ZUP - a zigzag a universal patterns Pesavento. A part 2

The introduction
Owing to built in the trading terminal the Metatrader 4 programming language can create various indicators. Simple and complex. All depends on imagination of the developer. Article is devoted to the description of opportunities of complex program development, the description, we shall tell so, a display platform - ZUP. In given article the brief description built in in ZUP graphic tools is given. ZUP it is constantly finished. In article the description of graphic tools for ZUP_v63 is brought.

Patterns Pesavento (http://www.ensignsoftware.com/tips/tradingtips35.htm#Pesavento)
On the schedule crises ZigZag are connected by dashed lines. In the middle of a dashed line there is a number. Dashed lines together with numbers about these lines the tool, named patterns Pesavento also is. It is necessary to distinguish the tool patterns Pesavento from figures in the market, named by patterns Pesavento. Further it will be told, that from itself the market figure represents a pattern Pesavento.

Let's calculate the size of beams **23** and **34** in points. The size of a beam **23** = (1.3665-0.8225) *10000=5440. The size of a beam **34** = (1.3665-1.1638) *10000=2027. We shall divide **34/23** = 2027/5440=0.373. Have received the number differing from 0,382 fibo. on 2,46 %. About a faltering line between points **2** and **4** there is a value 0.382.
It is noticed, that at approach of the market to certain fibo.level, fibo.level starts "to work". Often the market nearby fibo. stops or developed. There is as though a certain zone, in пределай which behaviour of the market predictedly enough. The size of a zone is expressed in percentage and is equal 2*Дельта.
Below on the schedule it is visible, that about a point **4** is 0.382 fibo.level. fibo.level is below a November minimum on (1.1638-1.1557) *10000=51 item.

EURUSD has not reached in November, 2005 up to 0.382 fibo. a little and it was developed upwards. It is an example of "job" 0.382 fibo.. In a general view the number deduced at a faltering line, is equal to the attitude of size of the subsequent beam to size of the previous beam of a zigzag. In the example brought above the attitude of beams **34/23**. This attitude is called retracement between points **2** and **4** zigzags.
Why about a line number 0.382, instead of 0.373 is deduced? It has been noticed, that in the market "work" quite certain fibo.. That is there is any set "working" fibo.. Different authors bring different sets fibo..

Algorithm of job of the tool patterns Pesavento

First pay off retracements between tops or hollows of a zigzag. Then calculated values are compared to the set set fibo.. If the received number differs from number from a set fibo. no more than on Delta of % about a faltering line the number is deduced from a set fibo.. The number is painted in the color set for numbers of a set fibo.. (If the set fibo. corresponds to the table of numbers offered Larry Pesavento the pattern Pesavento is received a market figure.) if the received number differs from number from a set fibo. more than on Delta of % this number is deduced about a faltering line. Also it is painted in other color.

At inclusion of the tool patterns Pesavento disappears necessity for calculation of retracements If the price gets in an operative range any fibo. a pattern Pesavento deduces value of this fibo., painted in the set color. The tool Pesavento relieves patterns of routine job by calculation of retracements

Parameters of the indicator for job with patterns Pesavento:

▪ **ExtHidden**

0 - patterns Pesavento are not deduced. But other tools can be deduced.
1 - shows all to a line between tops or hollows of a zigzag, at which percent of restoration (retracement)> 0.1 and <9.36.
2 - shows only those lines where the percent of restoration is equal to any value from the chosen set fibo..
3 - shows the numbers listed in item 2 and all dashed lines between tops (hollows) of a zigzag.
4 - shows numbers not equal to values from the chosen set fibo. and corresponding connecting lines.
5 - the zigzag is deduced only. All other tools are hidden. (All equipment is hidden).
The tools adhered to zigzags we shall name equipment.

▪ **ExtFiboZigZag**   - resolves a conclusion of the tool " ZiaZag Fibonacci "

▪ **ExtFractal**   - quantity of max (min) of a zigzag from which there are lines to other max (min) of a zigzag.
▪ **ExtFractalEnd**   - quantity of max (min) to which there are lines. Further this maximum of connecting lines will not be.

max (min) are considered from a zero bar.

▪ **ExtFractalEnd**   - if = 0 that connecting lines last up to the latest, including from a zero bar, crisis zigzag. Minimal value ExtFractalEnd=1.
▪ **ExtDelta**   - (the admission or Delta) a deviation in calculation. Sets also size potential reverting zones. Should be 0 <ExtDelta <1.
▪ **ExtDeltaType**   - a choice of algorithm of calculation of the admission - Deltas.

0 - percent of restoration " are deduced as is " with two signs after a comma.
1 - calculation of the admission under the following formula: (retracement-number from the chosen set fibo.)
2 - calculation of the admission under the following formula: (retracement-number from the chosen set fibo.) / (number from the chosen set fibo.)
3 - percent of restoration " are deduced as is " with three signs after a comma.

