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INTRODUCTION

Before you can use MATCHSTATISTICS it is essential to go through few steps and acknowledge yourself with program functionality and used expressions. The aim of this guide is to allow you work smoothly with a powerful tool that MATCHSTATISTICS is. We can assure you that spending few minutes on reading it is worth it:). [Note that it has been written by a non-English person so please have a little tolerance for used vocabulary.] Shall you have any questions or comments after reading it, don't hesitate to write to: support@matchstatistics.com. We will gladly answer any mail.

Step 1. DATA BASE PREPARATION

A huge database of 1-X-2 decimal odds covering more than 200 online bookmakers is included with MATCHSTATISTICS[1]. While working with MATCHSTATISTICS you will probably want to use only a fraction of sportsbooks for your analyses. That’s why before you can carry out tests, you have to create your own database that suits your needs. To do this:

A) Run MATCHSTATISTICS from the location on disk you have it installed

[1] You may check actual database size on MatchStatistics web page in section “Download”.

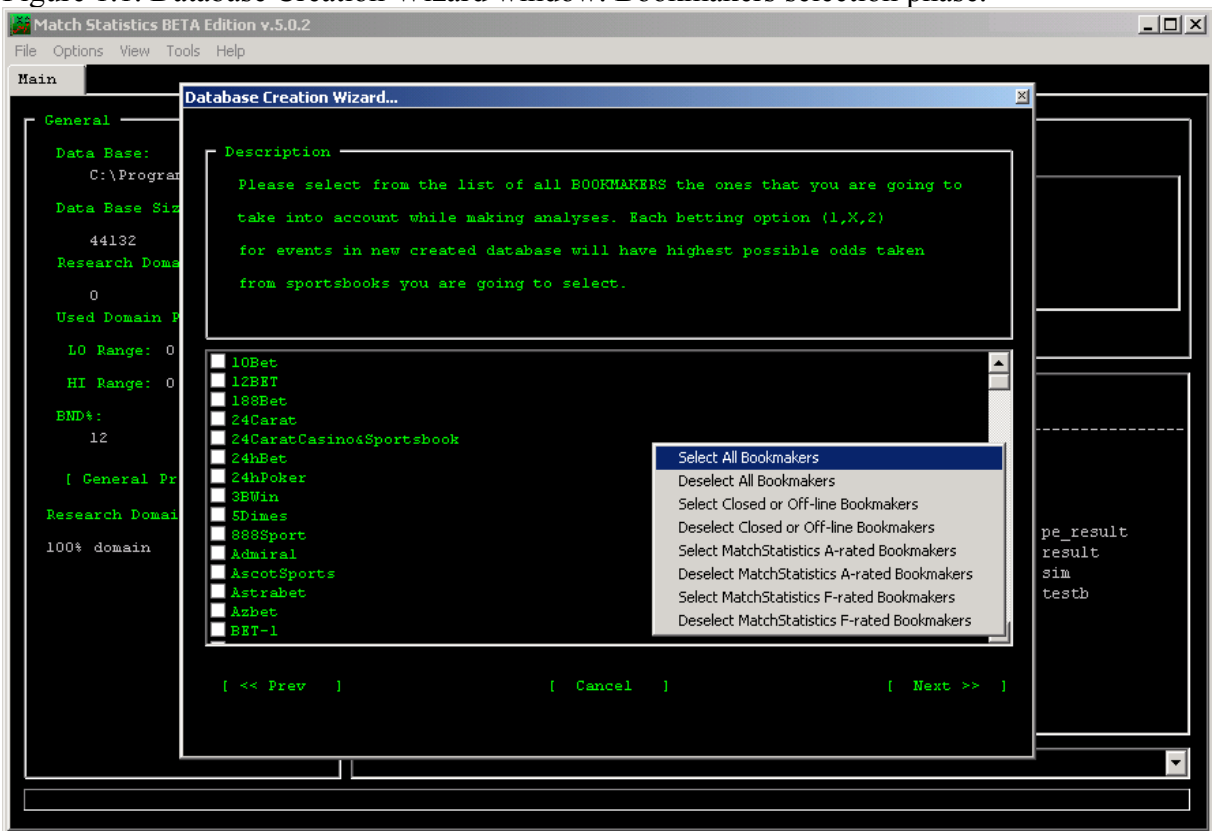
B) Go to “Tools” tab and select Data Base Creation Wizard
C) Follow the instructions given and:

- specify a data base source -> this is a database included with MATCHSTATISTICS. You can find it in folder "datasource" in location on disk where MATCHSTATISTICS is installed

- choose a name and location for a database you are going to create. If you insert it in a line without using "Specify" button, remember to give a full path before it and an extension *.txt after it! Advised and default location of new created database is “DataBase” folder which may be found in folder where MatchStatistics is installed.

- select from a given list as many bookmakers as you are going to take into account. When you use a right mouse button on a list of bookmakers a window will be displayed where you may select and deselect all bookmakers, select and deselect bookmakers that are closed or off-line and select / deselect the best and the worst bookmakers in our opinion[2].

Figure 1.1. Database Creation Wizard window. Bookmakers selection phase.



Each match in new created database will be combined of highest possible odds taken from selected bookmakers.

- Choose your time zone. Matches in new created database will have dates appropriate for your time zone.

[2] We graded few bookmakers with A or F taking into account withdrawal process speed and overall stability of a given bookmaker.

- wait few moments for new database to be created. When that process ends you will be asked if you want to load automatically new data base.

Note that you can have as many databases as you need for different analyses. **Before you may start working with MatchStatistics you must load a database.** To change current database you must load another one also. Do it by choosing tab „File”->„Load Data Base” and specifying location and the name of your database.

In later steps it may be helpful for You to know how the database you have just created looks like. Rows in this database are set chronologically. It consists of 8 columns:

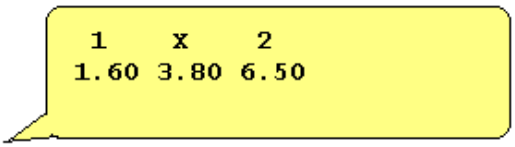
Date of match	Category	Name of home team	Name of away team	Odds 1	Odds X	Odds 2	Winning team / draw

, where:

* Category means a type of match - a league / an event it belongs to e.g.: Austrian hockey league, Uruguay soccer - 1st league, Champions League...
* odds 1, oddsX, odds2 are accordingly highest odds for winning team 1, for a draw and for winning team 2. These odds were taken from sporsbooks which you selected during preparation of your database. Following example shows a process of choosing highest odds. Let’s say that during data base creation You have chosen only 3 sportsbooks: 888Sport, Bet-At-Home, Bet1128. Below there is a comparison of odds offered by different sportsbooks for a mach Wrexham – Working. Odds for that match in new created database will be a combination of highest odds offered by sportsbooks you have chosen. Note, that other sportsbooks may offer higher odds – e.g. BetChronicle offers 8.00 odds for away team winning but the odds written to database comes from 888Sport and will be 6.50.

