1. Hypertext content: slides NN **1**, 2

2. Hypertext content:2. Hypertext content: slides NN 1, 2

3. Partnership System ZORAN

Is the great demonstration of the way how some intellectual possibilities, described in scientific and fantastic literature concerning Artificial Intelligence, can be successfully realized and used afterwards.

4. New type of expert system

According to theory, Partnership System ZORAN is really expert system; it is based upon so named W(doctor Watson)-technology principles. So, this system can become a user partner in resolving of a great number of economic tasks. By means of it user can always receive illustrated reply to his question: WHAT WILL BE IF…

5. Classic expert systems; limit of possibilities

Unlike Partnership System ZORAN, classic expert systems are working out using formal-logic M-technology, with all its advantages, limitations and defects. Such systems are based upon so named production-model (unity of a great number of production-rules IF … THEN …), being processed by means of a few logic output conceptions: deduction, induction, abduction, traduction etc. Any formal-logic model needs for noncontradictory internal and external data, and is not able to process, because of fundamental defects, paradoxical (even being in control) situations. Therefore, while usual computer programs can not get over the concrete calculations limit, possibilities of classic formal-logic model (and, of course, any classic expert system, based upon it) are limited by requirement of noncontradictory data. If there are paradoxes – there are great problems also, real headache.

6. How to get over limitation for classic expert systems

Unlike traditional expert systems, Partnership System ZORAN creating and developing is based upon not formal-logic conception, but evolutionary-content model, which makes it possible to process and take into consideration in calculations some types of paradoxical data and situations. Unfortunately, there is no fundamental theory of paradoxes, moreover such theory can not be created in the nearest future because of absolute indifference from the side of official science to this sphere of knowledge. Therefore author of Partnership System ZORAN created independently rule base for taking into consideration and processing paradoxical data type. As the result, we have nearest analogy for the theory for inventing task decision; moreover while this theory makes it possible to process successfully technical and physical contradictions, Partnership System ZORAN is able to process independently informational contradictions, which are arising very often during fuzzy, dependent and multivariant data processing.

7. First intellectual possibility

At present, common paradox classification, full paradox determination and fundamental paradox theory are not exist. Very approximately, *paradox is some contradiction in some intuitive meaning, and also paradox is some multimeanings*, *strangeness*, *conflicts*, *collisions*, *antinomies*, *incompatible data in the same numerical or logical meaning etc*.

Such definition is not suitable absolutely for formal-logic model; but we are using content-evolutionary author's method. So, there are no problems. Therefore we'll take into practice all advantages and profits of choosing method; that is we'll go from absolute objectivity to relative objectivity, based upon voluntarism of author.

As the result, let's name first realized intellectual possibility of Partnership System ZORAN: subjectivism or author's point of view into objective sphere.

In general, any expert system represents itself as author's point of view into objective sphere, realized as expert base of noncontradictory knowledge and data. These knowledge and data must be noncontradictory because methods of formal logic must process it.

As to Partnership System ZORAN, additionally, it is adding subjectivism by a number of very important features.

8. Second intellectual possibility

And the first from these features – ability to process paradoxical in author's understanding data. Therefore, the second intellectual possibility, realized in Partnership System ZORAN – automatic processing of contradictions-paradoxes using special knowledge and rule bases (paradoxicality). Of course, Partnership System ZORAN can process not all contradictions in objective meaning, but only those, which are ***considered*** in author's conception of artificial intelligence, which are ***classified*** by the special way as paradoxes, which are ***included*** into corresponding knowledge base, and which ***can be found*** during resolving of economic tasks. So, at our case the paradoxicality is controlled (is not out of control).

9. Data classification

And now its time to remember all data classes described in the first part of presentation and united into the single registry; there are following already mentioned data:

1.Definite or *concrete* or *exact*;

2.Fuzzy;

3. Incomplete;

4.Indefinite;

5.Dependent;

6.Multivariant;

7.Paradoxical;

8.Distributed;

9.Nonevident.

10. Third intellectual possibility

Next feature of subjectivism – is ability to represent and process, side by side with usual **definite** data, non-standard data types in definite meaning, such as: **fuzzy**, **incomplete**, **indefinite**, **dependent**, **multivariant**, **paradoxical**, **distributed** and **nonevident**. Thus, the third intellectual possibility, realized in Partnership System ZORAN – is automatic recognizing and automatic processing of definite, fuzzy, incomplete, indefinite, dependent, multivariant, paradoxical, distributed and nonevident data (complex determinism). Data classification, described above, of course, quite subjective, but very-very convenient and suitable for calculation processing. Undoubtedly, one can create and develop other, even more interesting data type classifications. The main question here is: how much is well founded and effective such possible classification? Besides it, described data classification gives the real possibility, being fundamental, to create first version of paradox classification - very important classification of the second level. Significant addition here: some of mentioned above data types are capable to become paradoxical at some different situations. Basing upon classifications one can easily develop and realize correct data processing operations.

