

Wrestling Pairings Program 2010

This program assists in setting up Madison style wrestling meets where rosters are combined and wrestlers are matched based on age, weight, experience and skill level. It can attempt to automatically find matches for kids of the similar age, weight, experience and skill.

Alternatively, it can be used to substantially aid the process of manually assigning matches by showing a list of possible opponents sorted by "best" matchup. The relative importance of each of these parameters can be adjusted to fine-tune the selection process.

Here is a summary of the new features included in the 2010 version of the Pairings program:

- **Operation** – The basic operation is the same as the prior version .
- **Teams** – The new version can have more than three teams using the “Add Team” feature.
- **Data Validation** - The new program validates the data as it is loaded and it will alert the user of any lines that are not in the correct format.
- With the new program you can delete the bottom wrestler without incident.
- **Mats** – The new version can be configured for up to 10 mats.
- **Mat assignments** – The new version of the software allows wrestlers to be assigned to mats by experience, weight or a combination of experience and weight.
- **Home Team Optimization** - The new software will allow the home team to assign their wrestlers to the same mat for all their matches to simplify assigning table help for the home team.
- **Match Spacing Optimization** - The new system offers a more flexible optimization when the operator can optimize each mat without changing mats that are already without conflicts.
- **Set Up Restart** - The new version has the ability to restart a meet without losing the entire set up. With the restart meet function the operator can restart, change the number of mats, delete or add teams and the program will only delete matches associated with deleted teams.
- **File Save** - The new software has more robust file save and allows the operator to specify the subdirectory and file where the output will be saved.
- **Program Output** - The new software is designed to save the output file in both .XML and HTML format. The .XML format can be opened on MS Excel 2003 and newer. The HTML format can be opened using a standard web browser.

System Requirements:

Computer (minimum)

CPU: Intel – Pentium M

CPU Speed: 1.5 Ghz

RAM (min): 512 MB

HD (Free Space): 500MB

Windows: XP, Version 5.1, SP 3

Support Software

Microsoft Excel 2003 (or higher) required to open .XML files

.NET Framework (4) (Pairings set up will install necessary components)

Note – Other systems may function correctly but this software was tested on a system with the specifications listed.

Installation:

The distribution is a self-extracting ZIP file. Choose “Open” when asked if you would like to open the file or save it to your computer. Choose a directory and a program group to install the program. After the installation program completes, you should have a program group named "Pairings" accessible from the **Start** menu.

The new program requires .NET to be installed; the set up file will automatically download and install the required components. This can take a while depending on your internet connection speed.

If you have a problem installing the .NET program you can save the .Net application to your hard drive from the following link and install it from the hard drive.

<http://www.microsoft.com/downloads/en/details.aspx?displaylang=en&FamilyID=9cfb2d51-5ff4-4491-b0e5-b386f32c0992>

Team Roster Files:

The program takes as input text files that contain a list of each team's wrestlers, one-per-line, in the following format:

```
firstName, lastName, weight, birthday, experience, skill
```

Files in this format can be easily created either by Microsoft Access or by Microsoft Excel. This is most often done by creating a spreadsheet in Excel with wrestlers' first Name in column 1, last name in column 2, weight in column 3, etc. (without column headings.) After entering each team member (in any order) choose the "**Save As**" command from the **File** menu. In the "**Save as Type:**" field, select the "**CSV (comma delimited)**" option.

The "skill" parameter should be a subjective value between 0 and 5 to help ensure that stronger wrestlers are paired with other wrestlers with similar skills. By convention, the value of 3 is used to mean an average wrestler. Refer to your leagues guideline for the skill definition guideline.