Figure 1.2. Example comparison of odds offered on Wirexham – Working match

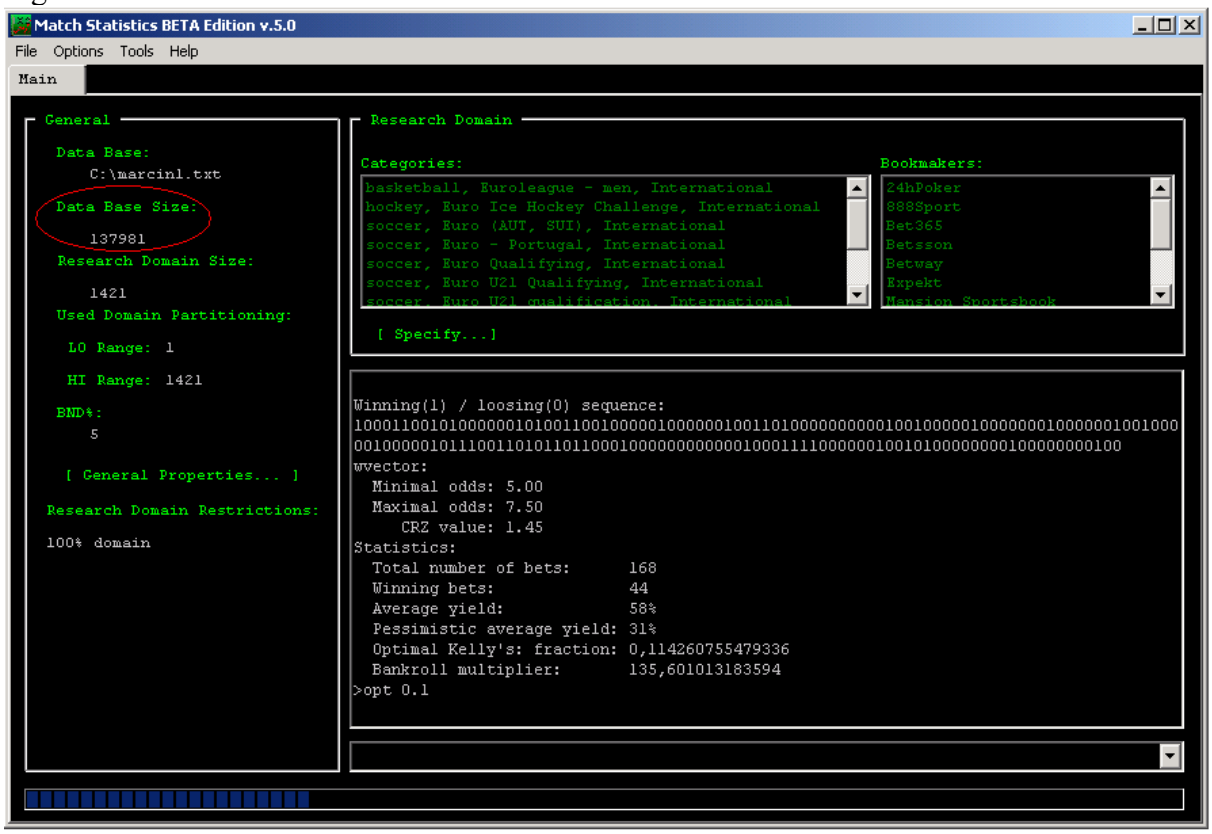
Wrexham - Woking			
bookmaker	1	X	2
24hPoker	1.52	3.65	6.00
5Dimes	1.55	3.83	5.45
888Sport	1.53	3.80	6.50
Bet-At-Home	1.50	3.60	5.60
Bet1128	1.60	3.60	5.00
Bet365	1.40	4.00	8.00
Betako	1.52	3.60	5.70
BetChronicle	1.49	4.10	6.60
BetCRIS	1.53	3.50	5.00



Step 2. DATA BASE ADAPTATION - SETTING UP RESEARCH DOMAIN AND FORMATTING IT

When you created and loaded a database to system you should have a number under “DATA BASE” expression in left part of program’s window.

Figure 2.1. Information about Data Base size



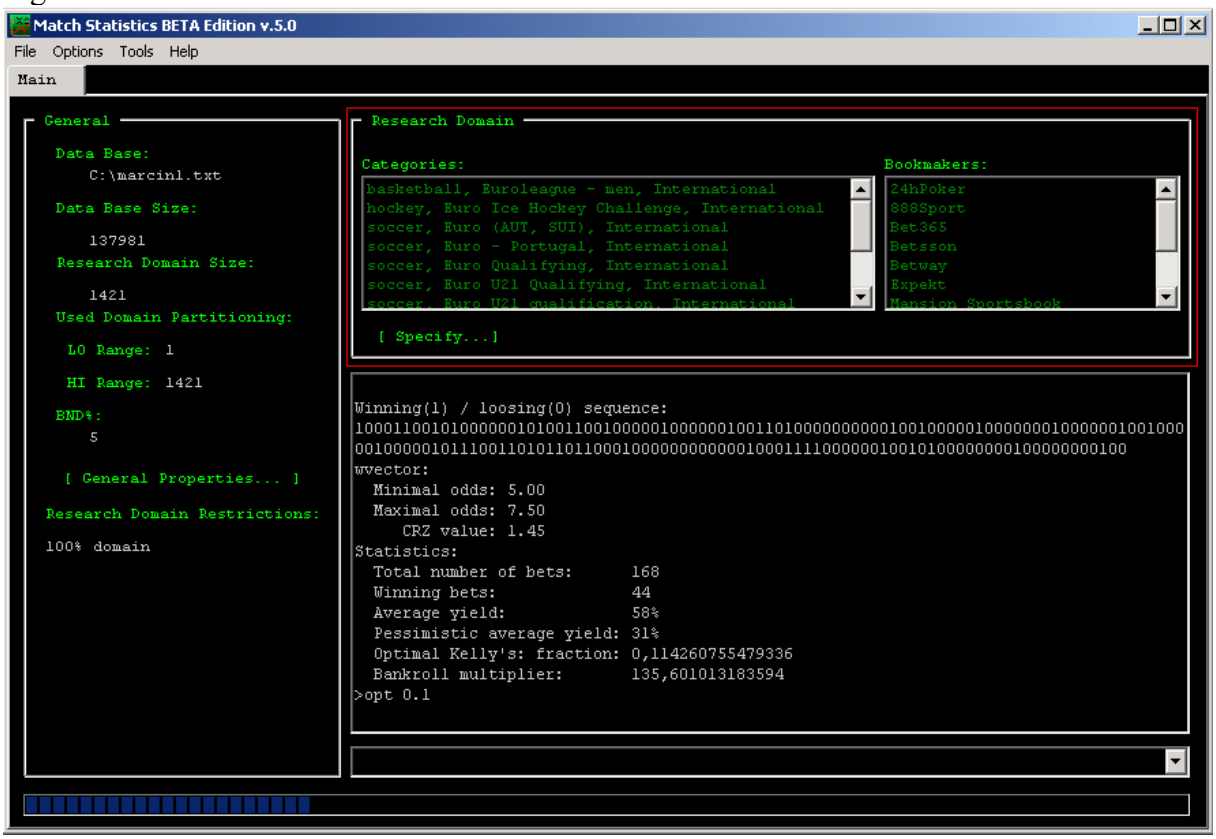
It means how many rows / matches your database has. This is a basis you work with but whole operations done with MATCHSTATISTICS are taken on part of this basis - so called RESEARCH DOMAIN. In peculiar case a RESEARCH DOMAIN may contain whole DATA BASE but this is not a must. For now A RESEARCH DOMAIN contains 0 elements. To do some operations on it you must first put some matches to it from a DATA BASE. You may choose a league or leagues[3] you are interested in or specific period of time that matches took place. Making a RESEARCH DOMAIN starts with selecting leagues / categories. It can be done in two ways:

First way of selecting CATEGORIES - “Specify” button

In upper part of program’s window there is an area called RESEARCH DOMAIN.

[3] Note that by leagues we mean not only national leagues but international matches and qualifications. This is just a type of event - in program so called CATEGORY.

Figure 2.2. Information about current RESEARCH DOMAIN.

