any redundancy. If some of these data were actually modified between two imports, REtool detects this and keeps multiple entries in such a case. Those multiple entries, e.g. several Comments Author Responses to the very same Review Comments, then a so-called history is generated by REtool. How to handle such histories is described under section «Manage histories». How to clean-out the data base should you have accidentally created duplicates is described under section «Resolving conflicts from redundancies (duplicates)».

For a full understanding: Note, quarantine data cannot be restored from a backup. However, as long as you work with the same 'REtool-main' file the quarantine data are kept fine until you delete them by some button click. Note, all quarantine data are deleted be-

fore an import, i.e. as soon as you click on the white button all current data are deleted and replaced by the newly imported ones. Therefore, should you have invested time by editing the data in the quarantine, never leave those data there without first getting the edited data into the main data base. Otherwise you risk to lose your work, e.g. should you inadvertently click on the white button. Once in the main data base, you can still edit those data there.

Managing histories

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file ‘REtool Read Me.pdf’¹⁹.

● Normally you see per Review Comment either none or only a single Author Response and/or none or a single RE Annotation²⁰. However, **REtool supports multiple Author Responses and/or multiple RE Annotations for a single Review Comment**. First, since Author Responses are to be made by the entire author team, multiple responses and/or notes may arise from multiple authors for the very same Review Comment, while the final Author Response is developed. Similarly, as a RE team you may decide to look at critical comments independently by each RE, again leading to several evaluations that may not always concur right away and may therefore lead similarly to multiple RE Annotations for the very same Review Comment. What results is a so-called 1:n relationship between Review Comments and Author Responses or RE Annotations, respectively. Whenever n becomes bigger than 1 means, there is a history present for that Review Comment, either an author history or a RE history. Although the end product IPCC rules need will be a single Author Response or single RE Annotation for every Review Comment, histories have proven to be helpful in supporting author and RE teams in their work. This is exactly where REtool comes in and supports teams in their collaborative efforts (see also section «Collaboration»).

In the standard modes the presence of a history is indicated by a little pink square labelled ‘H’ (for history) in the top right corner of the respective sections for Author Responses and/or RE Annotations:



● **Click on these pink squares** (or use mode pop-up menu to switch to ‘Edit Mode: Show History’) **to see the actual history**. REtool offers sophisticated tools to deal with a history. E.g. REtool offers search commands to find all comments for which there exists an author or RE history (menu commands “Comments -> Show comments with an author history” for author histories or “Comments -> Show comments with a RE history” for RE histories, respectively).

¹⁹ This file comes with every release of REtool and is also available from the home page of REtool

²⁰ In data base terminology this would be called a 1:1 relationship in contrast to a 1:n relationship

Managing author histories

● **History management is particularly useful for authors responding to Review Comments that pertain to the entire report.** For the latter it is likely that several Author Responses arise, since multiple teams independently respond to the same Review Comment as they deal with only that part of the comment as it affects their respective chapter (see figure below for an example). REtool allows to edit these histories and to unify the responses, by merging or giving preference to a particular response. To see the history click either on the pink history square (see above) or switch the mode to 'Edit Mode: Show History'. In that view/layout you can see all Author Responses in a scrollable list "attached" to the original Review Comment (see example below). To the right you find buttons that allow you to give a particular response priority (check mark) or delete some responses (cross) or allows you to edit the contents, by copy pasting text to a single response, which is given priority (check mark) once the editing is complete. The following example shows a longer response and a shorter one from two authors, each from a different chapter of the same report SR1.5. The two responses could be merged, e.g. by copy pasting and inserting the second response in front of the first.

The screenshot displays the REtool interface for 'Review Comments SR1.5'. At the top, there's a header with 'FOD Comments', a 'New Window' button, and a search bar. Below this, a table lists review comments with columns for 'Reviewer name', 'Chap. - Com. #', 'From page / line', 'To page / line', and 'Section/fig/table'. The first entry is for 'Abanades Carlos, Spanish Research Council CSIC' with comment number 'ALL - 4297' and 'Entire Report'. The comment text reads: 'I think the report would gain by focusing on chapters with quantitative information (mainly chapter 2-5) reducing the length of rather rethoric and long sub-sections of chapters 1, 4 and 5, where I find extremely difficult at times to extract a clear new message (i.e. not mentioned already in Ch 1) when referring to sustianible development, societal aspects, equity, justice etc . Authors of Ch2 (i.e. those translating ideas into numbers using quantitative models) should read other chapters, and assess/commnet if the information is coherent with data including in 1.5°C scenarios and pathways of Ch2 .'. Below the comment, a 'Conflict?' section is visible. The 'Authors' section shows a list of responses. The first response is from Daniela Jacob on 23/10/2018 at 19:04:33, with the text: 'Thank you for your comments. The chapters have reduced their lengths and their structures and texts were revised to allow more clarity. The information presented, is the information that was available during the preparation of the FOD. Quantitivative information made available after the preparation of the FOD, has been added in the SOD. Coherence between the chapters was also revised.' The second response is from MA on 23/10/2018 at 19:03:40, with the text: 'Accepted: long sections from chapters 1, 4 and 5 have been significantly truncated.' Each response has a set of control buttons on the right: a green checkmark, a green plus sign, a red cross, and a 'Defer' button.

● **The green plus button can be used to duplicate the Author Response shown on the left serving as a basis for the final response.** This will leave the history intact,

while an additional new response record is created at the top of the history and the response selected (for deletion or other editing). This serves to create a final response merging all from the history by copy and paste plus editing with the intent to keep only that new response. If there is no need to merge content and you give preference only to a specific response currently not on the top, then promote that response to the top by clicking on the up arrow button. ● If you wish **to complete your work, e.g. by making a particular response as the final one, then click the check mark button**. That will also add the phrase “ (for all C/LAs)” after your initials and the evaluation status should then show Done or Resolved (if it was previously Pending). Whether you prefer to delete the no longer needed Author Responses, e.g. by clicking on the red cross button or not, is not important. Without deletion a record is kept. Note, for the final use and publication only the topmost response is used.

To revert a finalisation, having perhaps second thoughts, you have two options: Either click on the phrase or then click on the little Defer button in the bottom left corner. This sets the status to pending, flagging this Review Comment for other authors. A dedicated menu command ‘Comments -> Show comments -> with a pending Author Response’ helps your colleagues to focus on those Review Comments they have still to come in as well to work on the Author Response and complete it to ready it for publication.

While the history mode shows only a single Review Comment at a time, it is possible to work on all review comments with a history by following this sequence of steps:

- 1 ‘Comments -> Show comments -> with an author history’
- 2 Switch to the history mode
- 3 Edit the history
- 4 Click on the next button (Mac Ctrl^<arrow down>) and repeat as from step 3 until finished

Once finished exit the history mode by clicking on the conspicuous red button in the top right corner labelled ‘Exit History Mode’.

● **Back in the standard edit mode not finished Author Responses are characterised by having in the top right corner a little orange square.** To finalise such an Author Response, e.g. when it is pending, click on the orange square button to finalise the Author Response (does the same as the check mark button in the history mode). The little square becomes green and the evaluation status should then show Resolved (or Done). Again you can revert that action by clicking on the Defer button in the left bottom corner. If the Author Response has already been finalized, you are asked for a confirmation.

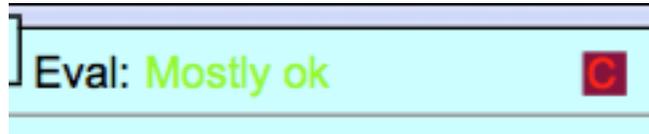
Once all histories have been resolved, the dedicated menu command ‘Pro -> Scripts -> E-mail or Export for collaboration -> Export Review Comments to Excel for publication...’ generates a spreadsheet that can be used to publish the final Author Responses with their Review Comments.

Remember, the many tools REtool provides offer help when hovering with the cursor over them.

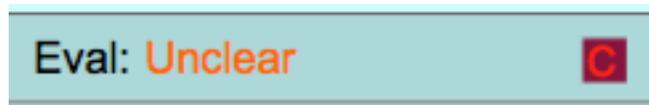
Managing RE histories

Managing RE histories is very similar to managing an author history. Again REtool helps you greatly to accomplish your task as a RE.

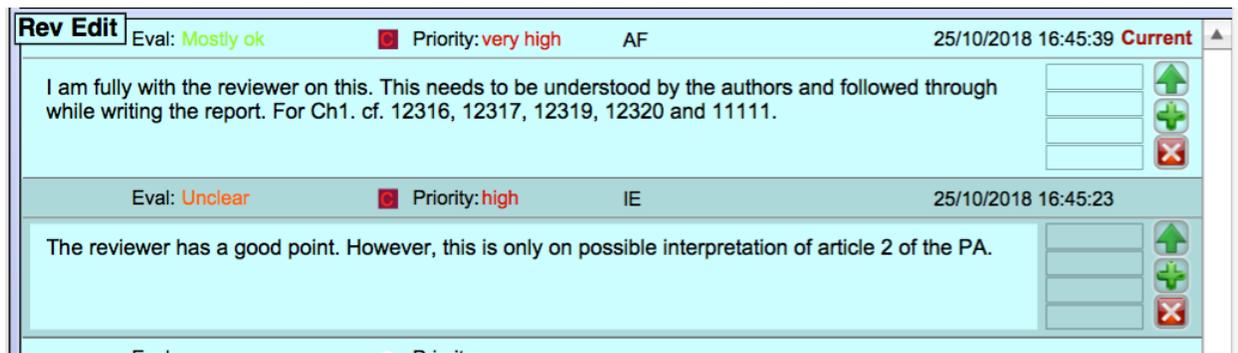
For instance, REtool detects when evaluations by REs are conflicting and marks such Review Comments with a conspicuous little square flag (dark brown with a red 'C' for Conflict). Ex.:



This square button indicates that there are conflicting RE evaluations present in the history for this comment. Indeed the second evaluation present made by RE 'IE' differs from the first:

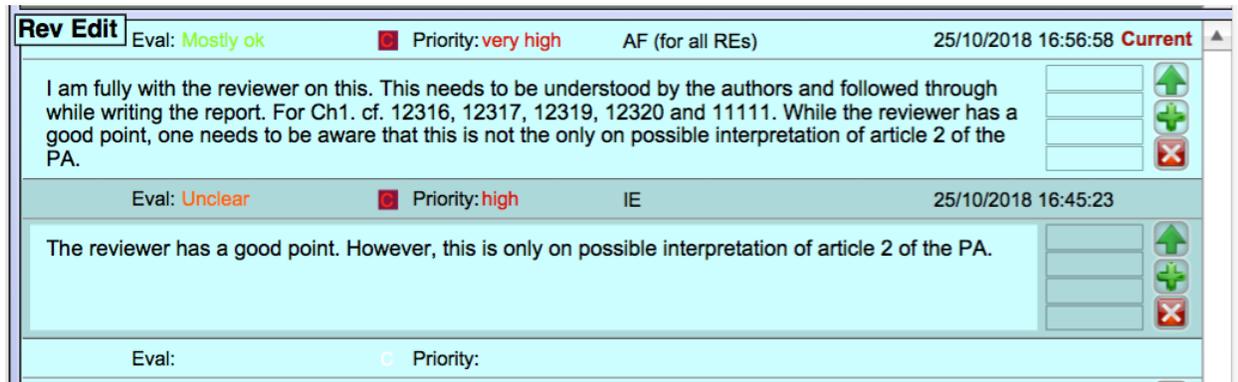
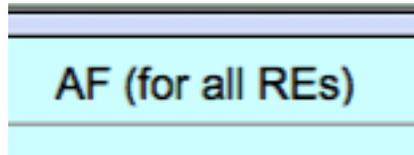


