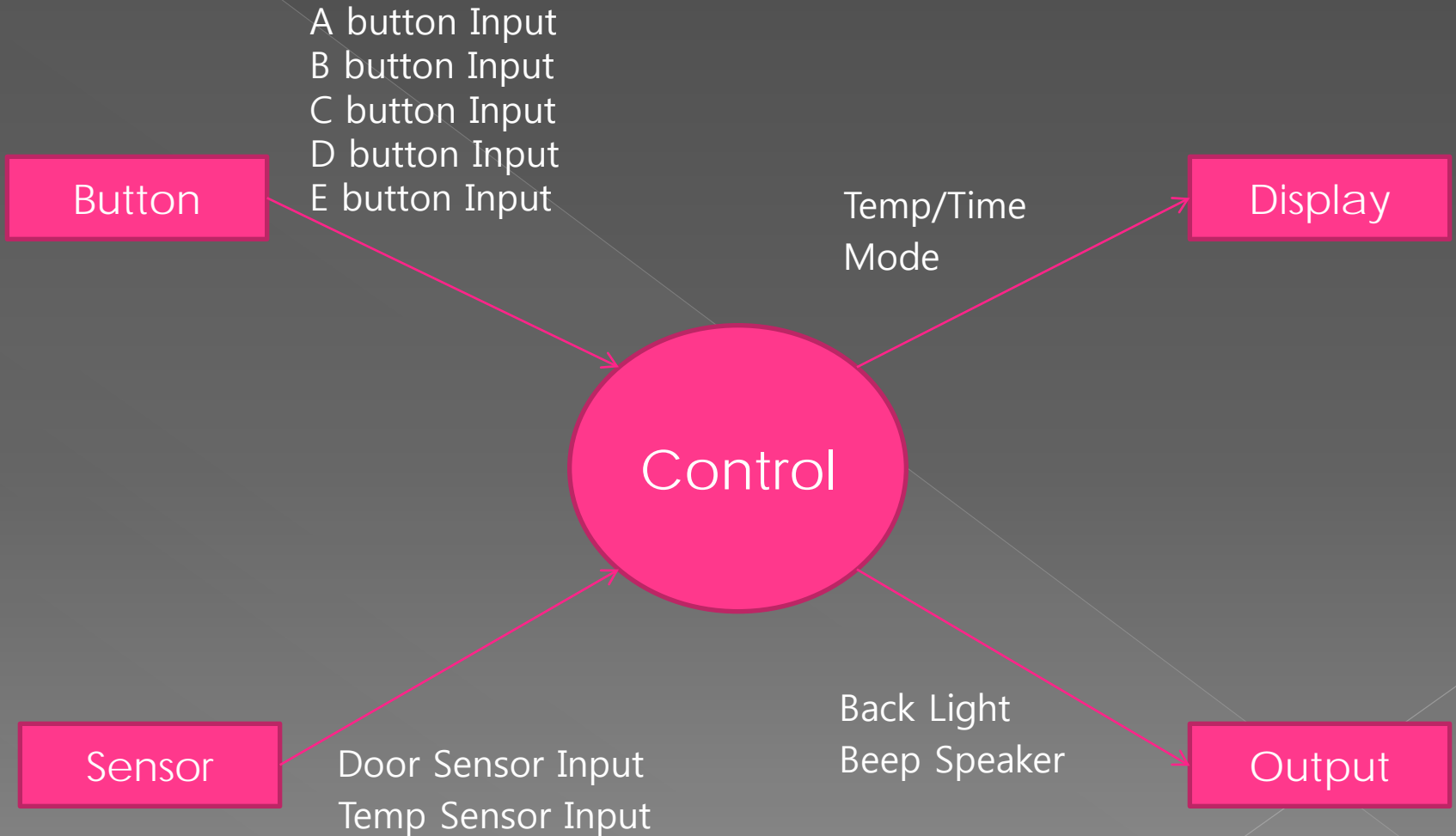


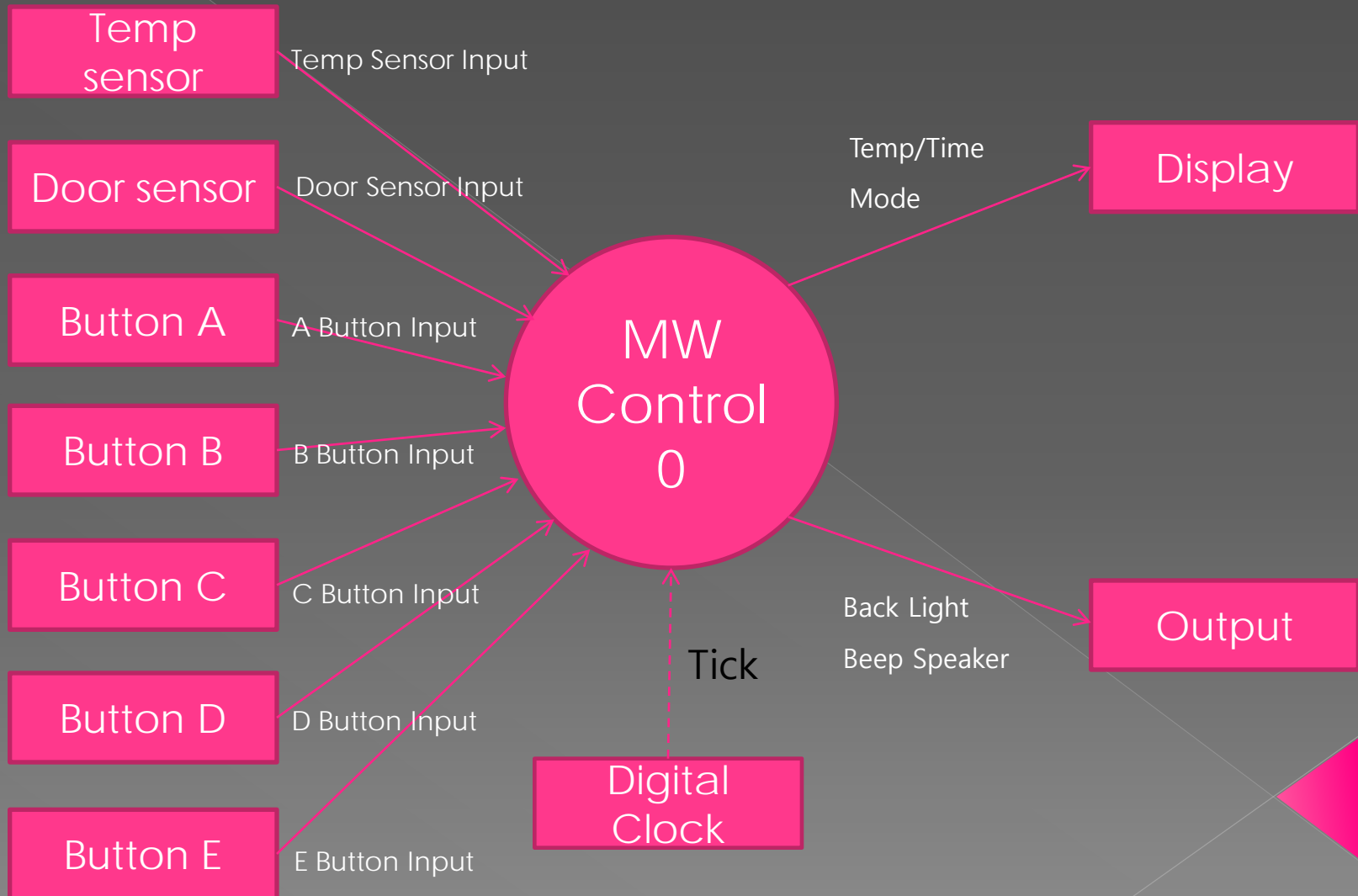
System Context Diagram



Event List

Input / Output Event	Description
Temp Sensor Input	온도 감지
Door Sensor Input	열기 / 닫기
A Button Input	10sec/10℃ 증가
B Button Input	30sec/20℃ 증가
C Button Input	시간 / 온도 (Default : 시간)
D Button Input	조리 모드 선택
E Button Input	시작 / 정지
Temp / Time	현재 온도 / 설정 온도, 남은 시간 / 설정 시간 표시
Mode	현재 모드 (00 : 모드 사용 안함) 표시
Beep Speaker	조리완료 시 3초간 Beep음 출력
Back Light	문이 열려있을 시 / 조리 중 Back Light On

