Vibraimage statistical analysis software

VibraStat3
(VibraStatMI)

Manual

CONTENT

1 Basic applications

The **MI_Stat.xlsm** program intended for statistical processing of VibraMI software results. VibraMI is program for psychophysiological testing (PPT) of a person by the questionnaire for detecting non-cognitive abilities and personality characteristics. VibraMI is based on multiple intelligences theory of Howard Gardner and vibraimage technology. More information about VibraMI program you can see in the "Psychophysiological profiling system Manual".

Program application:

- research in psychology, psychophysiology, biology, sociology;

- defining psychophysiological and emotional states of a person;

- ranking of psychophysiological responses to presented stimulus;

- profiling and disclosure of the personal characteristics;

- recruiting;

- sport;

- education;

- public security etc.

2 Processing data

Data for the program are the ***_MI.xlsm files created by VibraMI.

It is necessary to create the catalogue on a disk with VibraMI results files for each comparison group. File names contain information about the testing time (fig.1).

The basis of VibraMI analysis is the comparison and processing of conscious response to questions (answers Yes/No of the test person) and unconscious human psychophysiological response, measured by vibraimage technology and similar to lie detection. Shown questions (images) sequentially are grouped according to the following multiple intelligence (MI) types:

1. Intrapersonal (IA)
2. Existential-Theoretical (ET)
3. Logical-Mathematical (LM)
4. Business-Mercenary (BM)
5. Visual-Spatial (VS)
6. Naturalistic (NL)
7. Musical-rhythmic (MR)
8. Bodily-kinesthetic (BK)
9. Ascetic-Sacrificial (AS)
10. Verbal-linguistic (VL)
11. Bohemian-Demonstrative (BD)
12. Interpersonal (IE)

3 Operating procedure

1. Copy **MI_Stat.xlsm** file to a NEW directory on the hard disk of the computer where you will do processing of results from the link VibraStat3. For example, named this directory TEST. The file **MI_Stat.xlsm** will change after processing, so it is preferable to save original **MI_Stat.xlsm** file with the other name as Defaultstat.xlsm as reserved copy in the other directory (fig. 1).

2. Copy to created directory (TEST) all .xlsm files with results of testing separate people from the group (fig. 1).
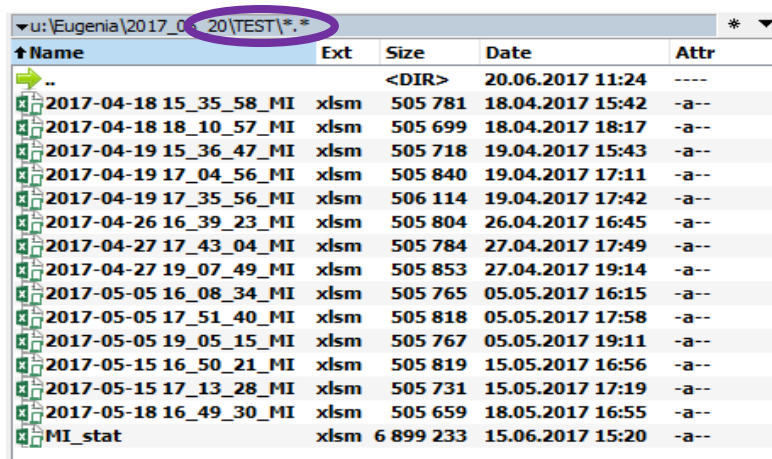

