

# IndexExploit User Guide

For Release 2.4

## INTRODUCTION

IndexExploit is a Visual Basic (VBA) macro for Microsoft Word embedded indexing and index linking. If you are using Libre Office or another word processor, then it will not run.

For the publishing industry, indexes are normally created when proofs are ready for publication. They depend on the proofs being stable, and any alterations may require complete re-indexing. Microsoft Word supports embedded indexing using an indexing module that has remained stable for many years. Using XE fields, index entries are made directly into the document close to the referenced text. For certain types of text, indexing can be very rapid. Improvements in computing power enable XE fields to be used and manipulated for purposes probably imagined at the time of introduction but way beyond the available computing resources. Many processes have been developed to make embedded indexing easier and to hide users from the necessity of understanding the Word indexing module. When a process fails, users are left wondering what to do. This has contributed to the slow take-up of Word embedded indexing among professional indexers and publishers. A few searches on the internet show there is a huge demand for information.

## WHAT MAKES INDEXEXPLOIT SPECIAL

This user guide and IndexExploit help to answer the following questions beginning how do I:

- learn about Word embedded indexing?
- create an index in Word
- create an embedded index in Microsoft Word?
- edit a Word embedded index?
- make a Word index clickable?
- link an index to content?
- turn a Word document into an epub with a linked index?
- turn a Word document into a PDF with a linked index?
- index ranges faster in Word?
- alter a range referenced by an XE field?
- find errors in a Word embedded index?
- re-sort a Word embedded index?

## EMBEDDED INDEXING CONFIGURATION

IndexExploit was developed after considering what the Word indexing module should do if it was developed now. Linking index locators back to content was considered the greatest missing capability. IndexExploit adds that capability by parsing and sorting the XE field index entries to create a picklist. By linking to the XE fields and ranges it will work for any Word embedded index. IndexExploit also enhances the embedded indexing capability, providing an integrated bookmark and index entry form. Every time a bookmark is added it automatically checks the name against existing bookmarks and makes an adjustment if necessary. This makes range indexing fast and robust. IndexExploit does not remove the need to use Word's Mark Index Entry form which has some powerful capabilities, especially for complex text containing diacritics, complex styles and special fonts.

## PDF GOTO CONFIGURATION

The PDF Goto functionality uses a page number to go to that page in a PDF. Originally intended to work with indexes it can work with any document referencing PDFs. Examples could include legal reports, treaties, student notes etc. The PDF capability is enabled by a start page adjustment for simple PDFs and a document map for more complex documents. The **Add hyperlinks** command uses the document map to embed a hyperlink into each page number. Acrobat Pro or equivalent is required if the PDFs are installed on a computer or network.

## UTILITIES CONFIGURATION

Utilities will be added as a need arises. The **Hyperlinks table** utility copies the content of all hyperlinks in a Word document to a table in another document. It was developed to support maintenance of a cumulative index for the Australia and New Zealand Society of Indexers.

**FREE EVALUATION**

For a free evaluation of IndexExploit go to the [IndexExploit Downloads](http://www.indexbase.co.uk) page at [www.indexbase.co.uk](http://www.indexbase.co.uk). Evaluation allows you 50 free embedded indexing menu selections, enough to index a moderate size book. You are allowed 100 free PDF menu selections and 100 hyperlink insertions in any document. For enquiries email [enquiries@indexbase.co.uk](mailto:enquiries@indexbase.co.uk).

**DISCLAIMER**

Please read Disclaimer and Licensing before using IndexExploit.

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## HOW TO LINK AN INDEX TO CONTENT USING INDEXEXPLOIT

IndexExploit is named for its ability to exploit indexes and link to content. For Word embedded indexes, an active pick list Figure 1 is created from embedded index entries. Selecting an entry takes the user to the indexed content. Embedded index editing and debugging is made easier.

For PDFs on a computer or network, Adobe inter application communication (IAC) is used from Word to select a page in a PDF. The **Goto** command reads a number in the Word document, for instance an index, Figure 2, and takes the user to that page in the correct PDF file. Hyperlinks are used to perform the same function for PDFs on the Internet.

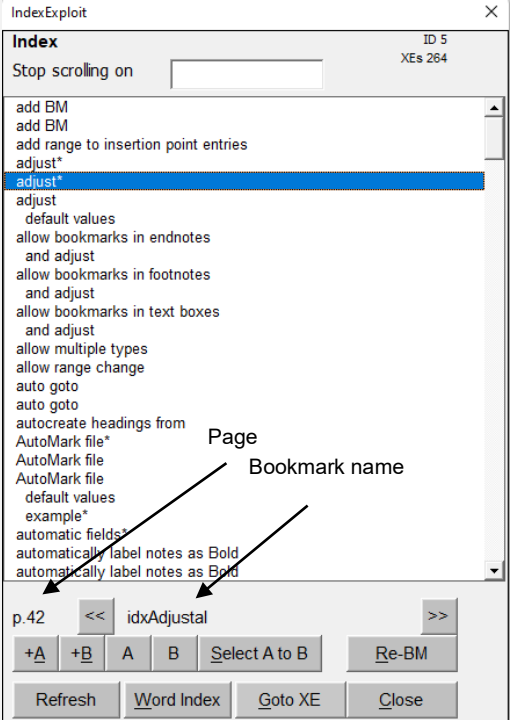
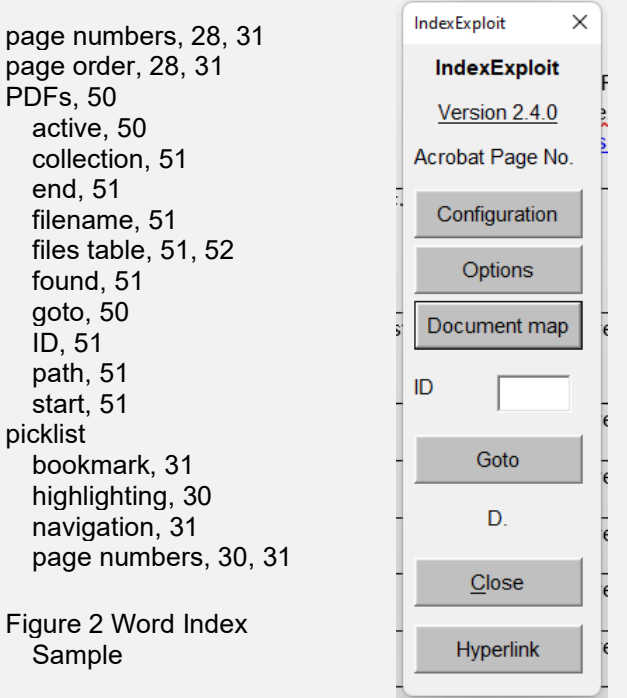
Index Picklist	PDF Goto
<p>The picklist is active. Designed for use with embedded indexes in Word files, it finds indexed content fast. Users can go to an XE field or its associated bookmark. Bookmarks can be re-ranged from the picklist.</p> 	<p>A user can select a page number in an index in a Word document and be automatically taken to the right PDF document and page when Goto is selected. A Document map supports navigation of complex documents.</p> 
<p>Figure 1 IndexExploit Picklist form</p>	<p>Figure 2 Word Index Sample</p>

Figure 3 IndexExploit PDF Goto

### LINKED INDEX

IndexExploit can use embedded index entries to create a linked index using hyperlinks or references. Insertion point XE fields are converted to range entries and the index locators are each linked to the right bookmark. The document can be exported to PDF or EPUB retaining the links. The example below is for display only.

page numbers, 28, 31  
 page order, 28, 31  
 PDFs, 50  
     active, 50  
     collection, 51  
     end, 51  
     filename, 51  
     files table, 51, 52

found, 51  
 goto, 50  
 ID, 51  
 path, 51  
 start, 51  
 picklist  
     bookmark, 31  
     highlighting, 30

## WORD AND INDEXEXPLOIT EMBEDDED ENTRY FORMS SIDE BY SIDE

### Word

Mark Index Entry supports rich text. It is excellent for insertion point indexing and for cross references. Use with bookmarks created by the Word Bookmark form or the IndexExploit Mark Entry form. Mark all should be used with care.

Figure 4 Word Mark Index Entry

Bookmarks are used widely in Word. The Bookmark form is not optimised for indexing. It closes when a bookmark is written and the user is responsible for unique bookmark naming. The Mark Index Entry form is used for range indexing.

Figure 5 Word Bookmark Form

### IndexExploit

The Mark Entry form includes index entry and bookmark fields. It remains open until closed by the user. Software ensures bookmark names are unique. Un-indexed bookmarks can be found and indexed. Added features include; **Read, Invert, Sort, Swap, Find XE** searches for the entry in the document. **Word index** searches for the entry in the index. Interactive **Find** replaces Word **Mark All**, giving far more control when searching and indexing.

Figure 6 IndexExploit Mark Entry Form Page range

The form shows the IndexExploit Mark Entry form with Page range selected. The form size is increased to show the lower part associated with bookmarking. **Add BM**, shown in red, when selected, will write the bookmark next to the Page range selector.

Underlined characters on controls show keyboard shortcuts. Activate using the alt key. The cursor must be within the form area for keyboard shortcuts to be available. **Show/Hide XEs** does what it says.

## INDEXEXPLOIT PROCESS DIAGRAM

The diagram below shows how IndexExploit fits within the Word embedded indexing and editing process. Entity and process numbers are included in heading titles to aid understanding.

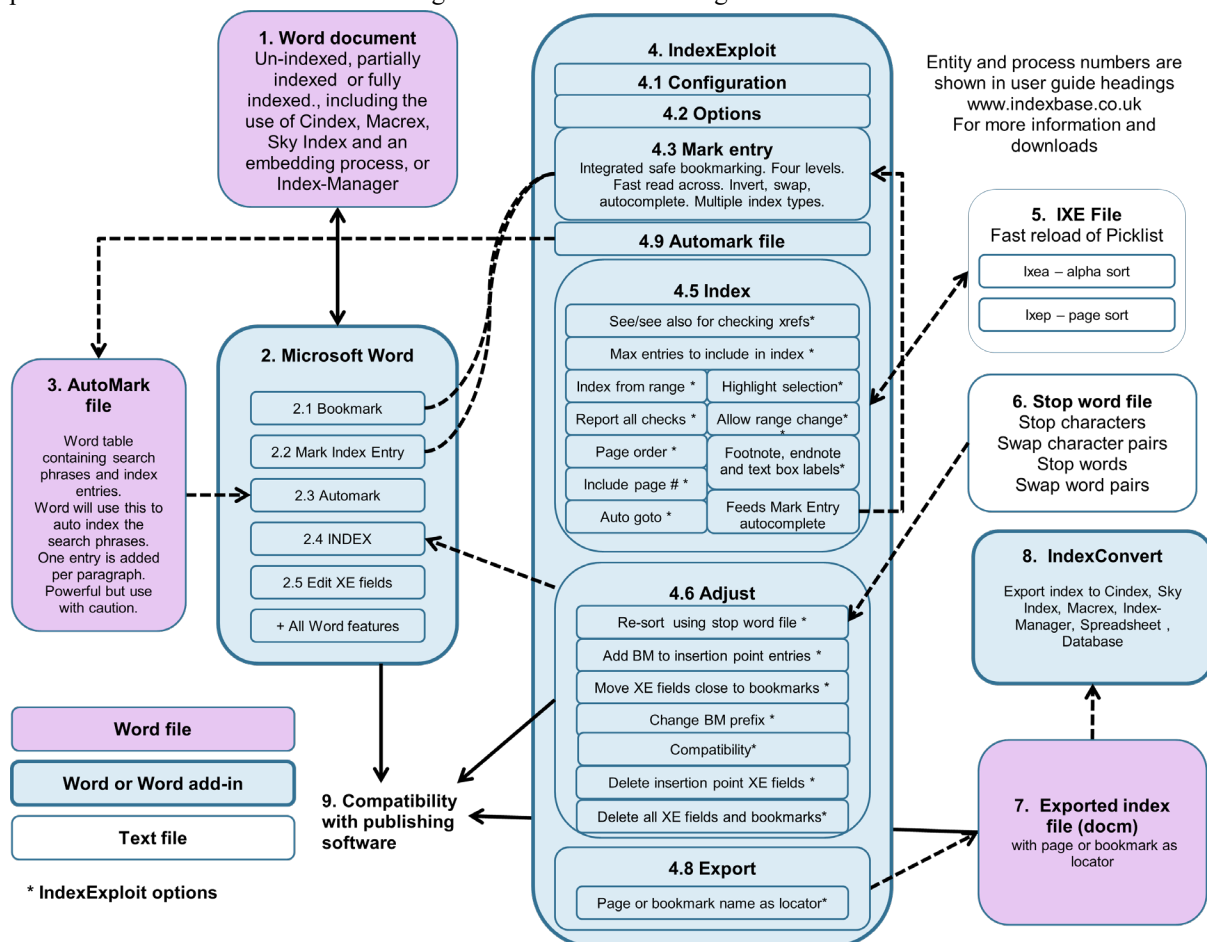


Figure 7 Process Diagram: Word Embedded Indexing with Word and IndexExploit

## INDEXEXPLOIT DOWNLOAD AND INSTALLATION

### DOWNLOAD FROM WEBSITE

Security is enhanced for later versions of Word, making the download and installation more complex.

Download the IndexExploit file containing the macro from [www.indexbase.co.uk](http://www.indexbase.co.uk) and copy it somewhere safe. When the file is opened you may get the warning “PROTECTED VIEW Be Careful – files from the Internet can contain viruses. Unless you need to edit, it’s safer to stay in Protected View”.

Close the file, find it in File Explorer, mouse right click, open the Properties form, and unblock the file using the General tab as shown in Figure 7. The Security Unblock checkbox is at the bottom.

### INSTALL INDEXEXPLOIT

The IndexExploit macro is supplied in a Word docm (macro enabled document) file. The installation saves the file as a Word dotm (macro enabled template) file in the Word startup folder. To install IndexExploit open IndexExploit x.x.x.docm where x.x.x is the version number. On opening the file, a security warning may be seen - Figure 8. The display may differ slightly depending on your version of Word. Allow macros to run.

The form shown in Figure 9 appears. Select **Install**. If an earlier version of IndexExploit is present this is overwritten.

Select **Uninstall** if you need to uninstall IndexExploit. If Install and Uninstall don’t work you may need to delete an earlier version manually in the Startup folder.

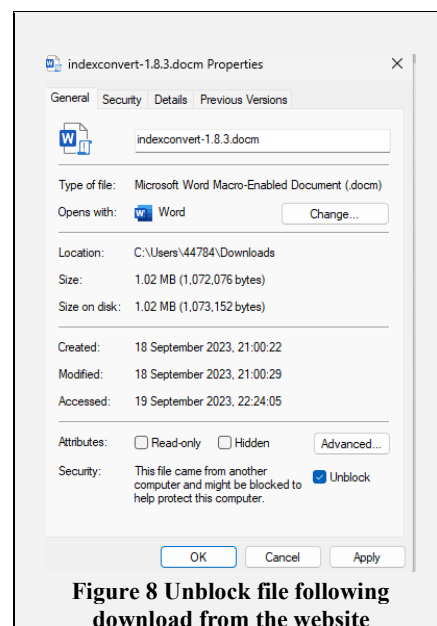
The startup folder location is displayed by selecting **Startup Path**.

For IndexExploit to become available, Word must be restarted following an installation or re-installation.

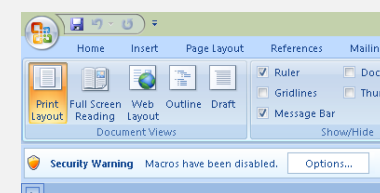
An appropriate version of Adobe Acrobat must be installed on your computer if you are using the PDF capability with files on a computer or network. Adobe Acrobat Pro supports the Adobe Inter Application Communication (IAC) interface used by IndexExploit.

If initial installation is unsuccessful, check the startup location. If a file with an identical name but different capitalisation is present, e.g. IndeXExploit.dotm remove it and try installing again.

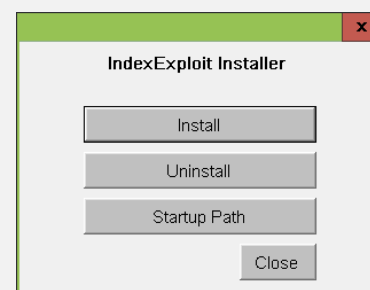
If your IT organization configurations prevent this installation or you prefer a different installation then see Alternative Installation, page 69.



**Figure 8 Unblock file following download from the website**



**Figure 9 Word Security Warning when Running a New Version of IndExploit**



**Figure 10 IndexExploit Installer**

## START INDEXEXPLOIT

Select View>Macros>View Macros, select IndexExploit and Run.

Do not attempt to run multiple parallel IndexExploit sessions. It is not supported by the software design.

### CONFIGURATION (4.1)

When IndexExploit is run for the first time a software licence (license) is applied. This supports 50 menu selections for Word embedded indexing, which is enough to index a moderate size book. 100 PDF selections are allowed, with a maximum of 100 linked entries for an export.

An empty Configuration form is then displayed, Figure 10.

**Licence** When IndexExploit is purchased a licence key is supplied. This includes coded values for an expiry date and the functions available.

**Name, email, Company** may be used in files generated by IndexExploit.

**Doc Type** is used to choose an IndexExploit configuration.

Choices are **Word embedded index, PDF and Utilities**. The value chosen is remembered when the document is next opened.

**Licence Type** is the licence type.

**First Used** is the date of first use.

**Expiry Date** changes colour as the expiry date becomes close and becomes red when the licence is expired.

**Metrics Report** creates a Word document summarizing IndexExploit usage.

**Word actions** is the number of menu selections made with the Word embedded menu selected.

**PDF searches** is the number of PDF actions conducted.

If you have been supplied with a new or special licence, then it can be entered by selecting Configuration from whichever menu you are using.

Figure 11 IndExploit Configuration Form

### SHORTCUTS

Any macro can be assigned to a custom key combination by using File>Word Options>Customise>Customise. Find Macros towards the bottom of the list. Select IndexExploit and enter a key combination to assign to the macro. For Word 2010 find File>Options>Customise Ribbon.

Some versions of Word allow a shortcut to be added to the quick access toolbar. Later versions allow them to be added to the ribbon.

## EMBEDDING AND LINKING DEFINED

Embedding and linking are often conflated. The terms are separated and explained below.

### EMBEDDING

Word processing and publishing software manage text layout and many other features using embedded codes. Examples include fonts, styles, fields, bookmarks, tables, pictures, and shapes. Microsoft Word uses over 70 field types for page numbering, contents lists, indexes, and other purposes. Bookmarks are used to name positions and ranges. Embedded codes are also used in PDF and other file types. Each embedded item must have a unique identity, ideally fixed. Word fields, including embedded index XE fields are numbered. As fields are added or removed the field numbering changes.

### LINKING

Linking allows a user to move easily from a location in a document to another location in the same or another document. A good linking strategy allows the user to return easily. Links are not hard wired like wiring in a city, they are created as needed usually by a search mechanism often aided by complex databases and lots of computing power. The hyperlink, the backbone of the World Wide Web is a good example. A hyperlink typically links to a website or document. It can target a location or page within a document if a sub address is used. Hyperlinks are defined in international standards such as W3C documentation but not always implemented by browsers, sometimes for security reasons, sometimes because there is not

enough demand. Sub-addresses are defined in W3C but detailed behaviour is for software developers to determine. Word supports Hyperlink sub-addresses to ranges and page numbers in PDFs.

Many features can be used as link targets, but special processing is required if standards are not used. The best targets are those with a fixed identity such as headings, captions, bookmarks, or shapes in Word. Page numbers and fields can be used when the document is stable. IndexExploit uses Word field numbers when linking a Word embedded index using the picklist. It uses Adobe Inter Application Communication (IAC) when linking to PDFs on a computer or network, and hyperlinks to find pages in PDF documents on the Internet.

Word also uses internal links called references, these are hyperlink sub addresses. Contents lists use references to link to sections, tables, diagrams etc. They are used by cross references.

## THE WORD INDEXING MODULE (2)

If you've created an embedded index using Word then you will have used the indexing module. You may have been pleased with how easy it is to create insertion point entries, especially as you don't need to worry about page numbering which is worked out when the index is created or updated. You may have wanted to create range entries and been disappointed by the cumbersome process. You may have wanted to create a separate author or names index, how? Having created an index you may be unhappy with some of the entries and want to alter them or adjust page ranges. There may be unexpected fonts or styles, or entries not appearing in the index. You may be one of the many people who ask can I link this index. You may want to re-sort the index. You may want to adjust an index created using one of the many alternative embedding processes. You may want to revise the document, swapping sections in, around and out and find which sections haven't been indexed. You may want to merge several indexed documents or even export the embedded index entries. IndexExploit supplies a range of facilities to help.

### WORD INDEXING MODULE STRENGTHS

Index entries are embedded. Page numbers are calculated from embedded entries when the index is generated or updated. The indexing capability is consistent for all desktop and laptop versions of Microsoft Word.

The Mark Index Entry form enables rapid insertion point indexing. Selected text automatically appears in the **Main entry** field when the cursor is moved to the form. The form supports rich text -  $C_{148}H_{221}N_{35}O_{50}S_2$  can be indexed in two keystrokes.

Copy/paste can be used to create entries as an alternative to using the Mark Index Entry form.

Word has extensive multiple language capability including Unicode and diacritics.

Multiple indexes (e.g. subject and name) can be generated.

Section or chapter indexes can be created.

Selecting Update field on an index updates it following document revisions.

The Word indexing module has been largely unchanged for many years.

### WORD INDEXING MODULE WEAKNESSES

Indexing of ranges is clumsy, slow and error prone. This is addressed by IndexExploit.

Documentation is hard to find, many features are undocumented. This is addressed by this user guide.

Re-sorting an index is impossible. This is addressed by IndexExploit.

Index is not linked. Indexes can be linked using IndexExploit.

Unexpected fonts or styles may occur in the generated index when 'leaked' from the text during a format change.

Clutter caused by visible XE fields when indexing. This is addressed by IndexExploit.

Some features including multiple indexes are not straightforward to achieve. This is addressed by IndexExploit.

Errors in embedded entries can prevent the entry appearing in the index. This is addressed by IndexExploit.

## HOW TO WRITE AN INDEX IN MICROSOFT WORD

With Word embedded indexing, page numbers are worked out for you, automatically, when the index is compiled using the INDEX field. The index is normally placed close to the back of the document.

Indexing can be done before final pagination, although it's recommended that the text is mature before starting. Text can be adjusted or moved around while indexing is being carried out, but care must be taken.

