The **ONEDOWN** package

[www.ctan.org/pkg/onedown](http://www.ctan.org/pkg/onedown)

Jacob Wiersma

[jack46@schuli-wirsi.de](mailto:jack46@schuli-wirsi.de)

v1.6 from 2021/04/27

---

**Dealer:** S ♠ A 32  
**Vul:** N–S ♥ QJ10  
♥ KQJ109  
♠ QJ  
♣ 8765  
♥ AK  
♦ 732  
♣ 10987  
♠ KQJ10  
♥ 9876  
♦ A8  
♠ AK2

South       West       North       East  
1NT\(^a\)   p        4NT\(^b\)   p  
6NT   X  All pass  

\(^a\) 15–17  
\(^b\) quantitative

<table>
<thead>
<tr>
<th>№</th>
<th>Lead</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>N</th>
<th>S</th>
<th>E</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W: ♥K</td>
<td>10</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>W: ♥A</td>
<td>J</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
Abstract

This package implements commands and environments to typeset various bridge diagrams, with or without a bidding sequence. It offers following features:

- It is possible to use an own font and/or a font-size with which the diagrams will be typeset independently from the main font used in the document. This also allows an easy production of overhead slides and for digital projection. Different fonts can be used for e.g. the bidding diagram, its header, the compass, the hands etc. Most diagrams can be centered both horizontally and vertically.

- A special feature is the automated check on consistency of suits and hands. If a hand holds more than 13 cards an error is printed, if there are less then 13 cards a warning. If a suit over the 4 hands has more than 13 cards or if a card appears more than once an error like Error: Card ♠ 8 occurs 2 times is printed. These warnings and error messages are controlled by the err and warn options, e.g. when loading the package.

- The output of the implemented bridge terms like Double (which you get by calling the command \double) are multilingual and get translated automatically. When the language german is active the command \double would produce Kontra. Also the basic symbols like Ace, King, Queen and Jack are multilingual. So ♠ AKQJ would automatically become ♠AKDB in a German text.

- It is possible to add annotations to a card diagram, like the board number, the dealer or the vulnerability etc. on several positions in the diagram (if a board number is given, the dealer and vulnerability are computed automatically). One can also add explanations to the bidding diagram, as well as the real world names of the bidders.

- There are two specials: a command to typeset a quiz with answers, and an environment to typeset the sequence of playing tricks, where also the total number of tricks won by each side is calculated and displayed.
Contents

1 Preface 5

2 Introduction 5

3 Usage 7
  3.1 Initialization ................................. 7
    3.1.1 Requirements ........................... 7
    3.1.2 Loading the package ..................... 7
    3.1.3 Options ................................. 8
    3.1.4 Languages & Dictionaries ................. 9

4 User Commands 10
  4.1 Overview .................................... 10
    4.1.1 The Compass ............................ 11
    4.1.2 Hooks .................................. 11
  4.2 Basic Symbols ................................. 12
    4.2.1 Header of the Bidding Table .............. 14
  4.3 The Card Diagrams ............................. 14
    4.3.1 The hands of the players ................. 14
    4.3.2 The single hand .......................... 15
    4.3.3 Only one suit ............................ 16
    4.3.4 Showing Card Diagrams .................... 17
    4.3.5 Showing Card Diagrams with Bidding ...... 18
    4.3.6 Diagram Conditions ....................... 18
    4.3.7 Sizing and Fonts ......................... 19
  4.4 Misc ......................................... 21
    4.4.1 Honor Cards .............................. 22
    4.4.2 Variants of Basic Symbols ................. 22
    4.4.3 Conditions in Diagrams ................. 24
    4.4.4 Annotations in Bidding Diagrams ........ 25
    4.4.5 Specials ................................. 26
    4.4.6 Re-Initialization ......................... 26
  4.5 Environments .................................. 28

5 Final Remarks 30
  5.1 Known Bugs ................................. 30
  5.2 ToDo ......................................... 31
  5.3 Acknowledgements ............................ 31
# 6 Implementation

## 6.1 Preliminaries

- 6.1.1 Packages we depend upon
- 6.1.2 Options
- 6.1.3 Misc
- 6.1.4 Variables
- 6.1.5 Booleans, Saveboxes, Lengths, Counters and Registers
- 6.1.6 Fonts

## 6.2 Bridge Basic Terms

- 6.2.1 Suit Symbols
- 6.2.2 Names of Directions and Axes
- 6.2.3 Non-Bid Calls
- 6.2.4 Bidding Diagrams
- 6.2.5 Diagram Hands
- 6.2.6 A Single Hand
- 6.2.7 Suits
- 6.2.8 Card Diagrams
- 6.2.9 The Compass
- 6.2.10 Diagram Conditions

## 6.3 The Bidding Environments

- 6.3.1 Special ColumnTypes
- 6.3.2 The Hidden Implementation

## 6.4 The User Environments

- 6.4.1 Bidding
- 6.4.2 Play

## 6.5 Card Diagrams with Bidding

## 6.6 The Expert Quiz

## 6.7 Resetting the Game

## 6.8 Error Handling

- 6.8.1 Consistency Checks
- 6.8.2 Controlling Messages

## 6.9 Misc Bridge Terms

- 6.9.1 Honour Cards
- 6.9.2 Vulnerability
- 6.9.3 Diagram Annotations
- 6.9.4 Point Units
- 6.9.5 Forcings

## 6.10 Initialization

## 7 References
1 Preface

I am neither a good bridge player nor a good package writer. But I like to read about bridge and when I write about bridge (sometimes a funny short story, sometimes some training exercises for beginners) I do feel the need for an appropriate tool to support that. Surprisingly enough, there exists no comprehensive package on CTAN for typesetting bridge diagrams. For all those people who feel more or less the same as I do, there is this package called OneDown. As some say: one down is good bridge\(^1\), I hope that OneDown is a good bridge package.

You can generate this documentation by running

\[
\text{pdflatex --shell-escape onedown.dtx}
\]
\[
\text{makeindex -s gind.ist onedown.idx}
\]
\[
\text{makeindex -s gglo.ist -o onedown.gls onedown.glo}
\]
\[
\text{pdflatex --shell-escape onedown.dtx}
\]
\[
\text{pdflatex --shell-escape onedown.dtx}
\]

Use:
\[
\text{pdflatex --shell-escape 'AtBeginDocument{\NoColortrue}\input{onedown.dtx}'}
\]
as last run to get a PDF for printing on a monochrome printer. The --shell-escape flag is necessary to generate the list of user commands. If you think this is too dangerous, then run pdflatex without this flag and you will get the documentation without the list of user command (of about 1 page). In any case you’ll find a multi-page reference overview of all commands in onedown-ref.pdf.

2 Introduction

There must be a lot of bridge players who also use \LaTeX\ to typeset their documents. And it is almost incredible that on CTAN there exist no modern package with a decent documentation that supports this.

\(^1\)please, don’t discuss the truth-value of this statement with me.
In 1990 Kees van der Laan [1] published an article in TUGBoat2 in which he describes how well the \TeX-machinery is able to produce beautiful bridge diagrams. Based on this article and examples, Johannes Braams put these commands together in a style file3 and added more. Some time later René Steiner and Thomas Hof produced the bridge-i and the kibitzer4 style files, in which they made a lot of enhancements. Also others made some efforts in this direction.5

Around 2005 I used these style files for some tiny projects. The quality of the output was splendid. Putting the text and diagrams together was not always easy and the documentation was poor. In 2015, after a long pause, I had to produce bridge texts again. I enhanced some of the existing stuff and made ad hoc changes in the code, which led to smaller and greater catastrophes. Summer 2016 I decided to write a new package, based on the work of the previously mentioned persons. I called it **OneDown**. The central goal was to offer a user friendly package with detailed documentation. For example you don’t need to say \setlength{\handskip}{5mm} or \def\handskip{5mm} but rather call the command \handskip{1em}. Not only the call is somewhat friendlier, but more important, by setting the width in terms of the font used, it will automatically adapt its size accordingly to font and font-size changes. **OneDown** features:

- Sizing of diagrams relative to font and font-size.
- The font-sizes of the diagrams and text are independent.
- Automated translation of all important bridge terms.
- Diagrams can optionally contain information about the dealer, who is vulnerable etc.

The **OneDown** package is designed to be used for typesetting texts that have to do with the game of bridge. It provides not only simple commands like \$\sp$ which produces the spade symbol \$♠\$. Also complete card diagrams with the hands of the North, East, etc. player

---

3bridge.sty, last version v1.7c, 1994/12/20
4both v1.0, 1995/04/06
5Antony Lee released his package bridge in 2012 and Gordon Bower his package grbbridge in 2013. Both are very interesting but offer only limited features and are not on CTAN at the time of writing. See [http://www.bridgebase.com/forums/topic/51967-latex-package-for-typesetting-bridge-related-stuff/](http://www.bridgebase.com/forums/topic/51967-latex-package-for-typesetting-bridge-related-stuff/)
can be defined in several ways. One can select which hands are to be shown. Bidding diagrams can be shown stand-alone or in connection with one or more hands. One can add annotations to any bid in a bidding diagrams.

3 Usage

3.1 Initialization

3.1.1 Requirements

The package \texttt{OneDown} depends on several other packages, such as \texttt{ifthen}, \texttt{translator} or \texttt{xspace}. All these packages get loaded automatically if not already used in your document. For a complete overview of all required packages, refer to page 31. All the packages are loaded without any option, so the risk of an option clash should be low: Just load your package with options \texttt{before OneDown}.

Furthermore, for the several languages that \texttt{OneDown} supports, there are the dictionary files with translations of the specific bridge terms. These dictionaries follow the naming convention: \texttt{ODw-<Language>.dict} and are included in the bundle. The name of the \texttt{<Language>} is generally the same as the name that you use as option for \texttt{babel}, but starting with a capital.

Should you make a dictionary for a language that is not provided yet, or have corrections for an existing one, please send it to the maintainer, so it can be added to the bundle.

3.1.2 Loading the package

Simply say \texttt{\usepackage{onedown}} in the preamble of your document if you want to load \texttt{OneDown} with its default settings.

\textbf{Warning:} \texttt{OneDown} loads all necessary \texttt{ODw}-dictionaries automatically. In order to know which languages must be loaded, these must be specified \texttt{before} package \texttt{onedown} is loaded. In general this means that if you use \texttt{babel} (or \texttt{polyglossia}) you must load it \texttt{before} package \texttt{OneDown}. If for some reason you cannot or do not want to do that, you can load any \texttt{ODw}-dictionary if you put the command: \texttt{\uselanguage{<ODw-Language>}} in your preamble, provided that the dictionary is in the \TeX-path. For a discussion about the caveats of using e.g. \texttt{babel}, refer to section 3.1.4.
3.1.3 Options

To change the behaviour of \texttt{OneDown} one can load the package with certain options: \texttt{\usepackage[\texttt{options}]\{onedown\}}. Of course this 'option loading' takes place in the preamble. But it is also possible to set (or change) options within the document by calling the macro \texttt{\setdefaults}. This macro uses the same \texttt{key=val} syntax as is used for the options and offers some more keys that cannot be used when loading the package. Refer to page 27 for details.

As said before, the package loads its options using the \texttt{key=val} syntax. These options deal with:

\begin{itemize}
  \item \texttt{colors} \texttt{colors=0|1|2|3|4A|4B}
    The color in which the card symbols will be printed. The color options are 0 (black only), 1 (black and white), 2 (black and red), 3 (grey (for special effects)), 4A (green, orange, red and blue), 4B (black, orange, red and green). We also defined some synonyms, as shown in the table below.

    Thus loading the package with \texttt{\usepackage[colors=X]\{onedown\}} will print

    \begin{itemize}
    \item x=0: ♠, ♦, ♣, ♤ (synonyms: mono, black)
    \item x=1: ♠, ♦, ♣, ♤ (synonyms: b+w)
    \item x=2: ♠, ♦, ♣, ♤ (synonyms: b+r)
    \item x=3: ♠, ♦, ♣, ♤ (synonyms: gray, grey)
    \item x=4A: ♠, ♦, ♣, ♤ (synonyms: 4a, fourA)
    \item x=4B: ♠, ♦, ♣, ♤ (synonyms: 4b, fourB)
    \end{itemize}

    The default is \texttt{colors=2} for printing in black and red. Please note, that \texttt{colors=3} is not meant to typeset the whole document. You can use it if you want e.g. to repeat something and want it to be less apparent.

  \item \texttt{err, warn} \texttt{err=on|off \ warn=|on|off}
    These options regulate which messages are to be output. These messages have to do with the consistency of cards in a suit, in a hand or combined hands. It is an error when a hand has more that 13 cards, or when the same card occurs twice or more in a hand or a deal. With the option \texttt{err=on} (which is the default) these error messages appear as output. With \texttt{err=off} you can suppress that. On the other hand when a suit has less than 13
\end{itemize}
cards, this must not necessarily be wrong. Maybe only some cards are to be shown, e.g. in an example concerning a finesse. Or when only e.g. E-W hands are concerned, not all cards of the deck will be specified. These situations will be caught by setting \texttt{warn=on}. To suppress these spurious warnings use \texttt{warn=off}, which is the default. Synonyms for \texttt{on} are 1 and \texttt{true}. Synonyms for \texttt{off} are 0 and \texttt{false}. This also applies for other keys that do not control a package option.

3.1.4 Languages & Dictionaries

\textbf{OneDown} uses the \texttt{translator} package to automatically translate often appearing bridge terms like e.g. \textit{declarer}. It does so by looking up these terms in the special \texttt{ODw}-dictionary for the active language. The current \textbf{OneDown} version supports English, German, Dutch, French, Spanish, most Scandinavian languages and Turkish. Some dictionaries may not be complete or may contain errors, please send corrections/additions to the maintainer.

In order to make \texttt{translator} do its job (automatically select the right translation when the current language switches to another), it is necessary to specify the languages with the \texttt{documentclass}, and not with \texttt{babel}!

\textbf{Warning for people using active characters.}

Some language packages fiddle around making characters active. This can have unexpected influence on \textbf{OneDown}. The \texttt{=} sign is used when loading the package \texttt{onedown} to specify options. It appears also in calls like \texttt{/setdefaults(warn=on)}. We also use the following characters as tokens for optional arguments with the meaning as shown in this list:

\begin{itemize}
  \item * to center diagrams or print a long or capitalized text
  \item ! special action like short names of vertical layout
  \item - to hide what would normally been shown
  \item + to show what would normally be hidden
\end{itemize}

To give you an idea what e.g. babel can cause we cite from \textit{The Turkish style for babel}:

\begin{quote}
  Turkish typographic rules specify that a little ’white space’ should be added before the characters ’:’, ’!’ and ’=’. In
\end{quote}
order to insert this white space automatically these characters are made \texttt{active}, so they have to be treated in a special way.

So babel-Turkish makes the equal sign and exclamation mark active. This leads to errors when you call e.g. \texttt{setdefaults\{warn=on\}} or \texttt{\textbackslash hand!}. If you do not need any character to be active, then load this language with \texttt{\usepackage\{turkish,shorthands=\}\{babel\}}.

You can also put \texttt{\PassOptionsToPackage\{shorthands=off\}\{ babel\}} above your \texttt{\documentclass} line. Here is a complete example:

\begin{verbatim}
\PassOptionsToPackage\{shorthands=off\}\{babel\}
\documentclass[a4paper,fontsize=11pt,\
dutch,\
german,\
english,\% this is the default language\}{scrartcl}
\usepackage\{babel\}
\end{verbatim}

If you do need the shorthand then you must disable it every time you have to use e.g. the = character as a normal character by:

\begin{verbatim}
\shorthandoff{=}\% Make '=' not active any more
\setdefaults\{warn=on\}
\shorthandon{=}\% Restore '=' to active again
\end{verbatim}

4 User Commands

4.1 Overview

In the next sections we give a short description of all the user commands and environments that are defined in \texttt{OneDown}. The commands marked with \texttt{ML} are multilingual. I.e. the text they typeset gets translated automatically into the active language.

In order to make sure that the example diagrams do not disturb the page layout of this document too much, we scaled them down to \texttt{footnotesize}.

Sometimes the output of a command is shown as an example. This output is framed in this document like \texttt{[this]} just to recognize it easily as an output example. In an accompanying file\textsuperscript{6} with examples one

\textsuperscript{6}onedown-examples.pdf
can find in more detail how these commands are used and what they produce.

We have loaded the package **OneDown** with the default option for colors, giving us black and **red**. Furthermore, when we describe macros, we use a colored frame that also shows the output of the commend. Some commands have optional tokens that produce an output that differs from the naked version. These optional tokens appear in a different background color like *!*. If an output of a macro is shown, then the output of tokenized calls is shown in parenthesis to demonstrate the difference.

### 4.1.1 The Compass

The compass is not available as a user command itself, but it is used in all user commands that draw a card diagram. It has some special features.

- It can mark the dealer (**North**)  

- It can write the vulnerable side (**North–South**) in red  

- it can put something (a board number) in the middle  

The machinery is intelligent enough to calculate the dealer and vulnerability from the board number. When only **black** or **b+w** is selected as option for colors, then the vulnerable side is written in italics rather colorized. Because underlining the **South**-hand would interfere with the compass frame, we overline it. With the command `\setdefaults` one can customize the look of the compass. In particular, if you want to print the actual board number, specified by calling `\boardnr{Nr}`, you can achieve that by calling `\setdefaults{compmid=\boardtext}`. In the accompanying file with examples you’ll find more examples about `\setdefaults`.

### 4.1.2 Hooks

We use kind of hooks to
1. change the font or the font-size. These are discussed in chapter *Sizing and Fonts* on page 19.

2. add commentary information to card diagrams. These are discussed in chapter *Conditions in Diagrams* on page 24.

3. There is one other hook to enable the user to add something to the compass. This is done by calling `\setdefaults{compmid=<Text>}`.

### 4.2 Basic Symbols

In this section we show the predefined commands that produce terms that occur often in bridge text. On page 21 an easy way is shown to redefine them as to use a different variant of the term in question.

The next 5 macros are shorthands for the suit symbols and **NT**:

- \Cl ♠
- \Di ♦
- \He ♣
- \Sp ♠
- \NT NT

The next 4 macros typeset the non-bid calls:

- \pass Pass
- \allpass All pass
- \double Double
- \redouble ReDouble

The next 6 macros typeset the directions that identify dealer (or player) and the axis that is vulnerable.
The next 4 macros typeset the unit of the points when valuing a bridge hand. If one or more of these items do not appear in your bridge world, don’t argue them, Just don’t use them! They are meant to specify High Card Points, High Card + Length Points, Length Points, Distribution Points and Total Points respectively.

The next 5 commands produce the abbreviations for several forcing expressions.
4.2.1 Header of the Bidding Table

\namesNS\namesNS{⟨N-name⟩}{⟨S-name⟩}

Defines the real world names for the North and the South player. If they are defined, they appear in the N- and the S-column of the bidding diagram.

\namesEW\namesEW{⟨E-name⟩}{⟨W-name⟩}

Same as \namesNS but now for the East and the West player.

4.3 The Card Diagrams

4.3.1 The hands of the players

Before a card diagram can be shown, one must specify the cards that each player holds. With the various \player\hand-commands one can do this. The suits they define are only shown when a show-command is issued after they have been defined. The show-commands are discussed on page 17.

\northhand\northhand[⟨v-offset⟩]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩}

\easthand\easthand[⟨h-offset⟩]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩}

\southhand\southhand[⟨v-offset⟩]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩}

\westhand\westhand[⟨h-offset⟩]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩}

The command \northhand defines the cards (all 4 suits) for the N-player. \easthand, \southhand and \westhand do that for the E-, S- or
W-player. These commands have 4 mandatory arguments in which the cards of the 4 suits are specified. In all suit commands where card ranks are issued, one must use T to denote the value 10. On output, some kerning takes care that the output looks like 10 and not like a 1 followed by a 0. So \suit{AKJT8} produces [AKJ108]. It is also possible to use a small 'x' as symbol for a spot card: \suit{AKxxx} produces [AKxxx].

These commands also have an optional argument, an offset which by default is 0pt. This offset is meant to finetune the layout of the hands in the card diagrams. They change the distance between a hand and the compass. \northhand and \southhand have a vertical offset, whereas \easthand and \westhand have a horizontal one. A positive value moves away from the compass.

4.3.2 The single hand

\hand*!\[⟨pos⟩]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩}

This macro typesets the cards of one single hand, either vertically or horizontally. There are 4 mandatory arguments defining the 4 suits. With 2 optional tokens ‘*’ resp. ‘!’ one can typeset the hand with some special features:

- \hand* typesets a hand horizontally, centered
- \hand! typesets a hand vertically, left aligned
- \hand*! typesets a hand vertically, centered

For vertical hands the optional argument pos (default= c) controls the horizontal alignment. Without a token, the hand is typeset horizontally, left aligned: The call \hand{AK2}{T85}{AQ76}{A42} typesets the hand horizontally like:

♠ AK2 ♠ T85 ♠ AQ106 ♠ A42

whereas the \hand! version produces:

♠ AK2 ♥ 1085 ♦ AQ106 ♣ A42

The third optional token, a ‘-‘ suppresses all output and saves the stuff for later use. This is used e.g. in \expertquiz.
4.3.3 Only one suit

\onesuitAll *! \{⟨N⟩\} \{⟨S⟩\} \{⟨E⟩\} \{⟨W⟩\}

Typesets the cards of 1 suit for all players. This command has 4 mandatory arguments defining the cards of the 4 players. There are 2 optional tokens. With \onesuitAll* the output is centered, with \onesuitAll! the cards are placed around a NESW compass. Without the ’!’-token a small box (□) is used instead. Thus the macro call \onesuitAll{AQ6}{J3}{T54}{K2} produces

\[\begin{array}{c}
\text{A Q 6} \\
\text{K 2} \\
\text{□ 1 0 5 4} \\
\text{J 3}
\end{array}\]

Please note the order of the players in the arguments: the first two denote the North and South hand. The last 2 denote the East and West hand. We choose it this way so you can easily cut and paste one pair from the \onesuitAll, or extend \onesuitNS to showing all hands.

