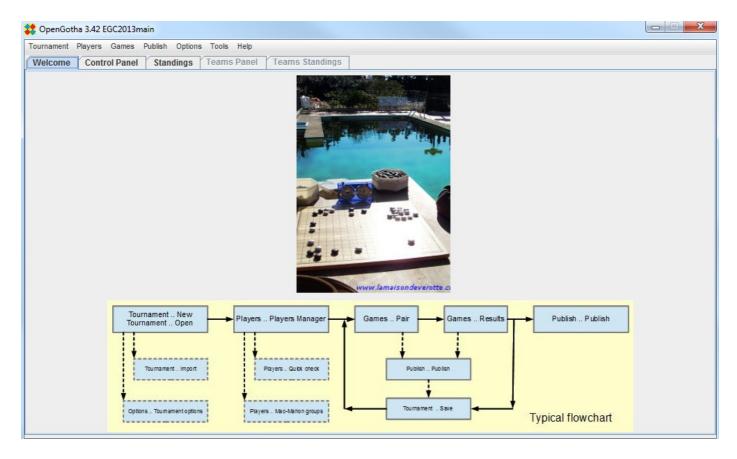
# **OpenGotha**

# User's guide



Luc Vannier. June 2015

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# **Starting OpenGotha**

OpenGotha is downloadable from http://vannier.info/jeux/download/download.htm . After unzipping, you get a set of files and directories, including the core file : opengotha.jar.

OpenGotha runs under any operating system (it has been tested under Microsoft Windows, Linux and Mac OS) with a Java Virtual Machine version 6 or newer.

If you do not have Java installed yet, get it from http://www.java.com/en/download/index.jsp

Depending on your operating system, you may start OpenGotha either by a double-click on opengotha.jar, or by a right click on opengotha.jar and "Open with Sun Java Runtime", or by issuing the following command from a Terminal window:

```
java - jar opengotha. jar
```

## **Running modes**

OpenGotha can be run in a Stand-Alone mode, which is the usual mode for small tournaments, or in a Client/Server mode where several workstations work simultaneously on the same tournament. Client/Server mode is recommended for big tournaments.

### Stand-alone running mode

Click "Start"

### Client/Server running mode

You can use Client/server mode if you have several workstations connected in a network. One unique workstation will be the server. The others will be clients.

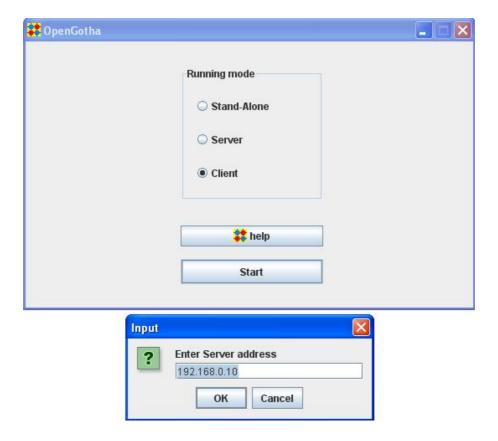
Many functions may be run from the server or from any client as well. But some others may be run from the server only. Server-specific functions are Open/Close/Save functions. Players management functions, Games functions and Options functions can be run equally and simultaneously by the server and the clients.

The server must be started first



A message box invites you to enter the server IP Address. Usually, the pre-written address is correct. But if your computer has several network interfaces, which may occur for instance when you have an Ethernet interface and a wireless network interface, then check the IP address and make sure to enter the address to which the clients will connect.

Then you can start the clients:



Replace the pre-written address by the actual server IP address..



From the dialog box, select the tournament you want to work on.

## **Tournament menu**



### Menu items list

#### New

This opens the Create a new tournament dialog box

Save as ..., Save a copy ...

See: Save facilities

#### **Import**

This opens **Import facilities** 

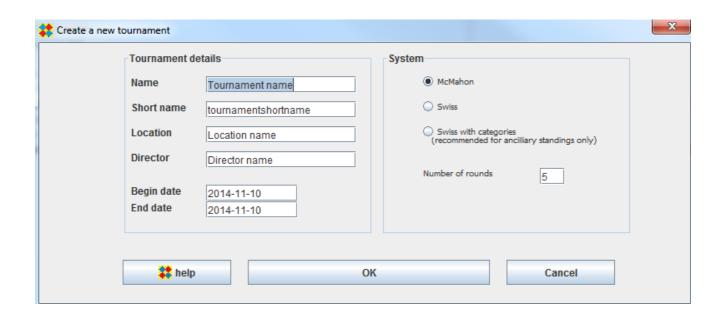
#### **Export**

Export facilities are now available from the **Publish menu** 

#### **Build test tournaments**

You can rapidly build dummy tournaments for test purpose.

## Create a new tournament



## **System**

#### **McMahon**

McMahon System's placement is based on McMahon Score (MMS).

Pairing is made between players with same MMS.

It is the most popular system and is recommended for nearly all kinds of tournaments.

In OpenGotha, by default, games in McMahon System may be played with handicap.

#### **Swiss**

Swiss System's placement is based on Number Of Wins (NBW)

Pairing is made between players with same NBW.

It can be considered as a McMahon system where all players start with 0 as common SMMS (Starting MMS).

In OpenGotha, by default, games in Swiss System are played without handicap.

#### **Swiss with categories**

Swiss with categories (Swisscat) system divides players in rank-based categories. Pairing is made internally in each category.

Even if you manage your tournament in McMahon system, Swisscat is interesting for ancillary placements, for example if you want to reward the best kyu players, the best 2-digit kyu players, etc.

# **Save facilities**

## Save as ...

You choose the directory and file name. The tournament is saved and the chosen file name is kept as the new tournament short name

## Save a copy ...

Use this to save copies of the current tournament.

This dialog differs from the "Save as ..." dialog in the sense that actual tournament short name is not affected

# Import facilities

## Import players and games from h9 file

h9 file format is described in Tournament table format

## Import players and games from Tou file

Tou file format is described in Le format TOU

## Import players and games from Wallist file

Use this to import from Christoph Gerlach's MacMahon program

## Import players from vBar-separated file

vBar-separated format is described in vBar-separated format

## Warning

You must be aware that h9, Tou, Wallist and vBar-separated files contain less rich information than what OpenGotha manages. For instance, Top-group informations are absent.

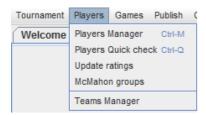
## Import tournament from XML file

The format is specified in Tournament DTD.

You can selectively import players and/or games and/or tournament parameters and/or Teams and team parameters.

Since OpenGotha V3.23, XML file is the standard format for OpenGotha files. You therefore can partially or totally import any previously saved tournament.

# Players menu



### Menu items list

### **Players Manager**

This opens the <u>Players Manager frame</u>. from where you can register players, set and modify all players data.

#### **Players Quick check**

This opens the <u>Players Quick check frame</u> where you have a quick access to some of the players data : rank, and registering status.

#### **Update ratings**

This opens the <u>Update ratings frame</u> where you can have access to the EGF rating list and where you can update players ratings.

### McMahon groups

This opens the McMahon groups frame where you can define McMahon top and super groups.

### **Teams Manager**

This opens the **Teams Manager frame** where you can define teams.

# **Players Manager frame**

With the Players manager frame, you can register or unregister players, and modify players data. You normally use it to register players and print the players list at the beginning of the tournament. You also use it during the tournament, for instance to change participation or correct any data.



## **Rating Lists**

OpenGotha incorporates EGF, FFG and AGA rating lists.

A copy of each of the rating lists is delivered with OpenGotha. You can download up-to-date rating lists by clicking the "Update XXX rating list from ..." button.

These rating lists enable fast and spelling-error-free access to known players. Type in the first letters of the player and known players with same first letters will show up. If you are not sure of first letters, then use Levenshtein algorithm. OpenGotha will do its best to find players with similar names.

A rank will be calculated from the rating as it appears in the rating list.

With EGF rating list,

- a rating between 50 and 149 will give a 20K rank
- a rating between 2050 and 2149 will give a 1D rank
- a rating equal to or above 2850 a 9D rank

With FFG rating list,

- a rating equal to or below -2901 will give a 30K rank
- a rating between 0 and 99 will give a 1D rank

a rating equal to or above 800 will give a 9D rank With AGA rating list,

a rating equal to or below -30.01 will give a 30K rank

a rating between -2.00 and -1.01 will give a 1K rank

a rating between 1.00 and 1.99 will give a 1D rank

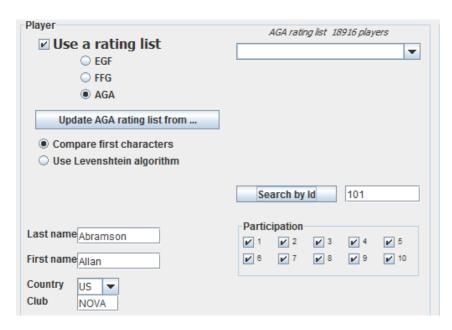
a rating equal to or above 9.00 will give a 9D rank

With EGF rating list, you can select the set Rank from Grade radio button. The rank will then be defined from the grade.

