Your Presentation Title

Your Full Name

Your Institution your.email@example.com

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- Brief overview of the topic.
- Key importance of the topic.
- What you will cover in this presentation.

Definition

Define key terms or concepts here.

Example

Provide an example or application here.

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- First item
- Second item



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- Recap main points.
- Future directions or next steps.
- Thank the audience.

Questions?

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If state k with symbol 0 writes 0 to the tape, moves to the left and transitions into state k' we get the following:

$$\begin{array}{c} H_{k0} \mapsto H_{k'}H_{k'} & H_{k0}[L_{k1}L_{k0}]^{T_{L}}[R_{k1}R_{k0}]^{T_{R}} \\ L_{k0} \mapsto L_{k'} & becomes \\ R_{k0} \mapsto R_{k'}R_{k'}R_{k'}R_{k'} & H_{k'}[L_{k'}]^{T_{L}}[R_{k'}]^{4T_{R}} \\ H_{k} \mapsto H_{k1}H_{k0} & becomes \\ L_{k} \mapsto L_{k1}L_{k0} & [H_{k'1}]^{z'}H_{k'0}[L_{k'1}L_{k'0}]^{\lfloor T_{L}/2 \rfloor}[L_{k'1}L_{k'0}]^{2T_{R}} \\ R_{k} \mapsto R_{k1}R_{k0} & Where z' \text{ is the next symbol} \end{array}$$

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If state k with symbol z writes 0 to the tape, moves to the left and transitions into state k' we get the following:

$$H_{kz} \mapsto [H_{k'}]^{1-z} H_{k'}$$

$$L_{kz} \mapsto L_{k'}$$

$$R_{kz} \mapsto R_{k'} R_{k'} R_{k'} R_{k'}$$

$$H_{k} \mapsto H_{k1} H_{k0}$$

$$L_{k} \mapsto L_{k1} L_{k0}$$

$$R_{k} \mapsto R_{k1} R_{k0}$$

$$R_{k*} \mapsto R_{k} R_{k}$$

$$[H_{k1}]^z H_{k0} [L_{k1} L_{k0}]^{T_L} [R_{k1} R_{k0}]^{T_R}$$

becomes

$$H_{k'}[L_{k'}]^{T_L}[R_{k'}]^{4T_R}$$

becomes

 $[H_{k1}]^{z'}H_{k0}[L_{k1}L_{k0}]^{T'_{L}}[L_{k1}L_{k0}]^{T'_{R}}$

Where z' is the next symbol

Table

If state k with symbol z writes y to the tape, moves to the left and transitions into state k' we get the following:

$$H_{kz} \mapsto [R_{k'*}R_{k'*}]^{y}[H_{k'}]^{1-z}H_{k'}$$

$$L_{kz} \mapsto L_{k'}$$

$$R_{kz} \mapsto R_{k'}R_{k'}R_{k'}R_{k'}$$

$$H_{k} \mapsto H_{k1}H_{k0}$$

$$L_{k} \mapsto L_{k1}L_{k0}$$

$$R_{k} \mapsto R_{k1}R_{k0}$$

$$R_{k*} \mapsto R_{k}R_{k}$$

 $[H_{k1}]^{z}H_{k0}[L_{k1}L_{k0}]^{T_{L}}[R_{k1}R_{k0}]^{T_{R}}$

becomes

$$[R_{k'*}R_{k'*}]^{y}H_{k'}[L_{k'}]^{T_{L}}[R_{k'}]^{4T_{R}}$$

becomes

$$H_{k'}[L_{k'}]^{T_L}[R_{k'}]^{4T_R+2y}$$

becomes

$$[H_{k1}]^{z'}H_{k0}[L_{k1}L_{k0}]^{T'_{L}}[L_{k1}L_{k0}]^{T'_{R}}$$

Where z' is the next symbol

If state k with symbol z writes y to the tape and transitions into state k' we get the following:

$$\begin{aligned} H_{kz} \mapsto [R_{k'*}R_{k'*}]^{ly}[H_{k'}]^{1-z}H_{k'}[L_{k'}L_{k'}]^{ry} & [H_{k1}]^{z}H_{k0}[L_{k1}L_{k0}]^{T_{L}}[R_{k1}R_{k0}]^{T_{R}} \\ L_{kz} \mapsto L_{k'}[L_{k'}L_{k'}L_{k'}]^{r} & \text{becomes} \\ R_{kz} \mapsto R_{k'}[R_{k'}R_{k'}R_{k'}]^{l} & H_{k'}[L_{k'}]^{(3r+1)T_{L}+2yr}[R_{k'}]^{(3l+1)T_{R}+2yl} \\ H_{k} \mapsto H_{k1}H_{k0} & \text{becomes} \\ L_{k} \mapsto L_{k1}L_{k0} & [H_{k1}]^{z'}H_{k0}[L_{k1}L_{k0}]^{\lfloor T_{L}/2 \rfloor}[L_{k1}L_{k0}]^{2T_{R}} \\ R_{k} \mapsto R_{k}R_{k} & \text{Where } z' \text{ is the next symbol} \end{aligned}$$

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