Larry Pesavento speaks, that the admission needs to be established within the limits of 4 % (0.04). When the price is included into a zone of the admission, the number becomes number from the chosen set fibo. and is painted in color of number from the chosen set fibo..
▪ **ExtSizeTxt**   - the size of a font for a conclusion of numbers
▪ **ExtLine**   - a choice of color of connecting lines
▪ **ExtPesavento**   - a choice of color of numbers from the chosen set fibo.
▪ **ExtGartley886**   - a choice of color of additional numbers
▪ **ExtNotFibo**   - a choice of color of all other numbers for patterns Pesavento
▪ **ExtPPWithBars**

0 - shows value of retracement at patterns Pesavento
1 - shows value of retracement at patterns Pesavento and in brackets shows quantity of bars between tops of a zigzag for data of retracement.
2 - shows value of retracement at patterns Pesavento and in brackets shows quantity of bars between tops of a zigzag separately for the first and second beam of a zigzag.
3 - it is deduced in brackets time retracement after price of retracement. Time retracement pays off as the attitude of quantity of bars on the second beam of a zigzag to quantity of bars on the first beam of a zigzag.
4 - it is deduced in brackets time retracement, calculated as the attitude of time of development of the second beam to time of development of the first beam.
5 - the attitude of the areas of the rectangulars constructed on two next beams of a zigzag is deduced in brackets. Diagonals of these rectangulars are beams of zigzags.
6 - deduces in brackets quantity of items and percent on which the current price of crisis of a zigzag differs from number from the chosen set fibo. (or from corresponding fibo a level). For example, 2.618 (7/2.81 %). In brackets number 7 means, that the level fibo 2.618 passes above a maximum of a bar on 7 items or on 2.81 %. If number 7 will be with a sign a minus the level fibo 2.618 passes below a maximum of a bar on 7 items.
Patterns Pesavento have the same functionality as well as tool Fibo levels.

Sets fibo. for various tools
In ZUP sets fibo. are divided into a standard set and alternative sets. An alternative set of numbers for brevity we shall name also numbers Pesavento.

By means of parameter ExtFiboType it is possible to make a choice between a standard set fibo. and an alternative set fibo.:
▪ **ExtFiboType**   = false - the standard set fibo. is deduced
▪ **ExtFiboType**   = true - the alternative set fibo. is deduced
▪ **ExtFiboChoice**   - sets a set alternative fibo.
Below the full list of sets fibo. (numbers) for the different tools which have been built in in ZUP is brought.
▪ **Patterns Pesavento**

Up to 58 versions ZUP inclusive:
Standard set fibo.: 0.146-0.236-0.382-0.5-0.618-0.764-0.854-1.0-1.236-1.618
Numbers Pesavento: 0.146-0.236-0.382-0.447-0.5-0.618-0.707-0.786-0.841-0.886-1.0-1.128-1.272-1.414-1. 5-1.618-1.732-1.902-2.0-2.236-2.414-2.618-3.14-3.618-4.0

In 59 versions there was an opportunity of a choice of alternative sets of numbers.
▪ **The Standard set fibo.**

0.146 - 0.236 - 0.382 - 0.5 - 0.618 - 0.764 - 0.854 - 1.0 - 1.236 - 1.618 - 4.236
▪ **Alternative sets fibo.**

ExtFiboChoice = 0 - a set of numbers Larry Pesavento 0.25 - 0.382 - 0.5 - 0.618 - 0.707 - 0.786 - 0.841 - 1.0 - 1.128 - 1.272 - 1.414 - 1.618 - 2.0 - 2.618 - 4.0
ExtFiboChoice = 1 - a set of the numbers used at construction of patterns Gartley 0.382 - 0.447 - 0.5 - 0.618 - 0.707 - 0.786 - 0.886 - 1.128 - 1.272 - 1.414 - 1.618 - 2.0 - 2.236 - 2.618 - 3.142 - 3.618
ExtFiboChoice = 2 - a set of the numbers used at construction of patterns Gartley plus additional useful numbers. Here subsequently it will be possible to add numbers. For the present moment following additional numbers are included: 0.146 - 0.236 - 0.854 - 1.732 - 1.902
ExtFiboChoice = 3 - a set of numbers with which Bryce Gilmore in book Geometry of Markets 2 on page 6 in the general list of numbers has allocated as the most significant. 0.25 - 0.382 - 0.5 - 0.618 - 0.667 - 0.786 - 1.0 - 1.272 - 1.618 - 1.732 - 1.75 - 2.0 - 2.236 - 2.5 - 2.618 - 3.0 - 3.33 - 4.236 - 6.854

Bryce Gilmore in book Geometry of Markets 2 allocates groups of numbers. Further sets of numbers from book Bryce Gilmore as John Edwards at forum Onix has offered are brought.

