PARAMETAR p_i $\qquad z_i = p_i x + q_i y + r_i$

$$\frac{\partial E_k}{\partial p_i} = \frac{\partial E_k}{\partial o_k} \cdot \frac{\partial o_k}{\partial z_i} \cdot \frac{\partial z_i}{\partial p_i}$$

$$\frac{\partial E_k}{\partial o_k} = -(y_k - o_k)$$

$$\frac{\partial o_k}{\partial z_i} = \left(\frac{\sum_{j=1}^{m} \alpha_j z_j}{\sum_{j=1}^{m} \alpha_j} \right)'_{z_i} = \frac{\alpha_i}{\sum_{j=1}^{m} \alpha_j}$$

$$\frac{\partial z_i}{\partial p_i} = x$$

$$\frac{\partial E_k}{\partial p_i} = -(y_k - o_k) \frac{\alpha_i}{\sum_{j=1}^{m} \alpha_j} \cdot x$$

STOHASTIČKO :

$$p_i(t+1) = p_i(t) + \eta (y_k - o_k) \frac{\alpha_i}{\sum_{j=1}^{m} \alpha_j} \cdot x$$

GRUPNO :

$$p_i(t+1) = p_i(t) + \eta \cdot \sum_{k=1}^{N} (y_k - o_k) \frac{\alpha_i}{\sum_{j=1}^{m} \alpha_j} \cdot x$$