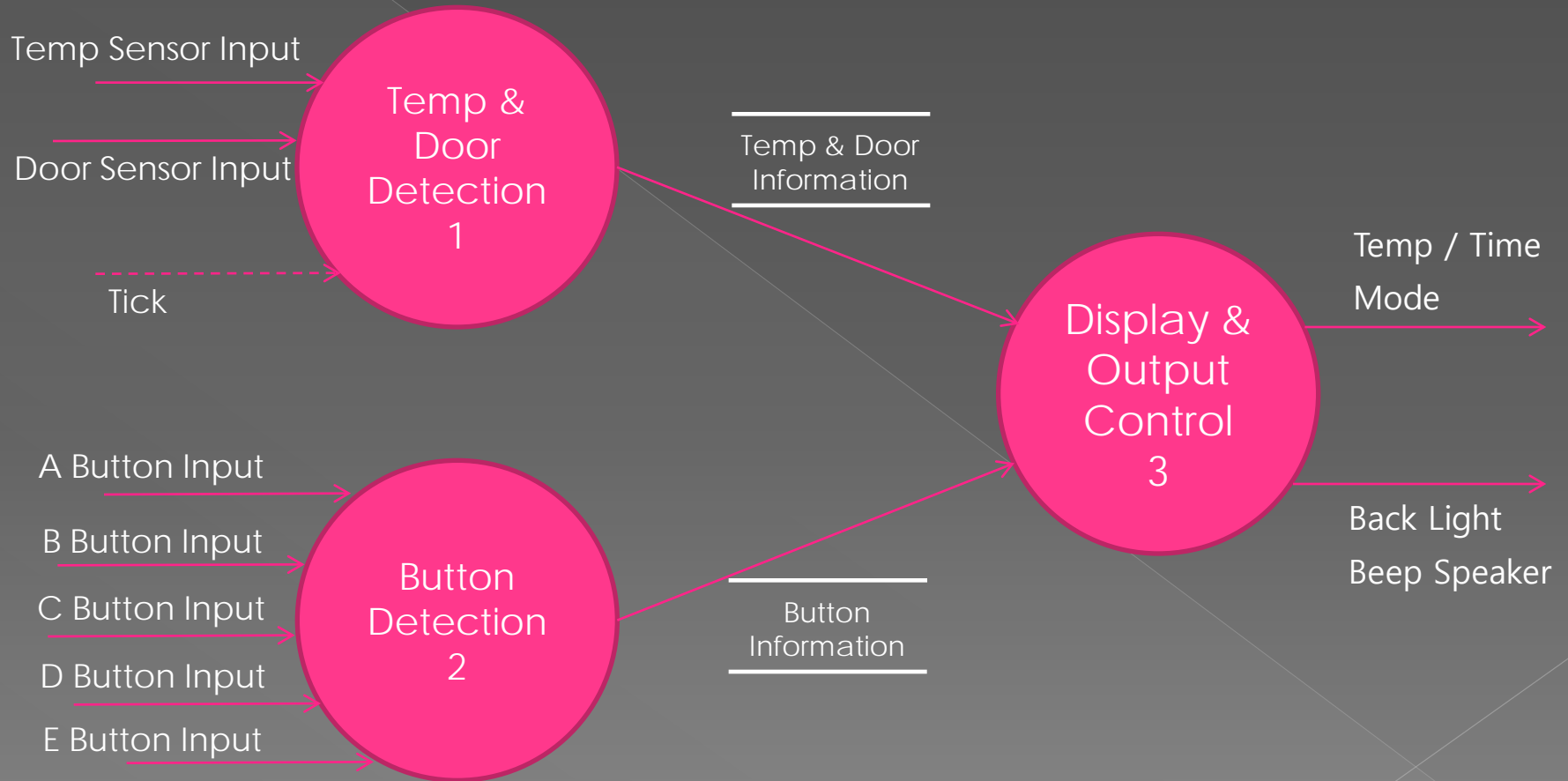
DFD Level 0 - Microwave



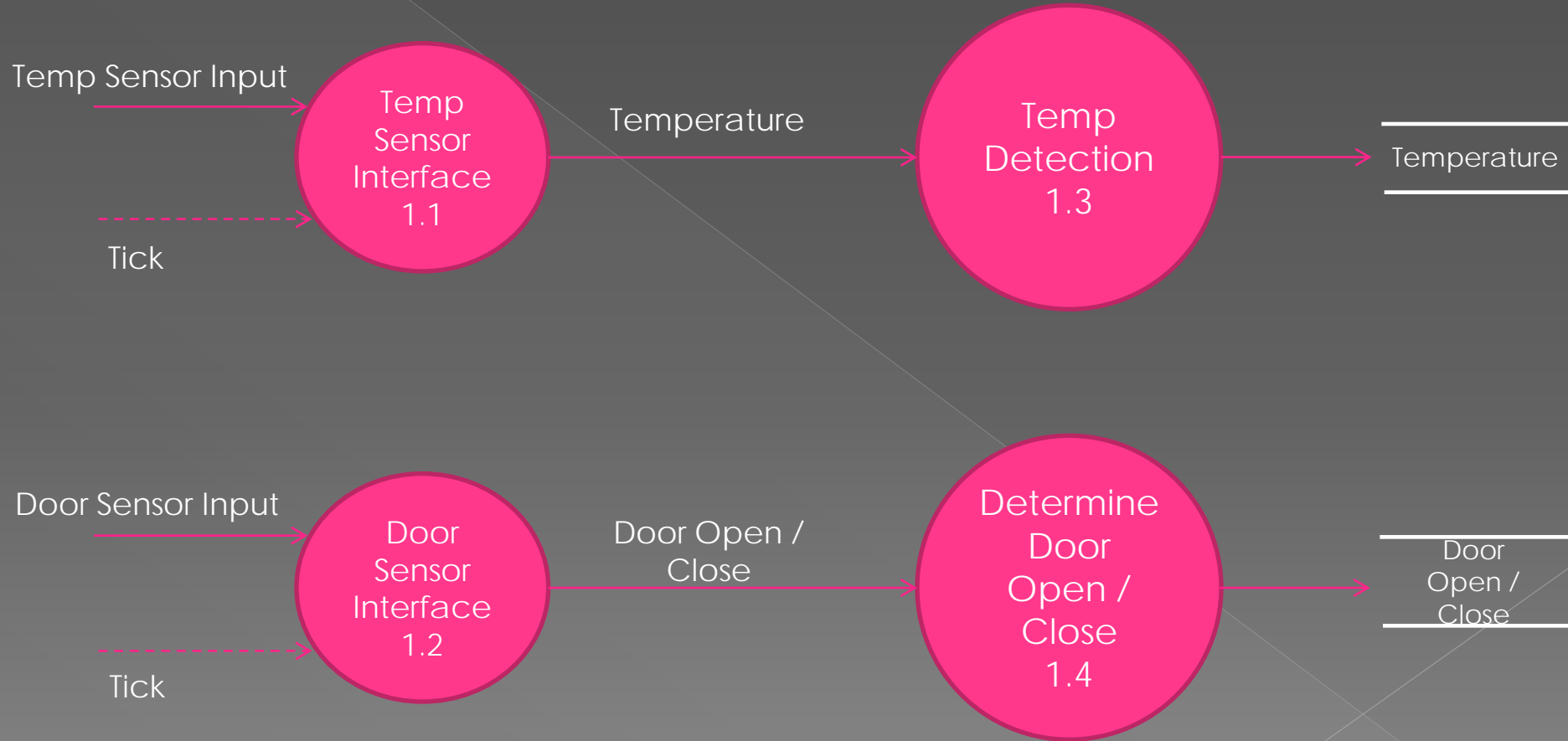
Data Dictionary

Input/Output Event	Description	Format / Type
Temp Sensor Input	온도 감지	Double, Periodic
Door Sensor Input	열기 / 닫기	True / False, Periodic
A Button Input	10sec/10°C 증가	True / False, Interrupt
B Button Input	30sec/20°C 증가	True / False, Interrupt
C Button Input	시간 / 온도 (Default : 시간)	True / False, Interrupt
D Button Input	조리 모드 선택	Integer, Interrupt
E Button Input	시작 / 정지	True / False, Interrupt
Temp/Time Display	현재 온도 / 설정 온도, 남은 시간 / 설정 시간 표시	On / Off
Mode Display	현재 모드 (00 : 모드 사용 안함) 표시	On / Off
Beep Speaker	Beep음 출력하는 스피커	On / Off
Back Light	문이 열려있을 시 / 조리 중 Back Light On	On / Off