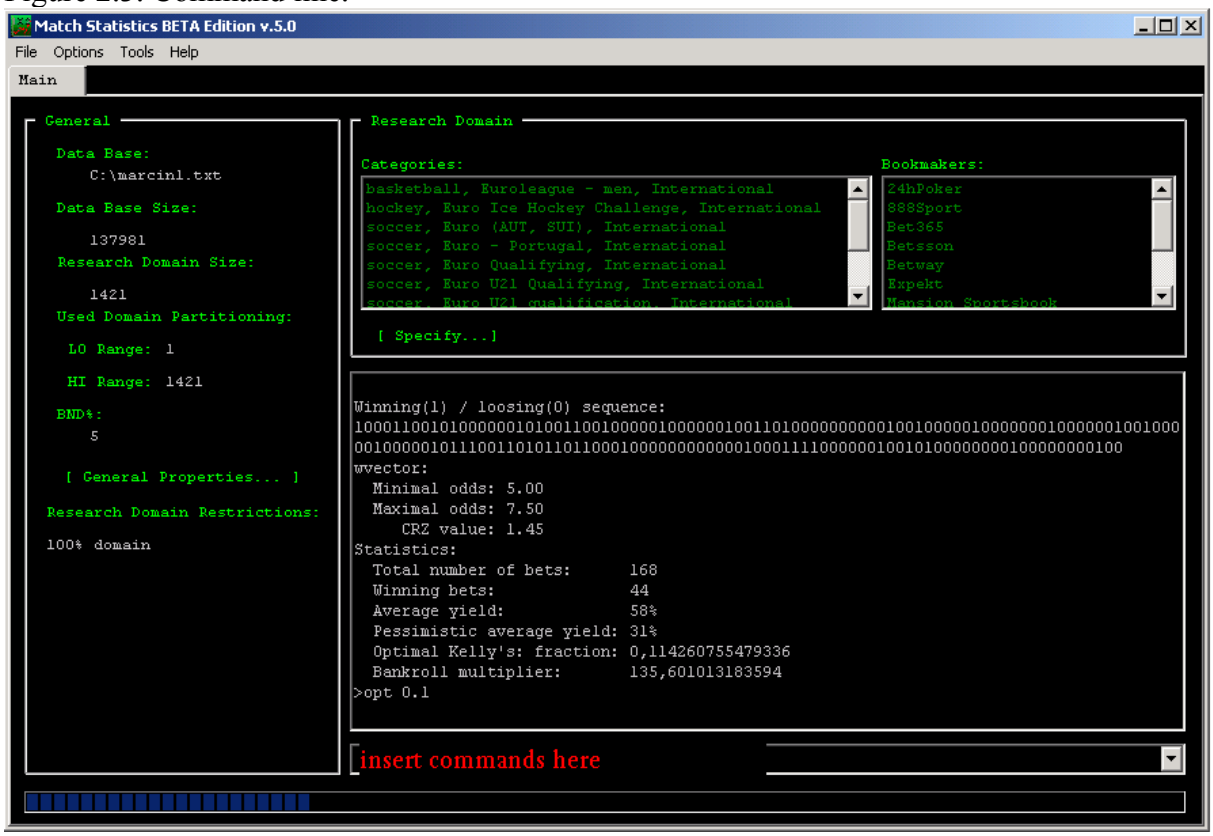


When you click the button - "Specify" - a list of CATEGORIES will occur. Please select as many leagues as you are interested in betting and than click OK.

Second way of selecting CATEGORIES - “struct” command

A special command "struct" is implemented in program for selecting CATEGORIES. Each command you are going to use must be typed in the command line in lower part of program’s window.

Figure 2.3. Command line.



After a command "struct" you must use a "mask", which is a name of specific CATEGORY or its part that may be combined with following characters:

* - any sequence of characters
? - any alphanumeric character
- any capital or small letter
@ - any digit [0...9]

So if you write in command line:

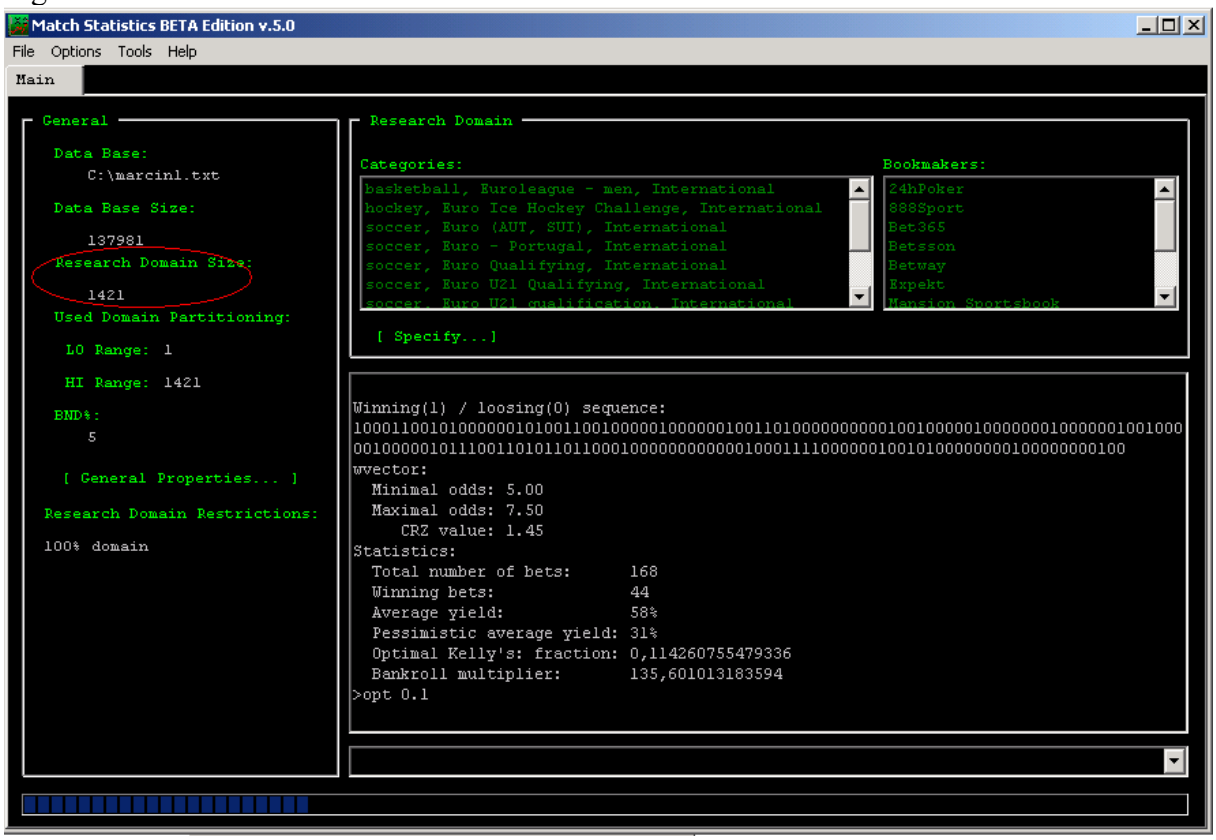
struct * - full available list of CATEGORIES will be implemented to RESEARCH DOMAIN. * replaces any sequence of characters

struct *Engl* -all CATEGORIES that have an expression "Engl" in name will be implemented to RESEARCH DOMAIN

struct *@* -all CATEGORIES that have a digit in name will be implemented to RESEARCH DOMAIN.

If you have selected CATEGORIES a number should appear in left part of program's window under phrase "RESEARCH DOMAIN".

Figure 2.4. RESEARCH DOMAIN size.



It means how many matches have your whole RESEARCH DOMAIN now. When you have selected categories (which is a must), you may also be interested in tightening a period of time that matches took place (it is not obligatory)[4]. You do it in two ways:

First way of partitioning RESEARCH DOMAIN – General Properties

Click on Tab "Options->General Properties" and change USED DOMAIN PARTITIONING values. The LO RANGE means first (oldest) match of RESEARCH DOMAIN taken into account, HI RANGE means last match of RESEARCH DOMAIN taken into account for analyses. Note that matches in RESEARCH DOMAIN are placed chronologically. By default LO RANGE is set to 1 and HI RANGE is set to a number equal to matches in your RESEARCH DOMAIN.

Second way of partitioning RESEARCH DOMAIN – "drange" command

Use command "drange dd/mm/yyyy dd/mm/yyyy", where:

dd/mm/yyyy - dates of matches between which you want to carry out analyses.

For example, command:

drange 01/02/2008 01/03/2008

[4] If you don't do it , whole available time period will be taken into account while making analyses.

picks up matches from 01/02/2008 to 01/03/2008. Any match of RESEARCH DOMAIN which date is not in this period of time won't be taken into account while doing tests and simulations. You may see that using command "drange" also changes LO VALUE and HI VALUE of USED RESEARCH DOMAIN PARTITIONING.

If you select CATEGORIES once more after partitioning RESEARCH DOMAIN, any partitioning will be erased.

Step 3. Putting up (more) restrictions on RESEARCH DOMAIN

This is a very important step that may spare you much time later. Let's say you are interested only in bets that odds1>odds2. You may put restriction on RESEARCH DOMAIN using command "rsr".

