

## Movement Files

This document describes the structure of **Bridge Gem** Movement Files. It also describes how they can be used to 'tune' Bridge Gem so that **Bridge Gem** recommends the most desired Movements.

### Bridge Gem Movement Library

All **Bridge Gem** movements are contained in a **Movements Library**. The Movements Library is found in folder:-

***%ProgramData%\Bridge Gem\Movement Libraries\***

where *%ProgramData%* is a Microsoft Windows' environmental variable, whose default value on most PCs is:-

***C:\ProgramData\***

The **Movements Library** contain many sub-folders. Each sub-folder contains Movement Files of a certain class and type, eg 1-Winner Pairs Movements, 2-Winner Pairs Movements, Howell Movements, Individual Movements etc. etc.

The name of the sub-folders is not constrained by any convention, but summarises the type of Movements they contain.

Sub-folders may be added or removed from the **Movements Library**.

Certain sub-folders are of particular significance, because these are the sub-folders from which Bridge Gem makes **Movement Recommendations**. The names of these sub-folders start with '**Bridge Gem...**'.

### Movement Library Sub-folders

Each Movements Library sub-folder has the same structure. It contains the following files:-

- A Header file header.txt
- An Index file index.idx
- One or more Movement files Mxxxxx.mvt  
where xxxxx is a 5 decimal digit number (must be 5 digits)

All these files are text files and may be viewed and edited by text editors, eg Notepad, Notepad++, Word etc etc.

#### header.txt

**header.txt** is a small, simple unstructured text file, it is used to describe the general nature of the Movements in the sub-folder, using words such as '1 Winner', 'Pairs', Individual'. The contents of a typical **header.txt** file is shown below:-

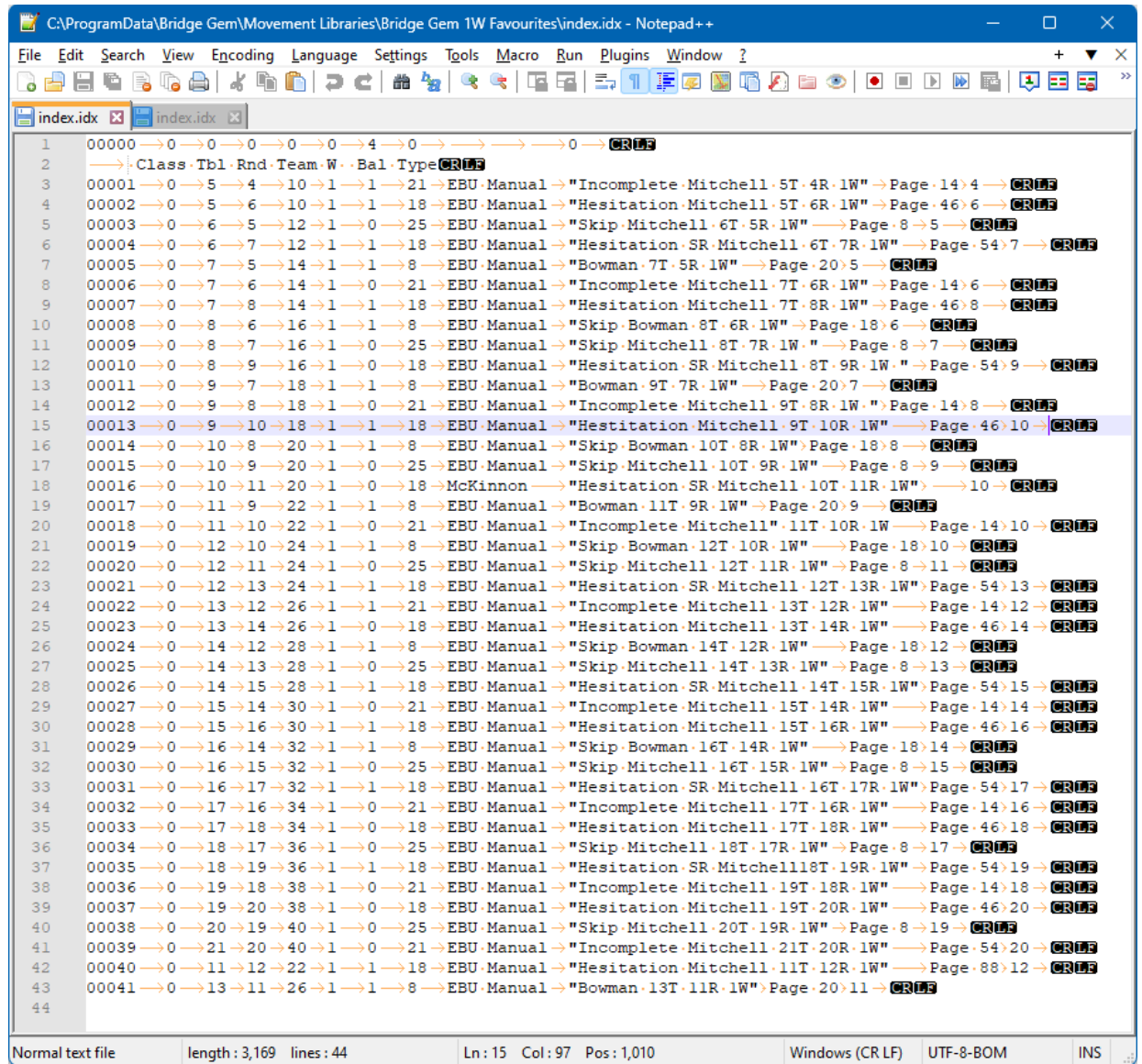
*1 Winner Pairs Movements. For when there are more Round than Tables and  $T+1 \geq R \leq 2T-1$*