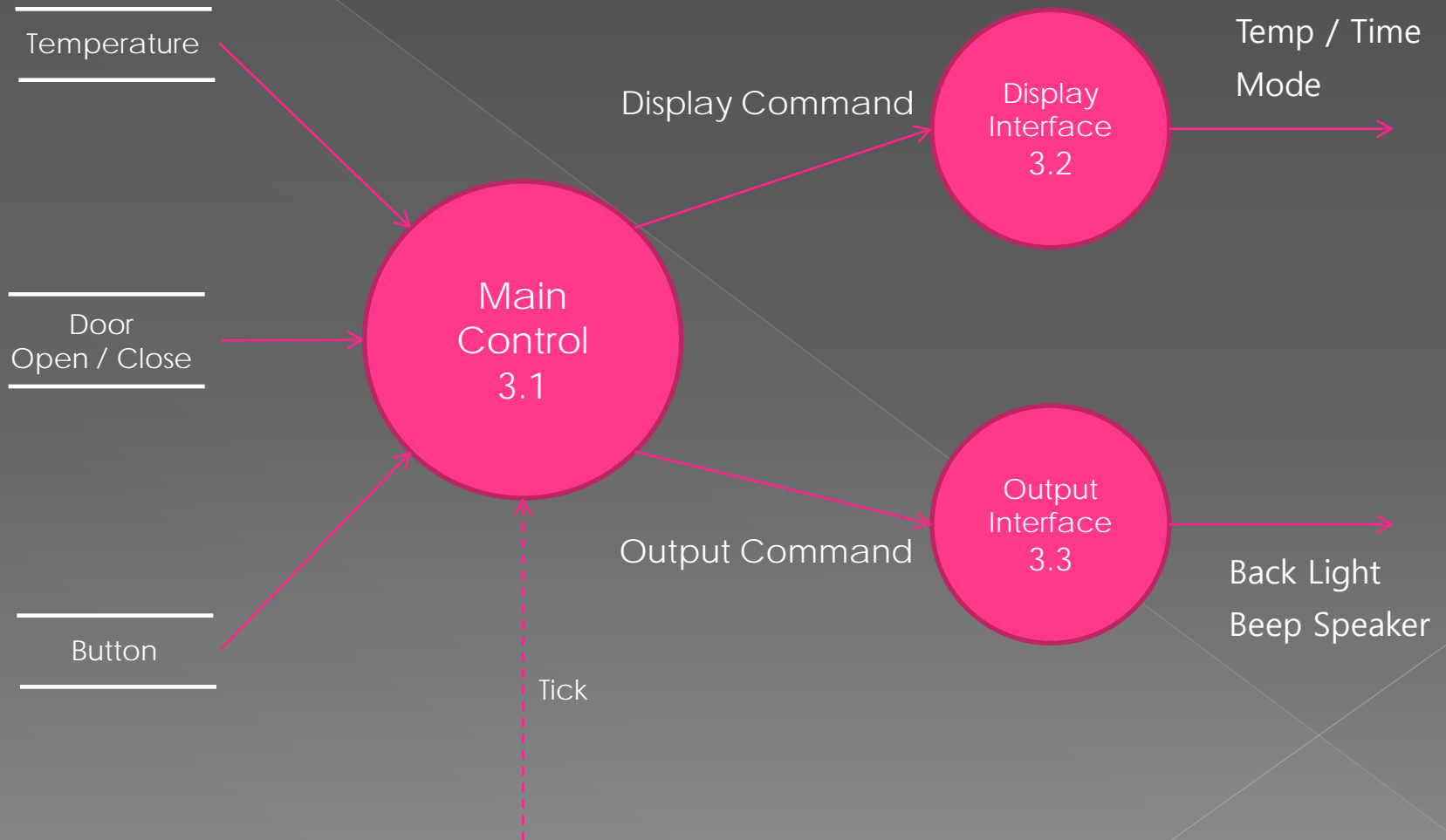
DFD Level 1 - Microwave



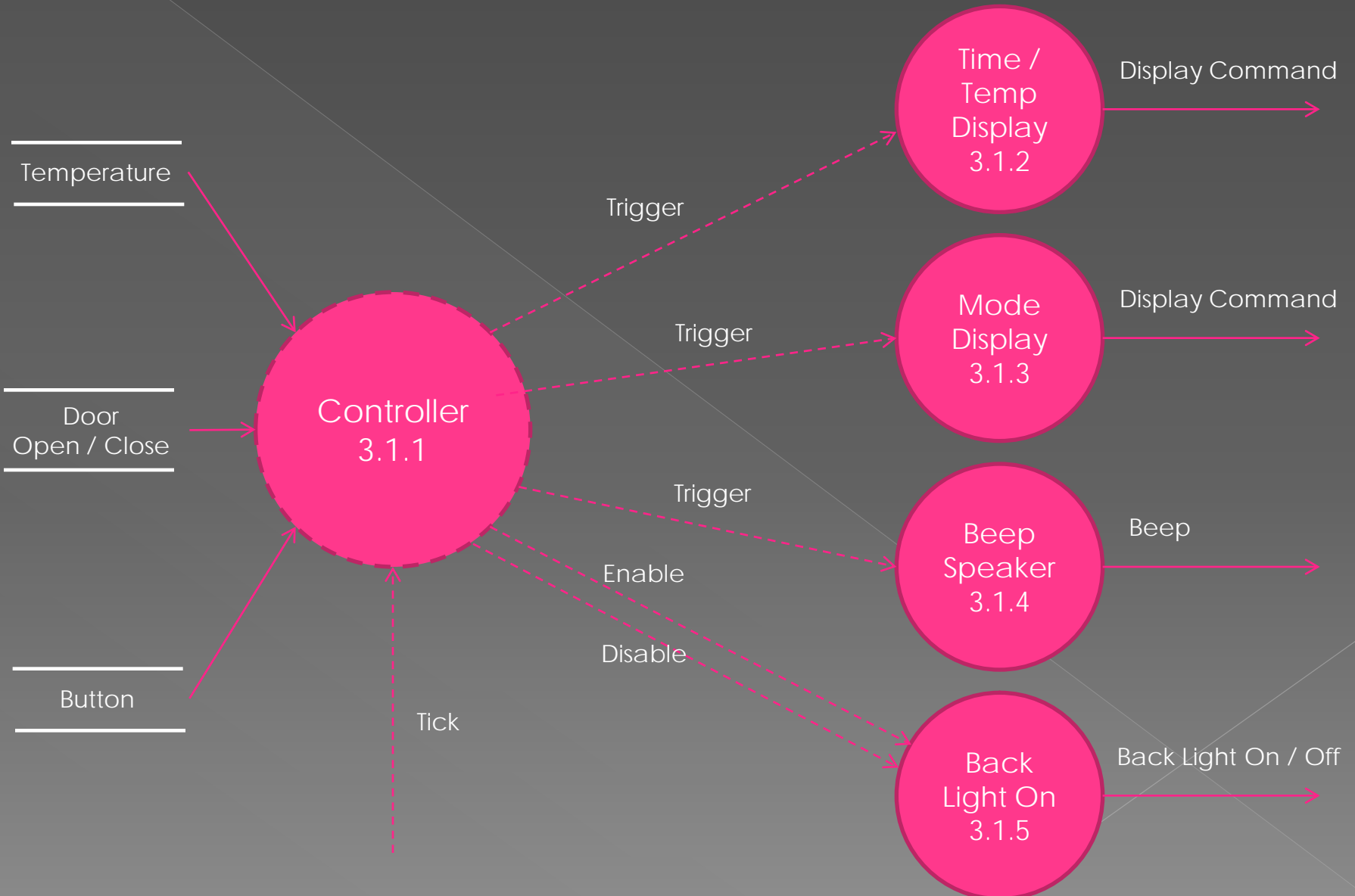
DFD Level 2 - Microwave



DFD Level 2 - Microwave

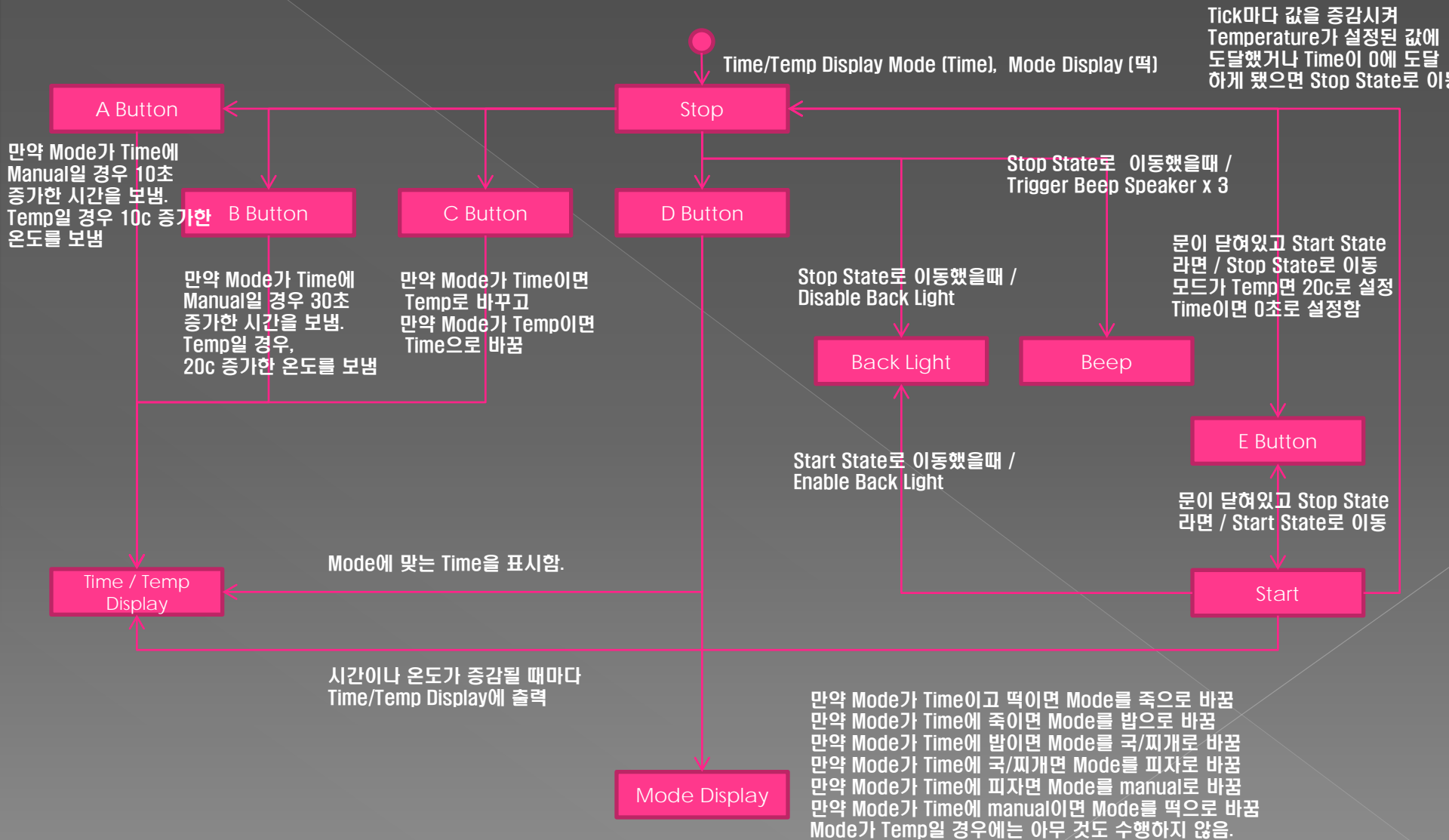