## Register a player

You can enter (automatically by rating list or manually) players data. Define participation (by default, the player is assumed to participate in all rounds). Define Registration status (Preliminary or Final). Then Register by clicking Register or by typing Enter key. Players data will be editable during the whole tournament by selecting a player in the Players panel, right click, "Modify player", or simply double-click.

## Search by Id (AGA only)



Give an AGA Id and click the "Search by Id" button.

## Players names

#### OpenGotha supports all the character sets:

		players. Preliminary players. Final (F)	(P)			
R	Name	First name	Co	Club	Rk	Rating
F	Poznań	Łódź	PL	Łódź	30K	-900
F	Vannier	Luc	FR	76Ro	1K	1969
F	Пётр	Петров	RU		1K	2000
F	Сидор	Сидоров	RU		1K	2000
F	עלי לברין	עלי	IL		5D	2550
F	عرافي	حائم	MA	XXX	2D	2160
F	孔	杰	CN.		9D	2900
F	山下	敬吾	JP		9D	2900
F	01	세돌	KR		9D	2900

### Welcome sheet

The welcome sheet displays general information about the tournament and specific information about the player.

It may be printed out and given to each player after registration.

The Tournament organizer can customize the welcome sheet by editing it.

The welcome sheet is located in [OpenGotha Root Directory]/welcomesheet/welcomesheet.html. A template welcome sheet is supplied.

Edit general information with any text processor, keeping html syntax.

Insert the player-related tokens where desired.

Player-related tokens are:

<name>, <firstname>, <country>, <club>, <rank>, <rating>, <ratingorigin>, <participation>

At run time, the tokens will be replaced by the player actual information.

<rank> is the rank between 30K and 9D

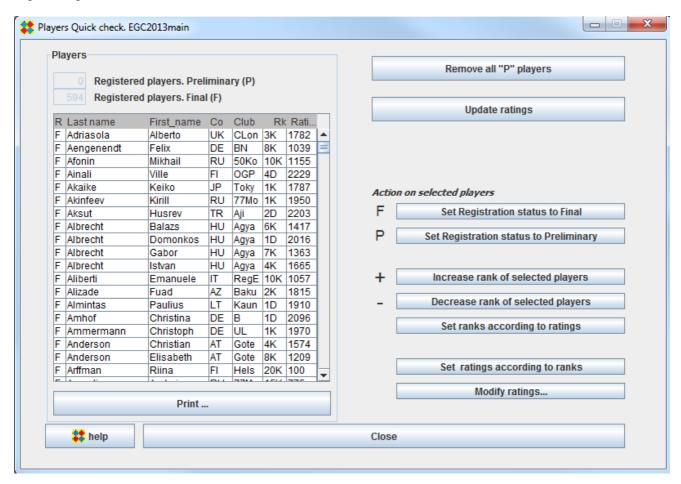
<rating> is the rating as found in the rating list

<ratingorigin> is the name of the rating list : EGF, FFG or INI. If the rating has not been defined by a rating list, the rating is defined from the rank and rating origin is INI.

<participation> defines the participation of the player for each round.

# **Players Quick check frame**

The Players Quick check frame is typically used after registration to quickly check and modify registering status and rank.

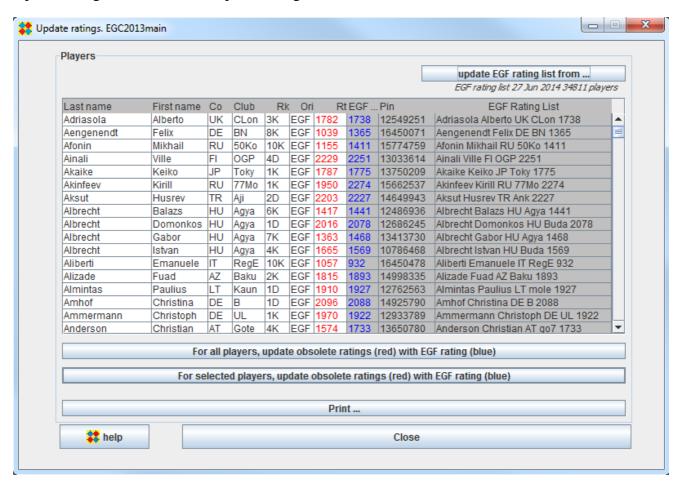


In the "Players" panel, select the players you want to modify

Then use buttons on the right or keyboard shortcuts to modify registration status or rank

# **Update ratings**

Update ratings frame is used to update ratings from EGF database.



The left part (white background) of the "Players" panel shows the list of players in the tournament.

The right part (grey background) shows the players current EGF rating.

OpenGotha tries to match the tournament players with the EGF database. Search is first made by EGF Pin, and if the EGF Pin is not found, a search is made by name and first name.

If a player is found, it is shown.

If no player is found, a red "????" is displayed in EGF Rt column.

## Accessing the rating list

By clicking in the "EGF Rating list" column, you get access to the rating list.

Type in the first letters of the player's name and known players with the same first letters will show up. To navigate in the rating list use Arrow and Escape keys.

To make actual update, use Enter key

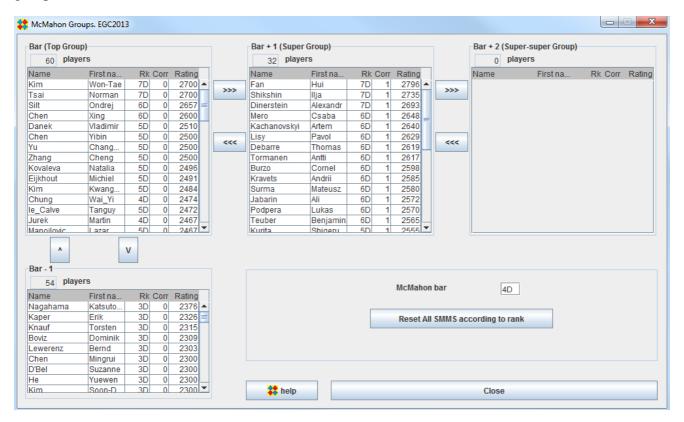
## Updating the players ratings

You can also update several players ratings simultaneously by selecting one or several lines and clicking the "For selected players, ..." button

And, to update all the players at once, click the "For all players, ..." button.

# McMahon groups frame

Use this frame to set the McMahon bar and to define which player will be a member of Top/super groups



Players whose rank equals the McMahon bar are initially placed into the Top Group and shown in the *Bar (Top Group)* panel.

Players whose rank equals the McMahon bar - 1 are initially shown in the Bar - 1 panel.

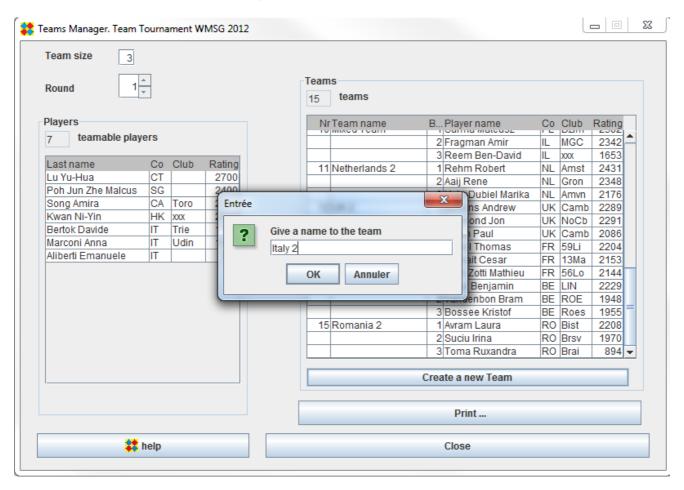
You can then move players from one group to another one by using arrow buttons.