Here the entire history of above examples:



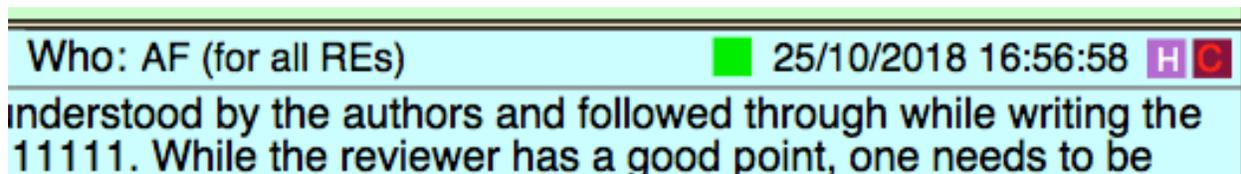
Switching to the mode 'Edit Mode: Show History' allows to view the history and the RE team can decide how to resolve the issue. Typically the team will make efforts to concur on a particular evaluation with a particular rationale. That rationale is best entered in the Notes field. To give that work top priority click the up arrow button. To finalise a RE Annotation click on the little dark square button with the 'C'. The RE Annotation will then be marked in the Who field with following token ' (for all REs)'. This token is appended to the initials of the RE making the finalisation.

This is how above example looks after REs have agreed to merge the two arguments and then finalising the top entry:



You can anytime easily revert that finalisation status by clicking on the phrase '(for all REs)'.

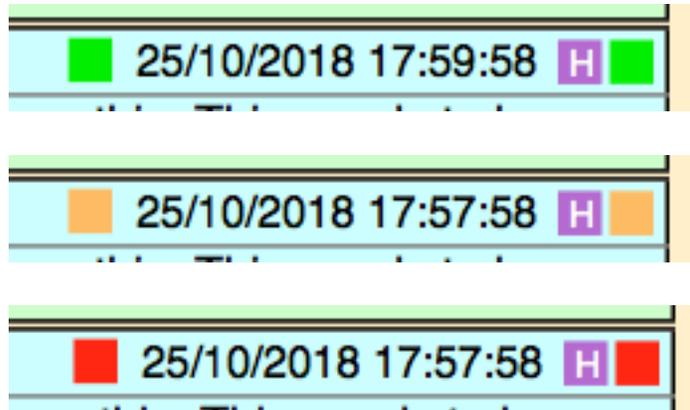
Going back the mode 'Edit Mode: Standard' we see first the same little brown square with the red 'C', now in the top right corner. Additionally a second little green square appears left of the date and time of the finalisation:



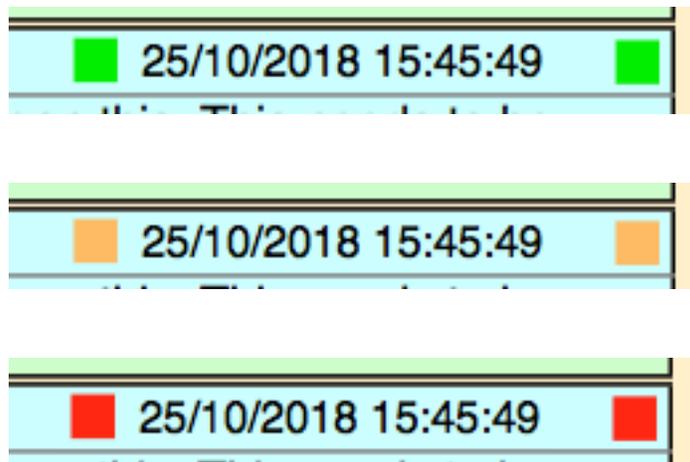
It shows the overall status of the RE Annotation where

- green means, all is ok with that comment,
- orange there are issues, but they may be tolerable,
- red critical issues are present, e.g. if REs conclude that a Review Comment with a high or very high priority has not been addressed by the authors in a satisfactory manner.

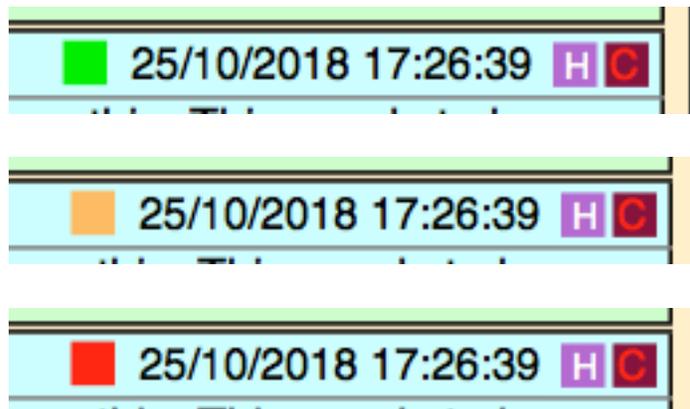
If all REs have fully concurred in case of multiple evaluations, i.e. a history without any conflicts, then the two square flags show an identical colour.



The presence of the left square is then flagging only the status of being finalised. Similarly the case where no history is present, yet the RE Annotations have been finalised:

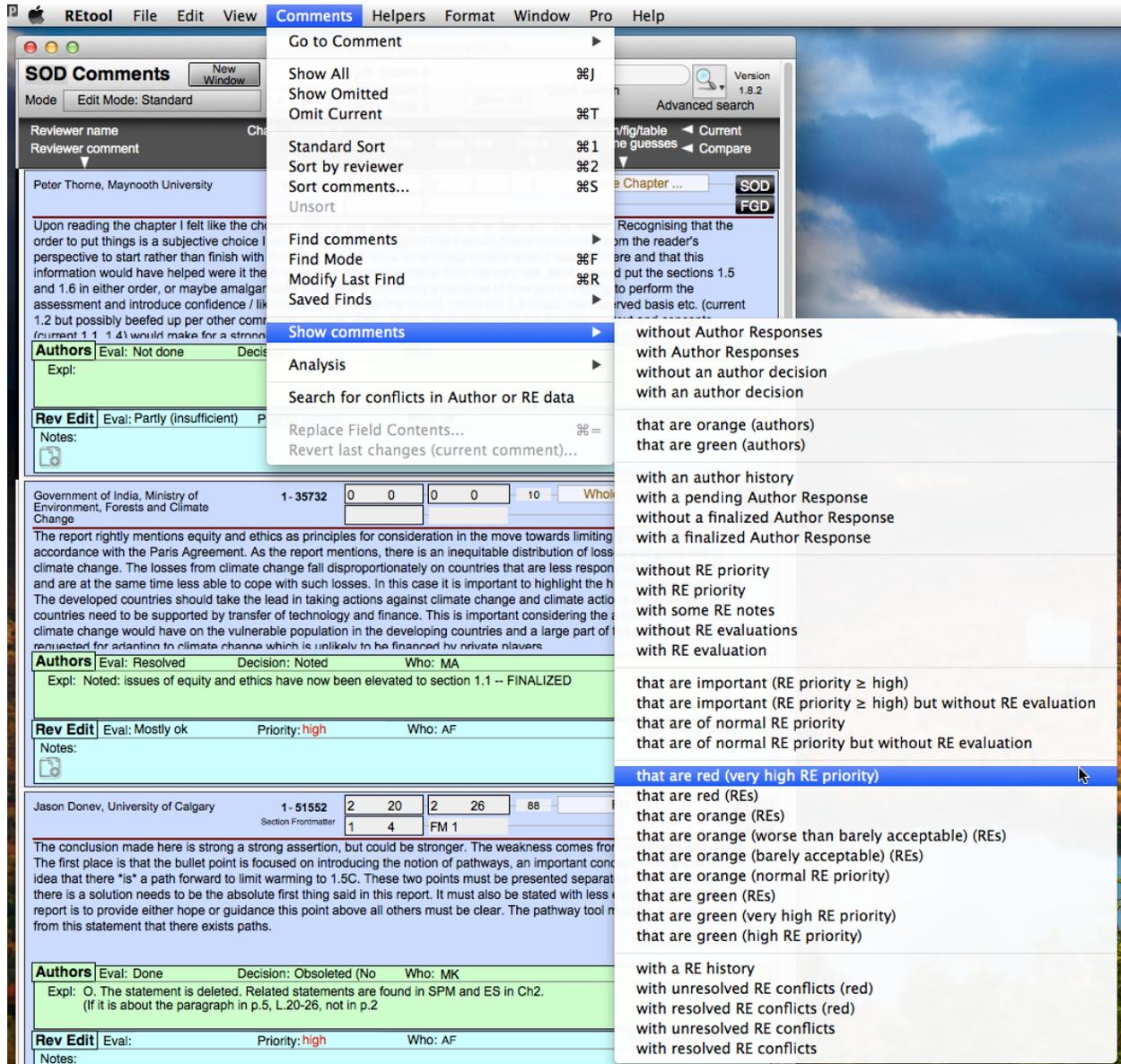


This second little square flag on the left is particularly helpful in cases where REs have made differing evaluations, in particular when evaluating some of the more critical comments. Then the little brown square flag to the very right shows only the red 'C' (for conflicting evaluations). The left square also informs about the fact that the RE Annotation has been finalised:



Some of the square flags explained above serve also as buttons, e.g. to finalize conflicting RE evaluations click on the the little brown square flag showing a red 'C'. Remember, the many tools REtool provides offer help when hovering with the cursor over them. No need to remember all of above.