\onesuitNS *! \{⟨N⟩\} \{⟨S⟩\}
\onesuitEW *! \{⟨E⟩\} \{⟨W⟩\}
\onesuitNE *! \{⟨N⟩\} \{⟨E⟩\}
\onesuitNW *! \{⟨N⟩\} \{⟨W⟩\}

These commands are similar to \onesuitAll but have only 2 mandatory arguments. The command \onesuitNS{AQ3}{JT9} typesets

\[\begin{array}{c}
\text{A Q 3} \\
\text{J 1 0 9}
\end{array}\]

and \onesuitEW{8764}{K2} will produce \[\begin{array}{c}
\text{K 2} \\
\text{□ 8 7 6 4}
\end{array}\]. Please note that at the latter the cards for the East hand appear in the first argument. Finally \onesuitNE{AQ3}{8764} produces

\[\begin{array}{c}
\text{A Q 3} \\
\text{□ 8 7 6 4}
\end{array}\]

and \onesuitNW{AQ3}{K2} produces

\[\begin{array}{c}
\text{A Q 3} \\
\text{K 2} \\
\text{□}
\end{array}\].

\suit \{⟨suit symbol⟩\} \{⟨cards⟩\}

This command has 1 optional argument denoting a suit symbol and
1 mandatory argument, defining the cards of the suit. \texttt{\suit\{AQJ7\}} by default produces \texttt{AQJ7}. When the German language is active it would produce \texttt{ADB7}. Using the optional argument like in \texttt{\suit\[Di\]{AQJ7}} will produce: \texttt{+ AQJ7}.

4.3.4 Showing Card Diagrams

\begin{verbatim}
\showAll \showAll[\{pos\}]
\showNS \showNS[\{pos\}](\{N|S\})
\showEW \showEW[\{pos\}](\{E|W\})
\showNE \showNE[\{pos\}]
\showNW \showNW[\{pos\}]
\end{verbatim}

All \texttt{show}-commands have two optional tokens, a ’\*’ which centers the output and a ’+’ which also displays a bidding diagram next to the card diagram. This bidding diagram must have been defined before, see page 28. They also have one optional argument that defines the aligning. Its default is \texttt{c}. \texttt{\showAll} typesets a card diagram with the NESW compass with \texttt{N} in top and the hands of the 4 players surrounding it. These hands must have been defined before by calling \texttt{\northhand} etc. Hands that are not defined are left empty. Optionally some conditions (like the dealer or who is vulnerable etc.) can be added to the diagram by using the commands described in section \textit{Diagram Conditions}. Please note that when the \texttt{North} or \texttt{South} hand contains a long suit that extends beyond the \texttt{NESW} compass, this might collide with these extra texts. You can correct that with the optional offset parameter of the condition commands (see page 18).

The other commands are similar to \texttt{\showAll} but typeset only the hands of the players that are represented in the name of the command: \texttt{N–S}, \texttt{E–W}, \texttt{N–E} and \texttt{N–W}.

The commands \texttt{\showNS} and \texttt{\showEW} have an extra optional argument with which selectively only one of the two hands can be displayed. E.g. \texttt{\showNS(S)} will display only the \texttt{South}-hand.
4.3.5 Showing Card Diagrams with Bidding

4.3.6 Diagram Conditions

These commands have 1 mandatory argument: the text that defines the annotation that is to be added to a card diagram. The text can be on more than one line, just separate them with a \par or \newline. \headlinetext places the annotation above the diagram, \footlinetext below it.

\leftupper \leftlower \rightupper \rightlower

These commands have 1 optional argument (default 0pt) with which you can add some extra horizontal space if hand and legend collide, and 3 mandatory arguments: the lines of text that are added as conditions to the card diagram. Both \leftupper (\rightupper) place their text in the left- (right-) upper corner of the diagram. The top line will be aligned with the (inner) top of the diagram. \leftlower (\rightlower) are similar, but place their text at the lower corner of the diagram. The last line is aligned with the (inner) bottom of the diagram. For an empty line you must issue an empty argument. With a positive offset, \leftupper and \leftlower shift to the left whereas \rightupper and \rightlower shift to the right. I.e. they shift away from their neighbouring hand.

\dealer \vulner

\footnotetext{Using ‘\\’ instead produces a misleading error: \texttt{! Missing } inserted...}
Both commands have 1 optional argument. If present it sets (and prints) the internal corresponding variable to this value, otherwise it only outputs the value of this internal variable.

\dealertext \dealertext[\text{\textit{text}}]

\vulnertext \vulnertext[\text{\textit{text}}]

These commands have also 1 optional argument. If present e.g. \dealertext[\textit{North}] this text is output in the form \textbf{Dealer: North}. If the German language is active then the call \dealertext[\textit{South}] produces the text \textit{Teiler: Südl}. Calling \dealertext without an argument outputs the predefined text, which can be set with \dealer. Example: \dealer[Jacob]\dealertext produces \textit{Dealer: Jacob}.

\boardnr \boardnr[\text{\textit{Nr}}]

The macro \boardnr has 1 mandatory argument. If it is a number, it is considered to be the board number. The dealer and which side is vulnerable is then calculated from it and stored in the appropriate variables. If it is not a positive integer, it is considered user-defined text and will be stored and used as is.

\boardtext ML \boardtext*

The macro \boardtext has 1 token and no arguments. \boardtext retrieves only the board number (stored by calling \boardnr). \boardtext outputs the board number with some additional (multilingual) text. \boardnr[23]\boardtext produces \textit{23} whereas \boardtext* would produce \textit{Board: 23}. Note that \boardnr can have a non-integer argument. \boardnr[\textit{Fun}]\boardtext produces \textit{Fun} and with \boardtext* it would produce \textit{Board: Fun}.

### 4.3.7 Sizing and Fonts

\handskip \handskip((length description))

This command has 1 mandatory argument: a \textit{text} describing a length. \handskip enlarges the distance (default 1em) between the rightmost hand and the bidding diagram. A negative value diminishes the distance.
These commands all have 1 mandatory argument: a description of the font to be used. In the list below the command names are typeset in their default font.

- **bidderfont**: Used for the player-names in the bidding diagram. The default is `\mdseries\sffamily`.
- **compassfont**: Used for the directions and the "midvalue" in the compass. The default is `\mdseries\sffamily`.
- **gamefont**: Used for card diagrams, hands and suits. The default is `\bfseries\sffamily`.
- **legendfont**: Used for the conditions in card diagrams. The default is `\mdseries\rmfamily`.
- **namefont**: Used for the real world names in bidding diagrams. The default is `\mdseries\slshape`.
- **otherfont**: Used for the other bridge expressions, also outside diagrams. The default is `\bfseries\sffamily`.

If a new font is defined, all relevant dimensions of the card diagrams (including the NWSW compass, the bidding diagram etc.) will be recalculated. Some examples for setting the gamefont to a new value are:

- `\gamefont\sffamily\bfseries\HUGE` to get HUGE diagrams. Refer to the documentation of package `moresize` for details.
- `\legendfont\smaller` to diminish the text in the card diagram conditions a little. Refer to the documentation of package `relsize` for details.
4.4 Misc

Many of the text producing macros have in common that they can produce 4 different versions of the text they represent. Normally, without any token, they produce the lowercase text. With the token * they produce the capitalised text. With the token ! they produce some abbreviation of the text (if available). Finally with both tokens *! they produce the capitalised abbreviation of the text. What exactly is produced, is shown in the macro descriptions. In some cases it seems rather strange to have the code for an abbreviated form, i.e. \texttt{\texttt{Lead[*!]}}, because it produces only the variants \texttt{lead} and \texttt{Lead}. But remember that we also support automatic translations into other languages and that in another language an abbreviation might be feasible: With the german language active \texttt{\texttt{Lead*}} and \texttt{\texttt{Lead*!}} produce \texttt{Ausspiel} and \texttt{Aussp.} respectively.

At the other hand it seems peculiar to let \texttt{\texttt{Ace!}} produce \texttt{A} for an Ace. But we do not foresee which modern novelist might want to produce this. That’s why they are defined, but ’normal’ writers probably will never used it.

The short versions are primarily meant to be used within diagrams, although it is possible to get the long forms there too. Refer to page 27 for details. We show the output of such a macro \texttt{\Macro} (note the capital M!) in the form:

\begin{verbatim}
\Macro*! \Macro (\Macro*, \Macro!, \Macro*!)
\end{verbatim}

In addition to each macro \texttt{\Macro} with its 4 variants, we also create a macro \texttt{\macro} which is defined to output the most used variant of \texttt{\Macro}:

\begin{verbatim}
\macro most used variant of \Macro
\end{verbatim}

It is very easy to redefine \texttt{\macro}. As an example we take the macro \texttt{\ace}. Its definition is:

\begin{verbatim}
\def\ace{\texttt{\texttt{Ace*!}}}
\end{verbatim}

so calling \texttt{\ace} will produce \texttt{A}. If somewhere in your document you

\*needs package scalefnt
redefine \texttt{\textbackslash ace} to be
\texttt{\textbackslash def\textbackslash ace\{\textbackslash Ace\}}

then \texttt{\textbackslash ace} will produce \texttt{\textbf{Ace}} rather than \texttt{A}.

4.4.1 Honor Cards

\begin{verbatim}
\texttt{\textbackslash Ace} ML \texttt{\textbackslash Ace \textbackslash*!} ace (Ace, a, A)
\texttt{\textbackslash ace} ML \texttt{\textbackslash ace} A
\texttt{\textbackslash King} ML \texttt{\textbackslash King \textbackslash*!} king (King, k, K)
\texttt{\textbackslash king} ML \texttt{\textbackslash king} K
\texttt{\textbackslash Queen} ML \texttt{\textbackslash Queen \textbackslash*!} queen (Queen, q, Q)
\texttt{\textbackslash queen} ML \texttt{\textbackslash queen} Q
\texttt{\textbackslash Jack} ML \texttt{\textbackslash Jack \textbackslash*!} jack (Jack, j, J)
\texttt{\textbackslash jack} ML \texttt{\textbackslash jack} J
\end{verbatim}

These commands produce the language dependent names for the
honor cards. To be used primarily when adding a lead to a card

diagram.

4.4.2 Variants of Basic Symbols

In section 4.2 we already described the macros for the main variant.
Here we introduce the macros that handle 4 variants with a combina-
tion of the tokens \texttt{*} and \texttt{!}.

We start with the variants for \texttt{\textbackslash nt}

\begin{verbatim}
\texttt{\textbackslash nt} ML \texttt{\textbackslash nt \textbackslash*!} no trump (No Trump, nt, NT)
\end{verbatim}

Next we show the 4 macros for the non-bid calls:

22
\texttt{\textbackslash Pass} \quad \texttt{ML \textbackslash Pass \textdagger} \quad \texttt{pass \ (Pass, \ p, \ P)}

\texttt{\textbackslash Allpass} \quad \texttt{ML \textbackslash Allpass \textdagger} \quad \texttt{all pass \ (All pass, \ ap, \ AP)}

\texttt{\textbackslash Double} \quad \texttt{ML \textbackslash Double \textdagger} \quad \texttt{double \ (Double, \ X, \ Dbl)}

\texttt{\textbackslash Redouble} \quad \texttt{ML \textbackslash Redouble \textdagger} \quad \texttt{redouble \ (ReDouble, \ XX, \ ReDbl)}

Next come the 6 macros for the symbolic names of players and axes.

\texttt{\textbackslash North} \quad \texttt{ML \textbackslash North \textdagger} \quad \texttt{north \ (North, \ n, \ N)}

\texttt{\textbackslash East} \quad \texttt{ML \textbackslash East \textdagger} \quad \texttt{east \ (East, \ e, \ E)}

\texttt{\textbackslash South} \quad \texttt{ML \textbackslash South \textdagger} \quad \texttt{south \ (South, \ s, \ S)}

\texttt{\textbackslash West} \quad \texttt{ML \textbackslash West \textdagger} \quad \texttt{west \ (West, \ w, \ W)}

\texttt{\textbackslash NorthSouth} \quad \texttt{ML \textbackslash NorthSouth \textdagger} \quad \texttt{north–south \ (North–South, \ n–s, \ N–S)}

\texttt{\textbackslash EastWest} \quad \texttt{ML \textbackslash EastWest \textdagger} \quad \texttt{east–west \ (East–West, \ e–w, \ E–W)}

The 4 commands that typeset the \textit{point-unit}

\texttt{\textbackslash \textbackslash bpts} \quad \texttt{ML \textbackslash bpts \textdagger} \quad \texttt{high card points \ (High Card Points, \ hcp, \ HCP)}

\texttt{\textbackslash \textbackslash tpts} \quad \texttt{ML \textbackslash tpts \textdagger} \quad \texttt{total points \ (Total Points, \ tp, \ TP)}

\texttt{\textbackslash \textbackslash lpts} \quad \texttt{ML \textbackslash lpts \textdagger} \quad \texttt{length points \ (Length Points, \ lp, \ LP)}

\texttt{\textbackslash \textbackslash dpts} \quad \texttt{ML \textbackslash dpts \textdagger} \quad \texttt{distribution points \ (Distribution Points, \ dp, \ DP)}
The forcing terms

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>\gforce</td>
<td>game forcing (Game Forcing, gf, GF)</td>
<td></td>
</tr>
<tr>
<td>\sforce</td>
<td>semi forcing (Semi Forcing, sf, SF)</td>
<td></td>
</tr>
<tr>
<td>\nmforce</td>
<td>new minor forcing (New Minor Forcing, nmf, NMF)</td>
<td></td>
</tr>
<tr>
<td>\tsforce</td>
<td>third suit forcing (Third Suit Forcing, 3rd sf, 3rd SF)</td>
<td></td>
</tr>
<tr>
<td>\fsforce</td>
<td>fourth suit forcing (Fourth Suit Forcing, 4th sf, 4th SF)</td>
<td></td>
</tr>
</tbody>
</table>

4.4.3 Conditions in Diagrams

These commands produce the language dependent expressions for All, None, by, Board etc. To be used primarily in card diagrams.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>\All</td>
<td>all (All, all, All)</td>
<td></td>
</tr>
<tr>
<td>\all</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>\None</td>
<td>none (None, none, None)</td>
<td></td>
</tr>
<tr>
<td>\none</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>\by</td>
<td>by</td>
<td></td>
</tr>
<tr>
<td>\Board</td>
<td>board (Board, brd, Brd)</td>
<td></td>
</tr>
<tr>
<td>\board</td>
<td>Board</td>
<td></td>
</tr>
<tr>
<td>\Contract</td>
<td>contract (Contract, contr, Contr)</td>
<td></td>
</tr>
</tbody>
</table>
4.4.4 Annotations in Bidding Diagrams

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>\alert</td>
<td>*</td>
</tr>
<tr>
<td>\announce</td>
<td>A</td>
</tr>
<tr>
<td>\markit</td>
<td></td>
</tr>
<tr>
<td>\explainit</td>
<td>{explanation}</td>
</tr>
</tbody>
</table>

These macros have no argument. With \alert one can mark a call that must be alerted with an asterisk (*) e.g. a weak 2\nt opening with 2\nt\alert. It produces 2\nt\alert. With \announce one can mark a bid with an 'A' (\announce) where an announcement is obligatory, e.g 2\he\announce produces 2\heart\announce. 

These commands are to be used to mark a call in the bidding diagram and explain it with a kind of footnote-like mechanism, directly below the bidding diagram. Both \markit and \explainit step a counter for associating the explanation with the mark. \markit has no arguments;
\explainit has one mandatory argument: the text to be displayed as explanation. \explainit should be called in the description part of bidding diagrams (or expertquiz). The text of the explanation is then typeset under the bidding diagram and has the same width. You can use newline (\ or \newline) in your text to force an new line in the explanation$^9$.

4.4.5 Specials

\expertquiz \expertquiz *! \{ comment \} \{ award \}

This command displays a hand, a bidding sequence and some additional stuff. It is designed after the Expert Quiz column in the Bridge Magazin of the DBV$^{10}$, the German Bridge Union. It has 2 optional tokens: a ‘*’ for centering and a ‘!’ which 1) forces the bidding diagram to appear on a new line, and 2) shifts the hand a bit to the right. Next there is one optional argument with wich some commentary information can be added. And finally there is 1 mandatory argument that describes the awards for certain solutions. Both the hand and the bidding must be defined before calling \expertquiz. One can do that by calling e.g. \hand- which suppresses the output of the hand.

4.4.6 Re-Initialization

\newgame

This command resets most bridge diagram data and can be used to start a new series of bridge diagrams. It is however not necessary to use \newgame if one enters new cards for the North etc. hands. The list below shows which items are reset by calling \newgame

- resets $\texttt{boardnr(0)}$.
- resets headlinetext and footlinetext.
- resets $\texttt{LeftUpperText}$, $\texttt{LeftLowerText}$, $\texttt{RightUpperText}$ and $\texttt{RightLowerText}$.
- resets $\texttt{northhand}$, $\texttt{easthand}$, $\texttt{southhand}$ and $\texttt{westhand}$.

$^9$Using \par produces the error: \texttt{Runaway argument?...}

$^{10}$Deutsche Bridge Verband
\setdefaults
\setdefaults*\{(key1=val1),(key2=val2),\ldots\}

<table>
<thead>
<tr>
<th>key</th>
<th>font</th>
<th>key</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>bidder</td>
<td>bidderfont</td>
<td>compline</td>
<td>\langle factor\rangle</td>
</tr>
<tr>
<td>compass</td>
<td>compassfont</td>
<td>compshow</td>
<td>{off} {on}</td>
</tr>
<tr>
<td>game</td>
<td>gamefont</td>
<td>compsize</td>
<td>\langle factor\rangle</td>
</tr>
<tr>
<td>legend</td>
<td>legendfont</td>
<td>compturn</td>
<td>{off} {on}</td>
</tr>
<tr>
<td>name</td>
<td>namefont</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>otherfont</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>key</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>colors</td>
<td>0</td>
</tr>
<tr>
<td>warn</td>
<td>off{on}</td>
</tr>
<tr>
<td>err</td>
<td>off{on}</td>
</tr>
</tbody>
</table>

The macro \setdefaults uses a \langle key\rangle=\langle val\rangle mechanism. The tables above show which keys are available. The underlined key values are defaults. The available keys with respect to fonts are: bidder, compass, game, legend, name and other. In upper the table to the left the association between key and font is shown. A call e.g. \setdefaults\{name=\bfseries\scriptsize\} will set the default for the namefont to the value specified. The starred form \setdefaults* will also call \resetfonts, which effectuates any change in a new default font immediately.

In the lower table to the left you’ll find the three keys that are also possible as package options. They have been described already in section 3.1.3.

The keys with respect to the compass are: compline, compshow, compsize and compturn. They are shown in the upper table to the right. With the first key one can set the linethickness of the compass frame, the default is 0.1em. The second key controls whether the compass is shown or not. The third key controls the size of the compass, which per default is 2.5em. With the fourth key one can rotate the letters for the E–W direction over 90°. The multiplication-\langle factor\rangle, which defaults to the value 1, can have any non-negative real value.

The keys with respect to the bidding diagram are: bidders, bidfirst, bidline and bidlong. They are shown in the lower table.
to the right. With the first key one can suppress the bidders in the bidding header. With the second key one can set which bidder appears in the first column of the diagram. The default is \textit{w}. The third key controls whether an \texttt{\line} is printed below the header. The fourth key switches between the long or short form of the non-bid calls, like \texttt{Pass} or \texttt{p}.

For the key-value \texttt{on} we have the synonyms \texttt{true} and \texttt{1}, for the key-value \texttt{off} we have the synonyms \texttt{false} and \texttt{0}.

\resetfonts
\resetfonts

When calling this macro, all fonts are set back to their default value. This is the value that was explicitly set by a previous call of \texttt{\setdefaults}, or to the intrinsic default value if \texttt{\setdefaults} has not been called before.