# **Teams Manager frame**

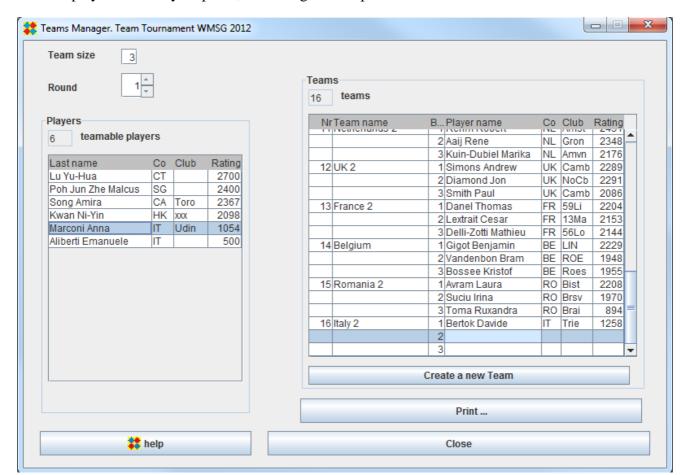
With the Teams manager frame, you can create teams, add/modify/remove players to teams and edit teams.

#### Create a new team

Click the "Create a new Team" button, choose a name for the team and click OK



## Assign players to teams



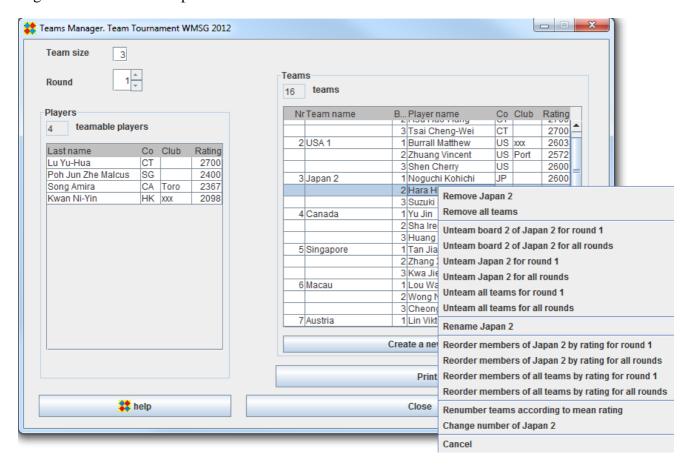
Select a player from Players panel, then Drag and drop it to the desired board of the desired team

Assignment is made for all other rounds if no other player has been assigned yet.

You also can assign different players for different rounds. You just have to select current round (top left spinner) and assign the player by drag and drop.

### **Edit teams**

#### Right-click in the Teams panel and choose a menu item



## Games menu



## Menu items list

#### Pair

This opens the Games Pair frame where you can make pairing

#### **Results**

This opens the **Games Results frame** where you enter results

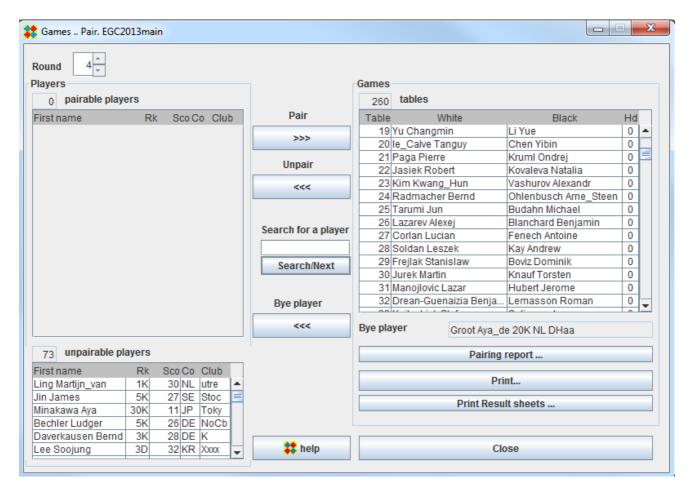
#### **Round-robin**

This opens the <u>Round-robin frame</u> where you can manually define pairing and results for small tournaments.

#### **Teams Pairing**

This opens the **Teams Pairing frame** where you can manually pair teams.

## **Games Pair frame**



All players appear in this frame.

Players declared as not participating in the current round are in the "unpairable players" list Players already paired appear in the Games list

The bye player, if exists, appear below the Games List. Only one player can be bye player for a given round.

The remaining players appear in the "pairable players" list.

## **Automatic pairing**

Click on the Pair button.

If the number of players is uneven, you will be asked to choose a bye player or to let OpenGotha choose it.

The pairing process will move players from the Players list to the Games list.

## Manual pairing

#### Select players

To select one player, just click on this player. To select 2 or more players, use Shift+click, Ctrl+Click and/or Ctrl+Shift+Click

You can pair a couple of players by selecting them in the pairable players list and click on Pair Button You can pair a set of players in a semi-automatic way by selecting desired players and click on Pair Button

As a help for manual pairing, when a unique player is selected, a list of previous games of that player is displayed.

## **Unpairing**

You can unpair some or all games by selecting games and clicking on the Unpair Button.

## Modify a game

You can modify the colour/handicap of a given game by selecting that game, right-clicking and choosing "Exchange Colours" or "Modify handicap".

## Change table numbers

Table numbers are chosen by OpenGotha according to availability.

You can renumber them according to MMS order by right click and choose "Renumber table by MMS"

You can change a given table number by selecting that game, right click, choose "Change table number", then enter a new number. If necessary, OpenGotha will automatically renumber the game previously assigned to the target table.

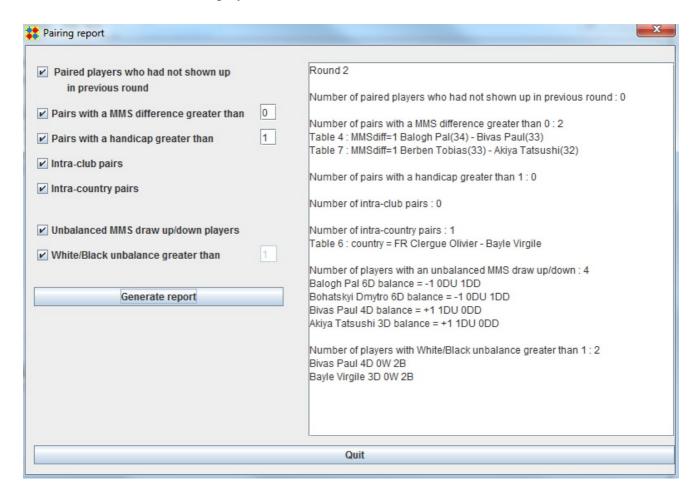
In some tournaments, you may happen to use different rooms with table numbers starting from a number other than 1. For instance, the available tables will be tables 25-48, tables 156-234, etc. To do that, select a table, right click, choose "Shift tables" and a new table number for the selected game. Subsequent table numbers will be shifted as well. However, table numbering should remain inside 1 to 600 limits.

## **Pairing report**

The Pairing report provides informations relevant to the tournament organizer:

- Paired players who had not shown up in previous round
- Pairs with a non zero MMS difference
- Pairs with a big handicap
- Intra-club and intra-country pairs
- Unbalanced Drawn up/down players

• White/Black unbalanced players



### Result sheets

## You can print result sheets. 2 sheets per page are printed

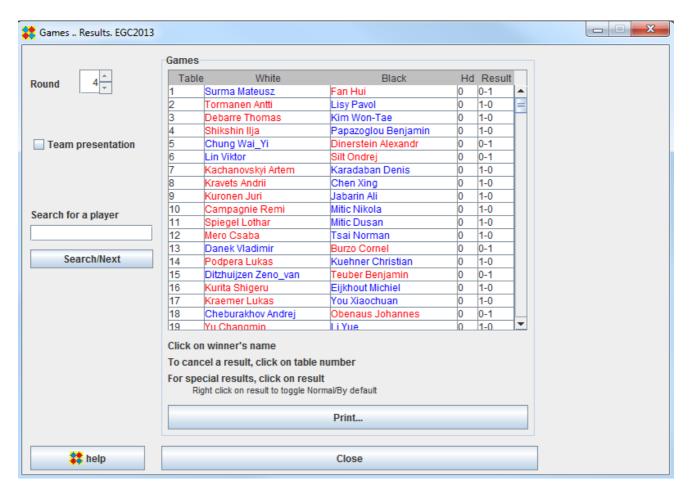
#### EGC2013main Result sheet

Table : 21	Hd = 0	Round : 4
White	Result	Black
Paga Pierre(4D,FR,92Le)	0 1-0	Kruml Ondrej(5D,CZ,Bmo)
EGF Pin: 13901283	0 0-1	EGF Pin : 10886524
Signature :	0 1/2 - 1/2	Signature :

#### EGC2013main Result sheet

Table : 22	Hd = 0	Round: 4
White	Result	Black
Jasiek Robert(5D,DE,B )	0 1-0	Kovaleva Natalia(5D,RU,74Ch)
EGF Pin: 10213203	0 0-1	EGF Pin: 10537087
Signature :	0 1/2 - 1/2	Signature :

