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[] Gnutella
[] DNS [] Tapestry [] Chord [] CAN [] Freenet
()

¹ Grid
² Peer to Peer
³ Learning Automat



¹ Actions

Time To Live

TTL)

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$$\begin{array}{lll} \alpha \equiv \{\alpha_1, \alpha_2, \dots, \alpha_r\} & E \equiv \{\alpha, \beta, c\} \\ c \equiv \{c_1, c_2, \dots, c_r\} & \beta \equiv \{\beta_1, \beta_2, \dots, \beta_r\} () \\ [] & \beta_i \\ \beta_i & P \\ & S \end{array} \quad (\beta_i \in [0,1])$$

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$$\begin{array}{lll} \alpha \equiv \{\alpha_1, \alpha_2, \dots, \alpha_r\} & \{ \alpha, \beta, p, T \} \\ p \equiv \{p_1, p_2, \dots, p_r\} & \beta \equiv \{\beta_1, \beta_2, \dots, \beta_m\} \\ n & p(n+1) = T[\alpha(n), \beta(n), p(n)] \\ \alpha_i & p_i(n) \\ & p_i(n) \\ (\beta_i(n)=1 & \beta_i(n)=0) & P \\ & S \end{array}$$

¹ Variable Structure

$$p_i(n+1) = p_i(n) + [1 - \beta_i(n)]a[1 - p_i(n)] - \beta_i(n)b \cdot p_i(n)$$

$$p_j(n+1) = p_j(n) - [1 - \beta_i(n)]a \cdot p_j(n) + \beta_i(n) \frac{b}{r-1} - b \cdot p_j(n) \quad \forall j \neq i \quad ()$$

$$\begin{array}{ccc} & b & a \\ a & b & : (L_{R-\varepsilon P}) & SL_{R-\varepsilon P} () \\ & & & . \\ & b & a & : (L_{R-P}) & SL_{R-P} () \\ & & b & : (L_{R-I}) & SL_{R-I} () \end{array}$$

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$$(V(n)) \quad n \quad [\quad]$$

$$V(n)$$

$$[\quad]$$

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$$)$$

$$(...$$

$$\begin{array}{ccccc} m & k \in \{1 \dots m\} & n_{ik} & (n_i) i & k \\ A_{ij} & & (n_i) i & (R_j) j & \\ n_{ik} & & \alpha_{ijk} & A_{ij} & \\ & & & & i \\ & & & & k \\ A_{ij} & & n_{ik} & \alpha_{ijk} & \alpha_{ijk} \\ & & & & \alpha_{ijk} \\ (& &) & &) \\ & & & j & \end{array}$$

$$\alpha_{ijk} = \left\{ \alpha_{ijk} \mid k \in \{1 \dots m\} \right\}$$

$$(\alpha_{ijk} \cong n_{ik})$$

$$(P \quad S \quad)$$

$$(\quad)$$

¹ **S** Model Linear Reward-Penalty Scheme
² **S** Model Linear Reward Epsilon Penalty Scheme
³ **S** Model Linear Reward-Inaction Scheme

$$\begin{array}{ccccccc}
 & S & & P & & S & \\
 (& j & . &) & &) & \\
 & (&) & & & & \\
 & : & & & & & \\
 \langle \tau_1, \tau_2, \dots, \tau_{e-1}, \tau_e \rangle & (i \in \{2, \dots, e-1\}) & n_{\tau_i} & n_{\tau_e} & n_{\tau_1} & \bullet \\
 & .(& & n_{\tau_i} & \tau_i) & & \\
 & (&) & & & & s_r \bullet \\
 .(i < j) & \tau_j & \tau_i & \tau_j & \tau_i & b_{ij} \bullet \\
 & : & & (i < j) & \tau_j & \tau_i & t_{ij} \bullet \\
 t_{ij} = \frac{s_r}{b_{ij}} & & & & & () & \\
 & : & & & & & \\
 & & & & \tau_i & d_i^{abs} & \bullet \\
 d_i^{abs} = \sum_{k=i}^{e-1} t_{k,k+1} = \sum_{k=i}^{e-1} \frac{s_r}{b_{k,k+1}}, \quad \tau_k \in \langle \tau_1, \dots, \tau_e \rangle & & & & & () & \\
 & : & & s_r & () & & s_r \\
 d_i^{abs} = \sum_{k=i}^{e-1} \frac{1}{b_{k,k+1}}, \quad \tau_k \in \langle \tau_1, \dots, \tau_e \rangle & & & & & () & \\
 & \tau_i & & \tau_i & d_i^{rel} & \bullet \\
 & : & & (& \tau_{e-1} &) & \\
 d_i^{rel} = \frac{d_i^{abs}}{d_{e-1}^{abs}} & & & & & () & \\
 .d_{e-1}^{rel} = 1 : & & & & & & \\
 j & & & & & & \\
 & & & & S & & \\
 & & & & : & & \tau_i \\
 & & & & (& & \\
 \beta_{ij} = 0.5 - \frac{1}{d_i^{rel} + 1} & & & &) & & () \\
 \beta_{ij} = 1 & & & & (& & \\
 & & & & \tau_i & & \\
 & & & & \frac{1}{d_i^{rel} + 1} & & \\
 & & & & j & & \\
 & & & &) & & \\
 & & & & (& & \\
 & & & &) & & \\
 \hline
 ^1 \text{Link} & & & & & & \\
 \end{array}$$