11. So, what types of paradoxes are described?

1. Paradoxes, connected with concrete data processing;
2. Paradoxes, connected with fuzzy data processing;
3. Paradoxes, connected with dependent data processing;
4. Paradoxes, connected with multivariant data processing;
5. Paradoxes, connected with final results understanding of final calculated data;
6. Paradoxes, connected with representation and behavior of dialog-windows and document windows;
7. Paradoxes, connected with stability losing during Partnership System ZORAN work because of conflicts with operation system.

12. Concrete data and paradoxes

Described below paradoxical examples for concrete data illustrate situations and events of great instability, which are required of serious attention. Here: sum prognosis – what sum was intended to receive or to expend at the first stage; after correction – corrected sum at an intermediate stage; result, calculated data – final data.

1. **Sum prognosis: *300*; result: *0*;**
2. **Sum prognosis: *300*; result: *–100*;**
3. **Sum prognosis: *–500*; result: *0*;**
4. **Sum prognosis: *–500*; calculated data: *400*;**
5. **Sum prognosis: *0*; calculated data: *300*;**
6. **Sum prognosis: *0*; result: *–500*;**
7. **Sum prognosis: *300*; after correction: *–100*; result: *0*;**
8. **Sum prognosis: *300*; after correction: *0*; result: *–100*;**
9. **Sum prognosis: *–500*; after correction: *400*; result: *0*;**
10. **Sum prognosis: *–500*; after correction: *0*; calculated data: *400*;**
11. **Sum prognosis: *0*; after correction: *300*; result: *–200*;**
12. **Sum prognosis: *0*; after correction: *–500*; result: *400*.**

13. Fuzzy data and paradoxes (**first variant**)

It is necessary to mention immediately that fuzzy data are always nonsimple, these data are describing ideally nondetermined future, but at the same time fuzzy data are not always paradoxical. Unlike fuzzy data, concrete data are always simple and describing determined future.

So, let's use below examples to demonstrate, when fuzzy data are paradoxical, and when these data are not paradoxical.

1.140<>200 – data are nonsimple but not but not paradoxical because at any case the numerical value is positive;

2.-20<>-15 – data are nonsimple but not but not paradoxical because at any case the numerical value is negative;

3.0<>80 – data are nonsimple and paradoxical simultaneously because the numerical value is either equal zero or positive;

4.-50<>0 – data are nonsimple and paradoxical simultaneously because the numerical value is either equal zero or negative;

5.-20<>40 – data are nonsimple and paradoxical simultaneously because the numerical value is either negative or equal zero or positive.

14. Fuzzy data and paradoxes (**second variant**)

Described below paradoxical examples for fuzzy data illustrate situations and events of great instability, which are required of serious attention. Here: sum prognosis – what sum was intended to receive or to expend at a first stage; after correction – corrected sum at an intermediate stage; result, calculated data – final data.

1.Sum prognosis: *300<>400*; result: *0*;

2.Sum prognosis: *300<>400*; result: *–100*;

3.Sum prognosis: *–500<>–400*; result: *0*;

4.Sum prognosis: *–500<>–400*; calculated data: *400*;

5.Sum prognosis: –100<>*0*; calculated data: *300*;

6.Sum prognosis: *0<>200*; result: *–500*;

7.Sum prognosis: *300<>400*; after correction: *–100<>–50*; result: *0*;

8.Sum prognosis: *300<>400*; after correction: *0<>100*; result: *–100*;

9.Sum prognosis: *–500<>–400*; after correction: *400<>500*; result: *0*;

10.Sum prognosis: *–500<>–400*; after correction: –200<>*0*; calculated data: *400*;

11.Sum prognosis: *0<>50*; after correction: *300<>500*; result: *–200*;

12.Sum prognosis: –200<>*0*; after correction: *–500<>–400*; result: *400*.

15. Dependent data and paradoxes (**first variant**)

Below is the example of noncontradictory dependency which is including into itself 5 events:

Bank credit => Goods buying => Goods selling => Credit repayment => Profit

This dependency can be simplified while being converted into paradoxical type:

Goods selling => Goods buying => Profit

Indeed, if there is a customer, who is ready to pay money beforehand, this way of business doing is more profitable and suitable in comparison with the first dependency.

