

**ПРЕИМУЩЕСТВА
АКСИОМАТИЧЕСКОГО
МОДЕЛИРОВАНИЯ НА ПРИМЕРЕ
РЕШЕНИЯ ПРОСТЕЙШЕЙ
ИНТЕЛЛЕКТУАЛЬНОЙ ЗАДАЧИ**

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 (...)) .
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 : « », 2010. – 267 .

2001
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 :
 - 05; - 03; - 05.22.00;
 - 01.05.01; - 01.04.00; - 02;
 - 01.01.00. - 01.02.00;
 4,
 8
 :
 ; - ; - ; - ; - ; - ; - ;
 :
 Z1 - 05.22.00.
 Z2 - 05.
 Z3 - 03.
 Z4 - 02.
 Z5 - 01.05.01.
 Z6 - 01.04.00.
 Z7 - 01.02.00.
 Z8 - 01.01.00.
 :
 x1 - (-)
 x2 - (.)
 x3 - (.)
 x4 - (.)

$x5 -$ (. .)
 $x6 -$ (.)
 $x7 -$ (.)
 $x8 -$ (. .)

:

$Y1 -$. . ; $Y2 -$. . ; $Y3 -$. . ; $Y4 -$. . . ; $Y5 -$. . . ; $Y6 -$. . . ;
 $Y7 -$. . ; $Y8 -$. . .

- :
1. $p1(, x5) - 1$ (. .) (. .).
 2. $p2(Z2, x2) - 1$ (. .) .
 3. $p3(, x1) - 2$ (. .) (-).
 4. $p4(,) - 2$ (. .) (. . .).
 5. $p5(, Y3) - 2$ (. .) .
 6. $p6(, Y6) - 3$ (. . .).
 7. $p7(Z3, x3) - 4$ (. .) , - , 3
(. . .).
 8. $p8(, Y2) - 5$ (. .) , - , 4
(. .) .
 9. $p9(, x1) - 3$ (. . .) (-).
 10. $p10(, x4) - 3$ (. .) (. .) .
 11. $p11(, x7) - 4$ (. . .) (.) .
 12. $p12(,) - 4$ (. .) (. . .) .
 13. $p13(x5, x6) - 6$ (. .) (.) .

$p14(Y, Z) -$, (. .) , Y, -

Z.

- 1 :
- (. .) (. .) - (. .) :
 $p1(, x5) \Rightarrow p14(, x5)$;
 - $\frac{1}{1}$ (. .) - (. .) - (. .) ,
: $p2(Z2, x2) \Rightarrow p14(, x2)$.

- 2 :
- (. .) (-) - (. .) (-) ,
2 , ,
:

$p3(, x1) \Rightarrow p14(, x1)$.

- 3 :
- (. .) (. .) - (. .) - (. .) :
 $p10(, x4) \Rightarrow p14(, x4)$.

4 :

- $(\dots) \quad (\dots), \quad (\dots)$, $(\dots) -$
 $(\dots) - (\dots)$:

$$p_{11}(x, x7) \Rightarrow p_{14}(x, x7).$$
- $(\dots) \quad (\dots), \quad 4 \quad (\dots) - \quad (\dots) -$
 (\dots) :

$$p_7(Z3, x3) \Rightarrow p_{14}(x, x3).$$

$$6 \quad (\dots) \quad (\dots) - \quad (\dots) - (\dots),$$

$$p_{13}(x5, x6) \Rightarrow p_{14}(x, x6).$$

$$((p_1(x, x5) \Rightarrow p_{14}(x, x5)) \quad (p_2(Z2, x2) \Rightarrow p_{14}(x, x2)) \quad (p_3(x, x1) \Rightarrow$$

$$\Rightarrow p_{14}(x, x1)) \quad (p_{10}(x, x4) \Rightarrow p_{14}(x, x4)) \quad (p_{11}(x, x7) \Rightarrow$$

$$\Rightarrow p_{14}(x, x7)) \quad (p_7(Z3, x3) \Rightarrow p_{14}(x, x3)) \quad (p_{13}(x5, x6) \Rightarrow$$

$$\Rightarrow p_{14}(x, x6))) \Rightarrow p_{14}(x, Y1) \Rightarrow ((\dots) \Rightarrow p_{14}(x, x8)). \quad (1)$$

(1) :

$$((\dots) \Rightarrow p_{14}(x, Y1)) \Rightarrow ((\dots) \Rightarrow p_{14}(x, x8)). \quad (2)$$

(2) :

$$((\dots) \vee p_{14}(x, Y1)) \quad ((\dots) \vee p_{14}(x, x8)). \quad (3)$$

(3) :

1. $(\dots) \vee p_{14}(x, Y1).$
2. $(\dots).$
3. $p_{14}(x, x8).$
4. $p_{14}(x, Y1).$ 1 2,
5. $\dots(\dots) \quad (\dots) \quad 3 \quad 4. \quad Y1 \quad x8,$
 $\dots(\dots) \quad (\dots) \quad \dots p_{14}(a, x8).$

