## State Space Diagram - Cowshots Turn Timer Complete/line sensor signal & beacon signal motors on direction control on Move-through gate Move to A Take a turn Stop Button/210 Timer = 1 Gray Line Detected Gray Line Detected Stop Button/210 Timer = Motors Off Motion complete/Stop Button/210 Motors Off Station count+=1, motors off, Station count+=1 stepper motor on Timer = 1Start Button/ motors opposite direction Motors Off 210Timer = 12.10 Timer reset, motors on Stop Button/210 Timer = 1 direction control on Move to Stop at A to Motors Off turning point drop balls Stop Button/210 Timer = Safety Stop Motors Off stepper signal, Stepper Signal, Stop Button/210 Timer = beacon signal beacon signal Motors Off motors on motors on direction control on Stop Button/210 Timer = 1 direction control on Stop Button/210 Timer = 1 Motors Off Stop Button/210 Timer = 1 Stop at B to Move to Motors Off drop balls Patent Office Motors Off Gray Line Detected Gray Line Detected Station count+=1, motors off, Station count+=1, motors off, Stop at PO to Move to B stepper motor on stepper motor on drop balls Stepper Signal, beacon signal motors on direction control on