Getting Started:

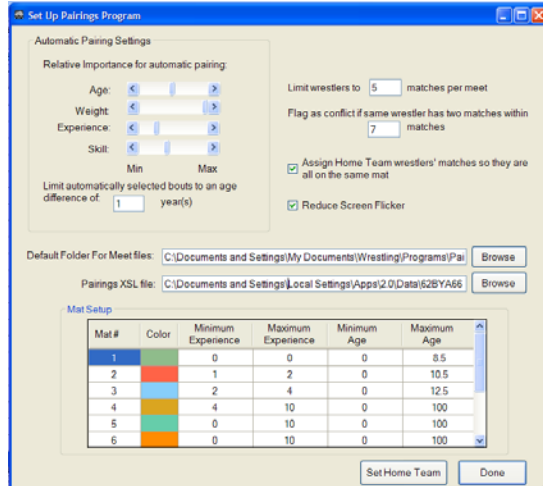
After pressing the Pairings launch on the Start menu the following popup will appear:



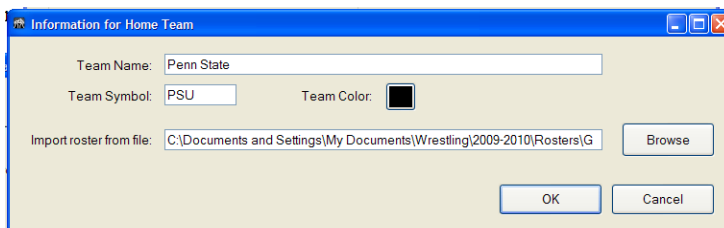
From this screen the operator can Setup the program defaults, Edit an Existing Meet, Create a new meet or Exit. For a coach doing an initial set up, he will first need to press the set up button to set the program defaults. If you are participating in a set up where the initial set up has already been done you can navigate directly to the "Edit Existing Meet" page without doing an initial set up.

Program Setup:

There are several options that can be selected to customize the way the program works. To change the settings, press the "Setup" button on the main form. After pressing the "Set Up" button the pairings program will navigate to the Set up Screen below:



To get started you will need to set the Home Team by pressing Set Home team button the program will take you to the set home team window as follows:



Enter the Team name (e.g. "lionville"), enter a 3 or 4 character Team Symbol and select a unique color to be associated with each team. This is useful to identify wrestlers from each team when making pairings and on wall charts and is particularly helpful when scheduling larger meets. To select a color, press on the colored square next to the Team Symbol field and select a new color (probably matching uniform colors).

Next, either type in the name of your team's roster file location or press the "**Browse**" button to locate the file using Windows dialogs. (NOTE: The program will save the name, symbol, and filename for the home team so that you won't be prompted to enter that information again. To change the home team file and/or name, choose the "**Set Home Team**" option from the Setup form.)

Automatic pairings setup:

The program can attempt to auto-select matchups for you. The algorithm used to do this tries to match kids of similar age, weight, experience and skill. Obviously, this is not an exact science and there's not always a "best" match, so there is considerable room for interpretation. The program does attempt to find reasonable matchups (e.g. it will "give up weight" if a kid is older or more experienced), but the approach is not always what a coach would do manually. There are 4 sliders corresponding to Age, Weight, Experience, and Skill. Move the slider to the right to increase the relative importance of a parameter in the pairing process.

Also, the program can be set so that it will never create a matchup between two kids who's ages differ by more than a fixed amount. By default, it limits kids to being within one year of each other. Increase the limit if you want the auto-pairing process to be more lenient than that.

NOTE: These parameters only affect the automatic pairing process; it's always possible to manually select matches that you know are good.

You can specify that maximum number of matches that a wrestler can have for a meet (the default is 5)

Mat setup:

The program can assign bouts to a mat automatically based on the experience level and/or age of the wrestlers (this is a frequently used approach to mat assignment since it tends to keep novices together, etc.). The program can schedule up to 10 mats and each one is referred to by a number and a color. It is also useful to pick a color for each mat so you can keep them straight.

For example, to assign all first year kids to a particular mat, enter 0 for both the minimum and maximum experience for that mat. If you use more than one mat for an age group (that is, if the minimum and maximum values overlap for more than one mat), bouts will be assigned to try to keep the number of matches approximately even on all mats. If you also put in an age range of 0-8 years old the program will move all first year wrestlers outside that age range to another mat where they meet the age criteria.

Each mat has a range (minimum and maximum values) for age and experience levels of the kids that can be assigned to it. You can set up the program to perform exactly like the prior version by setting the minimum age to 0 and maximum age to 100 for all mats. The new program offers the

ability to send older kids to another mat so you don't end up sending a first year 13 year old to a mat with mostly all 4-6 year old first year kids.