Fig. 1 Creating directory for testing

3. Run **MI_Stat.xlsm** (fig. 2).

Note, for correct operating of MI_Stat.xlsm file you need to enable macros in Microsoft Office Excel.
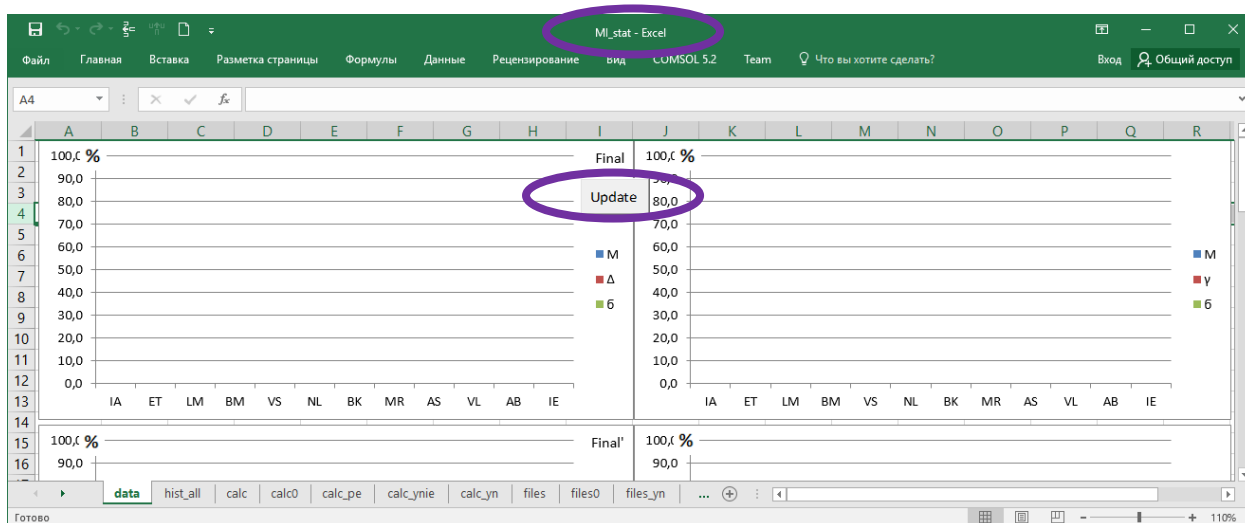
4. Put on the button "Update" (fig. 2).

*Fig. 2 Start of **MI_Stat.xlsm** file*

5. Program generates MI profile of group after finishing MI_stat.xlsm.

4 Program results

VibraMI forms results of program operation in **MI_Stat.xlsm** file.

Note, for operating with a MI_Stat.xlsm file you need to have Microsoft Office Excel 2016 or later.

Main results show multiple intelligence group profiles (**MIGP**) in the left side of sheet "Data" in **MI_Stat.xlsm** (fig. 3 - 7).

Figure legend for MI types: IA – intrapersonal; ET – existential-theoretical; LM – logical- mathematical; BM – business-mercenary; VS – visual-spatial; NL – naturalistic; BK – bodily-kinesthetic; MR – musical-rhythmic; AS – ascetic-sacrificial; VL – verbal-linguistic; AB – arts-bohemian; IE – interpersonal. In each graph:

M – average value (expected value);

Δ – average value of the absolute error of measurement;

σ – standard deviation.