A good understanding of XE fields is recommended. Range entries reference bookmarks, which are used widely by Word users for indicating ranges of current interest. Indexing is a minority usage and bookmarking is not optimised for indexing.

When writing a range using the Word Bookmark form it closes, slowing the indexing process.

Range names must be unique.

IndexExploit integrates bookmarking into the Mark Entry form making the process much faster by remaining open and automatically ensuring bookmark names are unique.

Before starting to index, consider the following.

1. Why was the document written, does it need to be read carefully or can it be dipped into?
2. Is there a good contents list including tables and figures?
3. Is the book layout well organised?
4. Is it in the final form, or will there be changes?
5. Who is expected to read it, do you know them?
6. Will it be updated regularly?
7. Will the index be linked back to content?
8. How will it be published. Options include:
  - a. As a Word document
  - b. Exported to a PDF
  - c. Exported to an epub
  - d. Imported into a publishing system
  - e. Other

If indexing for a client there may be special requirements for index layout. A Word index layout can be adjusted to suit many requirements but there are also fixed limitations. IndexExploit can export an index and include features not handled by Word including footnotes and endnotes. It can also create a linked index.

## SOURCES OF GUIDANCE

There is a lot of information about how to create index entries. Look on the Society of Indexers website (UK) or the American Society for Indexing website (USA). There are also indexing societies in Europe, Africa, China, Australia and more. Training courses are available.

Guides and videos showing Word embedded indexing are available on the Internet, some have been created by publishers for authors.

Look at other indexes.

Many topics that indexers will encounter in documents are now covered on the internet. Searches can assist in formulating index entries.

Likely users include book reviewers, subject matter experts, people who've read the document and need to find information they've already read, people new to the topic who need information on specific topics.

## INDEXING PROCESS

Work your way through the text from the beginning. If you are the author, you may have already been through it many times, but indexing requires a different mindset. Consider entering some ranges first, chapters and paragraphs or groups of paragraphs make good ranges, this captures high level concepts. Think carefully what the index entry should be for each range and insert the entry. Be aware of the need for unique bookmark names. You can compile a list, trust your memory, or use IndexExploit. You can use Word's Mark Index Entry form, IndexExploit's Mark Entry form, or you can copy and paste entries. A range entry XE field should be close to the beginning of the referenced range. This will help if the document is to be imported into a desktop publishing system like InDesign. When the index is generated, page numbers will be created from the location of the beginning and end of each range. Look at the index as it is being created and confirm that it looks good. You can edit XE fields if you need to adjust the index. The index can be displayed in a separate document using an RD (Referenced Document) field. This can be very useful for viewing the emerging index. At the time of writing (August 2024), the RD facility is not working for Office 365 Word. Microsoft have been informed. The IndexExploit Mark Entry form has a facility for viewing the index at the back of the document and returning to the last location.

Having created a few range entries, return to the beginning of the chapter and enter some insertion point entries to pick out lower level detail that you want users to be able to find. Consider the size of the index and the needs of the user. Indexes are scanned by users, large complex indexes are difficult to scan.

Decisions made at the beginning of the indexing process determine the outcome for the final index, this includes depth of indexing. It is easier to over-index and adjust later than to have to search through the document again.

## HOW TO RE-INDEX A DOCUMENT

When a document is being updated, changes can result in text being deleted, added or moved. XE fields and bookmarks may be deleted. If the index to the original is available then it can be used for reference. The Word generated index will



update following changes and will show errors due to absent bookmarks. IndexExploit can show index coverage to indicate un-indexed regions and generate an error report showing XE field errors. Entries can be found, edited, or deleted with the help of the index picklist. When a range entry is selected the range name is posted to the Mark Entry form if **Page range** is selected.

XE field numbers change as additions and deletions take place. The picklist will need updating occasionally. Don't select **Include page** as this will slow the update.

### EMBEDDED INDEX ENTRY (XE) FIELDS

Embedded entries are written to XE fields. These are hidden text fields but can be made visible using show/hide, ctrl-shift-\*, or by using IndexExploit. The XE fields are enclosed by field markers and curly brackets and include XE to label them as embedded entries. Three types of entry are allowed.

- Insertion point
- Range
- Cross reference

{ XE "heading" } is a simple insertion point entry. The page number appearing in the index is for the page containing the XE field.

{ XE "heading" \r "Rangename" } is a simple range entry. Rangename is the name of a bookmark. The page number or range span is for the page or pages containing the range. The XE field should be placed within or close to the bookmark.

{ XE "cross reference" \t "see also target heading" } is a simple cross reference entry.

{ XE "cross reference:see also target heading;zzz" \t "" } is an alternative. The zzz forced sort moves the entry to the bottom of the list of subheadings. The \t flag prevents a page number appearing in the index.

### CONTROL CHARACTERS IN XE FIELDS

Colons :, semicolons ;, double quotation marks "" and back slashes \ are control characters used in XE fields.

Colons separate subheadings from headings. Semicolons identify forced sorts. Quotation marks identify the beginning and end of text. Back slashes are used to label control characters and also to identify switch characters that label page styles, ranges and other fields. If you use the Word Mark Index Entry form or the IndexExploit Mark entry form any back slashes are normally inserted automatically before quotation marks. The user must insert backslashes before colons and semicolons to prevent them being used as subheading or forced sort controls.

### PAGE NUMBER FORMAT

Page numbers in the document are defined by the Word Page Number Format form Figure 11 reached by selecting Format Page Numbers.

**Number format** allows selection of Roman, Arabic and alphabetical numbering.

**Include chapter number** allows a heading level to be chosen to define chapters. Heading level 1 is recommended for a coherent contents list.

**Chapter starts with style** selects a chapter prefix.

**Use separator** defines a separator between chapter and page number. The default is a hyphen which is the same as the page range separator. Options are hyphen, period, colon, em dash, en dash. A colon is a good choice as it will not be confused with a range separator in the index.

**Page numbering** defines whether numbering starts at the section or continues from the previous section. Elision in a generated index follows Chicago elision rules.

See also the INDEX field in Table 17.

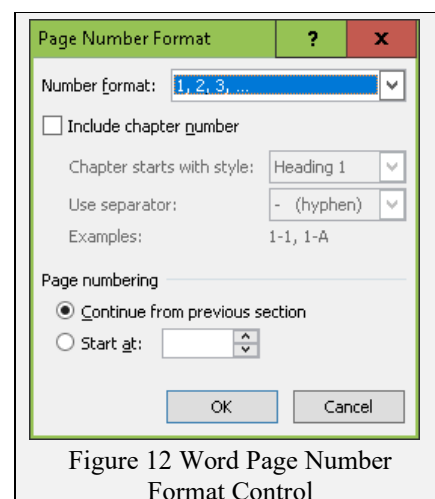


Figure 12 Word Page Number Format Control

### BOOKMARKS

Bookmarks serve many purposes in Word. They have been borrowed to support embedded indexing but the convenience of being able to create, move and delete bookmarks requires special care when using them in embedded index entries.

{ XE "heading" \r "rangename" } is an embedded entry referencing a bookmark called rangename. Many XE fields can reference the same range name. Bookmark names must be unique within the scope of the index. If when creating a bookmark you choose a name that already exists then the bookmark is moved to the new location. Word gives no warning. IndexExploit checks for existing bookmark names and automatically adjusts your chosen name to make it unique before it is written.



## CROSS REFERENCES

Some users compile all cross reference entries in a separate file and copy them across when indexing is complete. It is tempting to enter cross references on separate lines, separated by returns. When they are hidden a blank page or pages may appear. Someone may be tempted to delete the page.

Three methods are available, depending on personal choice and compliance with Microsoft Word rules.

### Cross Reference Method 1

Cross references can be entered using the Word Mark Index Entry form using the **Cross reference** option. Resulting cross references appear in the index following the heading or subheading. See also cross references appear in line with the first heading or subheading depending on the entry. A simple example is shown below.

XE “heading” \t “*see also* target heading”

It is good practise<sup>1</sup> to group all cross references in a single XE field for each heading. They can be separated by semicolons because they are not control characters in a \t text field.

XE “heading” \t “*see also* target heading a; target heading b; target heading c”

The indexer must arrange the entries in the right order.

### Cross Reference Method 2

Use subheadings, as in the examples below.

XE “art:anti-art” \t “*see* anti-art”

XE “art:Dada” \t “*see* Dada”

A valid cross reference appears in the index, it is arranged correctly in the sequence, can be entered easily when indexing.

art
and aesthetic judgement, 120
alienation of art from truth, 22
anti-art. <i>see</i> anti-art
autonomisation, 146
autonomy. <i>see</i> autonomy
avant-garde. <i>see</i> avant-garde
bourgeois art. <i>see</i> bourgeois art
and the bourgeois self, 36
and bourgeois sensibility, 36
the classical debate, 158–86
committed art. <i>see</i> committed art
communication of political effects,
18
conceptual art. <i>see</i> conceptual art
Dada. <i>see</i> Dada

Table 1 Cross References Example

### Cross Reference Method 3

Indexers may prefer *see also* cross references to appear as the last subheading. In this case the following is needed.

- Create the entry with Cross reference selected
- Write the cross reference text in the sub entry.
- Use \t “” for the Cross reference field. Blank entry.
- Add a forced sort such as *zzz#* to force the entry to the end of the list.
- Test it.

Examples

XE “art:anti-art. *see* anti-art” \t “”

XE “art:Dada. *see* Dada” \t “”

<sup>1</sup> If you know your document is to be imported into another application for publication then different rules may apply. You can play safe by limiting to a single cross reference per entry.

Once a good example is established it may be easiest to copy/paste and edit for remaining cross references. These entries will reported as errors by IndexExploit error checking because they don't conform to the Word standard.

### **'STORIES' IN MICROSOFT WORD AND THEIR IMPACT ON INDEXING**

Word documents are represented internally as stories. The main document, headers and footers, footnotes, endnotes, textboxes are different stories. When creating embedded XE field range entries ensure that the range is in the same story as the entry, or it will not be found.

### **TEXT BOXES IN MICROSOFT WORD AND THEIR IMPACT ON INDEXING**

Take particular care when adding XE fields to text boxes.

#### **Text Box**

Avoid using range entries as the page number may show as 0 in the index. The Word Mark Index Entry and IndexExploit Mark entry will not write to text boxes but embedded entries can be copied and pasted .

### **INDEXING CAPTIONS**

Avoid placing XE fields into captions. If they are cross referenced the XE field may be included, causing an erroneous entry in the index.

### **INDEXING FOOTNOTES**

XE fields can be placed in footnotes<sup>2</sup>.

### **INDEXING ENDNOTES**

XE fields can be placed in endnotes.<sup>i</sup>

### **WORD SETTINGS**

Word settings are reached using File>Options. The settings will influence how text is formatted during copy and paste into an XE field.

**Table 2 Word Setting for Copy/Paste into XE Fields**

Word option	Behaviour	Recommendation
Advanced>Cut, copy, and paste>	Use smart cut and paste	Uncheck or use Options. This setting will influence occurrence of leading spaces after colons and semicolons when pasting into XE fields.

<sup>2</sup> XE fields can be placed in footnotes.

## THE WORD BOOKMARK FORM (2.1)

The Word Bookmark form is used to insert bookmarks. It closes and has to be reopened for each bookmark, this ensures the form is updated with the current list of bookmarks. Great care needs to be taken to create unique bookmarks as reusing an existing bookmark name alters the range and will direct an existing embedded index entry to the new location in the document.

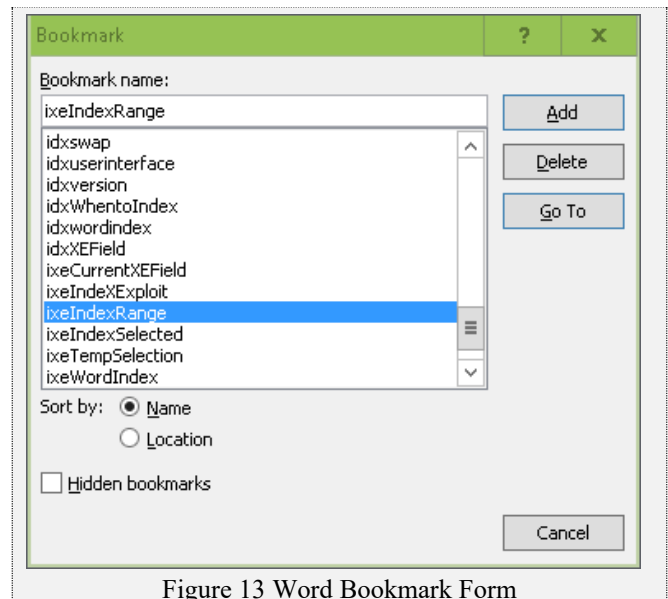


Figure 13 Word Bookmark Form

## THE WORD MARK INDEX ENTRY FORM (2.2)

The Word Mark Index Entry form supports Unicode and rich text. Entries can be typed or copied in from the text. Text selected in a Word document is transferred to the Main entry field when the cursor is moved to the form, the Subentry field is cleared. This can be confusing but can enable quick indexing. When entering a Main entry and a Subentry, first copy any text required for the Subentry. Select any text required for the Main entry and move the cursor to the Mark entry form. The selected text appears in the Main entry. Copied text can be pasted to the Subentry. Unicode and Rich text are supported - C<sub>148</sub>H<sub>221</sub>N<sub>35</sub>O<sub>50</sub>S<sub>2</sub> can be indexed in two keystrokes when copied from the text.

**Mark** creates a single embedded entry. All XE fields become visible.

**Cross-reference** allows cross references to be added. Only one *see* cross reference is expected for an entry but there can be many *see also* cross references, these are best entered into a single XE field to give the required layout.

**Current page** is as shown.

**Mark All** becomes available when text is transferred from the text to the Main entry.

**Page range** enables the Bookmark drop down list.

**Mark All** indexes one occurrence in each paragraph of the Word document containing the text in the Main entry.

### Index Fonts and Styles

When an index entry is first embedded the default font and style are applied. There are a variety of circumstances where the entry may inherit the font and style of the surrounding text, for instance if a style automatically updates or if the format painter is applied when embedded entries are visible.

When the index is created an embedded index entry font or style inherits the font or style of the previous identical entry encountered at that level.

```
{ XE "heading:subheading" }
```

```
{ XE "heading:subheading" }
```

Will result in

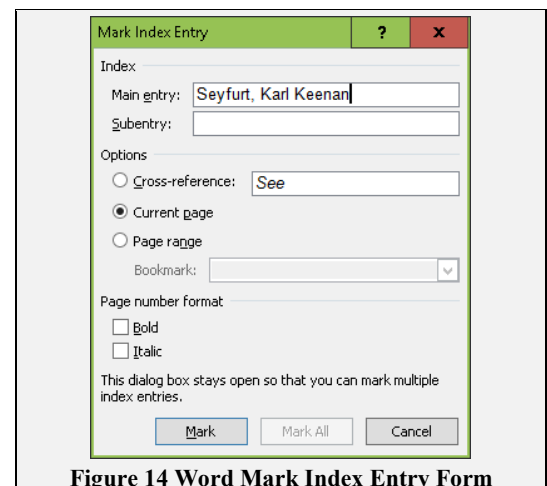


Figure 14 Word Mark Index Entry Form

heading

subheading

Fonts and styles may be overridden by Index styles set when inserting an INDEX field. However the rules are complex and should be tested by the user.

## IndexSort Order (2.4)

Entries are arranged using a 'simple' sort. This can be overridden by a forced sort following a semicolon in a Main entry or Subentry. Some indexing software will sort indexes using 'hidden' rules complying with a predefined schema or template. Word sorts on what it sees. IndexExploit can adjust sort order using a stop word file, with a facility for locking entries against automatic sort with a chosen **Fix character**.

## Page Numbers in the Index

Where a range is referenced in an XE field, the page range is determined by the referenced range. Where there is no range, page number information is calculated from the XE field location.

- For insertion point XE fields the page number is worked out from the location of the XE field.
- For entries with referenced ranges defined by bookmarks (\r) the page number(s) are worked out from the bookmark range.
- Page numbers are not calculated for cross references.
- Duplicate page number locators are suppressed.
- Repeating ranges, nested and overlapping page ranges are all displayed.
- Location of the page spans within the entry is worked out from the location of the XE field. If the XE field is too far from the range this may upset page numbering, e.g. 11-12, 4,5,6, 13-15

## Errors

If Word cannot find a range referenced by an XE field an error is included in the index. If index entries contain syntax errors, Word may miss them completely or miss parts when compiling the index.

## AUTOMARK (2.3)

An AutoMark file contains one or more tables with one, two, or more columns. With two columns, the first column in each table contains a trigger word or clause that will trigger an index entry. The second column defines the index entry. The Automark file must be saved as a .doc file.

When only one column is used the trigger term is the index entry and the index becomes a concordance.

When AutoMark is selected from the Word INDEX form an AutoMark file is requested. Each paragraph in the document being indexed is searched. If a trigger phrase is found then an index entry is created next to (following) the first occurrence in the paragraph. Subsequent occurrences of the trigger clause in the same paragraph are ignored.

If there is a trigger in column 1 but no entry in column 2 then the trigger becomes the index entry.

An AutoMark file can contain many tables. Every table will be processed.

The trigger and entry can be separated by tabs.

Third and subsequent columns in an AutoMark file are ignored by Word and can be used for notes.

Don't include text before or after tables in an AutoMark file, this will be used by Word as a trigger and cause unexpected index entries.

It is possible to run several AutoMark files against the same text.

It is valid to include multiple index entries in an AutoMark file for the same trigger. Each needs to be in a separate row of the AutoMark table, and contain separate index entries.

Up to seven heading levels separated by colons (:) can be used, each level can contain a forced sort term identified by a semicolon (;).

Examples of AutoMark table entries are shown in Table 16.

Automark will index a 500 page book in less than a minute

Some AI type auto indexing software will scan a Word document and generate a single column Automark file.

IndexExploit enables users to highlight terms in a Word document which are then added to an existing Automark file when **Automark** is selected.

## EDITING AN EMBEDDED INDEX (2.5) (4)

Simple edits including typos can be accomplished easily using Word find and replace. IndexExploit uses Word find when looking for an XE field or an index entry from the Mark Entry form so that when the Word Find form is opened it contains the search term placed by IndexExploit.

More complex edits may include replacing and re-indexing individual chapters, re-arranging chapters and merging separate files.

### USING WORD

#### Copy and Paste

When copy/paste is used with Word the default behaviour is to adjust word spacing. This can be inconvenient when copying and pasting into XE fields as additional actions are required to remove the spaces. Behaviour can be changed using Options>Advanced>Use smart cut and paste>settings>Adjust sentence and word spacing automatically. Figure 16

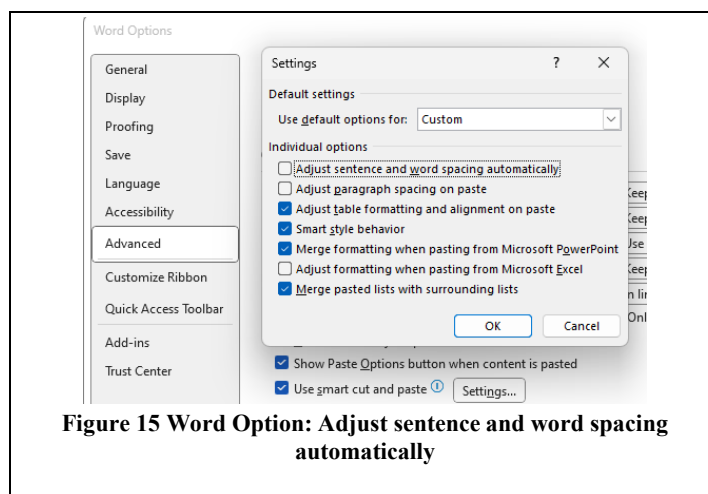


Figure 15 Word Option: Adjust sentence and word spacing automatically

### Find and Replace

Word find /replace can be used for adjusting embedded index entries. XE fields must be visible. Care needs to be taken to choose patterns that alter XE fields but don't alter the document being indexed.

#### *Used to recover styles*

The example below recovers italic text using markup labels /i1...../i0, and is used to recover italic text following a batch embedding process. The example can be adapted for other situations.

Use advanced find and replace with wildcards.

Find what: (/i1)(\*)(/i0)                      group 1 = (/i1), group 2 = (\*), group 3 = (/i0)

Use Wildcards

Replace with: \2    Format = italic    Group 2

Bold, superscript and other styles can be recovered.

### WITH INDEXEXPLOIT

#### Error Report

An error report (page 37) is always recommended when reviewing an index. Select Options:Index **Report all Checks** and run **Index**. Errors are reported as they occur and recorded in a separate Word file. Address each individually using the Error Report as guidance.

## Adjust

**Adjust** (page 39) provides features enabling sections to be moved and documents to be split and merged. XE fields can be moved close to ranges. Referenced ranges in XE fields can be changed with corresponding range name changes in the document.

### *Adjust Index Order*

Adjust can re-sort an embedded index using a stop word file. Select or create an appropriate stop word file and run **Adjust**. Main headings and subheadings can be individually sorted. Sub-subheadings and all lower level headings will be sorted during the same run. With care it is possible to apply different stop word files at each level. Indexes to religious texts can be arranged in book:chapter order.

## Mark Entry form

You can use the IndexExploit Mark Entry form to read entries in the index. Then **Find XE**. Edit the field and update the index.

When **Show all bookmarks in Entry form** is selected in Options, bookmarks are listed in order of appearance in the document and the closest is selected and placed into the bookmark name field. Otherwise, un-indexed bookmarks are shown.

## Index Coverage

Index coverage Figure 25 highlights indexed regions. This can help show any problems with moving large blocks of text before making the alteration.

## Index Picklist

The Index picklist assists with navigating and editing an embedded index. Each line of the picklist represents an embedded index entry. Subheadings are set-out with the first on the same line as the heading, separated by :==.

Double clicking on a picklist line or selecting the **Goto XE** button will take the user to the embedded entry. The XE field can be edited in Word.

Option>Index>**Auto goto** causes the XE field and range if present, to be found automatically when scrolling.

**Stop scrolling on** field, when populated, will stop scrolling when that text is present in the index entry.

A referenced range can be redefined by selecting a new range and **Rerange BM**. <<, >>, +A, +B, A, B, and Select A to B can be used.

For a range entry the bookmark name will be displayed in the **Mark Entry** form when it is open in **Page range** mode. New entries can be added using the selected range.