DFD Level 3 - Microwave

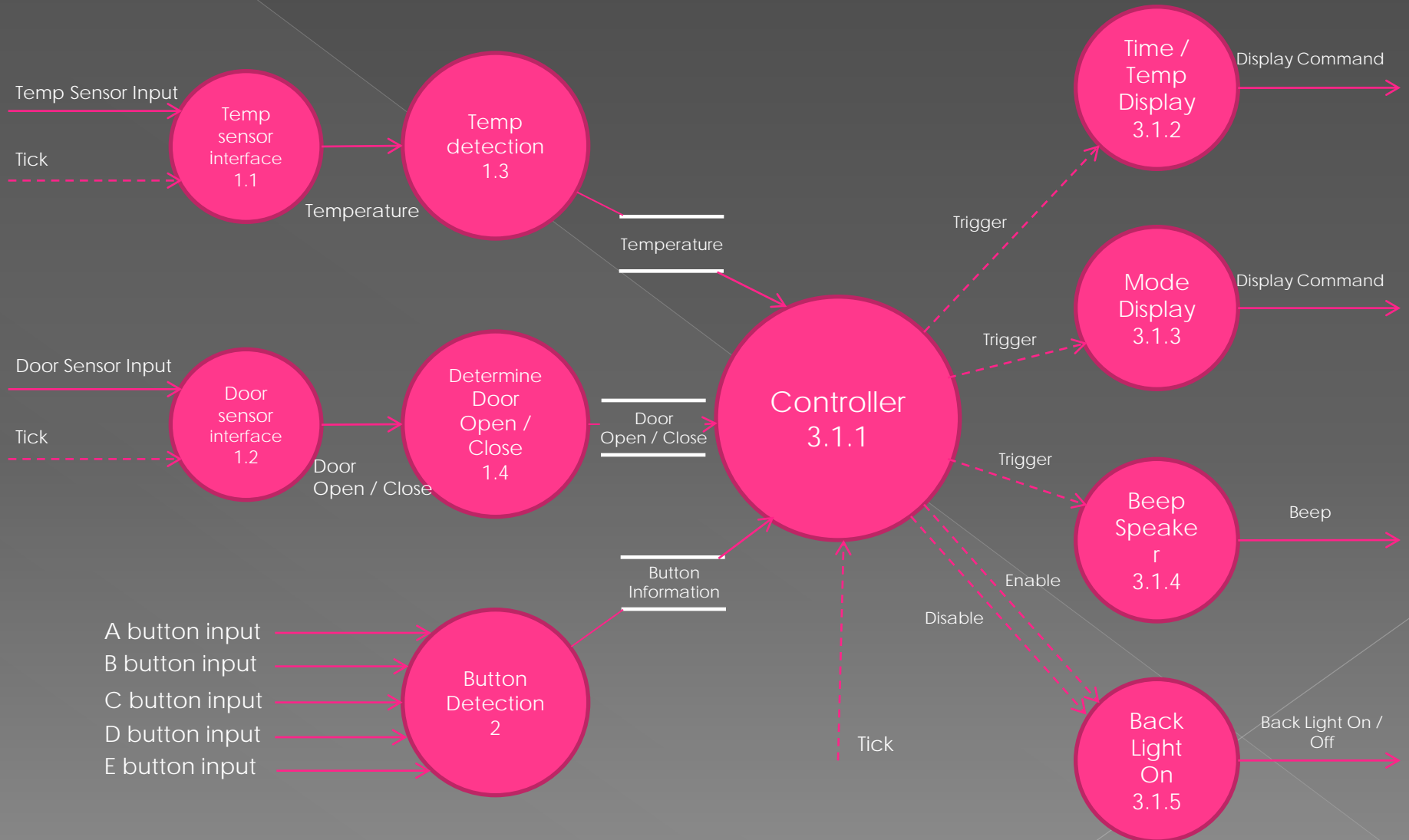


DFD Level 4 - Microwave

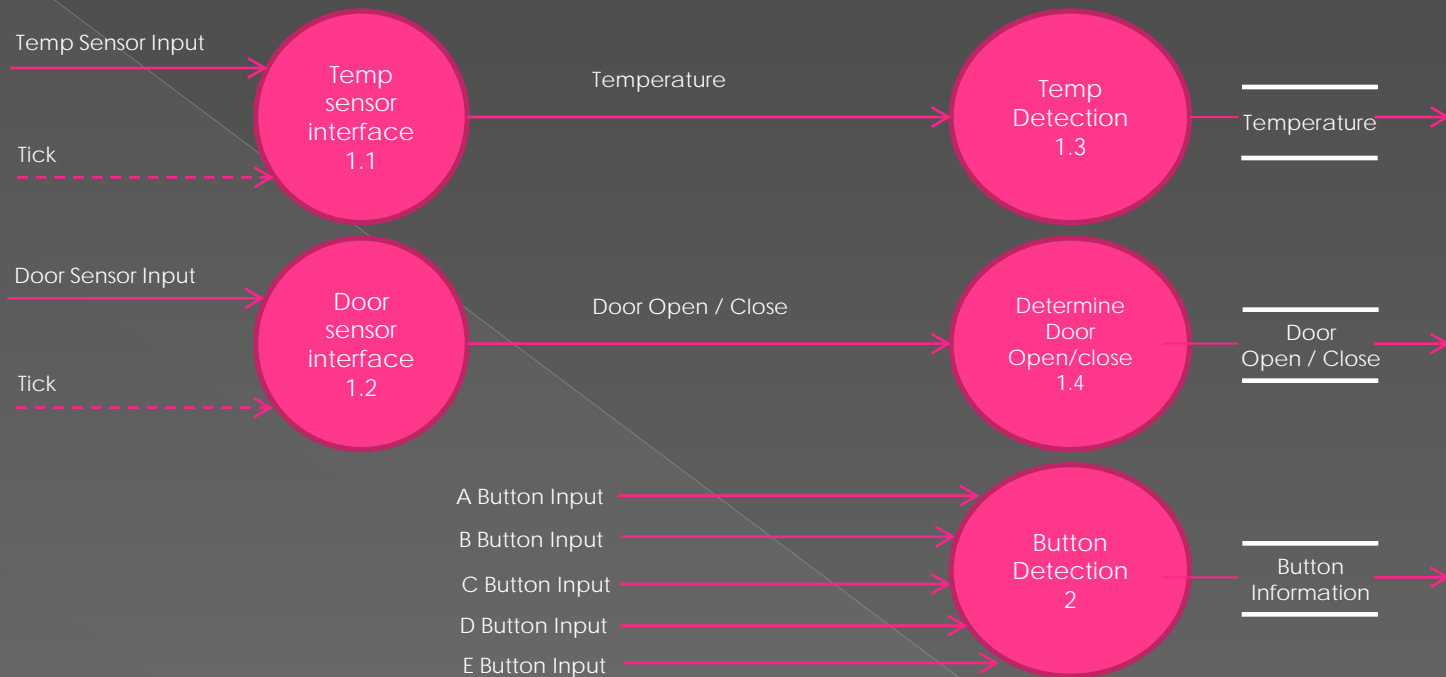
State Transition Diagram for Controller 3.1.1