Based on the initial testing the ideal setting is to set the minimum age for every mat at zero and have each mat with a higher upper age limit the set up will be the same as the old program except it will move kids to a higher mat based on their age. So if you use the example in the following table the wrestlers will be assigned as follows:

1. All wrestlers with 0 years experience who are less than 8.5 years old will be assigned to mat #1
2. All wrestlers with 1 to 2 years experience who are less than 10.5 years old and first year wrestlers that are older than 8.5 and less than 10.5 will be assigned to mat #2
3. All wrestlers with 3 to 4 years experience who are less than 12.5 years old and wrestlers with 0 to 2 years experience that are older than 10.5 and less than 12.5 and will be assigned to mat #3.
4. will be assigned to mat #4.
5. Wrestlers with 4 to 10 years experience and wrestlers with 0 to 4 years experience that are older than 12.5 years old will be assigned to mat #4.

| Mat # | Color | Minimum Experience | Maximum Experience | Minimum Age | Maximum Age |
|-------|-------|--------------------|--------------------|-------------|-------------|
| 1 | | 0 | 0 | 0 | 8.5 |
| 2 | | 1 | 2 | 0 | 10.5 |
| 3 | | 3 | 4 | 0 | 12.5 |
| 4 | | 4 | 10 | 0 | 100 |

Age settings are important for this feature because if you have a wrestler that does not fit in the criteria you establish the program will do a "best fit" but that may not be the mat assignment you would select.

The program begins by assigning match numbers randomly. However, it will attempt to adjust the order of matches so that no wrestlers' matches are within a few matches of one another (checking all mats). Unfortunately, sometimes there are conflicts, and the program will show the problem by highlighting the wrestler's matches that are too close together in PINK. You can specify how many matches apart indicates a conflict. The default is 6.

Home Team Optimization

The new version includes a check box to assign the home team wrestlers to the same mat. This will make it easier to obtain table help by assigning the home team wrestler to the same mat for all his matches.

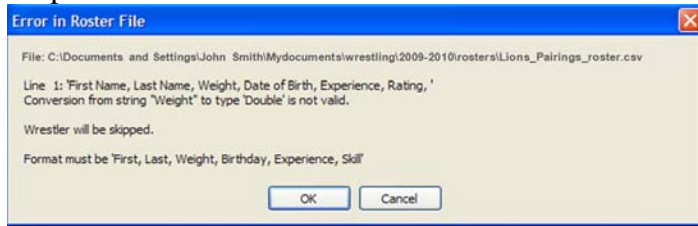
Set Up Finished:

After you set the program set up values you can press the "Done" button to return to the wrestling pairings window. Program settings are remembered between runs so they need not be selected more than once.

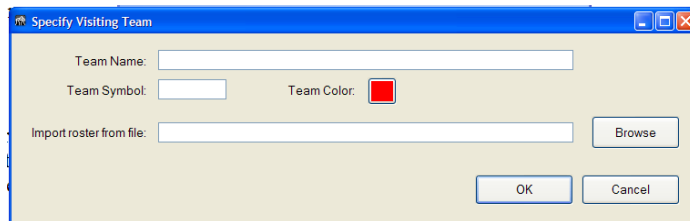
Creating a New Meet

To create a new meet, press "Create a **New Meet**" button. The program will validate your home team data at that time and identify any rows that do not meet the .csv format above. The program