ExtFiboChoice = 4 - a set of numbers Geometric 0.146 - 0.186 - 0.236 - 0.3 - 0.382 - 0.486 - 0.526 - 0.618 - 0.786 - 1.0 - 1.272 - 1.618

- 1.902 - 2.058 - 2.618 - 3.33 - 4.236 - 5.388 - 6.854

ExtFiboChoice = 5 - a set of numbers Harmonic 0.125 - 0.177 - 0.25 - 0.354 - 0.5 - 0.707 - 1.414 - 2.0 - 2.828 - 4.0 - 5.657 - 8.0

ExtFiboChoice = 6 - a set of numbers Arithmetic 0.167 - 0.333 - 0.577 - 0.667 - 1.5 - 1.732 - 3.0 - 6.0

ExtFiboChoice = 7 - a set of numbers Golden Mean 0.236 - 0.30 - 0.486 - 0.618 - 0.786 - 1.272 - 1.618 - 2.058 - 2.618 - 3.33

ExtFiboChoice = 8 - a set of numbers Square 0.177 - 0.250 - 0.354 - 0.50 - 0.707 - 1.414 - 2.0 - 2.828 - 4.0 - 5.656

ExtFiboChoice = 9 - a set of numbers Cube 0.111 - 0.192 - 0.333 - 0.577 - 1.732 - 3.0 - 5.2 - 9.0

ExtFiboChoice = 10 - a set of numbers Rectangle (Root 5 at Bryce Gilmore) 0.20 - 0.447 - 2.236 - 5.0

ExtFiboChoice = 11 - a set of numbers Additional useful numbers 1.414 * 1.618 = 2.288, 1.414 * 0.618 = 0.874, 2.618 * 1.272 = 3.330, 2.618 * 1.618 = 4.236, 1.618 / 2 = 0.809, 2.618 / 2 = 1.309, 1.618 * 2 = 3.236, 1.732 * 2 = 3.464, 2.236 * 2 = 4.472

- **fibo.. And expansions Fibonacci as at Robert Fisher with small difference**

Standard numbers: 0-0.146-0.236-0.382-0.5-0.618-0.764-0.854-1.0-1.236-1.618-2.618-4.236-6.854
Numbers Pesavento: 0-0.382-0.5-0.618-0.707-0.786-0.854-0.886-1.0-1.128-1.272-1.414-1.618-2.0-2.414-2. 618-4.0

- **Expansions Fibonacci as in the Metatrader**

Standard numbers: 0.236-0.382-0.5-0.618-0.764-0.854-1.0-1.236-1.618-2.0-2.618
Numbers Pesavento: 0.382-0.5-0.618-0.707-0.786-0.886-1.0-1.272-1.414-1.618-2.0-2.618

- **Fibo-levels. Static Fibolevels are deduced with static Andrews pitchforks. Dynamic are deduced on the first beam**

Standard numbers: 0.236-0.382-0.5-0.618-0.764-0.854
Numbers Pesavento: 0.236-0.382-0.5-0.618-0.786-0.886

- **Fibo-levels from any points and along a median line twisted Andrews**

Standard numbers: 0.236-0.236-0.382-0.5-0.618-0.764-0.854-1.0:1.618-2.618
Numbers Pesavento: 0.382-0.5-0.618-0.707-0.786-0.886-1.0-1.272-1.414-1.618-2.618

- **Lines of reaction (RL)**

Standard numbers: 0.236-0.382-0.5-0.618-0.764-1.0-1.618-2.0-2.618-4.0
Numbers Pesavento: 0.382-0.5-0.618-0.707-0.786-0.886-1.0-1.128-1.272-1.414-1.618-2.0-2.414-2.618-4. 0

- **Warning lines (UWL and LWL)**

Standard numbers: 0.618-1.0-1.618-2.0-2.618

- **Fibo Time. fibo time zones**

Standard numbers: 0-1-1.236-1.382-1.5-1.618-1.764-1.854-2.0-2.236-2.618-3.0-2.618
Numbers Pesavento: 0-1-1.382-1.5-1.618-1.707-1.786-1.886-2.0-2.272-2.414-2.618-3.0-3.414-3.618-4. 0

- **Versum Levels**

Standard numbers - 23,6-38,2-45,5-50,0-54,5-61,8-76,4
With numbers Pesavento - 23,6-38,2-44,7-50,0-61,8-78,6-88,6
In this list changes in the future are possible.

Numbering of crises and beams ZigZag.

Many tools in the indicator are under construction from the certain beam or from certain crisis ZigZag. For example:

- **ExtFiboStaticNum**   - number of beam ZigZag-a from which static levels Fibonacci will be deduced.
- **ExtFiboExpansion**   - expansions Fibonacci as in the Metatrader - sets crisis ZigZag where there is a first point of expansion Fibonacci.