DFD - Microwave

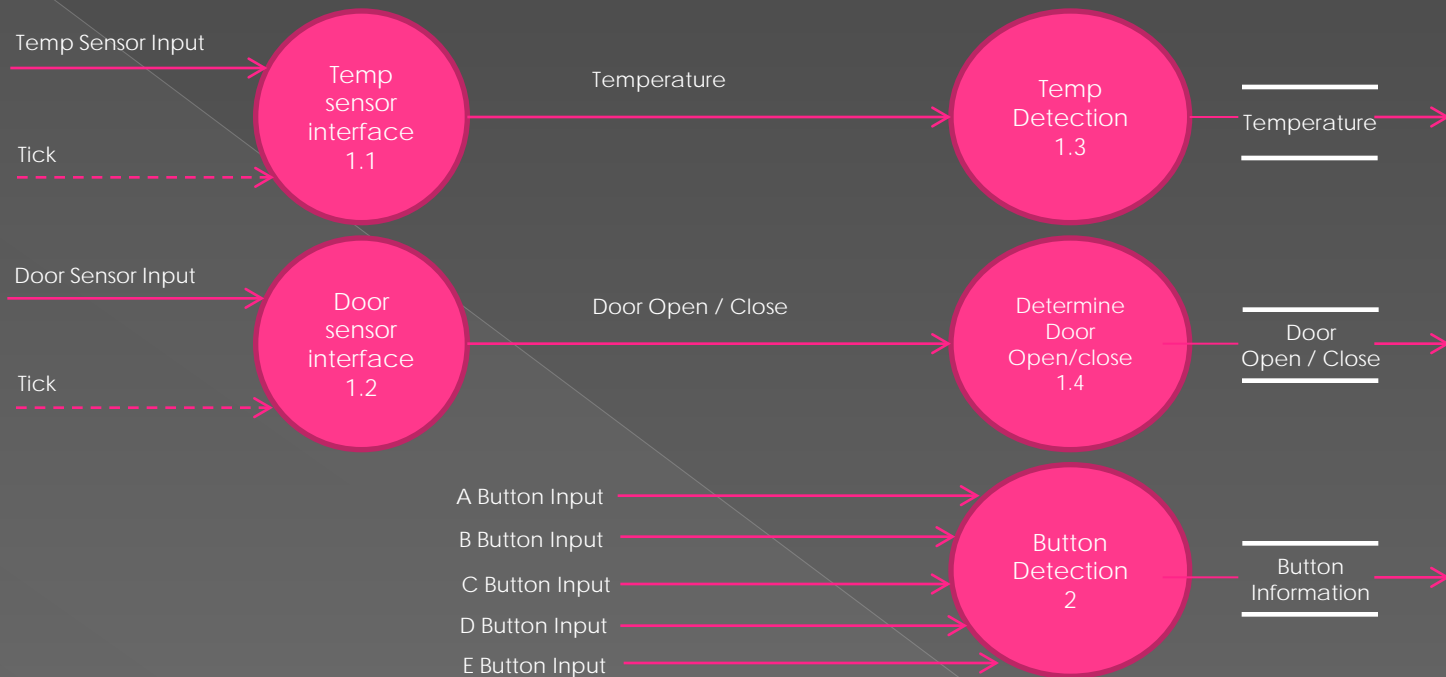


Process Specification - Microwave



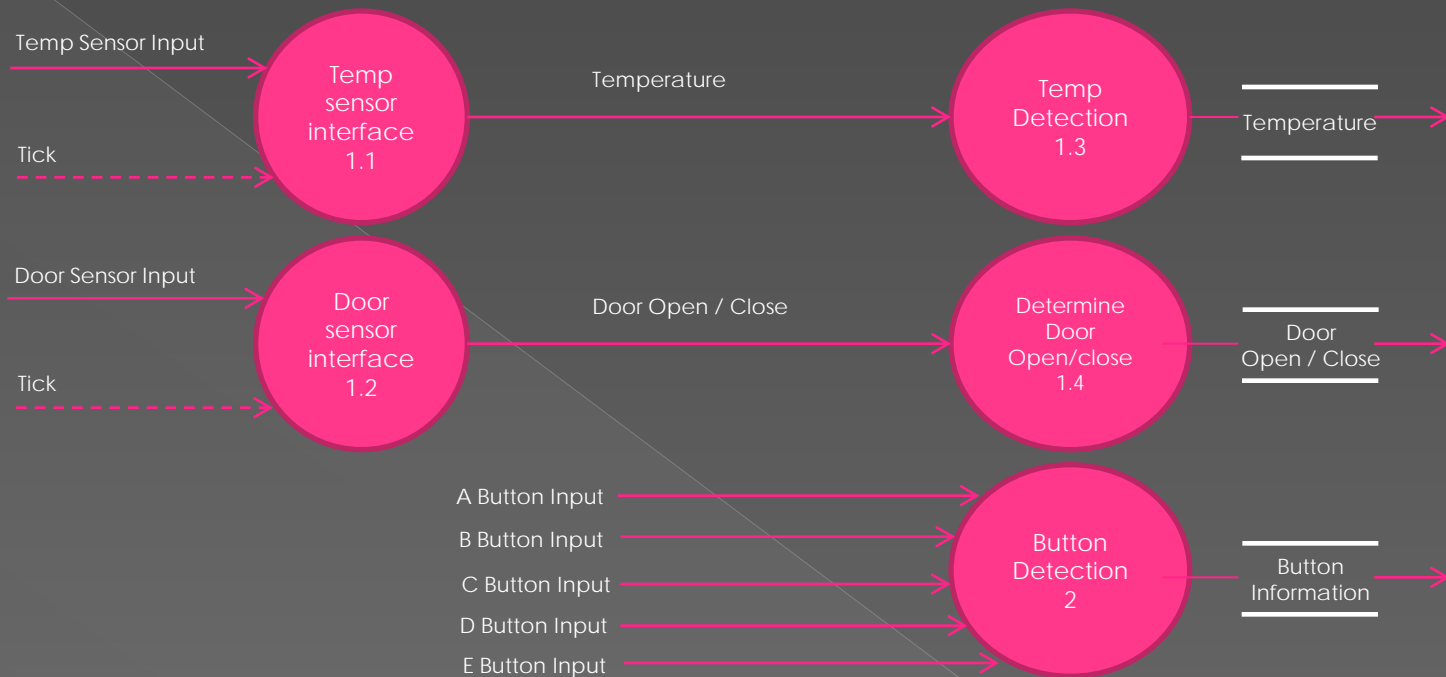
Reference No.	1.1
Name	Temp Sensor Interface
Input	Temp Sensor Input , Tick
Output	Temperature
Process Description	"Temp Sensor Input" 프로세스가 온도 감지 센서의 온도 값을 주기적으로 받아들여 Temp sensor interface로 넘김.