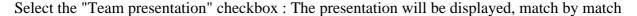
## **Games Results frame**

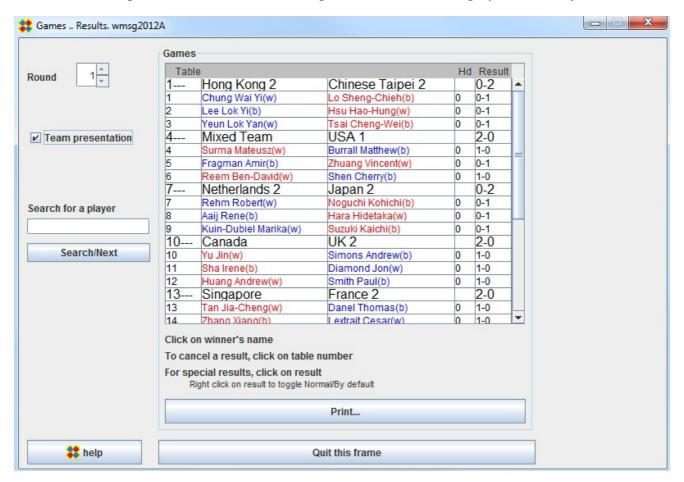


To enter usual results, just click on the winner. The winner is coloured in red, the loser in blue, an equal result in purple.

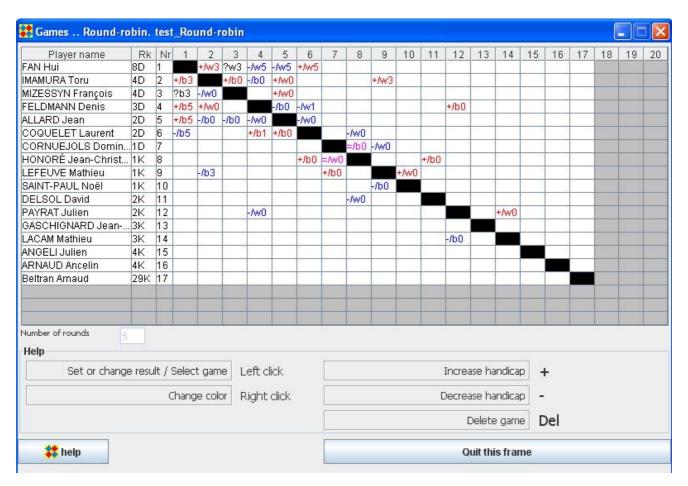
For special results, repeatedly click inside the specific result, until the desired result appears. The list of possible results is given in Games Encoding

### **Games Results for Team Tournaments**





## **Games Round-robin frame**



The Games Round-robin frame is usable only for small tournaments (20 players max).

Manual pairing and results entering can all be done in a single frame.

You don't have to worry about round numbers. OpenGotha will internally manage that for you, so that export functions will work exactly as if you had followed the usual complete process.

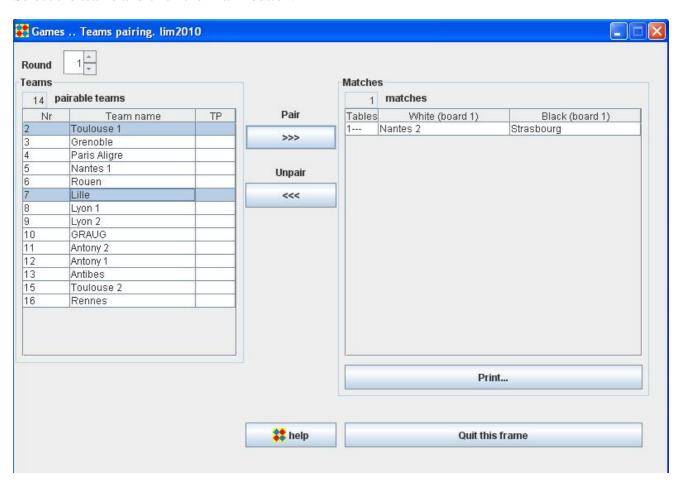
If you need to enter by default results, use Games Results Frame

# **Team Pairings frame**

With the Team Pairings frame, you can manually pair teams.

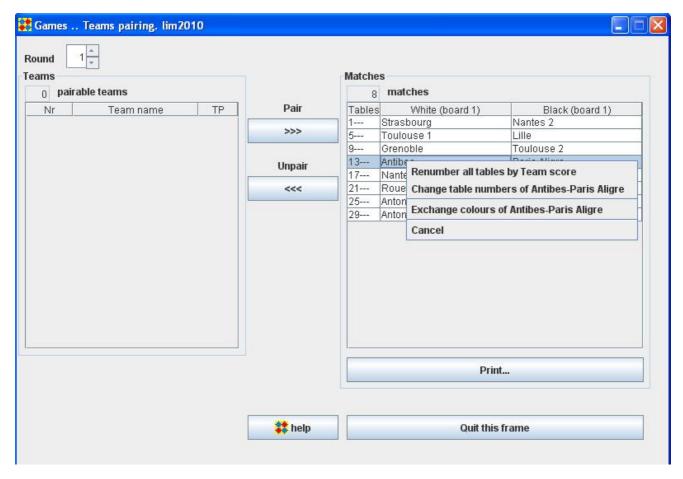
#### Pair 2 teams

Select the teams and click the "Pair" button.



Each player of each board of one team is paired with the player of the corresponding board of the other team.

## Modify one or several matches



To renumber all tables, right-click in the Matches panel and choose the "Renumber all tables by Team score" menu item.

To change table numbers of a given match, right-click on the match in the Matches panel and choose the "Change table numbers of ..." menu item.

To change colours of all games of a given match, right-click on the match in the Matches panel and choose the "Change table numbers of ..." menu item.

### Other modifications

To modify individual games, use the Games Pair frame

# **Publish menu**

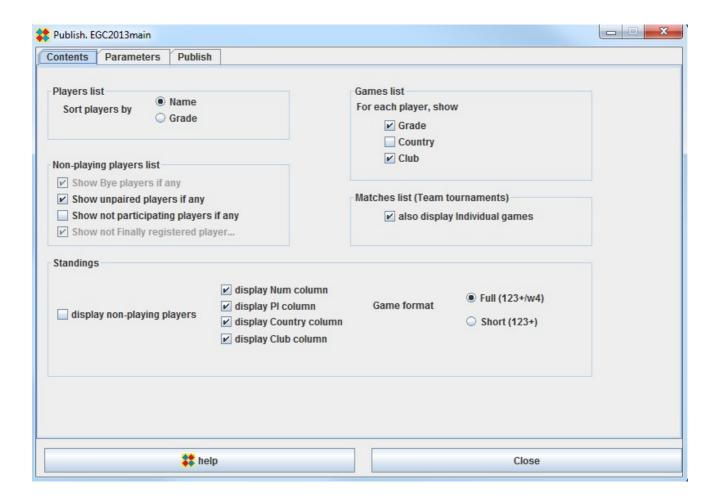


## Publish ...

Clicking the Publish menu item gives the following three tabs:

- Contents : defines contents
- Parameters : defines what actions publish buttons will launch
- Publish: launches Print or Export actions

## **Contents**



## **Players List**

## **Games List**

## **Non-Playing Players List**

A player may be a non playing player in a given round for one of the four following reasons:

- He is a bye player: this occurs when the number of players for this given round is odd
- He has not been paired: this is usually a temporary situation. The organizer should pair the player or set him as a bye player or set his participation status to not-participating
- He does not participate in the given round. To set the participation status, use the Players .. Manager frame
- His registration status is Preliminary. To set the registration status, use use the Players .. Manager frame or the Players .. Quick check frame

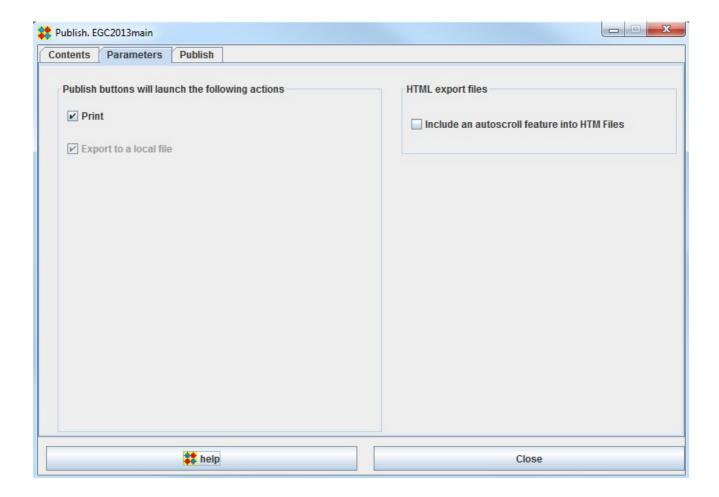
### **Matches List**

This refers to team tournaments. If you do not check the "Also display individual games" checkbox, only Team names will be displayed in the Print matches list or in the Export(html) matches list. If you do check the checkbox, all individual players will be printed or exported as well.