As far as **Bridge Gem** is concerned the only words of significant in the **header.txt** files are: '1 Winner', 2-Winner, 'Pairs' and 'Individual'. **Bridge Gem** uses the **header.txt** files to filter the available Movements into those of interest, and those of no interest, to a particular Event.

index.idx

index.idx is a structured text file.

A typical index.idx is shown below with <tab>, <space> and the end of line characters symbolically represented,



Line 1 of the index.idx file is ignored by Bridge Gem, but must be present.

All lines start with a 5-digit number, except comment lines. Any line that does not start with a 5-digit number is treated as a comment by Bridge Gem.

Each line in the index file describes a Movement and is associated with one of the Movement Flies in the sub-folder.

Each line in the index file is split into a number of 'fields' by the <tab> characters. Each field defines a property of the Movement:-

Field	Format	Movement Property	Mandatory
1	5 digits	Movement file name/number. Movement files have names <b>Mxxxxx.mvt</b> Where xxxxx is this 5-digit number  By convention Movement numbers start at 00001 and go upwards, but this is not necessary	Yes
2	1 digit	Movement class 0 - Pairs Movement 1 - Individual Movement	Yes
3	1 or more digits	Number of Tables in the Movement	Yes
4	1 or more digits	Number of Rounds in the Movement	Yes
5	1 or more digits	Number of Players or Pairs depending on the Movement class	Yes
6	1 digit	Number of Winners in the Movement	Yes
7	1 digit	This field is ignored by <b>Bridge Gem</b>	Yes
8	1 or 2 digits	Movement type, eg Mitchell, Howell etc., see the appendix for a list of Movement types	Yes
9	Alphanumeric text	Movement source, ie the author of the Movement.	No
10	Alphanumeric text	Movement description – enclosed in quotation marks	No
11	Alphanumeric text	Further details of the source of the Movement, eg the page in the document where the Movement is described	No
12	2 digits		No
13	Blank		No

It is the fields from the [index.idx](#) file that are displayed by **Bridge Gem** in the **Event** form.

## Movement Files

**Movement Files** are structured text files.

There are one or more **Movement Files** in a sub-folder. The name of all **Movement Files** follows the same convention:-

