創域理工学部　情報計算科学科　4 年
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$$s^l_{in_{disc}} \leftarrow V^{l-1} s^{l-1}_{A_{disc}}$$

$$s^l_{in_{gen}} \leftarrow W^{l+1} s^{l+1}_{A_{gen}}$$

$$x^l_{F_{disc}} \leftarrow x^l_{F_{disc}} + s^l_{in_{disc}} \cdot T_\theta(t-1)$$

$$x^l_{F_{gen}} \leftarrow x^l_{F_{gen}} + s^l_{in_{gen}} \cdot T_\theta(t-1)$$

if $\gamma^l(t) > 0$ then

$$e^l_{T_{disc}} \leftarrow \alpha_{disc} \cdot (x^l_T - x^l_{F_{disc}})$$

$$e^l_{T_{gen}} \leftarrow \alpha_{gen} \cdot (x^l_T - x^l_{F_{gen}})$$

$$x^l_T \leftarrow x^l_T + \gamma^l(t) \cdot (-e_{T_{disc}} - e_{T_{gen}} + (x^l_T > 0) \odot (e^l_{B_{disc}} + e^l_{B_{gen}}))$$

if $\gamma^l(t) > 0$ then

$$e_{T_{disc}} \leftarrow \alpha_{disc} \cdot (x^l_T - x^l_{F_{disc}})$$

$$e_{T_{gen}} \leftarrow \alpha_{gen} \cdot (x^l_T - x^l_{F_{gen}})$$

$$s^l_A \leftarrow \mathrm{sign}(x^l_T - x^l_A) \odot (|x^l_T - x^l_A| > T_\theta(t))$$

$$s^l_A \leftarrow s^l_A \odot (x^l_A + s^l_A \cdot T_\theta > 0)$$

$$x^l_A \leftarrow x^l_A + T_\theta(t) \cdot s^l_A$$

s_out.send(s^l_A)

e_out.send($s^l_{e_{disc}}$)

e_out.send($s^l_{e_{gen}}$)

$$\text{e\_in}^l_{disc} \leftarrow (V^l)^\top s^{l+1}_{e_{disc}}$$

$$\text{e\_in}^l_{gen} \leftarrow (W^l)^\top s^{l-1}_{e_{gen}}$$

$$e^l_{B_{disc}} \leftarrow e^l_{B_{disc}} + T_\theta(t-1) \cdot \text{e\_in}^l_{disc}$$

$$e^l_{B_{gen}} \leftarrow e^l_{B_{gen}} + T_\theta(t-1) \cdot \text{e\_in}^l_{gen}$$

$$s^l_{e_{disc}} \leftarrow \mathrm{sign}(e^l_{T_{disc}} - e^l_{A_{disc}}) \odot (|e^l_{T_{disc}} - e^l_{A_{disc}}| > T_\theta(t))$$

$$s^l_{e_{gen}} \leftarrow \mathrm{sign}(e^l_{T_{gen}} - e^l_{A_{gen}}) \odot (|e^l_{T_{gen}} - e^l_{A_{gen}}| > T_\theta(t))$$

$$e^l_{A_{disc}} \leftarrow e^l_{A_{disc}} + T_\theta(t) \cdot s^l_{A_{disc}}$$

$$e^l_{A_{gen}} \leftarrow e^l_{A_{gen}} + T_\theta(t) \cdot s^l_{A_g en}$$

$$V^l \leftarrow +\alpha e^l_{T_{disc}} \phi(x^l_T)\top$$

$$W^l \leftarrow +\alpha e^l_{T_{gen}} \phi(x^l_T)\top$$