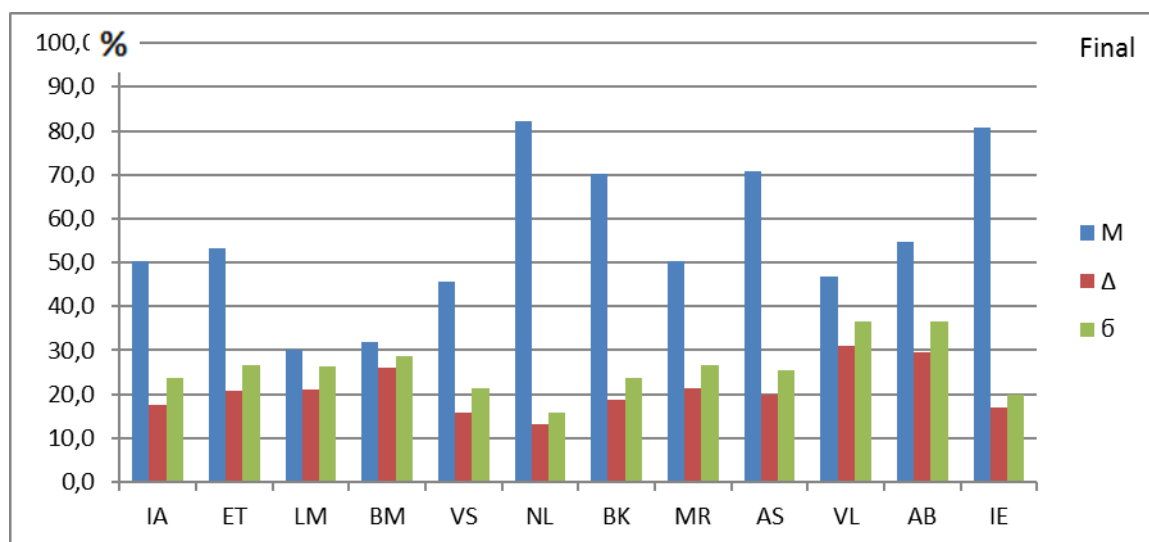MIGP Final is a graph based on the sum of all the MI profiles of people in the group (fig. 3).

Fig. 3 Integral MIGP

In Final graph the results of opposite unconscious response are averaged for the first 4 and last 4 MI types. MIGP Final' shows a graph based on the sum of all the MI profiles of people in the group without averaging of opposite MI types (fig. 4).
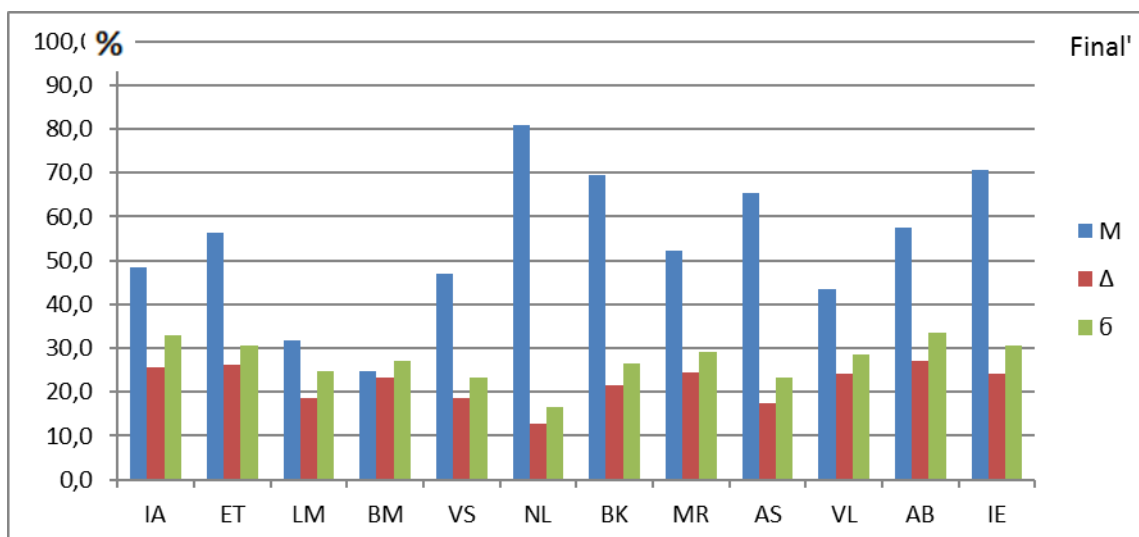
Fig. 4 MIGP without personal correction IE unconscious response