Option>Index> **Page order** displays index entries in page order.

Use Option **Index from selection** to build the Picklist from a region of interest, such as a chapter. Use INDEX \c "2" \z "2057" \b "ixeIndexSelected" to create a Word index synchronised to the selected region.

The IndexExploit database created when Index is selected contains the XE field ID and a copy of the XE field content. If the field ID is found, the XE field content is checked against the database. If there is a mismatch the document is searched for the expected XE field content, and the colour of Goto XE changes. As XE fields are edited, added, moved, and deleted, this process will become unreliable and Index needs to be rerun. This is because Word fields are numbered, with numbers changing as fields are added and deleted.

## INDEXEXPLOIT FOR WORD EMBEDDED INDEXES (4)

The menu is shown in Figure 18.

### MENU SELECTIONS - WORD EMBEDDED CONFIGURATION

**Version** opens the IndexExploit downloads website. Check the website occasionally for updates.

**Word embedded** is the selected user interface. Selecting this toggles the visibility of XE fields.

**Configuration (4.1)** See page 23

**Options (4.2)** See page 25

**Mark Entry (4.3)** See pages 28,

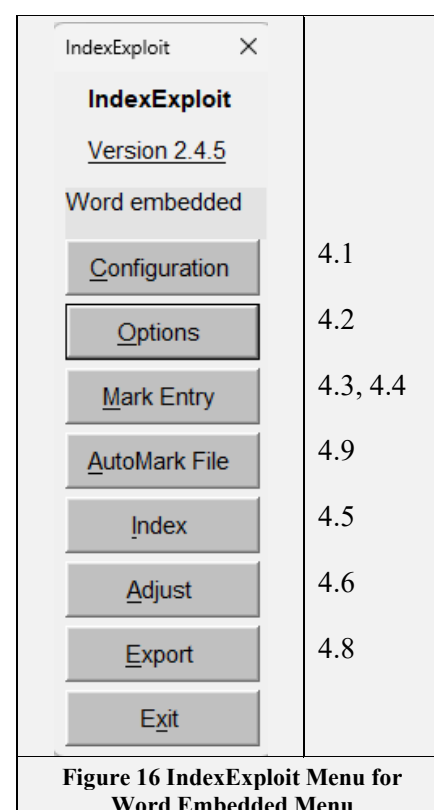
**Automark File (4.9)** See page 30

**Index (4.5)** See page 31

**Adjust (4.6)** See 39

**Export (4.8)** See page 41

**Exit** stops IndexExploit.



### START-UP

The stop word file (if selected) is read when the Word embedded form is opened. A stop word file can be defined in the **Adjust** options. If one is not found, then a message is displayed. The stop word file is used to force sort embedded index entries. See page 52.

Bookmarks beginning with **Bookmark prefix** are read if there are no more than 100 bookmarks total. Use **Read BMs** on the Mark Entry form to update the bookmarks list. If no bookmarks are found then a warning message is displayed.

### Configuration (4.1)

See page 13.

## MESSAGE FORM

An active message form is used by IndexExploit. This has a number of controls gathered at the right edge. The controls operate as described in Table 8 below.

Text in the message area can be copied.

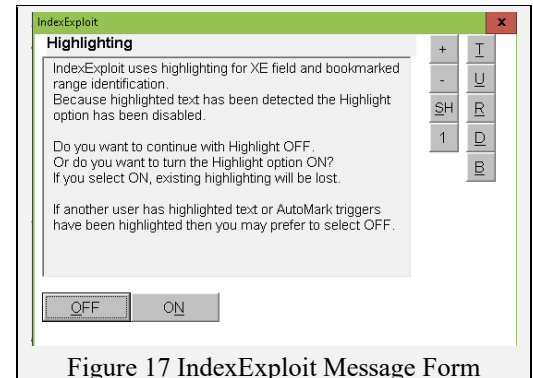


Figure 17 IndexExploit Message Form

Table 3 Control Buttons in the IndexExploit Message Form

Control	Action
+	Increase Word document zoom
-	Decrease Word document zoom
SH	Show/hide embedded index entries
1	Increase form size (1 to 1.6, effective next time it is used)
T	Top of file
U	Up 5 lines (depends on zoom)
R	Return to original position
D	Down 5 lines (depends on zoom)
B	Bottom of file



## INDEXEXPLOIT MARK ENTRY

### Options

The **Options** form is shown in Figure 20. There are several tabs, each relating to a different selection or form. All settings shown in this guide are seen when **Reset to Default Values** is selected. When options are altered most are remembered between sessions. Some are stored on the computer, some are stored in the document. Table 15 contains a list of all options and default values and explains where they are stored. Options and controls above and below the tabs are always visible, these are addressed first.

#### *Options Above the Tabs*

**Show Embedded Entries** When checked, bookmark range symbols and embedded index XE fields are visible. When unchecked, IndexExploit will hide the XE fields. If the Word Mark Index Entry form is used then XE fields will become visible again. To hide, either toggle **Show embedded entries** or select **Word embedded** on the menu.

**Highlight selection** causes the selected XE field if visible to be highlighted. The selected bookmarks if present will be highlighted. If IndexExploit detects highlighting in the document when it is started the Highlight selection option is automatically disabled to protect existing highlighting. It can be enabled if it is safe.

**Form added width pts** widens the Mark Entry and Index form by the number of points entered.

**Remove all Highlighting.** Processes are included to remove highlighting where it is no longer needed but the software involved is complex and doesn't always work. If too much highlighting is present, select the whole document and remove highlighting. If that doesn't remove all then select **Remove all highlighting**.

#### **Tip text guides**

Stored options may be written to computer memory or into the document. Temporary options are forgotten between sessions. Tip texts are prefixed [C] for values stored on the computer, [D] for values stored in the document, and [T] for temporary values lost when a session ends.

#### *Below the Tabs*

**Reset to default values** sets certain options to default values. Some values are unchanged, including the stop word file if one has been selected.

**Close** closes the form.

### **Bookmark Options (4.2)**

See Figure 21.

**Figure 18 IndexExploit Options Form for Word Embedded Indexing**

**Bookmark prefix** is prepended to bookmarks created by IndexExploit. Any value or none may be used except `ixe` which is reserved for IndexExploit use. The default is `idx`. The prefix is stored within the document as a custom property named `ixeBookmarkPrefix`. As you change from one document to another the appropriate prefix will be used automatically. Word does not allow certain characters in bookmark names. A warning is given if an invalid prefix is chosen.

**Min bookmark range** is the minimum number of characters that can be selected as the referenced range in an XE field. This ensures that the bookmark is visible when highlighted by a later search by Word Find or another application. If a range shorter than this is selected a warning is given and a bookmark will not be written.

**Max length of bookmark name** is the maximum number of characters that will be used when a bookmark name is created automatically. This is a guide only as the prefix is not included and a random number may be added if the initially generated bookmark already exists.

**Show all bookmarks** The bookmarks list shows bookmarks prefixed with **Bookmark prefix**. By default only un-indexed bookmarks are shown. Selecting this option shows all bookmarks

**Dbk-clk creates BM from selection** When the Bookmark text box is double clicked in the Bookmark form, the selected text in the Word document is used to create a bookmark name.

**Goto end of range after BM creation** defines where the cursor is located after inserting a bookmark. The default is the beginning of the range. When this option is checked the cursor is set to the end of the range. Intended for preliminary document scanning.

**Create bookmark name from entry** causes a bookmark name to be generated from the lowest level heading.

**Allow bookmarks in text boxes** allows bookmarks in text boxes. Also used by **Adjust**.

**Allow bookmarks in footnotes** allows bookmarks in footnotes. Also used by **Adjust**.

**Allow bookmarks in endnotes** allows bookmarks in endnotes. Also used by **Adjust**.

The screenshot shows the 'IndexExploit' application window with the 'Options' dialog box open. The 'Bookmark' tab is selected. The form contains the following settings:

- Show embedded entries:** ☐ (disabled)
- Highlight selection:** ☐ (disabled)
- Form added width pts:** 0
- Tip text guides:** [C] Computer, [D] Document, [T] Temporary
- Bookmark prefix:** idx
- Min bookmark range (for visibility):** 4
- Max length of bookmark name:** 8
- Show all bookmarks in Entry form:** ☐
- Dbk-clk creates BM from selection:** ☒
- Goto end of the range after BM creation:** ☐
- Create bookmark name from entry:** ☐
- Allow bookmarks in text boxes:** ☐
- Allow bookmarks in footnotes:** ☐
- Allow bookmarks in endnotes:** ☐

Buttons at the bottom: 'Reset to default values' and 'Close'.

Figure 19 Bookmark Options Form Showing Default Values

## Mark Entry Options (4.2)

See Figure 22.

When **Dbl-clck creates heading from selection** is selected, double clicking in Main entry, Subentry or Sub-sub transfers selected text to the selected text box. **Read** performs the same transfer and is the recommended method.

**Max heading length on dbl-clk** defines the maximum number of characters that will be transferred when text selected in the Word document is transferred by double clicking a heading field

**Allow multiple types ( \f )** opens the **Type** field in front of the Main heading. A letter entered here will be added to the entry as a type flag. Use this when multiple indexes are to be generated. A type flag is not needed for the largest (general) index. When selected, the first character of the type (if present) will precede the entry in the **Index picklist**. IndexExploit attempts to write this into the XE field after it's been inserted. Sometimes it doesn't work and the type code gets written into the Word document.

**Autocreate headings from bookmarks.** If structured bookmarks are used, (heading\_subheading\_subsub) entries are offered automatically by the Mark Entry form. Can be useful for an initial bookmarking scan of the document before indexing.

**Label notes as Bold/Italic** when checked causes IndexExploit to recognise when an entry is in a footnote or endnote and automatically includes a \b or \i or both) in the embedded entry to cause the page number to appear as bold /italic text.

**Label table entry as Bold/Italic** when checked causes IndexExploit to recognise when an entry is in a table and automatically includes a \b or \i or both) in the embedded entry to cause the page number to appear as bold /italic text.

**Mark entry form zoom %** alters the form size to suit your requirements.

Autocomplete from stored causes picklist entries to be written to the IndexExploit Mark Entry for to support autocomplete and provide a picklist of previous entries.

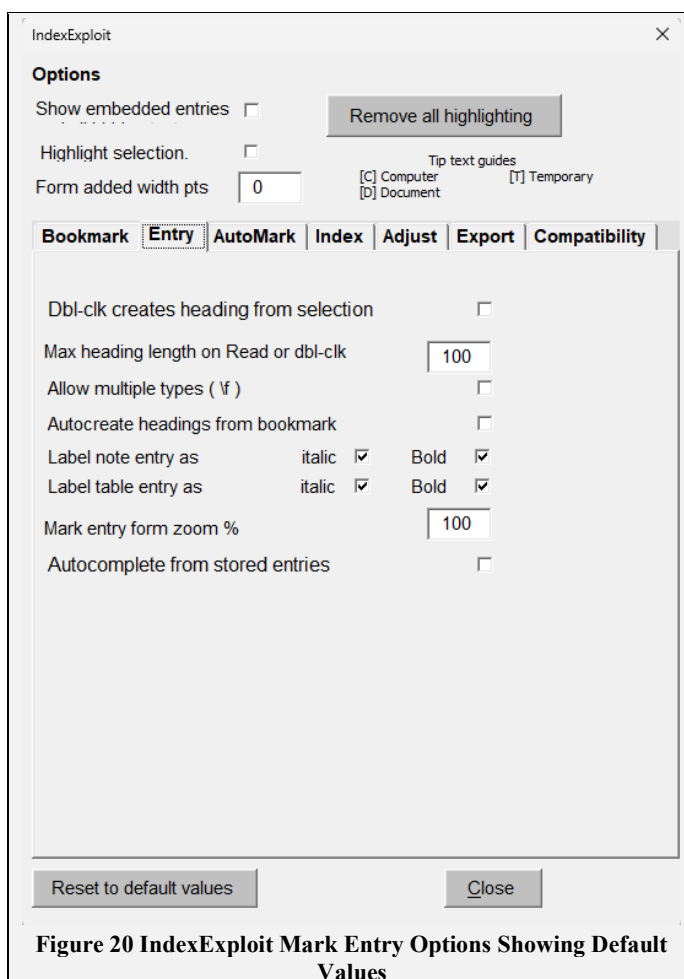


Figure 20 IndexExploit Mark Entry Options Showing Default Values

## Mark Entry Form (4.3)

### Bookmarking Process

The Bookmark fields and controls are at the bottom of the Mark Entry form, Figure 23. They appear when **Page range** or **Select A to B** is selected.

+A inserts bookmark ixmA at the cursor location.

+B inserts bookmark ixmB at the cursor location.

A goes to bookmark ixmA

B goes to bookmark ixmB

**Select A to B** selects a range extending from the beginning of bookmark ixmA to the end of bookmark ixmB.

The field next to the **Page Range** selector is used to enter the name of the bookmark to be added. A range must be selected before a bookmark will be written.

When option **DbI-Clk creates bookmark from selection** is selected the bookmark name is created from selected text.

When a new bookmark name is entered **Add BM** shows as red indicating the bookmark has not been written.

**Rerange-BM** redefines the bookmarked range to the current selection, use +A, +B, A, B, <<, >> and **Select A to B** if convenient.

**Add BM** creates the bookmark name by prepending **Bookmark prefix**. If the bookmark already exists then a number is appended to make the name unique. The bookmark name is displayed below the bookmark field which is left empty to receive the next bookmark name.

Selecting the bookmark name selects the bookmarked range. << and >> select the beginning and end of the bookmarked range.

If option **Create bookmark name from entry** is selected this creates a bookmark name from the lowest level heading when **Add BM** is selected.

**Read BMs** reads bookmarks with Option **Bookmark prefix** into the listbox. By default un-indexed bookmarks are read. If Option **Show all bookmarks in entry form** is selected, all bookmarks are read and the nearest is selected.

**Delete BM** deletes the selected bookmark.

### Mark Entry Process

It is the location of embedded index entries that determines the page number(s) in the generated index. The following guidelines may help.

**Current page** entries should be placed close to the beginning of the text referenced.

For **Page range**, the bookmarked range should span the text referenced. The XE field should be placed close to or within the bookmarked range. Refer to the compatibility section on page 35 for more information.

XE field placement is affected by the Compatibility setting on the Options form.

Cross references can be placed anywhere.

To find the latest embedded index entry created by IndexExploit click on the **Mark Entry** or **Main entry** labels at top left of the Mark Entry form.

A **Main entry** can be entered by keying the text or using **Read**. If **Index** has been run with default (alphabetical) index order then index entries are used for auto-complete. Click on the dropdown box at the end of the field to select an entry. New entries are added to the dropdown list. Auto-complete is case independent. A lower case typed character will match to

The screenshot shows the 'IndexExploit' window with the 'Mark Entry' tab selected. The 'Prefix' is 'idx' and the 'Type' is '(Multiple index)'. The 'Main entry' field contains 'heading', 'Subentry' contains 'subentry', 'Sub-sub' contains 'sub-sub', and 'Level 4' contains 'level 4'. There are checkboxes for 'Locator bold' and 'Locator italic', and buttons for 'Read 4', 'Invert 4', 'Restore 4', 'Delete 4', and 'Sort 4'. The 'Page range' option is selected, and the 'Range' field is active. The 'Add BM' button is highlighted in red. A listbox shows the following entries: idxEvaluation, idxMarkEntry, idxinstallation, idxembedding, idxlinking, idxWordIndexingModule, idxEditingEmbeddedIndex, idxMarkEntryForm, idxbookmarking, idxOptions, and idxMessageForm.

Figure 21 IndexExploit Mark Entry Form with Page Range Selected

an upper case entry if this is the first to be found. Adjustment may be required to achieve what is required, which may involve editing the XE field in Word once it's been written.

**Type** (see Options) is available when multiple indexes are being created. Use a single character. The default index value should be left blank. When **Mark Entry** is selected the index entry is inserted first and the Index type is inserted afterwards. This leaves the insertion point near the top of the screen.

**Subentry, Sub-sub and Level 4** are entered in the same manner as **Main Entry**. Autocomplete and a dropdown list are available as described in **Main entry**.

**Read** copies selected text into the selected heading field. Double click can be used if the option **Dbl-Clk creates heading from selection** is selected. The entry can be edited as required and can be recovered by selecting **Restore**.

If the selected text is longer than Option **Heading length** then it will be truncated. The form supports Unicode but does not support rich text. Edit the entry in Word if the font or style needs to be changed.

**Invert** reads the cursor position or text in the selected heading field, inverts the entry and inserts a comma.

**Restore** replaces the heading with the text copied by the last Read operation.

**Mark Entry** Writes the XE field to the Word document. It checks that the right document is selected before writing an entry. This allows entries to be copied from another Word document, for instance an earlier index or controlled vocabulary.

A range entry will include a \r reference to the bookmarked range, a cross reference will include a \t followed by the cross reference. If the insertion point is within styled text or the non-default font the user is warned and is given the option of moving the insertion point. This avoids unexpected styling of the embedded entry and the corresponding index entry. Style checking can be cancelled, preventing the form Figure 24 displaying again. When the embedded entry is added to the document the **Mark Entry** button shows green. The new entry is highlighted **green**, this will show in the updated index.

Avoid placing XE fields in captions and other cross reference targets. If text is cross referenced the index entry may appear in the cross reference leading to an incorrect index entry

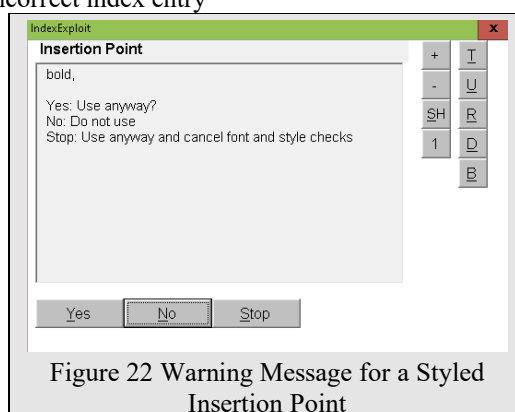


Figure 22 Warning Message for a Styled Insertion Point

If a range has been selected when inserting a current page entry the entry is placed at the beginning of the range.

Range entries should be placed within the range or very close. A warning is given if the entry is too far away. See also Compatibility, psge 43.

**Show/Hide XEs** is a quick way of showing and hiding XE fields when indexing or editing.

**Delete** removes text from the identified fields. **Delete 1-4** removes all four entry levels, when Main entry has been selected. If Subentry is selected then **Delete 2-4** is available. When Sub-sub is selected then **Delete 3-4** is available. This action does not remove any embedded XE fields.

**Sort** If a stop word file has been selected the forced sort text is automatically added in accordance with the selected stop word file. If an entry contains a colon (:) or semicolon (;) no change will be made. ;**Sort 1** is displayed when the cursor is in Main entry, ;**Sort 2** is displayed when the cursor is in Subentry. Behaviour is repeated for sub-sub and Level 4. The forced sort can be edited but be aware that if **Adjust** is selected from the Menu the forced sort may be replaced. This can be prevented by including a **Fix sort override** character such as # in the Adjust Options. See Stop Word File on page 52.

**Swap 1,2** is displayed when the cursor is in Main entry. This then swaps Main entry and Subentry. When Subentry is selected it becomes **Swap 2,3**.

**Locator bold**, when checked, sets the locator to **bold** in the Word index.

**Locator italic**, when checked, sets the locator to *Italic* in the Word index.

**Word Index** attempts to find the selected entry in the Word index. Only the heading is used in the search. As headings may turn up as subheadings earlier in the index, the user is asked whether the right entry has been found, with an opportunity to

continue the search or stop. The **Word Index** control is replaced by **Return** which returns the user to the original location when selected.

**Find XE** uses the contents of the entry fields to search for a matching XE field. If an index entry is badly formed then Find XE will not work. Use Ctrl-F Word find or the Advanced find form. The Find field will contain what Find XE is looking for. Modify as necessary and use Find Next.

The find value can be modified as necessary. To find subheadings only use Find XE “\*:subheading with Wildcards set.

Find XE works best when Ctrl-Home is selected first to take the cursor to the start of the document.

Selecting the **Mark Entry** or **Main entry** label on the Mark Entry form finds the last entry

**Find** uses Word search to find text in the adjacent field. Case, Whole word and Wildcard are available. **Find** stops at the last occurrence, It doesn’t wrap back to the beginning of the document.

**Close** closes the form.

Cross references can be entered by selecting **Cross ref**. The field next to the selector is used for cross reference text.

IndexExploit doesn’t support rich text, so some adjustment of see and see also terms in the XE fields will be required if italics are used.

## AUTOMARK FILE (4.9)

Word **Automark** automatically searches for trigger clauses from the first column in an Automark file and indexes them with predefined insertion point entries from the second column. Further columns are ignored. A trigger clause can be indexed with multiple embedded entries by including it in several rows. Automark is very quick. IndexExploit is able to help with creation of an Automark file by reading highlighted trigger clauses in a Word document.

There are no Options. The AutoMark file must be saved as a .doc file.

**Automark File** in IndexExploit creates or updates an AutoMark file using highlighted trigger clauses. These are appended to the first column of the selected AutoMark file. Processing begins at the cursor location in the Word file and proceeds to the end. This allows an AutoMark file to be created in stages. The user creates entries in the second column where necessary, these are used by Word Automark to automatically add embedded entries to the file being indexed. If the trigger clause is to be used as the embedded entry there is no need for an entry in column 2. Subsequent columns can be added, these are ignored by Word and can be used for notes.

**Automark file** requires you to have only two Word files open. First open the file being indexed and place the cursor where you want **AutoMark file** to start, then open the Automark file. Start IndexExploit and select **Automark file**. IndexExploit will ask whether the selected file is the Automark file.

The Automark file can be blank or it can contain earlier entries. If blank a new table will be created. Otherwise, new entries will be added to the end of the existing table. Highlighting is copied across and can be removed. Formatting is carried across; this may include bullet points or numbering which can be confusing but is easily removed.

Sort the AutoMark table as required, remove duplicates, and add entries into column 2 as required.

When the AutoMark file is ready run **AutoMark** from the Word Insert Index form.

## INDEX (4.5)

### Index Options (4.2)

See Figure 25. The options below affect operation of the **Index** process and the **Index picklist**.

**‘See’ text for checking xrefs,**

**‘See also’ for checking xrefs** are used when checking matches to a target cross reference.

The \t (text) switch in an XE field suppresses the page number in the index, text following the \t switch is shown instead. Conventionally this is used for cross references. Some indexers place cross references in subheadings and write \t “” into the XE field. They then force sort the entry using an appropriate forced sort, for instance ;zzz#. This gives greater control over where cross references appear in the index.