Thus, paradoxical converting of fuzzy data very often makes it possible to create simple and effective decisions.

16. Dependent data and paradoxes (**second variant**)

Let's suppose that our business plan consists of 50 events. Probability of each event is equal 0.99 (99 percent). If this business plan will be calculated without dependent data using, the common probability will be equal 0.99. In other way, if we have here dependency of 30 events, the common probability for this dependency will be equal 0.74 (not so much!), and the common probability for the whole business plan will be in 0.74<>0.99 interval. Usually, working even in concrete data, they are ignoring dependencies and probabilities. And because of it money can be lost very often accordingly.

As the result, if we'll compare these values, the probability will be equal either 0.99 exactly or it will be in 0.74<>0.99 interval; thus, at the first case we have simple and therefore inadequate decision.

Using of the dependent data conception makes it possible to process correctly such contradictions-paradoxes.

17. Multivariant data and paradoxes (**first variant**)

In multivariant data every result can represent itself either concrete or fuzzy value. Therefore all types of paradoxes described above for concrete and fuzzy data are possible to be find out in multivariant data.

Let's describe now examples of paradoxes, unique only for multivariant data:

1. There are two results in a single event; sum value for the first result is equal 500, sum value for the second result is equal 0.
2. There are two results in a single event; sum value for the first result is equal -300<>-200, sum value for the second result is equal 0.
3. There are two results in a single event; sum value for the first result is equal -100, sum value for the second result is equal 300<>400.
4. There are three results in a single event; sum value for the first result is equal 500, sum value for the second result is equal 0, sum value for the third result is equal -300.

18. Multivariant data and paradoxes (**second variant**)

Next type of paradoxes, connected with multivariant data, is related to probability of calculations. Noncontradictory probability model is putting forward the demand, that common probability of all results in any event can not exceed 1 (100%). That is, if an event consists of two results, probability for these two results can be equal, for example, 0.4 and 0.6 (1 in sum), but not equal 0.7 and 0.8 (1.5 in sum). Partnership System ZORAN, on the contrary, is able to process an event, which includes in itself a number of possible results; while probability for each mentioned result is near to 1 or even equal 1 (we are not basing upon formal-logic conception!). And the most complex thing here is not only to find out such paradoxical situations, but process data correctly also, that the received result in any way will be corresponding to common sense. And only new intellectual possibility makes it possible to process described contradictions.

19. Fourth intellectual possibility

As You can see already, Partnership System ZORAN makes it possible to construct and calculate business projects of many different facts and values owing to intellectual possibilities using. The most important calculating possibility for described data types here is ability to generalization of numerical values (generalizing procedure). This is the fourth intellectual possibility, realized in Partnership System ZORAN. Let's see the example. And let there is the event with three results. Sum values for each result are equal accordingly: -200<>-1; 0; 1<>50. And probability values are equal accordingly: 0.7; 0.8; 0.9. After generalizing procedure using the common sum will be at -200<>50 interval. As You can see here, any interval of such type is nonevident multivariant event with an indefinite number of results. Thus the common probability will be at 0.7<>0.9 interval (not absolutely absurd value: 2.4). So, without rule unity at generalizing procedure it is impossible to realize correct calculations.

20. Resultant values and paradoxes

One can find out very often paradoxes at resultant calculated values when business projects are being analyzed to stability quality. As the suitable example: such paradoxical result was received during data processing in business project for internet-consulting firm. In this example stability analysis was doing by means of comparison for two results: for initial data and for data when there is nonlinear tendency to progressive income decreasing. As the result they received: ***common sum*** for initial data 67845<>79341; ***common sum*** while income decreasing 59596<>80392; ***sum indefiniteness*** for initial data 14.48%; ***sum indefiniteness*** while income decreasing 25.86%; ***profit*** for initial data 1.6<>1.75; ***profit*** while income decreasing 1.55<>1.8. So there is the situation, contradictory to common sense, when during income decreasing there is a theoretical possibility to increase ***profit*** up to 5% and to increase ***common sum*** up to more over than 1000$; therefore the business project was declared to become superstable.

21. Classical paradox in window-object behaviour

Almost any Partnership System ZORAN window-object (excluding toolbars) can behave itself in a certain sense paradoxically. That is: all dialog boxes and documents are able to be duplicated, and besides it all copies are independent from original. Moreover, document-window-objects can be divided into different parts, and what's more: any such part is equivalent to the original document, but it is independent at the same time. Here classical paradox was realized, when a part of a whole can behave itself attitudely to this whole, as this whole attitudely to this part. This feature was named asynchronic multiexemplarity.