$$\frac{P}{\beta_{ij} = 0} \quad ()$$

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$$() . \quad \quad \quad () . \quad \quad \quad TTL () .$$

$$\overline{()} . \quad \quad \quad () . \quad \quad \quad () . \quad \quad \quad p=0.8$$

$$\overline{()} . \quad \quad \quad () . \quad \quad \quad [] ^1Tiers$$

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b a

۱-۳-۵ - تعیین پارامترهای الگوریتم یادگیری

b a

b a

a=0.1

S

L_{RI}

b=0.05 a=0.1

P

b a

S

L_{REP}

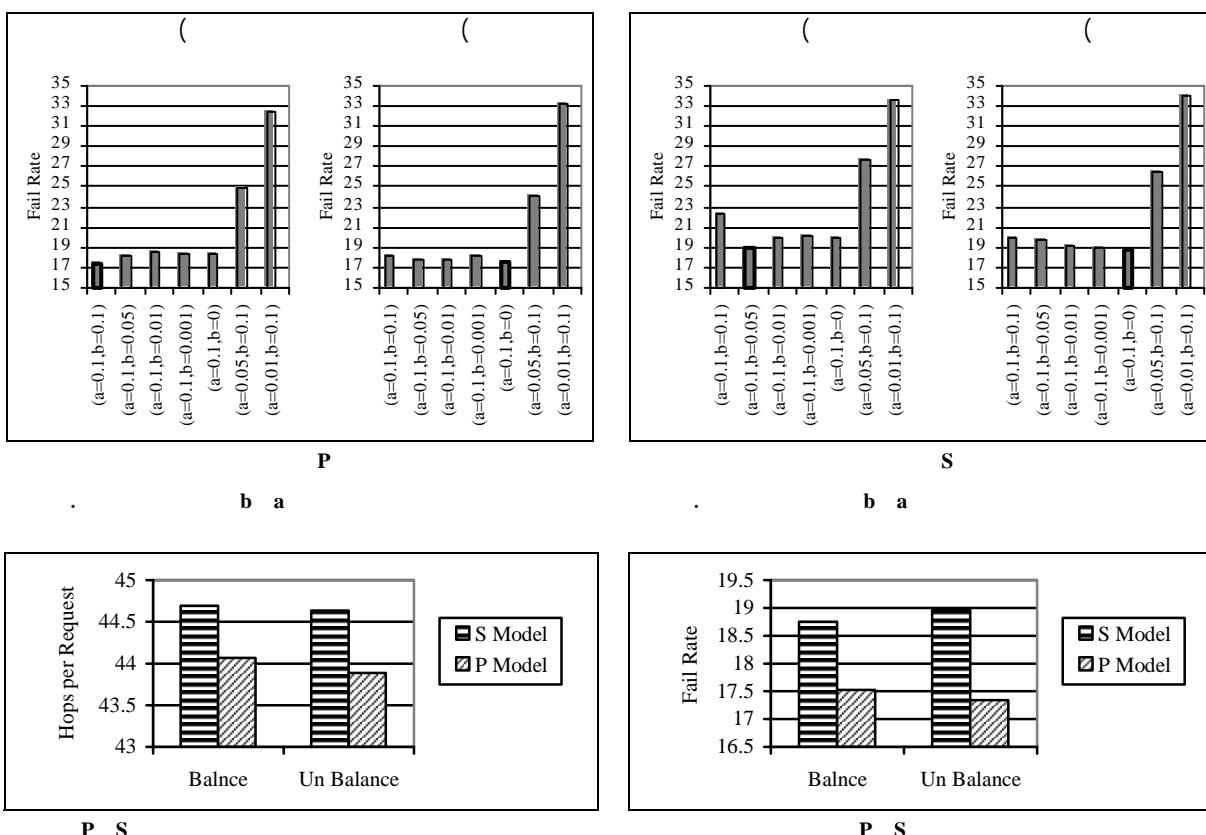
a=0.1

L_{RI}

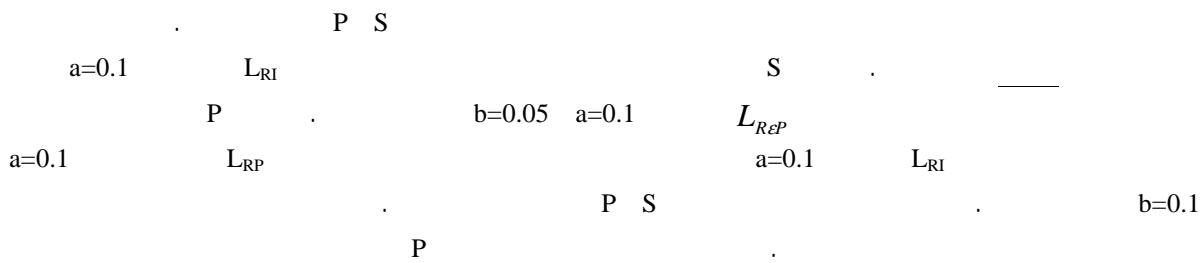
b=0.1 a=0.1

P

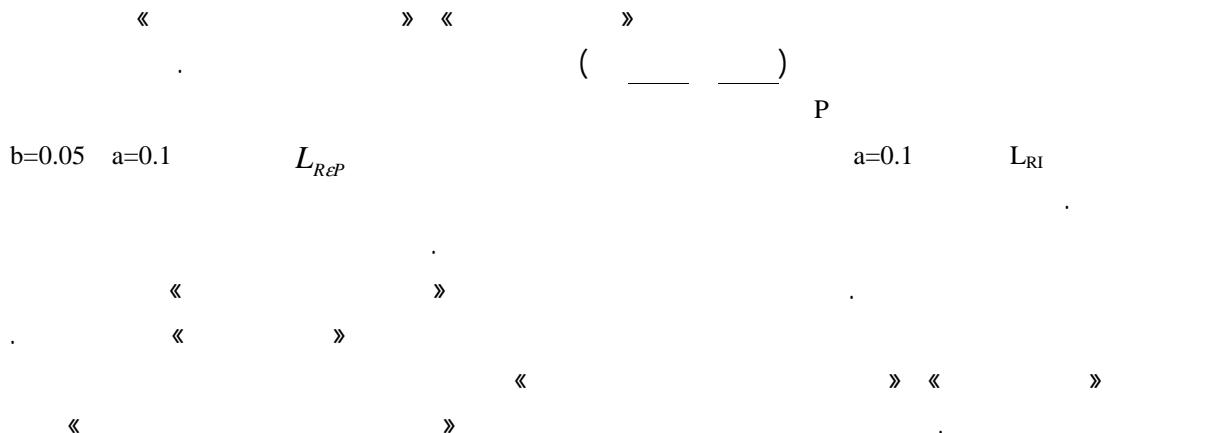
L_{RP}¹ Tiers Network Generator

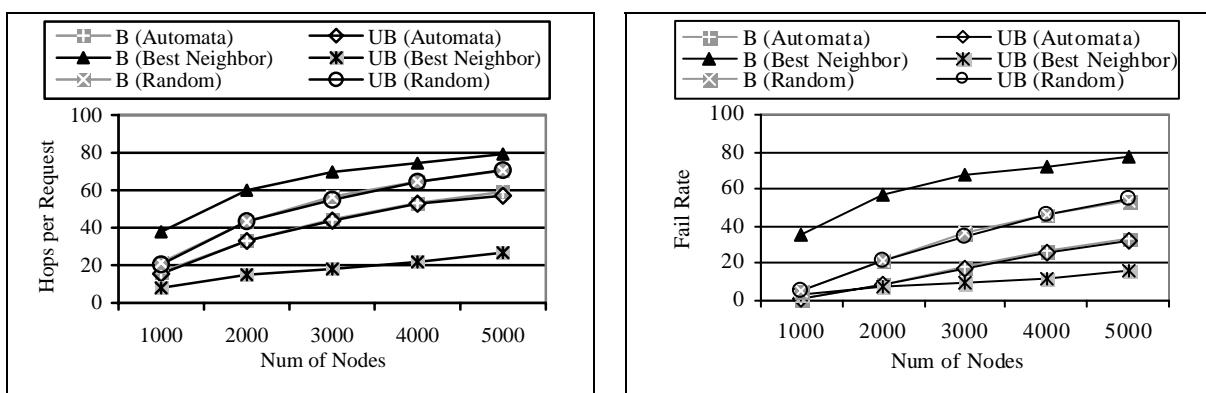


۲-۳-۵ - بررسی تاثیر مدل‌های مختلف محیط



۳-۳-۵ - مقایسه مکانیزم پیشنهاد شده با مکانیزم‌های قبلی





UB (UnBalance) :

B (Balance) :

UB (UnBalance) :

B (Balance) :

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