YN graph shows MIGP profile based only conscious response for all MI profiles in the group (fig. 5).
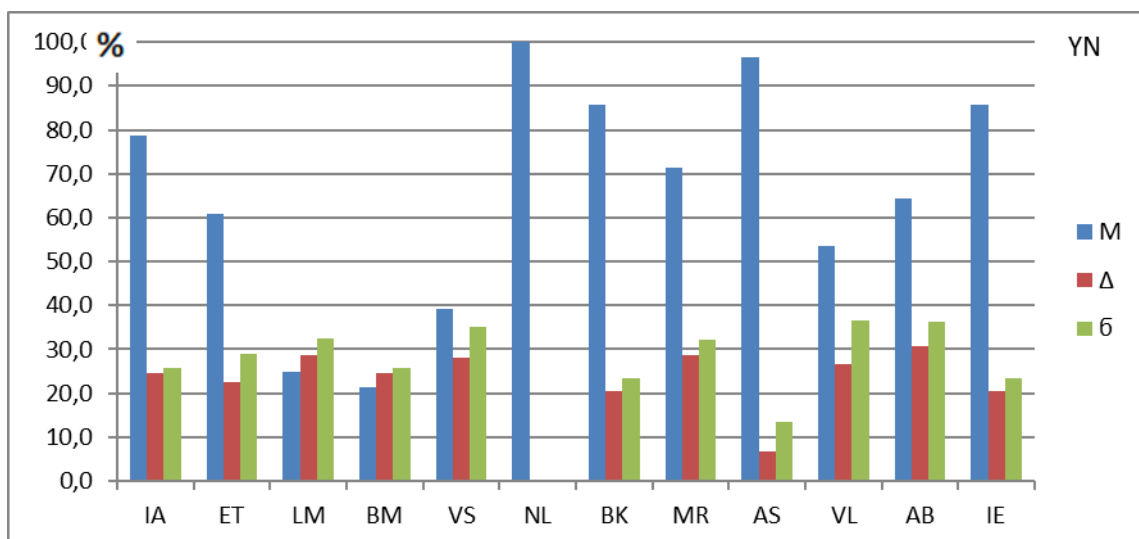

Fig. 5 MIGP on conscious response only (Yes/No)

IE graph shows MIGP profile based only unconscious response for all MI profiles in the group (fig. 6).
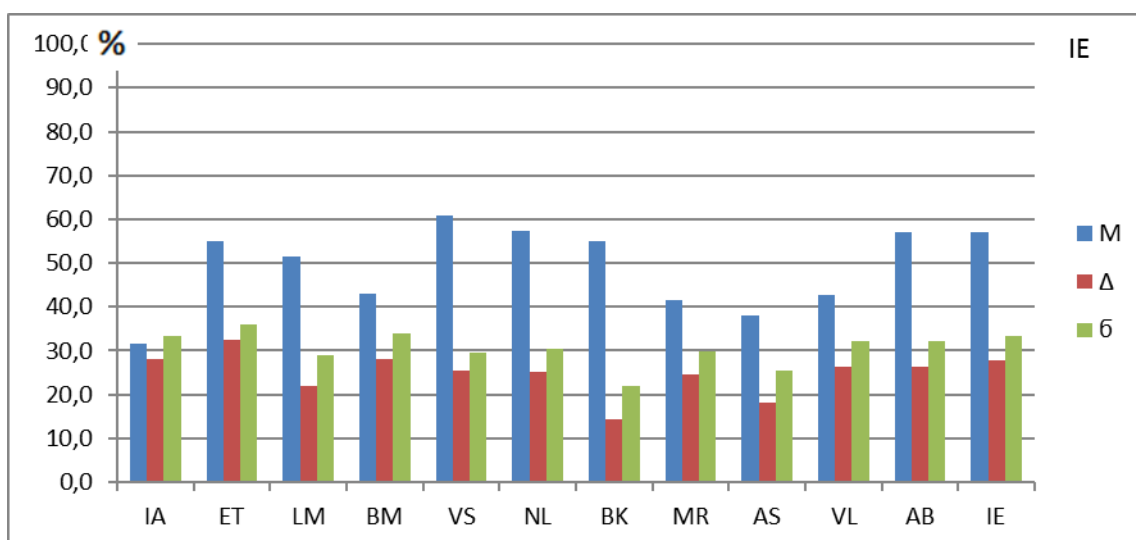
Fig. 6 MIGP on unconscious response only (IE)