\subsection{Environments}

In the first place we must warn the user for a peculiarity of the package \texttt{collcell}, which is used to do some special processing in these 3 environments: \textit{The last row must either end with a newline (\texttt{\\}) or with an empty cell.}

The advantage of the \texttt{collcell} processing is that within the bidding and play diagrams we can use shorthands for the suit symbols: rather than writing 3\texttt{\Sp} in a bidding diagram we can also write 3\texttt{S} to obtain 3\texttt{♠}. In the play diagram we could write \texttt{HA} instead of \texttt{\He\,\Ace} and get \texttt{♥\,A} as output. In bidding diagrams some non-bid calls may appear in short or in long form, controlled by calling \texttt{\setdefaults{bidlong=on}}, which switches to the lang form, or \texttt{\setdefaults{bidlong=off}} which switches to the short form. These non-bid calls are coded as follows:

A small \texttt{p} yields short form \texttt{[p]} or long form \texttt{Pass}. A capital \texttt{P} yields short form \texttt{AP} or long form \texttt{All\,pass}. A capital \texttt{X} yields short form \texttt{[X]} and long form \texttt{Double}. A capital \texttt{R} yields short form \texttt{[XX]} and long form \texttt{Re\,Double}.

\begin{bidding}
\begin{itemize}
  \item \texttt{*!-} [\texttt{(pos)\,(description)}] ...
\end{itemize}\end{bidding}

This environment has 3 tokens. The \texttt{*} centers the bidding diagram. The \texttt{!} outputs the short form: e.g. \texttt{N} rather than the long form \texttt{North} in the table heading. The \texttt{-} completely suppresses the output. The

\footnote{due to the fact that \texttt{x} denotes a spotcard, we had to implement it this way}
data is stored in a savebox and can be used in other macros, e.g. in all \showXX macros. Next come 2 optional parameters. The first one controls the alignment (default c) and the second one adds the list of annotations below the bidding diagram. With \setdefaults one can fine tune the look of the bidding diagram. Refer to page 27 for details. For example

\begin{bidding}(%explainit{WeakTwo}\explainit{preemptive})
2H\markit & p & 3H\markit & p \\
\end{bidding}

\setdefaults{bidlong=off}
\begin{bidding}!
2H & p & 3H & p\\
\end{bidding}\

produces

<table>
<thead>
<tr>
<th>West</th>
<th>North</th>
<th>East</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>2♥</td>
<td>Pass</td>
<td>3♥</td>
<td>Pass</td>
</tr>
</tbody>
</table>

\begin{tabular}{|c|c|c|c|c|}
\hline

\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|}
\hline

\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|}
\hline

\hline
\end{tabular}

In addition to the shorthands we mentioned before, one can also use macros in the bidding and play diagrams. As long as these macros appear as 1 single token in the diagram, no special care has to be taken. But if a macro appears as multiple tokens, e.g. like the call \Pass*, which consists of the 3 tokens \Pass, * and !, then it must be enclosed in braces {...} to make it act as 1 token. Without the braces \Pass*! will produce pass*, with them \{\Pass*!\} will produce Pass. Note that although \pass expands to \Pass*, it wil produce the correct Pass.

\begin{biddingpair}
\begin{tabular}{|c|}
\hline
\end{tabular}
\end{biddingpair}

\begin{play}
\begin{tabular}{|c|}
\hline
\end{tabular}
\end{play}

This environment is essentially the same as the bidding environment, but here the bidding diagram has only two columns rather than four.

This environment has 1 token, a '*' which controls the centering of the table; 1 mandatory argument, denoting the opening lead and 1 optional argument which specifies the trump suit, with default: NT. It typesets a diagram with the sequence of playing tricks, by producing a table with 8 columns: the running number; the player who had had
the lead; the 4 cards played in this trick and finally the 2 columns that show how many tricks N–S and E–W have won so far. The user has to specify only the columns 3-6, i.e. the cards that were played. Columns 1–2 and 7–8 are constructed by \textbf{OneDown}. Just as in bidding diagrams, also here one can denote the suit with S, H, D, or C. The winning card is automatically detected, taking into account if a suit contract or NT is played. The winning tricks counters are then updated automatically. Concerning consistency it is just as with hands and deals: If a card occurs more than one time, an error is raised and for missing cards a warning is issued.

\begin{play}{W} \\
D3 & 2 & Q & K \\
HA & 5 & 4 & J \\
C3 & 5 & K & A \\
\end{play}

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\textbf{№} & \textbf{Lead} & \textbf{2nd} & \textbf{3rd} & \textbf{4th} & \textbf{N} & \textbf{E} \\
\hline
1 & W: ♠3 & 2 & Q & K & 1 & 0 \\
2 & S: ♥A & 5 & 4 & J & 2 & 0 \\
3 & S: ♦3 & 5 & K & A & 2 & 1 \\
\hline
\end{tabular}

\begin{play}**{W} \\
D3 & 2 & Q & K \\
HA & 5 & 4 & J \\
C3 & 5 & K & A \\
\end{play}

produces the same diagram, but this time horizontally centered.

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\textbf{№} & \textbf{Lead} & \textbf{2nd} & \textbf{3rd} & \textbf{4th} & \textbf{N} & \textbf{E} \\
\hline
1 & W: ♠3 & 2 & Q & K & 1 & 0 \\
2 & S: ♥A & 5 & 4 & J & 2 & 0 \\
3 & S: ♦3 & 5 & K & A & 2 & 1 \\
\hline
\end{tabular}

5 Final Remarks

5.1 Known Bugs

• Some dictionaries have questionable translations.

• The boxes in \texttt{northhand} and \texttt{southhand} lead to problems with shifting the \texttt{West} hand. See file Legends in the example bundle.
5.2 ToDo

- Add the High Points to card diagrams (like Turnier in KA)
- Check if \def\xspace{} is also needed in bidding...?
- Make a template for showing 16 hands on 1 DIN A4 (3x5+1 or 4x4 landscape) e.g as handout for the hands on slides.
- Read source files in PBN format. Example: http://new.bridgekosice.sk/bridzove-diagramy-vykrelene-pomocou-tex/

5.3 Acknowledgements

This package is based on (ideas from) the style files:

- bridge-i v1.0 (1995/04/16) by René Steiner and Thomas Hof.
- kibitzer v1.0 (1995/04/16) by René Steiner and Thomas Hof.
- bridge v0.1 (2012/03/18) by Antony Lee.
- grbbridge v2.2 (2013/12/24) by Gordon Bower.

The style file bridge-i is based on the style file bridge v1.7c (1994/12/20) by J.L. Braams, which on itself was based on an article by Kees van der Laan in TUGboat (Vol 11 (1990), No 2: p265ff.

Last but not least I want to thank all those wonderful people down there in the Internet who spent their time in answering silly questions and solving difficult problems. If I had imagined the difficulties I would encounter, then I would not have started this work. And without the help of all these, to me unknown, people, this package would not exist.

6 Implementation

6.1 Prelimaries

6.1.1 Packages we depend upon

\%
\% Warn if a too old expl3 package is used.
2 \RequirePackage{expl3}[2019/09/21]% needed for LaTeX3 packages (xparse)
3 \RequirePackage{\%
4 xcolor,% colorizing symbols \Sp etc.
5 textcomp,% for the numbersign in environment play.
6 moresize,% add \HUGE and \ssmall to font-sizes
7 relsize,% relative font-sizes. (e.g. \smaller)
8 makecmds,% needed for provideenvironment
9 \% expl3,% needed for LaTeX3 packages (xparse)
xparse, \% optional params and starred commands
xspace, \% handling of spacing behind a command
calc, \% makes calculations and lengths easier
ifthen, \% easy booleans, tests and loops
adjustbox, \% stacked boxes in L-/R-Lower captions
translator, \% auto-translate terms (e.g. East->Ost)
calc, \% makes calculations and lengths easier
array, \% actions for tabular column cells
collcell, \% macro calls for tabular column cells
pgfopts, \% for keyval opts, loads also pgfkeys
environ, \% for handling bidding environments
xstring, \% for easy string processing.
tracklang, \% for iterating over loaded languages
pict2e, \% for drawing the compass
}

Add exceptions for xspace
\xspaceaddexceptions{%
\= \markit \, \suit \translate
2 3 4 5 6 7 8 9 T J Q K A
}%

6.1.2 Options
We use the pgf \texttt{<key>=<val>} system for our options: colors, warn and err.

\pgfkeys{/ODw/.is family}
\def\ODw@set#1{\pgfkeys{/ODw,#1}}
\ODw@set{colors/.is choice,}
\ODw@set{warn/.is choice,}
\ODw@set{err/.is choice,}

The details for option colors are on page 39ff and those for option warn and err on page 100.

6.1.3 Misc
\thinspace
\thinspace
\thinspace

\thinspace
\thinspace

We redefine \texttt{\thinspace} (originally \texttt{1\em}) to a smaller amount. That makes denominations like 3\texttt{\Sp} (3\♠) look better. The code is from: https://tex.stackexchange.com/questions/181003/multiply-fine-tuning-with-a-thinspace
This code however doesn’t work when coded within an own package, unless we use \AtBeginDocument.

\verb|
\AtBeginDocument{%
\renewcommand{\,}{\ifmmode\mskip\thinspace\else\thinspace\fi}%
\renewcommand{\thinspace}{\kern0.16667em\relax}%
}\%
|

We need to store the length of certain objects that are within a group (the group is needed to keep the font-size changes local). Therefore we define macro \ODw@gsetlength that works globally. The code is based upon a solution on LaTeX StackExchange: (https://tex.stackexchange.com/questions/406015/defining-macro-gsetlength-as-global-setlength-reliable)

\verb|
\gdef\ODw@gsetlength#1#2{%
\begingroup
\setlength\skip@{#2}% local assign to scratch reg.
\global#1=\skip@% global assignment to #1;
\endgroup% restore \skip@ by endgroup.
}\%
|

In the environment \texttt{play} we need to calculate the winning tricks for \texttt{N–S} and \texttt{E–W}\textsuperscript{12}. We store this information as a string in \ODw@Scratch and use \ODw@append to accumulate them.

\verb|
\gdef\ODw@append#1{%
\bgroup%
\edef\tmp{\the\ODw@Scratch #1}%
\global\ODw@Scratch=\expandafter{\tmp}%
\egroup%
}\%
|

\textsuperscript{12}For details see page 91
6.1.4 Variables

In this package we do use font relative sizing. That means that widths and skips are defined in terms of \em, \ex and \baselineskip. On the other hand there are e.g. the real world names of the bidders, that must be recorded. Some of these the user should be able to control. Rather than forcing the user to do that directly with \def or \renewcommand we store all this information in internal variables, by defining a constant command. These variables can be set by calling a user command, that is associated with the variable. E.g. the variable \ODw@Skipwidth gets set by the command \handskip. The variables we use are:

\ODw@BidderFont
\ODw@CompassFont
\ODw@GameFont
\ODw@LegendFont
\ODw@NameFont
\ODw@OtherFont
\ODw@BidderDefault
\ODw@CompassDefault
\ODw@GameDefault
\ODw@LegendDefault
\ODw@NameDefault
\ODw@OtherDefault
\ODw@North@Name
\ODw@South@Name
\ODw@East@Name
\ODw@West@Name
\ODw@BoardText
\ODw@HeaderText
\ODw@FooterText
\ODw@Last
\ODw@Skipwidth

These contain the default values for the fonts

Controlled by \bidderfont: the font used for the players (bidding).
Controlled by \compassfont: the font used for the compass.
Controlled by \gamefont: the font used for all card diagrams
Controlled by \legendfont: the font used for the annotations.
Controlled by \namefont: the font used for the real world names.
Controlled by \otherfont: the font used for other bridge expressions, also outside diagrams.

Controlled by \namesNS: hold the real world names of the North and the South player.
Controlled by \namesEW: hold the real world names of the East and the West player. These names are typeset using the font specified with \namefont.

Controlled by \boardtext: holds the board number and extra text.
Controlled by \headlinetext: holds header information for card diagrams.
Controlled by \footlinetext: holds footer information for card diagrams.

\ODw@Last

\ODw@Skipwidth

13see page 89
6.1.5 Booleans, Saveboxes, Lengths, Counters and Registers

6.1.5.1 Booleans

\texttt{\textbackslash ifODw\textbackslash description} \texttt{\textbackslash ifODw\textbackslash description} is used in the bidding environments and the command \texttt{expertquiz} to test if there is an annotation that should be written.

\texttt{\textbackslash ifODw\textbackslash short} \texttt{\textbackslash ifODw\textbackslash short} is used in the bidding environments and the command \texttt{expertquiz} to denote if a short form of the diagram header is to be used.

\texttt{\textbackslash ifODw\textbackslash monochrome} \texttt{\textbackslash ifODw\textbackslash monochrome} flags the case that the user specified \texttt{colors=0} or \texttt{colors=1}, i.e. just black and white. In this situation we will not print the vulnerable side in red, but use italics instead.

\texttt{\textbackslash ifODw\textbackslash CardSkip} \texttt{\textbackslash ifODw\textbackslash CardSkip} determines whether we need some extra space between card ranks (i.e. in suit descriptions) or not (i.e. in bidding or play diagrams).

\texttt{\textbackslash ifODw\textbackslash Bidders} \texttt{\textbackslash ifODw\textbackslash Bidders} suppresses the bidders in the bidding header.

\texttt{\textbackslash ifODw\textbackslash BidLine} \texttt{\textbackslash ifODw\textbackslash BidLine} draw a \texttt{\hline} below the bidding header.

\texttt{\textbackslash ifODw\textbackslash LongCalls} \texttt{\textbackslash ifODw\textbackslash LongCalls} determines whether to use the short (like \texttt{N}) or the long form (like \texttt{North}) for calls in the bidding diagram.

\texttt{\textbackslash ifODw\textbackslash CompShow} With \texttt{\textbackslash ifODw\textbackslash CompShow} one can suppress drawing a compass within card diagrams completely.

\texttt{\textbackslash ifODw\textbackslash CompTurn} With \texttt{\textbackslash ifODw\textbackslash CompTurn} one rotates letters \texttt{E} and \texttt{W} in the compass 90°.

The next booleans are directly controlled by \texttt{\setdefaultsl}.

\texttt{\textbackslash ifODw\textbackslash Bidders} suppress bidders in bidding header

\texttt{\textbackslash ifODw\textbackslash BidLine} draw \texttt{\hline} below bidding header

\texttt{\textbackslash ifODw\textbackslash LongCalls} switch between long/short calls

\texttt{\textbackslash ifODw\textbackslash CompShow} show compass or not

\texttt{\textbackslash ifODw\textbackslash CompTurn} turn E-W letters 90°

Since there seems to be a problem in using \texttt{\ifthenelse} in particular places, these booleans are set by calling \texttt{ODw\textbackslash TestIfEmpty} (which uses \texttt{\ifthenelse} bites \texttt{multicolumn}!\textsuperscript{14})
an ordinary \ifthenelse) outside the dangerous places, and then use 
\newboolean{ODw@EmptyHeader} as a test whether the header is empty or not.
66 \newboolean{ODw@EmptyFooter} = 'header is empty'
67 \newboolean{ODw@EmptyFooter} = 'footer is empty'

6.1.5.2 Saveboxes
\ODw@Diagram@Box is to store the actual card diagram (the compass with 
the hands) in order to calculate its width.
\ODw@BidBox stores a bidding diagram.
\ODw@Hand@Box stores a hand with the 4 suits.
68 \newsavebox\ODw@Diagram@Box
69 \newsavebox\ODw@Hand@Box
70 \newsavebox\ODw@BidBox

6.1.5.3 Lengths
Is used to store the actual width of the bidding diagram.
\ODw@Card@Skip Defines space between adjacent cards in suits.
\ODw@Diagram@Width Defines the width of compass plus (E-W) hands.
\ODw@Skip@Width Defines the distance between the card diagram and the bidding dia-
gram.
\ODw@Tmp@Len Auxiliary lengths, used in several calculations.
71 \newlength\ODw@Compasssize% the size of the compass.
72 \newlength\ODw@Diagram@Width
73 \newlength\ODw@Card@Skip
74 \setlength\ODw@Card@Skip{.15em}% space between cards
75 \newlength\ODw@Bid@Width
76 \newlength\ODw@Skip@Width
77 \setlength\ODw@Skip@Width{\ODw@Skipwidth}
78 \newlength\ODw@Tmp@Len% temp var for computations
79 \newlength\ODw@Tmp@Width% temp var for computations

6.1.5.4 Counters
\ODw@Nr Counts lines (in play diagrams) and explanations (in bidding dia-
grams).
80 \newcounter{ODw@Nr}
\ODw@Cnt Auxiliary counter, used in several calculations.
81 \newcounter{ODw@Cnt}
\texttt{ODw@PlayerNr} Set to the player that won the trick in environment play.
\begin{verbatim}
82 \newcounter{ODw@PlayerNr}
\end{verbatim}

\texttt{ODw@NSCnt} Holds the number of N-S tricks in environment play.
\begin{verbatim}
83 \newcounter{ODw@NSCnt}
\end{verbatim}

\texttt{ODw@EWCnt} Holds the number of E-W tricks in environment play.
\begin{verbatim}
84 \newcounter{ODw@EWCnt}
\end{verbatim}

6.1.5.5 Registers

\texttt{ODw@Scratch} Tempory store for winning tricks in environment play.
\begin{verbatim}
85 \newtoks{ODw@Scratch}
\end{verbatim}

6.1.6 Fonts

6.1.6.1 Text Fonts

Here we merely define the commands to set the default fonts. At the end of this .sty file they are set to their value. Refer to section 6.10 for details.

\texttt{\bidderfont} The font used to indicate the symbolic player (N, E, S, W) in bidding diagrams. The default is \texttt{\mdseries\sffamily}.
\begin{verbatim}
86 \newcommand{\bidderfont}[1]{\gdef{ODw@BidderFont}{#1}}
\end{verbatim}

\texttt{\compassfont} The font used to indicate the directions (N, E, S, W) in the compass. The default is \texttt{\mdseries\sffamily}.
\begin{verbatim}
87 \newcommand{\compassfont}[1]{\gdef{ODw@CompassFont}{#1}}
\end{verbatim}

\texttt{\namefont} The font used for the real world names of the players in bidding diagrams. The default is \texttt{\mdseries\slshape}.
\begin{verbatim}
88 \newcommand{\namefont}[1]{\gdef{ODw@NameFont}{#1}}
\end{verbatim}

\texttt{\legendfont} The font used for the conditions in card diagrams. The default is \texttt{\mdseries\rmfamily}.
\begin{verbatim}
89 \newcommand{\legendfont}[1]{\gdef{ODw@LegendFont}{#1}}
\end{verbatim}

\texttt{\otherfont} The font used for the other bridge expressions like \texttt{\north}, \texttt{\pass} or \texttt{\double}. The default is \texttt{\bfseries\sffamily}.
\begin{verbatim}
90 \newcommand{\otherfont}[1]{\gdef{ODw@OtherFont}{#1}}
\end{verbatim}

\texttt{\gamefont} The font for the hands and calls. It sets the general font-size/widths for the game. The default is \texttt{\bfseries\sffamily}.
We use widths that are dynamically adjusted at font changes and store the 'value' as text in \ODw@GameFont.

\ODw@GameSize recalculates these sizes and is called in all show- and bid-diagrams.

91 \newcommand\gamefont[1]{%
92 \gdef\ODw@GameFont{#1}%
93 \gdef\ODw@GameSize{% recalculate dimens for the new font
94 \ODw@GameFont%
95 \setlength\ODw@Skip@Width{\ODw@Skipwidth}%
96 }%
97 }% gamefont

6.1.6.2 Symbol Font

We need special symbols to get solid colored ♥ and ♠, rather than ♥ and ♦. We use those from stix. As the shape of the 'normal' black suits differ from the red ones we also take the black suits from the font stix. First we define the symbols and font. As we do not want to load the complete package, we only use the relevant piece of code found in txfont.sty:

98 \fontencoding{T1}\fontfamily{stix}
99 \fontseries{m}\fontshape{n}\selectfont
100 %
101 % Code stolen from txfonts.sty.
102 % It works smoothly: thank you guys!
103 % Because of an interference with package newtxmath I had to rename
104 % symbols into ODw@symbols and symbolsC into ODw@symbolsC
105 %
106 \DeclareSymbolFont{ODw@symbols}{OMS}{txsy}{m}{n}
107 \SetSymbolFont{ODw@symbols}{bold}{OMS}{txsy}{bx}{n}
108 \DeclareFontSubstitution{OMS}{txsy}{m}{n}
109 \DeclareSymbolFont{ODw@symbolsC}{U}{txsyc}{m}{n}
110 \SetSymbolFont{ODw@symbolsC}{bold}{U}{txsyc}{bx}{n}
111 \DeclareFontSubstitution{U}{txsyc}{m}{n}
112 \DeclareMathSymbol{ODw@spadesuit}{\mathord}{ODw@symbols}{127}
113 \DeclareMathSymbol{ODw@varheart}{\mathord}{ODw@symbolsC}{114}
114 \DeclareMathSymbol{ODw@vardiamond}{\mathord}{ODw@symbolsC}{113}
6.2 Bridge Basic Terms

6.2.1 Suit Symbols

First we supply shorthands for the ‘five’ suits (♣, ♠, ♥, ♦ and NT) that are used in the game of bridge. We define the international version with the English shortcuts. We use the \textcolor{black}{} package to colorize the suit symbols. The color can be set as an \texttt{<key>=<val>} option when loading the package. The option \texttt{colors=0} means mono-color (black only), synonyms of key 0 are \texttt{mono} and \texttt{black}. \texttt{colors=1} means black and white, a synonym is \texttt{b+w}. \texttt{colors=2} means bi-color (black and red), with synonym \texttt{b+r}. \texttt{colors=3} means grey, with synonyms \texttt{gray} and \texttt{grey}.

This ‘color’ is meant for special effects, e.g. for making unimportant parts less visible \texttt{colors=4A} gives qua-color (green, orange, red and blue); synonyms are \texttt{fourA} and \texttt{4A}. Finally \texttt{colors=4B} defines the second qua-color (black, orange, red and green) with synonyms \texttt{fourB} and \texttt{4B}.

We precede all the suit symbols with a ‘very-thin-space’ (\,0.3) which is 0.3 the size of a normal \texttt{\hspace{0.3}} space.