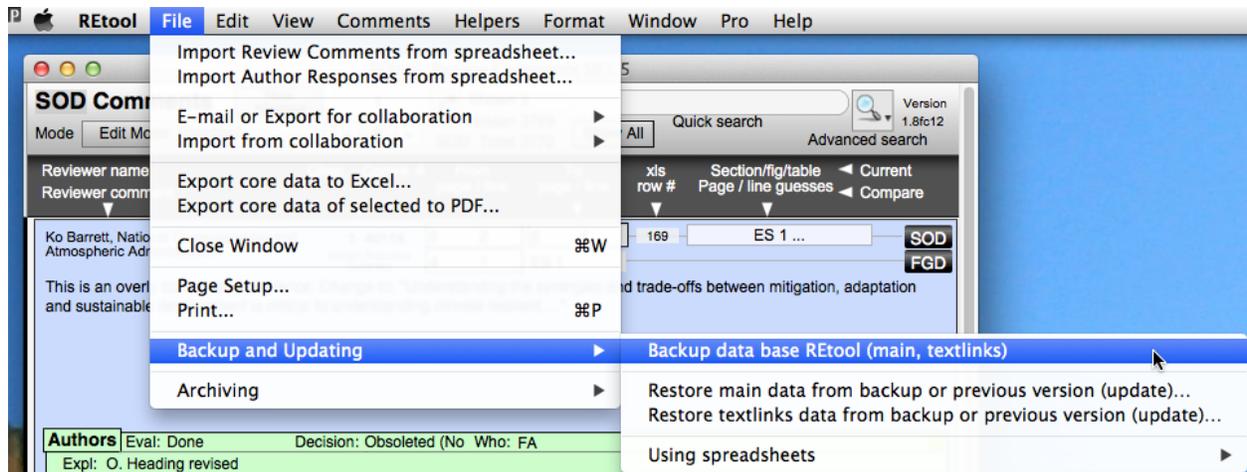
Obviously red flagged RE Annotations with even conflicting RE evaluations require particular attention and care by the RE team. To find such Review Comments again REtool offers dedicated menu commands. E.g. the latter can be immediately selected by choosing menu command 'Comments -> Show comments -> that are red (very high priority)':



Making a backup

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file ‘REtool Read Me.pdf’²¹.

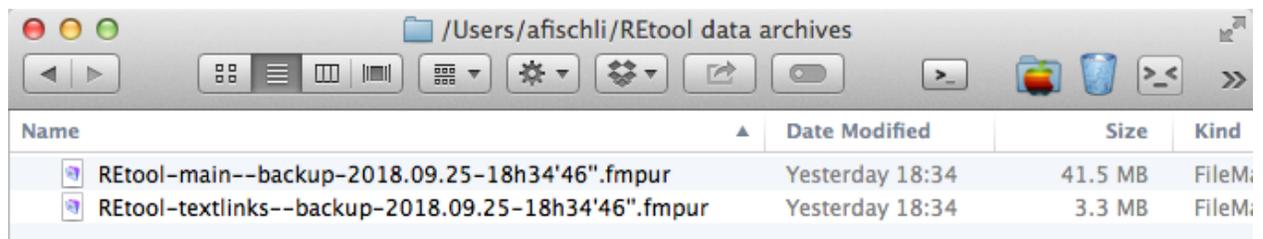
● Your REtool data base is stored in the file ‘REtool-main’.²² This is a precious file. You can **make anytime a backup** from all your data by choosing the menu command ‘File -> Backup and Updating -> Backup dat abse REtool (main, textlinks)’:



This will create a backup not only from your main data base, i.e. ‘REtool-main’ where all your responses or annotations are stored, but also of the so-called textlinks, i.e. the meta data on the structure of the draft (table of contents) as stored in ‘REtool-textlinks’.

The backup files are exact copies of what you have at the moment when you make the backup. The backup files are stored in the subfolder ‘REtool data archives’ within your REtool work folder that came with the release (see ‘REtool Read Me.pdf’ for details).

The backup files are named by their source and the data and time of the backup is appended to the file name in big endian format. The backup may then look similar to this:



Note, these files may get large. Note also that a backup is made automatically each time

²¹ This file comes with every release of REtool and is also available from the home page of REtool

²² This file has either the extension .fmpur if you work with the standard REtool software. Otherwise, i.e. if you work with ‘REtool for FileMaker’, then the extension is ‘.fmp12’.

you export some data, in particular when you do the latter in replace mode. Since this may result in using a significant amount of disk space it is recommended to delete superfluous backups from the subfolder 'REtool data archives' from time to time.

Note also, the files REtool-main and REtool-textlinks contain not only data, but also the functionality of the data base. The application REtool itself contains not the REtool specific functionality, but only the generic data base functionality as contained in FileMaker and as needed by the REtool specific data base functions. Any backup stores therefore not only your data, but also the REtool data base functionality. You can store only the data separate from the REtool data base functionality. For this end you can use the archiving functions as also offered in REtool (menu 'File -> Archiving', see section «Archiving REtool data»).

Restoring your REtool data base from a backup or any other Retool data base file is described under section «Restoring your REtool data base». Restoring data selectively is described under section «Importing data from another REtool data base».

Restoring your REtool data base

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'²³.

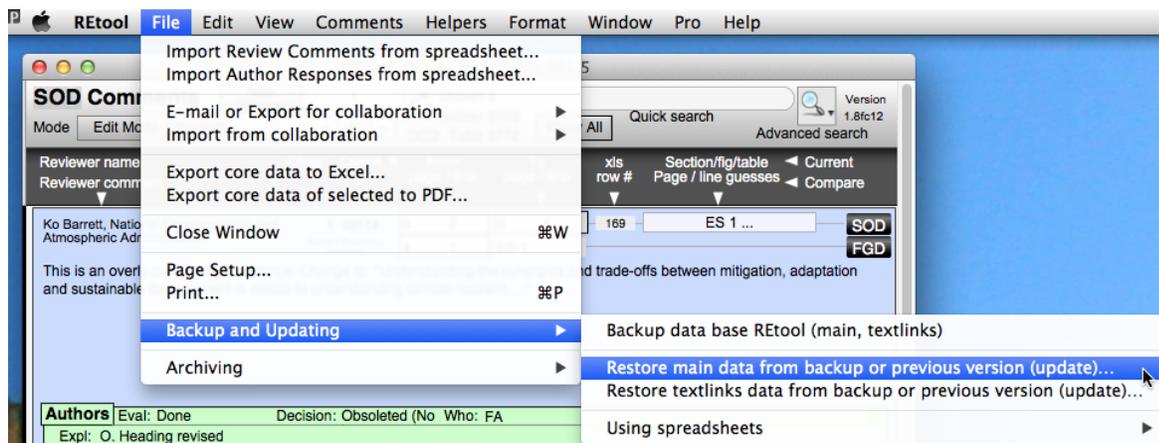
A REtool data base can easily be restored from various sources. A typical case is restoring from a previously made backup (cf. section «Making a backup»). You are invited to do that when you start from a new copy of REtool, e.g. after downloading an update for a new version and launching that new REtool for the first time.



Clicking on button 'Updating' triggers a restore process.

Whatever reason you have for restoring, **it is important to know that you can restore anytime your precious REtool data**. They represent possibly a lot of work you have invested. The REtool data base is designed to provide maximal safety for your work and data.

Instead of restoring from a previous backup, you can restore your data also from spreadsheets. That is a bit more elaborate to do, but this offers sometimes more flexibility, e.g. to massage the data in Excel before restoring them to REtool. Moreover, the backups made to Excel files are typically much smaller and are therefore more fit to be sent via E-mail.

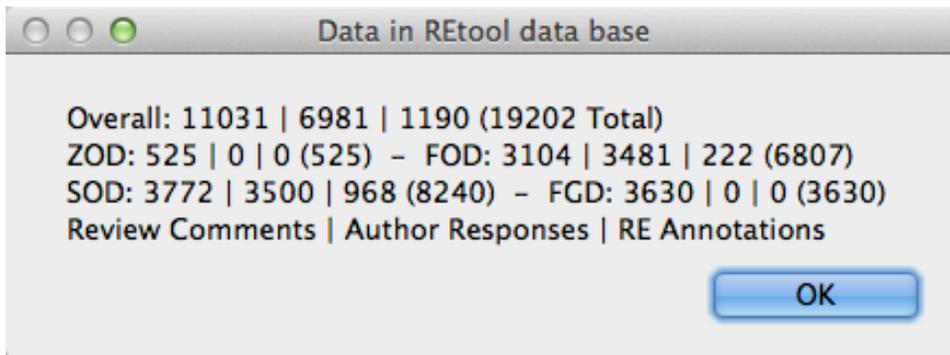


²³ This file comes with every release of REtool and is also available from the home page of REtool

To restore from a previously made backup simply choose menu command 'File -> Backup and Updating -> Restore main data from backup or previous version (update)...' as shown above and follow the instructions.

You are asked in the standard open file dialogue to select the backup file. Make sure you choose the wanted file and that it is a of the right kind, i.e. it is a REtool-main backup file. You find a hint on what kind of file is expected at the top in the middle of every file selection dialogue.

At the end of updating you get a little summary of the content of your data base similar to this:



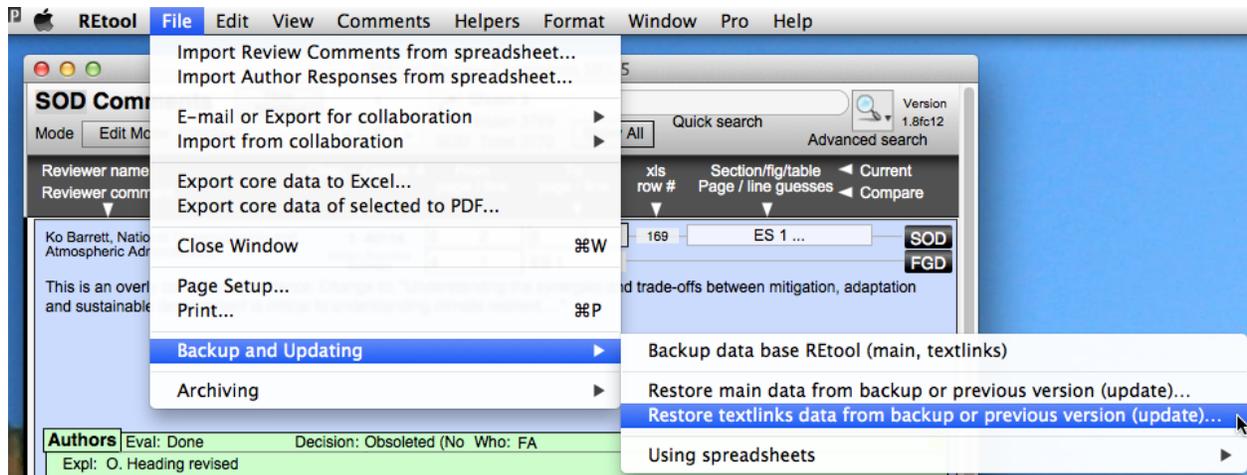
This means there are 11,031 Review Comments, 6,981 Author Responses, and 1,190 RE Annotations in total present in your data base, given as a number triple delimited by a vertical bar ('|'). The sum of these, the so-called 19,202 records is given in the parentheses behind each triple. Below you get how these records distribute for all four drafts, a triple for the ZOD, FOD, SOD, and FGD each, again each time followed by a record total in parentheses. The legend at the bottom is a reminder how to read the sequence of numbers for each number triple. Given you started from an empty data base, this means all those 19,202 records were restored from the backup. The old data can now be used exactly as they were in the new REtool offering a new functionality.