## **Standings**

- display non-playing players. check this checkbox if you want all players be displayed, including PRE registered players. By default, non-playing players are not displayed
- display Num/Pl/Country/Club : if checked (resp. unchecked), the corresponding columns are displayed (resp. hidden)
- Game format

## **Parameters**



## **Print**

Check this checkBox if you want the published items to be printed

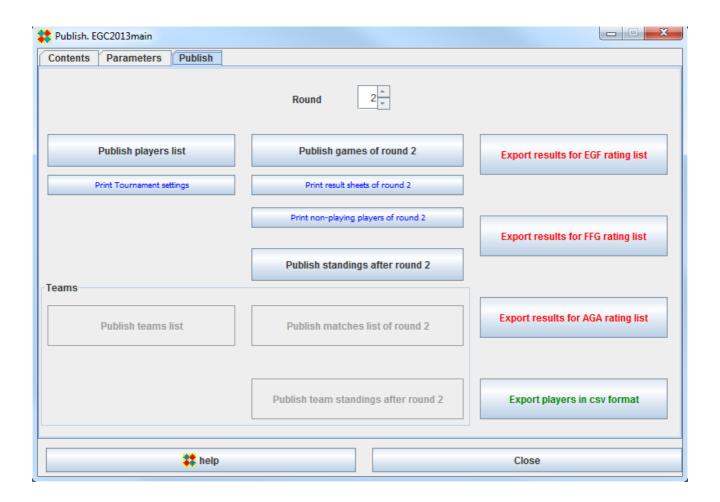
## Export to a local file

This checkbox is always checked. Published items are sent to a html file in export/html directory

## Include an autoscroll feature into HTML files

With this option selected, HTML pages will automatically scroll the contents when displayed. This is useful for example if you use a projector to diplay pairings and your have more than 30 boards to display. Think of using Ctrl+ and Ctrl- to adjust font size.

## **Publish**



## Publish ... buttons Print ... buttons

Data is automatically formatted according to what is specified in the Contents tab.

Html files are locally stored in the *export/html* directory. They are also optionally exported to OpenGotha site.

Html files are associated with a style sheet. A default style sheet is supplied : *current.css*. The user can supply his own style sheet.

Character encoding is "UTF-8".

## **Export results for EGF rating-list**

The generated file complies with the <u>h9 format</u>.

Spaces inside a player name or first name are replaced with "\_"

Total name + first name length is limited to 30

Character encoding is "ISO-8859-15".

# **Export results for FFG rating-list**

The generated file complies with the <u>Tou format</u>. Spaces inside a player name or first name are replaced by "\_" Total name + first name length is limited to 25 Character encoding is "ISO-8859-15".

# **Export results for AGA rating-list**

The generated file complies with the <u>AGA standard ratings submission format</u>. For players without an AGA id, dummy AGA ids are generated in the "99xxx" range. Character encoding is "ISO-8859-15".

# **Export players in csv format**

The generated file contains the players data.

CSV format is a commonly used format and is supported by most spreadsheets.

Character encoding is "UTF-8".

# **Options menu**



## Menu items list

### **Tournament Options**

This opens the **Tournament Options frame**.

### **Games Options**

This opens the **Games Options frame**.

#### **Preferences**

This opens the **Preferences frame**.

# **Tournament Options**

General settings

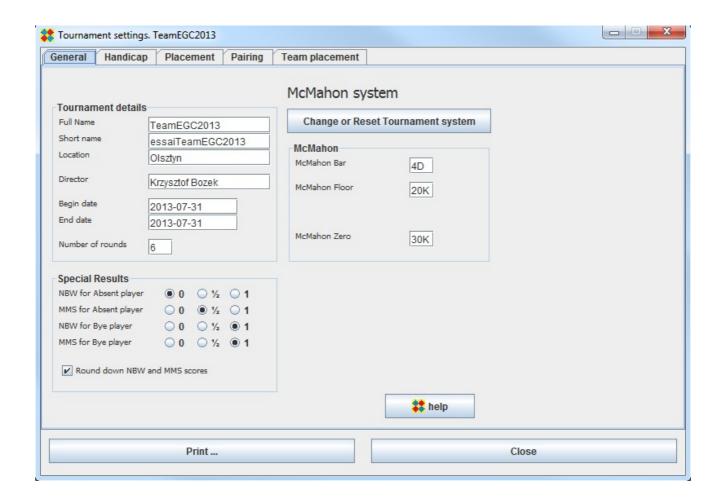
Handicap settings

Placement settings

Pairing settings

Team Placement settings

# **General settings**



## **Tournament details**

#### **Number of rounds**

It can be set between 1 and 20.

It can be increased at any time.

It can be decreased at any time too, provided that no game has been defined for abandonned rounds.

## Special results

An absent player for a given round is a player who has been declared as not participating in that round.

A bye player for a given round is a player who has been defined as bye in the pairing process. Not more than one player can be bye for a given round.

The NBW and MMS scores for absent and bye player for a given round will be computed according to what you define in this frame.

When, as a result of bye or absence, the score is not integer, a rounding down is made if the "Round down NBW and MMS scores" checkbox is selected. Otherwise, no rounding is made.

NB: Points resulting from a draw are not rounded.

NB: For pairing, players with a non-integer score are grouped with players with an integer score just below, whatever the "Round down NBW and MMS scores" choice might be.

### **McMahon**

The McMahon Bar defines the SMMS (Starting McMahon Score) for players above the bar. The super-bars can also be defined in big tournaments.

The McMahon Floor defines the SMMS (Starting McMahon Score) for players below the bar.

The Bar can be set between 10K and 9D

The Floor can be set between 20K and 1D

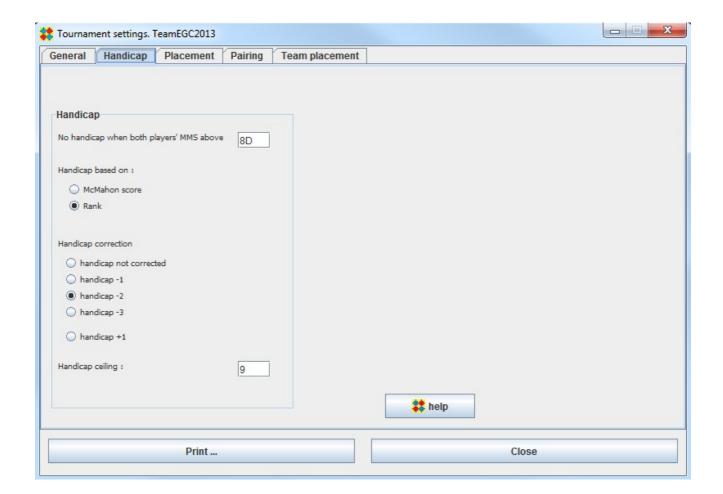
The Bar must be higher or equal to Floor

McMahon Zero defines the rank corresponding to zero in MMS computings. By default, McMahon Zero is set to 30K. It may be more convenient to set it to a higher value, for instance McMahon floor.

## **Change or Reset Tournament system**

This button gives acess to a dialog box where you can choose one of the three <u>tournament systems</u> or reset tournament parameters to their default values

# **Handicap settings**



## No handicap when both for players' MMS above

Players with a current MMS equal or above the corresponding specified rank.

If a player is above and his opponent is below, the handicap will be computed as if the MMS of the stronger player was the MMS corresponding to the specified rank.

# Handicap based on

If you choose McMahon score, the handicap will be computed according to the current MMS. If you choose Rank, the handicap will be computed according to the rank, independently of previous results.

# **Handicap correction**

After previous computations, handicap will be decreased by 0, 1, 2 or 3 stones or increased by 1 stone.

# Handicap ceiling

The handicap is then limited to this value. The handicap ceiling is between 0 and 9.

# **Placement settings**

## **Glossary**

• NBW

Number Of Wins.

• MMS

McMahon Score

At the beginning of the tournament, each player is given a starting McMahon score (SMMS) which is usually based upon his ranking. For instance, a 1 dan player starts with 30 points, a 20 kyu player starts with 10 points. After each round the MMS of each player is increased by 1 for a win, 1/2 for a draw, 0 for a loss.

