Computer science

Wthor database format

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General

The base of Wthor is of PC/Intel origin. Also, the are Word and Longint type data stored in the Intel format, ie the least significant byte in front.

On your mind

All Wthor database files have a 16 byte header, followed by some number of records all having the same size.
The header is made up as follows:

Wording	Size	Type
File creation century	1	bytes
File creation year	1	bytes
File creation month	1	bytes
File creation day	1	bytes
Number of N1 records	4	Longint
Number of N2 records	2	Word
Year of parties	2	Word
Parameter P1 : game board size 1		bytes
Parameter P2 : type of parts 1		bytes
Parameter P3 : depth	1	bytes
X	1	(Reserve)

- The first 4 bytes represent a signature so as to avoid the overwriting of a file by a later version Ancient. For this, the programs must allow an update of the directory (or folder) other than by a system copy.
- The number of records N1 stores the number of parts (parts file) or positions (parts file) solitaires) in the file. It is 0 for files of players and tournaments. The number of records N1 is limited to 2,147,483,648 games per year for game files, at 2,147,483,648 positions for solitaire files.
- The number of records N2 stores the number of players (player name file), tournaments (file of tournament labels) or the number of empty boxes in the solitaires (solitaires file) in the file. It is worth 0 for game files. The number of records N2 is limited to 65535 for tournament labels and player names, to 64 for solitaire files.
- The year of the games is worth 0 in the player files, conch, but normally grouped by tournament. tournaments or solitaires.
- The P1 parameter (in a part or solitaires) indicates the size of the game board:
  - 0: standard 8x8 game board
  - 8: standard 8x8 game board
  - 10: 10x10 game board

  It is 0 in all other cases.
- The P2 parameter is worth 1 in solitaire files, and 0 in all other cases.
- The P3 parameter (in a part file) indicates the depth for which the theoretical score is calculated (the value 0 is equivalent to value 22 for files after 01/01/2001).

Game files on 8x8 board

File name: WTH_####.WTB
Each record (68 bytes) contains:

Wording	Size	Type
Tournament label number	2	Word
Black player number	2	Word
White player number	2	Word
Number of black pawns (actual score)	1	bytes
Theoretical score 1		bytes
List of moves	60	Byte[]

- There is a game file per year. In a file games, these are stored in any order, but normally grouped by tournament.
- The #### in the file name is the year number.
- The theoretical score contains the score (in number of pawns) of the Black player on a perfect endgame. This final is calculated on the position whose number of empty cells is equal to parameter 3 (depth). For example, for a depth of 22, the perfect finish begins at move 39, i.e. once move 38 has been played.
- The move list starts at move 1.f5.
- Moves are stored in chronological order of the part according to the following format: number the rows and columns from 1 to 8 and perform the operation => column + (10* line). Ex: a1 = 11, h1 = 18, a8 = 81, h8 = 88.
- File size in bytes: 16 + N1*68.

Game files on 10x10 board

File name: WTH_####.WTD
Each record (104 bytes) contains:

Wording	Size	Type
Tournament label number	2	Word
Black player number	2	Word
White player number	2	Word
Number of black pawns (actual score)	1	bytes
Theoretical score 1		bytes
List of moves	96	Byte[]

- There is a game file per year. In a file parts, these are stored in any order, but normally grouped by tournament.
- The #### in the file name is the year number.
- The theoretical score contains the score (in number of pawns) of the Black player on a perfect endgame. This final is calculated on the position whose number of empty cells is equal to parameter 3 (depth). For example, for a depth of 22, the perfect finish begins at move 75, i.e. once move 74 has been played.
- The list of moves begins at move 1.g6.
- Moves are stored in chronological order of the part according to the following format: number the rows and columns from 1 to 10 and perform the operation => column + (12 * line). Ex: a1 = 13, j1 = 22, a10 = 121, j10 = 130.
- File size in bytes: 16 + N1*104.

Files of solitaires on 8x8 board

File name: SOLITAIRES_##.PZZ
Solitaires are interesting endgame positions extracted from the base of Wthor in which the player having the line a, with each stroke, a single stroke leading to the win or draw on the perfect straight. all the loners of the same file have the same number of empty boxes, indicated in the header and the ## of the file name.

Following the standard 16-byte main header of the Wthor base, each 8x8 solitaire file includes a secondary header of 512 bytes made up as follows:

Wording	Size Type
Attendance table	512 Longint[]

The attendance table is an array of 64 longints extracted from the solitaire. in which all the entries are worth 0, except the N2 th which contains the number of records N1 of the file. This presence table allows a consistency check information read in the main header: N1 is the number of solitaires and N2 the number of empty squares of lonely.

Each record (36 bytes) is made up as follows:

Wording	Size Type	
Solitaire Party Year	2	Word Word
Tournament label number	2	
Black player number	4	Longint
White player number	4	Longint
Position	16	Byte []
Number of empty boxes	1	Byte
Trait	1	Byte
Solution score 1st	1	Signed Byte
solution move	1	Byte
Actual game score	1	Byte
Move 25 of the game	1	bytes
X	2	(Reserve)

- The position is stored line by line, with 2 bytes per line. Byte 0 encodes boxes a1-d1, byte 1 encodes boxes e1-h1, etc., up to byte 15 encoding boxes e8-h8. In each byte, the color of each box is coded by the following combination of bits:
  - empty box: 00
  - black pawn: 11
  - white pawn: 10
- The line is worth 1 for Black, 2 for White.
- The solution score contains the score, in difference pawns with his opponent, of the player having the move in the solo position, on a perfect finish.
- The first move of the solution is stored according to the following format: number the rows and columns from 1 to 8 and perform the operation => column + (10* row).
- The actual score of the game contains the actual score (in number of pawns) of the Black player in the game whose
- Move 25 of the game contains the one that took place in the game from which the solitaire is drawn, if the game appears in the Wthor base. It is stored in the following format: number the rows and columns from 1 to 8 and perform the operation => column + (10* row). It contains 0 if this information is not available.
- File size in bytes: 16 + 512 + N1*36.

Tournament labels file

File name: WTHOR.TRN
Each record (26 bytes) is an array of characters terminated with a binary zero. The useful length is 25 characters.
File size in bytes: 16 + N2*26.

Player name file

File name: WTHOR.JOU
Each record (20 bytes) is an array of characters terminated with a binary zero. The useful length is 19 characters.
File size in bytes: 16 + N2*20.