IndexExploit will check for cross references in subheadings and text fields. Non-English cross reference terms can be entered supporting the multi-language abilities of Word. Checking occurs when **Report all checks** is selected. IndexExploit looks for an exact match. If this is not found the entry is bookmarked ixErr and a number, e.g. ixErr001. An entry is created for an error report. IndexExploit expects headings in cross references to be separated by semicolons (;). It expects subheadings to be preceded by colons (:) or commas (.). Cross references are matched to the heading level only.

**Max entries to include in index** defines the maximum number of entries used for the Index picklist. If no value or a negative value is set the default value will be applied which is derived from the licence. If 0 is chosen the picklist will contain entries in footnotes, endnotes and text boxes only.

**Alphabet range** creates the picklist for the start and end character range defined.

**Index from selection** causes the Index picklist to be populated using the selected range. If the selected range is less than 100 characters then a range is calculated by finding the largest bookmarked range which includes the selection. If the selected range doesn't include any XE fields then IndexExploit will attempt 10 PgUp and 20 PgDn and will generate the picklist from the selected range. Only main text entries are included in the picklist, not notes or text boxes.

When **Index from selection** is not selected, IndexExploit generates a picklist from the entire document and creates an ixc file that can be loaded when **Index** is selected during a later session. This removes the need to re-create the picklist every time IndexExploit is used. The ixc file name is the same as that of the document but with extension ixc (index order) or ixep (page order). ixc files can be transferred to other IndexExploit users. They are spreadsheet compatible. The first row contains column headings. The second row contains configuration information. ixc files distributed to other users should be set read-only to prevent accidental replacement.

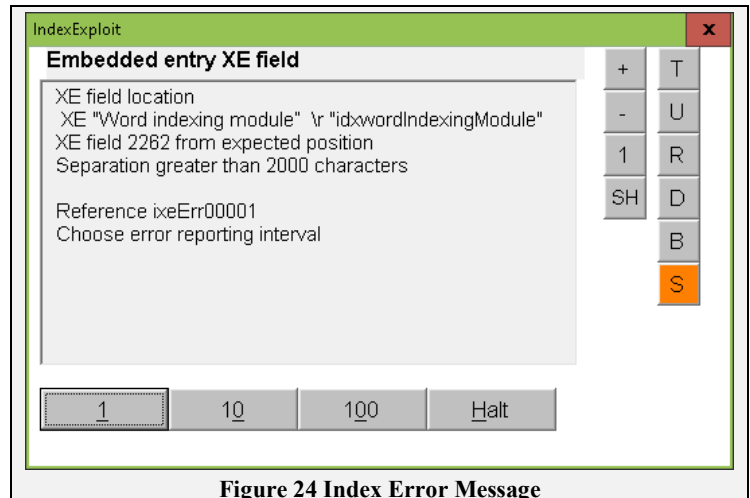
The screenshot shows the 'IndexExploit' dialog box with the 'Options' tab selected. The 'Index' sub-tab is active, displaying various configuration options. The 'Options' section includes checkboxes for 'Show embedded entries', 'Highlight selection', and 'Form added width pts' (set to 0). A 'Remove all highlighting' button is present. Below these are checkboxes for 'Index from selection', 'Report all checks' (checked), 'Page order', 'Include page', 'Auto goto', 'Allow range change' (checked), 'Show coverage', and 'Sequence for locator prefix' (set to 'Level1'). The 'Picklist zoom %' is set to 100. The 'Bookmark' tab is also visible, showing fields for 'See' text (set to 'see'), 'See also' text (set to 'see also'), 'Max entries to include in index' (set to 30000), and 'Alphabet range' (set to 'a' to 'z'). The 'Footnote label' is 'f', 'Endnote label' is 'e', 'Text box label' is 'x', and 'Table label' is 't'. At the bottom are 'Reset to default values' and 'Close' buttons.

Figure 23 Index Options Showing Default Values

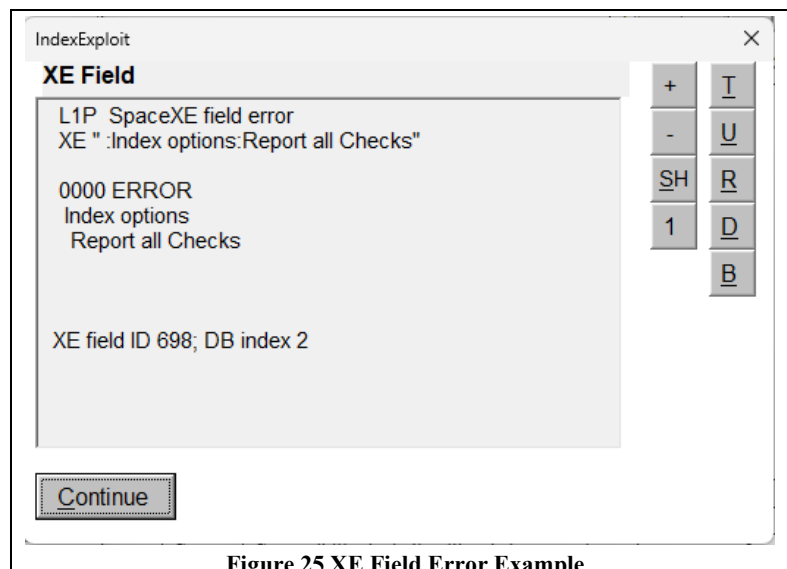


Report all checks causes IndexExploit to report possible faults when the picklist is created. Entries are automatically bookmarked ixErr001 upwards as they are encountered. Figure 26 is an example error message. The error reporting interval can be chosen for convenience. Halt stops reporting checks in the current story and moves to the next. Errors are written to a separate Word document which can be used for subsequent analysis, adjustment of the embedded entries, and can be shared with other users. Error codes written to the index picklist are enclosed in – which forces scrolling to stop.

Clicking on the page number at the bottom of the picklist displays the embedded entry content with error information, see Figure 27. Error codes are listed in Table 9.



**Figure 24 Index Error Message**



**Figure 25 XE Field Error Example**



Table 4 IndexExploit Index Error Messages

Code	Meaning
B	Space at beginning or end of a bookmark name
C	Compatibility including illegal characters in entries or cross references, XE field too far from referenced range
FS	Forced sort not adjusted because an escaped control character is present
Ln	Space at beginning or end of heading level n
LnS	Space at beginning or end of a forced sort
M	Maintainability. XE fields more than 2000 characters from referenced bookmark.
P	XE field could not be parsed because XE field syntax has not been followed.
P	Empty heading (parser error)
R	Referenced range bookmark missing
R10k	Referenced range greater than 10,000 characters. This is information only but may indicate a problem.
R50	Index range > 50 pages. This is information but may indicate a problem.
RR	Contiguous or overlapping ranges
T	Cross reference text not found following \t. Not always an error, can be used to force see also cross references to the last subheading.
T	Space at beginning or end of a Text field
V	Visibility. Referenced bookmark range length less than <b>Min referenced range</b> .
X	Cross referenced target not found, a complete match is sought.

**Page Order** when checked causes the Index picklist to appear in page order. The default is alphabetical order. Note that if the Pick list has been generated and the Page Order is changed, entries are read from the wrong database, taking the user to the wrong locations in the document.

**Include Page Numbers** Adding page numbers to the index picklist slows the generation of the picklist. The default is to exclude page numbers, this doesn't reduce the ability to find content.

For a 500 page book with 2000 index entries and 2000 footnotes, **Index** is processed in about 1 minute without page numbers. It took 8 hours with page numbers because Word repaginates each time a page number is requested. When **Index** is complete, an ixex file is saved, this loads in about one second if **Report all checks** is not selected.

Include page numbers when:

- Document is fully indexed and you are ready to create the final index or picklist version.
- An export including page numbers is required

**Auto Goto** causes IndexExploit to find the indexed content immediately an entry is selected. Double clicking the entry is normally required. Auto Goto slows down picklist browsing because of the time required to move through the document.

**Allow range change** allows bookmarks to be re-ranged from the Picklist.

**Show coverage**, when selected uses highlighting to show index coverage. Select **Highlight selection** and **Remove All Highlighting** before selecting **Index**.

**Sequence for locator prefix** allows a page number prefix to be added, for instance Heading 1. It should be the same as chosen for Word page numbering.

**Picklist zoom %** adjusts the size of the picklist to your requirements.

**Footnote label** is added to a picklist entry for a footnote. Default is f.

**Endnote label** is added to the picklist entry for an endnote. Default is e.

**Textbox label** is added to the picklist entry for a textbox. Default is x.

**Table label** is added when an embedded entry is in a table cell. Default is t.

Labels don't affect the Word index and should not be left blank.

## Index Menu Selection

**Index** runs the index parser, opens the index picklist, updates any Word indexes and goes to the first Word index. An ixea (alphabetically sorted) or ixep (page sorted) file may be written. If an ixc file is found when **Index** is selected, then this is offered to save processing time. See Figure 28. Every embedded index entry in the selected range is parsed and split into its components. The main text is parsed first, followed by text boxes, footnotes, endnotes. Computing power will affect performance. Close unnecessary files and applications as necessary.

A progress indicator appears during processing, Figure 29, and a timer message, Figure 30 appears at intervals to show processing is still continuing. If you need to stop processing at any time and re-start IndexExploit then key Ctrl-break. For those of you that don't have a break key on your keyboard **esc** may work.

When complete a new ixc file will be written if **Index from range** and **Report all errors** are not selected. If an ixc file has been set to read-only then the new ixc file will not be written and an error is displayed, Figure 31.

Selecting **Index** again when a picklist has been created will normally re-open the picklist. This is a design decision, made to prevent users unintentionally re-starting the Index process. Use **Refresh** to recreate the picklist.

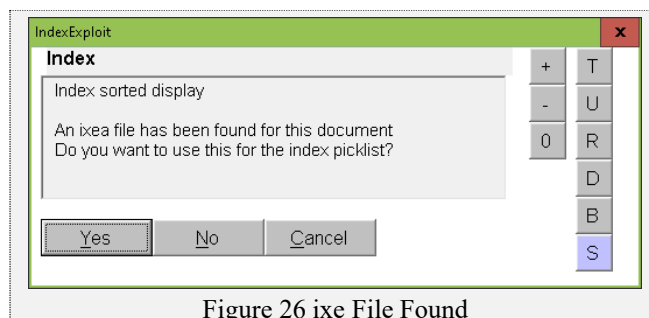


Figure 26 ixc File Found

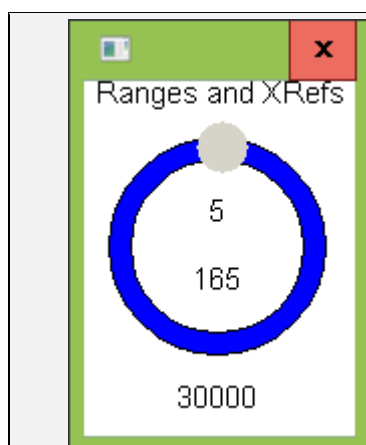


Figure 27 Progress Indicator

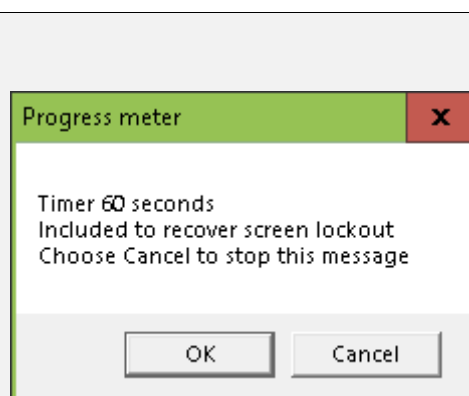


Figure 28 Timer Message

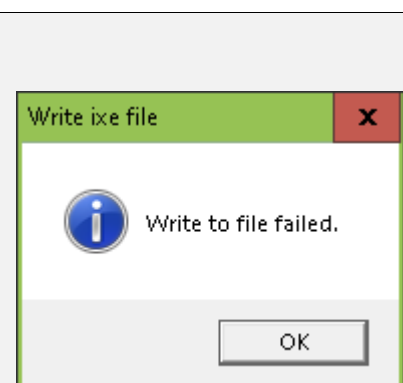


Figure 29 ixc file write failed

## Index Picklist (4.5)

### Index Entries

If the **Page Order** Option is selected, the picklist is arranged in the order that entries are parsed with main text entries first followed by footnotes, endnotes, and text boxes.

If the **Page Order** Option is not selected, then entries are arranged in alphabetical order. If a forced sort is included in a heading, this is used to position the entry. Page numbers are included only when the **Include page numbers** option is selected.

Every XE field is represented in the picklist, the first subheading is included on the same line as a heading to achieve this. If a bookmarked range is referenced the entry is labelled with an asterisk (\*). Footnotes are identified with **Footnote label**, endnotes are identified by **Endnote label**, text boxes are identified by **Textbox label**, table entries are identified by **Table label**.

If **Allow multiple types** is selected then if the **lf** type switch is used, the first character of the index type appears at the beginning of the picklist entry.

When XE fields are longer than 500 characters, which can occur if an index hasn't been embedded properly, then Trunc. and the length of the XE field appears at the beginning of the entry. The picklist entry will have been truncated.

### Entry Selection

Double click an entry to find the indexed content in the Word document. When IndexExploit looks for indexed content it looks for the XE field with an expected field ID and reads it's content. If it matches the content stored in the IndexExploit database it takes the user to that location in the document. If a match is not found it looks for a field containing progressively shorter versions of the stored XE field content. This is less precise as there could be several fields with the same content. When this happens the Goto XE button is highlighted red. The Word Find buffer is loaded with the search term. Use Word Find to perform a manual search if required.

If the entry references a bookmark, the name is posted to the **Mark entry** form if **Page range** is selected, which can then be used to add more entries referencing that bookmark.

To see the XE fields select Option **Show embedded entries**.

Rules for highlighting of content are shown in **Table 10**.

If **Auto goto** is selected the indexed content is automatically found in the Word document. Otherwise double click the entry. **Highlight selection** enables highlighting of entries. Option **Show embedded entries** causes XE fields to be displayed.

The sidebar, PgUp, PgDn and cursor keys are used to navigate the picklist. Keying a single character moves the cursor to that section of the picklist. When an entry is selected the page number and if applicable the bookmark name appear below the picklist.

**Stop scrolling on** will stop scrolling when the content of that field occurs in a picklist entry. This can be used with the Up and Down keys to find specific words in the index. Looking for **:=** will find first subheadings, including lone subheadings, enabling quick editing of entries.

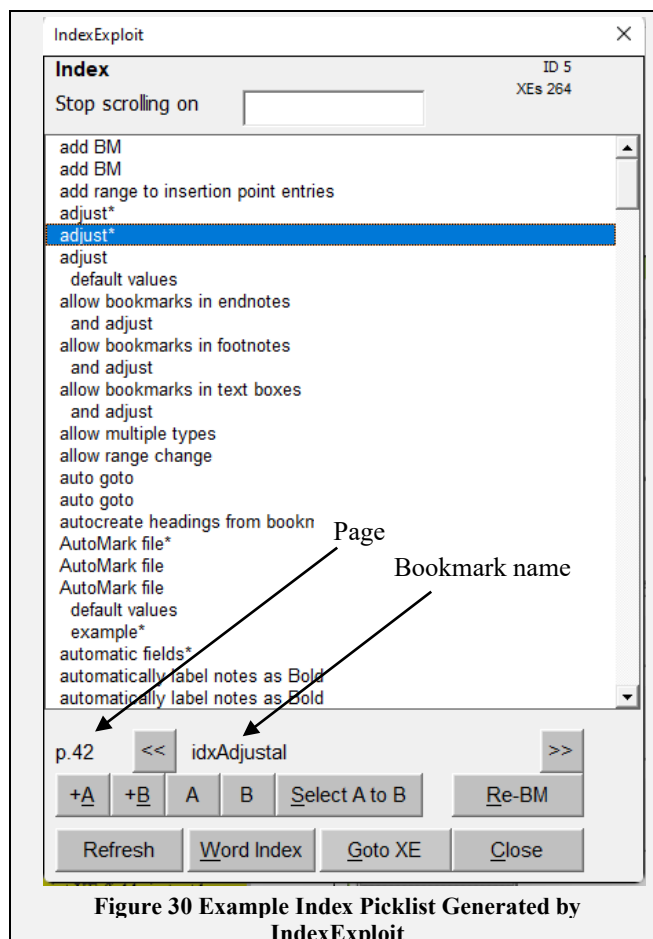


Figure 30 Example Index Picklist Generated by IndexExploit

Selecting **Page** opens a form showing the XE field content Figure 33. Text displayed here can be copied. This enables hidden text in XE fields to be copied and pasted elsewhere.

Selecting **Bookmark name** goes to the referenced range. Selecting << or >> goes the beginning or end of the bookmarked range.

+**A** and +**B** create bookmarks ixmA and ixmB at the selected text. **A** and **B** return to the bookmarked entries ixmA and ixmB. **Select A to B** selects the range from the beginning of bookmark ixmA to the end of ixmB. Used with **Re-BM**.

**Re-BM** alters the range of the bookmark to the selected range.

**Refresh** refreshes the picklist using the range selected when **Index** was selected.

**Word Index** attempts to find the selected entry in the Word index. Only the heading is used in the search. As headings may turn up as subheadings earlier in the index, the user is asked whether the right entry has been found, with an opportunity to continue the search or stop.

**Goto XE** goes to the XE field in the Word document. If **Show embedded entries** is selected the XE field is selected, otherwise the line containing the XE field is selected. Goto XE reads the entry in the IndexExploit database, determines the XE Field ID, goes to that field, reads the content and compares it with the content in the database. If there is not a match because the entry has changed or something has happened to alter the XE Field ID the IndexExploit searches for progressively shorter versions of the expected entry and sets the **XE Field** control red to indicate there may be a problem. If no match is found a warning is given.

**Close** closes the Index form and returns the cursor to its position when Index was selected.

Table 5 XE Field and Bookmark Highlighting when Selected from the Index Picklist

		XE Field Selection and Highlighting	
Highlight Selection	Show embedded entries	Bookmark absent in XE field	Bookmark present in XE field
<input type="checkbox"/>	<input type="checkbox"/>	Line containing XE field is selected	Bookmark selected if length is greater than <b>Min bookmark range</b> , otherwise the line is selected.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Line containing XE field is highlighted	Bookmark highlighted if length is greater than <b>Min bookmark range</b> , otherwise the line is highlighted.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	XE Field selected	Bookmark selected if length is greater than <b>Min bookmark range</b> , otherwise the line is selected.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	XE Field highlighted	Bookmark highlighted if length is greater than <b>Min bookmark range</b> , otherwise the line is highlighted.

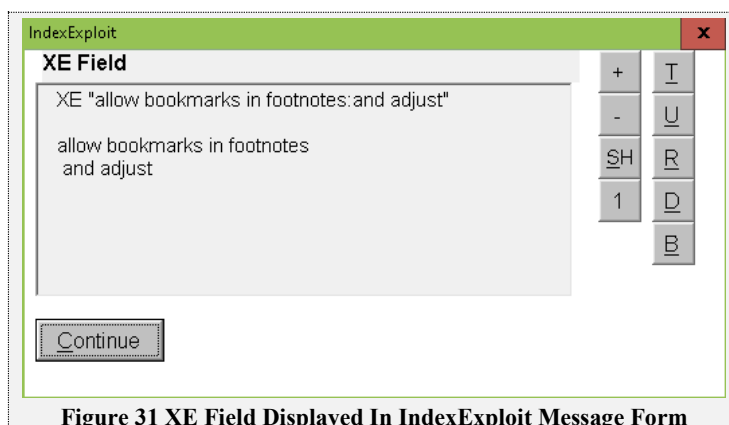


Figure 31 XE Field Displayed In IndexExploit Message Form

## Index Error Reports

Error reports can be created by the **Index** process to support index debugging. The first part of the report is metrics, Table 11 and is followed by a detailed analysis, Table 12. Select Option **Report all checks**. ixr files and error reports have been shared by users to fix embedded index compatibility issues in the publishing process. An extract is shown below in Table 11 and Table 12. A real document containing a few errors was modified for testing to show all error types. Picklist entries are labelled, and scrolling will stop at records containing errors. The error may be labelled with a bookmark corresponding to the Reference in the example shown in Table 12 below. Error types labelled BM are bookmarked.

**Table 6 Index Error Metrics**

Error Type	Quantity	Note
Total entries	904	
Bookmark range too short (BM)	1	Minimum bookmark range is a user defined option. Provided to enable linked index applications to make the range visible.
Compatibility illegal characters	1	User defined characters that may interfere with the operation of publishing software are checked against a user defined list.
XE field too far from range (BM)	1	When an XE field is too far from a referenced range it can upset the order in a locator string.
Empty headings	1	Heading should always be present
Parser errors	1	The IndexExploit parser will pick up illegal XE field constructs and report them.
Referenced range missing (BM)	1	This will also cause an Error message in the Word index.
Space in bookmarks	2	Spaces are not allowed in bookmark names.
Space in forced sort	0	A leading space in a forced sort will disrupt sort order.
Space in headings (BM)	5	Leading space in a heading
Space in Text field	2	Leading space in a text (cross reference) field.
Cross reference in heading	1	A user defined cross reference term is found in a heading.
Cross reference not found (BM)	1	Using user defined cross reference terms, a matching target is not found.
Range may be too large (BM)	4	Exceptionally large ranges are reported. They may be errors caused when moving text or other errors, but may be deliberate.
Ranges overlap (BM)	2	Matching entries reference overlapping ranges or an insertion point entry is inside a marching range entry.