In order to test which suit (\Cl,...) was encountered in \texttt{\ODw\translate} we must define the suits with a \texttt{\renewrobustcmd}. So we must \texttt{\def} them first.

\begin{verbatim}
\def\Cl{}\def\Di{}\def\He{}\def\Sp{}
\ODw@set{%
colors/0/.code=%
\ODw@monochrometrue%
\renewrobustcmd\Cl{\textcolor{black}{\,0.3\ensuremath{\ODw@clubsuit}}\xspace}%
\renewrobustcmd\Di{\textcolor{black}{\,0.3\ensuremath{\ODw@vardiamond}}\xspace}%
\renewrobustcmd\He{\textcolor{black}{\,0.3\ensuremath{\ODw@varheart}}\xspace}%
\renewrobustcmd\Sp{\textcolor{black}{\,0.3\ensuremath{\ODw@spadesuit}}\xspace}%
}%
\ODw@set{colors/mono/.code={\pgfkeys{/ODw/colors=0}}}\end{verbatim}

\footnote{see page 45}
\ODw@set{colors/black/.code={\pgfkeys{/ODw/colors=0}}}
\ODw@set{%
colors/1/.code={%
\ODw@monochrometrue%
\renewrobustcmd\Cl{\textcolor{black}{\,[0.3]\ensuremath{\ODw@clubsuit}}}\xspace}
\renewrobustcmd\Di{\textcolor{red}{\,[0.3]\ensuremath{\ODw@vardiamond}}}\xspace}
\renewrobustcmd\He{\textcolor{red}{\,[0.3]\ensuremath{\ODw@varheart}}}\xspace}
\renewrobustcmd\Sp{\textcolor{black}{\,[0.3]\ensuremath{\ODw@spadesuit}}}\xspace}
%
}%
\ODw@set{colors/b+w/.code={\pgfkeys{/ODw/colors=1}}}
\ODw@set{%
colors/2/.code={%
\ODw@monochromefalse%
\renewrobustcmd\Cl{\textcolor{black}{\,[0.3]\ensuremath{\ODw@clubsuit}}}\xspace}
\renewrobustcmd\Di{\textcolor{red}{\,[0.3]\ensuremath{\ODw@vardiamond}}}\xspace}
\renewrobustcmd\He{\textcolor{red}{\,[0.3]\ensuremath{\ODw@varheart}}}\xspace}
\renewrobustcmd\Sp{\textcolor{black}{\,[0.3]\ensuremath{\ODw@spadesuit}}}\xspace}
%
}%
\ODw@set{colors/b+r/.code={\pgfkeys{/ODw/colors=2}}}
\ODw@set{%
colors/3/.code={%
\ODw@monochromefalse%
\renewrobustcmd\Cl{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@clubsuit}}}\xspace}
\renewrobustcmd\Di{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@vardiamond}}}\xspace}
\renewrobustcmd\He{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@varheart}}}\xspace}
\renewrobustcmd\Sp{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@spadesuit}}}\xspace}
%
}%
\ODw@set{%
colors/4/.code={%
\ODw@monochromefalse%
\renewrobustcmd\Cl{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@clubsuit}}}\xspace}
\renewrobustcmd\Di{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@vardiamond}}}\xspace}
\renewrobustcmd\He{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@varheart}}}\xspace}
\renewrobustcmd\Sp{\textcolor{gray}{\,[0.3]\ensuremath{\ODw@spadesuit}}}\xspace}
%
}%
Because some languages use a different symbol for **NT** (No Trump) we must look it up in the dictionary to find e.g. **SA** ( Sans Atout) for German.
Define a practical shorthand to produce \texttt{NT} without the need to add a token.
\begin{verbatim}
def\NT{\nt*!}
\end{verbatim}

\texttt{\ODw@SetRank{⟨card rank⟩}}

\texttt{\ODw@SetRank} stores the rank of the card played in \texttt{\ODw@Rank}. This is essentially the intrinsic rank of the card (2 for a 2, 14 for an Ace), but there are special cases:

- Spot cards (denoted with \texttt{x}) always get rank 0
- Discards always get rank 0
- Trump cards get 15 (15 to ensure that a spot trump card defeats an Ace) added to the intrinsic rank, to make sure that:
  - A trump card will defeat all other cards
  - The highest trump card will win the trick

We first define three variables, one to store the suit of the actual card, the second one to store which suit was led and the last variable to store which suit is the trump suit, all initialized with the \texttt{`NT-suit'}.  
\begin{verbatim}
\gdef\ODw@SuitPlayed{N}
\gdef\ODw@SuitLead{N}
\gdef\ODw@TrumpSuit{N}
\newcounter{ODw@Rank}
\def\ODw@SetRank#1{% 
\ifthenelse{\equal{\ODw@SuitPlayed}{\ODw@SuitLead}}{
\setcounter{ODw@Rank}{#1}}{
% else, if a suit is not followed then ...
\ifthenelse{\equal{\ODw@SuitPlayed}{\ODw@TrumpSuit}}{
% (at NoTrump, the trumpsuit is coded 'N' and will
\setcounter{ODw@Rank}{#1}}{
% never match a real suit (coded C, D, H and S))
\setcounter{ODw@Rank}{0}
% thus avoiding that trump cards are detected
\fi\fi}
\end{verbatim}

42
% if it is a trump card, increase the rank
\setcounter{ODw@Rank}{#1}\%
\addtocounter{ODw@Rank}{15}\%
% if it is a discard, set the rank to 0 to make
% sure it will never win
\setcounter{ODw@Rank}{0}\%
}\% ifthen
% If the card was of another suit,
% then ODw@SuitPlayed was changed.
% If we encounter 'unsuited' cards,
% then we must reestablish the
% original ODw@SuitPlayed.
\global\edef\ODw@SuitPlayed{\ODw@SuitLead}\% org. suit
\% ODw@SetRank

\ODw@Xfer\{\textit{tokens}\}\}

This macro gets called by \ODw@Tfer which is automatically called in the environments \texttt{play}, \texttt{bidding} and \texttt{biddingpair} by means of \texttt{columntype P} and \texttt{columntype B} to convert at one hand the shorthand suit code in suit symbols and at the other hand to translate card honors into the active language. It also converts the card value $T$ into $10$ and a hyphen into an en-dash. It calls \ODw@translate to do the work.

The following code was contributed on StackExchange by egreg, see https://tex.stackexchange.com/questions/417731/problem-with-xstring-ifeqcase-case-falls-thru/417788?noredirect=1#comment1045001_417788

\ExplSyntaxOn
% NB: now all spaces are ignored, use '~' if needed.
\NewDocumentCommand{\ODw@Xfer}{m}{
\bgroup
% we do not want spaces here
\def\xspace{}
\tl_map_function:nN {#1} \ODw@translate:n
\egroup
}\% \ODw@Xfer

\ODw@translate\{\textit{tokens}\}\}

\ODw@translate processes a (relatively short) string of tokens that determine an entry in bidding or play diagrams, and also in all situations where suits are defined. It gets called by \ODw@Xfer.
It expects bridge stuff describing strings like \textit{AK54} to produce the suit \textbf{AK1052}, \textit{2H}\alert{alert} to produce the call 2\heartsuit\star in the bidding diagram, or \textit{DA} to produce \diamondsuit A as entry in the play diagram to show that the ace of diamonds was played. Please note that constructs like \textit{DA} or \frame{2H} are not allowed and will produce rather misleading errors like:

```
! Argument of \ODw@translate:n has an extra }, or
! Missing number, treated as zero.
```

Even clever people who use {\frame{2H}} will get disoppointed, because they’ll get \textbf{2H} rather than the wanted \textbf{2\heartsuit}. But the very clever people can reach their goal by using {\frame{2\heartsuit}} or {\textit{\Di A}}.

261 \cs_new_protected:Nn \ODw@translate:n
262 {  
263  \setcounter{ODw@Rank}{0}
264  \str_case:nnTF {#1}
265  { % Store the suit of the card played
266    % needed to determine the winner
267    % and for checking for multiple cards
268    {C}{\Cl\gdef\ODw@SuitPlayed{C}}
269    {D}{\Di\gdef\ODw@SuitPlayed{D}}
270    {H}{\He\gdef\ODw@SuitPlayed{H}}
271    {S}{\Sp\gdef\ODw@SuitPlayed{S}}
272    {N}{\NT\gdef\ODw@SuitPlayed{N}}
273    % Translate a hyphen into an en-dash
274    {-}{--}
275  % 1: translate the honour cards,
276  % 2: store the played cards for checking
277  % 3: and set their rank. This must be done last, because
278  % \ODw@SetRank resets \ODw@SuitPlayed to \ODw@SuitLead
279  % Honour Cards
280  % 1
281  % 2
282   {A}{\Ace*!\ODw@AppendCard{\ODw@SuitPlayed}{A}}
283  \ODw@SetRank{14}% 3
284   {K}{\King*!\ODw@AppendCard{\ODw@SuitPlayed}{K}}
285  \ODw@SetRank{13}
286   {Q}{\Queen*!\ODw@AppendCard{\ODw@SuitPlayed}{Q}}
287  \ODw@SetRank{12}
288   {J}{\Jack*!\ODw@AppendCard{\ODw@SuitPlayed}{J}}
289  \ODw@SetRank{11}
290   {T}{\kern-0.1em1\kern-0.1em0% massage 1 and 0 a bit
% Numeral Cards
{9}{9\AppendCard{\SuitPlayed}{9}\SetRank{9}}
{8}{8\AppendCard{\SuitPlayed}{8}\SetRank{8}}
{7}{7\AppendCard{\SuitPlayed}{7}\SetRank{7}}
{6}{6\AppendCard{\SuitPlayed}{6}\SetRank{6}}
{5}{5\AppendCard{\SuitPlayed}{5}\SetRank{5}}
{4}{4\AppendCard{\SuitPlayed}{4}\SetRank{4}}
{3}{3\AppendCard{\SuitPlayed}{3}\SetRank{3}}
{2}{2\AppendCard{\SuitPlayed}{2}\SetRank{2}}
% A spot card has rank 0
{x}{x\SetRank{0}}
% Non cards (bidding only)
{1}{1}% this enables e.g. 1\He in biddings
{p}{\ifODw@LongCalls\Pass*\else\Pass!\fi}
{P}{\ifODw@LongCalls\Allpass*\else\Allpass*!\fi}
{X}{\ifODw@LongCalls\Double*\else\Double*!\fi}
{R}{\ifODw@LongCalls\Redouble*\else\Redouble*!\fi}
\expandafter{#1}% enables e.g. 1\He
% suit of 1st card (\SuitLead) is \SuitPlayed accordingly. To make this
% test work, we had to redefine the suit macros with an \renewrobustcmd.
% Here we also issue \expandafter{#1} rather than just #1. Otherwise,
% among others, the coloring of the suit symbol would extend behind it.
% Curiously enough the phenomena does not occur anymore. I leave
% the expandafter in, until this is cleared.
% if matched (case T(ue))
\ifODw@CardSkip\hspace{\Card@Skip}\fi
% suit of 1st card (\SuitLead) is \SuitPlayed accordingly. To make this
\iftheODw@PlayerNr1\global\edef\SuitLead{\SuitPlayed}
\fi
%
% if not matched (case F(alse))
\expandafter{#1}\ifODw@SuitPlayed{\ifODw@SuitPlayed{C}\fi
\ifODw@SuitPlayed{D}\fi
\ifODw@SuitPlayed{H}\fi
\ifODw@SuitPlayed{S}\fi
\expandafter{#1}\ifODw@SuitPlayed{\ifODw@SuitPlayed{C}\else\fi
\ifODw@SuitPlayed{D}\else\fi
\ifODw@SuitPlayed{H}\else\fi
\ifODw@SuitPlayed{S}\else\fi
\expandafter{#1}\ifODw@SuitPlayed}
In order to do a simple consistency check in play diagrams, we need to store the cards that were played. We do that for each suit in the variable \( \texttt{ODw@suit} \). This macro is called in \( \texttt{ODw@translate} \), i.e. for all situations where cards are to be manipulated. But the result of \( \texttt{ODw@AppendCard} \) is used only within play diagrams. The macro \( \texttt{ODw@appendcard} \) appends 1 character to a string.

\begin{align*}
\text{%}
\text{\newcommand{\texttt{ODw@appendcard}}[2]{\xdef#1{#1#2}}}
\text{\newcommand{\texttt{ODw@AppendCard}}[2]{\texttt{\IfEqCase{#1}{\{C\}{\texttt{ODw@appendcard}\{\texttt{ODw@Clubs}\}{#2}}}}}}
\text{\newcommand{\texttt{ODw@PTfer}}{(\textit{tokens})}}
\end{align*}

This macro is called within play diagrams where we can write HA and get ♥ A. Also all relevant symbols get translated into the active language. We use the counter \( \texttt{ODw@PlayerNr} \) to determine the column in the play diagrams with the winning card, and from this we can compute which player won the trick. \( \texttt{ODw@PTfer} \) is essentially called for each entry in all columns of the play diagram through the column definition:

\begin{verbatim}
\newcolumntype{P}{>{\collectcell\texttt{ODw@PTfer}}c<{\endcollectcell}}
\end{verbatim}

We first define two counters, both initially set to zero.

\begin{align*}
\text{\newcounter{ODw@Highest} \% the highest rank until now}
\text{\setcounter{ODw@Highest}{0}}
\text{\newcounter{ODw@WinningNr} \% player with the highest rank}
\end{align*}
\setcounter{ODw@WinningNr}{0}
def\ODw@PTfer#1{\stepcounter{ODw@PlayerNr}\ODw@Xfer{#1}\ifthenelse{\value{ODw@Rank} > \value{ODw@Highest}}{\setcounter{ODw@WinningNr}{\theODw@PlayerNr}\setcounter{ODw@Highest}{\theODw@Rank}}{}}\ifthenelse{\value{ODw@PlayerNr} = 4}{\setcounter{ODw@Nr}{\ODw@AccTricks}}{}}\ODw@FTfer\ODw@FTfer{(tokens)}\ODw@FTfer is called for the first column of the play diagram TableII. In \ODw@Tricks it just resets ODw@PlayerNr and ODw@Last and writes the player who leads. Finally it processes the entry of the first column by calling \ODw@PTfer. \ODw@FTfer is essentially called for the entries in the first column of TableII in the play diagram through the column definition:
\newcolumntype{F}{>{\collectcell\ODw@FTfer}c<{\endcollectcell}}\def\ODw@FTfer#1{\ODw@Tricks\ODw@PTfer{#1}}\ODw@BTfer\ODw@BTfer{(tokens)}This macro is called within bidding diagrams and enables us to type 1C\announce and get 1♣A. The symbols get translated into the active language. \ODw@BTfer is essentially called for each entry in the bidding diagrams through:
\newcolumntype{B}{>{\collectcell\ODw@BTfer}c<{\endcollectcell}}As there is no special processing for the bidding entries, we call \ODw@Xfer right away to do the job.
6.2.2 Names of Directions and Axes

\North \North*!

\north

\NewDocumentCommand\North{s t!}{\bgroup\ODw@OtherFont\IfBooleanTF#1{\IfBooleanTF{#2}{\ODw@N*}{\ODw@North*}}{\IfBooleanTF{#2}{\ODw@N}{\ODw@North}}}% TF#1\egroup\xspace}
\def\north{\North*}

\East \East*!

\east

\NewDocumentCommand\East{s t!}{\bgroup\ODw@OtherFont\IfBooleanTF#1{\IfBooleanTF{#2}{\ODw@E*}{\ODw@East*}}}{\IfBooleanTF{#2}{\ODw@E}{\ODw@East}}}% TF#1\egroup\xspace}
\def\east{\East*}
\South \South*!

\south

\NewDocumentCommand{\South}{s t!}{\bgroup\ODw@OtherFont\IfBooleanTF{#1}{\IfBooleanTF{#2}{\ODw@S*}{\ODw@South*}}{\IfBooleanTF{#2}{\ODw@S}{\ODw@South}}\egroup\xspace}%

\def\south{\South*}

\West \West*!

\west

\NewDocumentCommand{\West}{s t!}{\bgroup\ODw@OtherFont\IfBooleanTF{#1}{\IfBooleanTF{#2}{\ODw@W*}{\ODw@West*}}{\IfBooleanTF{#2}{\ODw@W}{\ODw@West}}\egroup\xspace}%

\def\west{\West*}

\NorthSouth \NorthSouth*!

\northsouth

\NewDocumentCommand{\NorthSouth}{s t!}{\bgroup\ODw@OtherFont\IfBooleanTF{#1}{\IfBooleanTF{#2}{\ODw@NS*}{\ODw@NorthSouth*}}{\IfBooleanTF{#2}{\ODw@NS}{\ODw@NorthSouth}}\egroup\xspace}%

\def\northsouth{\NorthSouth*}
Next we define macros that translate the short form of the directions into the active language.

\def\ODw@N{% 
  \@ifstar{\translate{N-(ODw)}}{% 
    \translate{n-(ODw)}}
\}
\def\ODw@E{% 
  \@ifstar{\translate{E-(ODw)}}{% 
    \translate{e-(ODw)}}
\}
\def\ODw@S{% 
  \@ifstar{\translate{(ODw)-S}}{% 
    \translate{-(ODw)S}}
\}
\def\ODw@W{% 
  \@ifstar{\translate{W-(ODw)}}{% 
    \translate{w-(ODw)}}
\}
6.2.3 Non-Bid Calls

\Pass

\Pass*!

\pass

\NewDocumentCommand\Pass{s t!}{% 
  \bgroup% 
  \ODw@OtherFont% 
  \IfBooleanTF{#1}{% 
    \IfBooleanTF{#2}{% 
      \translate{Pass!-(ODw)}}% 
    }{% 
      \translate{Pass-(ODw)}}% 
  }% 
% 
%
\def\Pass*{\allpass*}
\NewDocumentCommand\allpass{s t!}{%\bgroup\ODw@OtherFont%\IfBooleanTF#1{%\IfBooleanTF{#2}{%\translate{All pass-(ODw)}}%\translate{AP-(ODw)}}%\translate{All pass-(ODw)}}%}% TF#1\egroup\xspace}% Pass%
\def\Allpass*{\double*}
\NewDocumentCommand\double{s t!}{%\bgroup\ODw@OtherFont%\IfBooleanTF#1{%\IfBooleanTF{#2}{%\translate{Double-(ODw)}}%\translate{AP-(ODw)}}%\translate{Double pass-(ODw)}}%}% TF#1\egroup\xspace}% Double%
6.2.4 Bidding Diagrams

\texttt{\textbackslash ODw@FirstBidCol\{}\langle N|S|E|W\rangle\texttt{\textbackslash ODw@FirstBidCol}\}

\texttt{\textbackslash ODw@FirstBidCol} determines which player starts in the first bidding column. We also take care that the real world name of the players are
kept associated with the columns. For \ODw@BidderX (X=I,II,III,IV) we define two macros: \ODw@BidderX and \ODw@BidderX* in one. When these macros are called in the bidding diagram, the starred version writes the short notation whereas the unstarred one writes the long version.