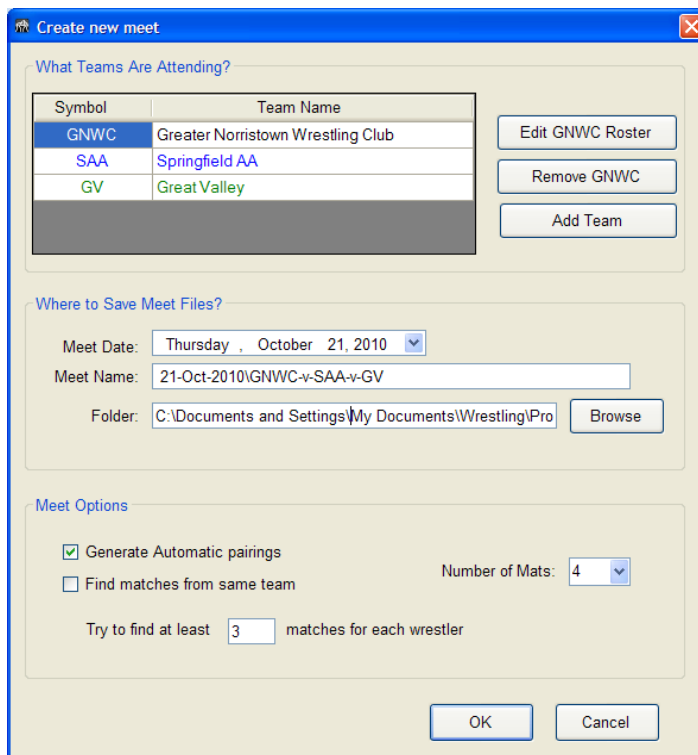
will proceed to the next step but you should make note of the wrestler to be sure he is not omitted in the set up.



After pressing OK the program will navigate to the Visiting Team entry file.



You will then enter the name, symbol, color, and file for the first opposing team, just as you did for the home team. After pressing OK the "Create new meet" form will appear where you can add more teams, configure the meet storage location and set the number of mats.



Enter the date for the meet (this is only used to generate a file name to save the meet). To edit a roster select the team and the "**Edit Roster**" will specify the selected team. Press the button to open the roster and make changes or add wrestlers. To indicate that a wrestler will not be attending the meet, click on his name and the attending cell will change to no and the line of data will appear dimmed and crossed out (you click again, the wrestler will be reinstated).

To change the information about a wrestler (name, birthday, weight, skill, etc.), highlight the cell you need to change and edit the information in that cell.

If you make changes to or add new wrestlers in the **Edit Roster** form, the "**Save Roster**" will create a new file for future meets.

For each meet, you can indicate whether you want the program to generate auto-pairing or not, how many matches to find for each wrestler, and whether it should look for matches for a wrestler with other wrestlers on the same team if no match can be found on opposing teams. Also, indicate the number of mats you will be using. When all information is complete, press the **OK** button and a new meet will be created.

Editing a Meet

The Edit Meet form has two panels: "**Wrestler Pairings**" and "**Mat Assignments**". Click on the tabs at the top of the form to select one or the other.

Wrestler Pairings:

Each team's name is listed on a tab on the top left side of the form. Click on one of the tabs to see the roster for that team. The wrestlers are listed sorted according to one of the columns. Click on the column heading to resort by a different column. Clicking on the column heading again will reverse the order of the sort. For example, to see all wrestlers organized by weight, click on the "**Weight**" label. The wrestlers are sorted by weight, lightest to heaviest. To see them in the opposite order (heaviest to lightest), click on the "**Weight**" label again.

As you click on each wrestler's name (or scroll up and down using the arrow keys), you'll see the matches already assigned for that wrestler are listed in the upper right box labeled: "**Current matches for XXX:**". Below that, in the box labeled "**Possible additional matches:**" are any additional matches that are possible, sorted top to bottom according to the auto-pairing "best match" scheme.

Each wrestler is shown in the color for his team with the number of matches currently scheduled so you can tell which wrestlers need more matches, etc. Each bout is assigned a bout number, and will correspond to an entry on the "**Mat Assignments**" panel. The Mat Assignments panel is used to rearrange the order of bouts. It is often necessary to toggle between the Wrestler Pairings and Mat Assignments panels and between the team tabs.

If there no names listed in the "**Possible additional matches**" box, that means that none of the other wrestlers on the other teams are within the preset limits for matchups. There are 3 options to find additional matches for hard-to-match kids:

1. By default, the program only allows first-year wrestlers to wrestle other first-year wrestlers. Uncheck the "**First-year only rule**" to allow matches between first year wrestlers and non-first-year wrestlers.
2. By default, the program will not allow matches between wrestlers whose weight difference is too large (as a percentage of the lighter wrestler). Uncheck the "**Enforce weight check**" box to allow matches between wrestlers of widely different weights.
3. Lastly, if no one on the opposing teams is a match, check the "**Include own team**" box to schedule a match between two wrestlers on the same team.