Below on the schedule numbering of crises by red color, numbering of beams - is shown by color Teal.
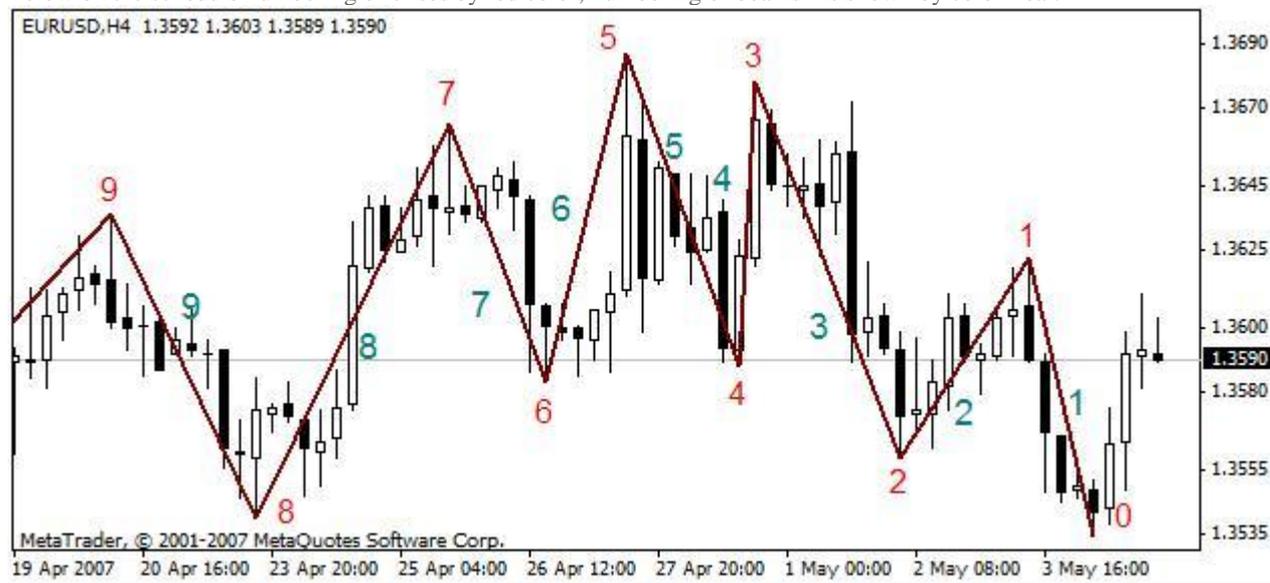
If constructions are conducted on the first beam or on zero (0) crisis the tool will dynamically change together with change of the current

price. If constructions do not concern the first beam and zero crisis - the tool will not change and, accordingly, such tool is called static. All graphic tools in ZUP are under construction on first nine beams or on first ten peaks (0-9). But patterns Pesavento can be under construction on all crises, and not just on first ten.

Dynamic and static fibo.. Expansions Fibonacci

The graphic tools which have been built in in ZUP, happen static and dynamic. Static graphic tools become attached to the generated crises of a zigzag, that is to those crises which will not change any more. Dynamic graphic tools have an anchor located on the end changing the position of the first beam of a zigzag.

Dynamic graphic tools enable operatively to make a decision. If the market will be developed, on a tracing of the dynamic graphic tool we at once can see a direction of prospective further movement of the market. At change of the first beam of indicator ZigZag the dynamic graphic tool is automatically reconstructed also.

Dynamic fibo. are under construction on the first, changing, beam ZigZag:

Static fibo. are under construction on 2-9 beams.

Parameters for job with fibs:
- **ExtFiboType** = true - fibo. with numbers Pesavento, false - standard fibo.
- **ExtFiboDinamic** - resolves a conclusion of dynamic levels fibo. Dynamic levels fibo are deduced on first beam ZigZag-a.
- **ExtFiboStatic** - resolves a conclusion of static levels fibo
- **ExtFiboStaticNum** - number of beam ZigZag-a from which static levels Fibonacci will be deduced.
- **ExtFiboS** and **ExtFiboD** - a choice of color static and dynamic fibo..

Thus value fibo., for example 61.8, the price for a corresponding level fibo. and the name timeframe on which are deduced fibo. is deduced. timeframe it is important to know at job in mode DT. Значеиня dynamic fibo. are deduced more close to edge of a window with the schedule. Value static fibo. are deduced with a space from edge.

At a simultaneous conclusion static and dynamic fibo. values fibo. will be partially blocked. It complicates viewing the information. But to deduce values static fibo. little bit further from edge of a window with the schedule restrictions of the Metatrader do not allow. Dynamic fibo.level will automatically vary at change of the size and position of first beam ZigZag.

- **ExtFiboCorrectionExpansion** switches static and dynamic fibo. to a conclusion of corrections or expansions Fibonacci.

Expansions Fibonacci are deduced as is described in Robert Fisher's book " New methods of trade on Fibonacci ". Thus the size of beam ZigZag undertakes base. And expansions as though prolong a beam further. Numbers of expansions as at Robert Fisher are deduced with prefix Fe.

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- **ExtFiboExpansion** - expansions Fibonacci as in the Metatrader - sets crisis ZigZag where there is first of three point of expansion Fibonacci.