When a player is absent or bye, he is given points according to values defined in special results panel of General parameters Default values are 1/2 point for absence and 1 point for bye.

But if the sum of such points is not an integer, it is rounded down to the closest integer.

Rank

As defined at registration time. Value is between 30K and 9D.

Rating

As defined in the reference rating list. Value is between -2950 and 850. When EGF rating list is used, Rating = GoR -2050

• CUSSW

Cumulative Sum of Scores (NBW).

CUSSW after round r is the sum of NBW as computed after round 1 + NBW as computed after round 2 + ... + NBW as computed after round r

• CUSSM

Cumulative Sum of Scores (MMS).

CUSSM after round r is the sum of MMS as computed after round 1 + MMS as computed after round 2 + ... + MMS as computed after round r

• SOSW, SOSM

Sum Of Opponents scores. SOSW is based on NBW. SOSM is based on MMS.

If the player does not participate in a round, the opponent's score is replaced by the starting score of the player himself.

In handicap games, the opponent's MMS is corrected according to the handicap before addition to the SOSM

• SOSW-1, SOSW-2, SOSM-1, SOSM-2

Same as SOSW and SOSM but after elimination of 1 or 2 worst opponents scores

• SODOSSW, SODOSSM

Sum Of Defeated Opponents scores.

• SOSOSW, SOSOSM

Sum of Opponents' SOS

#### • EXT, EXR

Exploits Tentes, Exploits Reussis. The idea is to take in account the *difficulty* of the game. A game is assumed to be difficult for a player if the actual handicap (AH) was, for that player, more difficult than Natural Handicap (NH)

- o if AH < NH, then coef = 0 (easy game)
- o if AH = NH, then coef = 1 (normal game)
- o if AH = NH + 1 then coef = 2 (difficult game)
- o if  $AH \ge NH + 2$  then coef = 3 (very difficult game)

ET is the sum of opponents scores, with coef as a weight factor

ER is the sum of defeated opponents scores, with coef as a weight factor

#### • DC

Direct Confrontation. This performs a special sort on players having the same score for higher priority parameters than DC, so that a player is above the ones he has defeated. DC numeric value has no meaning by itself, it is set to enforce rank given by following algorithm:

- This applies to a group of players equal according to higher priority settings, looking only at results of games played against each other.
- It detects and removes cycles of victories, by putting players forming a cycle in a single "node" sharing all victories and defeats against other players of the group.
- Considering all players with no victory against the group, take the one (or the ones, there can be ties) with the lowest score for parameters after DC. Rank this player last.
- Remove ranked player from the group and iterate previous step.

#### • SDC

Simplified Direct Confrontation. Considering players having the same score for higher priority parameters than SDC:

- if they all have played against each others, SDC value for a player is the number of victory amongs its peers.
- if they haven't, SDC value is 0 for all of them.

#### • STS

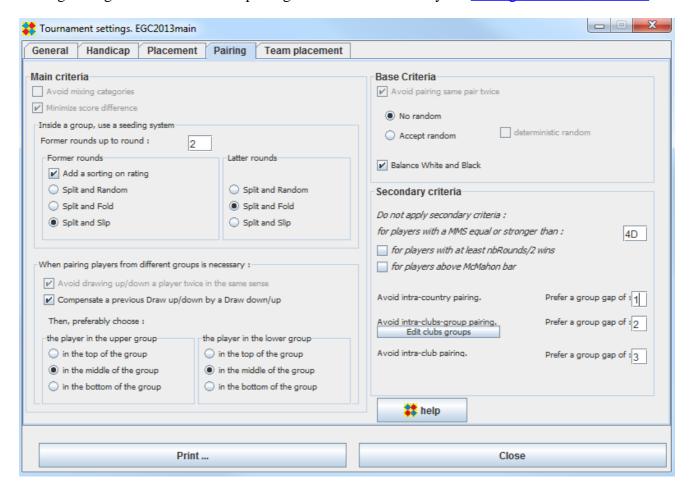
STrasbourg Score. Used ONLY for a tournament, where the players of the top group play in a single elimination bracket to decide the champion, while other players play a classic McMahon tournament.

- When a player of the top group loses a game, he joins the classic McMahon tournament. The loosers of semi-finals play a match for the 3rd place.
- STS is equal to MMS for all players, except for the 4 players of the top group reaching the semi-finals:
  - o at each round, STS is increased according to MMS rules.
  - o but a win in quarter or semi-finals gives a bonus of 2 STS points.
- STS used as first placement criterion aims at ranking players (Standings tab -> use temporary set) according to the elimination bracket results.

- The pairing of the players in the elimination bracket has to be done manually. For a tournament with n rounds, the number of players in the McMahon top group, who enter the elimination bracket, must be set to  $2^n$ .
- SOSTS
  Sum Of Opponents' STS

# **Pairing settings**

Pairing settings refer to a subset of pairing criteria as described by the Pairing evaluation function.



## Main criteria

A "group" is a set of players with same score for main placement criterion (MMS or NBW).

## **Avoid mixing categories**

Relevant in "Swiss with categories" only. When selected, the pairing will prefer intra-category pairing.

#### Minimize score difference

Always selected. Pairing prefers to pair players with equal or neighboring main score, MMS or NBW.

### Seeding system

Inside a group, players are ordered according to their placement. Each player of the higher half of the group will be paired with a player of the lower half.

You can choose a different system for former rounds and latter rounds.

And, for former rounds, you can add a sorting on rating. This is the recommended mode if you want to avoid a game between two best players in the former rounds.

### When pairing players from different groups ...

Difficulties or impossibility to make intra-group pairing (due to uneven size of a group, for instance) may occur.

When this occurs, OpenGotha will choose one player in the group and this player will be paired with a player of a stronger or weaker group.

OpenGotha will try to do not draw-up or draw-down a player twice in the same direction.

It will also try to compensate a previous draw-up by a draw-down and vice versa. However, you may inhibit this compensation system by unchecking the "Compensate a previous Draw up/down by a Draw down/up" checkbox.

It will also prefer to chose drawn-up and drawn-down players according to your choice, in the top, middle or bottom of the group.

### **Base criteria**

### Avoid pairing same pair twice

Always selected

#### Random

OpenGotha can introduce randomness as part of the pairing process. If you choose to accept random, you will have to choose between:

- Deterministic random. Two successive pairings will give exactly the same pairing
- Non-Deterministic random. Two successive pairings may give different pairings

#### **Balance White and Black**

Tends to give the same number of games with white and black for a given player.

# Secondary criteria

<sup>&</sup>quot;Split and Fold" will prefer pairs on the "1 - n, 2 - n-1, ..." scheme

<sup>&</sup>quot;Split and Slip" will prefer pairs on the "1 - n/2+1, 2 - n/2+2, ..." scheme

<sup>&</sup>quot;Split and Random" will make random choice.

Secondary criteria are "Minimize handicap" criterion and geographical criteria. Secondary criteria are, by default, applied. But you can exclude these criteria for some defined players:

- Players above a certain rank
- Players with a good performance in previous games.
   For instance, in a 10 rounds tournament, if you select this option, then players having at least 5 wins in their previous games will not be concerned by these secondary criteria.
- Players above the McMahon bar

#### Minimize handicap

This criterion is already taken in account in McMahon system because intra-group pairing will not lead to handicaps.

It is relevant in Swisscat system.

Details in Pairing evaluation function.

### Avoid intra-country, intra-clubs-groups and intra-club pairing

This determines what is acceptable to avoid intra pairing.

For instance, in a McMahon tournament, if you choose 3 as the group gap, which is the default value for intra-club pairing, then OpenGotha will prefer to pair a given player with another player coming from another club even if their MMS difference is up to 3 points rather than to pair him with a player coming from the same club with same MMS value.

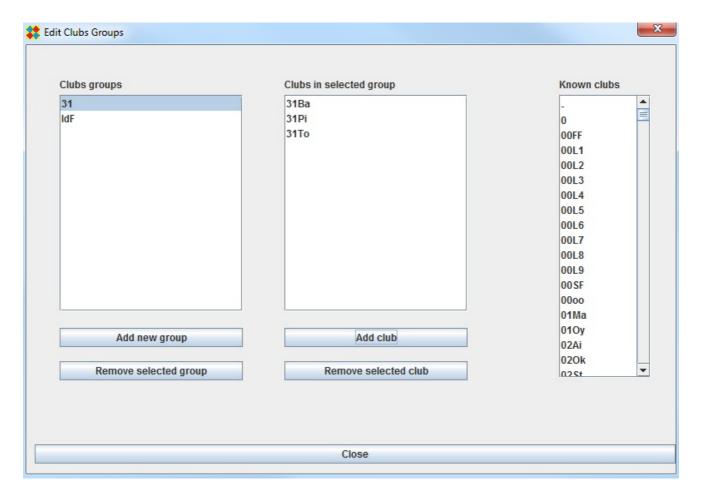
### Avoid intra-clubs-groups pairing

This criterion is a way to avoid pairing players coming from a given group of clubs.