1 :

- $(\dots) \quad (\dots) \quad 1, \quad 2 \quad p_{14}(a, x8)$, :
- $(\dots) - (\dots)$:

$$p_1(x, x5) \Rightarrow p_{14}(x, x5);$$
- $(\dots) - (\dots)$:

$$p_2(Z2, x2) \Rightarrow p_{14}(x, x2);$$

- $(\dots) - (\dots)$:

$$p_{14}(a, x_8) \Rightarrow p_{14}(\dots, x_8).$$

2 :

(\dots) (\dots) , $(\dots) (\dots) -$:

- $(\dots) - (\dots)$:

$$p_3(\dots, x_1) \Rightarrow p_{14}(\dots, x_1);$$

- $(\dots) - (\dots)$:

$$(p_4(\dots) p_{14}(\dots, x_6)) \Rightarrow p_{14}(\dots, x_6).$$

$(\dots) - (\dots)$

4 :

- $(\dots) \dots 4 (\dots) (\dots) (\dots) - (\dots)$:

$$p_{11}(\dots, x_7) \Rightarrow p_{14}(\dots, x_7).$$

5 :

- $(\dots) (\dots) - (\dots)$, \dots , $4 (\dots)$.

$$p_8(\dots, Y_2) \Rightarrow p_{14}(\dots, x_3).$$

$$\begin{aligned} &(((p_1(\dots, x_5) \Rightarrow p_{14}(\dots, x_5)) (p_2(Z_2, x_2) \Rightarrow p_{14}(\dots, x_2)) (p_{14}(a, x_8) \Rightarrow \\ &\Rightarrow p_{14}(\dots, x_8)) (p_3(\dots, x_1) \Rightarrow p_{14}(\dots, x_1)) ((p_4(\dots) p_{14}(\dots, x_6)) \Rightarrow \\ &\Rightarrow p_{14}(\dots, x_6)) (p_{11}(\dots, x_7) \Rightarrow p_{14}(\dots, x_7)) (p_8(\dots, Y_2) \Rightarrow p_{14}(\dots, x_3))) \Rightarrow \\ &\Rightarrow p_{14}(\dots, Y_2)) \Rightarrow ((\dots) \Rightarrow p_{14}(\dots, x_4)). \end{aligned} \tag{4}$$

(4)

$$((\dots) \Rightarrow p_{14}(\dots, Y_2)) \Rightarrow ((\dots) \Rightarrow p_{14}(\dots, x_4)). \tag{5}$$

(5)

$$((\dots) \vee p_{14}(\dots, Y_2)) ((\dots) \vee p_{14}(\dots, x_4)). \tag{6}$$

(6)

1. $(\dots) \vee p_{14}(\dots, Y_2)$.
2. (\dots) .
3. $p_{14}(\dots, x_4)$.

.....

4. $p_{14}(\cdot, Y_2)$. $1 \ 2$,

5. $(\cdot \cdot \cdot)$ $(\cdot \cdot)$, $\cdot \cdot p_{14}(\cdot, x_4)$. Y_2 x_4 ,

$(\cdot \cdot \cdot)$ $(\cdot \cdot \cdot)$ $-$

2 $(\cdot \cdot)$ $(\cdot \cdot)$ $-$

- $(\cdot \cdot \cdot)$
- $(\cdot \cdot \cdot)$
- $(\cdot \cdot \cdot)$
- $(\cdot \cdot \cdot)$
- $(\cdot \cdot \cdot)$
- $(\cdot \cdot \cdot)$
- $(\cdot \cdot \cdot)$

$(\cdot \cdot \cdot)$ $(\cdot \cdot \cdot)$:
 $p_{14}(\cdot, x_2)$.

$(\cdot \cdot \cdot)$ \cdot $:$

- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)$,
- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)$,
- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)(\cdot \cdot \cdot \ 3 \ 4)$,
- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)(\cdot \cdot \cdot \ 7 \ 12)$,
- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)(\cdot \cdot \cdot \ 10 \ 12)$,
- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)(\cdot \cdot \cdot \ 1 \ 12)$,
- $(\cdot \cdot \cdot) - (\cdot \cdot \cdot)(\cdot \cdot \cdot \ 11 \ 12)$.

$(\cdot \cdot \cdot) - (\cdot \cdot \cdot)$:
 $14(\cdot, x_6)$.

V.A. Kondratenko

DEMONSTRATING THE ADVANTAGES OF AXIOMATIC MODELING ON EXAMPLE
OF SOLVING A SIMPLE INTELLECTUAL PROBLEM

The modern theory of intellectual problems solving has reached such a level, when one can make a scientifically reasonable statement about the existence of a unique algorithm for solving any intellectual task. As an example of solving intellectual problems, we choose the problem of determining the scientific specialty of each of the eight participants of the chess tournament between the members of NAS of Ukraine. On this example, we demonstrate the potential of axiomatic modeling.

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