Understand that only the data are restored, not the data base functionality. The latter cannot be restored and is stored permanently in the data base file. Should you have a license for FileMaker Pro then you can also modify and customise the data base functionality. However, in the freely available REtool this is not possible. This is why you have to replace the old obsolete file 'REtool-main' with the new one when updating to a new version of REtool.

Note also, a restore always restores also all Retool settings, settings that may have caused problems in the past and/or may cause some now. If you suspect such difficulties you can easily click the button 'Factory Reset' in mode 'REtool Settings' to resume an initial factory state of all settings. **IMPORTANT:** Note, this may require to choose your report and preferred chapter once again.

If you wish to restore only some of your data, say either only Author Responses or only RE Annotations, then you need to use other techniques, which REtool offers as well (see section «Importing data from another REtool data base»).

The file '**REtool-textlinks**' can also be restored from a previously made backup. Choose menu command 'File -> Backup and Updating -> Restore textlinks data from backup or previous version (update)...'



You are asked in the standard open file dialogue to select the backup file. Make sure you choose the wanted file and that it is a of the right kind, i.e. it is a REtool-textlinks backup file. You find a hint on what kind of file is expected at the top in the middle of every file selection dialogue.

Note, the updating process you are offered during first time use of REtool, notably when updating to a new version, employs the same techniques. It uses both of above described restore processes, i.e. it simply calls each restore command for your convenience one by one, first for REtool-textlinks and then for REtool-main.

It may also be that during a restore you encounter warnings about duplicates (redundancies). Find more on how to handle these situations in section «Importing data from another REtool data base» and «Resolving conflicts from redundancies (duplicates)».

Importing from another REtool data base

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'²⁴.

● This import technique allows you to **import selectively either Review Comments²⁵, Author Responses, or RE Annotations from a REtool file²⁶**. Note, REtool Settings cannot be imported in such a manner. REtool Settings are only imported during a restore (section «Restoring your REtool data base») or update (section «Updating REtool», 'REtool Read Me.pdf').

● To **selectively import either Author Responses or RE Annotations from another REtool data base file** perform following steps:

- 1) Ready the REtool file (typically a REtool-main file) from which you wish to import by making sure the parent folder holding the file is “blessed”
- 2) Choose the appropriate menu command, depending on the kind of data you wish to import, i.e. either Review Comments, Author Responses, or RE Annotations

On step 1: You can choose any file from any folder with the standard file selection dialogue. However, the import succeeds only as long as the parent folder of the file from which you wish to import has also two files present: 'REtool-main' and 'REtool-textlinks'.²⁷

Those files are small and contain no data, they just need to be FileMaker files having the correct names and being present. Once the two files are present, you can say the folder is “blessed” for any importing and restoring of any REtool files that reside in it. As released the subfolder 'REtool data archives' is already “blessed” and contains these two files. Thus it is recommended to use this folder by first choice. For any other folder,

²⁴ This file comes with every release of REtool and is also available from the home page of REtool

²⁵ The menu command needed to import Review Comments is only available in the so-called Pro mode from the submenu 'Pro -> Scripts -> Import data -> Import Review Comments from a REtool file...'. Pro mode can anytime be activated by choosing menu command 'Help -> Set Pro Mode -> On'.

²⁶ Files you can import from are characterised by having the extension .fmpur (free REtool) or .fmp12 (FileMaker REtool) and are in essence some copy of a REtool-main file. Note, it does not matter whether the file you wish to import from has been sent to you by a colleague or resulted from a backup or was created by duplicating your REtool-main file by using the Explorer (Windows) or Finder (Macintosh). It does also not matter by which backup method the file was created, i.e. whether you have executed from within REtool an actual backup command or whether that file was generated automatically by REtool's auto backup feature. All these files are identical in their structure but not necessarily in the data they store and can therefore be used either to restore all your data or to selectively import from them.

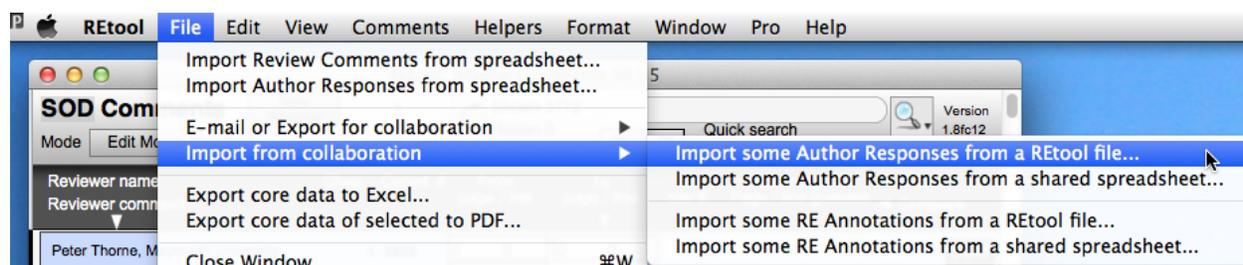
However, in some cases incompatibilities may arise when trying to import from REtool files that were generated by an older version of REtool.

²⁷ Extensions are either .fmpur (free REtool) or .fmp12 (licensed FileMaker variant)

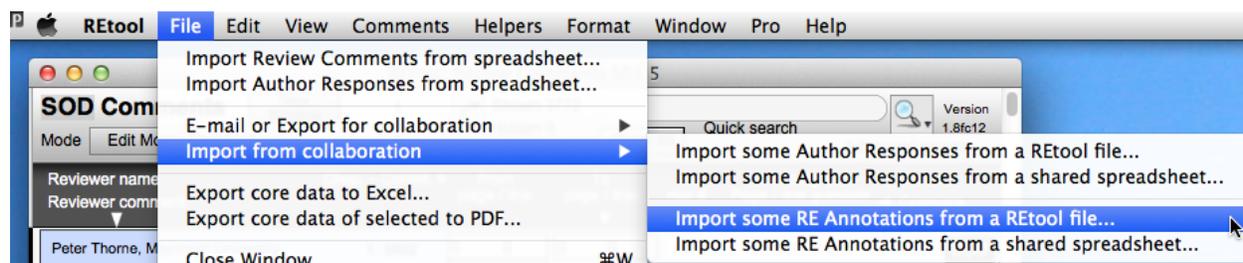
however, make first a copy of the two files²⁸ 'REtool-main' and 'REtool-textlinks' from the folder 'REtool data archives' and move each copy to that extra folder while making sure the file names match precisely. In this manner you can "bless" any folder in which you wish to store files from which you intend to import (or restore).

On step 2: Use the submenu 'File -> Import from collaboration' or in Pro mode²³ the submenu 'Pro -> Scripts -> Import data'.

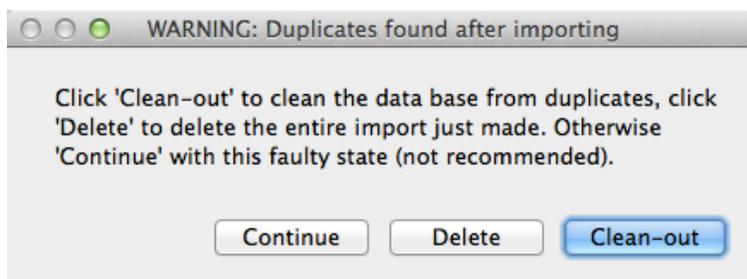
To import Author Responses choose following menu command 'Import some Author Responses from a REtool file...':



To import RE Annotations data choose following menu command 'Import some RE Annotations from a REtool file...':



● In case you append data the import routines may detect so-called duplicates. In such a situation REtool offers you two main choices:

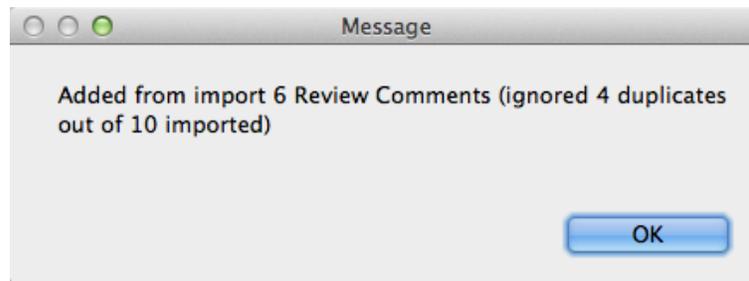


Typically you choose to partially import and ignore any data that are redundant to those already present in your data base (button "Clean-out"). While the process first import-

²⁸ On the Mac those two files are marked by having a yellow label

ed all data – which resulted in the detection of duplicates – in the end this option will add only what is new and different by ignoring any redundant data. Alternatively you can also decide at this point to discard the import entirely (button “Delete”), e.g. should you have accidentally imported the same data twice or you prefer to defer the import to a later point, needing to check something first. If all data are new for the REtool data base, then they are of course simply added.

Once the import has finished you get a report about what was done similar to this:



summarizing that from the 10 imported Review Comments only 6 were actually added to your data base, while 4 were ignored by REtool and not inserted, since they were merely duplicates of Review Comments already present in your data base.

Find further details on the handling of duplicates in section «Resolving conflicts from redundancies (duplicates)».

Importing data via Pro mode

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'²⁹.

Normally REtool should be able to easily import data from the files provided to you. However, following commands from the standard REtool menus

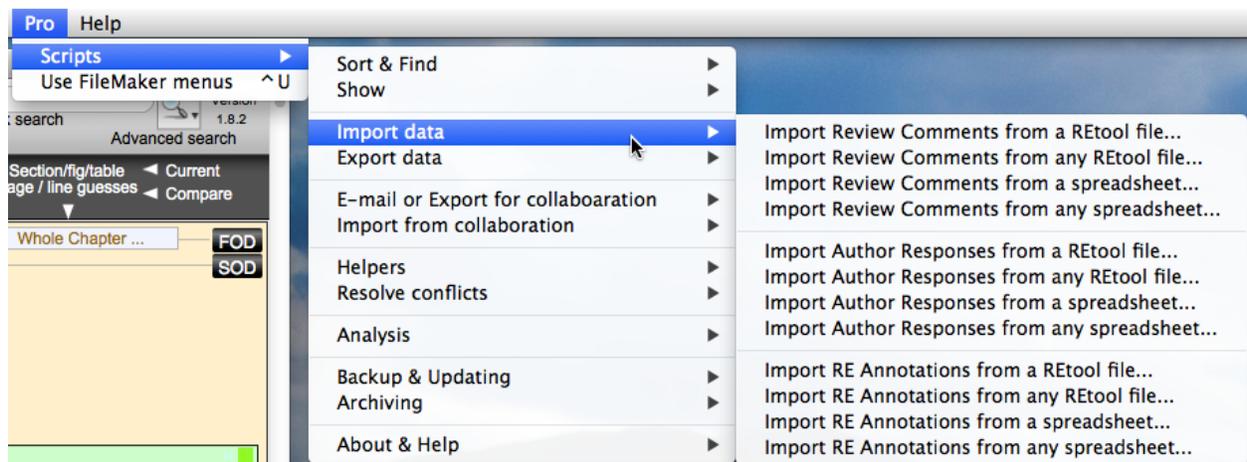
'File -> Import Review Comments from spreadsheet...'