Process Specification - Microwave



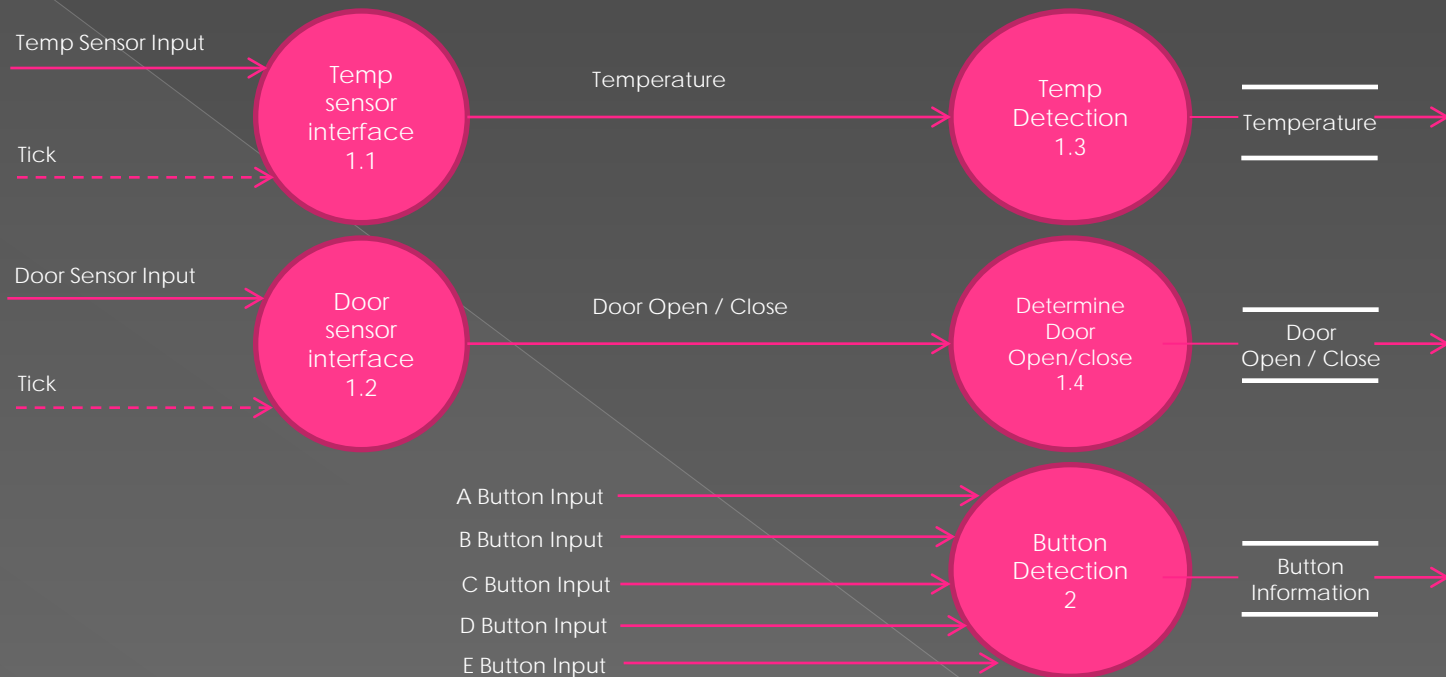
Reference No.	1.2
Name	Door Sensor Interface
Input	Door Sensor Input, Tick
Output	Door Open / Close
Process Description	"Door Sensor Input" 프로세스가 인식한 값을 받아들여 Determine Door Open/close State로 넘김.

Process Specification - Microwave



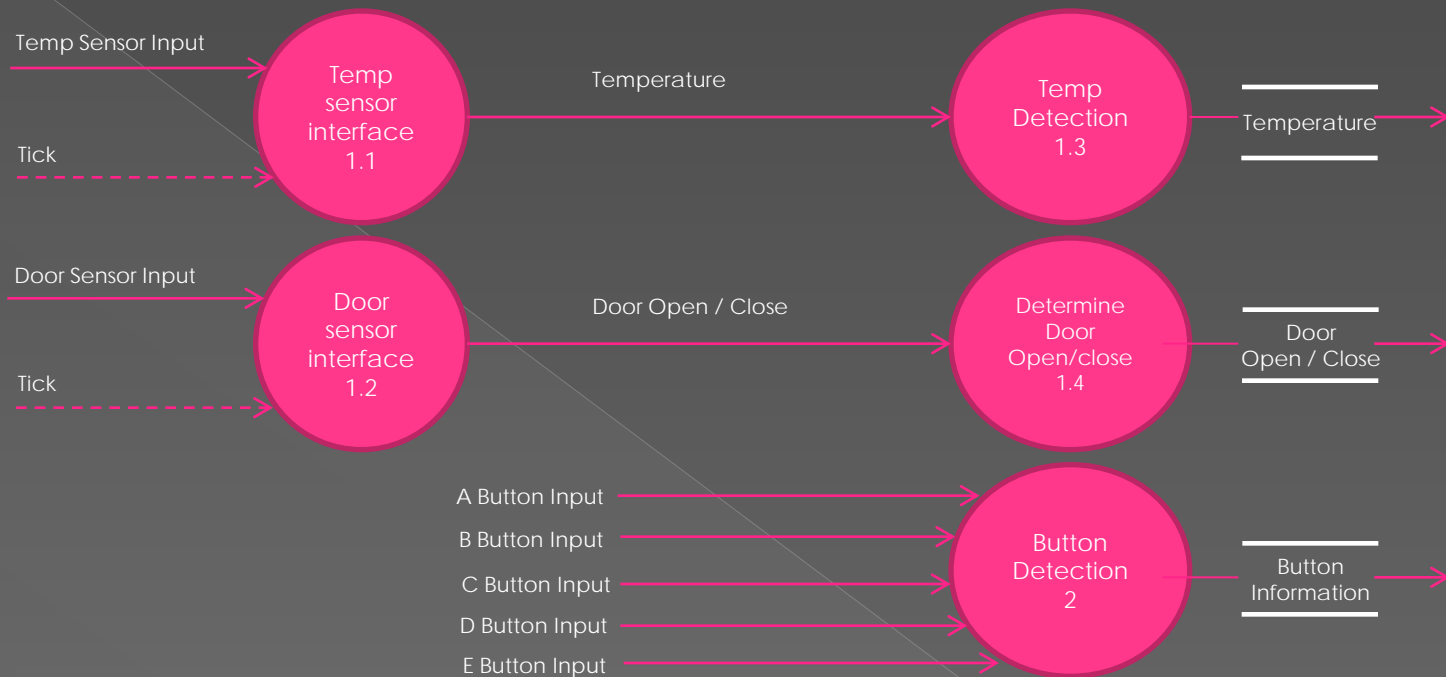
Reference No.	1.3
Name	Temp Detection
Input	Temperature (Double)
Output	Temperature
Process Description	Temp Sensor Interface 에서 전달해 준 Temperature 값을 Double 형 값으로 Controller에 넘겨줌.

Process Specification - Microwave



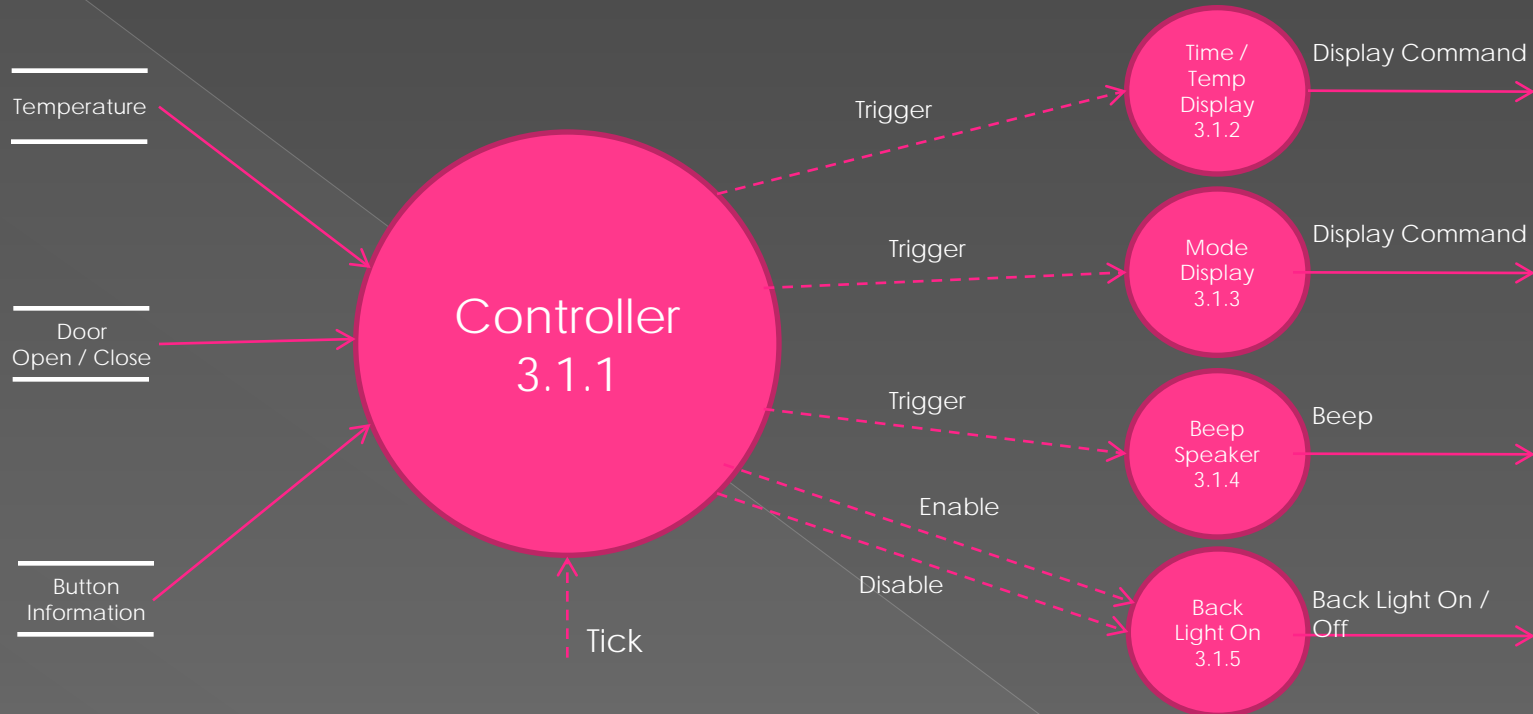
Reference No.	1.4
Name	Determine Door Open / Close
Input	Door Open / Close
Output	Door Open / Close
Process Description	Door sensor interface가 읽어들이는 Input을 받아서 값의 상태가 Door Open인지 Door Close인지 구별.