"rsr" command usage

This command consists of phrase "rsr" and CONDITION. While creating CONDITIONS you may use following phrases:

odds1	- odds1 value. Best odds of selected sportsbooks for first (home) team winning.
odds0	- odds0 value. Best odds of selected sportsbooks for a draw
odds2	- odds2 value. Best odds of selected sportsbooks for second (away) team winning.
&&	- operator "and"
||	- operator "or"
>	- more than
<	- less than
==	- equal
sin	- sine function
cos	- cosine function
tan	- tangent function
cotan	- cotangent function
log	- logarithm function
^	- power function

You may use also brackets while writing conditions.

Example 3.1.

You want to analyze only matches which odds for home team winning is bigger than odds for away team winning. To put such a restriction type in command line:

rsr odds1>odds2

A condition that you put after "rsr" may be arbitrarily complicated. Let's say, you want to tighten RESEARCH DOMAIN to matches which odds1 was bigger than odds2 and additionally odds1 was less or equal "4" and odds2 was bigger or equal "1.2". You do it by typing in command line:

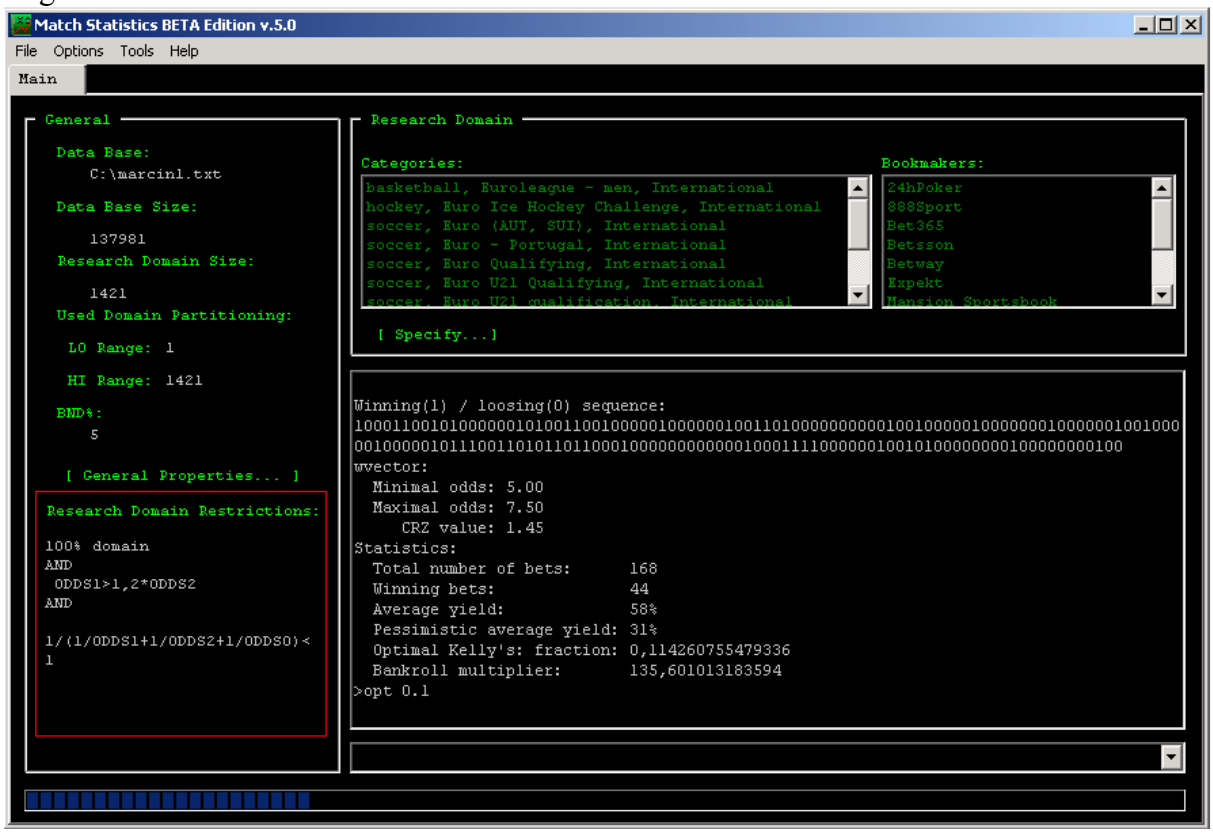
rsr odds1>odds2 && odds1<=4.00 && odds2>=1.20

Note that using "rsr" command erases "drange" command, just as using "struct" command erases "rsr". That's why it is the best (unless you want some commands to be erased) to use commands in the following order:
1. struct
2. rsr
3. drange

An "rsr" command may be used many times. In that case your RESEARCH DOMAIN will be restricted more and more. For example, a command:
Rsr odds1>odds2 && odds1>=4.00 && odds2<=1.20
is equiv to:
rsr odds1>odds2
rsr odds1>=4.00
rsr odds2>=1.20

If you want to erase given restrictions for RESEARCH DOMAIN, select CATEGORIES once more. Note that you always erase all "rsr" restrictions. You may see actual RESEARCH DOMAIN restrictions in left part of program's window.

Figure 3.1. RESEARH DOMAIN restrictions.



Example 3.2.

Let's have now a summarizing example of RESEARCH DOMAIN preparation. Suppose You want to set up a RESEARCH DOMAIN that:

* covers all first world leagues

* consists of matches that have resultant payout in range between 0.97 and 1.00[5]
* takes into account only matches from first term of 2008

You create such a RESEARCH DOMAIN by typing in MATCHSTATISTICS command line:

struct *1st*
rsr 1/(1/odds1+1/odds0+1/odds2)>=0.97 && 1/(1/odds1+1/odds0+1/odds2)<1.00
drange 01/01/2008 30/06/2008

Step 4. WORKING WITH RESEARCH DOMAIN

When Your RESEARCH DOMAIN is ready, it is time to carry out some analyses. MATCHSTATISTICS allows:
* making betting simulations
* gathering winning / loosing statistics of each betting system you create
* finding optimal parameters for your betting systems

Besides all that, MATCHSTATISTICS is a very flexible tool that gives you opportunity to enhance your own analyses in many ways.

Before you start using all programs' features it is essential that You understand nature of simulations made by MATCHSTATISTICS. As it has been pointed out earlier, RESEARCH DOMAIN may be interpreted as rows of odds and results of matches. On this basis it is possible to know what effect for your bankroll would have a specific way of betting. It is like a virtual betting. To make a simulation you must therefore "tell" a program what are conditions for making a bet. Those conditions are combination of odds and few phrases. While making any analyses you must always remember that all calculations are based on used RESEARCH DOMAIN (which you may easily manipulate with - See Step 2 and Step 3).

For making analyses and simulations in MATCHSTATISTICS, two commands are used:

pe_result - for getting statistics and optimal parameters of each betting method (e.g. fraction of bankroll for bets)
pe_sim - for drawing a graph that shows how your bankroll would change in time and a table with results of all bets.

After each command comes CONDITIONAL BETTING EXPRESSION. It is written formulas „telling" program which match to pick up and what odds to bet (1-X-2).

[5] We mean by resultant payout a winning rate of betting all odds (for winning team 1, for a draw and for winning team 2). Your return on such a bet may be written as 1/(1/odds1+1/odds0+1/odds2) . If it is above 1, we call such a bet a sure bet - a bet you will surely win on. Surebets can sometimes be combined of odds offered by different sportsbooks. Using MATCHSTATISTICS you may easily find out how rare such situations are.

Building CONDITIONAL BETTING EXPRESSIONS

CONDITIONAL BETTING EXPRESSIONS are built of conditions that look just like conditions that come after "rsr" command plus a type of decision which is supposed to be made when those conditions are met and eventually another expression telling what to do when conditions are not met. General form of CONDITIONAL BETTING EXPRESSION looks that way:

CONDITION ? DECISION : CONDITIONAL BETTING EXPRESSION 2 ,where:

CONDITION	- function of odds. For building it, see Step 3. "Command "rsr" usage"[6]
?	- sign telling program that conditional part of expression has ended
DECISION	- decision which is supposed to be made when CONDITION has been met. You may use following phrases as DECISIONS:

bet1 - bet odds 1 (for winning home team)
bet0 - bet odds 0 (for a draw)
bet2 - bet odds 2 (for winning away team)
bet10 - bet odds 1 and 0
bet02 - bet odds 0 and 2
bet12 -bet odds 1 and 2
bet102 - bet all odds (useful only for surebets)

:	- sign telling program that conditional betting expression has ended – use it when you want to put another CONDITIONAL BETTING EXPRESSION.
CONDITIONAL BETTING EXPRESSION 2	-alternative expression telling what to do in case CONDITION has not been met (first CONDITIONAL BETTING EXPRESSION didn't result with DECISION). If it is omitted, no bet would be made when CONDITION has not been met.