22. Conflicts with operation system

And the last type of contradictions – conflicts and collisions, connected with cooperation of Partnership System ZORAN and operation system (like as Windows). Special knowledge and rule base was worked out, which is effectively using to correct and process different possible conflict situations. Therefore Partnership System ZORAN is stable and reliable software, almost free from error messages such as: **THIS PROGRAM HAS PERFORMED AN ILLEGAL OPERATION AND WILL BE SHUT DOWN. IF THE PROBLEM PERSISTS, CONTACT THE PROGRAM VENDOR.**

23. Fifth intellectual possibility

Next intellectual possibility is ability to self-organization (procedure of self-organization). For different economic tasks calculating it is necessary to create various memory structures, complex, original, intended for a single concrete task calculating. Thus internal memory structure of Partnership System ZORAN is altering independently from a user during economic tasks calculating. And this is very comfortable possibility, because a user by this way is becoming free from the question: **HOW IT MUST BE REALIZED**? Instead of it there is another question must be answered: **WHAT MUST BE REALIZED**?

24. Sixth intellectual possibility

The more important integral intellectual possibility is automatic generation of mathematical formulas and final results based upon these formulas receiving (automatic calculating procedure). The possibility, mentioned above, is integral, because it is basing upon already described intellectual possibilities: paradoxicality, complex determinism, generalizing procedure, procedure of self-organization, and also it is basing upon author's conception of modernized multitudes - toposes. Topos is modernized multitude which unlike classical multitude, is characterizing not only by a number of elements, but also by concrete structure, semantics (sense), pragmatics (financial importance) and generalized mathematical formula, which is transforming (expanding) during calculation processing in accordance with a number of elements in a topos-multitude.

25. Simple topos types

At present, the author's conception includes in itself something about ten topos types, but existing version of Partnership System ZORAN is able to process only three from mentioned above topos types:

1. Firstly, this is a number of independent events (document type «***CARD***»).
2. Secondly, this is a dependency of dependent events (document type «***FILE***»); it is applied for dependent data representing.
3. Thirdly, this is a single event with a number of results (document type «***TABLE***»); it is applied for multivariant data representing.

As You can see, topos types are closely connected with types of nonstandard data, being structural, semantic and pragmatic representation of these data. And also in Partnership System ZORAN any certain document class is corresponding to certain topos class.

26. The way for calculation doing

Firstly for financial project Partnership System ZORAN is looking for all financial documents (toposes), and corresponding memory structures are creating at the same time. As an intermediate result a calculating formula is creating automatically, mentioned formula consists of a number of mini-formulas:

1. For totalities of independent events;
2. For dependencies of dependent events;
3. For events with a number of results each.

After that, financial calculating process is doing (with contradiction processing):

1. For totalities of independent events sums are adding (subtracting), and probabilities are generalizing;
2. For dependencies of dependent events sums are adding (subtracting), and probabilities are multiplying;
3. For events with a number of results each sums and probabilities are generalizing;
4. Simultaneously, basing upon intermediate calculating data the final result is calculating (sums are adding (subtracting), and probabilities are generalizing);
5. And at the same time, basing upon the next intellectual possibility, sum distribution into probability intervals is doing automatically.

27. Seventh intellectual possibility

Is very important for final result understanding. It was named pessimistic point of view into objective world (pessimistic procedure); this intellectual possibility is basing upon the second basis of thermodynamics (chaos is increasing to maximum in any totally isolated system), and also upon the empiric observation: a piece of bread which was spread with butter onto single side after falling down on the floor is fallen (almost) always by the single side with butter. That is, in accordance with pessimistic procedure, always the worse or pessimistic result is examining (the most probable thing is to receive a smallish sum, but not the biggest one; and vice versa - the most probable thing is to expend the biggest sum, but not a smallish one), in comparison with the best result. But, simultaneously, this worse result is the best from the worst results, which usually are not examined, but can be received by special processing using if it is necessary, owing to application of the next intellectual possibility.

28. Eighth intellectual possibility

Putting into operation and using of a chance (chance factor) for receiving some or other from worse results, worse in unknown value, in comparison with the best from worst results. Here again everything is as in real life. This possibility is the secondary effect from using of pessimistic procedure; it is especially actual, when a huge business project must be calculated in parts because of shortage of operation system resources, or when limited version of Partnership System ZORAN is using. As the result, if Your received calculated pessimistic result is good, so, optimistic result will differ from the pessimistic one in unknown value in best side.