**Table 7 Index Error Report - Example**

Reference	Type	Embedded Entry	Bookmark	Observation
ixeErr00001	Illegal characters in heading	XE "rural <dweller>:reported a high quality of life"		Illegal characters in heading <>
ixeErr00002	Space in L2	XE "United States: " \r "idxUnitedStates"	idxUnitedStates	Space in L2
ixeErr00004	XE field parser	XE "Colorado study:results" \r "idxColorado Results"		C5 Embedded entry range error near location 45 in XE field o R
ixeErr00006	Space in L1	XE "individualism vs. collectivism "		Space in L1
ixeErr00007	Unexpected use of text field	XE "built environment:Denmark:see Denmark"		Cross reference is in heading
ixeErr00009	Cross reference not found	XE "wellbeing" \t "see also community wellbeingx"		Cross reference community wellbeingx Not found
ixeErr00010	Range length	XE "rural-urban happiness paradox" \r "idxRuralUrbanHP"	idxRuralUrbanHP	Bookmarked range less than 4 characters
ixeErr00011	XE field location	XE "rural-urban binary" \r "idxruralurb"	idxruralurb	XE field 35894 from expected position Separation greater than 2000 characters
ixeErr00012	Bookmark not found	XE "Colorado study:method" \r "idxColaradoMethod"	idxColaradoMethod	Bookmark in XE field idxColaradoMethod has not been found.
ixeErr00013	Range greater than 100000 characters	XE "built environment" \r "idxBuiltEnvironment"	idxBuiltEnvironment	Bookmarked range is 383473 characters
ixeErr00016	Range greater than 100000 characters	XE "rural vs urban quality of life" \r "idxRuralVsUrban"	idxRuralVsUrban	Bookmarked range is 392813 characters
ixeErr00017	Entry after XE "women:and COVID-19"	XE " :urban green" \r "idxUrbanGreen"	idxUrbanGreen	Empty Level 1 during alpha sort
ixeErr00018	Range overlap warning	XE "China study:Everyone is an Artist, project"	idxEveryoneIsArtist	Embedded Entry within Bookmark h Delete Embedded Entry

Reference	Type	Embedded Entry	Bookmark	Observation
ixeErr00019	Range overlap warning	XE "Scotland studies:outdoor recreation" \r "idxOutdoor2"	idxOutdoor idxOutdoor2	Range overlap b2 Extend range idxOutdoor and delete Embedded Entry

## ADJUST (4.6)

There is no form associated with **Adjust**

### Adjust Options

Adjust options affect operation of the Adjust process.

**Allow bookmarks in text boxes, Allow bookmarks in footnotes, Allow bookmarks in endnotes** in Bookmark options allows bookmarks to be added as referenced ranges to insertion point XE fields in text boxes, footnotes and endnotes.

**Browse for Stop Word File** selects a stop word file. The stop word file is described on page 53.

**Report adjustments** shows adjustments as they occur. It is useful when trying out a new stop word file to be able to check that the index is being sorted in the expected manner. Other checks are also included. The user is able to gradually reduce the level of reporting when this option is selected.

**Replace smart quote delimiters with plain in XE fields** causes smart quote delimiters in XE fields to be replaced by plain quotes while retaining escaped smart quotes. Entry, cross reference and bookmark parts are among those treated. This functionality was added when an indexer found that another application would not import XE fields correctly. Smart quotes can appear in XE fields when Option Replace' straight' quotes with 'smart' quotes is chosen. Manually adjusting an XE field may cause smart quotes to appear. Third part software may cause smart quotes to be written.

**Re-sort headings using stop word file** causes heading forced sorts in XE fields to be adjusted by reference to the selected stop word file which is read when Adjust is selected. **Show embedded entries** must be selected. XE fields containing a backslash (\) are not adjusted. Word escapes certain characters used for control with a backslash (\). This makes adjustment more complex and is therefore avoided. Control characters include double quotation marks", and backslash \.

**Re-sort subheadings using stop word file** causes subheading forced sorts in the XE fields to be adjusted by reference to the selected stop word file which is read when Adjust is selected. XE fields containing a backslash (\) in a heading or subheading are not adjusted

**Re-sort sub-sub headings and lower level headings** causes Level 3 to Level 7 heading forced sorts to be adjusted by reference to the selected stop word file which is read when Adjust is selected. **Show embedded entries** must be selected. XE fields containing a backslash (\) are not adjusted

**Fix Characters** A user may wish to prevent a forced sort being altered during Adjust processing. Any character in Fix characters present in an existing forced sort will prevent any alteration. # is a good initial choice

**Add range to insertion point entries** Insertion point embedded entries are modified to include a range. The range name includes the **Bookmark prefix**, a name based on the lowest level subheading in the embedded entry and optionally a number chosen to make the bookmark unique. If a valid bookmark name cannot be created from a heading then a random text generator creates a valid name.

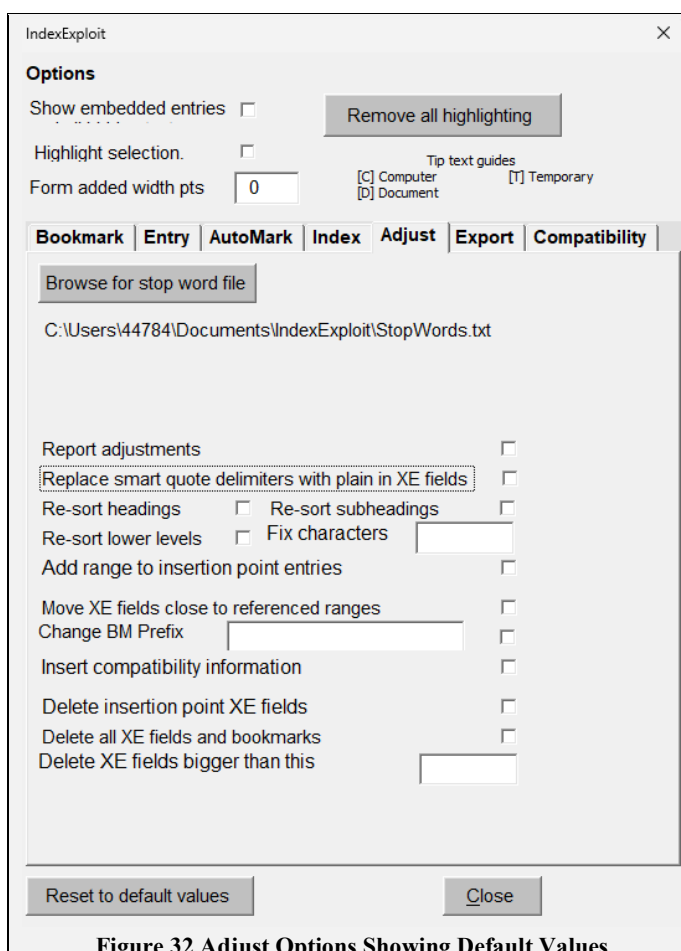


Figure 32 Adjust Options Showing Default Values

**Move XE fields close to referenced ranges** Word allows XE fields containing referenced bookmarks to be located anywhere in the document. This can present problems when a text is to be modified and re-indexed. Moving XE fields close to their referenced ranges may remove maintainability problems. When this option is checked, **Adjust** causes all XE fields more than 2000 characters away from their bookmarked range to be moved next to or into the bookmarked range.

**Change BM Prefix** Any bookmarks already with prefix **Change BM Prefix** will be unchanged. Any prefixed by **Bookmark prefix** will have the bookmark prefix changed. Other bookmark names will be prepended with **Change BM Prefix**. XE fields referencing the bookmark are updated.

**Insert compatibility information** causes compatibility information to be written to XE fields.

**Delete Insertion Point XE Fields** causes all insertion point XE fields to be deleted. This is intended to be used when Word AutoMark has been run but the result is unsatisfactory. This deleted approximately 1000 entries per minute during testing. If Word undo is available this is much faster. When selected **Adjust** only performs this action

**Delete all XE fields and bookmarks** causes all XE fields and their associated bookmarks to be permanently removed. When selected **Adjust** only performs this action. Two opportunities are presented to cancel the process. IndexExploit forgets this selection when a session has ended.

**Delete XE fields bigger than this** is used in conjunction with **Delete Insertion Point XE Fields** and **Delete all XE fields and bookmarks**. It causes XE fields larger than this value to be deleted. It was introduced when an embedding process went badly wrong and a badly corrupted embedded index was presented where large XE fields needed to be deleted.



## EXPORT (4.8) (7) (8)

There are several ways of transferring a Word index to another document. The Word generated index can be copied and pasted. Take care not to include the INDEX field markers when copying because the index will disappear when the field is updated. Once copied it becomes a static document. Any links between the embedded index entries and the new index are broken.

IndexExploit can be used. A variety of options are provided. Some include link mechanisms such that when the new document text is copied into the original, locators are linked to content.

### Export Options (4.2)

By default the export is from the IndexExploit database used to create the picklist with a single font and style.

**Page range separator** allows the user to choose a separator for page ranges. The default is en dash.

When **Add IndexConvert Labels** is selected, headings are labelled \$H1\_, \$H2\_ etc. locators are labelled {tab}\$L\_. Forced sorts are labelled \$FA\_....\$FZ\_.

The export is compatible with IndexConvert. It can be processed for import to any indexing program, a database or a spreadsheet.

**Copy fonts and styles** copies entries from the Word index and includes any fonts and styles used. This can take a long time for a large index.

**Link entries to bookmarks with hyperlinks** uses hyperlinks as locators. This works when **Adjust** has been run with **Add range to insertion point entries** selected. The exported file can be added to the document being indexed. Static page ranges are used. Select all and F9 will cause hyperlinks to be updated to reference the correct locations. If the document is reflowed and page numbers change, **Link** should be run again.

**Link entries to bookmarks with references** uses dynamic cross references as locators. This works when **Adjust** has been run with **Add range to insertion point entries** selected. The exported file can be added to the document being indexed. Select all and F9 will cause cross references to be updated to the correct page numbers. Page ranges are not displayed.

When neither of the link options is selected locators are not linked.

**Insert note number** adds locator labels set on the Index option page.

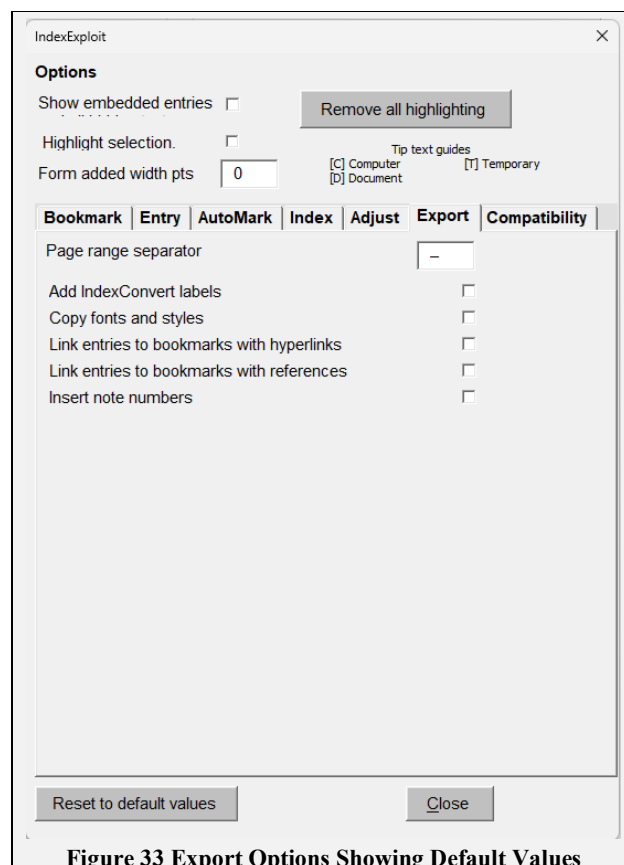


Figure 33 Export Options Showing Default Values

Table 13 shows export behaviour with various options. For linked indexes, first run **Adjust** with **Add range to insertion point entries**.

Table 8 IndexExploit Options and Behaviours when Exporting an Index

Export selection		Index Option Include page Nos	
		Unchecked	Checked
<b>No selection</b>	IndexExploit internal database is exported. Plain text only.	Locators include XE field IDs, Range names, Shape names.	Locators include Page numbers. Styles are defined by Bold and Italic selections in XE fields.
<b>Copy fonts and styles</b>	Uses Word fonts and styles in the export. Achieved by finding the entry in the Word BoB index, copying and pasting.	Word index fonts and styles	Word index fonts and styles

Export selection		Index Option Include page Nos	
		Unchecked	Checked
<b>Link entries to bookmarks with hyperlinks</b>	Hyperlinks are associated with locators. Display text is fixed.	Locators are shown as (1), (2), etc. hyperlinked to bookmarks. No display change with document reflow	Locators include page numbers hyperlinked to bookmark. No display change with document reflow
<b>Link entries to bookmarks with references</b>	References are associated with locators. Display text alters with pagination. First page only is displayed for ranges.	Entries include a single updateable locator. Range is indicated by the number of paragraphs (paragraphs).	As for unchecked.
<b>Insert note number</b>	Locators include footnote labels and numbers, endnote labels and numbers, textbox labels and table labels	Note, textbox and table labels included	Note, textbox and table labels included
<b>Add IndexConvert Labels</b>	Headings are labelled \$H1_, subheadings are labelled \$H2_ etc. Locator strings are labelled \$L_. Forced sorts are included at the beginning of entries or subentries and are labelled \$FA_forced sort\$FZ	\$H, \$L and \$F labels inserted	\$H, \$L and \$F labels inserted

## COMPATIBILITY WITH OTHER APPLICATIONS (9)

You will be affected by compatibility if you need your document published in a format not available from Word. Examples include InDesign or EPUB. These use different and often incompatible index codes.

Compatibility is addressed in several ways including location and content of XE fields and bookmarks.

XE field location can be controlled when indexing to meet compatibility requirements. They can be moved to referenced range start or end position depending on the requirements of the other application.

Compatibility codes can be added to XE fields. These can be visible in the index for manual processing or hidden, to be picked up and processed by software.

### Bookmarks

Bookmarks can be added to insertion point entries enabling an application to link to bookmarks for embedded entries.

Using the Adjust Options, select **Add range to insertion point entries** and run **Adjust**

### XE Field Position

Word uses the location of insertion point XE fields to generate a page number in the index. IndexExploit forces XE fields to the beginning of the selected range for an insertion point entry. Thus, if a long book title is selected when **Mark Entry** is selected the XE field is inserted at the beginning of the title, ensuring that correct page number appears in the index

Word uses range start and end locations to generate the page ranges for a range entry. The location of the XE field determines the position of the span in the locator string. IndexExploit guides the user to insert XE fields within the referenced range.

When **Enforce compatibility** is selected, IndexExploit places the XE field at the beginning of the selected range. If **XE fields at end of range** is selected then it is placed at the end of the referenced range.

### Compatibility Codes in XE Fields

IndexExploit can add compatibility codes to XE fields including:

- Chapter (Word recommendation for including chapter in page numbers must be followed)
- Range as the number of paragraphs and number of characters.
- footnote label
- endnote label
- table label
- text box label
- footnote number (counted from beginning of document)
- endnote number (counted from beginning of document)

Certain information is fluid and should be used with great care. This includes

- XE Field ID
- Page number

There are currently no plans to make these available in compatibility information.

### Syntax for Compatibility Information

Syntax used is \$CA\_ compatibility \$CZ\_.

By default this is placed in the lowest level subheading in the XE field and appears as part of the entry in the Word generated index.

An alternative location is at the end of the XE field. It is ignored by Word.

A new subheading can be added for compatibility information.

Compatibility is added using the Adjust command.

### *Range information*

If the XE fields references a bookmark then Wrp=p, will be written where

- p is the range length in paragraphs.

If the separation between the XE field and it's chosen position is more than 200 characters then Wrsc=s and Wrec=e will also be written. An entry will be created in the error report.

- s is the number of characters separating the start of the XE field from the range start as characters.
- e is the number of characters separating the start of the XE field from the range end as characters.

- Where the value of s or e is negative the = is replaced by -.

#### Examples

- \$CA\_ Wrp=10 Wpsc=400 Wrec=1234 \$CZ\_

#### Examples

- { XE “subject:heading;heading sort:subheading;sh sort:subsub\$CA\_ Wrpp=10 \$CZ\_;subsub sort” }  
The tag will appear in the index when it is next updated and will appear in the InDesign embedded entries when the Word document is imported.
- { XE “subject:heading;heading sort:subheading;sh sort:subsub;subsub sort” \b \u \$CA\_ Wrp=10 Wsc=400 Wrec=1234 \$CZ\_ }  
The tag will not appear in the index when it is next updated but will appear in the InDesign embedded entries when the Word document is imported TO BE CONFIRMED.

### Chapter Prefix

The chapter number appearing in the page number is available and will be included if available. Example:

- \$CA\_ Wrp=10 pre=1 \$CZ\_

### Footnotes, Endnotes, Textbox, Table Labels

Suffix information is available and will be written. This includes footnote, endnote, textbox, table. A single suffix is suggested as these are unlikely to occur together. Footnote number and endnote number, counted from the beginning of the document will be included. Characters identifying footnotes, endnotes, textbox and table are user configurable. Examples

- suf=f10 (footnote)
- suf=e25 (endnote)
- s (for text box, a shape)
- t (locator is in a table”
- \$CA\_ Wrp=10 pre=1 suf=e2 \$CZ\_

### Remove Compatibility

If it is necessary to remove compatibility information then Word find/replace with wildcards. Search for

\$CA\_\*\$CZ\_ (When visible this is within the XE text )

"\$CA\_\*\$CZ\_" (When hidden this is outside the XE field text and enclosed in “.....”)

Include a leading space in both cases. Test the find before use to avoid surprises.

### Control characters

Certain characters are used by Word as control characters. Other applications may use different control characters.

IndexExploit can check for a list of characters in headings and a separate list of characters in cross references. < and > may risk interfering with XML type codes. A semicolon in cross references will identify multiple cross references.

### InDesign

InDesign embedded entry markers can contain:

- Up to four heading levels with associated forced sorts
- Locator information
- Page number style information

Locator information is derived from the locator position. Ranges are measured forward from the location of index marker.

The locator can include a cross reference

### InDesign Script

InDesign scripts need to perform the following

- Read the \$CA\_ compatibility \$CZ\_ tag
- process the compatibility
- Address cases where Wpsc is considered too large
- Optionally remove the tag

Figure 34 InDesign New Page Reference Form

### ***Information for Indexers***

Use insertion point embedded entries as much as possible.

Place XE fields as close as possible to the start of referenced ranges, consider setting **Enforce compatibility**.

InDesign is likely to re-sort and alter the layout of the index in accordance with selected style sheets and stop word list.

### **Cambridge University Press (CUP)**

Indexing and proofreading are parallel processes. The index typesetting process is semi-automatic and normally very robust. A marked up copy of the index can be supplied. A wide range of processes are accepted when creating an index for CUP.

Zero length ranges have been a problem for one indexer who had an index rejected. IndexExploit was used to make the necessary changes. Other difficulties have been encountered, it seems to depend on the skill and experience of the typesetters and the supporting software tools.

### **Manchester University Press**

MUP uses a process very similar to CUP.

### **Kindle**

If the publishing route is via InDesign then follow InDesign rules. Amazon now expect EPUB documents.

Other routes TBD.

### **DocBook**

If the publishing route is via InDesign then follow InDesign rules.

Other routes TBD.

### **EPUB**

### ***InDesign***

If the publishing route is via InDesign then follow InDesign rules.

### ***Calibre (EPUB generator)***

When creating a linked index for use by an EPUB, use hyperlinked locators. Locators using references didn't work when tested in May 2024.

### **PDF**

### ***Adobe Acrobat Pro***

A Word document exports well using Acrobat Pro. Linked indexes with hyperlinks and references have been found to work. With hyperlinks, Open link highlights the bookmarked range, providing great precision when the XE field and referenced range are accurately placed.

***Other routes TBD.*****COMPATIBILITY OPTIONS**

Figure 37 shows an example of Compatibility options. All are stored as properties within the document and are unaffected by **Reset to Default Values**.

**Enforce compatibility** causes insertion point entries to be placed at the beginning of the selected text.

**XE Fields at end of range** causes the XE field to be placed at the end of the referenced range.

**Prevent Compatibility codes showing in index** causes compatibility codes to be written outside of the XE field text, and therefore hidden from the index.

**Include \$C code.** Compatibility information is enclosed by \$CA\_...\$CZ\_

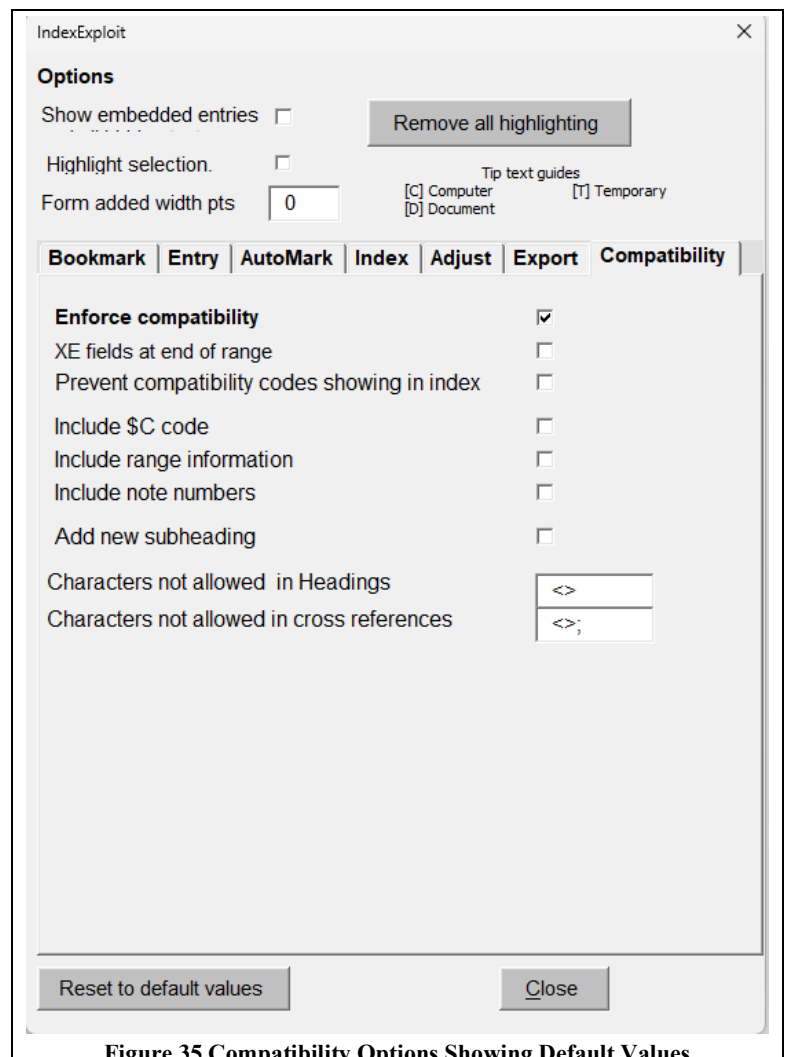
**Include range information.** Range extent is included in compatibility information.