'File -> Import Author Responses from spreadsheet...'

work only³⁰ if

- (i) the files have a name known to REtool,
- (ii) reside in the correct REtool work folder, and
- (iii) have the proper structure.

Since it may easily happen that a file name is not the expected or some colleague has altered the structure of a spreadsheet, any such modification suffices to cause REtool to be unable to import the data with above regular import commands. Requirements (i) and (ii) can normally easily be fixed. But REtool offers an alternative to overcome all of these import difficulties: Use a command from the submenu 'Pro -> Scripts -> Import data' available in the Pro mode of REtool:

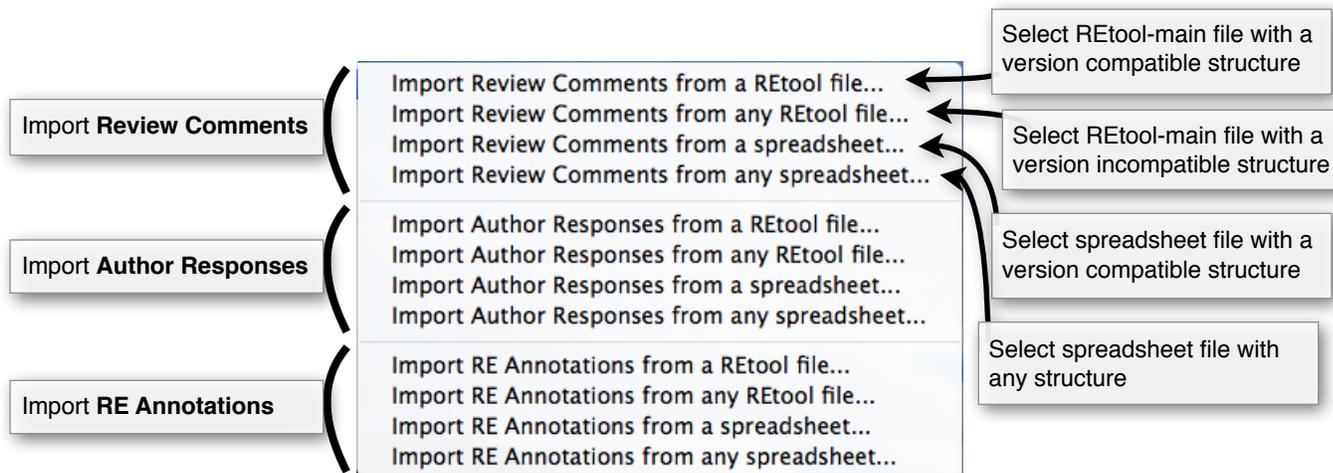


The Pro mode can be activated via the Help menu 'Help -> Set Pro Mode -> On'.

²⁹ This file comes with every release of REtool and is also available from the home page of REtool

³⁰ The requirements (i) and (ii) are relaxed if the preference 'Ask always for file' is checked (see mode 'REtool Settings')

For each category of data that you can import there are four menu commands with an analogue functionality (explained below only for data category Review Comments):



Note, each group of four menu commands are related and differ only little. One difference is the type of file from which you wish to import the data. Two types are supported, the import from another **REtool file** such as a backup³¹, which must be a REtool-main file. Secondly you can import from an Excel **spreadsheet** file with or without multiple worksheets (extension .xlsx). Another difference is whether REtool asks you first to select the file from which you wish to import or not (note phrase ... **from a REtool file**). And a third difference is whether the structure of the file you wish to import from is already known to REtool or not (note phrase ... **from any REtool file**).

The following similar³² menu commands serve to import from a REtool-main file:

- 'File -> Import from collaboration -> Import <data kind> from a REtool file...'³³
- 'Pro -> Scripts -> Import data -> Import <data kind> from a REtool file...'
- 'Pro -> Scripts -> Import data -> Import <data kind> from any REtool file...'

In all three cases REtool asks you to select the file with a file selection dialogue (note phrase ... **from a REtool file**). In cases a) and b) for a successful import the internal structure of the REtool file you wish to import from must be compatible with the current version of REtool. In case c) you are asked in an additional dialogue window to assign which data goes where (note phrase ... **from any REtool file**). This requires some expert knowledge about the inner workings of REtool and should therefore only be used as a last resort. But this may be unavoidable if the REtool file you wish to import from has internally an incompatible structure so that menu commands a) or b) yield not the de-

³¹ see section «Making a backup»

³² for <data kind> Author Responses and RE Annotations a) and b) have even identical functionality

³³ This menu command is only available from the standard REtool menus (not from the Pro menus)

sired result, e.g. because the REtool file was generated by an older version of REtool. As a rule of thumb, always try out first commands a) and b) before using c).

To import from a spreadsheet the following menu commands are very similar:

- a) 'File -> Import <data kind> from spreadsheet...' ³⁴
- b) 'Pro -> Scripts -> Import data -> Import <data kind> from a spreadsheet...'
- c) 'Pro -> Scripts -> Import data -> Import <data kind> from any spreadsheet...' ³⁵

In cases a) and b) for a successful import the structure of the spreadsheet you wish to import from must be known to REtool and compatible with the current version of REtool. In case a) the file name must be known to REtool and the file has to reside in the dedicated REtool work folder. In cases b) and c) the name of the file does not matter and the file can reside anywhere on your system. REtool asks you to select the file with a file selection dialogue (note phrase ... **from a spreadsheet**). In case c) you are asked to assign which data goes where (note phrase ... **from any spreadsheet**). This requires some expert knowledge about the inner workings of REtool and should therefore only be used as a last resort. This may become necessary if the spreadsheet you wish to import from has been modified by a previous user, e.g. by deleting or rearranging columns, or has an incompatible structure, e.g. because the spreadsheet file was generated by an older version of REtool. As a rule of thumb, always try out first commands a) and b) before using c).

● If you have to resort to case c) you should watch out that you always import the core data.

Of highest priority are the data needed to make the relationships between all three data categories functional. They are:

Review Comments	RevStage	Comment_No	Chapter_Info	
Author Responses	RevStage	Comment_No	Chapter_Info	RevCommID
RE Annotations				RevCommID

'RevStage' data may not always be available. If available in the input, always import it. Otherwise you have been asked by REtool to provide a value. Correct values are: ZOD,

³⁴ This menu command is only available from the standard REtool menus (not from the Pro menus)

³⁵ Note following menu command uses a quarantine and does in contrast to cases a), b), and c) not import the data directly into the REtool data base

'File -> Import from collaboration -> Import <data kind> from a shared spreadsheet...'
(see section «Collaboration», subsection «Import a colleague's work into the master data base»).

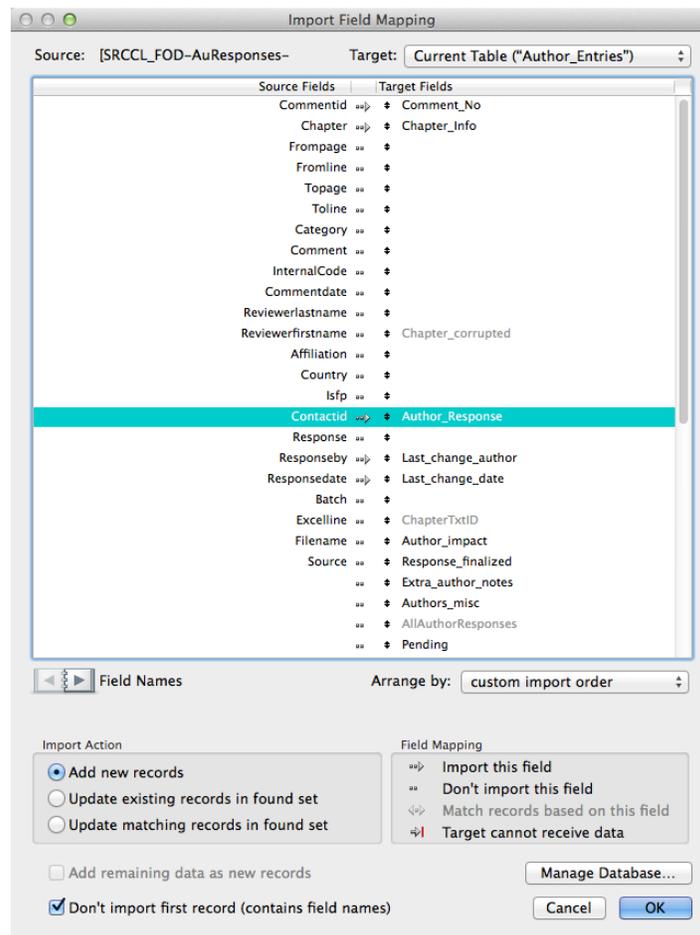
FOD, SOD, or FGD. 'RevCommID' combines 'RevStage', 'Comment_No', and 'Chapter_Info' in a single field/spreadsheet column. If you can, always import 'RevCommID' but it may be missing, e.g. in source files containing Author Responses.

These are the additional core data you should import as well (key fields in bold):