Getting known with CONDITIONAL BETTING EXPRESSIONS is easiest with examples.

Example 4.1.

Let's try to create simplest CONDITIONAL BETTING EXPRESSION. Suppose You don't want to have any CONDITIONS but only bet draws. A CONDITIONAL BETTING EXPRESSION would look then that way:

[6] Note that CONDITION in CONDITIONAL BETTING EXPRESSION may be omitted in peculiar case . You don't have to use a sign "?" then.

bet0

If You would like to put more complexity to your system and still bet only draws, but only on matches that odds for home team was greater or equal than 3/4 odds for away team, a CONDITIONAL BETTING EXPRESSION would look that way:

odds1>=0.75*odds2 ? bet0

If you want to add an additional condition to your system, for example: when odds for home team was less than 3/4 odds for away team **and** odds for away team was greater than 2.5, your system should bet winning of first (home) team. A CONDITIONAL BETTING EXPRESSION takes on such form:

odds1>=0.75*odds2 ? bet0 : odds2>2.5 ? bet1

Example 4.2.

Remember that You may use operators "and"/"or" ("&&"/"||") in your expressions. That makes possible to construct very complex expressions:

odds0 >= 2.6 && odds0 <= 3.3 && odds0 < odds2 ? bet0 : odds2 >= 2.6 && odds2 <= 3.3 && odds0 > odds2 ? bet2

When You know how to construct CONDITIONAL BETTING EXPRESSIONS it is time to use them in practice. CONDITIONAL BETTING EXPRESSIONS are putted after commands: "pe_result" and "pe_sim".
Both command's effect and usage are described below.

"pe_result" command usage

This command results with various statistics of "virtual betting". To use it, you must type in command line:

pe_result CONDITIONAL BETTING EXPRESSION

When calculations come to end, following results will come out on terminal screen:

* Total number of bets	- this is a number of events (records) in RESEARCH DOMAIN that meet given criteria in CONDITIONAL BETTING EXPRESSION. It is a total number of bets made,
* Winning bets	- this is a number of successful bets,
* Average Yield	- it is an average net profit / loss percentage on bets made. It is calculated as a sum of net profit (loss) from one unit bets[7] divided by number of bets.
* Pessimistic average field	- range estimation result for Average Yield. It is a lower bound of confidence range.
* Optimal Kelly's fraction	- it is a fraction of bankroll that should be wagered on each bet to maximize result of all bets.

[7] Each bet may be treated here as 1$ bet for example.

	Read more about KELLY CRITERION on: http://www.bjmath.com/bjmath/thorp/paper.htm
* Bankroll multiplier	-a number indicating how many times, using optimal Kelly's fraction, you would multiply initial bankroll.

You may select which statistics you want to be displayed in tab „Options->result/pe_result display options...”

"pe_sim" command usage

This command results with a chart of bankroll multiplier in time function and a table with all bets made and results. To use "pe_sim" type in command line:

pe_sim {f*} CONDITIONAL BETTING EXPRESSION , where:

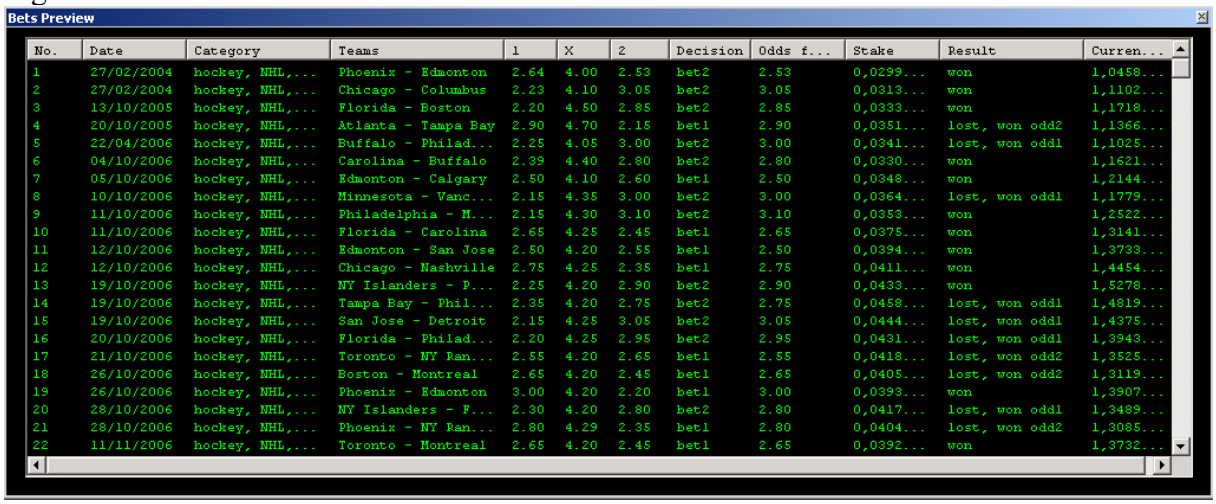
f*	- fraction of bankroll wagered on each bet. f* value must be inserted in brackets {} to distinguish it from CONDITIONAL BETTING EXPRESSION part.

You may change scale of Y axis to decimal / logarithmic by right mouse clicking on any area of a chart.
You may enlarge an area of a chart by selecting it with mouse from left to right. You come back to normal view by selecting any area from right to left.

Following data is inserted in table:

No.	- bet number,
Date	- date of match,
Category	- chosen category (effect of „struct” command or manual choice by „Specify” button”),
Teams	- teams playing,
1-X-2	- odds for winning home team, draw, winning away team. These are highest odds taken of selected sportsbooks. They must also meet criteria given by „rsr” command and CONDITIONAL BETTING EXPRESSION. If odds for a given match don’t meet your criteria, this match will not be taken into account while making bets and it will not be inserted in the table.
Decision	- decision made on background of CONDITIONAL BETTING EXPRESSION (what kind of bet was made),
Odds for Decision	- overall odds of bet. If a bet for wining home team and a draw was made for example – this is a combination of odds for single results,
Stake	- stake wagered,
Result	- result of bet,
Current bankroll	- bankroll value after result of a bet. Initial bankroll value is 1.

Figure 4.1. Table with results of bets.