**Include note numbers.** Note numbers are included in compatibility information.

**Add new subheading.** Compatibility information is included in a new subheading.

**Characters not allowed in headings.** Certain characters may interfere with downstream processing. Warnings are given and an error report entry created.

**Characters not allowed in cross references.** Certain characters may interfere with downstream processing. Warnings are given and an error report entry created.



**Figure 35 Compatibility Options Showing Default Values**

## INDEXEXPLOIT RESERVED BOOKMARKS

IndexExploit uses bookmarks prefixed ixex to support processing. XE fields cannot be entered using IndexExploit if prefix ixex is chosen for a range name.

**Table 9 IndexExploit Reserved Bookmark Names for Special Processing**

Bookmark Name	Usage
ixexA	Used to label the beginning of a selected range
ixexB	Used to label the end of a selected range
ixexErr	If the <b>Report all checks</b> Option is selected, additional processing and reporting is invoked, including the creation of a report listing all errors found. This can be used when correcting the index. If possible errors are found they are bookmarked using prefix ixexErr and a number, e.g. ixexErr001 ixexErr002 etc. When <b>Index</b> is selected all ixexErr bookmarks are automatically removed and a new set created if errors remain.
ixexHereFormB	When an active message form is opened this bookmark is written. When R is selected the cursor returns to this position.
ixexIndexExploit	This is used as a general place marker when IndexExploit is running.
ixexLastEntry	Written whenever an embedded entry is written by IndexExploit.
ixexIndexSelected	If a range is selected to create the Index Picklist it is bookmarked as ixexIndexSelected. This can be used in the INDEX field to create a Word index using the same content. When editing or reviewing an index it is possible to create a second index containing the bookmark name ixexIndexSelected. A full index and a partial, synchronized index will both be updated when Index is selected but IndexExploit will go to the first index. The INDEX field below will create a synchronized index. INDEX \c "2" \z "2057" \b "ixexIndexSelected" Range ixexIndexSelected may be extended by IndexExploit if the initial selection is too small. It first attempts to find the largest enclosing bookmark, then will try to select 20 pages. IndexExploit will only include main text entries in the picklist, whereas Word will also include notes and text boxes.
ixexSelectedRange	Used by the Bookmark form when inserting bookmarks
ixexWordIndex	The start of the first Word index is bookmarked ixexWordIndex
ixexXEFIELD	When an embedded entry is found using the Index Picklist the embedded XE field is bookmarked ixexXEFIELD and an associated bookmark if present is bookmarked ixexXEFIELDRange
ixexXEFIELDRange	When an embedded entry is found using the Index Picklist the embedded XE field is bookmarked ixexXEFIELD and an associated bookmark if present is bookmarked ixexXEFIELDRange
ixexTargetXEn	In an exported index. Supports a growth path to linking a cross reference to its target.

## MASTER/SUBDOCUMENT STRUCTURE

IndexExploit can be used with a master/subdocument structure. When indexing a master/subdocument text two approaches are available when using IndexExploit which can be used together if required. Testing has revealed the following. When a bookmark name referenced by an XE field appears in more than one subdocument only the first will be found by the Word index. IndexExploit will find all occurrences. To prevent this problem when using IndexExploit for indexing set a different bookmark prefix for each subdocument and another for the master document. You can then index each subdocument separately or index the entire text by opening the master document.

## INDEXEXPLOIT DEFAULT OPTIONS FOR WORD EMBEDDED INDEXING

Table 10 IndexExploit Default Options for Word Embedded Processing

Options Page	Parameter	Initial and Default Value	Type
<b>All</b>	Show embedded entries	False	Computer
	Highlight selection	False	Computer
	Form added width points	0	Computer
<b>Bookmark</b>	Bookmark Prefix	idx for a new document then unchanged	Document
	Min bookmark range	4 characters	Computer
	Max BM Length on dbl-clk	8 characters	Computer
	Show all bookmarks in Entry form	False	Computer
	Dbl-clk creates BM from selection	True	Computer
	Goto end of range after BM creation	False	Computer
	Create bookmark name from entry	False	Computer
	Allow bookmarks in text boxes	False for a new document then No change	Document
	Allow bookmarks in footnotes	False for a new document then No change	Document
	Allow bookmarks in endnotes	False for a new document then No change	Document
	Dbl-clk creates heading from selection	False	Computer
<b>Entry</b>	Max heading length on dbl-clk	100 characters	Computer
	Allow multiple types ( \f )	False	Computer
	Autocreate headings from bookmark	False	Computer
	Label note entry as Italic	False for a new document then No change	Document
	Label note entry as Bold	False for a new document then No change	Document
	Label note entry as Italic	False for a new document then No change	Document
	Label note entry as Bold	False for a new document then No change	Document
	Mark entry form zoom %	100	Computer
	Autocomplete from stored entries	False	Computer
	No options for AutoMark		
	Autocomplete from stored entries	False	Computer
<b>Index</b>	‘See’ text for checking xrefs	see	Computer
	‘See also’ text for checking xrefs	see also	Computer
	Max entries to include in index	30000, based on licence.	Computer
	Alphabet range (From ... To)	Blank	Temporary
	Index from selection	False	Computer
	Report all checks	True	Computer



Options Page	Parameter	Initial and Default Value	Type
	Page order	False	Computer
	Include page	False	Computer
	Auto goto	False	Computer
	Allow range change	True	Computer
	Show coverage	False	Temporary
	Sequence for locator prefix	Blank for a new document then No change	Document
	Picklist zoom %	100	Computer
	Footnote label	f	Computer
	Endnote label	e	Computer
	Text box label	x	Computer
	Table label	t	Computer
<b>Adjust</b>	Stop word file	Undefined when IndexExploit first installed then No change	Computer
	Report adjustment	False then no change	Temporary
	Re-sort headings	False	Computer
	Re-sort subheading	False	Computer
	Re-sort lower levels	False	Computer
	Fix characters	Blank for new document then no change	Document
	Add range to insertion point entries	False	Computer
	Move XE fields close to referenced ranges	False	Computer
	Change BM prefix	The prefix field is blank and the change checkbox is False	Temporary
	Insert compatibility information	False	Temporary
	Delete insertion point XE field	False	Temporary
	Delete all XE fields and bookmarks if present	False	Temporary
	Delete XE fields bigger than this	Blank	Temporary
<b>Export</b>	Page range separator	En dash	Document
	Add IndexConvert labels	False	Computer
	Copy fonts and styles	False	Computer
	Link entries to bookmarks with hyperlinks	False	Computer
	Link entries to bookmarks with references	False	Computer
	Insert labels and note numbers	False	Computer
<b>Compatibility</b>	Enforce compatibility	False for a new document then No change	Document
	XE Fields at end of range	False for a new document then No change	Document
	Prevent compatibility codes showing in index	False for a new document then No change	Document

Options Page	Parameter	Initial and Default Value	Type
	Include \$C code	False for a new document then No change	Document
	Include range information	False for a new document then No change	Document
	Include note numbers	False for a new document then No change	Document
	Add new subheading	False for a new document then No change	Document
	Characters not allowed in headings	False for a new document then No change	Document
	Characters not allowed in cross references	False for a new document then No change	Document

### AN AUTOMARK FILE EXAMPLE (3)

The example is created from several real documents and includes examples of possible automark file entries.

In practice a good automark file requires a significant amount of work and may not work as desired. Matching triggers in contents lists, captions etc. may be indexed causing confusion.

The heading row is not part of an Automark file.

**Table 11 Examples of Trigger Terms and Index Entries in a Word AutoMark Files**

Trigger	Index entry	Note
“Appeasement” Crises prior to World War II	appeasement crises:prior to World War II	Trigger term chosen to occur only once. A subheading is forced. Check for other appeasement crises.
Abu Bakr al-Baghdadi	al-Baghdadi, Abu Bakr; Baghdadi, Abu Bakr	Entry includes a forced sort
Aldrich et al. 2006	Aldrich, John	Author. Date is included to make the trigger unique
Allison 1969	Allison, Graham T.	Author. Date is included to make the trigger unique
Bueno de Mesquita and Siverson	Bueno de Mesquita, Bruce	Authors. Both authors are included to make the trigger unique.
Bueno de Mesquita and Siverson	Siverson, Randolph M.	Authors. Trigger is repeated for the second author.
China		Trigger is used as the entry.  China appears 9 times in the book. This can be reduced by careful use of trigger clauses.
Cold War		Trigger is used as the entry.  24 occurrences. This can be reduced by careful use of trigger clauses.
George H.W. Bush	Bush, George H.W.	Subsequently referred to as Bush which cannot be used as an index trigger.

Trigger	Index entry	Note
George W. Bush	Bush, George W	Subsequently referred to as Bush which cannot be used as an index trigger.
Accioly	Accioly, Hildebrando	Last name only used as it does not appear in any other context
Agamben	Agamben, Giorgio	
Júnior	Amaral Júnior	
Armstrong	Armstrong, David	
Barcellos	Barcellos, Ana Paula de	
ACCIOLY	Accioly, Hildebrando	Names above repeated because they are capitalised in footnotes
AGAMBEN	Agamben, Giorgio	
JÚNIOR	Amaral Júnior	
ARMSTRONG	Armstrong, David	
BARCELLOS	Barcellos, Ana Paula de	

## STOP WORD FILES AND HOW THEY ARE USED (6)

A stop word file is available on the IndexExploit downloads page.

A stop word file is a plain text file that should be created using Notepad and saved with Unicode UTF-8 encoding. Don't open a stop word file with a word processor. Case is significant, A is not the same as a!

Five record types are recognized.

- A record beginning with a semicolon is a comment.
- The first non-commented record contains characters to be ignored. During processing a stage 1 forced sort candidate is created by removing all 'ignore' characters. If ignore characters are not required leave the line blank.
- The second non commented record contains character find/replace pairs. 'Find' characters in the stage 1 forced sort candidate are replaced by 'replace' characters to create a stage 2 forced sort candidate.
- Following records are stop words or clauses if they don't contain a colon ( : ) and find/replace words or clauses if they do contain a colon. List order is unimportant. The stage 2 forced sort candidate is processed using these records. Any stop words are removed if they become the first word(s) in the forced sort candidate. When 'find' words or clauses become the first word(s) in the stage forced sort candidate they are replaced by the 'replace' word(s). The result is a stage 3 forced sort candidate.

If the stage 3 forced sort candidate is the same as the heading, i.e. no matches are found, no forced sort will be written. A stage 4 forced sort candidate is created by limiting the length to four words to prevent it becoming unwieldy for a very long heading or subheading.

Headings containing a backslash ( \ ) are not processed. The \ is the escape character before double quotation marks, colons and semicolons to prevent them being recognised as control characters in an embedded entry. Software to handle all cases has not been included because of the unexpected changes that could result if it doesn't work correctly. These entries need to be adjusted manually.

**Adjust** will include stop word processing when a **Re-sort** option is chosen.

**;Sort** on the Bookmark and Mark entry forms uses stop word processing unless a colon or semicolon is present.

Bookmark, Mark entry and Adjust all read the stop word file when selected, it is therefore possible to keep a stop word file open, adjust it, save it, and immediately see the result.

Lists of stop words are included in an article in The Indexer by Max McMaster [1].

A sample of a possible stop word file is shown below, sections are labelled a, b, c, d.

```
;a Ignore characters
\'"`(){}[].,
;b Find/replace pairs
âäåæçĖÀÁÂÃÄÅÆ
;c Stop words
a
A
an
An
against
Against
;d Replacement strings
Genesis:Bible 010
```

If the find replace pair list (b) contains two pairs that counter each other, e.g. abba then the routine will not find a substitution and will move on after 100 attempts.

The order of processing for each heading or heading or subheading is a b c d.

Processes a and b affect characters appearing anywhere in a subheading.

Process c and d apply to first words. As a first word is removed from a candidate it may expose another in the stop word list which is then removed.

## WORD EMBEDDED INDEX FIELDS, AND HOW THEY ARE PROCESSED BY WORD AND INDEXEXPLOIT

### XE Field Parsers

#### *Word*

Behaviour of the Word parser can only be determined from user experience. It is closely integrated into Word, is fast and relatively robust. Missing bookmarks result in an error message in the index. The position of switches such as \f before or after a main entry doesn't confuse the parser. \f "a" and \f a are equivalent and both work. XE and xe both work. Bookmark names can be plain or enclosed in quotation marks.

Do not attempt to edit a Word generated index. All changes will be lost when the INDEX field is updated.

Some publishers accept changes made in a copy of the index, for instance addition of footnote and endnote numbers. Select the complete index, do not include field markers {, } or any additional text, and Copy. Then Paste into a new document. If you've copied too much and have included the INDEX fields then Update field will be available which, if selected, will cause the index to disappear.

#### Track Changes

An index being developed while track change is on may not merge correctly until all changes are accepted.

#### *IndexExploit*

IndexExploit reads each XE field and splits it into its components, checking that known Word rules are obeyed. Only XE is accepted. xe is not. IndexExploit will find errors where the Word parser won't recognise an entry. The indexExploit parser will accept switches before and after the main entry and the presence or absence of quotation marks for switch characters and ranges.

An ixex file is generated following creation of the picklist in alphabetical order, an ixep file is created when page order is selected. These include information created by the IndexExploit parser and can be re-read next time IndexExploit is used. These files include column header information and can be opened using a spreadsheet program such as Excel.

### XE FIELD CONTENT AND LOCATOR PROCESSING

Table 12 XE Field and Locator Processing by Word and IndexExploit

Term	Definition	Word index generation	IndexExploit Picklist generation
XE Field	An XE field is a Word field defining an embedded index entry. The default is an insertion point entry. A range entry uses a /r switch with a bookmark name to define a range. The location and content of an XE field and any referenced range determine where the entry will appear in the generated Word index defined by an INDEX field. .	An index entry is worked out using a simple sort defined by a forced sort or the entry for each heading level in the XE field.	IndexExploit uses the same rules as Word.
Locator	For an XE field without a range this is a single page number. For an XE field with a range the locator will be a single page number or a page range depending on the extent of the range.	Locators are worked out automatically by an INDEX field. Page or chapter:page is displayed dependent on page number format. Repeating page number locators are suppressed but repeating page ranges are not. Location of the page spans within the index entry is worked out from	Locators are worked out automatically by IndexExploit. Page or chapter:page is displayed dependent on page number format. Footnote, endnote, textbox and table indicators are included. Repeating page numbers and ranges are included to enable the

		the location of the XE field. If the XE field is too far from the range this may upset page numbering, e.g. 11-12, 4,5,6, 13-15. Footnote and endnote indicators are not shown.	user to link to the content from the picklist. Footnote and endnote indicators and numbers are shown. Textbox and table cell indicators are shown.
--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------

## WORD INDEX FIELD, STYLES AND SWITCHES (2.4)

An INDEX field defines the location, styles and content of an index.

Table 15 shows field codes..

Right click on the index and select Edit Field, select Field codes. More layout options become available. See page 53 for more information.

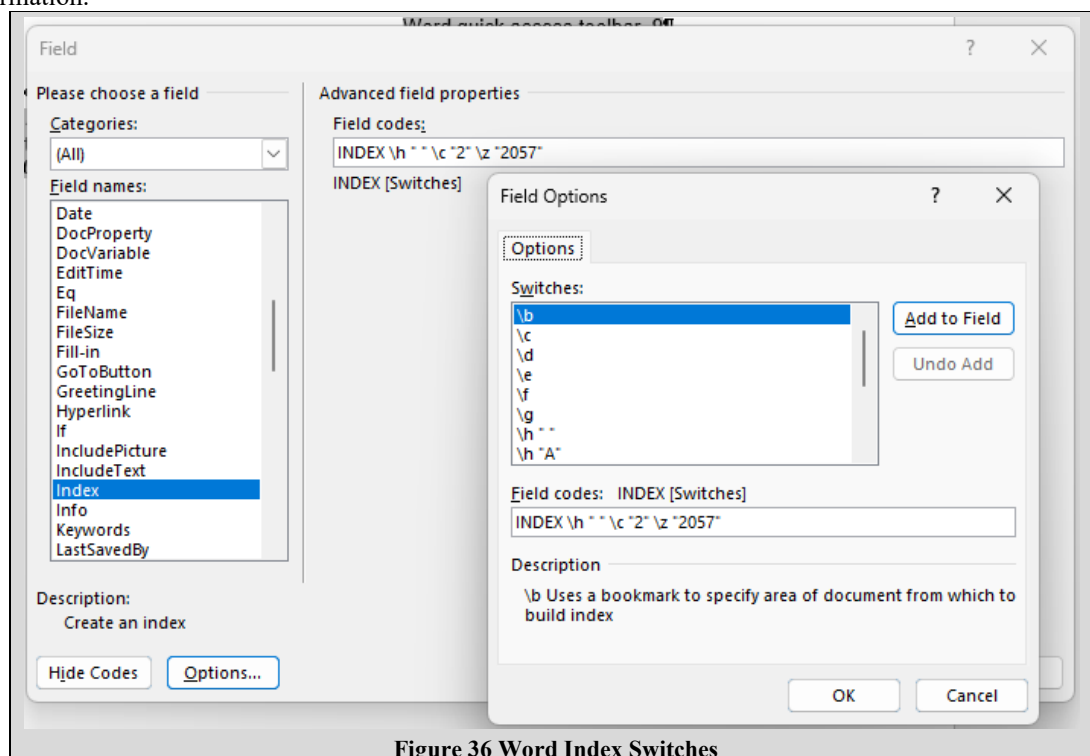


Figure 36 Word Index Switches

Table 3 shows the switches used by Word when generating an index and the equivalent processing by IndexExploit.

Table 13 Word INDEX Field and Switches and Comparison with IndexExploit Picklist

	Word functionality	IndexExploit Picklist
\b	Switch uses a bookmark to specify area of document from which to build index	When indexing a selected range it is bookmarked ixIndexSelected. This can be used to generate a synchronised index. Example INDEX \c "2" \z "2057" \b "ixIndexSelected"
\c	creates an index with more than one column on a page (maximum = 4)	The index picklist is a single column.
\d	with the \s switch defines the separator between sequence and page numbers	Defined by the Wofr Page format settings.
\e	defines the separator characters used between an index entry and its page number (default comma space)	Defined by the Word Page format settings.
\f	creates an index by using only the specified \f type in the XE fields. Do not use this for the 'primary' index. <div style="margin-left: 20px;"> { INDEX \c "2" \z "1033" } is the default index  { INDEX \c "2" \z "1033" \f "N" } only includes entries with \f "N" </div>	Not used. The picklist includes all entries

	Word functionality	IndexExploit Picklist
\g	defines the separator characters used in a page range (default is em dash)	Defined by the Word Page format settings.
\h	\h " " inserts a blank line formatted with the index heading style between groups in the index \h "A" inserts a heading letter formatted with the index heading style between groups in the index	The picklist is a continuous table.
\k	defines the separators between cross references and other entries (default is full stop followed by space)	A cross reference will have its own entry in the picklist.
\l	defines the separators between page numbers for multiple page references (default comma space)	Each XE field has its own entry in the picklist.
\p	limits the index to the specified letters	Index Option <b>Alphabet range</b>
\r	runs index subentries onto the same line as the main entry (default set-out)	Index picklist is a single column.
\s	includes the referenced sequence number with the page number. Sequence number is a selected heading level.	Index Option <b>Sequence for locator prefix</b> . Heading 1 is recommended, labelled as Chapter
\y	enables the use of yomi text for index entries	Not tested
\z	\z "#####" defines the language ID Word used to generate the index (default depends on region)	Not used



**Table 14 XE Field Content and Switches**

Feature	Description	Word with Mark Index Entry	Word with IndexExploit Mark Entry	Word Copy/Paste XE field
XE label	This label must always be present in an XE field. It must precede the index entry.	Automatically inserted.	Automatically inserted.	Must be included in copy/paste.
Index entry	<p>An index entry includes headings and subheadings with optional forced sort text.</p> <p>Word supports up to 6 subheading levels (7 heading levels).</p> <p>A colon (:) separates heading levels.</p> <p>{ XE “heading:subheading” }</p> <p>A semicolon (;) identifies forced sorts.</p> <p>{ XE “the Darwin papers;Darwin papers” }</p>	<p>The Mark Index Entry form writes the XE field when Mark is selected.</p> <p>Supports rich text.</p> <p>Supports all languages supported by Word.</p> <p>Cannot write to text boxes.</p>	<p>Uses a Word VBA function to write the XE field. This ensures Word rules are followed.</p> <p>Doesn’t support rich text.</p> <p>Supports all left-right languages.</p> <p>Bookmark naming is managed automatically.</p> <p>If a \f type switch is used, it is normally added automatically after the XE field is written. There are occasions when it is not written to the field but is written to the text.</p> <p>\b and \i switches can be set automatically for note and table entries.</p> <p>Cannot write to text boxes.</p>	<p>Copy a good XE field, paste to required location and edit. This can be a very rapid indexing technique for insertion point entries and cross references.</p> <p>Can write to text boxes but page number will be 0 in the index.</p>
Main entry	Always required, example: the main entry	<p>Supports rich text.</p> <p>Type text or allow selected text to be automatically copied to this field.</p> <p>Edit as required to create suitable entry.</p>	<p>Doesn’t support rich text, use the Word form for complex text such as chemical formulae.</p> <p>Type text or selected text can be read to this field.</p>	Type or copy text. XE fields are hidden text, copying from within a field is not supported.