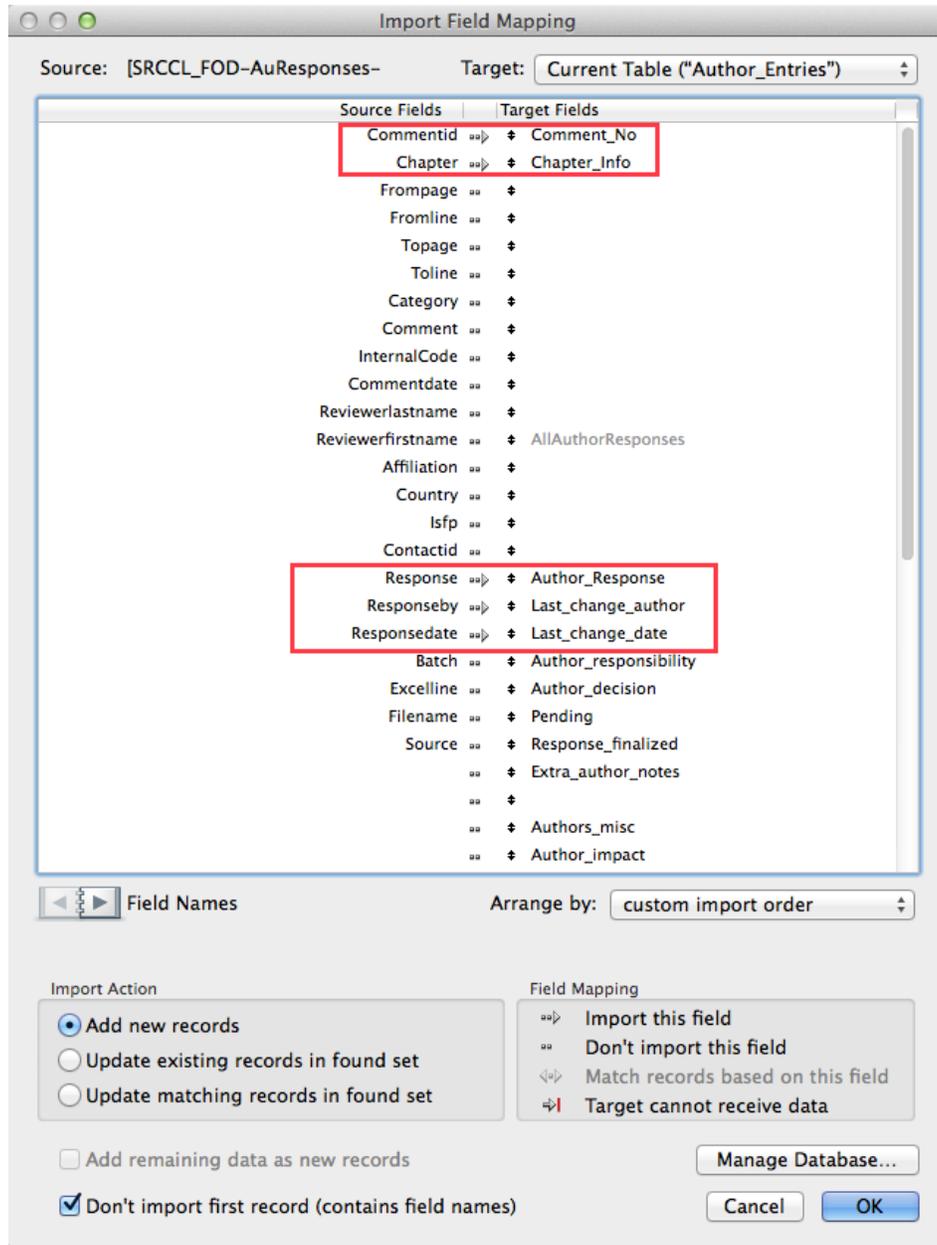
Review Comments	Comment	Category	fromPage, fromLine, toPage, toLine	Reviewer data etc.
Author Responses	Author_decision	Author_Response	Pending, Response_finalized	Author_responsibility, Last_change_author, Last_change_date_author, Extra_author_notes
RE Annotations	RE_Priority	RE_Notes	RE_Evaluation	RE_responsibility, Last_change_RE, Last_change_date_RE

Above tables list the field names as used by REtool as of version 1.8.2 or later.

The following screenshot illustrates the situation, an example where authors have modified the spreadsheet and you are trying to import nevertheless the author responses:



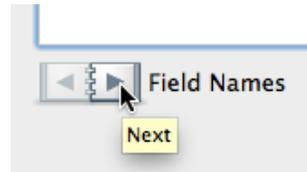
What would result in above case is a bad import where no Author Responses would be imported and an ID of the reviewer would show up in place of Author Responses. Thus you need to rearrange things until following assignment between the column headers in the input spreadsheet (named "Source Fields", shown on the left) and the field names of the REtool data base's target fields (shown on the right) results:



Arrange by drag and drop the target fields up and down until the spreadsheet columns, in this example 'Commentid', 'Chapter', 'Response', 'Responseby', and 'Respondedate', match their target fields, i.e. in this example 'Comment_No', 'Chapter_Info', 'Author_Re-

sponse', 'Last_change_author', and 'Last_change_date'³⁶. Some target fields are greyed out. Understand they are fields for which REtool automatically calculates a value and consequently no data can be imported into them.

The source fields shown above are merely the column headers as used in the source spreadsheet in the first row. It may be helpful to use the left and right arrows on the left of 'Field Names' to move to other rows in the source spreadsheet.



This may be necessary if column headers are written on multiple rows or if the column headers are not clear and only the actual data allow you to recognise what is actually contained in the respective spreadsheet columns.

As a rule of thumb, if you import from a REtool file it is recommended to use for 'Arrange by:' the option 'matching names' and work from there. Yet, you need to be aware that this does not automatically warrant that all core data are imported. Field names may have changed from the previous REtool version. Make sure that all wanted data are actually imported by clicking between the source and target field pairs. To import the data check there is the little arrow shown for that spreadsheet column you wish to import.

As a second rule of thumb you should always import as many data as possible, given the data appear to be correct. Use the two tables given above to check that you are importing the minimum of data needed by REtool.

Once you have arranged everything as it should, simply click the button 'OK' to initiate the actual import.

How to correct for a bad import?

In case the import does not look as it should, e.g. data are garbled up or obviously end up in the wrong place, there is nothing lost, since REtool offers several techniques to easily discard the last import and to resume the state before a bad import. However, not all import errors are obvious. To be on the safe side it is recommended to check for problems by using menu command 'Comments -> Search for problems in data base' or 'Pro -> Scripts -> Resolve conflicts -> Search for problems in data base' if you have any doubts about a made import before continuing your work. Note the following in this context:

³⁶ The field 'Last_change_date' as shown in this graph has been renamed to 'Last_change_date_author' in REtool version 1.8.2 or later, for easier understanding when having to match source with target fields.

First REtool makes typically a backup of your entire data base before importing new data.³⁷ Thus your REtool data base before the import should be safe.

Secondly REtool automatically deletes empty imported data and tests the just imported data for errors. If it detects serious errors, it offers you in many cases the option to discard the entire import right away (see in this context also section «Resolving conflicts from redundancies (duplicates)»).

If you have imported from a spreadsheet use following commands from the submenu 'Pro -> Scripts -> Resolve conflicts' to get rid of the just made import:

- 1) Optional: Make a backup if none was made during the import to be on the safe side
- 2) Depending on the type of data you have badly imported choose either 'View Review Comments in table format' or 'View Author Responses' or 'View RE Annotations'
- 3) 'Find last imported spreadsheet data'
- 4) Check that the selected data are the ones you really want to delete
- 5) 'Delete all currently selected...'

In many cases another robust and convenient technique is to reimport the data and when asked whether to append or replace the data answer with 'Replace'. This works of course only if the data you wish to import is complete and was not meant to append the imported data to the already existing data. If the data are Review Comments this is the most convenient technique to fix a bad import.

Another option is to discard the current 'REtool-main' file in favour of a backup you have made just before the import. Normally REtool makes for you a backup automatically.³⁸ If such a backup file is available from your subfolder 'REtool data archives' then quit REtool, discard the current 'REtool-main' file and replace it with the backup file. Rename the file to 'REtool-main.fmpur'³⁹ and relaunch the REtool application.

As last technique consists of finding the just imported data by some specific characteristic in place of step 3 as described above. E.g. this may be necessary if you have badly imported from a REtool file data by not properly assigning source to target fields. The typical case is an import of Author Responses or RE Annotations. First note that in the unsorted state (default) the just imported records are appended after any records that were present before the import. The data base marks Author Responses and RE Anno-

³⁷ This depends on the preference settings of the option 'Always backup' (see mode 'REtool Settings')

³⁸ This depends on the preference settings of the option 'Always backup' (see mode 'REtool Settings')

³⁹ or 'REtool-main.fmp12' if you work with the FileMaker version of REtool

tations records with a data base unique stamp hold in field 'ID_Database'. If the records were imported from another data base, e.g. from a Retool-Main file that you have received from an author or RE colleague, then this field may contain a unique value which is different from that used by your REtool data base. Searching for those records is all what you need to perform step 3. Following menu commands from the submenu 'Pro -> Scripts -> Resolve conflicts' may help you here:

'Find Author Responses imported from REtool file'

'Find RE Annotations imported from REtool file'

Perhaps you need to further refine your search and hereby repeat steps 3) and 4) until you have exactly selected all badly imported records. Then of course you are ready to proceed with step 5).

As a final check to make sure that your REtool data base is in a fine state check the internal consistency of your REtool data base as described in section «Check internal consistency of your REtool data base».

Check internal consistency of your REtool data base

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁴⁰.

You can anytime check the internal consistency of your REtool data base to ensure it is in a fine state. This is recommended notably before a phase when you intend to invest considerable work into it or after a difficult import. Following menu commands from menu 'Comments' or the submenu 'Pro -> Scripts -> Resolve conflicts' help you here:⁴¹

a) 'Search for problems in data base'

and depending on the case also

b) 'Find duplicate Review Comments'

c) 'Find duplicate Author Responses'

d) 'Find duplicate RE Annotations'

Command a) can detect inconsistencies such as conflicts in the primary keys of Review Comments, Author Responses, and/or RE Annotations or essential fields being empty. If this command finds no records, your REtool data base is technically in good shape.

Otherwise execute from submenu 'Pro -> Scripts -> Resolve conflicts' the menu command

e) 'Fix current sets of Author Responses and RE Annotations'

Command e) fixes empty critical fields in Author Responses and RE Annotations and assigns proper values to those. If no such problems are actually present, this command is without effect and safe to use.

In some cases – in particular after an import having caused the difficulty – the best remedy may be to resume a previous state of REtool by discarding the imported data (see subsection «How to correct for a bad import?» in section «Importing data via Pro mode»).

Commands b), c), and d) report only on the presence of duplicates. Fix such redundancies as described in section «Resolving conflicts from redundancies (duplicates)».

⁴⁰ This file comes with every release of REtool and is also available from the home page of REtool

⁴¹ The Pro mode can be activated via the Help menu 'Help -> Set Pro Mode -> On'.

Resolving conflicts from redundancies (duplicates)

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁴².

● **REtool tries automatically during all import processes⁴³ to avoid redundancies**, i.e. to avoid importing redundant data that are already present in the data base. However, it may well be that not all redundancies can be removed during an import process. This is typically the case when your REtool data base contained already redundancies before you made the import. Redundancies can also be generated through other actions, e.g. you duplicate an Author Response or a RE Annotation, perhaps accidentally or intentionally during an edit. However, redundant data may cause problems, notably by disrupting the relationship between Review Comments and Author Responses and/or RE Annotations, respectively. Thus you should always try to avoid redundancies and remove duplicates from your data base. In a data base such as Retool redundancies are present in form of so-called duplicate records, i.e. records of the same information content. E.g. two Author Responses or three RE Annotations of identical content.

You can anytime check the presence of such redundancies by using in the Pro mode⁴⁴ one of the following menu commands from submenu 'Pro -> Scripts -> Resolve conflicts':

- 'Find duplicate Review Comments'
- 'Find duplicate Author Responses'
- 'Find duplicate RE Annotations'

It is easy to remove duplicates: You can conveniently clean-out your data base any time from duplicates by using following menu commands from aforementioned submenu:

- 'Clean-out duplicate Review Comments'
- 'Clean-out duplicate Author Responses'
- 'Clean-out duplicate RE Annotations'

Note, these commands operate only on the currently selected set of records.