Mxxxxx.mvt

where xxxxx is one of the 5 digit numbers in the **index.idx** file

The contents of a typical **Movement File** is shown below with <tab>, <space> and end of line characters symbolically represented.

```
1 0000 → "5T 4R 1W Incomplete Mitchell" → 21 → "Set up 5 tables.", "Place 1 boardset on each table, starting at table 1 with boardset 1.", "The N-S pairs use the table number as their pair number and the E-W pairs add 5 to their table number to get their pair number.", "N-S pairs remain stationary throughout the session, the E-W pairs to move up one table at the end of each round.", "Boardsets move down one table at the end of each round.", → 5 → 4 → 1 → 6 → 0 → 10 → 4 → EBU Manual → Page 14 → 1 → 1.7191 → 36 → 0 → 0 → → CR LF
2 0001 → 1 → "N-S remain stationary" → → "E-W go to E-W table 2" → → CR LF
3 0002 → 2 → "N-S remain stationary" → → "E-W go to E-W table 3" → → CR LF
4 0003 → 3 → "N-S remain stationary" → → "E-W go to E-W table 4" → → CR LF
5 0004 → 4 → "N-S remain stationary" → → "E-W go to E-W table 5" → → CR LF
6 0005 → 5 → "N-S remain stationary" → → "E-W go to E-W table 1" → → CR LF
7 0100 → 1 → 5 → → CR LF
8 0101 → 1 → 1 → 1 → 6 → 1 → F → CR LF
9 0102 → 1 → 2 → 2 → 7 → 2 → F → CR LF
10 0103 → 1 → 3 → 3 → 8 → 3 → F → CR LF
11 0104 → 1 → 4 → 4 → 9 → 4 → F → CR LF
12 0105 → 1 → 5 → 5 → 10 → 5 → F → CR LF
13 0200 → 2 → 5 → → CR LF
14 0201 → 2 → 1 → 1 → 10 → 2 → F → CR LF
15 0202 → 2 → 2 → 2 → 6 → 3 → F → CR LF
16 0203 → 2 → 3 → 3 → 7 → 4 → F → CR LF
17 0204 → 2 → 4 → 4 → 8 → 5 → F → CR LF
18 0205 → 2 → 5 → 5 → 9 → 1 → F → CR LF
19 0300 → 3 → 5 → → CR LF
20 0301 → 3 → 1 → 1 → 9 → 3 → F → CR LF
21 0302 → 3 → 2 → 2 → 10 → 4 → F → CR LF
22 0303 → 3 → 3 → 3 → 6 → 5 → F → CR LF
23 0304 → 3 → 4 → 4 → 7 → 1 → F → CR LF
24 0305 → 3 → 5 → 5 → 8 → 2 → F → CR LF
25 0400 → 4 → 5 → → CR LF
26 0401 → 4 → 1 → 1 → 8 → 4 → T → CR LF
27 0402 → 4 → 2 → 2 → 9 → 5 → T → CR LF
28 0403 → 4 → 3 → 3 → 10 → 1 → T → CR LF
29 0404 → 4 → 4 → 4 → 6 → 2 → F → CR LF
30 0405 → 4 → 5 → 5 → 7 → 3 → F → CR LF
31
```

A **Movement File** is split into 3 regions:

- A Movement Description
- Player Directions
- Round/Table Configurations

### Movement Description

Line 1 of the **Movement File**, which is terminated by <CR><LF>, provides a general description of the Movement.

Line 1 contains a number of fields separated by <tab> characters. The fields in the **Movement Description** are the same/similar to those in the index file, with one addition:-

The third field contains a set of **Instructions** to the tournament director on how to set up the Tables, the Boardsets, and how the Players move. This may be lengthy, but the field is terminated by a <tab> character. This is the only field in the **Movement Description** that is used by **Bridge Gem**. All the other fields are duplicates, or near duplicates, of the fields in the index file (which are used in preference to those in the Movement Description).

## Player Directions

Lines 1 to <Number of Rounds> provide directions to the Player/Pairs as to how to move at the end of each Round. There is 1 line for each round; each line contains 4, <tab> separated fields:-

- Field 1 4-digit (zero padded) Round Number
- Field 2 1-digit Round Number
- Field 3 NS Movement at the end of the Round
- Field 4 EW Movement at the end of the Round

This information is displayed by **Bridge Gem** in the **Player Instructions** tab of the **View Movement** form.

## Round/Table Configurations

After the **Player Direction** lines come the **Round/Table Configuration** descriptions. One for each Round.

Each **Round/Table Configuration** consists of a Header line, followed by one line for each Table in the Movement. Each line in a **Round/Table Configuration** consists of a number of <tab> separated fields.