Process Specification - Microwave



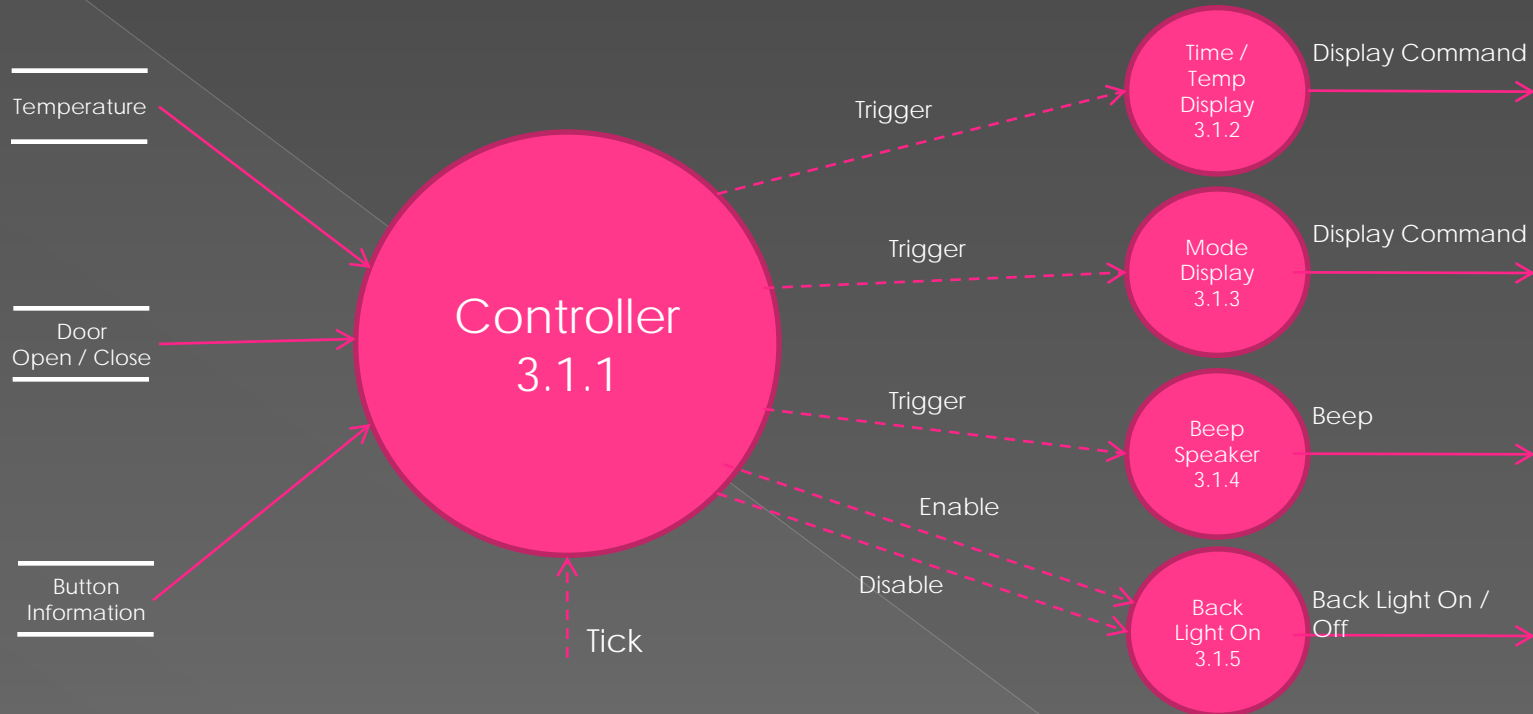
Reference No.	2
Name	Button Detection
Input	A Button Input, B Button Input, C Button Input, D Button Input, E Button Input
Output	Button Information
Process Description	Button Input에서 넘어온 값을 받아서 Controller에 넘겨줌.

Process Specification - Microwave



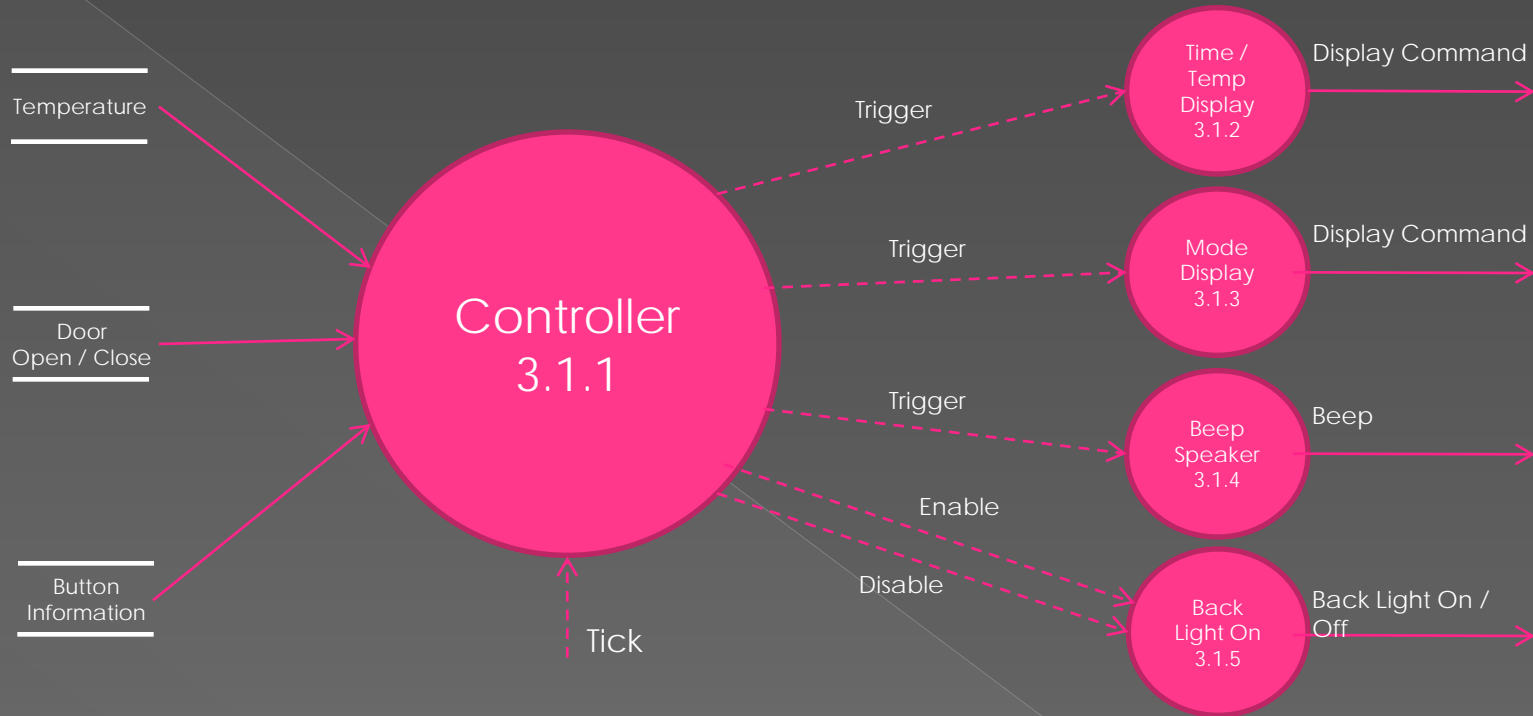
Reference No.	3.1.1
Name	Controller
Input	Temperature(Double), Door Open/Close(Boolean), Button Information(Char)
Output	Trigger, Enable, Disable
Process Description	각 State에서 받아들인 값을 내부적으로 처리한 후 상황에 따라 Time/Temp Display와 Mode Display, Beep Speaker, Back Light On State에 Trigger, Enable, Disable 값으로 Output을 내보냄.