ExtFiboExpansion <2 - expansions Fibonacci are not deduced
ExtFiboExpansion=2 - dynamic expansion Fibonacci
ExtFiboExpansion> 2-

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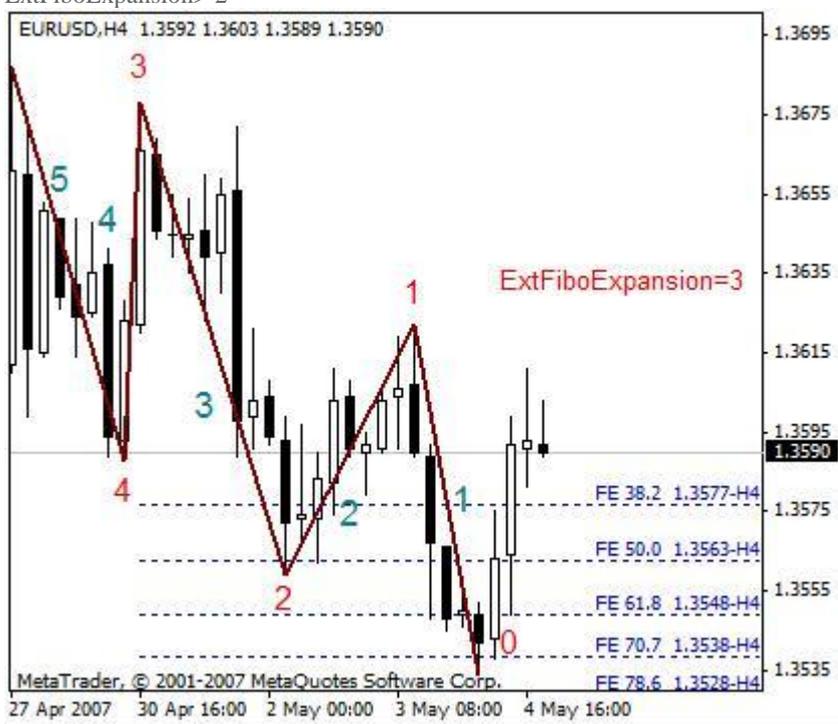
Andrews pitchfork (http://www.trading-naked.com/alan_andrews_course_1.htm

The description twisted Andrews and tactics of job with Andrews pitchfork was made by Patrick Mikula (<http://www.kroufr.ru/content/view/682/124/>). The detailed description of construction Andrews pitchfork has made Putnik at forum ONIX <http://onix-trade.net/forum/index.php?showtopic=8249> construction Is realized in ZUP also was under request Putnik'a.

The full list of parameters for job with Andrews pitchfork:
- **ExtPitchforkDinamic**

> 0 (= 1) are deduced dynamic Andrews pitchfork from last two extrema ZigZag
= 2 - are deduced Andrews pitchfork from 50 % by a median
= 3 - 50 % Andrews pitchfork (in treatment Vinsant. Vinsant - the participant of forum ONIX) are deduced
= 4 - Chiff ?? lines are deduced
- **ExtPitchforkStatic**

> 0 (= 1) are deduced static Andrews pitchfork from extremum ZigZag with number ExtPitchforkStaticNum
= 2 - are deduced Andrews pitchfork from 50 % by a median

= 3 - 50 % Andrews pitchfork (in treatment Vinsant) are deduced

= 4 - Chiff ?? lines are deduced

▪ 3 <= **ExtPitchforkStaticNum** <= 9 - number of top ZigZag from which begin static pitchfork

▪ **ExtLinePitchforkS** and **ExtLinePitchforkD** sets color static and dynamic twisted

▪ **ExtPitchforkStaticColor** - sets color of a shading of the channel static twisted, and also includes a shading. The shading joins a choice of color. It is disconnected by installation of this parameter in NONE.

▪ **ExtFiboFanDinamic** - resolves a conclusion of dynamic fibo-fans

▪ **ExtFiboFanStatic** - resolves a conclusion of static fibo-fans

▪ **ExtFiboFanExp** - quantity of beams fibo fans. true=6, false=4

▪ **ExtFiboFanHidden** - resolves a conclusion of marks of beams of fibo-fans. Works only with static and dynamic fibo-fans.

▪ **ExtFiboFanD** - sets color of dynamic fibo-fans

▪ **ExtFiboFanS** - sets color of static fibo-fans

▪ **ExtFiboFanMedianaStaticColor** and **ExtFiboFanMedianaDinamicColor** - set color fibofans on a median line static and dynamic twisted, and also include corresponding Fibolevels

▪ **ExtPitchforkStyle** - sets style of a conclusion twisted:

0 - the Continuous line

1 - the Shaped line

2 - the Dashed line

3 - the Stroke-dashed line

4 - the Stroke-dashed line with double points

5-10 - sets thickness of the Continuous line

▪ **ExtFiboTime1** - includes fibo time zones 1.

▪ **ExtFiboTime2** - includes fibo time zones 2.

▪ **ExtFiboTime1C** - sets color of lines of a time zone 1.

▪ **ExtFiboTime2C** - sets color of lines of a time zone 2.