Bets Preview

No.	Date	Category	Teams	1	X	2	Decision	Odds f...	Stake	Result	Curren...
1	27/02/2004	hockey, NHL,...	Phoenix - Edmonton	2.64	4.00	2.53	bet2	2.53	0,0299...	won	1,0458...
2	27/02/2004	hockey, NHL,...	Chicago - Columbus	2.23	4.10	3.05	bet2	3.05	0,0313...	won	1,1102...
3	13/10/2005	hockey, NHL,...	Florida - Boston	2.20	4.50	2.85	bet2	2.85	0,0333...	won	1,1718...
4	20/10/2005	hockey, NHL,...	Atlanta - Tampa Bay	2.90	4.70	2.15	bet1	2.90	0,0351...	lost, won odd2	1,1366...
5	22/04/2006	hockey, NHL,...	Buffalo - Philad...	2.25	4.05	3.00	bet2	3.00	0,0341...	lost, won odd1	1,1025...
6	04/10/2006	hockey, NHL,...	Carolina - Buffalo	2.39	4.40	2.80	bet2	2.80	0,0330...	won	1,1621...
7	05/10/2006	hockey, NHL,...	Edmonton - Calgary	2.50	4.10	2.60	bet1	2.50	0,0348...	won	1,2144...
8	10/10/2006	hockey, NHL,...	Minnesota - Vanc...	2.15	4.35	3.00	bet2	3.00	0,0364...	lost, won odd1	1,1779...
9	11/10/2006	hockey, NHL,...	Philadelphia - M...	2.15	4.30	3.10	bet2	3.10	0,0353...	won	1,2522...
10	11/10/2006	hockey, NHL,...	Florida - Carolina	2.65	4.25	2.45	bet1	2.65	0,0375...	won	1,3141...
11	12/10/2006	hockey, NHL,...	Edmonton - San Jose	2.50	4.20	2.55	bet1	2.50	0,0394...	won	1,3733...
12	12/10/2006	hockey, NHL,...	Chicago - Nashville	2.75	4.25	2.35	bet1	2.75	0,0411...	won	1,4454...
13	19/10/2006	hockey, NHL,...	NY Islanders - P...	2.25	4.20	2.90	bet2	2.90	0,0433...	won	1,5278...
14	19/10/2006	hockey, NHL,...	Tampa Bay - Phil...	2.35	4.20	2.75	bet2	2.75	0,0458...	lost, won odd1	1,4819...
15	19/10/2006	hockey, NHL,...	San Jose - Detroit	2.15	4.25	3.05	bet2	3.05	0,0444...	lost, won odd1	1,4375...
16	20/10/2006	hockey, NHL,...	Florida - Philad...	2.20	4.25	2.95	bet2	2.95	0,0431...	lost, won odd1	1,3943...
17	21/10/2006	hockey, NHL,...	Toronto - NY Ran...	2.55	4.20	2.65	bet1	2.55	0,0418...	lost, won odd2	1,3525...
18	26/10/2006	hockey, NHL,...	Boston - Montreal	2.65	4.20	2.45	bet1	2.65	0,0405...	lost, won odd2	1,3119...
19	26/10/2006	hockey, NHL,...	Phoenix - Edmonton	3.00	4.20	2.20	bet1	3.00	0,0393...	won	1,3907...
20	28/10/2006	hockey, NHL,...	NY Islanders - F...	2.30	4.20	2.80	bet2	2.80	0,0417...	lost, won odd1	1,3489...
21	28/10/2006	hockey, NHL,...	Phoenix - NY Ran...	2.80	4.29	2.35	bet1	2.80	0,0404...	lost, won odd2	1,3085...
22	11/11/2006	hockey, NHL,...	Toronto - Montreal	2.65	4.20	2.45	bet1	2.65	0,0392...	won	1,3732...

After closing a table or a chart, you may in any time come back to chart by using “sch” command and to table by using “sbp” command. You may also do it by selecting “View” tab and choosing “Show Bankroll Multiplier Chart” or “Show Betting Preview”..

From now on you may use basic program functions. Let' s test it on following example

Example 4.3. Commands usage.

A) Create a new database.

Run “Database Creation Wizard” and choose a datasource.txt file from folder “datasource” where MatchStatistics is installed.
Name your database and choose following bookmakers: 24hbet, 888Sport, bet365, Betfair, Betway, Bwin.com, Expekt, Unibet.
Wait for a new database to be created. Unless you have changed it – a file will be saved in “DataBase” folder in MatchStatistics installation folder.
Load new created database to program by choosing tab “File”-> „Load Data Base” and giving a path for a file you created.

B) Choose CATEGORIES

Type in command line:

struct ***AHL***
In CATEGORY field should now occur: „hockey, AHL, USA”.

C) Restrict RESEARCH DOMAIN.

Type in command line:

drange 01/01/2008 31/12/2008

D) Use command „pe_result”

Type in command line:

pe_result odds0>=4,6 && odds0<=5 ? bet0

Following results should occur:

Statistics:
Total number of bets: 141
Winning bets: 41
Average yield: 38%
Pessimistic average yield: 15%
Optimal Kelly's fraction: 0,102081060409546
Bankroll multiplier: 13,0813121795654

As you may see, given betting formula (used on selected group of sportsbooks) was profitable in 2008. A single bet had average net profit of 38%. A strike rate was 29.08% (=41/141).
If 10.2% of bankroll was wagered on each bet, initial bankroll would have been multiplied 13.08 times.

F) Use command „pe_sim” with optimal Kelly’s fraction

Type in command line:

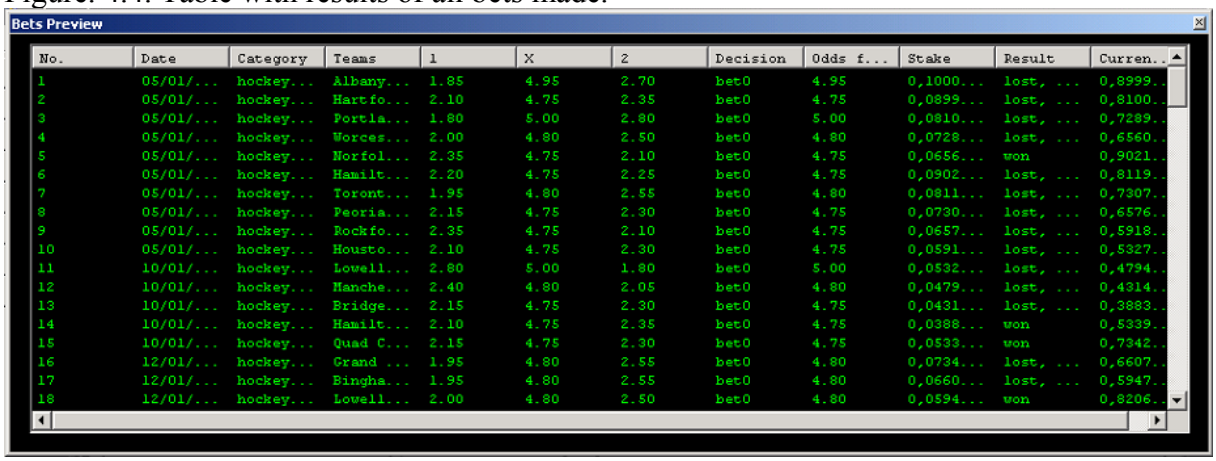
pe_sim {0.1} odds0>=4,6 && odds0<=5 ? bet0

A chart and a table should occur:

Figure 4.2. Bankroll Multiplier function in time (decimal scale).

Figure 4.3. Bankroll Multiplier function in time (logarithmic scale).

Figure. 4.4. Table with results of all bets made.


Bets Preview

No.	Date	Category	Teams	1	X	2	Decision	Odds f...	Stake	Result	Curren..
1	05/01/...	hockey...	Albany...	1.85	4.95	2.70	bet0	4.95	0,1000...	lost, ...	0,8999..
2	05/01/...	hockey...	Hartfo...	2.10	4.75	2.35	bet0	4.75	0,0899...	lost, ...	0,8100..
3	05/01/...	hockey...	Portla...	1.80	5.00	2.80	bet0	5.00	0,0810...	lost, ...	0,7289..
4	05/01/...	hockey...	Worces...	2.00	4.80	2.50	bet0	4.80	0,0728...	lost, ...	0,6560..
5	05/01/...	hockey...	Norfol...	2.35	4.75	2.10	bet0	4.75	0,0656...	won	0,9021..
6	05/01/...	hockey...	Hamilt...	2.20	4.75	2.25	bet0	4.75	0,0902...	lost, ...	0,8119..
7	05/01/...	hockey...	Toront...	1.95	4.80	2.55	bet0	4.80	0,0811...	lost, ...	0,7307..
8	05/01/...	hockey...	Peoria...	2.15	4.75	2.30	bet0	4.75	0,0730...	lost, ...	0,6576..
9	05/01/...	hockey...	Rockfo...	2.35	4.75	2.10	bet0	4.75	0,0657...	lost, ...	0,5918..
10	05/01/...	hockey...	Housto...	2.10	4.75	2.30	bet0	4.75	0,0591...	lost, ...	0,5327..
11	10/01/...	hockey...	Lowell...	2.80	5.00	1.80	bet0	5.00	0,0532...	lost, ...	0,4794..
12	10/01/...	hockey...	Manche...	2.40	4.80	2.05	bet0	4.80	0,0479...	lost, ...	0,4314..
13	10/01/...	hockey...	Bridge...	2.15	4.75	2.30	bet0	4.75	0,0431...	lost, ...	0,3883..
14	10/01/...	hockey...	Hamilt...	2.10	4.75	2.35	bet0	4.75	0,0388...	won	0,5339..
15	10/01/...	hockey...	Quad C...	2.15	4.75	2.30	bet0	4.75	0,0533...	won	0,7342..
16	12/01/...	hockey...	Grand ...	1.95	4.80	2.55	bet0	4.80	0,0734...	lost, ...	0,6607..
17	12/01/...	hockey...	Bingha...	1.95	4.80	2.55	bet0	4.80	0,0660...	lost, ...	0,5947..
18	12/01/...	hockey...	Lowell...	2.00	4.80	2.50	bet0	4.80	0,0594...	won	0,8206..