\newcommand\ODw@FirstBidCol[1]{%
\IfEqCase{#1}{%
{N} {%\def\ODw@BidderI{\@ifstar\ODw@North*}{\ODw@N*}}%
{E} {%\def\ODw@BidderI{\@ifstar\ODw@East*}{\ODw@E*}}%

{S} {%\def\ODw@BidderI{\@ifstar\ODw@South*}{\ODw@S*}}%
{W} {%\def\ODw@BidderI{\@ifstar\ODw@West*}{\ODw@W*}}%

{N} {%\def\ODw@BidderII{\@ifstar\ODw@North*}{\ODw@N*}}%
{E} {%\def\ODw@BidderII{\@ifstar\ODw@East*}{\ODw@E*}}%

{S} {%\def\ODw@BidderII{\@ifstar\ODw@South*}{\ODw@S*}}%
{W} {%\def\ODw@BidderII{\@ifstar\ODw@West*}{\ODw@W*}}%

{N} {%\def\ODw@BidderIII{\@ifstar\ODw@North*}{\ODw@N*}}%
{E} {%\def\ODw@BidderIII{\@ifstar\ODw@East*}{\ODw@E*}}%

{S} {%\def\ODw@BidderIII{\@ifstar\ODw@South*}{\ODw@S*}}%
{W} {%\def\ODw@BidderIII{\@ifstar\ODw@West*}{\ODw@W*}}%

{N} {%\def\ODw@BidderIV{\@ifstar\ODw@North*}{\ODw@N*}}%
{E} {%\def\ODw@BidderIV{\@ifstar\ODw@East*}{\ODw@E*}}%

{S} {%\def\ODw@BidderIV{\@ifstar\ODw@South*}{\ODw@S*}}%
{W} {%\def\ODw@BidderIV{\@ifstar\ODw@West*}{\ODw@W*}}%

\def\ODw@NameI{\ODw@North@Name}%
\def\ODw@NameII{\ODw@East@Name}%
\def\ODw@NameIII{\ODw@South@Name}%
\def\ODw@NameIV{\ODw@West@Name}%
\\%}
}
Next we define the real world names for the \textbf{N–S} and the \textbf{E–W} bidders. We use \texttt{\ODw@All@Names} as variable to test if we have names for bidders at all: If it is empty, then no names were defined.

\begin{align*}
\texttt{\namesNS} & \quad \texttt{\namesNS}{\langle N\text{-}name \rangle}{\langle S\text{-}name \rangle} \\
\texttt{\namesEW} & \quad \texttt{\namesEW}{\langle E\text{-}name \rangle}{\langle W\text{-}name \rangle}
\end{align*}

\noindent 6.2.5 Diagram Hands

Here we implement commands that store the cards that each player holds. E.g. \texttt{\northhand} defines the complete hand, i.e. all 4 suits for the \textbf{North}-player. They have an optional parameter (an offset, default \texttt{0pt}) to finetune the distance to the compass. In \texttt{\ODw@Nhand} and \texttt{\ODw@Shand} we use a makebox to prevent that its width goes beyond the \texttt{NESW} compass (but this can interfere with the Right-U/L-Legend). Within these macros, we check the consistency of the cards in the hand and also store card-information to check a complete deal later.

\begin{align*}
\texttt{\northhand} & \quad \texttt{\northhand}{\langle v\text{-}offset \rangle}{\langle Sp \rangle}{\langle He \rangle}{\langle Di \rangle}{\langle Cl \rangle} \\
\texttt{\northhand}{\langle v\text{-}offset \rangle}{\langle Sp \rangle}{\langle He \rangle}{\langle Di \rangle}{\langle Cl \rangle} & \quad 1 \quad 2 \quad 3 \quad 4 \quad 5
\end{align*}

\noindent 604 \texttt{\newcommand\northhand[5][\texttt{Opt}]{\%} % check that north has 13 cards
ODw@ChkNrOfCards{#2#3#4#5}{\north}\
\gdef\ODw@NSpades{#2}% Save norths cards
\gdef\ODw@NHearts{#3}% of all suits
\gdef\ODw@NDiamonds{#4}% for later
\gdef\ODw@NClubs{#5}% checking

\ODw@Nhand We fit the North hand in a box to avoid that a very long suit shifts the East hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{t}{#2}{#3}{#4}{#5}}\vspace{#1}\\% northhand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand

\ODw@Ehand We fit the East hand in a box to avoid that a very long suit shifts the South hand to the right
\makebox[\ODw@Compasssize + 2ex][l]{\ODw@hand{c}{#2}{#3}{#4}{#5}}\hspace{#1}\\% easthand
633 \gdef\ODw@SSpades{#2}\% Save souths cards
634 \gdef\ODw@SHearts{#3}\% of all suits
635 \gdef\ODw@SDiamonds{#4}\% for later
636 \gdef\ODw@SClubs{#5}\% checking

\ODw@Shand We fit the South hand in a box to avoid that a very long suit shifts
the East hand to the right
637 \gdef\ODw@Shand{%
638 \parbox[b]{\ODw@Compasssize + 2ex}{%
639 \vspace*{#1}\par%
640 \makebox[0pt][l]{%
641 \ODw@hand{b}{#2}{#3}{#4}{#5}%
642 }%
643 }%
644 }%
645 }% southhand

\westhand \westhand[{h-offset}]{(Sp)}{(He)}{(Di)}{(Cl)}
\westhand[h-offset]{Sp}{He}{Di}{Cl}
1 2 3 4 5
646 \newcommand\westhand[5][0pt]{%
647 \% check that west has 13 cards
648 \ODw@ChkNrOfCards{#2#3#4#5}\{\west\}%
649 \gdef\ODw@WSpades{#2}\% Save wests cards
650 \gdef\ODw@WHearts{#3}\% of all suits
651 \gdef\ODw@WDiamonds{#4}\% for later
652 \gdef\ODw@WClubs{#5}\% checking

\ODw@Whand
653 \gdef\ODw@Whand{%
654 \ODw@hand{c}{#2}{#3}{#4}{#5}%
655 \hspace*{#1}%
656 }%
657 }% westhand

6.2.6 A Single Hand
Sometimes we want to show only (the cards of) one single hand.

\hand
\hand{s t!-}\{(pos)\}{(Sp)}{(He)}{(Di)}{(Cl)}
658 \NewDocumentCommand\hand{s t! t- O{c}mmm}{%
This macro has 3 optional tokens that act as follows:
Naked mode: Displays the hand horizontally, left aligned.
* mode: Displays the hand horizontally, centered.
! mode: Displays the hand vertically, left aligned.
*! mode: Displays the hand vertically, centered.
- mode: Output is suppressed, it is stored in a savebox for later use.
The 4th argument is the aligning (used only in case of a vertical hand): default c. The rest of the arguments denote the cards of the suits.

We first check that this hand has 13 cards. Then we check for each suit that there are no multiples. Finally we store the hand in \ODw@Hand@Box. If output is not suppressed, we write the hand with \usebox\ODw@Hand@Box.

\newcommand\ODw@hhand[4]{%  
\bgroup  
\def\xspace{}% undo xspace locally  
% it screws the distance between suit and cards  
\newcommand\ODw@hhand{(Sp)}{(He)}{(Di)}{(Cl)}%  
\centering \usebox\ODw@Hand@Box\par}%  
\usebox\ODw@Hand@Box}%
\egroup%  
} % hand

Displays a hand horizontally (e.g. ♠ xxxx ♥ xxx ♦ xxx ♥ xxx ). We use a tabular with 4 columns in 1 row to print the 4 suits.
\setlength{\tabcolsep}{1\ODw@Card@Skip} \\
\begin{tabular}{llll}
\% we can’t use \suit here: it would cause double checks!
\Sp\hspace{0.3em}\ODw@Cards{#1} &\%
\He\hspace{0.3em}\ODw@Cards{#2} &\%
\Di\hspace{0.3em}\ODw@Cards{#3} &\%
\Cl\hspace{0.3em}\ODw@Cards{#4} \\%
\end{tabular} \\
}\egroup \\
\begin{tabular}{ll}
\% ODw@hhand \\
\ODw@vhand[⟨pos⟩]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩} \\
\end{tabular} \\
\begin{tabular}{ll}
\% ODw@vhand \\
\ODw@hand[[pos]]{⟨Sp⟩}{⟨He⟩}{⟨Di⟩}{⟨Cl⟩} \\
\end{tabular} \\
\begin{tabular}{ll}
\% ODw@hand \\
\ODw@hand[⟨pos⟩]{spades}{hearts}{diamonds}{clubs} \\
\end{tabular} \\

We put a hand and some spacing in a tabular by reading the cards for each suit, making the lines more tense with the \\[-0.5ex\]. Empty hands are discarded completely.

\begin{tabular}{ll}
\% ODw@hand \\
\ifthenelse{\equal{#2#3#4#5}{}}{}{ \\
\begin{tabular}{ll}
\% we can’t use \suit here: it would cause double checks! \\
\Sp & \ODw@Cards{#2} \\{-0.5ex\} \\
\He & \ODw@Cards{#3} \\{-0.5ex\} \\
\Di & \ODw@Cards{#4} \\{-0.5ex\} \\
\Cl & \ODw@Cards{#5} \\ \\
\end{tabular} \\
\end{tabular} \\
\} \% ifthenelse \\
\} \% ODw@hand
6.2.7 Suits

In some cases, we need only a collection of cards, without a suit symbol.

\texttt{\onesuitAll}\texttt{!*}\quad \{(N)\}\{(S)\}\{(E)\}\{(W)\}

Display the cards of one suit in a \texttt{NS-EW} diagram, with the \texttt{N-}, \texttt{E-}, \texttt{S-} and \texttt{W-} hand.

\texttt{\NewDocumentCommand\onesuitAll{s t! mmmm}{}}\texttt{onesuitAll* !{N-hand}{S-hand}{E-hand}{W-hand}}

\texttt{1 2 3 4 5 6}

Naked version: Use a \texttt{\begin{center}}

* version: Display the diagram centered

! version: use the \texttt{NESW} compass

First we test that we have no multiple cards in the suit. Then we use a \texttt{tabular} to place the cards around a compass or around a box.

\texttt{\IfBooleanTF\nbgroup\setlength\tabcolsep{0em}}\texttt{\begin{tabular}{rcl}}

\texttt{\begin{tabular}{rcl}}

\texttt{\end{tabular}}

\texttt{\egroup}

\texttt{\IfBooleanTF\end{center}\texttt{\end{tabular}}}\texttt{\texttt{\onesuitAll}}

\texttt{\texttt{\onesuitNS}\texttt{!*}\quad \{(N)\}\{(S)\}}

Display a suit as \texttt{NS}-diagram. Similar to \texttt{\onesuitAll} but with only \texttt{N-} and \texttt{S-} hand.

\texttt{\NewDocumentCommand\onesuitNS{s t! mm}{}}\texttt{onesuitNS* !{N-hand}{S-hand}}

\texttt{1 2 3 4}

Naked version: Use a \texttt{\begin{center}}
Display a suit as EW diagram. Similar to \onesuitAll but with only E- and W-hand.

\NewDocumentCommand\onesuitEW{s t! mm}{\onesuitEW* !{E-hand}{W-hand}}

\begin{tabular}{cccc}
1 & 2 & 3 & 4 \\
\end{tabular}

Naked version: Use a □

Display a suit as NE diagram. Similar to \onesuitAll but with only N- and E-hand.
Display a suit as NW diagram. Similar to \onesuitAll but with only N- and W-hand.

\NewDocumentCommand\onesuitNW{s t! mm}{\%}
\onesuitNW* {{N-hand}{W-hand}}

Naked version: Use a □
* version: Display the diagram centered
! version: use the NESW compass

\IfBooleanTF#1{\begin{center}}{}\%
\bgroup\%
\ODw@GameSize\%
\begin{tabular}{r@{ }c}
& \ODw@Cards{#3} \%
\Odw@Cards{#4} & \IfBooleanTF#2{\ODw@Compass}{\ODw@Box} \%
\end{tabular}\%
\egroup\%
\IfBooleanTF#1{\end{center}}{}\% onesuitEW

\suit \suit[⟨suit symbol⟩]{⟨cards⟩}
Command for displaying the cards of a suit. With the optional argument one can add a suit symbol to the suit.

\newcommand\suit[2][]{%
\suit[suit]{cards}
  1 2
\ODw@ChkNrOfCards{#2}{suit}%
\ODw@ChkSameCards{#2}{#1}%
\bgroup% keep font change local
\%JW
\ODw@GameSize%
\#1\ODw@Cards{#2}%
\egroup%
\xspace%
} suit

\ODw@Cards\langle cards\rangle

This macro gets called by \suit and all commands that process hands. It processes the ranks of the cards. Between ranks some space is typeset. Care is taken that T becomes 10 and honor cards are translated into the active language.

\newcommand\ODw@Cards[1]{%
We enable the cardskip and call \ODw@Xfer to do the job
\ODw@CardSkiptrue%
\ODw@Xfer{#1}%
\xspace}

6.2.8 Card Diagrams

Next we define several diagrams with hands around the compass. \ODw@GameSize sets the size of the compass, the directions and the hands, according to the actual font or font-size. \ODw@LeftUpperText etc. displays extra text, that appear in the left upper, etc. corner of the diagram. If \headlinetext (\footlinetext) is the empty string, we set boolean \ODw@EmptyHeader (\ODw@EmptyFooter) to true\footnote{see page 35, last paragraph why this is necessary}. This value is used in \ODw@ProcessHeader to conditionally span the 3 columns with the headline- (footline)text. We first store the diagram in a box, so we can calculate its width and use that as a size to limit the header/footer texts.
Define the diagram, showing the cards for All hands.

\begin{center}
\begin{array}{ccc}
1 & 2 & 3
\end{array}
\end{center}

Display the NS--EW diagram, defined by \northhand, etc
* Version: Display the diagram centered
+ Version: Also display a bidding diagram
pos: aligning, default= c

First, for all suits we store all cards of all sides together. Next we check
the consistency of all complete suits. The individual suits of each
player have already been checked as we defined the hands. Finally we
print the hands around the compass using a tabular, taking care of
the additions above, below and in the corners of the diagram. Before
we write the diagram, we store it in an sbox to calculate its width, so
we can use that in other places.

\begin{verbatim}
\gdef\ODw@Spades  % store all Spades together
  \ODw@NSpades \ODw@ESpades \ODw@SSpades \ODw@WSpades \\
\gdef\ODw@Hearts  % store all Hearts together
  \ODw@NHearts \ODw@EHearts \ODw@SHearts \ODw@WHearts \\
\gdef\ODw@Diamonds % store all Diamonds together
  \ODw@NDiamonds \ODw@EDiamonds \ODw@SDiamonds \ODw@WDiamonds \\
\gdef\ODw@Clubs   % store all Clubs together
  \ODw@NClubs \ODw@EClubs \ODw@SClubs \ODw@WClubs \\
% check for multiple and nr. of cards
\ODw@ChkNrOfCards{\ODw@Spades}\{Sp\} \\
\ODw@ChkSameCards{\ODw@Spades}\{Sp\} \\
\ODw@ChkNrOfCards{\ODw@Hearts}\{He\} \\
\ODw@ChkSameCards{\ODw@Hearts}\{He\} \\
\ODw@ChkNrOfCards{\ODw@Diamonds}\{Di\} \\
\ODw@ChkSameCards{\ODw@Diamonds}\{Di\} \\
\ODw@ChkNrOfCards{\ODw@Clubs}\{Cl\} \\
\ODw@ChkSameCards{\ODw@Clubs}\{Cl\} \\
\IfBooleanTF#1{\begin{center}}{} \\
\bgroup \\
\setlength{\tabcolsep}{0em} \\
\end{verbatim}
Define the diagram, showing the cards for the N–S hands.

\showNS \enspace *[pos]\enspace (N/S)

Show the NS diagram, defined by \northhand, etc.

* Version: Display the diagram centered
+ Version: Also display a bidding diagram
pos: aligning, default c
N/S: only N-hand (or S-hand) is to be displayed
% For all suits store all cards of north and south together
\newcommand{\ODw@Spades}{\ODw@NSpades\ODw@SSpades}%
\newcommand{\ODw@Hearts}{\ODw@NHearts\ODw@SHearts}%
\newcommand{\ODw@Diamonds}{\ODw@NDiamonds\ODw@SDiamonds}%
\newcommand{\ODw@Clubs}{\ODw@NClubs\ODw@SClubs}%
\newcommand{\ODw@ChkSameCards}{\ODw@Spades}{\Sp}%
\newcommand{\ODw@ChkSameCards}{\ODw@Hearts}{\He}%
\newcommand{\ODw@ChkSameCards}{\ODw@Diamonds}{\Di}%
\newcommand{\ODw@ChkSameCards}{\ODw@Clubs}{\Cl}%
\IfBooleanTF{#1}{\begin{center}}{}%
\bgroup%
\setlength{\tabcolsep}{0em}\
\ODw@GameSize%
\ODw@EmptyHeader%
\ODw@EmptyFooter%
\end{center}\
\bgroup%
\setlength{\tabcolsep}{0em}\
\begin{tabular}{@{}r@{}c@{}l@{}}% Display the N-hand only with token 'N', or no token at all
& \IfNoValueTF{#4}{\ODw@Nhand}{\ifthenelse{\equal{#4}{N}}{\ODw@Nhand}{}{}} & \\
& \usebox{1} & \\
% Display the S-hand only with token 'S', or no token at all
& \IfNoValueTF{#4}{\ODw@Shand}{\ifthenelse{\equal{#4}{S}}{\ODw@Shand}{}{}} & \\
\end{tabular}\
\ODw@gsetlength{\ODw@Diagram@Width}{\wd0}\
\begin{tabular}{@{}r@{}c@{}l@{}}% Display the N-hand only with token 'N', or no token at all
& \IfNoValueTF{#4}{\ODw@Nhand}{\ifthenelse{\equal{#4}{N}}{\ODw@Nhand}{}{}} & \\
& \usebox{1} & \\
% Display the S-hand only with token 'S', or no token at all
& \IfNoValueTF{#4}{\ODw@Shand}{\ifthenelse{\equal{#4}{S}}{\ODw@Shand}{}{}} & \\
\ODw@ProcessHeader{3}% span 3 columns
\end{tabular}\
\ODw@gsetlength{\ODw@Diagram@Width}{\wd0}\
\begin{tabular}{@{}r@{}c@{}l@{}}% Display the N-hand only with token 'N', or no token at all
& \IfNoValueTF{#4}{\ODw@Nhand}{\ifthenelse{\equal{#4}{N}}{\ODw@Nhand}{}{}} & \\
& \usebox{1} & \\
% Display the S-hand only with token 'S', or no token at all
& \IfNoValueTF{#4}{\ODw@Shand}{\ifthenelse{\equal{#4}{S}}{\ODw@Shand}{}{}} & \\
\ODw@ProcessFooter{3}% span 3 columns
\end{tabular}\
\IfBooleanTF{#2}{% necessary for \ODw@CondNewLine
\setlength{\ODw@Bid@Width}{\wd\ODw@BidBox}\ODw@CondNewLine%
Define the diagram, showing the cards for the E–W hands.

\showEW** + \text{[pos]} (E/W)

Display the EW diagram, defined by \easthand, etc
* Version: Display the diagram centered
+ Version: Also display a bidding diagram
pos: aligning, default c
E/W: only E-hand (or W-hand) is to be displayed

Description: similar to \showAll

% For all suits put all cards of east and west together
\gdef\ODw@Spades{\ODw@ESpades\ODw@WSpades}%
\gdef\ODw@Hearts{\ODw@EHearts\ODw@WHearts}%
\gdef\ODw@Diamonds{\ODw@EDiamonds\ODw@WDiamonds}%
\gdef\ODw@Clubs{\ODw@EClubs\ODw@WClubs}%
\ODw@ChkSameCards{\ODw@Spades}{\Sp}%
\ODw@ChkSameCards{\ODw@Hearts}{\He}%
\ODw@ChkSameCards{\ODw@Diamonds}{\Di}%
\ODw@ChkSameCards{\ODw@Clubs}{\Cl}%
\IfBooleanTF#1{\begin{center}}{}%
\bgroup%
\setlength{\tabcolsep}{0em}%
\ODw@GameSize%
\ODw@TestIfEmpty{\ODw@HeaderText}{\ODw@EmptyHeader}%
\ODw@TestIfEmpty{\ODw@FooterText}{\ODw@EmptyFooter}%
\sbox0{%}
\begin{tabular}{@{}r@{}c@{}l@{}}%
\IfNoValueTF#4{\ODw@Whand}{\ifthenelse{\equal{#4}{W}}{\ODw@Whand}{}%}
& \ODw@Compass &
\IfNoValueTF#4{\ODw@Ehand}{\ifthenelse{\equal{#4}{E}}{\ODw@Ehand}{}%}
\end{tabular}%

67
Define the diagram, showing the cards for the N–E hands.

\showNE \showNE* +[\{pos\}]

1 2 3

Display the NE diagram, defined by \northhand, etc

* Version: Display the diagram centered

+ Version: Also display a bidding diagram

\begin{center}
\begin{tabular}{r@{}c@{}l}
\ODw@ProcessHeader{3}% span 3 columns
& & \\
% Display the W-hand only with token 'W', or no token at all
\IfNoValueTF{#4}{\ODw@Whand}{\ifthenelse{\equal{#4}{W}}{\ODw@Whand}{} } & \ODw@Compass &
% Display the E-hand only with token 'E', or no token at all
\IfNoValueTF{#4}{\ODw@Ehand}{\ifthenelse{\equal{#4}{E}}{\ODw@Ehand}{} } \\
\ODw@ProcessFooter{3}% span 3 columns
\end{tabular}
\end{center}
\IfBooleanTF#2{%
% necessary for \ODw@CondNewLine
\setlength{\ODw@Bid@Width}{\wd{\ODw@BidBox}}%
\ODw@CondNewLine%
\usebox{\ODw@BidBox}%
}\{}%
\egroup%
\IfBooleanTF#1{\end{center}}{}% showEW
Define the diagram, showing the cards for the N–W hands.

\showNW ** ([pos])

Display the NW diagram, defined by \northhand, etc
* Version: Display the diagram centered
+ Version: Also display a bidding diagram
pos: aligning, default c
Description: similar to \showAll

% For all suits put all cards of north and west together
\gdef\ODw@Spades{\ODw@NSpades\ODw@WSpades}
6.2.9 The Compass

When displaying the compass, the square with N-S and E-W axes, we try to achieve several things:

1. Making the size font-size dependent
2. Put both N and S horizontally centered
3. Put both E and W vertically centered
4. Print the vulnerable side in red if in colored mode
5. Underline the dealer (we *underline* S for better clarity)

We use the mapping as shown in the tables below. The *u* stands for undefined. This reflects the situation where neither `\vulner` nor `\dealer` have been called, and also there is no board number known.

<table>
<thead>
<tr>
<th>Player</th>
<th>Vulner</th>
<th>Dealer</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>none</td>
<td>N</td>
</tr>
<tr>
<td>E</td>
<td>all</td>
<td>E</td>
</tr>
<tr>
<td>S</td>
<td>N-S</td>
<td>S</td>
</tr>
<tr>
<td>W</td>
<td>E-W</td>
<td>W</td>
</tr>
</tbody>
</table>

\begin{tabular}{|c|c|c|}
\hline
Player & Vulner & Dealer \\
\hline
N & none & N & 0 \\
E & all & E & 1 \\
S & N-S & S & 2 \\
W & E-W & W & 3 \\
\hline
\end{tabular}
We use a picture environment and set its size to 2.5em × 2.5em by setting the \PicSize to 500 and the unitlength to 0.005em. Doing this enables us the avoid floating point arithmetic in the calculations of positions. Both \PicSize and \MidSize are local to \ODw@Compass and skipped from indexing. The same goes for \Hoffset and \Voffset.

