

C.B.

$$\left\{ \begin{array}{l}
 \Sigma = \{T, X, U, \Omega, Y, \{, \}, y\} \\
 \Omega = \{w: T \rightarrow U\} \\
 = \{y: T \rightarrow Y\} \\
 \{ : T \times T \times X \times \Omega \rightarrow X \\
 y : T \times X \rightarrow Y
 \end{array} \right. \quad (1)$$

$X -$; $T \subset \mathbb{N} -$
 t ; $U -$
 ; $\Omega -$

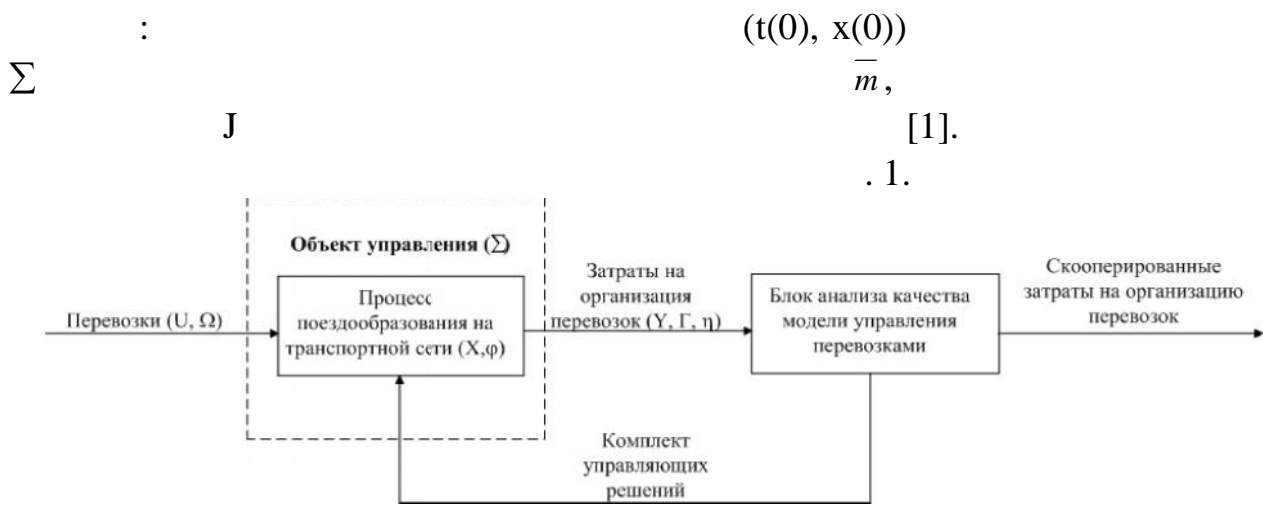
$(r(0), r(1)) \in T;$

$Y -$; $\varphi -$; $y; -$; $\eta -$,

$(t(0), x(0)).$

$$y(n) = y(t(n), x(n)) \tag{2}$$

$$J = C(\bar{m}) = (y(n) - \bar{y}(n)) \rightarrow \max \tag{3}$$



. 1 -

U, Ω

(Y).

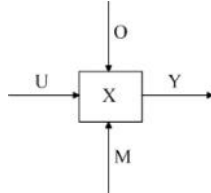
(m-bar),

;

:

$$\begin{cases} T = \{t_0, t_1\} \\ \Omega = \emptyset \\ = \emptyset \\ \{ = \emptyset \end{cases} \quad (4)$$

. 2.



. 2-

U -

;

$$X = \{(x_0, x(m)_k)\}; \quad k \in N_+; m \in M -$$

,

,

$x_0 -$

,

; $x(m)_k -$

; M -

,

;

$$Y = \{(y_0, y(m)_1)\} -$$

; O -

,

.

,

,

:

$$y(m)_1 = (t_1, x(m)_1) \quad \min \quad (5)$$

().

1.

O

,

,

:

$$O = (G(V, E, f), S(K_i^{\max}, N_i^{\max}, T_{ij}), W(L_{ij}, v_{ij}), R(C_{ij}, m_{ij}), M_{ij}^o, M_{ij}) \quad (6)$$

G(V, E, f) -

,

; V -

; E -

; f -

V,

E; $S(K_i^{\max}, N_i^{\max}, T_{ij}) -$

; K_i^{\max} –
 i; N_i^{\max} – ; T_{ij} –

j ; $W(L_{ij}, v_{ij})$ –
 ; L_{ij} – ; v_{ij} – ; $R(C_{ij}, m_{ij})$ –
 , ; $C_{ij} = (cm)_{ij}$ –
 - (c_{ij} –
); m_{ij} – ; M_{ij}^o, M_{ij} –

2. :

$$X = \{x : (R_{ij}, C_{ij}^{pq}, N_{ij}^p)\} \tag{7}$$

R_{ij} – (i,j); C_{ij}^{pq} –
 (p,q), (i,j); N_{ij}^p –
 (i,j).

3. $U = \{N_{ij}\}$.

4.

$$\bar{M} = \{m : (\bar{R}_{ij}, \bar{G}_{ij}^{pq}, \bar{N}_{ij})\}.$$

5. , :

$$y(m)_1 = F(Z_{opt}, Z, Z) = \left(\sum_{i,j \in V} N_{ij} \sum_{i,j \in V} T_k - \sum_{i,j \in V} (cm)_{ij} \sim_{ij} \right) - \sim_{ij} \sum_{i,j \in V} N_{ij} \sum_{p,q \in V} \frac{L_{pq}}{v_{pq}} - \tag{8}$$

{p q} – (i,j);
 μ_{ij} – (i,j)
 : $\mu_{ij}=1$, , $\mu_{ij}=0$, ;
 k – , (i,j)

6. , .
 :
 –

$$K_i^{\max} \geq K_i \tag{9}$$

K_i — i .

$$N_{ij}^{\max} \geq \sum_{j=1}^n N_{ij}, \tag{10}$$

$\sum_{j=1}^n N_{ij}$ —
i.

$$\tilde{ij} = \begin{cases} 1; (i, j) \in M^o \\ 1; f(u) = (i, j) \\ 0; \{i, j\} \in M \\ 0 \vee 1- \end{cases}, \tag{11}$$

— (i,j)

$$\sum N_{ij} \sum T_{ij} - (cm)_{ij} \geq 0, \tag{12}$$

—

$$N_{ij} \sum T_{pq} - (cm)_{ij} \geq 0 \tag{13}$$

T_{pq} — Nij

[2].

:
0- . 1.

$$M = \{m_0 : ((i, t_1, t_2, \dots, t_k, j), r(i, j))\}, \quad t_k - \\ (i, j), r(i, j) - \\ (i, j).$$

2.

M (i,j)

1- . 1. M (i,j)

2.

2- . 1.

(cm)_{pq}.

(p,q)

(p_j,q_j)

N(i,j)

$$N_{pq} \sum T_{pq} ; -$$

$$Z = \sum N_{p_1q_1} \sum T_{p_1q_1} - \sum cm_{p_1q_1} \tag{14}$$

$$(N_{pq} \sum T_{pq} + Z \rightarrow \min) \tag{15}$$

$$= cm_{pq} - (N_{pq} \sum T_{pq} + Z) \tag{16}$$

2.

3-

[3,4].

: 1.

2.

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(received) 18.09.2014