▪ **ExtPivotZoneStaticColor** - sets color of a shading static Pivot Zone

▪ **ExtPivotZoneDinamicColor** - sets color of a shading dynamic Pivot Zone

▪ **ExtPivotZoneFramework** - sets conclusion Pivot Zone in the form of a framework (by default) or in the form of the painted over rectangular

▪ **ExtUTL** - includes the top control line twisted Andrews

▪ **ExtLTL** - includes the bottom control line twisted Andrews

▪ **ExtUWL** - includes the top warning lines

▪ **ExtLWL** - includes the bottom warning lines

▪ **ExtISLDinamic** - includes internal alarm lines for dynamic twisted Andrews

▪ **ExtISLStatic** - includes internal alarm lines for static twisted Andrews

▪ **ExtRLine** - resolves a conclusion of lines of reaction lengthways twisted Andrews

▪ **ExtRLineBase** - hides reactions directing lines

In figure the example of construction static is shown twisted Andrews.
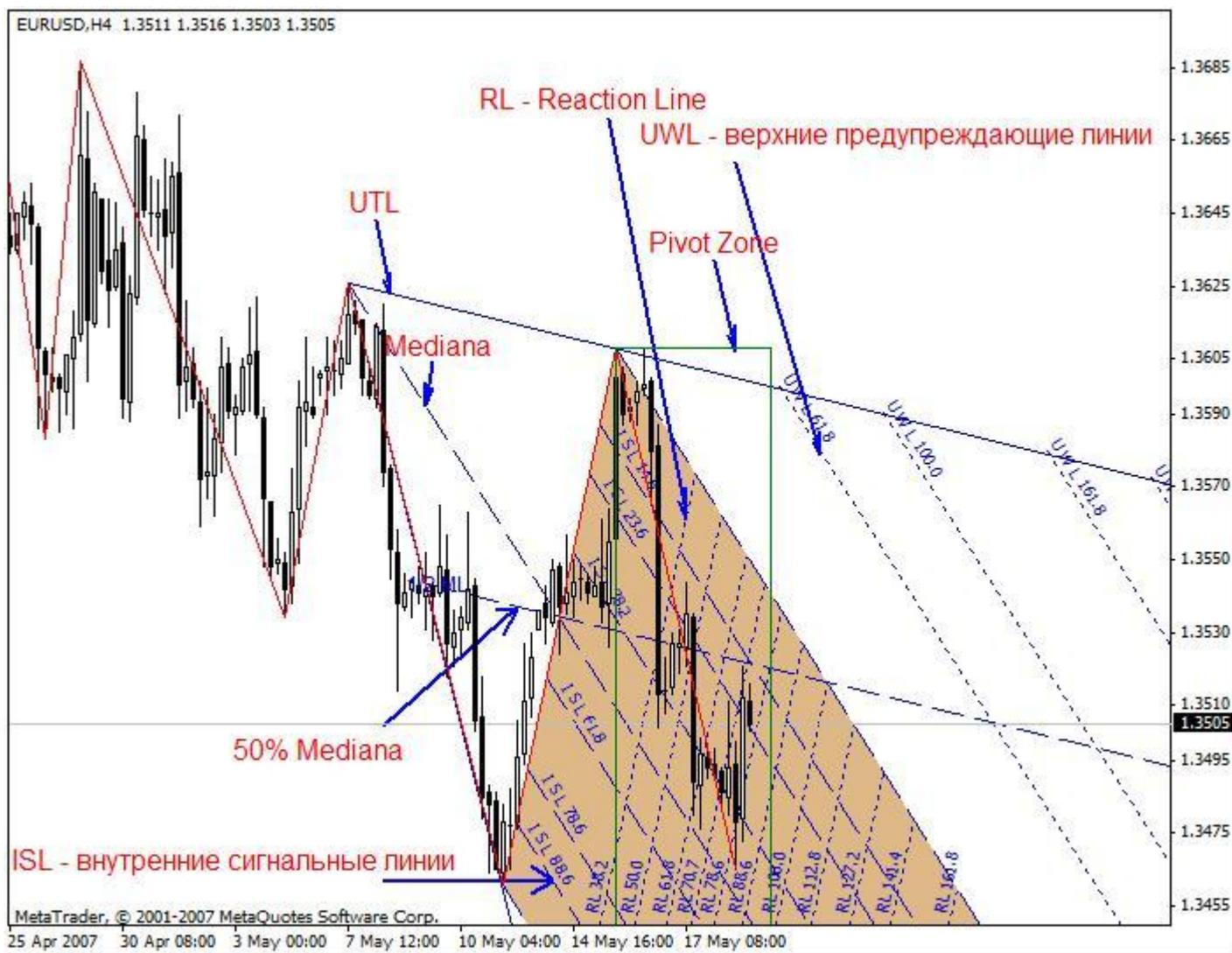
The note:
Lines of reaction are under construction by means of the tool Channels Fibonachchi. In many cases of construction are done with errors. Errors small, but on the big time interval the error collects. To construct without errors it is impossible. The standard tool Channels Fibonachchi in the Metatrader to construct without errors it is impossible because of features of a binding of Channels Fibonachchi to candles. In first article wrote about this error. Therefore Lines of Reaction in current realization should be used with care. Developers of the terminal the Metatrader can correct the given error only.