\ODw@CompassDefault% use the compass font
\def\PicSize{500}%
\def\MidSize{250}%
% Multiply unitlength=0.005em with CompSize (default= 1)
\setlength\unitlength{0.005em * \real{\ODw@CompSize}}%
\ODw@setlength\ODw@Compasssize\unitlength * \PicSize + 2ex}%
\def\Hoffset{30}% distance between W (E) and frame
\def\Voffset{30}% distance between N (S) and frame
\setlength\ODw@Tmp@Width{0.1em * \real{\ODw@CompLine}}%
% leave 1ex space on all sides
\parbox[c]{\ODw@Compasssize}{\ODw@Compasssize}{%
\ODw@Print\{\langle player-code\rangle\}

\ODw@Print prints N, E, S and W in the compass. The side that is vul-
nerable is printed in red (or italics if we are monochrome), otherwise in black. The dealer is under- or overlined. The \texttt{ifcase} distinguishes between the players. Then dealership and vulnerability are tested. \texttt{\textbackslash ODw@PrintColor} is called to actually print the player.

\newcommand\ODw@Print[1]{%
\ODw@Print\{player-code\}
1 (player-code=0-3)
\bgroup
\smaller\smaller%
\ifcase#1% #1=0: print N
\ifboolexpr{ test \{ifnumcomp\{\ODw@D\}={}=0\}}%
  {\% dealer = N
  \ifboolexpr{ test \{ifnumcomp\{\ODw@V\}={}=1\}} or%
  test \{ifnumcomp\{\ODw@V\}={}=2\} }
  {\ODw@PrintColor\{\underline{\ODw@N*}\}}% Vul
  \{\underline{\ODw@N*}\} not Vul
  %{\% dealer <> N
  \ifboolexpr{ test \{ifnumcomp\{\ODw@V\}={}=1\}} or%
  test \{ifnumcomp\{\ODw@V\}={}=2\} }
  {\ODw@PrintColor\{\ODw@N*\}}% Vul
  \{\ODw@N*\} not Vul
  }
\or% #1=1: print E
\ifboolexpr{ test \{ifnumcomp\{\ODw@D\}={}=1\}}%
  {\% dealer E
  \ifboolexpr{ test \{ifnumcomp\{\ODw@V\}={}=1\}} or%
  test \{ifnumcomp\{\ODw@V\}={}=3\} }
  {\ODw@PrintColor\{\underline{\ODw@E*}\}}% Vul
  \{\underline{\ODw@E*}\} not Vul
  %{\% dealer <> E
  \ifboolexpr{ test \{ifnumcomp\{\ODw@V\}={}=1\}} or%
  test \{ifnumcomp\{\ODw@V\}={}=3\} }
  {\ODw@PrintColor\{\ODw@E*\}}% Vul
  \{\ODw@E*\} not Vul
  }
\or% #1=2: print S
\ifboolexpr{ test \{ifnumcomp\{\ODw@D\}={}=2\}}%
  {\% dealer S
  \ifboolexpr{ test \{ifnumcomp\{\ODw@V\}={}=1\}} or%
  test \{ifnumcomp\{\ODw@V\}={}=2\} }
  \{\ODw@PrintColor\{}}}
\ensuremath{\overline{\text{mbox{\ODw@S*}}}}\% Vul
\{\ensuremath{\overline{\text{mbox{\ODw@S*}}}}\% not Vul
\}% dealer <> S
\ifboolexpr{ test {\ifnumcomp{\ODw@V}{=}{1}} or%
 test {\ifnumcomp{\ODw@V}{=}{2}} }%
{\ODw@PrintColor{\ODw@S*}}% Vul
{\ODw@S*}% not Vul
\}%
\or% #1=3: print W
\ifboolexpr{ test {\ifnumcomp{\ODw@D}{=}{3}}}%
{% dealer W
 \ifboolexpr{ test {\ifnumcomp{\ODw@V}{=}{1}} or%
 test {\ifnumcomp{\ODw@V}{=}{3}} }%
{\ODw@PrintColor{\underline{\ODw@W*}}}% Vul
{\underline{\ODw@W*}}% not Vul
% dealer <> W
\ifboolexpr{ test {\ifnumcomp{\ODw@V}{=}{1}} or%
 test {\ifnumcomp{\ODw@V}{=}{3}} }%
{\ODw@PrintColor{\ODw@W*}}% Vul
{\ODw@W*}% not Vul
}%
\fi% (ifcase#1)
\egroup%
}% ODw@Print

\ODw@PrintColor{\ODw@PrintColor{\{N|E|S|W\}}}

\ODw@PrintColor checks if we are in monochrome mode. If that is the
case we print N, E, S or W in italics, otherwise in color.

\newcommand{\ODw@PrintColor}{\%
 \ifODw@monochrome{textit{#1}}\else{textcolor{red}{#1}}\fi%
}% ODw@PrintColor

Hook to write something in the middle of the compass. We write
what is stored in \ODw@CompMid a bit smaller than the N-S and E-W
letters. \ODw@mid writes the contents of \ODw@CompMid in the middle
of the compass. As there is only very limited room, this text should
be very short. It is primarily meant to write just a board number in
the compass.

\ODw@CompMid

1174 \def{\ODw@CompMid{}}
1175 \def{\ODw@mid{\{\smaller\smaller\smaller\ODw@CompMid{}}}
Here we implement several macros that add some board information to the card diagram. \ODw@BoardText serves as a variable to store the user-defined or (by means of the board number) auto-generated text, concerning the board. The macro \boardnr has 1 mandatory argument. If it is a number, it is considered to be the board number. The dealer and which side is vulnerable is then calculated from it and stored by calling \dealer resp. \vulner. If it is not a positive integer, it is considered user-defined text which is stored ‘as is’ in \ODw@BoardText. The contents can be retrieved by the user by calling \boardtext to actually print the board information.

\newcommand{\ODw@BoardText}{% \bgroup \setlength{\fboxsep}{0pt} \setlength{\fboxrule}{0.1em} \fbox{\rule{0mm}{0.7em}\rule{0.7em}{0mm}} \egroup} % ODw@Box

6.2.10 Diagram Conditions

\def\ODw@BoardText{}

\boardtext* has only 1 token and no arguments. The unstarred form outputs only the text stored in \ODw@BoardText, this is normally a board number. \boardtext* outputs something like ‘Board: 23’.

\newcommand{\boardnr}[1]{% \IfBooleanTF#1{\translate{Board-(ODw)}:,$\ODw@BoardText$} {$\ODw@BoardText$} % boardtext

\boardnr{Nr} sets the dealership and vulnerability according to Nr. As the system repeats itself after the 16th board, we canonize Nr to the range of 1–16. We also set \ODw@BoardText accordingly. For the association between boardnumber and dealer/vulner, see file Compass of the onedown-example collection.

\newcommand{\boardnr}{1}%

76
The next macros are used to add some game information above resp. below the card diagram. \ODw@HeaderText and \ODw@FooterText are used as variables to store the user-defined text.
The next macros are used to add some game information in the corners of the card diagram. We use a \texttt{tabular} with 1 column and 3 lines to do so.

We redefine the (originally empty) \texttt{Left[Upper/Lower]-} and \texttt{Right[Upper/Lower]Text}, and set it to the wanted value. The first (optional) parameter defines some horizontal extra space if the hand and a condition text collide. The commands have 3 mandatory arguments, each for 1 of the 3 condition lines, which may be empty.

```latex
\leftupper\leftupper[\langle h-offset\rangle]{\langle line1\rangle}{\langle line2\rangle}{\langle line3\rangle}
```

```latex
\def\ODw@LeftUpperText{}
\newcommand\leftupper[4][0pt]{%\gdef\ODw@LeftUpperText{%\hspace{-#1}%\begin{tabular}
```

```latex
\rightupper\rightupper[\langle h-offset\rangle]{\langle line1\rangle}{\langle line2\rangle}{\langle line3\rangle}
```

```latex
\def\ODw@RightUpperText{}
```

\newcommand\rightupper[4][0pt]{% 
\gdef\ODw@RightUpperText{% 
\hspace{#1}% 
\begin{tabular}[t]{l}#2\#3\#4\end{tabular}% 
} % rightupper

\rightlower
\def\ODw@RightLowerText{}
\newcommand\rightlower[4][0pt]{% 
\gdef\ODw@RightLowerText{% 
\hspace{#1}% 
\begin{tabular}[b]{l}#2\#3\#4\end{tabular}% 
} % rightlower

\ODw@ProcessHeader
\ODw@ProcessHeader[\langle N \rangle]
\ODw@ProcessHeader[\langle h\text{-}offset \rangle]{\langle \text{l}s\text{ne}1 \rangle}{\langle \text{l}s\text{ne}2 \rangle}{\langle \text{l}s\text{ne}3 \rangle}

\def\ODw@RightLowerText{}
\newcommand\rightlower[4][0pt]{% 
\gdef\ODw@RightLowerText{% 
\hspace{#1}% 
\begin{tabular}[b]{l}#2\#3\#4\end{tabular}% 
} % rightlower

\ODw@ProcessHeader
\ODw@ProcessHeader[\langle N \rangle]
\ODw@ProcessHeader[{\langle h\text{-}offset \rangle}]{\langle \text{l}s\text{ne}1 \rangle}{\langle \text{l}s\text{ne}2 \rangle}{\langle \text{l}s\text{ne}3 \rangle}

Programmers note: \ifODw@EmptyHeader% Must be this way (StackExchange) %ifODw@EmptyHeader% else% |ifthenelse| bites |\multicolumn|!

So the test of the emptiness of Header- and FooterText is done out of the tabular. Why is (La)TeX always causing unexpected problems?:-(
We set the headline/footline text to the width of the diagram with a solution found at:


\ifODw@EmptyHeader% Must be this way (StackExchange) %else% |ifthenelse| bites |\multicolumn|!

\multicolumn{#1}{% 
p{\dimexpr\ODw@Diagram@Width-% 
2\tabcolsep-2\arrayrulewidth}% 
\{{\ODw@LegendFont\ODw@HeaderText}}\% 
\fi% 
\ODw@ProcessHeader
\texttt{\ODw@TestIfEmpty}\{\langle Str \rangle}\{\langle Bool \rangle\}

Tests the emptiness of a string.

\begin{verbatim}
1264 \newcommand\{\ODw@TestIfEmpty\}[2]{%
\ODw@TestIfEmpty\{Str\}\{Bool\}
  sets boolean Bool to true if string Str is empty
1265  \ifthenelse{\equal{#1}{}}{%\%
1266   \setboolean{#2}{true}}{%\%
1267   \setboolean{#2}{false}%
1268  }%
1269 }% \ODw@TestIfEmpty
\end{verbatim}

\texttt{\ODw@ProcessFooter}\{\langle N \rangle\}

\ODw@ProcessFooter\[N\] puts FooterText in a multicolumn which spans \(N\) columns.

\begin{verbatim}
1270 \newcommand\{\ODw@ProcessFooter\}[1]{%
1271  \ifODw@EmptyFooter% Must be this way (StackExchange)
1272  \else% \|ifthenelse| bites |\multicolumn|!!
1273   \multicolumn{#1}{%\%
1274     p{\dimexpr\ODw@Diagram@Width%\%
1275       -2\tabcolsep-2\arrayrulewidth}%
1276     }{{\ODw@LegendFont\ODw@FooterText}}\%
1277  \fi%
1278 }% \ODw@ProcessFooter
\end{verbatim}

\texttt{\handskip}\{\langle length \rangle\}

\handskip adds \langle length \rangle to SkipWidth, i.e. the distance between the card diagram (with or without the east hand) and the bidding diagram.

\begin{verbatim}
1279 \newcommand\{\handskip\}[1]{%
1280  \def\ODw@Skipwidth{1em + #1}% recalculate the new Skipwidth
1281  \setlength\ODw@Skip@Width{\ODw@Skipwidth}%
1282 }% handskip
\end{verbatim}

\texttt{\ODw@DealerText}

Typesets the string \textit{Dealer}.

\begin{verbatim}
1283 \def\ODw@DealerText{%
1284  \bgroup%
1285  \ODw@OtherFont\translate{Dealer-(ODw)}%
1286  \egroup%
1287 }% \ODw@DealerText
\end{verbatim}
Typesets the string `vulnerable` or `Vul`.

```
\NewDocumentCommand\ODwVulnerText{s t!}{%
  \bgroup
  \ODwOtherFont%
  \IfBooleanTF#1{% 
    \IfBooleanTF#2{% 
      \translate{Vul-(ODw)}% 
    }{ 
      \translate{Vulnerable-(ODw)}% 
    }% 
  }{ 
    \IfBooleanTF#2{% 
      \translate{vul-(ODw)}% 
    }{ 
      \translate{vulnerable-(ODw)}% 
    }% 
  }% 
  \egroup
  \xspace%
%
```

```
\ODwAwardText
Typesets the text to be put as 'title' in the award part of a expert quiz.
\def\ODwAwardText{\textsf{\translate{Award-(ODw)}}}
```

```
\dealer
\def\ODwDealer\North*
```

```
\vulner
\def\ODwVulner\NorthSouth
```

\newcommand\dealer[1][]{\ifthenelse{\equal{#1}{}% 
  \ODwDealer% 
  \gdef\ODwDealer{#1}%%
}{\ODwDealer}}

\newcommand\vulner[1][]{\ifthenelse{\equal{#1}{}% 
  \ODwVulner% 
  \gdef\ODwVulner{#1}%%
}{\ODwVulner}}

```
\def\ODwDealer\North%
```

```
\def\ODwVulner\NorthSouth%
```

81
6.3 The Bidding Environments

6.3.1 Special Columntypes

In order to automatically apply a macro call on all cell contents of a column (translate/convert; step a counter) in bidding and play diagrams, we define newcolumntypes, made possible by loading package collectcell. We define next columntypes:
B: Transfers suits and cards (bidding and play)
F: sets First column in play diagrams
P: Transfers suits and cards, accumulates won tricks (play)

\newcolumntype{B}{% for Biddings >\{\collectcell\ODw@BTfer\}c<\{\endcollectcell\}}
\newcolumntype{F}{% for First column in |play| diagrams >\{\collectcell\ODw@FTfer\}c<\{\endcollectcell\}}
\newcolumntype{P}{% for |Play| diagrams (2nd--4th column) >\{\collectcell\ODw@PTfer\}c<\{\endcollectcell\}}

6.3.2 The Hidden Implementation

As explained before, in the bidding diagrams we convert $S$ to the spade symbol ♠, etc. We do need packages array and collectcell for this and define the columntype B. In order to avoid these conversions in the top row, where names are displayed, we use the \cci-trick to suppress expansion of the cell macro. Curiously the command \cci (from collectcell, v0.5, 2011/02/27) sometimes produces unwanted characters. The reason is unknown to me. We use a space (" ") as first character in \cci to avoid this.

We store the bidding diagram without the explanations in a box, so we can calculate the width of the bidding diagram and make our explanation part exactly as wide. In the first row we write the bidders: North etc. (or \textit{N}, if it has to be short). In the second row we write the real world names of the bidders, if given. If any description is given, we make a multicolumn over the 4 rows with the previously stored width to write the explanations. We also use this width to calculate whether the bidding diagram will fit on the actual line. If not, we put it on a new line.

\begin{ODw@Bidding}[2][t]{% for Biddings
\def\xspace{}% \setlength\tabcolsep{0.2em}%
\begin{tabular}{BBBB}% 1st column
\ifODw@Bidders% \cci{ % there MUST be a ’ ’ (space)
\ODw@BidderFont%
\ifODw@short\ODw@BidderI%
\else\ODw@BidderI*%
\end{ODw@Bidding}
\newenvironment{ODw@Biddingpair}[2][t]{%  
def\xspace{}
\setlength{\tabcolsep}{0.2em}
\sbox{0}{%
\begin{tabular}{#1}{BB}% 1st column
\ifODw@Bidders%
  \cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderI%
  \else\ODw@BidderI*%
  \fi%
} &% 2nd column
\cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderIII%
  \else\ODw@BidderIII*%
  \fi%
}\end{tabular}%
\sbox{0}{%}
\setcounter{ODw@Nr}{0}
\setlength{\ODw@Bid@Width}{\wd0}%
\global\sbox{ODw@BidBox}{%
\begin{tabular}{#1}{BB}% 1st column
\ifODw@Bidders%
  \cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderI%
  \else\ODw@BidderI*%
  \fi%
} % \cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderIII%
  \else\ODw@BidderIII*%
  \fi%
}% end of first row
\if\ODw@All@Names\empty%
\else% 2nd row
  \cci{ \ODw@NameFont\ODw@NameI} &% please mind
  \cci{ \ODw@NameFont\ODw@NameIII} \% the spaces!
\fi%
\ifODw@BidLine\hline\fi%
\fi%
\cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderI%
  \else\ODw@BidderI*%
  \fi%
}% end of tabular%
\setcounter{ODw@Nr}{0}
\setlength{\ODw@Bid@Width}{\wd0}%
\global\sbox{ODw@BidBox}{%
\begin{tabular}{#1}{BB}% 1st column
\ifODw@Bidders%
  \cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderI%
  \else\ODw@BidderI*%
  \fi%
} % \cci{ % there MUST be a ’ ’ (space)
  \ODw@BidderFont%
  \ifODw@short\ODw@BidderIII%
  \else\ODw@BidderIII*%
  \fi%
}% end of first row
\if\ODw@All@Names\empty%
\else% 2nd row
  \cci{ \ODw@NameFont\ODw@NameI} &% please mind
  \cci{ \ODw@NameFont\ODw@NameIII} \% the spaces!
\fi%
\ifODw@BidLine\hline\fi%
\fi%}
\end{ODw@Biddingpair}

Description: Similar to ODw@Bidding
6.4 The User Environments

6.4.1 Bidding

The bidding environments have 2 optional arguments: an alignment \( \langle \text{pos} \rangle \) and an annotation \( \langle \text{description} \rangle \). There are also 3 tokens: the \( \ast \) centers the bidding diagram, the \( + \) forces the short notation, i.e. \textbf{N} rather than \textbf{North} and the \( - \) suppresses all output. \texttt{\textbackslash ODw@GameSize} takes care of the font dependent sizing of the diagram. We locally redefine \texttt{\textbackslash thefnotenote} and reset the (general) counter \texttt{\textbackslash ODw@Nr}, which is stepped in \texttt{\textbackslash markit} and \texttt{\textbackslash explainit} to make the annotations correspond. In the end code we define a multicolumn over all 4
(2) columns and write the annotation given in argument #2. With \(p\{...\}\) care is taken to limit this text to the width of the diagram.

```
bidding
\begin{bidding} *!- [pos] ((description)) \ldots \end{bidding}
```

```
\NewDocumentEnvironment{bidding}{s t! t- O{c}d()}{%  \begin{bidding} * ! - [pos] (description)
\hspace{1.2cm} 1 2 3 4 5
\end{bidding}
```

The 1st token (*) centers the environment; the 2nd token (t) switches to the short notation in the table header; the 3rd token (-) suppresses the output. Argument 4 regulates the alignment of the table (default is c and the 5th argument contains the annotations of the bidding. Argument 2 is the name of the table.

```
biddingpair
\begin{biddingpair} *!- [pos] ((description)) \ldots \end{biddingpair}
```

```
\NewDocumentEnvironment{biddingpair}{s t! t- O{c}d()}{%  \begin{biddingpair} * ! - [pos] (description)
\hspace{1.2cm} 1 2 3 4 5
\end{biddingpair}
```

The same as with environment bidding, only with 2 columns instead of 4.
6.4.2 Play

Environment play displays the sequence of playing tricks. It uses 2 newcolumntypes:

\begin{itemize}
  \item \texttt{F} to increment and display the current row.
  \item \texttt{P} to translate an convert suits/ranks.
\end{itemize}

\texttt{\ODw@AccTricks} calculates and shows the accumulated tricks in play that N-S and E-W has won. The winning card is detected automatically and \texttt{\ODw@LastTrick} is called to process the winning trick for whichever side won it (N-S or E-W) by stepping the counter for the winning side. The counter \texttt{\ODw@Player} denotes the player who won the trick. From the player who leads and the position that wins we calculate the winning player and step the counter for his side.

\begin{verbatim}
\def\ODw@AccTricks{%
  \ODw@LastTrick{\ODw@Last}{\theODw@WinningNr}%
  \ODw@append{\theODw@NSCnt,\theODw@EWCnt,}% store counters
  \setcounter{ODw@Highest}{0}% reset for next trick
}% ODw@AccTricks
\end{verbatim}

This macro is automatically called in TableII for column 1. This column displays the player who had the lead. It essentially 1) resets the \texttt{ODw@PlayerNr} which will be stepped for each next column in search for the winning card 2) remembers in \texttt{ODw@Last} who had the lead. From these two values we can later calculate who won this trick. The stepping of \texttt{ODw@PlayerNr} occurs in \texttt{ODw@Tfer}.

\begin{verbatim}
\def\ODw@Tricks{%
\end{verbatim}

89
This macro is called by \ODw@AccTricks. It computes who won the last trick and steps the corresponding counter.

\newcommand\ODw@LastTrick[2][]{% 
\ODw@LastTrick{Player}{Pos}
\}

Consider the following table, where the seats are in horizontal direction, starting with the player who leads in seat 1. Vertically, in the first column, we have an initial value, stored in ODw@Cnt which is associated with the leading player.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>W</td>
<td>N</td>
<td>E</td>
<td>S</td>
</tr>
<tr>
<td>1</td>
<td>N</td>
<td>E</td>
<td>S</td>
<td>W</td>
</tr>
<tr>
<td>2</td>
<td>E</td>
<td>S</td>
<td>W</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td>S</td>
<td>W</td>
<td>N</td>
<td>E</td>
</tr>
</tbody>
</table>

If we add this initial value to the seat where the trick is won, then the result gives us the player who won the trick. Suppose that e.g. S had the lead, so ODw@Cnt = 3. Suppose also that seat number 3 wins the trick. The sum equals 6 and this is the seat of N. For clarity these sums are displayed in the table as superscripts to the players.