G) Use „pe_sim” command with 1% of bankroll wagered for each bet.

Type in command line:

pe_sim {0.01} odds0>=4,6 && odds0<=5 ? bet0

You should get following graph:

Figure 4.5.. Bankroll Multiplier function in time (decimal scale). – 1% wagered for each bet.

Advanced features

"wvector" argument. “result” and “sim” commands

Besides „pe_result” and „pe_sim” with CONDITIONAL BETTING EXPRESSION, MatchStatistics offers to use correlates of those commands – “result” and “sim” . These commands use instead of CONDITIONAL BETTING EXPRESSION other argument – “wvector”. The origin of “wvector” comes from a simple but surprisingly profitable idea of betting odds from a given range. "wvector" is a an imposed system of betting odds from specified range combined with unique criterion called "CRZ". "wvector" is a 3-dimesion vector [x y z], where:

x - Minimal value of odds to bet
y - Maximal value of odds to bet
z - CRZ value

This 3 values makes together following betting system (decision algorithm):

If the minimal of odds (1 X 2) for an event is bigger or equal CRZ value
and
if one or more odds from {1 X 2} is in x->y range
then:
bet for:
that odds or minimal of them.

If one or more odds are equal (minimal can't be defined) bet in this priority:

1
x
2.

Example 4.4. Process of odds selection with „wvector" usage.

Let's say you want to use argument "wvector" with values [2.50 3.60 1.50]. Bellow are example 1-X-2 odds and odds selected with usage of a given "wvector".

Odds 1	Odds X	Odds 2	Selected Odds	Comments
1.80	3.50	5.75	„X"	Only odds for a draw is in 2.50...3.60 range
2.55	3.00	3.30	„1"	All odds are in 2.50 … 3.60 range – minimal of them was used to bet on
1.40	3.60	10.00	-	Although odds „X" is in 2.50 … 3.60 range, however none of odds will be selected to bet because minimal odds value is 1.40 which is smaller than CRZ value – 1.50.

To use "wvector" argument, type in command line:

result wvector
or
sim wvector f* ,where:

f* - fraction of bankroll wagered for each bet

Optimization process – "opt" function

When You work with "wvector" argument for some time you will probably find out that it is quite difficult to find profitable systems with many bets that are based on a large RESEARCH DOMAIN. That's why optimization algorithm has been implemented. For optimization purposes one argument function "opt" is used. To use it write in command line:

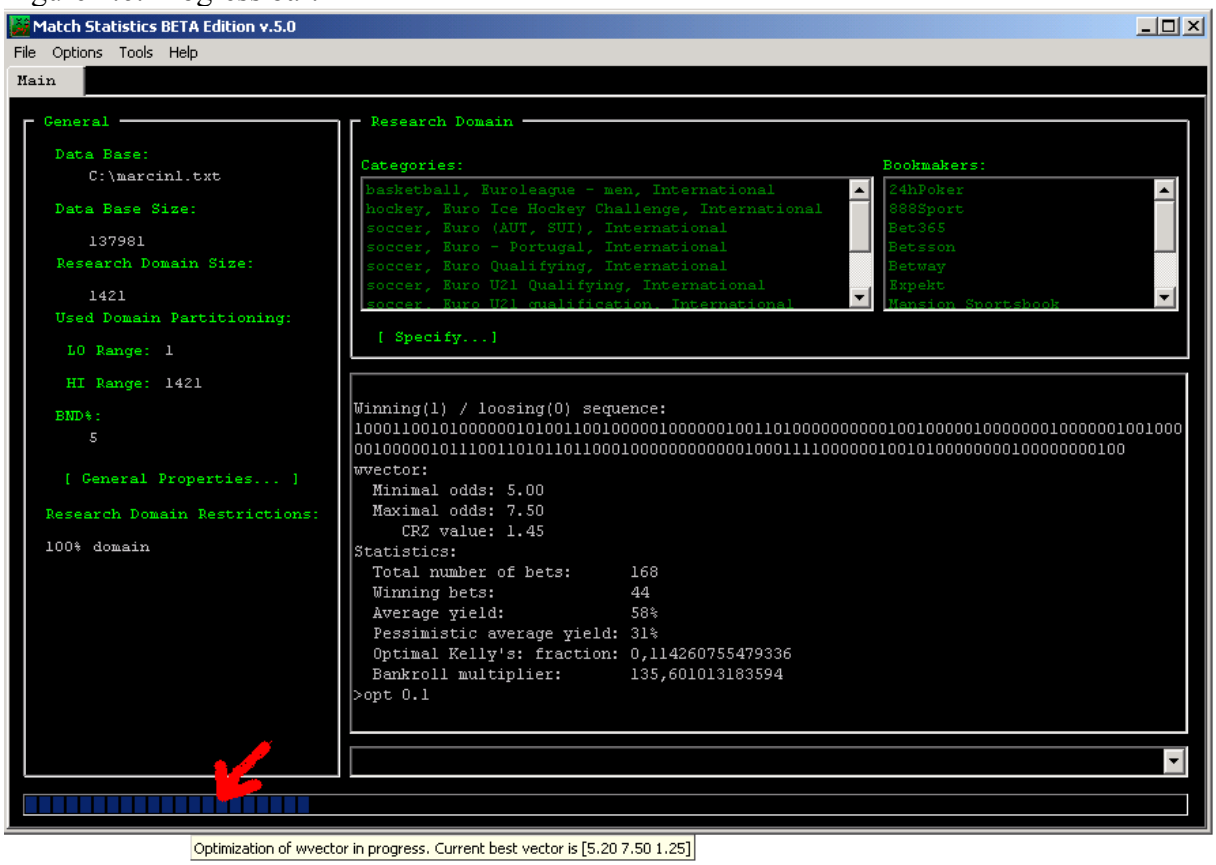
opt Arg ,where:

Arg - argument with values between 0-1. It means highest acceptable absolute difference between inversed minimal and maximal value of odds in found "wvector". It has been implemented to make possible to standardize a single bet expected value. It is advised this argument not to be to big (e.g. 0.1).

After typing "opt" in command line, searching for optimal ("the most profitable") parameters of "wvector" for a given RESEARCH DOMAIN starts. To prevent from finding very profitable but hardly ever possible to use "wvectors", you may set a minimum percentage of events from RESEARCH DOMAIN which must be used for making bets. This percentage is "BND%" that may be found and changed in General Properties. By default "BND%" value is set to 1%.

As a result of "opt" function you get 3-dimension "wvector" that you may use in "result" and "sim" functions. Note that optimization process can take a very long time - even a few hours for a large RESEARCH DOMAIN. You may check a progress of optimization process on a bar in lower part of program's window. After pointing mouse cursor on it - the best "wvector" found for a given moment will be displayed.

Figure 4.6. Progress bar.



When using optimization process it is possible to work on with MATCHSTATISTICS normally with an exception of changing a RESEARCH DOMAIN. A possibility of changing categories, time partitioning and using “rsr” command is blocked then. In order to stop optimization process, use command “break”.

Step 5. ODDS COMPARISON FOR UPCOMING SPORT EVENTS

MatchStatistics lets you compare odds for upcoming sport events from offer of over 150 online bookmakers. Using this feature you will be able to quickly check which bookmaker gives highest odds for event that interests you. All you need to do is choose bookmakers and leagues and MatchStatistics will show highest odds. Comparing large number of odds for the same event will effect in few percent increase of an average yield from a single bet which may be critical for an overall success of a betting strategy .