YN-IE graph shows differential MIGP profile based the difference between conscious and unconscious responses (fig. 7).
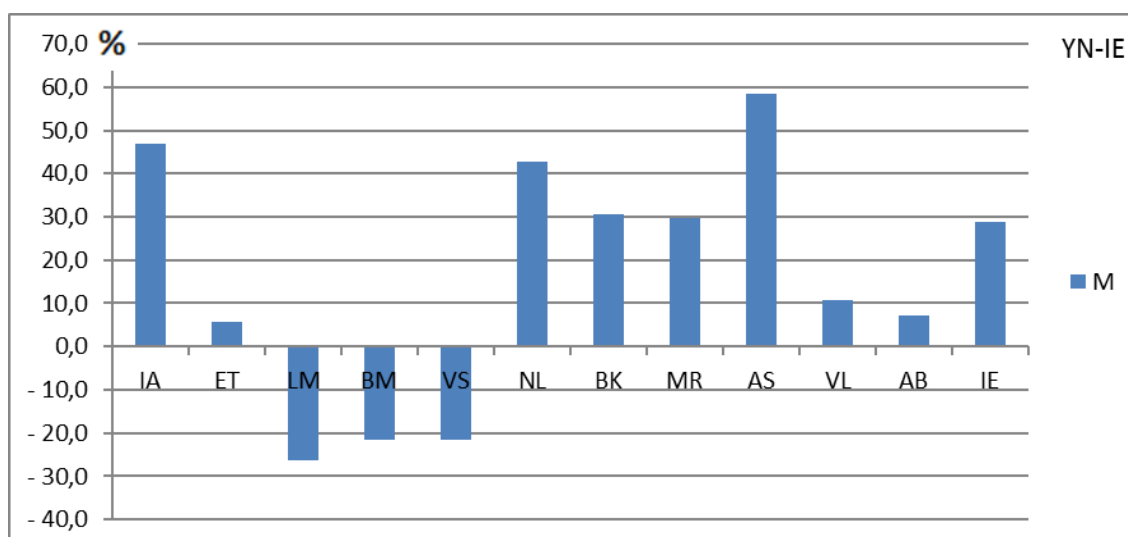

Fig. 7 Differential MIGP.

Fig 8 and 9 shows graphs similar fig. 3-7 with reduced error γ (red line) instead of Δ placed on the right side of sheet "Data" in **MI_Stat.xlsm.**
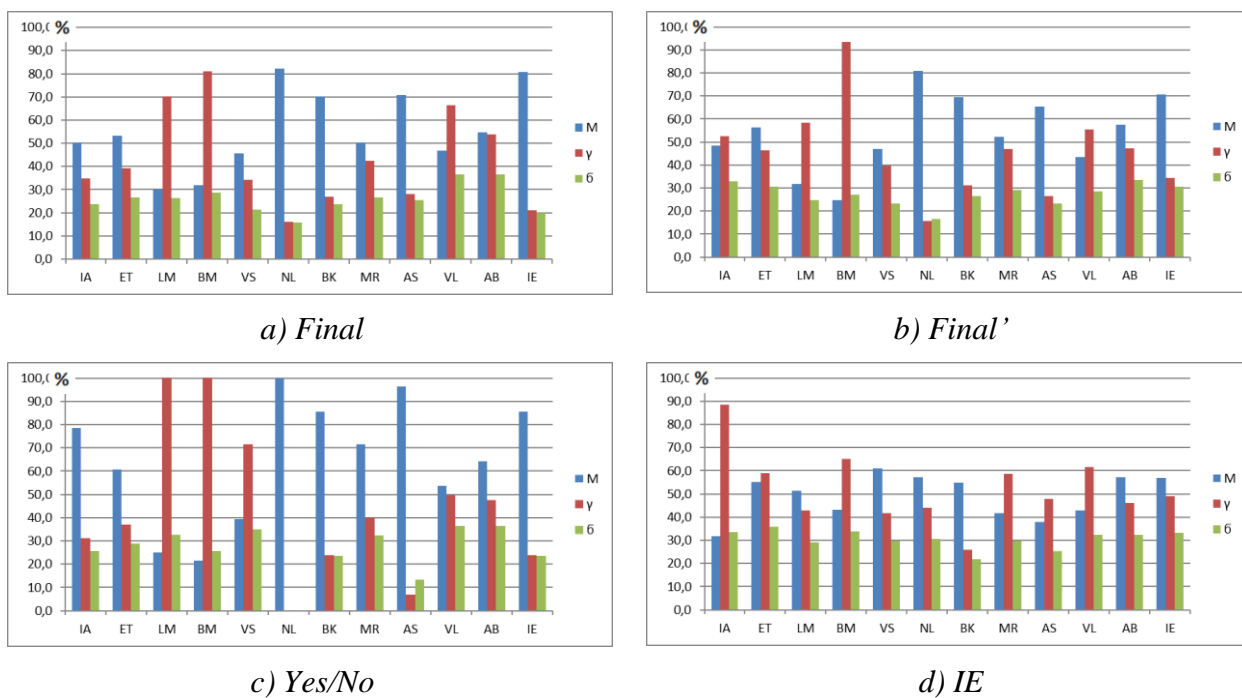
a) Final