First we set the counter ODw@Cnt to the player who has the lead and add the seat number (#2) to it. We then store who has the next lead in \ODw@NextLead and increment the counter of the winning side.
Finally we define environment $\texttt{play}$. It consists primarily of these 3 tables, the middle one with the special newcolumntype $\texttt{P}$. We reset the counter for the running line (=trick) $\texttt{ODw@Nr}$ and the winning trick counters for $\texttt{N-S}$ and $\texttt{E-W}$: $\texttt{ODw@NSCnt}$ and $\texttt{ODw@EWCnt}$. As usual $\texttt{ODw@GameSize}$ takes care for the correct sizing. The first row (the title row) is displayed using the $\texttt{cci}$ method. The 3th table gets a stacked N/S and E/W title.

\begin{verbatim}
\NewDocumentEnvironment{play}{s mO{N}}{\% #1 --> s center
% #2 --> m lead
% #3 --> O trumpsuit (default NoTrump)
\def\ODw@TrumpSuit{#3}
\gdef\ODw@NextLead{#2}\%
\setcounter{ODw@Nr}{0}\%
\setcounter{ODw@NSCnt}{0}
\setcounter{ODw@EWCnt}{0}\%
\ODw@GameSize%\ODw@Scratch{}% make empty
\let\ODw@Clubs\empty%
\let\ODw@Diamonds\empty%
\let\ODw@Hearts\empty%
\let\ODw@Spades\empty%
\% We need some data which is calculated in TableII
\% to create TableI and TableIII. So we put TableII in a
\% box and display it later at due time
\def\ODw@EXtra{0.9em}\% white space in title
\provideenvironment{TableII}{%}
\end{verbatim}
\begin{tabular}[b]{FPPP}
\multicolumn{1}{c}{\translate{Lead!-(ODw)}} &
\cci{\translate{2nd-(ODw)}} &
\cci{\translate{3rd-(ODw)}} &
\cci{\translate{4th-(ODw)}} \\
\hline
\multicolumn{4}{c}{}
\end{tabular}

% TableII

% Check consistency of the played cards
\ODw@ChkSameCards{\ODw@Spades}{\Sp}\
\ODw@ChkSameCards{\ODw@Hearts}{\He}\
\ODw@ChkSameCards{\ODw@Diamonds}{\Di}\
\ODw@ChkSameCards{\ODw@Clubs}{\Cl}

% We need TableI to show the running trick number. When constructing Table II, the total number of tricks that were actually displayed is available in counter \theODw@Nr. So we just need to loop \theODw@Nr times and write the local counter value \theODw@Cnt. To avoid the extra line problem we use the solution from: https://tex.stackexchange.com/questions/50296/problem-with-using-loop-inside-the-tabular-environment/142562#142562

\begin{tabular}[b]{r}
\cci{\translate{Nr-(ODw)}}
\hline
\setcounter{ODw@Cnt}{1}
\whiledo{\theODw@Cnt<\theODw@Nr}{%
\theODw@Cnt\%\else\stepcounter{ODw@Cnt}\%\fi
\theODw@Cnt\%\else\stepcounter{ODw@Cnt}\%\fi
\theODw@Cnt\%\else\stepcounter{ODw@Cnt}\%\fi
% (the extra line problem)
We use TableIII to show the winning trick counts. These are already stored in a CSV-list \ODw@Scratch, implemented as a token register. To process this list we use \docsvlist and must only define our \do. As this table has 2 columns, we check with \ODw@Nr that after an item is read, we put an & and after the next item a \\.

\begin{tabular}{|cc|} \hline
\cci{\scriptsize\shortstack{\North*!\
South*!}} & \cci{\scriptsize\shortstack{\East*!\
West*!}} \\
\hline
\end{tabular}

6.5 Card Diagrams with Bidding

\ODw@CondNewLine\[⟨offset⟩\]

\NewDocumentCommand\ODw@CondNewLine{O{0em}}{\ODw@CondNewLine
forces a newline if the bidding diagram does not fit on the line, taking into account the width of the card diagram and the width of the bidding diagram. Otherwise the bidding diagram appears to the right of the card diagram at distance \ODw@Skip@Width. We call the global macro \ODw@Diagram@Width that contains the width of the
card diagram. The optional parameter of \ODw@CondNewLine is used to add some extra offset if needed.

\setlength{\ODw@Skip@Width}{\ODw@Bid@Width}\% needed to relate skips to the font-size
\addtolength{\ODw@Tmp@Len}{\ODw@Bid@Width}\%
\addtolength{\ODw@Tmp@Len}{\ODw@Diagram@Width}\%
\addtolength{\ODw@Tmp@Len}{#1}\
\addtolength{\ODw@Tmp@Len}{\ODw@Skip@Width}\
\ifthenelse{\lengthtest{\ODw@Tmp@Len > \textwidth}}{\hspace{\ODw@Skip@Width}}{}
\NewDocumentCommand{\expertquiz}{st! O{}}{\expertquiz* ![comment]{award}}

6.6 The Expert Quiz

The macro \expertquiz displays a hand, a bidding diagram and the award for the answers. Optionally a description can be added. The hand and the bidding have to be defined before. This is done to avoid having 4 more arguments, needed for specifying the hand. The token ‘*’ centers the whole and the token ‘!’ forces that the bidding diagram appears on a new line and that the hand shifts a bit to the right. The last parameter defines the award. In order to limit the width of the award we use the known widths of the bidding diagram and the hand and set the parbox accordingly to display the award.

\NewDocumentCommand{\expertquiz}{st! O{}}{\expertquiz* ![comment]{award}}

12 3 4
\expertquiz* ![comment]{award}

12 3 4
\noindent%
\IfBooleanTF!{\begin{center}}{% "*" detected
{\par\vspace{0.5\baselineskip}}%
\bgroup% keep font changes local (e.g. \smaller).
\ODw@LegendFont%
\ifx#3\empty\else#3\par\fi%
\egroup%
6.7 Resetting the Game

We use \texttt{pgfkeys} with its \texttt{<key>=<val>} system to specify the fonts and other things that we want to have as defaults, rather than the initial \texttt{OneDown} values. Therefore we first define the keys and the store for it.

\begin{verbatim}
\pgfkeys{%
/ODw/.is family, /ODw,
% fonts
bidder/.store in = /ODw@BidderDefault,
compass/.store in = /ODw@CompassDefault,
game/.store in = /ODw@GameDefault,
legend/.store in = /ODw@LegendDefault,
name/.store in = /ODw@NameDefault,
other/.store in = /ODw@OtherDefault,
% compass
compline/.store in = /ODw@CompLine,
compmid/.store in = /ODw@CompMid,
compsize/.store in = /ODw@CompSize,
\end{verbatim}

\ODw@set{compshow/.is choice}
\ODw@set{compshow/off/.code={\ODw@CompShowfalse}}
\ODw@set{compshow/on/.code={\ODw@CompShowtrue}}
\ODw@set{compturn/.is choice}
\ODw@set{compturn/off/.code={\ODw@CompTurnfalse}}
\ODw@set{compturn/on/.code={\ODw@CompTurntrue}}
\ODw@set{bidders/.is choice}
\ODw@set{bidders/off/.code={\ODw@Biddersfalse}}
\ODw@set{bidders/on/.code={\ODw@Bidderstrue}}
\ODw@set{bidfirst/.is choice}
\ODw@set{bidfirst/N/.code=\ODw@FirstBidCol{N}}
\ODw@set{bidfirst/E/.code=\ODw@FirstBidCol{E}}
\ODw@set{bidfirst/S/.code=\ODw@FirstBidCol{S}}
\ODw@set{bidfirst/W/.code=\ODw@FirstBidCol{W}}
\ODw@set{bidline/.is choice}
\ODw@set{bidline/off/.code={\ODw@BidLinefalse}}
\ODw@set{bidline/on/.code={\ODw@BidLinetrue}}
\ODw@set{bidlong/.is choice}
\ODw@set{bidlong/off/.code={\ODw@BidLongCallsfalse}}
\ODw@set{bidlong/on/.code={\ODw@BidLongCallstrue}}
\ODw@set{compshow/1/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compshow/true/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compturn/1/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compturn/true/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{bidline/1/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidfirst/1/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidfirst/true/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidlong/1/.code={\pgfkeys{/ODw/bidlong=on}}}
\ODw@set{bidlong/true/.code={\pgfkeys{/ODw/bidlong=on}}}
\ODw@set{compshow/0/.code={\pgfkeys{/ODw/compshow=off}}}
\ODw@set{compshow/false/.code={\pgfkeys{/ODw/compshow=off}}}
\ODw@set{compturn/0/.code={\pgfkeys{/ODw/compturn=off}}}
\ODw@set{compturn/false/.code={\pgfkeys{/ODw/compturn=off}}}
\ODw@set{bidders/0/.code={\pgfkeys{/ODw/bidders=off}}}
\ODw@set{bidders/false/.code={\pgfkeys{/ODw/bidders=off}}}
\ODw@set{bidline/0/.code={\pgfkeys{/ODw/bidline=off}}}
\ODw@set{bidline/false/.code={\pgfkeys{/ODw/bidline=off}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidders/1/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidline/true/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidline/1/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidfirst/true/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidfirst/1/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{compturn/true/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compturn/1/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compshow/true/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compshow/1/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidders/1/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidline/true/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidline/1/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidfirst/true/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidfirst/1/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{compturn/true/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compturn/1/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compshow/true/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compshow/1/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidders/1/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidline/true/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidline/1/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidfirst/true/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidfirst/1/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{compturn/true/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compturn/1/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compshow/true/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compshow/1/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidders/1/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidline/true/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidline/1/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidfirst/true/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidfirst/1/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{compturn/true/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compturn/1/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compshow/true/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compshow/1/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidders/1/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidline/true/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidline/1/.code={\pgfkeys{/ODw/bidline=on}}}
\ODw@set{bidfirst/true/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{bidfirst/1/.code={\pgfkeys{/ODw/bidfirst=on}}}
\ODw@set{compturn/true/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compturn/1/.code={\pgfkeys{/ODw/compturn=on}}}
\ODw@set{compshow/true/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{compshow/1/.code={\pgfkeys{/ODw/compshow=on}}}
\ODw@set{bidders/true/.code={\pgfkeys{/ODw/bidders=on}}}
\ODw@set{bidders/1/.code={\pgfkeys{/ODw/bidders=on}}}
The available keys are those defined in \pgfkeys some lines up from here. For the fonts they are: bidder, compass, game, legend, name and other. They store the new default value in the corresponding variable. In order to make the new default active, we must use \setdefaults* which will also call \resetfonts.

The keys for the compass are: compline, compmid, compshow, compsize and compturn. They control the thickness of the frame, the mid-text, the visibility of the compass, its size and the angle of the compass E–W letters.

For the bidding diagram we have: bidders, bidfirst, bidline and bidlong. They control if bidders are to be displayed at all, which bidder appears in the first column, draw a \hline below the header and showing long calls.

Furthermore defined elsewhere are the keys to control errors err and warnings warn, as well as the key to control the color e.g. of the symbols colors. Refer to section 3.1.3

\newgame resets and clears the stored game information to be ready for a new game. We do not reset the option for warn- and err-messages,
nor any selected font. Setting \boardnr{0} executes also: \ODw@BoardText{\vulner[-1]\dealer[-1]}. 

\newcommand\newgame{% 
\boardnr{0}\
\headlinetext{}\
\footlinetext{}\
% clear the left/right upper/lower stuff 
\gdef\ODw@LeftUpperText{}\
\gdef\ODw@LeftLowerText{}\
\gdef\ODw@RightUpperText{}\
\gdef\ODw@RightLowerText{}\
% clear the hands 
\gdef\ODw@Nhand{\ODw@hand{t}{}{}{}{}}\
\gdef\ODw@Ehand{\ODw@hand{c}{}{}{}{}}\
\gdef\ODw@Shand{\ODw@hand{b}{}{}{}{}}\
\gdef\ODw@Whand{\ODw@hand{c}{}{}{}{}}\
% set default for real bidders names: no names 
% we print only the symbolic names North, East, etc. 
% \namesNS{}{}\namesEW{}{}% 
% reset consistency check stuff 
% 
\gdef\ODw@Spades{}\
\gdef\ODw@Hearts{}\
\gdef\ODw@Diamonds{}\
\gdef\ODw@Clubs{}\
\gdef\ODw@NSpades{}\gdef\ODw@ESpades{}\
\gdef\ODw@SSpades{}\gdef\ODw@WSpades{}\
\gdef\ODw@NHearts{}\gdef\ODw@EHearts{}\
\gdef\ODw@SHearts{}\gdef\ODw@WHearts{}\
\gdef\ODw@NDiamonds{}\gdef\ODw@EDiamonds{}\
\gdef\ODw@SDiamonds{}\gdef\ODw@WDiamonds{}\
\gdef\ODw@NClubs{}\gdef\ODw@EClubs{}\
\gdef\ODw@SClubs{}\gdef\ODw@WClubs{}% 
} % newgame 

98
6.8 Error Handling

6.8.1 Consistency Checks

We perform different checks on consistency of the cards entered:

1. Check that a hand not has more than 13 cards (E)
2. Check that a hand doesn’t contain multiple cards (E)
3. Check that a deal doesn’t contain multiple cards (E)
4. Check that a hand has less than 13 cards (W)
5. check that a suit of a deal has more than 13 cards (E)
6. check that a suit of a deal has less than 13 cards (W)
7. In play diagrams: check that a card is played only once (E)

The checks marked with (E) raise an error, those marked with (W) raise a warning. They can be controlled with the package options \texttt{err} and \texttt{warn}.

\begin{verbatim}
\newcommand\ODw@ChkNrOfCards[2]{
\ODw@ChkNrOfCards{cards}{hand}
\}
\newcommand\ODw@PrErr[3]{
\ODw@PrErr{(rank)}{(count)}{(suit)}
\}
\end{verbatim}

This macro only outputs the warning/error if the card specified by
rank (#1) and suit (#3) does not occur (denoted by #2) exactly 1×. An exception for spotcards must not be made, because in \ODw@ChkSameCards they are not taken into account. (In fact they are already filtered out by ODw@translate).

\begin{Verbatim}
\newcommand\ODw@ChkSameCards[2]{% #1 = a string with all cards of 1 suit (denoted by #2) of all hands step 1: remove all "-" step 2: we count the frequency of all ranks 2--9,T,J,Q,K,A (ODw@CCnt) step 3: Warn if Freq(card) = 0 ; Err if Freq(card) > 1 (ODw@PrErr)
1826 \StrDel{#1}{-}[\ODw@CardStr]%
1827 \StrCount{\ODw@CardStr}{2}[\ODw@CCnt][\ODw@PrErr{2}][\ODw@CCnt]{#2}%
1828 \StrCount{\ODw@CardStr}{3}[\ODw@CCnt][\ODw@PrErr{3}][\ODw@CCnt]{#2}%
1829 \StrCount{\ODw@CardStr}{4}[\ODw@CCnt][\ODw@PrErr{4}][\ODw@CCnt]{#2}%
1830 \StrCount{\ODw@CardStr}{5}[\ODw@CCnt][\ODw@PrErr{5}][\ODw@CCnt]{#2}%
1831 \StrCount{\ODw@CardStr}{6}[\ODw@CCnt][\ODw@PrErr{6}][\ODw@CCnt]{#2}%
1832 \StrCount{\ODw@CardStr}{7}[\ODw@CCnt][\ODw@PrErr{7}][\ODw@CCnt]{#2}%
1833 \StrCount{\ODw@CardStr}{8}[\ODw@CCnt][\ODw@PrErr{8}][\ODw@CCnt]{#2}%
1834 \StrCount{\ODw@CardStr}{9}[\ODw@CCnt][\ODw@PrErr{9}][\ODw@CCnt]{#2}%
1835 \StrCount{\ODw@CardStr}{T}[\ODw@CCnt][\ODw@PrErr{T}][\ODw@CCnt]{#2}%
1836 \StrCount{\ODw@CardStr}{J}[\ODw@CCnt][\ODw@PrErr{J}][\ODw@CCnt]{#2}%
1837 \StrCount{\ODw@CardStr}{Q}[\ODw@CCnt][\ODw@PrErr{Q}][\ODw@CCnt]{#2}%
1838 \StrCount{\ODw@CardStr}{K}[\ODw@CCnt][\ODw@PrErr{K}][\ODw@CCnt]{#2}%
1839 \StrCount{\ODw@CardStr}{A}[\ODw@CCnt][\ODw@PrErr{A}][\ODw@CCnt]{#2}%
1840 \StrCount{\ODw@CardStr}{A}[\ODw@CCnt][\ODw@PrErr{A}][\ODw@CCnt]{#2}%
1841 \StrCount{\ODw@CardStr}{A}[\ODw@CCnt][\ODw@PrErr{A}][\ODw@CCnt]{#2}%
1842 \newbool{ODw@Warnings}
\end{Verbatim}
6.9 Misc Bridge Terms

6.9.1 Honour Cards

These macros retrieve the translations of the 4 alternative forms of the honour cards from the ODw-dictionary of the active language.
% Ace
1880 \}
1881 \def\ace{\Ace*!}
\xspace
\egroup
\def\ace{\Ace*!}

% King
\NewDocumentCommand{\King}{s t!}{
\bgroup
%JW \ODw@GameFont%
\IfBooleanTF{#1}{% \IfBooleanTF{#2}{%
{\translate{K-(ODw)}}%
{\translate{King-(ODw)}}%
}%
\IfBooleanTF{#2}{%
{\translate{k-(ODw)}}%
{\translate{king-(ODw)}}%
}%
}\egroup
\xspace
\def\king{\King*!}

% Queen
\NewDocumentCommand{\Queen}{s t!}{
\bgroup
%JW \ODw@GameFont%
\IfBooleanTF{#1}{% \IfBooleanTF{#2}{%
{\translate{Q-(ODw)}}%
{\translate{Queen-(ODw)}}%
}%
\IfBooleanTF{#2}{%
{\translate{q-(ODw)}}%
{\translate{queen-(ODw)}}%
}%
}\egroup
\xspace
\def\queen{\Queen*!}
6.9.2 Vulnerability

These macros retrieve the translations of the 4 alternative forms of the commands \All and \None from the ODw-dictionary of the active language. As there is no short form for them in the English language, we just code these entries in the ODw-dictionaries with an exclamation mark '!'.

\All
\all
\NewDocumentCommand{\All}{s t!}{% 
\bgroup% 
\IfBooleanTF{#1}{ % 
\IfBooleanTF{#2} % 
{\translate{J-(ODw)}} % \translate{Jack-(ODw)}}% % 
\egroup% 
\xspace% % Jack % 
def\all{\All*!}

\None
\none
\NewDocumentCommand{\None}{s t!}{% 
\bgroup% 
\IfBooleanTF{#1}{ % 
\IfBooleanTF{#2} % 
{\translate{j-(ODw)}} % \translate{jack-(ODw)}}% % 
\egroup% 
\xspace% % None % 
def\none{\None*!}
6.9.3 Diagram Annotations

These macros retrieve the translations of the 4 alternative forms of the commands \Contract, \Lead, \Declarer, \Board and \Deal from the ODw-dictionary of the active language.
\NewDocumentCommand{\Contract}{s t!}{
\bgroup
\ODw@OtherFont
\IfBooleanTF{#1}{%
  \IfBooleanTF{#2}{%
    \translate{Contr-(ODw)}%
  }{%
    \IfBooleanTF{#2}{%
      \translate{contract-(ODw)}%
    }{%
      \translate{contr-(ODw)}%
    }
  }
}\egroup
\xspace%
}
\def\contract{\Contract*}
%
\NewDocumentCommand{\Lead}{s t!}{
\bgroup
\ODw@OtherFont
\IfBooleanTF{#1}{%
  \IfBooleanTF{#2}{%
    \translate{Lead-(ODw)}%
  }{% else #1
    \IfBooleanTF{#2}{%
      \translate{lead-(ODw)}%
    }{% #1
      \egroup
    }
  }
}\egroup
\xspace%
}
\def\lead{\Lead*}
%
\NewDocumentCommand{\Declarer}{s t!}{
\bgroup
\ODw@OtherFont
\IfBooleanTF{#1}{%
  \IfBooleanTF{#2}{%
    \translate{Declarer-(ODw)}%
  }{%
    \translate{declarer-(ODw)}%
  }
}\egroup
\xspace%
}
\def\declarer{\Declarer*}

\Lead
\lead
\Declarer
\declarer
\IfBooleanTF{#2}{%\translate{Decl-(ODw)}}{%2018 \{\translate{Declarer-(ODw)}}\}%\IfBooleanTF{#2}{%\translate{decl-(ODw)}}{%2022 \{\translate{declarer-(ODw)}}\}%\egroup\xspace\ declarer\{\Declarer*\}\% by
\newcommand\by{%\bgroup\ODw@OtherFont\\translate{by-(ODw)}}\egroup\xspace\ by
\Board\board\NewDocumentCommand{\Board}{s t!}{%\bgroup\ODw@OtherFont\IfBooleanTF{#1}{%\IfBooleanTF{#2}{%\translate{Brd-(ODw)}}{%\translate{Board-(ODw)}}\}%\egroup\xspace\ Board\% by
\def\board{\Board*}\% Board\% by
\def\declarer{\Declarer*}\% Declarer
The commands \texttt{\doubled} and \texttt{\redoubled} do not have a short form.
6.9.4 Point Units

These macros retrieve the translations of the commands \hpts, \lpts, \dpts and \tpts from the ODw-dictionary of the active language.