The **Header** Line has 3 fields:-

- Field 1 a 2-digit Round Number followed by two '0's
- Field 2 Round Number
- Field 3 Number of Tables in the Round

The **Configuration** lines have 7 fields:-

- Field 1 a 2-digit Round number followed by a 2-digit Table number
- Field 2 Round Number
- Field 3 Table Number
- Field 4 NS Pair Number
- Field 5 EW Pair Number
- Field 6 Boardset Number
- Field 8 Arrow Switch Indicator – **True** or **False**

This information is, of course, used by **Bridge Gem**.

## 'Tuning' Bridge Gem Movement Recommendations

**Bridge Gem** can handle any Movement sub-folder and any Movement file that conforms to the standard specified above.

Movement sub-folders can be added or removed from the **Movements Library** and Movement files can be added to removed from a Movement sub-folder, provided that the **index.idx** is modified accordingly.

When **Bridge Gem** '*recommends*' a movement during the setup of an Event it interrogates a small sub-set of the Movement sub-folders to find a Movement that matches the *Movement Class, Number of Winners, Number of Players, and 'Number of Rounds'* requested by the tournament director.

The sub-sets it interrogates depends on the class of the Movement and, for a Pairs Movement, the number of winners required. The Movement sub-folders **Bridge Gem** interrogates, and the order in which they are interrogated is:-

- 1-Winner Pairs Movement      7\_3 Mitchells – switched  
Bridge Gem 1W Favourites  
Bridge Gem Three-Quarter Howell Movements  
Bridge Gem Howell Movements
- 2-Winner Pairs Movement      Bridge Gem 2W Mitchells  
Bridge Gem 2W Bowman  
Bridge Gem 2W Extended Mitchell
- Individual Movement            Bridge Gem Individual Movements

By adding and removing Movement Files into these sub-folders in the **Movements Library** the recommendations **Bridge Gem** makes can be altered.

## Changing Away from Bridge Gem Recommendations

If the Movement recommended by **Bridge Gem** is not desired, or if **Bridge Gem** has indicated it cannot make a recommendation, this does not mean that the desired Movement is not in the **Movements Library**. It merely means that it is not in one of the above Movement sub-folders.

Clicking on the **Change** button in the **Event** form causes **Bridge Gem** to interrogate *every* sub-folder in the **Movement's Library**. It is at this point that **Bridge Gem** uses the Movement sub-folders' **header.txt** files. **Bridge Gem** initially looks at only those Movement sub-folders whose **header.txt** file indicates that it contains Movements of the required class, eg 1W Pairs, 2W Pairs, or Individual. It then looks for an exact match on Movement Class and Number of Winners, and a near match on Number of Rounds. These are the Movements that are displayed in the **Alternative Movements** list.

## Appendix – Movement Types

"Any",	0
"Three Quarter Howell",	1
"Half Mitchell",	2
"American Whist League",	3
"Appendix Howell",	4
"Appendix Mitchell",	5
"Blackpool",	6
"Block Mitchell",	7
"Bowman-Ewing Mitchell",	8
"Criss Cross Mitchell",	9
"DispMitchell",	10
"Double Hesitation Mitchell",	11
"Double Howell",	12
"Double Weave Mitchell",	13
"Extra Board Howell",	14
"Extra Board Mitchell",	15
"Flower Howell",	16
"Hesitation Bowman",	17
"Hesitation Mitchell",	18
"Howell",	19
"Interwoven Howell",	20
"Mitchell",	21
"NS Rover",	22
"Share & Relay Mitchell",	23
"Rover Table Mitchell",	24
"Skip Mitchell",	25
"Stagger Mitchell",	26
"Twin Mitchells",	27
"Undefined",	28
"Web Mitchell",	29
"Individual Howell Type",	30
"Individual Mitchell Type",	31
"Individual Irregular",	32
"Individual Combination",	33
"Individual Shomate",	34
"Pivot Mitchell",	35
"2T Appendix Mitchell",	36
"Individual Played as Triples",	37
"Individual Triples plus Quintuple",	38
"Individual User3",	39
"Individual User4",	40
"Individual User5",	41
"User1",	42
"User2",	43
"User3",	44
"User4",	45
"User5",	46
"Unable to Recommend a Movement"	47