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- a set of states

State Machines

- the transitions between them
- the associated inputs and outputs
- A state machine is a conceptualization of a system.

George Blankenship































A Simple Moore Machine

• A Telephone Answering Machine:

Assumptions: External circuitry exists for the following:

- To monitor the telephone line for a dial tone and ringing, a
- provided separate 0/1 signals to report the presence of either. · Connect and disconnect the telephone electronically under the control of the state machine.
- · Control two audio tape units, one for the greeting and one for recording the incoming message.

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· Generate an out-of-tape signal at the end of the incoming message tape. State Machines

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Transition Table • Alternate representation of the state machine. • For each (Present State x Possible Transition), the transition table is a table that contains a line of information for each transition Present State Input/s Next State Outputs Generated • Transition table is representation of the

Transition table is representation of the state machine

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Answering	Machine	Transition	Table
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Present State	Input/s	Next State	Outputs Generated
WAITING	/RING	WAITING	/ANSWER./PLAY./RECORD
WAITING	RING	PLAYING	ANSWER.PLAY./RECORD
PLAYING	/ENDGREETING */DIALTONE	PLAYING	ANSWER.PLAY./RECORD
PLAYING	ENDGREETING */DIALTONE	RECORDING	ANSWER./PLAY.RECORD
PLAYING	DIALTONE	WAITING	/ANSWER./PLAY./RECORD
RECORDING	/ENDMESSAGES */DIALTONE	RECORDING	ANSWER./PLAY.RECORD
RECORDING	ENDMESSAGES + DIALTONE	WAITING	/ANSWER./PLAY./RECORD
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