In certain towns (e.g. Toulouse), you may have several clubs (31To, 31Pi, 31Ba) and players from these clubs often play together.

Define these clubs groups **Edit clubs groups button** 

# **Edit clubs groups**



Add or remove clubs groups.

To add or remove clubs, select a clubs group, then use the add club/remove selected club buttons

# **Team Placement settings**

## **Glossary**

#### • TEAMP

Team points.

2 points are given to the team having more than (number of boards)/2 board wins

1 point is given to a team having (number of boards)/2 board wins

2 points are given to the team having less than (number of board)/2 board wins

#### • SOST

Sum Of Opponents scores.

The Opponents scores are the team points.

#### • BDW

Board wins.

Number of individual board wins

#### • BDxW

Board wins on x upper boards

Number of individual board wins. Only the boards from 1 to x are taken in account.

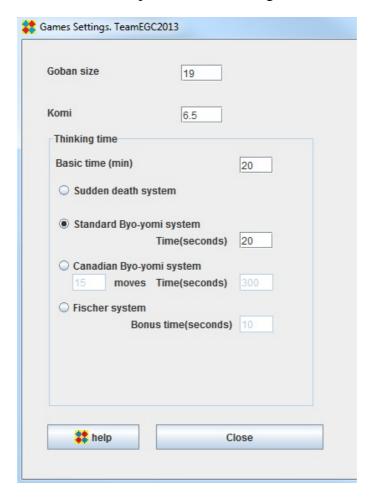
#### • MNR

Mean rating.

Mean of ratings of the team members at first round

# **Games Options**

The informations in this frame is used to export results for rating lists



You can choose between 4 time systems.

- · Sudden death
  - Basic time and no additional time
- Standard Byo-yomi
  - Basic time and additional time for each move
- Canadian Byo-yomi
  - Basic time and additional time for each series of moves
- Fisher
  - Bonus time is added to the credit of the player after each move, starting from the first move of the game.

## **EGF classes**

Depending on the time settings, OpenGotha computes the class (A, B, C, or no class) according to EGF rules.

EGF recognizes three tournament categories:

• **class A** - well organised tournament recognised by an EGF member time limit requirements: adjusted time minimum 75 minutes, basic time minimum 60 minutes (45 for Fischer)

#### weight for inclusion to EGF ratings: 1.00

In addition tournaments with handicaps in the top bar are not included in class A.

• **class B** - well organized tournament recognized by an EGF member time limit requirements: adjusted time minimum 50 minutes, basic time minimum 40 minutes (30 for Fischer)

#### weight for inclusion to EGF ratings: 0.75

• class C - casual or club tournament recognized by an EGF member time limit requirements: adjusted time minimum 30 minutes, basic time minimum 25 minutes (20 for Fischer)

weight for inclusion to EGF ratings: 0.50

#### Adjusted time:

is calculated as:

- Sudden death basic time.
- **Standard byoyomi** basic time + time equivalent to 45 moves.

e.g.: basic time: 60 minutes, byoyomi: 30 seconds per move:

$$60 + (45 \times 30") = 82.5$$
 minutes

• Canadian byoyomi - basic time + time equivalent to 60 moves.

e.g.: basic time: 75 minutes, byoyomi: 12 moves in 5 minutes:

$$75 + (60 \times (5 / 12)) = 100 \text{ minutes}$$

• **Fischer** - basic time + bonus time equivalent to 120 moves.

e.g.: basic time: 45 minutes, bonus per move: 15 seconds:

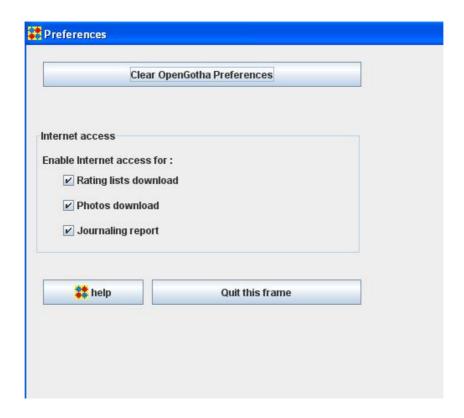
$$45 + (120 \times 15") = 75 \text{ minutes}$$

Sudden death - implying adjusted time = basic time - is acceptable, provided all other criteria are met.

# **Preferences**

As opposed to *parameters*, attached to a tournament and stored in the tournament file, *preferences* are installed on a computer and stored in the register (Windows) or a dedicated file (Linux and Mac OS). OpenGotha uses *preferences* to store

- The default type of rating list
- The default registration status, Preliminary or Final
- The list of recent tournaments
- The journaling informations
- The Internet access authorizations



## Internet access authorizations

- Rating list downloads
   Enables/Disables the possibility to download rating lists
- Photos downloads
   Enables/Disables the possibility to download photos from EGD
- Journaling report
   Enables/Disables the possibility to upload Journaling reports

   Journaling report data are sent to the author of this program. It is highly recommended to keep journaling enabled.

# **Options menu**



## Menu items list

#### **Discard rounds**

This opens the **Discard rounds frame**.

### **RMI Manager**

Useful for Administrators/Programmers.

#### **Memory manager**

Useful for Administrators/Programmers.

### **Experimental tools**

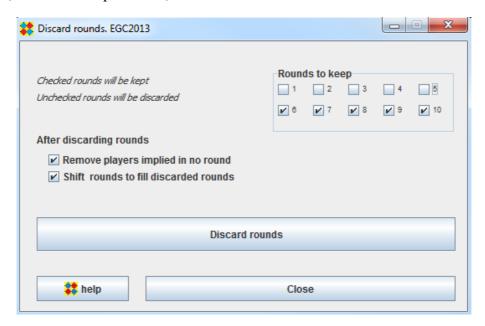


Work in progress

# **Discard rounds frame**

Useful to keep certain rounds in a tournament and discard others.

May be used before exporting part of a tournament. Typically, if you run a main tournament in a European congress, you will have to split your rounds, rounds 1-5 for the 1st week, rounds 6-10 for the 2nd week (as in the example below)



The "Discard rounds" button will:

- Discard unchecked rounds
- (if checkbox selected) Remove players participating in no round
- (if checkbox selected) Shift rounds to fill discarded rounds
  In the example above, results of 2nd week (rounds 6-10) will be shifted to rounds 1-5

# **Appendices**

**Games encoding** 

Pairing algorithm

**Pairing evaluation function** 

**Compatibility issues** 

**VBar-separated format** 

# **Games encoding**

When displayed in a frame like Games .. Results, a game is represented by a string of 1 to 4 characters.

Result	Encoding
Unknown	-
White wins	1-0
Black wins	0-1
Equal	1/2-1/2
Both win	1-1
Both lose	0-0
White wins by default	1-0!
Black wins by default	0-1!
Equal by default	1/2-1/2!
Both win by default	1-1!
Both lose by default	0-0!

A result is declared "by default" when one player or both did not show up.

When displayed in a table like in the Standings Tab or in an export file like html export file, a game is represented by a string of up to 8 characters

char 1-4: opponent number

char 5 : result : + for win, - for lose, = for  $\frac{1}{2}$ 

char 6: "/" or "" (empty) for "normal" result. "!" for "by default" result

char 6 or 7 : colour : w for white, b for black, ? for unknown colour.

char 7 or 8: handicap: from 0 to 9

For a dummy game (absent, bye or unassigned) the string is "0-/","0=/" or "0+/" meaning loss, equal or win. The result is always a loss for unassigned, and may be loss, equal or win for absent or bye, depending on user's choice in General parameters

# Pairing algorithm

OpenGotha's pairing system is based on an evaluation function and a maximum matching algorithm. To pair a set of n players, OpenGotha first computes a cost for each pair of players, that is to say n\*(n-1)/2 costs. The cost is computed by an evaluation function. A low cost means an undesirable pairing while a high cost means a desirable pairing. Then these n\*(n-1)/2 costs are input to the maximum matching algorithm which finds the set of n/2 couples that gives the maximum sum of costs.