29. Ninth intellectual possibility

Homeostasis supporting (a some balance state between internal environment of Partnership System ZORAN and external environment). The point is that Partnership System ZORAN was worked out from the very beginning to be a primitive lively creature, the most primitive organism, with very limited number of real abilities.

This organism has central part with a number of functions, which are analogous to functions of a central nervous system of an alive animal; mentioned central part is responsible for correct activities to influences from the side of external environment – operation system.

According to real situation, central part can create various objects, analogous to pseudopodia of amoeba, which are responding to external irritants. And these objects, at last, represent themselves an analogy of peripheral nervous system. Thus, homeostasis supporting is being based upon analogies of central and peripheral nervous systems, worked out by means of methodology of system methods.

There are more than hundred of such pseudopodia-objects, moreover each pseudopodia-object is able to copy itself ether independently or with a help of other objects; that is any pseudopodia-object can divide itself into equivalent parts, which are identical each other in outward appearance and functional abilities.

30. Tenth intellectual possibility is

Memory of past activities. It is very simple ability. If an object is quasi-alive, it must have a minimum memory of past at least. In up-to-date version of Partnership System ZORAN this function was realized in the following way.

Information, which is receiving in some peripheral objects is recognizing according to situation at real-time mode, comparing with natural language string, and putting into central memory with time fixing, if such function is active in main menu.

There are something about hundred of such peripheral objects, each of them can be duplicated from three to five times, that is to be presented in quantity from four to six exemplars; and each exemplar can be presented in different states: capable of functioning, restored, fictitiously destroyed, hidden etc. (in legal combinations).

Moreover any exemplar of any object is able to realize full set of corresponding functions. As the result, there are many tens of thousands of possible situations; each from these situations is recognizing almost momentary and can be remembered in central memory. Commentary, as they say, are unnecessary.

31. Register of intellectual possibilities

So, next intellectual possibilities are realized in Partnership System ZORAN:

1. Author's point of view into objective sphere;
2. Paradoxicality – automatic processing of contradictions-paradoxes;
3. Complex determinism – processing of non-standard data (definite, fuzzy, incomplete, indefinite, dependent, multivariant, paradoxical, distributed and nonevident);
4. Generalizing procedure – ability to generalization of numerical values;
5. Procedure of self-organization – ability to self-organization;
6. Automatic calculating procedure – automatic generation of mathematical formulas and final results based upon these formulas receiving;
7. Pessimistic procedure – pessimistic point of view into objective world;
8. Chance factor – putting into operation and using of a chance;
9. Homeostasis supporting – a some balance state between internal environment of Partnership System ZORAN and external environment;
10. Memory of past activities.

32. Registry of fundamental know-how basis: conceptions, methodologies and classifications

Well, at last, it is necessary to mention again, that all described above features, realized in Partnership System ZORAN, were put into practice owing to results of author's fundamental scientific investigations only. These results were received beforehand, long before the beginning of Partnership System ZORAN creating. So, let's enumerate the most important of them:

1. New author's Artificial Intelligence conception (any Artificial Intelligence system must be realized as very primitive quasi-alive creature with the most important structures and functions realizations);
2. System methodology and system analysis principles;
3. Author's classification of data types, including new ones, because our real future is not determined and can not be described adequately by means of concrete data only;
4. Author's classification of paradoxes, it is quite necessary, because our real world is paradoxical very often, and this postulate can not be ignored;
5. Author's register of intellectual possibilities, there is no Artificial Intelligence without realization of a pair of intellectual possibilities at least;
6. Author's conception of informational generalizations;
7. Author's analogy for the theory for inventing task decision, it makes possible processing of paradoxes;
8. Authors conception of modernized multitudes – toposes (for automatic generation of mathematical formulas and final results based upon these formulas receiving);
9. Methodology of probability theory;
10. Methods of fuzzy mathematics;
11. Author's methodology of W(doctor Watson) partnership expert system creating.

33. And what about future?

In future – subsequent developing of:

1. fundamental theory;
2. author's conception of Artificial Intelligence;
3. Partnership System ZORAN as real product;
4. different services, based upon Partnership System ZORAN using;
5. manuals for practical using;
6. internet-service;
7. and also new educational examples with decisions of original economic tasks.

All mentioned above is possible with financial base increasing, while activity of serious sponsors, investors, partners, promoters and customers is being expanding. I'll be thankful for Your supporting and understanding.

34. Short message to You

I SHALL BE GLAD TO SEE YOU BEING MY SPONSOR, INVESTOR, PARTNER, PROMOTER OR CUSTOMER

35. Scheme of presentation

Hypertext content

1	2

Basic slides of presentation

3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34