▪ **ExtPitchforkCandle** - includes a conclusion of the complete set twisted from the chosen candles
▪ **ExtPitchfork_1_HighLow** - at construction twisted from the chosen candles sets from a maximum or a minimum of a candle to build the first point twisted
▪ **ExtDateTimePitchfork_1**, **ExtDateTimePitchfork_2**, **ExtDateTimePitchfork_3** - date and time of candles from which will be under construction Andrews pitchfork for the first, second and third points accordingly is set.

How to deduce the complete set twisted from the chosen candles

We choose candles from which we shall deduce pitchfork. We direct the cursor at these candles. We write down date and time of candles on a leaflet. We cause the panel of change of parameters of the indicator. In parameters ExtDateTimePitchfork_1, ExtDateTimePitchfork_2, ExtDateTimePitchfork_3 we enter date and time of candles. By means of ExtPitchfork_1_HighLow it is chosen from a maximum or a minimum of a candle the first point will be under construction twisted. We set ExtPitchforkCandle = true. By means of ExtPitchforkCandle it is chosen: from extrema ZigZag the complete set will be under construction twisted or from extrema of the chosen candles.

At choosing ExtPitchforkStatic> 0 the complete set static will be deduced twisted from the chosen candles. The complete set twisted it is possible to save. If the third point twisted to be on a zero bar will be deduced dynamic pitchfork and to save them it is impossible. Below the example of construction is brought twisted Andrews from the chosen candles. Candles to which are adhered pitchfork, are registered in ZUP by default. Figure is executed by means of ZUP_v63. In earlier versions in this figure of a line of reaction RL *** are under construction with errors because of features of job of channels Fibonacci in the metatrader. Lines of reaction are under construction by means of channels Fibonacci.
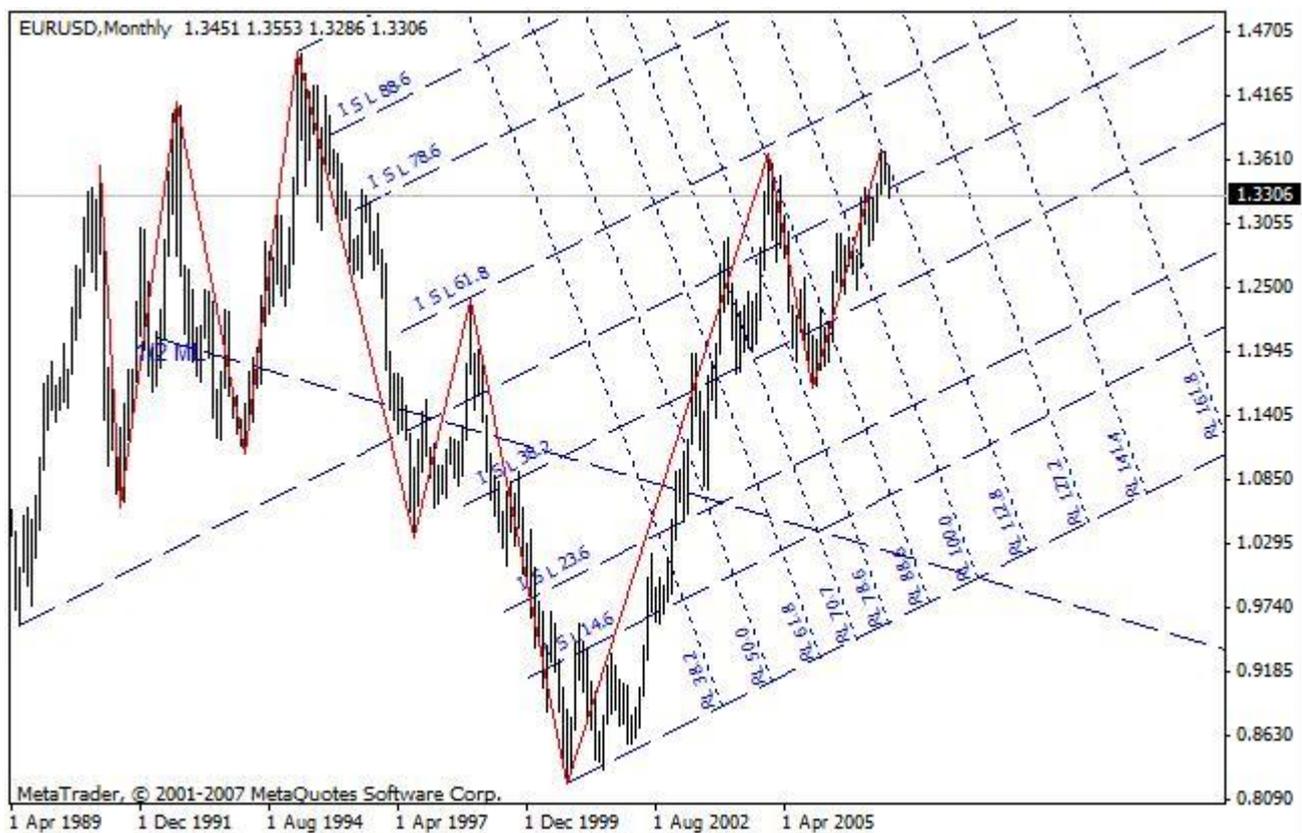
Parameter ExtSave - resolves preservation of the complete set static twisted, Fibo Time, expansions Fibonacci and static fibo.. This parameter does not save a shading of the channel static twisted.