## The maximum matching algorithm

OpenGotha's pairing system is based on an O(n^3) implementation of Edmonds' algorithm, as presented by Harold N. Gabow. The development is part of the UCSB JICOS project. Adaptation for OpenGotha has been made by Jean-François Bocquet.

Descriptions of Maximum matching algorithms, Edmond's algorithm and Gabow's implementation can be found in :

- J. Edmonds, "An introduction to matching," Notes of Engineering Summer Conference, Univ. of Michigan, Ann Arbor, 1967.
- C. Gerlach, Ein Mac-Mahon-Losungsprogram für Go-Turniere unter Benutzung von Maximum Weight Perfect Matching : http://www.cgerlach.de/go/diplom.pdf
- B. Korte, "Combinatorial Optimization", Springer, available on Google books: http://books.google.com/books?id=tu6nz572uJIC&printsec=frontcover&dq=Combinatorial+Optimization

# Pairing evaluation function

OpenGotha's pairing evaluation function delivers, for a given pair of players and for a given round, a cost value which takes into account evaluation criteria.

### Base criteria

#### **Avoid duplicate games**

Set to 500 000 \* 10^9 if the two players have not yet played each other. Set to 0 if the two players have already played each other.

#### Random

If the option is selected, set to a value between 0 and 10^9

The deterministic function is a scrambling function of players names

The non-deterministic function is based on standard Java method.

#### **Balance White and Black**

For each player, the number of games played with White and no handicap is compared with the number of games played with Black and no handicap.

If both players give a strictly opposed result, then set to 1 000 000.

If one player's balance is 0 and the other one's is greater than 1, then set to 500 000.

Else set to 0.

## Main criteria

### **Avoid mixing categories**

If both players belong to the same category, then set to  $20\ 000 * 10^9$ .

else set to coef \* 20 000 \* 10^9 where coef is a number between 0.0 and 1.0, computed by a concavity function

#### Minimize score difference

Aims at pairing inside a group.

If both players have equal score then set to  $100 * 10^9$ .

else set to coef \* 100 \* 10^9 where coef is a number between 0.0 and 1.0, computed by a concavity function

### **Draw-up Draw-down**

Aims at choosing players according to their positions inside their group (Top/Middle/Bottom) and at correcting previous draw-ups/draw-downs.

If players have a group distance >=4, set to 0

else 4 scenarii:

- scenario = 0 : One of the players has been already drawn in the same sense
- scenario = 1 : Normal conditions (does not correct anything and no previous drawn in the same sense)
- scenario = 2 : It corrects a previous DU/DD for one player
- scenario = 3 : It corrects a previous DU/DD for both players

If scenario = 0, set to 0

Else take in account the position of the player inside a group. This gives a value between 0 and 33 333 333

```
If scenario = 2, add 33 333 333
```

If scenario = 3, add 66 666 666

Set to the resulting value, which is a number between 0 and 99 999 999

If players belong to different categories, decrease the resulting value

### Seeding

Aims at pairing according to chosen seeding system: "Split and Random", "Split and Fold" or "Split and Slip".

The cost of this criterion is between 0 and maxSeeding = 5 000 000 cla1 and cla2 being the internal placement (0 to groupSize - 1) of players inside the group ...

• Split and Random.

If both players are not in the same half of the group, the cost is randomly chosen between 0.8 \* maxSeeding and 1.0 \* maxSeeding

```
else cost = 0
```

• Split and Fold.

```
x = cla1 + cla2 - (groupSize - 1)

cost = maxSeeding - maxSeeding * x^2 / (groupSize - 1)^2
```

• Split and Slip.

```
x = 2 * |cla1 - cla2| - groupSize

cost = maxSeeding - maxSeeding * x^2 / groupSize^2
```

# Secondary criteria

## Are secondary criteria relevant for these players?

Secondary criteria are not applied for players above a certain ranking, as set by the organizer (by default, 1D) and, optionnaly (by default, secondary criteria applied), for players with a number of wins >= (number of rounds) /2.

When both players are concerned by secondary criteria, the function values are set as computed.

When both players are excluded from secondary criteria, the function values are set as to the maximum possible.

When one player is excluded from secondary criteria and the other player is not, an intermediate value will be computed (see sources for details)

### Minimize handicap

The maximum value is  $20\,000 * 10^{\circ}9$ . The minimum is 0

Between the extrema, set to coef \* 20 000 \* 10^9 where coef is a number between 0.0 and 1.0, computed by a <u>concavity function</u> a If MMS difference is 0, set it to Secondary criteria are not applied for players above a certain ranking, as set by the organizer (by default, 4D) and, optionnaly (by default, secondary criteria applied), for players with a number of wins >= (number of rounds) /2.

### Geographical criteria

A malus value is computed for if both players belong to the same club. An other one for if both players belong to the same country. The values of the malus depends on the "Prefer a group gap of ..." as defined by the user. The geographical malus is set as a worse value between both malus.

## **Concavity function**

The concavity function is used to compute the weight of several criteria.

Let us see why this function is necessary and how it is used.

An example : have a tournament where you have 1 player 1K, 2 players 2K, 2 players 3K, ... 2 players 10K and 1 player 11K. The parity issue will result in a choice between :

- Pair everybody with his same rank fellow. And fix the parity issue by pairing the 1K with the 11K
- Pair the 1K with a 2K, the other 2K with a 3K, etc.

Any human organizer would choose the second option, but the computer might not, if you don't take care.

Assume that in your evaluation function, the base value for a pair is 1000 and you give a penalty of 100 \* d for a d kyu rank difference.

The sum of values will be, in both cases 9000.

Now, with the concavity function.

Instead of 1000 - 100\*d, you use 1000 \* (1.0 - x) \* (1.0 + k \* x)) (OpenGotha uses 0.5 for k. x = d/maxRange, d/10 here)

Then, the sum of values will be 9 \* 1000 + 0 = 9000 in solution 1 and 10 \* 945 = 9450 in solution 2

OpenGotha prefers solution 2.

# All the details

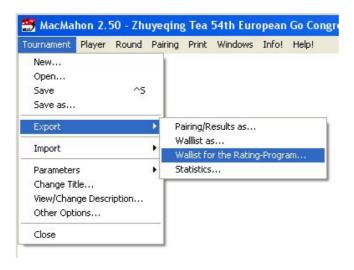
OpenGotha is hosted by GitHub. Sources are available from lucvannier/opengotha github repository In Tournament.java, see the costValue method.

# **Compatibility issues**

OpenGotha supports tournament data generated by other programs.

# Importing players and games from Christoph Gerlach's MacMahon program

From MacMahon 2.50, use "Tournament .. Export .. Wallist for the Rating-Program" menu item.



Save the file into a .txt file

In OpenGotha, create a new tournament.

Then import the .txt file with the "Tournament .. Import .. Import Players and Games from Wallist file" menu item



Importing players and games from Geoff Kaniuk's GoDraw program

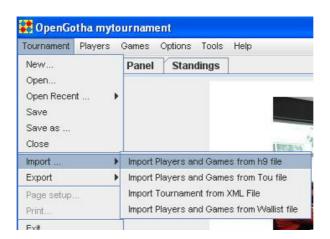
From GoDraw 6.3.6, use "File .. Export .. Ratings" menu item.



Save the file into a .h9 file

In OpenGotha, create a new tournament.

Then import the .h9 file with the "Tournament .. Import .. Import Players and Games from Wallist file" menu item



### Opening a tournament saved by an old OpenGotha program

Usually, the "Tournament .. Open" menu item is what you need.

However, for tournaments managed by OpenGotha V3.22 or older, the file to open is the .xml file as generated by the "Tournament .. Export .. Tournament in XML format" menu item :



Save the file into a .xml file

In new OpenGotha, open the .xml file with the "Tournament .. Open .. " menu item

### **Running several instances of OpenGotha**

Some compatibility issues may occur when running several releases of OpenGotha.

To solve them, choose the "Options .. Preferences" menu item and click "Clear OpenGotha Preferences"

# **VBar-separated format**

vBar-separated format has been defined by Christoph Gerlach. It is supported by OpenGotha to facilitate transition from MacMahon program to OpenGotha.

Each row of the file holds the dataset for one player and has to follow this format:

#### name|firstname|rank|club|country|rating|registration

#### name:

#### firstname:

rank: Number followed by "d" or "D" is interpreted as Dan, everything else as Kyu; the limits are 30

Kyu - 9 Dan

club: Truncated after 4 characters

**country :** Truncated to 2 characters. Ignored if 0 or 1 character is supplied.

rating: from 0 to 2900.

**registration:** "p" for Preliminary "f" = Final.

#### **Notes**

- Fields must be separated by "|"
- ";" declares the rest of the row as a comment.

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