If there are multiple duplicates present, it may well be that a single clean-out command may not suffice. **Repeatedly execute the clean-out command until you have all duplicates removed.**

⁴² This file comes with every release of REtool and is also available from the home page of REtool

⁴³ Such import processes are described in this guide in sections «Collaboration», notably subsection «Import a colleague's work into the master data base», «Restoring your REtool data base», «Importing data from another REtool data base», plus from 'REtool Read Me.pdf' sections «Importing Review Comments» and «Updating REtool»

⁴⁴ Pro mode can anytime be activated by choosing menu command 'Help -> Set Pro Mode -> On'.

In rare cases it may well be that you fail to clean-out all duplicates. This happens whenever the duplicates are actually not true duplicates. There is an implementation restriction in REtool – due to a limitation of FileMaker – that causes duplicates to be reported while they are actually not true duplicates. This is the case when longer Author Responses or RE Annotations are identical in the beginning⁴⁵ and start to differ only towards their later parts. REtool is programmed such that no such alleged duplicates are deleted, yet for efficiency reasons it is unavoidable that they are reported as duplicates nevertheless.

 In some even rarer cases **REtool may report duplicate primary keys. You should never work with a REtool data base in such a state** and should always try to fix the issue. Otherwise you risk to disrupt the relationship between Review Comments and Author Responses and/or RE Annotations, respectively. Such an issue is not the fault of REtool and REtool cannot fix it. The fault is here with the input data that contain the same comment number for actually differing comments, something which must not occur.

Use the menu command ‘Search for problems in data base’ to test for the presence of any kind of problems in your data base. This command can detect additional inconsistencies such as conflicts in the primary keys of Review Comments, Author Responses, and/or RE Annotations or essential fields being empty. If this command finds no records, your REtool data base is technically in excellent shape.

Otherwise heed these recommendations:

- In a first step you can execute menu command ‘Pro -> Scripts -> Resolve conflicts -> Fix current sets of Author Responses and RE Annotations’. This will fix empty critical fields in Author Responses and RE Annotations and assign proper values to those. If no such problems are actually present REtool cannot fix, this command is without effect.
- **Duplicates in Review Comments need always be fixed and should never be tolerated.** Fix those by deleting the faulty set of Review Comments. The easiest approach here is to reimport proper data by replacing the existing Review Comments during the import.
- Duplicates in Author Responses or RE Annotations need not be cleaned-out immediately. Yet, it is recommended to clean them out as soon as possible. Otherwise you will get histories, which are actually not true histories (see also section «Managing histories»). **Exceptions:** Long multiple Author Responses or RE Annotations on the same Review Comment that are first identical and begin to differ only towards their end are to be tolerated, despite REtool reporting them as duplicates.³² Since they are not really identical they are elements of a true history.

⁴⁵ A maximum of 100 characters is used for duplicate detection, while not only the fields ‘Author_Response’ or ‘Notes’ for REs matter but also other fields are using up some of these 100 characters. The actual amount differs e.g. with the length of the comment number and that of other critical fields.

Analysing Comments

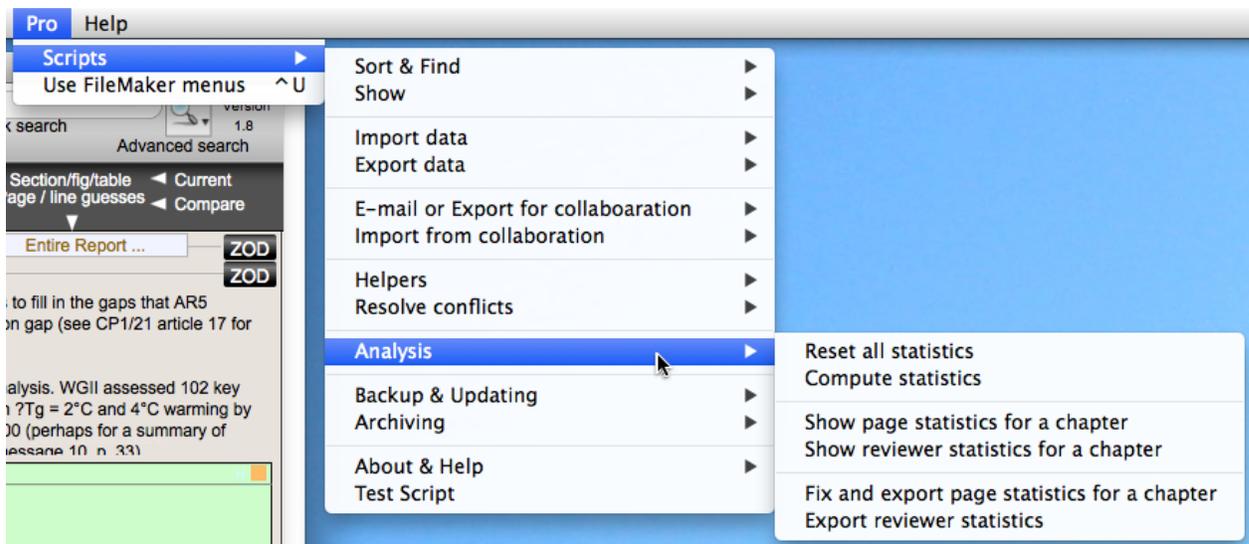
The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁴⁶.

Comments can be analysed statistically in two ways:

- a) Number of Review Comments every page of the draft received (page statistics)
- b) Number of Review Comments a reviewer provided (reviewer statistics)

In both cases perform following steps:

- 1) Choose menu command 'Analysis -> Reset all statistics' to prepare for the analysis including clearing of possibly present old results that might otherwise distort the results
- 2) Choose menu command 'Analysis -> Compute statistics' to run the analysis routine
- 3) select which results you wish to view and possibly export

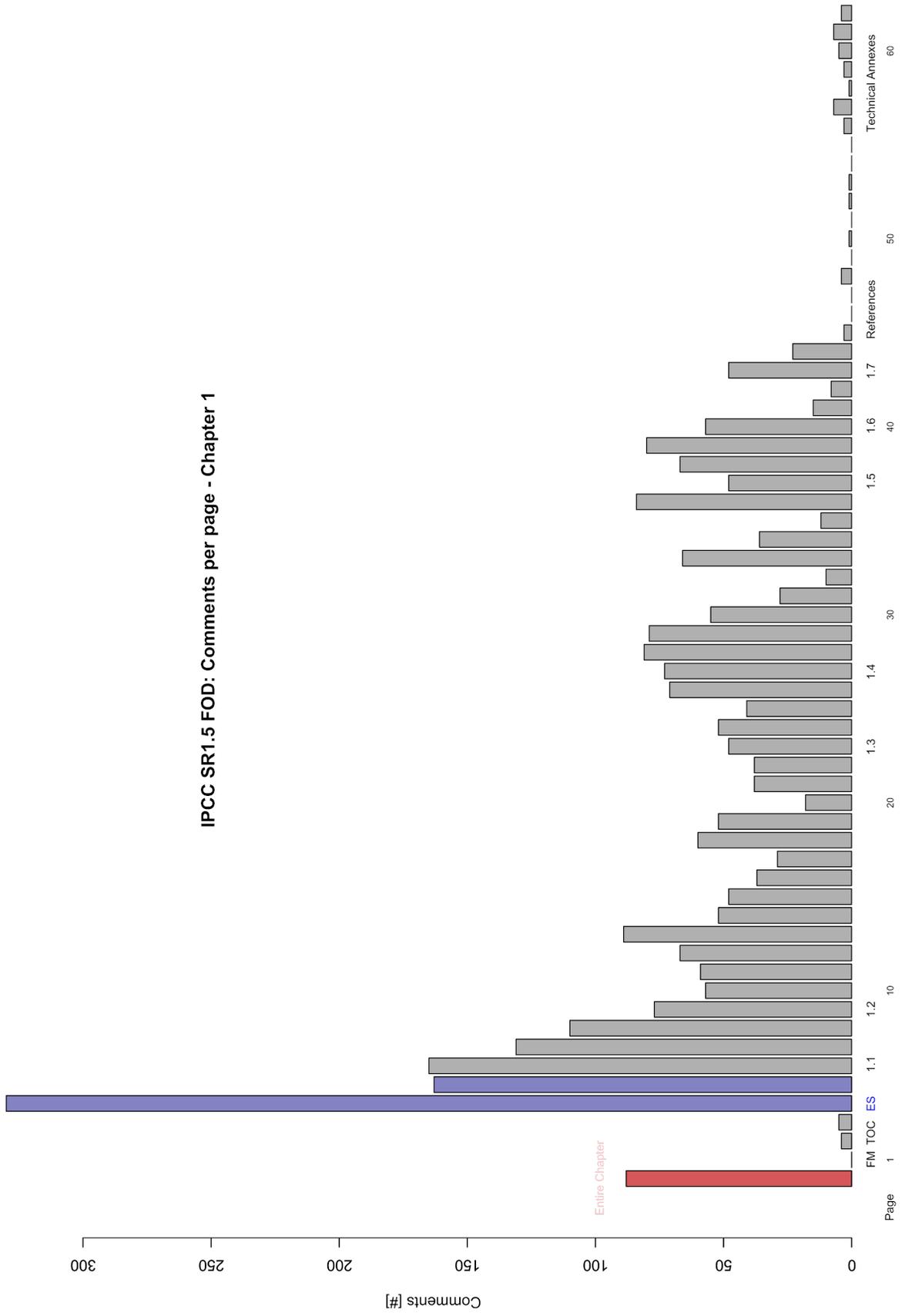


Step 3) is done by either optionally visiting the results with one of the two 'Show ...' menus or then by immediately exporting the statistics of interest. It is recommended to export the results of the analysis to a text file. That file can then be opened by Excel or perhaps best by a R-script for generating a histogram. See the REtool web site for such a R-script.

