

inbr(1)

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1 Introduction

1.1 NAME

`inbr` — `i(1)` numbering update utility

1.2 SYNOPSIS

```
inbr [ -h ] [ -? ] [ -- ] [ inputFile ]
```

1.3 DESCRIPTION

The `inbr(1)` utility reads the `inputFile` (or standard input if none is given) and produces on standard output a version of its input in which all numbered entities are brought up to date. The input is treated in accordance with what is specified for `i(1)`. The output also follows the rules of the `i(1)` specification. It is vital to correct numbering that not only a part but the entire textual content is fed into the `inbr(1)` utility. Chapter 3 explains what is meant by a numbered entity. All unnumbered entities are transferred to the output without modification.

Inconsistencies in the numbered entities are treated as errors. The `inbr(1)` utility thus exits before producing any output if it detects:

- numbered entities in number anchor mode that are not unique.
- numbered entities in latex, man or default mode that cannot be resolved.

1.4 OPTIONS

- `-h` Give a bit of help about the command line arguments and options.
- `-?` See option `-h`.
- `--` Indicate end of options.

1.5 EXIT STATUS

The `inbr(1)` utility exits with value 0 if the processing was successful. The occurrence of an error is indicated by an exit value 1 and an error message on standard error.

1.6 KNOWN BUGS

There are no known bugs.

1.7 OPEN ISSUES

There are no open issues.

1.8 AVAILABILITY

This document is part of the `i` project which is available on-line at the following site: <http://i2i.sourceforge.net>.

1.9 AUTHOR

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1.10 SEE ALSO

[i\(1\)](#), [i2i\(1\)](#), [i2latex\(1\)](#), [i2man\(1\)](#), [i2html\(1\)](#), [html2i\(1\)](#)

2 Items

Items are only relevant to the [inbr\(1\)](#) utility in so far as they affect the byte mode (see chapter 3).

3 Modes

3.1 Latex mode

Latex items may contain references (links) to number anchors that need to be updated by the [inbr\(1\)](#) utility. Such numbered entities appear as the `key` argument in the `\iref`, `\ibibliolink`, `\ihyperref` or `\ihyperrefput` command. References to numbered entities in the neutral form are, of course, not allowed. The example in chapter 3.3.1 contains numbered entities in latex mode and the example in chapter 3.3.2 shows the corresponding [inbr\(1\)](#) output.

3.1.1 *LaTeX* syntax

```
\iref{key}
\ibibliolink{key}
\ihyperref{key}{text}
\ihyperrefput{x}{y}{key}{text}
```

3.2 Man mode

Man items may contain references (links) to number anchors that need to be updated by the [inbr\(1\)](#) utility. Such numbered entities are indicated by the `\fI\fP` preamble. References to numbered entities in the neutral form are, of course, not allowed. The example in chapter 3.3.1 contains numbered entities in man mode and the example in chapter 3.3.2 shows the corresponding [inbr\(1\)](#) output.

3.3 Number anchor mode

All bytes of `I_TOK_H1`, `I_TOK_H2`, `I_TOK_H3`, `I_TOK_H4`, `I_TOK_HBIB`, `I_TOK_NEQU`, `I_TOK_HFIG` and `I_TOK_HTAB` tokens are in this mode. The content of each of these tokens forms a destination (anchor) of the document-wide numbering scheme. All these numbered entities need to be updated by the [inbr\(1\)](#) utility. Numbered entities may appear as follows:

- in the final form where the complete numbering is present.
- in the neutral form where the digits are missing (see table 1).

- in the decrement form where the numbering is in the final form but marked to be lowered to the next level (the I_BYTE_NBR_DECR character is only allowed for I_TOK_H2, I_TOK_H3 and I_TOK_H4 tokens).
- in the increment form where the numbering is in the final form but marked to be raised to the next level (the I_BYTE_NBR_INCR character is only allowed for I_TOK_H1, I_TOK_H2 and I_TOK_H3 tokens).

The example in chapter 3.3.1 contains numbered entities in number anchor mode and the example in chapter 3.3.2 shows the corresponding `inbr(1)` output.