\hpts
\HCP 2092 \NewDocumentCommand{\hpts}{s t!}{% 2093 \bgroup% 2094 \ODw@OtherFont% 2095 \IfBooleanTF{#1}{% 2096 \IfBooleanTF{#2}{% 2097 {\translate{HCP-(ODw)}}{\translate{High Card Points-(ODw)}}}% 2098 {% }% 2099 \IfBooleanTF{#2}{% 2100 {\translate{hcp-(ODw)}}{\translate{high card points-(ODw)}}}% 2101 }% 2102 \egroup% 2103 \xspace% 2104 \def\HCP{,\hpts*!}

\lpts
\LP 2109 \NewDocumentCommand{\lpts}{s t!}{% 2110 \bgroup% 2111 \ODw@OtherFont% 2112 \IfBooleanTF{#1}{% 2113 \IfBooleanTF{#2}{% 2114 {\translate{LP-(ODw)}}{\translate{Length Points-(ODw)}}}% 2115 {% }% 2116 \IfBooleanTF{#2}{% 2117 {\translate{lp-(ODw)}}{\translate{length points-(ODw)}}}% 2118 }% 2119 \egroup% 2120 \xspace% 2121 \def\LP{,\lpts*!}

\dpts
\HLP 2122 \def\HLP{,\group\ODw@OtherFont\translate{HLP-(ODw)}\egroup\xspace}
\dpts
\DP
\NewDocumentCommand{\dpts}{s t!}{%
  \bgroup
  \ODw@OtherFont
  \IfBooleanTF{#1}{%
    \IfBooleanTF{#2}{%
      {\translate{DP-(ODw)}}%}
    {\translate{Distribution Points-(ODw)}}%
  }%}
  \IfBooleanTF{#2}{%
    {\translate{dp-(ODw)}}%
  }%
  \egroup%
  \xspace%
} % Distribution Points
\def\DP{,\dpts*!}

\tpts
\TP
\NewDocumentCommand{\tpts}{s t!}{%
  \bgroup
  \ODw@OtherFont
  \IfBooleanTF{#1}{%
    \IfBooleanTF{#2}{%
      {\translate{TP-(ODw)}}%
    }{\translate{Total Points-(ODw)}}%
  }%
  \IfBooleanTF{#2}{%
    {\translate{tp-(ODw)}}%
  }%
  \egroup%
  \xspace%
} % Total Points
\def\TP{,\tpts*!}

6.9.5 Forcings

These macros retrieve the translations of the commands \gforce, \sforce, \nmforce, \tsforce and \fsforce from the ODw-dictionary of the active language.
\gforce \NewDocumentCommand{\gforce}{st!}{% \bgroup \ODw@OtherFont \IfBooleanTF{#1}{% \IfBooleanTF{#2}{\translate{GF-(ODw)}}{\translate{Game Forcing-(ODw)}}} \egroup \xspace} \def\GF{\gforce*!}

\sforce \NewDocumentCommand{\sforce}{st!}{% \bgroup \ODw@OtherFont \IfBooleanTF{#1}{% \IfBooleanTF{#2}{\translate{SF-(ODw)}}{\translate{Semi Forcing-(ODw)}}} \egroup \xspace} \def\SF{\sforce*!}

\nmforce \NewDocumentCommand{\nmforce}{st!}{% \bgroup \ODw@OtherFont \IfBooleanTF{#1}{% \IfBooleanTF{#2}{\translate{SF-(ODw)}}{\translate{Semi Forcing-(ODw)}}} \egroup \xspace} \def\NMF{\nmforce*!}
\IfBooleanTF{#2}\
{\translate{NMF-(ODw)}}\
{\translate{New Minor Forcing-(ODw)}}
\egroup\
xspace
\% New Minor Forcing
\%\def\NMF{\nmforce*!}

\NewDocumentCommand{\tsforce}{s t!}{\
\bgroup\
\ODw@OtherFont\
\IfBooleanTF{#1}{\
\IfBooleanTF{#2}{\translate{TSF-(ODw)}}\
{\translate{Third Suit Forcing-(ODw)}}}\
{\translate{tsf-(ODw)}}\
{\translate{third suit forcing-(ODw)}}\egroup\
xspace
\% Third Suit Forcing
\%\def\TSF{\tsforce*!}

\NewDocumentCommand{\fsforce}{s t!}{\
\bgroup\
\ODw@OtherFont\
\IfBooleanTF{#1}{\
\IfBooleanTF{#2}{\translate{FSF-(ODw)}}\
{\translate{Fourth Suit Forcing-(ODw)}}}\
{\translate{fsf-(ODw)}}\
{\translate{fourth suit forcing-(ODw)}}\egroup\
xspace
\% Fourth Suit Forcing
\%\def\FSF{\fsforce*!}
6.10 Initialization

It’s time to prepare everything. We clear the game and set the defaults.

\newgame

Set the default fonts

\setdefaults{bidder=\mdseries\sffamily}
\setdefaults{compass=\mdseries\sffamily}
\setdefaults{game=\bfseries\sffamily}
\setdefaults{legend=\mdseries\rmfamily}
\setdefaults{name=\mdseries\slshape}
\setdefaults{other=\bfseries\sffamily}

\setdefaults{colors=b+r}

Set the compass

\setdefaults{compshow=on,compturn=off}

set the start column for bidding (West is recommended) and the long form.

\setdefaults{bidfirst=W,bidders=on,bidlong=on}

Now we load the dictionaries for the languages that are to be used in the document. We use tracklang to iterate over all the document languages and load the corresponding ODw-dictionaries.

%\AtBeginDocument{%
\usedictionary{ODw}
%}

%\ForEachTrackedLanguage{\thislang}{%
\PackageInfo{ODw}{Language \thislang\ detected}%
%}

% Commented out due to translator
% \ifthenelse{\equal{\thislang}{norsk}}{%
{\def\thislang{norwegian}}%
%
%
That's it folks, happy \TeX\!ing!
\endinput%

onedown.sty

7 References


8 Change History

v0.1

General:
- Reorganized the bzr versioning. bzr will contain only onedown, the former bidnplay stuff is archived. The ToDo and Known-Bugs lists are cleaned.
- We are version 0.1 now, trying to keep the bzr version number equal to the changes minor number. .................. 1

v0.2

General:
- We finally have a List of User Commands.
- In the compass we can print vulner in red and mark the dealer. We have a hook \texttt{\textbackslash CompassMid} to
write something in the middle of the compass.
- Added several macros to auto-translate common stuff like 'lead' etc.
- Added the danish language.
- Corrected a bug in \dealer and \vulner.
- Removed pgf-key 'lang': we now load the needed languages on the fly.
- Finally we revised the documentation.

v0.3

play:
- In order to avoid empty columns in environment playtricks we reorganized it. Rather than just 1 table we use 3 tables. The middle one typesets the relevant tricks, stored in an \rbox, while generating on the fly a string with the winning tricks. Finally we put the running trick-number in TableI, we 'use' TableII and construct TableIII from the string with the winning tricks.

v0.4

General:
- Major change in playtricks: the winner is now determined by the cards played, and code is added to check consistency.
- Dirty coded macros like \ODw@symbol and \ODw@(?)Card(s) are replaced by neat expl3 code.
- We load necessary dictionaries automatically on the fly and enhanced the colors options.
- Corrected some minor bugs and reorganized the documentation.
- One can now also generate the documentation without the list of user commands

v0.5

v0.6

General:
- Associated the names and bidders in a fixed way.
- Added checks to onesuitNS/EW.
- Made ODw@OtherFont local where necessary.
- Redefined columntypes.
- Made 'T' a code for '10'.
- Adapted the 'translate' macro to enable both 1H and \He etc.
- Enhanced the documentation.

v0.6a

General:
- In order to test which suit (\Cl,...) was encountered in
\texttt{\textbackslash ODw\textbackslash translate} (see page 45) we must define the suits as a \texttt{renewrobustcommand}. So we \texttt{define} them first. The idea was given on LaTeX StackExchange by egreg, see https://tex.stackexchange.com/questions/420257/test-which-macro-is-called-in-tabular/420258#420258

v0.7

General:
- Final(?) edits of the documentation:
  Consequent use of 'card diagram', 'bidding' diagram and 'play diagram'.
- Corrected some minor bugs.
- Changed the name of the 'playtricks' environment into 'play'.
- Can now disable all colors in the manual for monochrome printing.
- Changed signature of \texttt{\expertquiz} and \texttt{\boardtext}.

v0.7a

General:
- Major change: Removed all \texttt{\bidXX} and \texttt{\bidXXpair} commands.
- The biddings can now be shown with \texttt{\showXX+} (with token '+').
- The macros \texttt{\hand-} and the bidding environments suppress their output with token '-'

v0.8

General:
- Added package \texttt{verbatimbox} to adjust verbatim font easily.
- Added \texttt{\setdefaults} with keys for fonts, compass and bidding diagrams.
- Made \texttt{\FirstBidCol} internally hidden.
- Removed \texttt{\longcalls}, \texttt{\CompassMid}, added \texttt{\compassfont}.
- Changed the order of the hands in \texttt{\onesuitAll}.
- Renewed the implementation of the compass and added extra features.

v0.9

General:
- Adapted \texttt{\ODwset} and \texttt{\setdefaults}.
- Separated key messages into keys \texttt{warn} and \texttt{err}.
- Adapted \texttt{\ODw\textbackslash Compass}.
- Removed legends from \texttt{\showNS}.
- Added \texttt{\sbox1} to all \texttt{\showXX} macros with a N-hand.
- Changed \texttt{ODw\textbackslash [No]Warnings} and \texttt{ODw\textbackslash [No]Errors}.
- Corrected some minor bugs and adapted the documentation accordingly.

v1.0

General:
- Adapted the urls, the
directories and some filenames to conform to the CTAN-standard and made the bundle ready for upload.
- Corrected a small bug in \ODw@Compass that was introduced in v0.9.
- Made all relevant text-writing macros in 4 versions with/without tokens ‘*’ and ‘!’.
- Corrected a sizing/font bug.
- Added 4 variants of many other text-writing macros, onesuit-NE/NW/.
- Adapted \handskip.
- Added code to work-around a babel-translations inconsistency w.r.t. norsk/norwegian.

v1.1

General:
- Corrected onedown-ref.tex.
  - Added the missing rows in lines 419-422.
  - and the explanatory text on line 457.
- Changed in all ODw*.trsl files: The translation of 'pass' into 'p' and 'Pass' into 'P'.
- Corrected some typos in ShowAll.tex.
  - \contract* into \contract,
  - \declarer* into \declarer and
  - \lead* into \lead.
- Removed some illegal chars from changes entries.

v1.2a

General:
- Enhanced the documentation (both onedown.dtx and onedown-ref.tex: The command tokens are no longer shown as ‘[*!]’, but as ‘*!’ with a different background color.
- Added a thinspace (‘\,’) before all points counts (HCP, LP, DP and TP)
- Improved \alert by using \textasteriskcentered rather than just a ‘*’;
- The changes history has a better layout now
  - \showNS and \showEW now can selectively display only the N- or S-hand, resp the E- or W-hand.

v1.2b

General:
- Corrected a bug: Added \ODw@monochromefalse in all initializations of multi colors in \ODw@set
- Made all relevant setdefaults settings (like bidfirst) non-global
- Made all \ODw@BidderX and \ODw@NameX non-global
- Removed ‘\global’ from \ODw@CompShow (false and true), \ODw@CompTurn, \ODw@Bidders, \ODw@BidLine and \ODw@LongCalls
- In command \suit
changed 'JW
\ODw@GameSize' into
'\ODw@GameSize'  .......  1

v1.3a
General:
- Added \HLP
- Changed/Added in all relevant ODw-lang.trsl:
  - 'V0.4' into 'V0.4-2018/12/01'
  - 'FP' into 'F', 'fp' into 'f' (entry HCP/hcp)
  - 'Figuren-Punkte' into 'Figurenpunkte',
    'figuren-punkte' into 'figurenpunkte'
  - 'FL' into 'L', 'fl' into 'l'
- /NewDictTranslation\{HLP-(ODw)}{FL}
  (german)  ...............  1

v1.3b
General:
- Added setdefaults to the list of User Commands
- Corrected \setdefaults in onedown-examples:
  - changed [ ] into {}
  - Adapted/corrected onedown-ref and onedown-examples
  - Added color 'gray' for special effects  .........  1

v1.4
General:
- Made onedown-ref independent of onedown-examples and subfiles
- Corrected some mistakes ODw-*.trsl files, all
  V0.51-2019/10/15
- Added macro \Ten to get rid of the extra enlargement
  by 'scalefnt' in \gamefont
- Added support for the spanish language
- Made onedown-ref.tex and onedown-examples.tex multilangular. We can output the onedown commands in all supported languages.
- /DeclareSymbolFont\{symbols\}{OMS}
  \{txsy\}{m}{n} interferes with package newtxmath.
  I renamed symbols into \ODw@symbols and symbolsC into \ODw@symbolsC to solve this. ............  1

v1.5
General:
- Added a check if the etoolbox package is recent enough.
- Added code to load onedown.symbols (card symbols) and explained in onedown-examples (CardSymbols) how to use it. ..................  1

v1.6
General:
- Switched to translator due to incompatibilities with translations
  - We now use \translate rather than \GetTranslation
  - Translation files are named like: ODw-German.dict
  - Adapted the code to read them on the fly .......  1
## 9 Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

### Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>,</td>
<td>33</td>
</tr>
<tr>
<td>@input</td>
<td>2323</td>
</tr>
<tr>
<td>@</td>
<td>2260</td>
</tr>
<tr>
<td>\Ace</td>
<td>282, 1865</td>
</tr>
<tr>
<td>@ace</td>
<td>1865</td>
</tr>
<tr>
<td>\alert</td>
<td>1323</td>
</tr>
<tr>
<td>\All</td>
<td>1940</td>
</tr>
<tr>
<td>@all</td>
<td>1024, 1025, 1026, 1027, 1207, 1210, 1213, 1216, 1940</td>
</tr>
<tr>
<td>\Allpass</td>
<td>307, 499</td>
</tr>
<tr>
<td>@allpass</td>
<td>499</td>
</tr>
<tr>
<td>\announce</td>
<td>1324</td>
</tr>
<tr>
<td>\bidderfont</td>
<td>86, 1755</td>
</tr>
<tr>
<td>bidding (environment)</td>
<td>28, 1505</td>
</tr>
<tr>
<td>biddingpair (environment)</td>
<td>29, 1521</td>
</tr>
<tr>
<td>\Board</td>
<td>2036</td>
</tr>
<tr>
<td>@board</td>
<td>2036</td>
</tr>
<tr>
<td>\boardnr</td>
<td>1188, 1768</td>
</tr>
<tr>
<td>@boardtext</td>
<td>1184</td>
</tr>
<tr>
<td>@by</td>
<td>2029</td>
</tr>
</tbody>
</table>

### D

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>\Deal</td>
<td>2054</td>
</tr>
<tr>
<td>\deal</td>
<td>2054</td>
</tr>
<tr>
<td>\dealer</td>
<td>1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1302</td>
</tr>
<tr>
<td>\dealertext</td>
<td>1314</td>
</tr>
<tr>
<td>\Declarer</td>
<td>2011</td>
</tr>
<tr>
<td>\declarer</td>
<td>2011</td>
</tr>
<tr>
<td>\Double</td>
<td>308, 516</td>
</tr>
<tr>
<td>\double</td>
<td>516</td>
</tr>
<tr>
<td>\doubled</td>
<td>2072</td>
</tr>
<tr>
<td>\Dpts</td>
<td>2127</td>
</tr>
</tbody>
</table>

### E

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>\East</td>
<td>383, 439, 441, 1043, 1044, 1045, 1046, 1205, 1209, 1213, 1217, 1645</td>
</tr>
<tr>
<td>\east</td>
<td>383, 620</td>
</tr>
<tr>
<td>\easthand</td>
<td>618</td>
</tr>
<tr>
<td>\EastWest</td>
<td>435, 1032, 1033, 1034, 1035, 1206, 1209, 1212, 1219</td>
</tr>
<tr>
<td>\eastwest</td>
<td>435</td>
</tr>
<tr>
<td>endODw@Bidding</td>
<td>1514</td>
</tr>
<tr>
<td>endODw@Biddingpair</td>
<td>1531</td>
</tr>
<tr>
<td>environments: bidding</td>
<td>28, 1505</td>
</tr>
<tr>
<td>biddingpair</td>
<td>29, 1521</td>
</tr>
<tr>
<td>ODw@Bidding</td>
<td>1339</td>
</tr>
<tr>
<td>Command</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>ODw@Biddingpair</td>
<td>1436</td>
</tr>
<tr>
<td>play</td>
<td>29, 1569</td>
</tr>
<tr>
<td>\expertquiz</td>
<td>1665</td>
</tr>
<tr>
<td>\explainit</td>
<td>1329</td>
</tr>
<tr>
<td>\footlinetext</td>
<td>1225, 1770</td>
</tr>
<tr>
<td>\FSF</td>
<td>2229</td>
</tr>
<tr>
<td>\fsforce</td>
<td>2229</td>
</tr>
<tr>
<td>\gamefont</td>
<td>91, 1757</td>
</tr>
<tr>
<td>\GF</td>
<td>2161</td>
</tr>
<tr>
<td>\gforce</td>
<td>2161</td>
</tr>
<tr>
<td>\hand</td>
<td>658</td>
</tr>
<tr>
<td>\handskip</td>
<td>1279</td>
</tr>
<tr>
<td>\HCP</td>
<td>2092</td>
</tr>
<tr>
<td>\He</td>
<td>117, 125, 140, 154, 169, 185, 201, 270, 305, 321, 323, 661, 686, 702, 805, 806, 850, 896, 941, 981, 1609</td>
</tr>
<tr>
<td>\headlinetext</td>
<td>1223, 1769</td>
</tr>
<tr>
<td>\height</td>
<td>1080, 1085, 1089, 1095</td>
</tr>
<tr>
<td>\HLP</td>
<td>2109</td>
</tr>
<tr>
<td>\hpts</td>
<td>2109</td>
</tr>
<tr>
<td>\IfNoValueTF</td>
<td>864, 867, 874, 877, 908, 911, 919, 922</td>
</tr>
<tr>
<td>\ifODw@Bidders</td>
<td>61, 1344, 1386, 1441, 1469</td>
</tr>
<tr>
<td>\ifODw@BidLine</td>
<td>61, 1344, 1386, 1441, 1469</td>
</tr>
<tr>
<td>\ifODw@CardSkip</td>
<td>60, 312</td>
</tr>
<tr>
<td>\ifODw@CompShow</td>
<td>64, 1070</td>
</tr>
<tr>
<td>\ifODw@CompTurn</td>
<td>65, 1084, 1096</td>
</tr>
<tr>
<td>\ifODw@description</td>
<td>57, 1422, 1491</td>
</tr>
<tr>
<td>\ifODw@EmptyFooter</td>
<td>1271</td>
</tr>
<tr>
<td>\ifODw@EmptyHeader</td>
<td>1256</td>
</tr>
<tr>
<td>\ifODw@LongCalls</td>
<td>63, 306, 307, 308, 309, 313, 1204, 1211, 1214, 1217, 1957</td>
</tr>
<tr>
<td>\ifODw@monochrome</td>
<td>59, 1172</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10 List of User Commands

\ace, 22
\Ace, 22
>alert, 25
\all, 24
\All, 24
\allpass, 12
\Allpass, 23
\announce, 25
\bidderfont, 20
bidding (env), 28
biddingpair (env), 29
\board, 24
\Board, 24
\boardnr, 19
\boardtext, 19
\by, 24
\Cl, 12
\compassfont, 20
\contract, 24
\Contract, 24
\deal, 25
\Deal, 25
\dealer, 18
\dealertext, 19
\declarer, 25
\Declarer, 25
\Di, 12
\double, 12
\Double, 23
\DP, 13
\dpts, 23
\east, 13
\East, 23
\easthand, 14
\eastwest, 13
\EastWest, 23
\expertquiz, 26
\explainit, 25
\footlinetext, 18
\FSF, 14
\fsforce, 24
gamefont, 20
\GF, 13
\gforce, 24
\hand, 15
\handskip, 19
\HCP, 13
\headlinetext, 18
\He, 12
\HLP, 13
\lpts, 23
\Jack, 22
\king, 22
\King, 22
\lead, 25
\Lead, 25
\leftlower, 18
\leftupper, 18
\legendfont, 20
\LP, 13
\lpts, 23
\markit, 25
\namefont, 20
\namesEW, 14
\namesNS, 14
\newgame, 26
\NMF, 13
\nmforce, 24
\none, 24
\None, 24
\north, 13
\North, 23
\northhand, 14
\northsouth, 13
\NorthSouth, 23
\NT, 12
\nt, 22
\onesuitAll, 15
\onesuitEW, 16
\onesuitNE, 16
\onesuitNS, 16
\onesuitNW, 16
\otherfont, 20
\pass, 12
\Pass, 22
\play (env), 29
\queen, 22
\Queen, 22
\redouble, 12
\Redouble, 23
\resetfonts, 28
\rightlower, 18
\rightupper, 18
\setdefaults, 27
\SF, 13
\sforce, 24
\showAll, 17
\showEW, 17
\showNE, 17
\showNS, 17
\showNW, 17
\south, 13
\South, 23
\southhand, 14
\Sp, 12
\nM, 16
\TP, 13
\tpts, 23
\TSF, 14
\tsforce, 24
\vulner, 18
\vulnertext, 19
\west, 13
\West, 23
\westhand, 14