The following graph was generated using above commands to compute and export the number of comments every page of the SR1.5 FOD of chapter 1 has received:

⁴⁶ This file comes with every release of REtool and is also available from the home page of REtool

IPCC SR1.5 FOD: Comments per page - Chapter 1



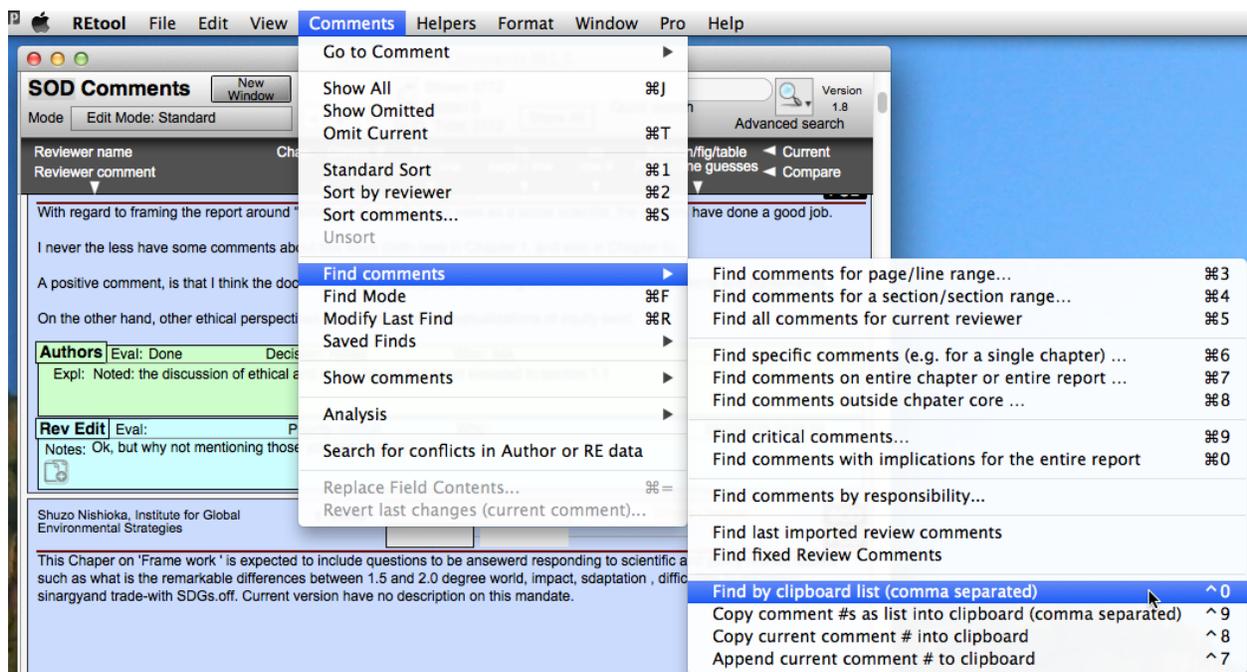
Finding comments via clipboard

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁴⁷.

REtool offers a very nifty feature, which is to find comments via a list of numbers. Say you took notes of critical comments that are related and address a particular topic, say on the Structured Expert Dialogue as it relates to the Paris Agreement, yet would not be easy to find via a common keyword. That list may look similar to this

32066, 36394, 43996, 27952, 52750, 46460 (6)

REtool supports you in immediately refinding those comments by simply copying them to the clipboard and choose menu command 'Comments -> Find comments -> Find by clipboard list (comma separated)':



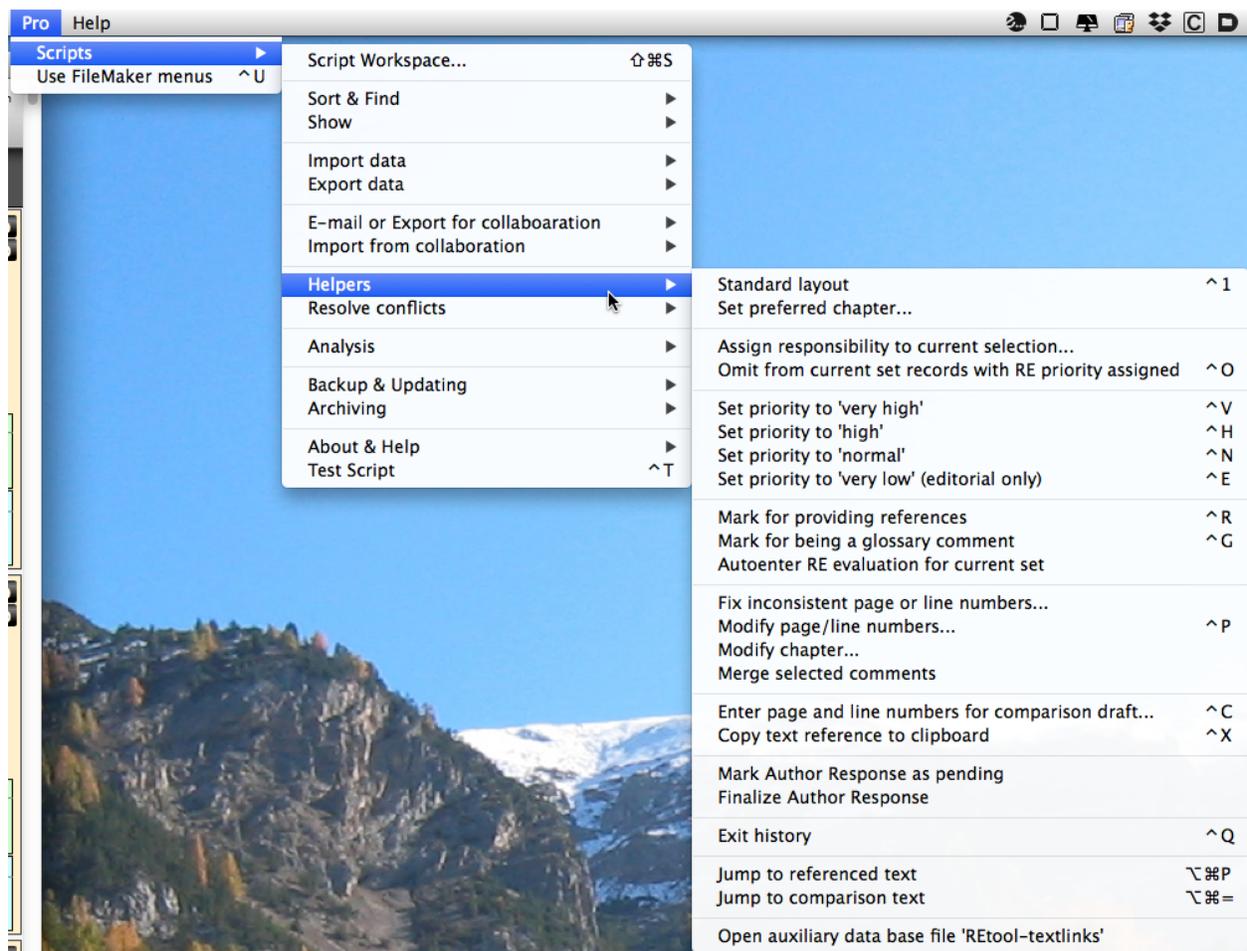
And the listed comments are immediately selected. I use this command so often I have assigned it a keyboard shortcut (Ctrl^0 on the Mac). REtool offers of course also a companion command 'Comments -> Find comments -> Copy current comments # into clipboard', which creates in the clipboard a list as shown above from the currently selected comments, a text which can be easily pasted into your notes. Again I need a keyboard shortcut (Ctrl^9 on the Mac) for that, using as RE this command all the time. Additional commands in that group offer even more flexibility during reading of comments.

⁴⁷ This file comes with every release of REtool and is also available from the home page of REtool

Using shortcuts

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁴⁸.

REtool has been designed to support the power user. This means common functions are also offered as a menu command, some of them only in the Pro menus. On the Macintosh platform this allows to install conveniently keyboard shortcuts in addition to the default ones provided by FileMaker. E.g. I use following shortcuts for frequently used menu commands from the Pro submenu 'Helpers'.



Above shortcuts support greatly the work as a review editor on a set of critical comments as resulting from e.g. 'Comments -> Find comments -> Find critical comments...' by setting priorities, Ctrl^V for «Set priority 'very high'», Ctrl^H for «Set priority 'high'» etc. Note, depending on the phase you are currently working different sets of shortcuts may be helpful to work efficiently.

⁴⁸ This file comes with every release of REtool and is also available from the home page of REtool

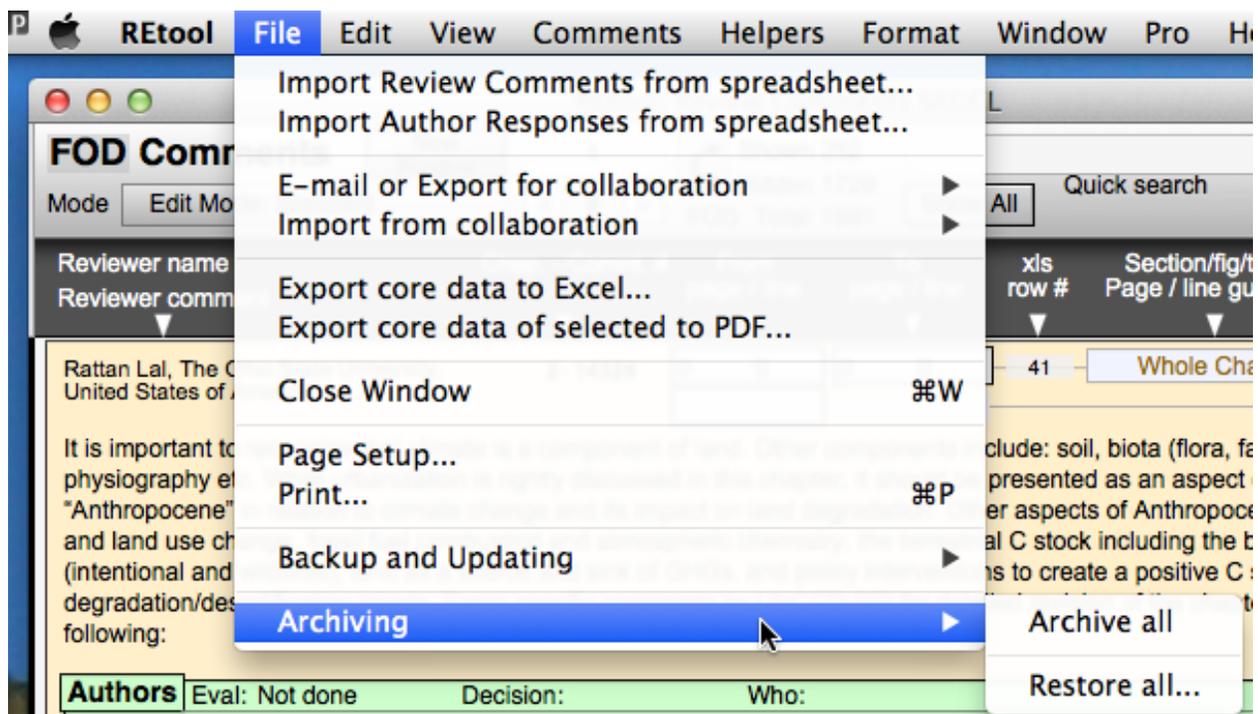
Archiving REtool data

The following assumes you have installed the REtool software and made ready as described in the installation tutorial of the file 'REtool Read Me.pdf'⁴⁹.

All archiving is done to tab separated text files for long term storage of the data independent of any software. The encoding is done with UTF-8 and the files contain at the top a header row describing the content of the column below. An archive consists of several files, one for each data type contained in the REtool data base. The files are automatically created and named and stored in the same pre-installed folder as backups, i.e. subfolder 'REtool data archives' in the REtool work folder.⁵⁰

A REtool data base can be fully restored from an archive.

The following menu commands serve this purpose:



⁴⁹ This file comes with every release of REtool and is also available from the home page of REtool

⁵⁰ See 'REtool Read Me.pdf' for details