Feature	Description	Word with Mark Index Entry	Word with IndexExploit Mark Entry	Word Copy/Paste XE field
Main entry forced sort	;main entry Will cause a sort on m instead of t. There must be no space around the semicolon. Don't use forced sort unless necessary.	Must be added manually.	Forced sort can be added by reference to a stop word file. Automatic adjustment can be prevented by using a lock character such as # at the end of a forced sort. Forced sorts can be adjusted automatically using the IndexExploit Adjust process.	Type or copy text. XE fields are hidden text, copying from within a field is not supported. Adjustment of forced sorts must be done manually to change index order. Automatic adjustment can be prevented by using a lock character such as # at the end of a forced sort.
Subentry	Optional		As main entry	As main entry
Subentry forced sort	As for main entry	Must be added manually.	As main entry forced sort	As main entry forced sort.
Sub-subentry	Optional	Form has space for two levels. Further levels must be appended to existing fields or editing the entry following Mark.	As main entry	As main entry
Sub-subentry forced sort	As for main entry		As main entry forced sort	As main entry forced sort.
Level 4	Optional		As main entry	As main entry
Level 4 forced sort	As for main entry		As main entry forced sort	As main entry forced sort.
Levels 5 to 7	Optional		The form allows for four levels. Further levels must be added using the available fields or editing the entry following Mark.	As main entry
Levels 5 to 7 forced sort	As for main entry			As main entry forced sort.
\r Range	\r "RangeName" Defines the name of a bookmarked range which can be an insertion point or a span of many pages. All range names must be unique. Re-using a bookmark name moves it to the new location, which will upset page numbering.	User must manage unique bookmark naming using Bookmark form.	Bookmarking integrated into form, range naming managed automatically	User must manage unique bookmark naming.
\b Bold locator	\b inserted after the entry causes the locator in the index to be bold	User must set for each entry	Can be set automatically for notes and table cells	Insert if required

Feature	Description	Word with Mark Index Entry	Word with IndexExploit Mark Entry	Word Copy/Paste XE field
\i Italic locator	\i inserted after the entry causes the locator in the index to be italic.	User must set for each entry	Can be set automatically for notes and table cells	Insert if required
\f Index type	When inserted after the entry this defines an index type. Not used for the main index. \f “n” can define a names index entry.	Not supported. Adjust XE field after it’s been written. Not used for main index.	An option makes this field available on the form.	Insert if required
\t Cross reference	Suppresses the page number in the generated index and causes the following text to be written instead. Conventionally used for cross reference text. \t “ <i>see also</i> target heading”	Cross reference. Rich text supported.	Cross reference. Rich text not supported.	Can be very effective for entering many cross references.

## INDEX PROCESSING BY WORD AND INDEXEXPLOIT

Word Index layout is defined using the Insert Index command. Select Reference>Insert Index to insert a new index or update the layout of an existing index.

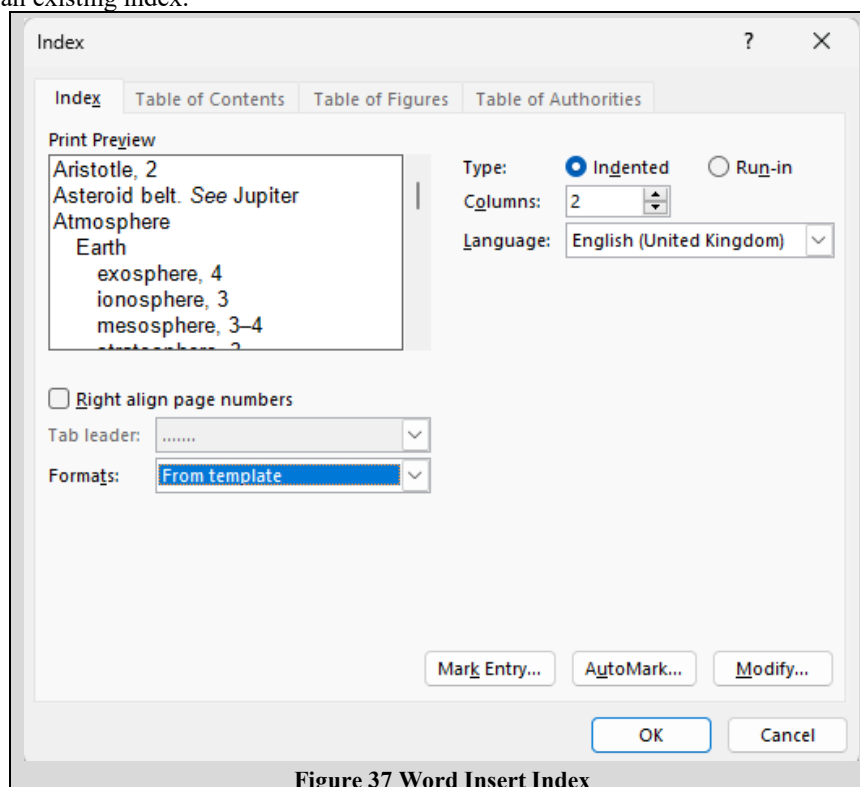


Figure 37 Word Insert Index

Table 15 Word Insert Index Options

<b>Print Preview</b>	Print preview changes as options are changed.
<b>Type</b>	Index can be set out or run-in. A set-out index is easier to scan, a run-in index uses less space.
<b>Columns</b>	Up to four columns can be included in the index.
<b>Language</b>	Select the language to match the document.
<b>Right align page numbers</b>	When selected, page numbers are right aligned.
<b>Formats</b>	Several formats are available.
<b>Mark Entry</b>	Selects the Mark Entry form
<b>AutoMark</b>	Runs the Automark process. See page 20
<b>Modify</b>	Use Indert Index with Modify to change the layout of the selected index.
<b>OK</b>	Inserts or updates the index.
<b>Cancel</b>	Cancels the operation.

Table 5 shows how Microsoft Word generates an index and how IndexExploit generates an index picklist.

A Word index is created when a new INDEX field is inserted or when an existing field is updated. It may be updated when print is selected, depending on Word Options settings.

When **Index** is selected from the IndexExploit menu, XE fields in the main text, footnotes, endnotes and text boxes are read and parsed. The picklist is updated and entries are passed to the Mark Entry form to support autocomplete and a dropdown list.

**Table 16 Microsoft Word Index Generation Process and IndexExploit Behaviour**

Topic	Word process	Features of the Word index	IndexExploit behaviour
Headings	XE fields are read in the order they are encountered in the document. The first occurrence of a heading determines the font and styles.	If an index entry uses the same wording as another earlier entry the style and font is as the earlier entry.	XE fields are read and parsed for main text, footnotes, endnotes and text boxes.
Heading sort	Headings are arranged by forced sort if present, otherwise using a simple word by word sort.	If forced sort is applied inconsistently, duplicated entries will appear.	As for Word. Page number order is available as an option.
Subheadings and lower	Are treated the same as headings but at the lower level, down to seven levels (six subheadings levels), any remainder is included in the seventh level.	See above	As for Word.
Insertion point entries	The location of the XE field determines the page number in the index. When several identical XE fields appear on the same page, repeating page numbers in the index are suppressed.	Multiple occurrences on a single page are not apparent.	All entries are included in the Picklist.
Range entries	The page numbers for the span are worked out from the beginning and end page numbers of the range. The location of the XE field determines where the page number span appears in a locator string.	If XE fields are far from the referenced range, locator order may be incorrect within an entry.	Page numbers are an option in the picklist and can slow its creation considerably. The page numbers for the span are worked out from the beginning and end page numbers of the range.
\f Multiple indexes	\f values in the XE fields and INDEX field must match.	An index or entries may be missed if a \f setting in an XE fields is not matched by an INDEX field with a corresponding setting.	Not used. All entries are included in the picklist.
\p Selected indexes	Limits the index to the specified letters		Not used. An Index option causes the picklist to include a selected character range
\s Sequence number	Prefixes the page number with the selected sequence. Heading 1 is recommended, formatted as Chapter.	Take care selecting a sequence. Heading 1 is recommended for chapters to give a coherent contents list.	Prefixes the page number with the selected sequence. Restricted to Heading levels.

## SOME OF THE TERMS USED AND IMPORTANT DATA STRUCTURES

**Table 17 Important Data Structures or Terms**

Data Structure or Item	Meaning
AutoMark file, Word feature	An AutoMark file contains one or more two-column tables or tab delimited lists. The first column contains trigger words or clauses that will trigger an index entry. The second column defines index entries. A third column, ignored by AutoMark can be used for notes.  Must be a .doc file.
Bookmark, Word feature	A bookmark marks a range or location in a Word document. Bookmarks can be inserted using the Word Bookmark or the IndexExploit Bookmark form. They can be found using the Word Bookmark or Find form or by using IndexExploit. Certain characters are forbidden in bookmarks, these include space, hyphen, colon, semicolon.
Bookmark Prefix, IndexExploit feature	IndexExploit allows the user to specify bookmark prefixes to prevent confusion with bookmarks created by other users, or used for other purposes. If it is known that the document is to be merged with another then a unique prefix can be chosen.  IndexExploit reserves prefix <code>ixe</code> for bookmarks used during processing. These can be found by the user to locate highlighted text or entries marked during error checking.
Compatibility	The compatibility of embedded index data when transferred to other applications. For instance, Word and InDesign work differently but by taking care how embedded entries are positioned, and including special data in XE fields the interface can be improved. IndexExploit can supply data but it requires the other application to process it correctly.
Concordance	A concordance is a list of words in a text. When used as an AutoMark file the result is usually unsatisfactory but may be useful for very specific documents such as software manuals, certain user guides and religious works.
Field, Word feature	Word uses fields for many purposes. They include contents lists, captions, index entries and indexes. Automation features are often associated with fields causing them to be updated automatically.  A macro can cause fields to be updated The print operation can cause fields to be updated. An embedded index entry is an XE field.
Insertion point, Word feature	Cursor position. A zero length range.
Interface Control Document (ICD)	A document used to define the interface between two or more systems.
ixe File (5)	Spreadsheet compatible ixex files are used to store picklist data.. Column headings are listed below. For more information open a real ixex file. ixea files contain data in alphabetical order. ixep files contain data in page order, main text followed by footnotes, endnotes and text boxes. ;XE Field L1 L1Sort L2 L2Sort L3 L3Sort L4 L4Sort L5 L5Sort L6 L6Sort L7 L7Sort Bookmark Unassigned Bold Italic EntryType Text Picklist lField ID lPageStart sPgeEnd sPgeStart sPgeEnd FNNum EndNNum ShapeName ShapeType TableLabel lChap sChap ChSep Note#
Maintainability	A Word document may go through many revisions, including updates to the embedded index. Recognising that parts of the document may be moved, added and deleted requires embedded index entries to be placed close to referenced ranges to maximise maintainability.
Range, Word feature	A section of content within a document defined by a starting point and an end point, given a range name.
Stop word file	A stop word file is used by the <b>;Sort</b> command to sort Word embedded entries when using the IndexExploit Bookmark form or Mark entry form when indexing. It is also used by the <b>Adjust</b> command to re-sort embedded indexes.

## INDEXEXPLOIT FOR PDFS

Page numbers in a Word document are used by IndexExploit to link to pages in the corresponding PDF or suite of PDFs, on a computer or network, or on the Internet or an intranet. The Word document can be an index, a contents list or a set of notes referencing many PDF documents. Alternatively a single number in the Word file can be used and updated for the next search. When using Adobe Acrobat Pro it can take less than a second to find the right page. It takes longer on the Internet, and depends on the size of the PDF file and performance of the server.

From **Configuration** select **PDF**.

The PDF Goto functionality supports two modes.

Goto a wanted page in the active PDF on your computer

Goto a wanted page in a collection of PDFs or a PDF with multiple sections on your computer, a network, the Internet or an intranet..

Add hyperlinks converts page numbers to hyperlinks based on the content of the document map.

The Goto capability works by translating the wanted page number to the PDF internal page number, then using Adobe inter-application communication (IAC) or a hyperlink to go to that page.

When a single PDF is being searched, open the document in Acrobat before starting IndexExploit. In the field labelled **Start** enter the PDF internal page number corresponding to the visible page 1 in the PDF file.

For multi-page documents construct a document map before starting IndexExploit. See Table 19.

Add hyperlinks turns page numbers into hyperlinks using the document map. Locator strings must be labelled {tab}\$L\_ for the parser to work. Labelling can be done manually, by indexing software, or using IndexConvert.

### MENU SELECTIONS - PDF GOTO CONFIGURATION

Figure 38 shows the initial configuration of the PDF Goto form. It is configured for going to a selected page in the currently open PDF. Figure 39 shows the configuration when Document map has run successfully.

**Version** shows the current software version. When selected it opens the IndexExploit downloads website. Check the website occasionally for updates.

**PDF Goto** is the selected user interface.

This confirms that you are using the PDF Goto functionality.

**Configuration** See page 13

**Options** See page 64

**Document Map** See page 64

**Start/ID** See page 64

**Selected PDF** See page 64

**Close** Closes IndexExploit

**Add hyperlinks** See page 64

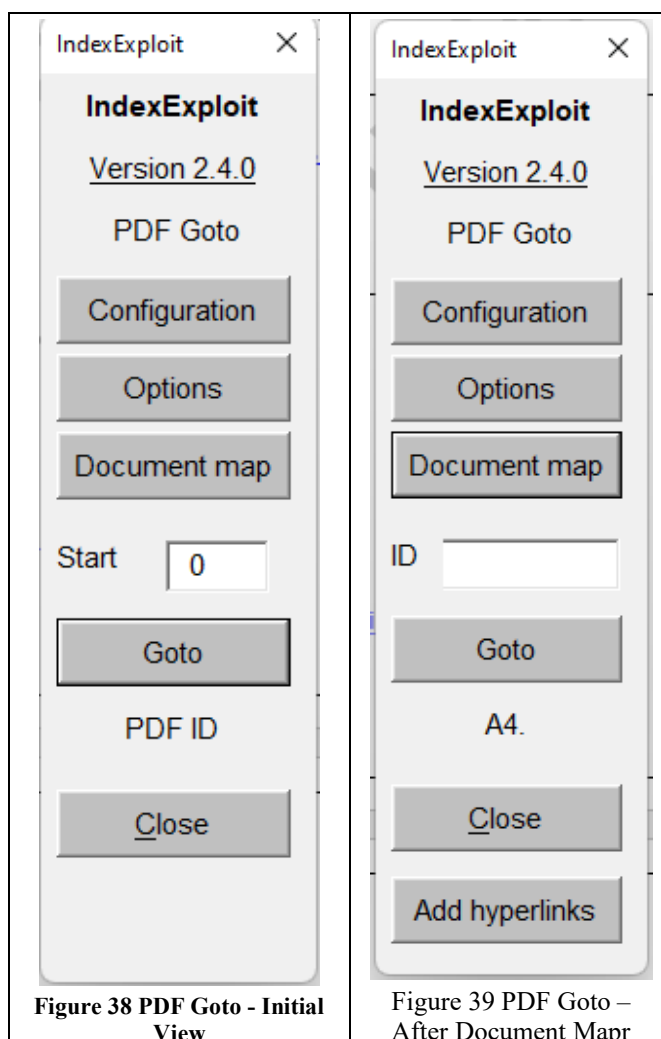


Figure 38 PDF Goto - Initial View

Figure 39 PDF Goto – After Document Mapr

## PDF Options

This command selects the **PDF Options** form. There are no options for PDF Goto.

### *PDF Goto Options*

**Goto hyperlinks** causes IndexExploit to attempt to open the target hyperlink when **Goto** is selected. This selection alone is useful when testing the document map.

**Update hyperlinks** causes IndexExploit to update the hyperlink associated with the selected page. This selection alone is useful when manually updating hyperlinks.

### **Document Map**

This reads the document map.

### *Adobe Acrobat Pro*

If the path and filename information is correct the **Found** column will be labelled with Y and will turn green. If details are wrong the **Found** column will be labelled N\*, coloured red and a warning message displayed.

### *Hyperlinks*

The Found column will contain http if an internet path is detected in the document map. There is no check on the presence of the web address. The **Add hyperlinks** command will be displayed.

### *Mixed*

A document map can include PDFs on the Internet or an Intranet and documents on a network. Adobe Acrobat Pro is required for network operation, hyperlinks will not be added.

### **Start / ID**

When using a single active PDF a start page is used to define the PDF start page of the section required. This is used to adjust for frontmatter and section page starts. This available when Acrobat Pro is installed.

When a document map is used the field becomes **ID**. Enter the PDF ID or chapter number defined in the document map. Alternatively select PDF ID or chapter in the document and double click on the text box for the text to be transferred.

### **Goto**

Place the cursor on or next to a page number in the index or document and select Goto.

IndexExploit reads Start/ID and the number, works out which PDF to use and goes to the selected page. If an internet path is selected the page number is updated to become a hyperlink.

### **PDF ID**

This shows the selected PDF.

### **Close**

This stops IndexExploit and closes any PDF files opened by IndexExploit.

### **Add Hyperlinks**

When Document map is selected, **Add hyperlinks** becomes available when locator strings labelled {tab}\$L\_ have been found. The labels can be added using indexing software, IndexConvert, or by manual markup.

IndexExploit looks for locator strings beginning \$L\_. It looks for a match in the document map for ID or chapter, and then a page number. When a page number is found it calls the same process used by **Goto** to add a deep hyperlink to the page. It doesn't attempt to go to the hyperlinked location as this would take too long. If entries in the Document map don't include an ID or chapter then the page number alone is used.

Chapter and page separators must be defined in the **PDF Options>Insert hyperlinks** form.

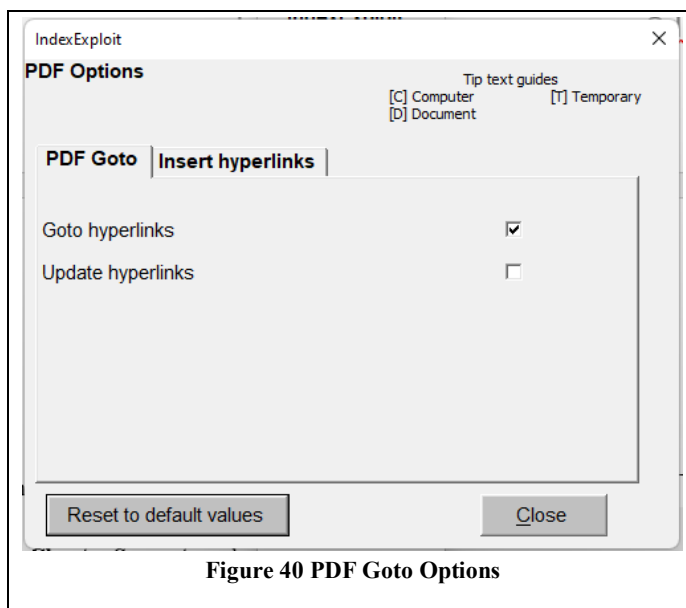


Figure 40 PDF Goto Options



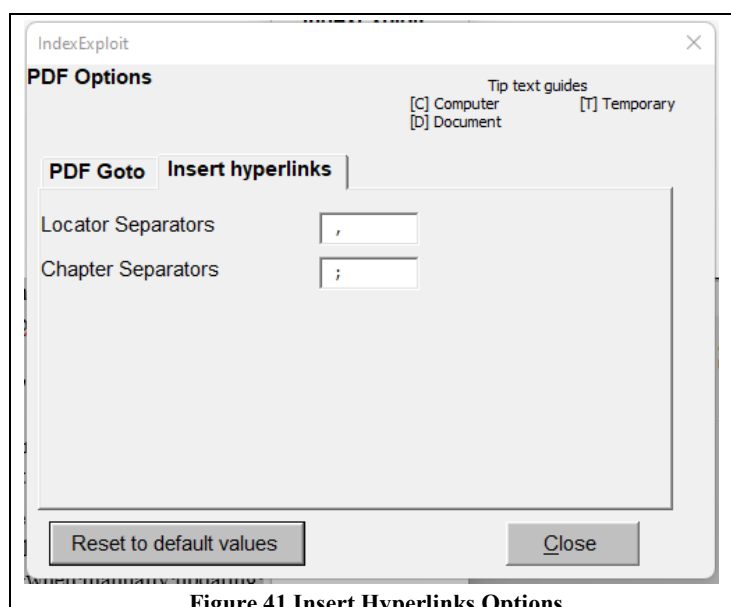
If the document map is altered and a new hyperlink path is added then **Add hyperlinks** will replace all the hyperlinks. Several conditions need to be satisfied for deep hyperlinks to work correctly.

- a. The PDFs must open when targeted by the hyperlink.
- b. The browser process must support deep hyperlinks to page.

### ***Insert Hyperlinks Options***

The parser sometimes needs help discriminating locators and chapters. This is assisted by two options. Use **Locator Separators** to define possible locator separators. Don't include spaces.

Use **Chapter Separators** to define possible chapter separators. Don't include spaces.



**Figure 41 Insert Hyperlinks Options**

### **USING THE ACTIVE PDF**

Your working Word document will contain a copy of the index which may have been copied from the active PDF or may have come from another source, for instance an indexing program.

Open the PDF corresponding to the index using Acrobat.

If page 1 doesn't correspond with the first page of the PDF then insert a compensating value in Start.

Place the cursor on a page number in the index, select Goto and IndexExploit will go to that page.

The Active PDF mode doesn't require a document map.

If your index includes front matter with Roman numerals followed by main text with Arabic page numbers then use a document map. One entry will define the Roman numeral page range and the other will define the Arabic numeral page range. Define an ID to identify each entry, for instance R for Roman and no ID for Arabic. Arabic numbering can be used throughout to overcome the absence of 0 and negative Roman numerals.

### **COLLECTION OF PDFs ON A COMPUTER OR NETWORK (ADOBE ACROBAT PRO)**

Create a table like Table 19 containing the file locations of the collection of PDFs. Then select **Document map**. When Adobe is used, IndexExploit checks for the presence of each file and confirms when it is found by writing Y into the Found column.

When **Goto** is selected the number under the cursor and the ID is read. The content of the PDF Files table is scanned to find the document containing a matching ID and page number. If not already open the document is opened and IndexExploit finds the selected page. The File ID displays the reference number of the file which is also displayed in the PDF name tab.

## Accidental File Closure

Avoid closing any PDF files when using IndexExploit. Communication is set up between Word and Acrobat, closing a PDF file can disrupt the communication resulting in an error message.

Close the index file and restart IndexExploit.

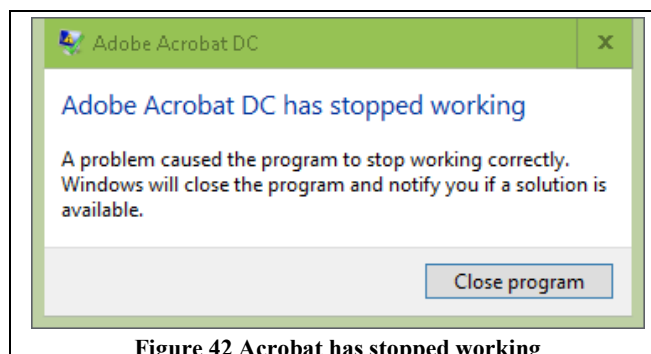


Figure 42 Acrobat has stopped working

## USING A DOCUMENT MAPS

There are two or more numbering schemes in a PDF. The **PDF page** is the number used by the PDF software. The first **PDF page** is always 1. The **Printed page** will normally be different. The document map identifies the documents and addresses the page number offsets. It must be the first table in the document.

Column headings are indicative and can be adjusted to fit the project. Columns can be added to the right for notes.

Path  
Filename  
ID  
Start page  
End page  
First page (PDF)  
Found

### *Path*

In the second row insert the path to the file containing the first document. If the second file uses the same path then the third (and subsequent rows) can be left empty.