CAUTION

To get access to current odds offers from matchstatistics server you need a valid "Unique Identity Key". You may purchase this key on website : http://www.matchstatistics.com/payments/oddscomparison.php

All odds have 1-X-2 decimal format and may be delayed from live odds up to 1 hour but normally the delay does not exceed couple of minutes.

For odds comparison purpose MatchStatistics uses two commands: "upcoming" and "pe_upcoming".

"pe_upcoming" command usage

This command is similar in form to "pe_result". To use it, type in command line:

pe_upcoming CONDITIONAL BETTING EXPRESSION

As an outcome of this command a table will be displayed. It shows a list of sports events with highest odds for each result and a bet that should be made accordingly to CONDITIONAL BETTING EXPRESSION. Odds for events in the list will meet criterion of CONDITIONAL BETTING EXPRESSION and restrictions of RESEARCH DOMAIN. Above the list of events there are 3 fields. After selecting an event from the list, bookmakers will occur in these fields. These are bookmakers that give accordingly highest odds for home team win, a draw and away team win. Remember that highest odds are taken only from bookmakers that your database is built of[8]. Sometimes one field will contain more than one bookmaker. It means that highest odds (the same) is offered by more than one bookmaker.

MathStatistics enhances placing mixed type of bets i.e. : 1X, 12, X2. If you want to place this type of bet at two different bookmakers it is essential to know what part of the whole stake bet at each bookmaker. For example, you want to place 1X type of bet on some event. Let 's say highest odds for home team win offers Expect, but highest odds for a draw gives Unibet. In this case under first and second field, percentage values will occur. They mean how much of the whole stake you need to bet at each bookmaker to make your bet the same as you would place it at one “virtual” bookmaker that gives best offer for 1X type of bet.

Example 5.1. Odds comparison with usage of “pe_upcoming” command.

Let' s say you are taking into account betting at following bookmakers: 24hPoker , Bet365 , Bet-At-Home , BetBoo , BetCRIS , Betsson , Blue Square , Bookmaker.com , Canbet , Centrebet , Diamond Sportsbook Int. , EuroBet , Expekt , IASbet , Ladbrokes.

Create and load a database built of given bookmakers (Tools->Database Generator Wizard). You will select these particular bookmakers quickly by right mouse clicking on the list of bookmakers to select and choosing „Select MatchStatistics A-rated Bookmakers”.

You want to bet on handball. Type in command line then:

struct ***handball***

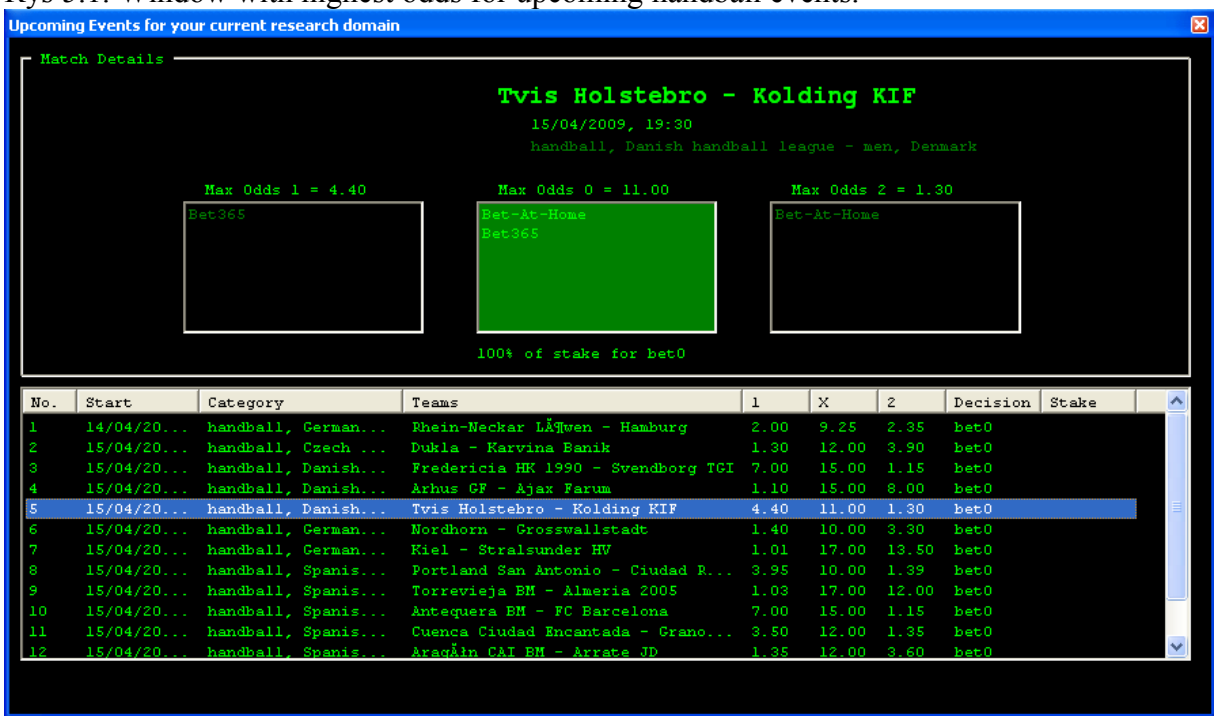
You are interested only in betting draws with odds higher than 9 and odds for away team win higher than 1.15. To check which bookmakers give highest odds for matches meeting that condition, type in command line:

[8] You may see a list of bookmakers in left part of main program window. It can be changed by creating and loading new database.

pe_upcoming odds0>9 && odds2>1.15 ? bet0

After a while a table will be displayed with a list matches that meet given criterion.

Rys 5.1. Window with highest odds for upcoming handball events.



No.	Start	Category	Teams	1	X	2	Decision	Stake
1	14/04/20...	handball, German...	Rhein-Neckar LÅ¶wen - Hamburg	2.00	9.25	2.35	bet0	
2	15/04/20...	handball, Czech ...	Dukla - Karvina Banik	1.30	12.00	3.90	bet0	
3	15/04/20...	handball, Danish...	Fredericia HK 1990 - Svendborg TGI	7.00	15.00	1.15	bet0	
4	15/04/20...	handball, Danish...	Arhus GF - Ajax Farum	1.10	15.00	8.00	bet0	
5	15/04/20...	handball, Danish...	Tvis Holstebro - Kolding KIF	4.40	11.00	1.30	bet0	
6	15/04/20...	handball, German...	Nordhorn - Grosswallstadt	1.40	10.00	3.30	bet0	
7	15/04/20...	handball, German...	Kiel - Stralsunder HV	1.01	17.00	13.50	bet0	
8	15/04/20...	handball, Spanis...	Portland San Antonio - Ciudad R...	3.95	10.00	1.39	bet0	
9	15/04/20...	handball, Spanis...	Torrevieja BM - Almeria 2005	1.03	17.00	12.00	bet0	
10	15/04/20...	handball, Spanis...	Antequera BM - FC Barcelona	7.00	15.00	1.15	bet0	
11	15/04/20...	handball, Spanis...	Cuenca Ciudad Encantada - Grano...	3.50	12.00	1.35	bet0	
12	15/04/20...	handball, Spanis...	AragÃ³n CAI BM - Arrate JD	1.35	12.00	3.60	bet0	

If you want to remove a sport event from odds comparison list (e.g. if you have already placed a bet on it), click right mouse button on that event and chose : „Delete this match from list and don't show it again".

If you want to see highest odds for all matches from a given league, you must erase restrictions of your research domain (select categories once more) and type a command with CONDITIONAL BETTING EXPRESSION that will always result with a decision, e.g.:

pe_upcoming bet1

That way you may check highest odds for all matches from a given CATEGORY (e.g. : NHL) without further conditions. Remember that suggested bet to be made is useless in that case (it will always be bet1).

"upcoming" command usage

This command is similar in form to "result" command. To use it, type in command line:

upcoming wvector

The description of "wvector" syntax is to be found in unit : "wvector" argument. "result" and "sim" commands.

The outcome of command “upcoming” is virtually the same as "pe_upcoming". The difference is that matches in the sport events list must meet CRZ criterion instead of CONDITIONAL BETTING EXPRESSION criterion. Decisions (bets that should be made) are also based on CRZ criterion.

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