Table 1: Number anchor entities

Item	Token	Neutral form
I_ITEM_H1	I_TOK_H1	#
I_ITEM_H2	I_TOK_H2	#.
I_ITEM_H3	I_TOK_H3	#..
I_ITEM_H4	I_TOK_H4	#...
I_ITEM_HFIG	I_TOK_HFIG	#F
I_ITEM_HTAB	I_TOK_HTAB	#T
I_ITEM_HBIB	I_TOK_HBIB	#B
I_ITEM_HEQU	I_TOK_HEQU	#E

3.3.1 `inbr(1)` input example

```
# Neutral heading one
#. Neutral heading two
#.. Neutral heading three
#... Neutral heading four
Heading five
#1 Final heading one
#1.1 Final heading two 'X'
#1.1.1 Final heading three
#1.1.1.1 Final heading four
#2> Heading one to be raised to a heading two
#2.1> Heading two to be raised to a heading three
#2.1.1> Heading three to be raised to a heading four
#3.1< Heading two to be lowered to a heading one
#3.1.1< Heading three to be lowered to a heading two
#3.1.1.1< Heading four to be lowered to a heading three
#T Neutral table caption
#F Neutral figure caption
#T1 Table caption
#F1 Figure caption
#B Neutral bibliography
#B1 Neutral bibliography
#E Neutral equation
#E1 Final equation
```

```
Refer to #1, #2, #3.1.1, #3.1.1.1, #T1, #F1, #B1 or #E1
#M \fI\fp1, \fI\fp2, \fI\fp3.1.1, \fI\fp3.1.1.1,
#M \fI\fpT1, \fI\fpF1, \fI\fp[1] or \fI\fpE1
#L \iref{1} \iref{2} \iref{3.1.1} \iref{3.1.1.1} \iref{T1}
#L \iref{F1} \ibibliolink{1} \iref{E1} \italic{ \ihyperref{1.1}{X}}
#L \begin{ipicture}{1}{1}
#L \ihyperrefput{0}{0}{1.1}{X}
#L \end{ipicture}
```

3.3.2 `inbr(1)` output example

```
#1 Neutral heading one
#1.1 Neutral heading two
#1.1.1 Neutral heading three
#1.1.1.1 Neutral heading four
Heading five
#2 Final heading one
#2.1 Final heading two 'X'
#2.1.1 Final heading three
#2.1.1.1 Final heading four
#2.2 Heading one to be raised to a heading two
#2.2.1 Heading two to be raised to a heading three
#2.2.1.1 Heading three to be raised to a heading four
#3 Heading two to be lowered to a heading one
#3.1 Heading three to be lowered to a heading two
#3.1.1 Heading four to be lowered to a heading three
#T1 Neutral table caption
#F1 Neutral figure caption
#T2 Table caption
#F2 Figure caption
#B1 Neutral bibliography
#B2 Neutral bibliography
#E1 Neutral equation
#E2 Final equation
```

```
Refer to #2, #2.2, #3.1, #3.1.1, #T2, #F2, #B2 or #E2
#M \fI\fp2, \fI\fp2.2, \fI\fp3.1, \fI\fp3.1.1,
#M \fI\fpT2, \fI\fpF2, \fI\fp[2] or \fI\fpE2
#L \iref{2} \iref{2.2} \iref{3.1} \iref{3.1.1} \iref{T2}
#L \iref{F2} \ibibliolink{2} \iref{E2} \italic{ \ihyperref{2.1}{X}}
#L \begin{picture}{1}{1}
#L \ihyperrefput{0}{0}{2.1}{X}
#L \end{picture}
```

3.4 Fix-width font anchor mode

Bytes in fix-width font anchor mode cannot contain numbered entities.

3.5 Italic font anchor mode

Bytes in italic font anchor mode cannot contain numbered entities.

3.6 Fix-width font mode

Bytes in fix-width font mode cannot contain numbered entities.

3.7 Italic font mode

Bytes in italic font mode cannot contain numbered entities.

3.8 Default mode

Textual content in default mode may contain references (links) to numbered entities. Such numbered entities are updated by the `inbr(1)` utility. References to numbered entities in the neutral form are, of course, not allowed. The example in chapter 3.3.1

contains numbered entities in default mode and the example in chapter [3.3.2](#) shows the corresponding `inbr(1)` output.