Process Specification - Microwave



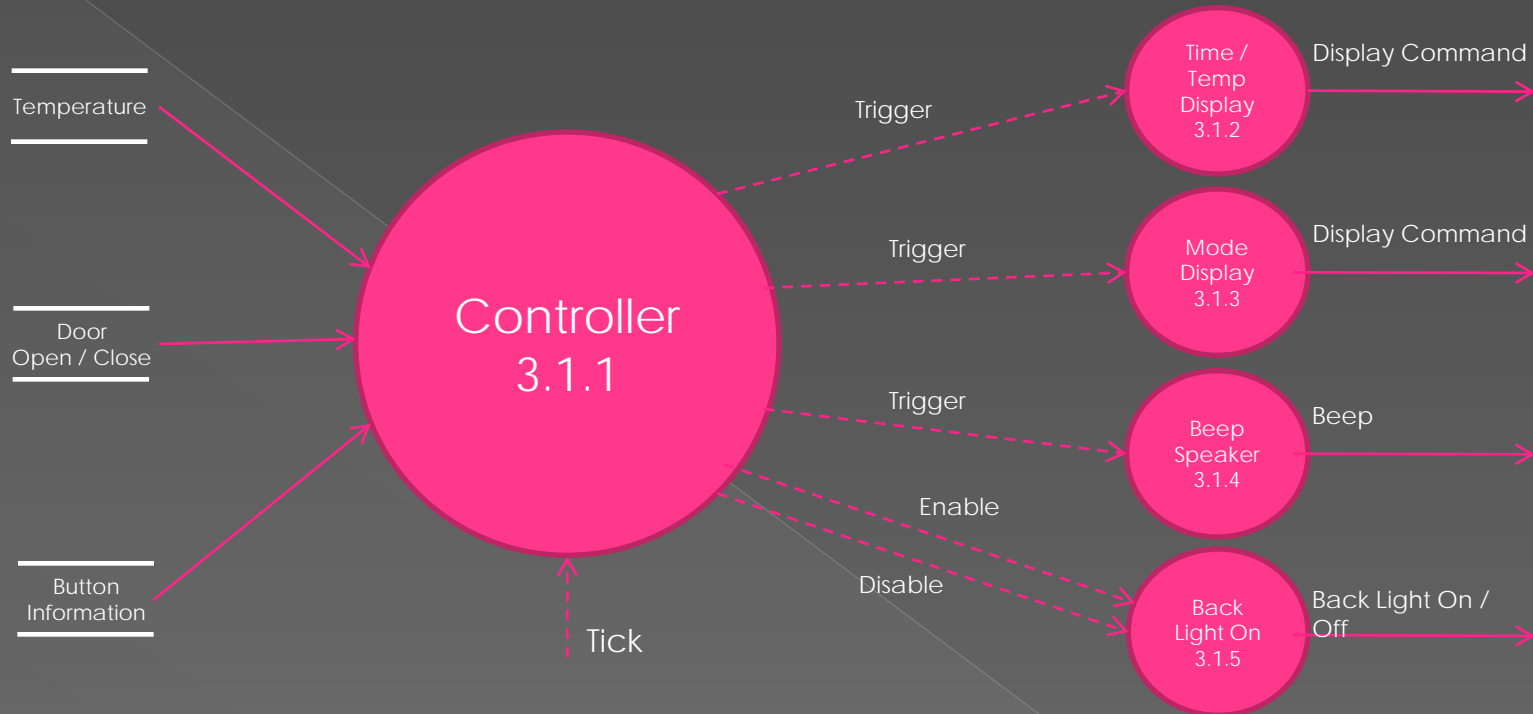
Reference No.	3.1.2
Name	Time / Temp Display
Input	Trigger
Output	Display Command
Process Description	Controller로부터 Trigger 신호를 받아 화면에 Time 또는 Temperature 상태 출력

Process Specification - Microwave



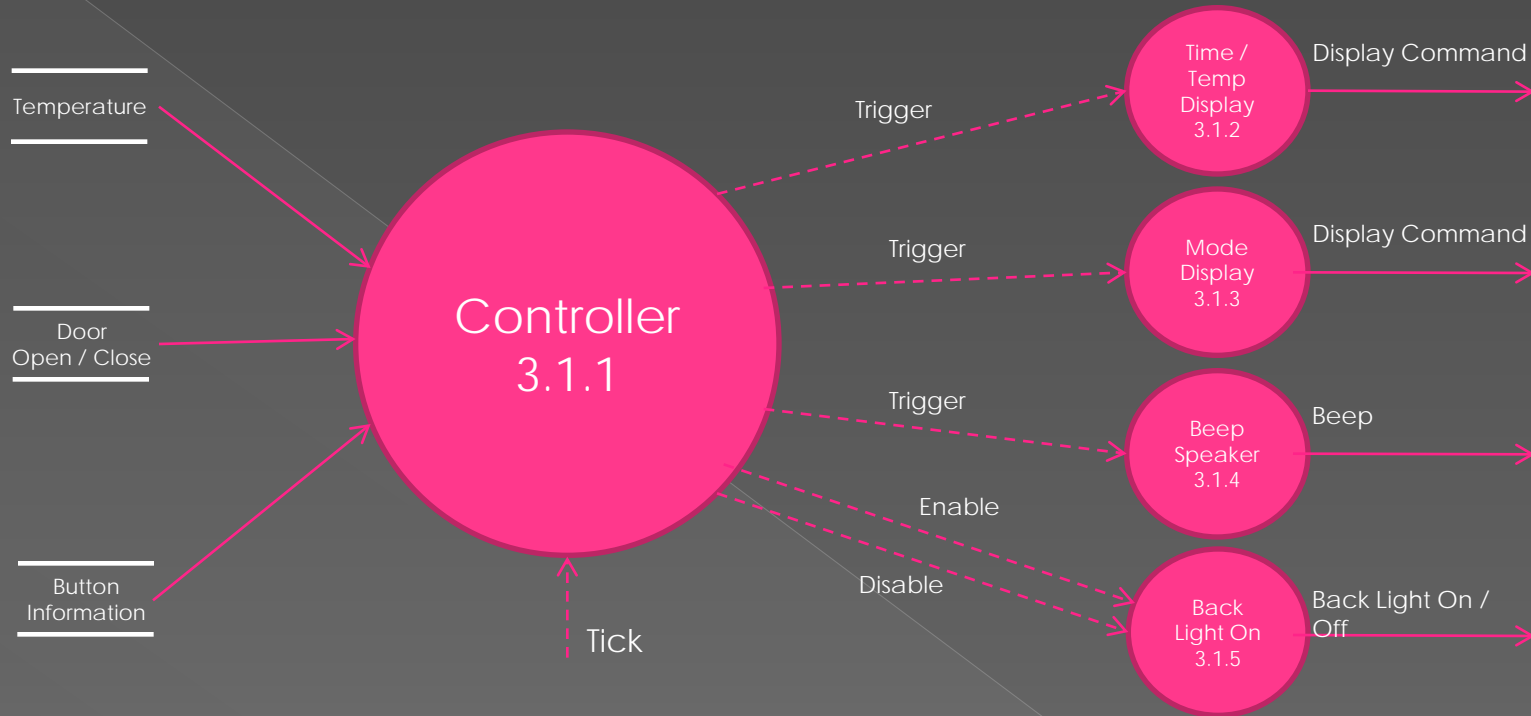
Reference No.	3.1.3
Name	Mode Display
Input	Trigger (String)
Output	Display Command
Process Description	Controller로부터 Input인 Trigger를 받아 해당되는 Mode인 String을 출력함.

Process Specification - Microwave



Reference No.	3.1.4
Name	Beep Speaker
Input	Trigger (Integer)
Output	Beep
Process Description	Controller로부터 Input인 Trigger 신호를 받아 원하는 초만큼 Beep 음을 출력

Process Specification - Microwave



Reference No.	3.1.5
Name	Back Light On
Input	Enable / Disable (Boolean)
Output	Back Light On / Off
Process Description	Controller로부터 Input을 받아 Back Light를 On 시키거나 Off 시킴

Structured Charts – Microwave