Rules of job with ExtSave:

1. The complete set static Is under construction twisted Andrews and all auxiliary lines.
2. We Come into the panel of parameters of the indicator and we set ExtSave=true.
3. We Close the panel of parameters. Thus on the schedule the complete set will be traced twisted.
4. Again we come into the panel of parameters of the indicator and we set ExtSave=false.
5. We Close the panel of parameters. On the schedule there will be a saved complete set twisted. Atop of this complete set precisely same complete set will be deduced, but at removal of the indicator the saved complete set remains on the schedule, and the second - atop of saved - will be removed together with the indicator.

If to not execute items 4) and 5) at each change of parameters of the indicator with the schedule the next complete set will be saved twisted with parameters current at present to time. And at removal of the indicator on the schedule there will be some complete sets twisted, imposed against each other or a little displaced.

To save tools - pitchfork, Fan, etc. it is necessary on minimal of workers timeframes. If preservation will be made on the senior timeframe, at transition on younger timeframe the saved tools отрисуются from the first candle younger timeframe, entering on time in senior timeframe - timeframe on which tools have been saved. Feature of the Metatrader is here too shown. The saved tools at switching on another timeframe are deduced with distortions.

If tools to not save, and easier to deduce them by means of ZUP tools will be under construction correctly. In ZUP in mode DT recalculation of crises ZigZag and construction of crises from candles where really there is a maximum or a minimum is made, at transition to another timeframe. And tools pointing to more exact points. Distortions of constructions thus it is not observed.

Channels micmed'a

Channels micmed'a - the new graphic tool which has offered micmed - the participant of forum ONIX. For a basis are taken Andrews pitchfork, but anchors twisted Andrews get out in the special image.

I bring citations from different messages micmed'a at forum ONIX:

... And it is possible in the complete set twisted to add such as on pictures, I name them " gold section ". Experimenting with VL (*) has found out, that such pitchfork more often correctly hold the channel...

In that that and interest to this construction, that the gold section constructed by rules described above works in the further as the channel though is under construction long before display of borders of the channel under construction on a classical technique. That quite keeps within a harmony connected with numbers Fibonacci...

... It is valid not pitchfork, it was simply convenient to build with their help. As to construction I build a point 1 on a vertical of Century Some supervision:

1. If diagonal AB of less diagonal BC I build on distance 32, 8 % from top In
2. If diagonal AB is more than diagonal BC, then 61,8 % from top In
3. There Are 50 more % usually at turns and they go successively 2-3 triangles
4. If the channel makes the way, the point 38,2 varies on 61,8 and on the contrary (figures).

* - VL - Versum Levels - one more new graphic tool about which it will be told further.

Parameters:

▪ **ExtCM_0_1A_2B** - resolves construction of channels micmed'a. Value gets out of numbers 1-2-3-4. Value 0 by default - are under construction usual Andrews pitchfork.

▪ **ExtCM_Fibo** - position of a median line is set twisted Andrews for construction of channels micmed'a. Value can be changed

from 0 up to 1.

Parameter ExtCM_0_1A_2B adheres all constructions twisted Andrews (look above) to other points. To construct channels micmed'a, all over again it is necessary to construct Andrews pitchfork. Then by means of parameter ExtCM_0_1A_2B new anchors get out twisted. Parameter ExtCM_0_1A_2B gets out depending on length of beams AB and BC.

I shall bring the description of construction of channels in an author's variant:

Channels micmed in ZUP, since version 55 are under construction by means of the standard tool " Andrews pitchfork " on three points.

Where 2 and 3 points get out on two tops as in classical pitchforks, and for a choice of 1 point exists two parameters:

▪ **ExtCM_0_1A_2B**   (can be 0, 1, 2, 3, 4) defines the vertical on which is under construction a point 1

Accordingly when

0 - channels are not under construction, under construction standard pitchfork

1 - the point 1 gets out on a vertical from top And on Fibolevel AB

2 - the point 1 gets out on a vertical from top In on Fibolevel BC

3 - the point 1 gets out on a vertical from top And on Fibolevel BC

4 - the point 1 gets out on a vertical from top In on Fibolevel read on algorithm: if AB> BC value 0,618, if AB <BC value 0,382

▪ **ExtCM_Fibo**   (can be in a range from 0,0 up to 1,0) defines value for fibo a level of a point 1

Examples of constructions

▪   ExtCM_0_1A_2B = 1, ExtCM_Fibo = 0.618

▪   ExtCM_0_1A_2B = 2, ExtCM_Fibo = 0.618