To remove a match:

Either double-click or right-click on the name of the wrestler in the "**Current matches for ...**" box and that match will be removed.

To add a new match:

Either double-click on the name of the wrestler in the "**Possible additional matches ...**" box or click and drag the name to the top box.

To add, remove, or change values for a wrestler:

Either right-click on his name in the roster and mark him as "not attending", or edit the roster using the "**Edit Roster**" button.

Leave Early and Arrive Late:

Invariably, there will be special requests for wrestlers who either have to leave early or will arrive late. To keep track of these pain-in-the-ass requests, select the wrestler's name in the Wrestler Pairings form so that it says "Current Matches for xxxx" and then right-click on the wrestler's name. You can remove the wrestler by pressing the "John Doe not attending" or you can select "Arrive Late", the wrestler's name will be shown in Green in the Mat Assignment form and if you select "Leave Early" it will show up in Brown (the program provides no more help than that, it just makes it easier to see where their matches line are.)

Mat Assignments:

Clicking on the **Mat Assignments** tab at the top left side of the form brings up a list of the bouts assigned to each mat. To the "**Optimize**" the bouts to remove conflicts for wrestlers without sufficient rest press the column header. The program will attempt to rearrange the matches so that no wrestler has two matches too close together for the mat you selected. You can optimize each mat until the conflicts are removed. It sometimes may take more than one attempt at optimizing before all conflicts will disappear (and sometimes it can't find any order that works). If you can optimize the set up to only a few conflicts you may be able to optimize manually by moving individual matches.

To rearrange the order of bouts, simply click and drag (press and hold the left mouse button while moving the mouse) until it's on top of the bout you want to replace. Bouts can be moved from one mat to another, but the colored bar to the left of the bout indicates the mat to which it was first assigned (this is useful for "grouping" bouts with kids of similar experience so that coaches can stay in the same place.) Bout numbers are automatically adjusted as they are moved around. Any wrestler with bouts too close together is flagged as a "conflict" and his name will appear in pink in both bouts. It's usually necessary to try to spread bouts for wrestlers with several matches apart as far as possible to eliminate conflicts.

Wrestlers with only one match show up with their names in *italics*, since preference is often given to them so they don't have to wait around for hours to wrestle only one time.

NOTE:

It's usually not worthwhile to try to arrange bouts on mats until match assignments are nearly finished, since changes can cause several new conflicts to appear.

Saving a Meet

As you are assigning matches, it's probably a good idea to periodically save the meet using the "Save" button on the bottom of the Edit Meet form. Meets are saved in a file with the extension ".wrs" so you can find and edit them in the future. The new Pairings program is not compatible with the older .wrs files so you may want to retain a copy of the prior pairings program if you want to refer to older set ups. It is also possible to email a ".wrs" file to another coach so they can review the match-ups and/or make changes.

Wall Charts and Matchup Lists:

When you are finished assigning matches and mat orders, the program can create files to be used for Wall Charts and for coaches when you press the "**Done**" button.

The program always creates a text file with a list of the matchups for each mat. In addition, it will create a file in .XLS format that can be opened using Microsoft Excel (2003 or higher). The spreadsheet has one tab for each team and one tab for each mat. For each team, the spreadsheet has a row for each wrestler sorted by last name. The row includes the wrestler's stats (for meet-day pair ups) and opponents and bout numbers. This spreadsheet can be reformatted and printed to help get kids to the mats when they're supposed to be there.

Many coaches have commented that it's usually a good idea to hide the Age, Weight, Experience, and Skill columns before posting the wall charts. That seems to eliminate a lot of complaining about matchups.

For each mat, the spreadsheet has each bout number listed.

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In particular, it is understood that any user of the Software assumes all responsibility for the appropriateness of any wrestling matches scheduled using it. Each coach, to ensure their suitability, should carefully review all pairings automatically selected by this program. John Smith of the West Chester Wrestling Club, West Chester, Pennsylvania, graciously supplied several ideas used in the auto-pairing strategy of this program.