The path must not be enclosed in “...” and must contain a terminating \ or /.

Local paths and hyperlink paths can be included in the same document map.

### **Filename**

Insert the filename of the first document in the second row of the table.

### *ID*

If the document has multiple volumes or chapters then use these if convenient or choose a convenient alternative to insert in the ID column. No value is needed if page numbers run sequentially between documents.

For **Add hyperlinks** to work the IDs must match those in the document, including any terminators. If locators are like A.123 then use ID A. in the document map.

### *Start Page*

Insert the start page number as shown on the ‘printed’ page for the first file in the second row. Roman numerals i to l (1 to 50) may be used.

### *End Page*

Insert the end page as shown on the ‘printed’ page in the second row. Roman numerals i to l (1 to 50) may be used.

### *First Page (PDF)*

This is the page number shown at the top of the Acrobat display. It may not be the ‘printed’ page number.

### *Found*

This is used by IndexExploit, leave empty. As the path and filename on a computer or network are read the existence of the file is checked. When a file is found a Y with a green background is inserted. If it is not found then N\* with a red

background is inserted and a message is displayed saying the file cannot be found. For http: addresses this checking is not performed.

### ***Second and subsequent document***

Complete the rows for subsequent documents.

If a path name is absent a value is inherited from above. If an entire suite of documents is moved only one path change is required in the table. If the document contains several sections then a row is recommended for each section, each using the same filename..

### ***Testing***

To test the document map, select the First page in each row and if necessary insert an ID. Select Goto and the right page should be found. If not then review and adjust the document map. Repeat for the Last page and for the remaining rows.

### ***Content Protection***

If it is important to protect the index from accidental change then consider setting the file read only or setting a password. If the file is password protected, file checking and reporting will take place but the Found column is not updated.

### **Example Document Maps**

The document maps below are examples.

Table 18 shows a simple example where the printed page number and PDF are the same. This is recommended as a starting point for building a more complex document map.

**Table 18 A Simple PDF Document Map**

PDF Path	File Name	ID (Section)	First Page	Last page	First Page PDF	Found
C:\Users\Owner\Documents\PDFs\	Example.pdf		1	500	1	Y

Insert here an index, contents list, notes, or even a single number.

Table 19 is based on a real set of proofs with front matter and several chapters as separate PDFs.

**Table 19 PDF Document Map - Each Chapter is a Single PDFs**

PDF Path	File Name	ID (Section)	First Page	Last page	First Page PDF	Found
C:\Users\Owner\Documents\Indexes\ Publisher\Title\Originals\	Chapter 1.pdf		i	xxx	1	Y
	Chapter 2.pdf	1	1	29	31	Y
	Chapter 3.pdf	2	30	55	31	Y
	Chapter 4.pdf	3	56	84	31	Y

Insert here an index, contents list, notes, or even a single number.

Table 20 is a document with multiple chapters and appendices in a single PDF.

**Table 20 PDF Document Map - Multiple Sections in One PDF**

IDs are terminated with a fullstop to support **Add hyperlinks**.

PDF Path	File Name	ID (Section)	First Page	Last page	First Page PDF	Found
https://www.justice.gov/storage/	report.pdf	I.	1	199	9	http
	report.pdf	II.	1	182	213	http
	report.pdf	A.	1	1	397	http
	report.pdf	B.	1	14	401	http

	report.pdf	C.	1	23	417	http
	report.pdf	D.	1	6	443	http

Insert here an index, contents list, notes, or even a single number.

## MENU OPTIONS – UTILITIES CONFIGURATION

The Utilities menu is shown in Figure 43. Options are shown in Figure 44. A default limit of 100 entries appears when first used. This allows for familiarisation of a process that can take a long time on a large index.

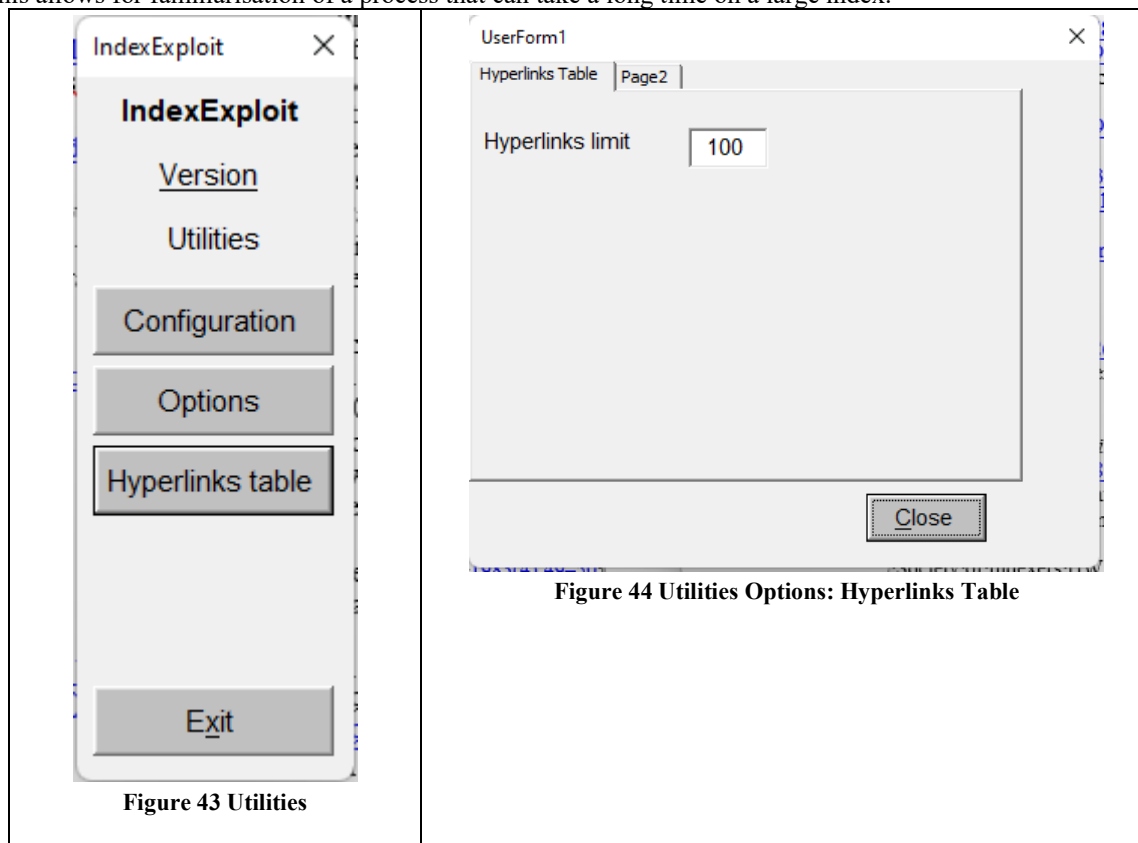


Figure 44 Utilities Options: Hyperlinks Table

### CONFIGURATION

See page 13

### HYPERLINKS TABLE

Every hyperlink is read.

Display, Address, an Subaddress are checked against the IndexExploit database. If no match is found, then a new record is added.

The process is fast for the first few records but as the database becomes larger the comparison process takes longer. A progress indicator is displayed. The progress indicator halts every 2 minutes to allow recovery when another process appears to halt hyperlinks processing. You can cancel the interrupts to allow the process to complete.

#### Example

The example below is from the Australia and New Zealand Society of Indexers cumulative newsletters index. The original files were not available. The index had been recovered from a PDF and imported into Sky Index indexing software. Hyperlinks could not be imported so a locator/hyperlink map was needed. The table generated can be sorted and manipulated as needed.

#### *Index Extract*

This is an extract from the cumulative index.

Table 21 is the corresponding Hyperlinks Table. Records ID 7 and 8 appear the same but record 8 has a leading space in the Display text,

A to Z order. see [filing order](#)

ABIX (Australian Business Index), [1986\(3\):32](#)

Aboriginal issues, [1991\(10&11\):6](#)

Aboriginal language indexing, [1991\(10&11\):6](#)

'Abstracting and Indexing Services - Conser Project' (Davel), [1984\(2\):24](#)

academic indexing. *see* [scholarly book indexing](#)

access to information, [1987\(4\):41–3](#)

'Accounting aspects of freelance work: notes on a talk by Margaret Jackson, B.Ec. (Hons.), M.B.A., A.C.A. at General Meeting 17 November 1983', [1984\(1\):3–4](#)

accounting records, [1984\(1\):3–4](#), [1985\(4\):56](#)

*see also* [income tax](#)

accreditation. *see* [registration](#)

accuracy in indexing, [1974\(9\):S3](#)

**Table 21 Hyperlinks Table**

ID	Added	Display	Address	Subaddress
1	1	filing order		bookmark51
2	2	1986(3):32	<a href="https://www.anzsi.org/publications/aussi-news/1986/aussi-news-1986-3.pdf">https://www.anzsi.org/publications/aussi-news/1986/aussi-news-1986-3.pdf</a>	page%3D6
3	3	1991(10&11):6	<a href="https://www.anzsi.org/publications/aussi-news/1991/aussi-news-1991-10.pdf">https://www.anzsi.org/publications/aussi-news/1991/aussi-news-1991-10.pdf</a>	page%3D6
5	4	1984(2):24	<a href="https://www.anzsi.org/publications/aussi-news/1984/aussi-news-1984-2.pdf">https://www.anzsi.org/publications/aussi-news/1984/aussi-news-1984-2.pdf</a>	page%3D11
6	5	scholarly book indexing		_bookmark115
7	6	1987(4):41–3	<a href="https://www.anzsi.org/publications/aussi-news/1987/aussi-news-1987-4.pdf">https://www.anzsi.org/publications/aussi-news/1987/aussi-news-1987-4.pdf</a>	page%3D7
8	7	1984(1):3–4	<a href="https://www.anzsi.org/publications/aussi-news/1984/aussi-news-1984-1.pdf">https://www.anzsi.org/publications/aussi-news/1984/aussi-news-1984-1.pdf</a>	page%3D4
9	8	1984(1):3–4	<a href="https://www.anzsi.org/publications/aussi-news/1984/aussi-news-1984-1.pdf">https://www.anzsi.org/publications/aussi-news/1984/aussi-news-1984-1.pdf</a>	page%3D4
10	9	1985(4):56	<a href="https://www.anzsi.org/publications/aussi-news/1985/aussi-news-1985-4.pdf">https://www.anzsi.org/publications/aussi-news/1985/aussi-news-1985-4.pdf</a>	page%3D10
11	10	income tax		bookmark58
12	11	registration		bookmark111
13	12	1974(9):S3	<a href="https://www.anzsi.org/publications/socia-news/1974/socia-news-1974-9.pdf">https://www.anzsi.org/publications/socia-news/1974/socia-news-1974-9.pdf</a>	page%3D4

## ALTERNATIVE INSTALLATION

Installation instructions relate to Microsoft Office Word 2007 or 2010 running on Windows 10. Other installations may differ

The macro is contained in a file named IndexExploit x.x.x.docm where x.x.x is the release. This can be installed as a Word add-In. The following paragraphs explain how to configure security settings to let IndexExploit run and then activate it.

For users who prefer not to have to activate IndexExploit for each Word session there is a description of how to configure an AutoExec macro to activate IndexExploit when Word starts.

## TRUST SETTINGS

The Trust settings can be adjusted to allow files in the chosen directory and subdirectory to be trusted. Use Word Options>Trust Center>Trust Center Settings.

Select the View ribbon and Macros. A form appears. Select IndexExploit and Run. The security warning will no longer appear.

## ACTIVATE

IndexExploit is active for a word session following activation. You will be able to avoid this step if you have an AutoExec macro configured to activate IndexExploit.

To activate IndexExploit select the Office Button>Word Options>Add-Ins>Word Add-Ins>Go. Select Add as shown in the form below if IndexExploit is not present and add the file. If IndexExploit is already present then check it to activate it.

If you do this with macro recording on the macro created will include an AddIns command that can be used in an AutoExec macro.

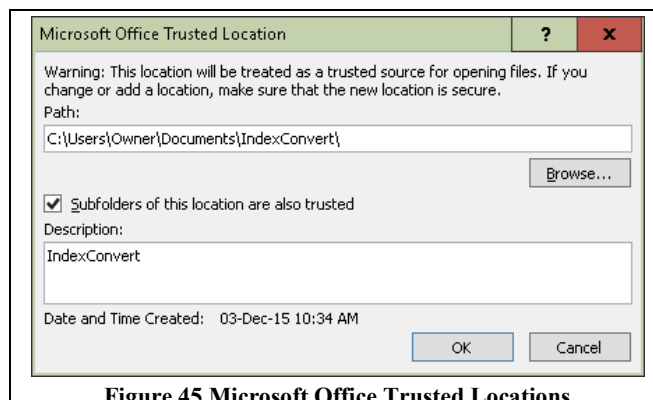


Figure 45 Microsoft Office Trusted Locations

## AUTOEXEC WORD MACRO

AutoExec is a Word macro that runs on commencement of Word. It is installed in 'All active templates and documents'.

AutoExec can perform chosen commands when Word starts which can include activating IndexExploit.

If an AutoExec file exists then include AddIns commands to activate selected add-ins when Word starts. If AutoExec does not exist it can be created using the Word Macros form.

The AddIns command syntax is

```
AddIns("Path").Installed = True
```

An example of Path is

```
C:\Users\Owner\Documents\IndexExploit\IndexExploit.docm
```

If you change the file name to remove the version number and remember to do this whenever a new version is released then the AutoExec file will not need to be changed. An example AutoExec is shown below.

```
Sub AutoExec()
```

```
AddIns("C:\Users\Owner\Documents\IndexExploit\IndexExploit.docm").Installed = True
```

```
AddIns("C:\Users\Owner\Documents\IndexExploit\Elided_123_4.docm").Installed = True
```

```
End Sub
```

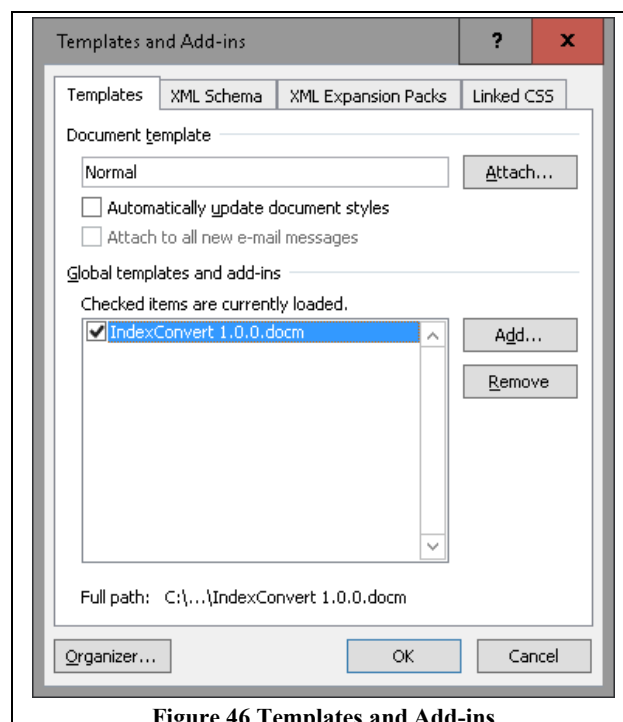


Figure 46 Templates and Add-ins

## WORD AND VBA COMPATIBILITY WITH KNOWN PLATFORMS

NOTE: Compatibility of the Acrobat PDF capability has only been tested on PCs with Windows. The remainder of the section relates to Word compatibility.

IndexExploit is compatible with desktop versions of Microsoft Word for PC and Mac. It is not compatible with Word clones such as Libre Office and other word processors.

It is compatible with Macs running Word for Windows under Parallels for IndexExploit version 1.0.2 and later.

The add-in is written using Word VBA. Microsoft withdrew support for Visual Basic (VBA) with Office 2008 but subsequently included it with later versions of Word.

Compatibility has been tested where possible and results are shown in Table 22. See also the [Microsoft Word features website](#).

A version of this document was used for testing. It was saved using a variety of formats and tested using an installed version of IndexExploit. Not all combinations have been tested.

**Table 22 Word and VBA Compatible File Formats that have been tested with IndexExploit**

Word File Format	Compatible with IndexExploit	Notes
docx	Yes	Windows 10 Pro, Word 2007 Pro (Development platform) Windows 10 Home, Word 2010 Home and Student, Windows 10 Pro, Word 365 (2022) Windows 10 Home, Word 365 (2022-24)
docm	Yes	Windows 10 Pro, Word 2007 Pro Windows XP, Word 2007 Pro Windows 10 Home, Word 2010 Home and Student Windows 10 Pro, Word 365 (2022) Windows 10 Home, Word 365 (2022-24)
rtf	Yes	Windows 10 Pro, Word 2007 Pro Windows XP, Word 2007 Pro Windows 10 Home, Word 2010 Home and Student
doc	Yes	Windows 10 Pro, Word 2007 Pro Windows XP, Word 2007 Pro Windows 10 Home, Word 2010 Home and Student
XML 2003	Yes	Windows 10 Home, Word 2010 Home and Student
XML 2010	Yes	Windows 10 Home, Word 2010 Home and Student
odt	Yes	Windows 10 Pro, Word 2007 Pro Windows 10 Home, Word 2010 Home and Student Diagrams were truncated.



## PERFORMANCE

IndexExploit is a complex VBA macro. To get best performance you can alter your computer setting. Figure 47 shows recommended settings for Windows.

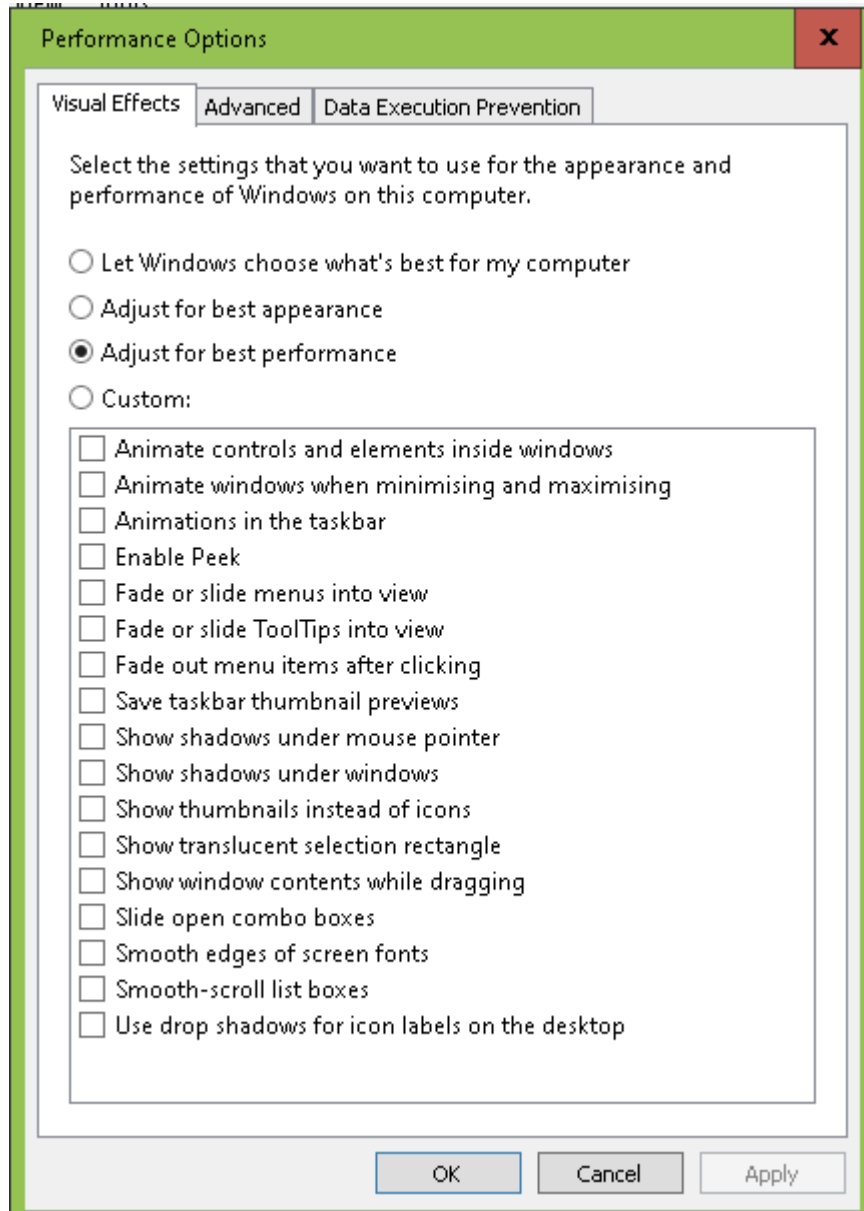


Figure 47 Windows - Adjust Performance

## KNOWN ERRORS

210411 When selecting Index, if Page order or Alpha order is selected, Index is cancelled and the order selection changed an error occurs.

From the Index Picklist. If an entry is in a text box, following entries may not be found. Select an entry with a referenced range then try again.

On a Windows PC, "Run-time error 52: Bad file name or number" error message has been reported when **Index** is selected. The error stopped when the PC was re-started.

The complete set of compatibility codes cannot be written if any XE fields are in text boxes. Other exceptions may occur..

## BIBLIOGRAPHY

The references here provide useful information about embedded indexing in Word which can be used when interpreting how best to use IndexExploit.

Johncocks [2] provides useful information about the technicalities of embedded indexing in Word.

Lyon [3] describes IndexLinker which creates a hyperlinked index in Word where the embedded index fields reference ranges.

McGhie is a Microsoft technical author, now retired, who wrote an article about embedded indexing in Word. He expects to be able to index 500 pages in a week.

Seth Maislin [4] has written a very useful article about indexing in Microsoft Word.

Cambridge University Press provides information for authors [5] including guidance on Word embedded indexing. There is also a video [6]

- [1] M. McMaster, "Stop Words in the Filing of Subheadings," *The Indexer*, vol. 34, no. 2, pp. 68-70, 2016.
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## **SOFTWARE SECURITY**

The IndexExploit macro is protected by a password to prevent accidental or deliberate alteration to the code.

Personal data is not collected. Name and email information in the Configuration screen may be used when creating error and diagnostic reports to support users. No information is sent automatically to servers by IndexExploit.

Copies of user documentation has been found on the Internet interspersed with advertising. The information has been placed by a third, unknown party, is out of date and should not be used.

Follow advice for keeping your system and personal data safe and secure.

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