b) Final'

c) Yes/No

d) IE

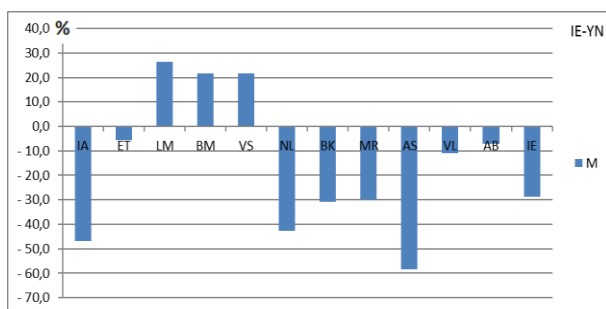*Fig. 8 MIGP with reduced error γ (red line) instead of Δ*

Fig.9 IE – Yes/No – mirror graphics to – Yes/No – IE

IE-YN graph shows differential MIGP profile based the difference between conscious and unconscious responses (fig. 9).

5 Analysis results

The **MI_Stat.xlsm** program intended for statistical processing of VibraMI software results. It is possible to process and research the statistics of group results including several testing of a one person, or for the several persons in group.

For example, graphs given in Section 4 show results on the analysis of the several persons MI profiles testing. Using the graph in fig. 3, you can identify the main features of this group of people. Maximum average values on types of MI for managers is a naturalistic (82.1 %) and an interpersonal (80.7 %), also high values is in bodily-kinesthetic (70.1 %) and in ascetic-sacrificial (70.9 %) MI types. Variation of these parameters in the group does not exceed 25 %.

An ideal differential MI profile for the perfect person, from the viewpoint of equality of conscious and unconscious person's reactions, should represent small columns of the MI types, which are not going beyond ± 10 %. In a harmoniously developed person, the area of the integral, which is higher and lower of the axis on the differential profile, should be approximately equal. In this case, a conscious reaction is prevailing for some MI types, and for other MI types – an unconscious reaction. At the same time, at large an approximate equality is observed. Figure 7 represents shows the results indicating that the values of differential MI profiles, obtained in the groups, are far from perfect and harmonious. For said people group (Fig.7) conscious response is greatly more than unconscious response.

With the help of vibraimage technology and given statistical processing a simultaneous evaluation of the conscious and unconscious person and/or group's responses are carried out simply, remote, friendly and nonintrusive.

6 License

VibraStatMI program presented for open access to all licensed users of VibraMI program.

Updates and questions on www.elsys.ru

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