DWS_TB5_Unit Test Definition

ver 2.0

Title	Identifier	In/Out	Feature	Value
1. Input Process	DWS.UTD.00	*입력 처리 구조가 변경되었기 때문에 UTD.01과 통합*		
2.1 Input Controler	DWS.UTD.01	입력	Tick	-
			Single_input	0 A, 1 B, 2 C, 3 D
		출력	Trigger	unit_chage(), value_change()
			Enable/Disable (bTimeflow, bStopwatch)	0 Enable, 1 Disable
			state	0 TK, 1 TS, 2 SW
2.2 Time Flow Process	DWS.UTD.02	입력	Enable/Disable (bTimeflow, bStopwatch)	0 Enable, 1 Disable
			Time	Tick 이 있을 때마다 현재 시간 갱신
			Tick	-
		출력	Time	Lap Time, Stopwatch Time, Modifying Time, Flow Time
2.3 TimeSetting Controller	*DWS.UTD.03*	*Mode를 구분하는 내용이 변경되면서 없어짐 유지보수 입장에서 봤을때 기능의 수정이나 소스 분석이 쉽기 때문에 이전의 구조가 좋지 않았나 하는 의견*		
2.3 Stopwatch Controller	DWS.UTD.04	입력	Single_input	0 A, 1 B, 2 C, 3 D
			Enable/Disable (bTimeflow, bStopwatch)	Stopwatch state를 조정
			Stopwatch State (s_state)	stop, flow, laptime
		출력	Trigger	stopwatch_reset(), laptime_save(), stopwatch_flow()
			Enable/Disable (bStopflow)	0 Enable, 1 Disable
			Stopwatch State (s_state)	stop, flow, laptime
2.4 Back Light	DWS.UTD.05	입력	Trigger	backlight() 2초간 라이트를 켠뒤 종료
2.5 Unit Change	DWS.UTD.06	입력	Trigger	unit_chage()
			Time Unit (unit)	0 m_sec, 1 m_hour, 2 m_min, 3 m_year, 4 m_month, 5 m_day
		출력	Time Unit	0 m_sec, 1 m_hour, 2 m_min, 3 m_year, 4 m_month, 5 m_day
2.6 Value Chage	DWS.UTD.07	입력	Trigger	value_change()
			time	-
			time unit	0 m_sec, 1 m_hour, 2 m_min, 3 m_year, 4 m_month, 5 m_day
		출력	time	-
2.7 Stopwatch Flow	DWS.UTD.08	입력	Enable/Disable (bStopflow)	0 Enable, 1 Disable
2.8 Laptime Save	DWS.UTD.09	입력	Trigger	
2.9 Stopwatch Reset	DWS.UTD.10	입력	Trigger	stopwatch_reset()
3.1 DisplayController	DWS.UTD.11	입력	Tick	display_controller()
			Single_input	0 A, 1 B, 2 C, 3 D
		출력	Enable/Disable (bTK, bTS, bSW)	화면을 조정
			state	0 TK, 1 TS, 2 SW

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Title	Identifier		Input	Output
1. Input Process	DWS.UTC.00	00	*N/A*	
2.1 Input Controler	DWS.UTC.01	00	Time Keeping / Single_input = A	Transition to Time Setting
		01	Time Keeping / Single_input = C	Transition to Stop Watch
		02	Time Keeping / Single_input = D	Trigger Backlight
		03	Time Setting / Single_input = A	Transition to Time keeping
		04	Time Setting / Single_input = D	Trigger Backlight
		05	Stop Watch / Single_input = C	Transition to Time keeping
		06	Stop Watch / Single_input = D	Trigger Backlight
2.2 Time Flow Process	DWS.UTC.02	00	Time.ms=0 Time.sec=0 Time.min=0 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012	Time.ms=10 Time.sec=0 Time.min=0 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012
		01	Time.ms=99 Time.sec=0 Time.min=0 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012	Time.ms=0 Time.sec=1 Time.min=0 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012
		02	Time.ms=99 Time.sec=59 Time.min=0 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012	Time.ms=0 Time.sec=0 Time.min=1 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012

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Title	Identifier		Input	Output
2.2 Time Flow Process	DWS.UTC.02	03	Time.ms=99 Time.sec=59 Time.min=59 Time.hour=0 Time.date=1 Time.month=1 Time.year=2012	Time.ms=0 Time.sec=0 Time.min=0 Time.hour=1 Time.date=1 Time.month=1 Time.year=2012
		04	Time.ms=99 Time.sec=59 Time.min=59 Time.hour=23 Time.date=1 Time.month=1 Time.year=2012	Time.ms=0 Time.sec=0 Time.min=0 Time.hour=0 Time.date=2 Time.month=1 Time.year=2012 Time.day=mon
		05	Time.ms=99 Time.sec=59 Time.min=59 Time.hour=23 Time.date=31 Time.month=1 Time.year=2012 Time.day=tue	Time.ms=0 Time.sec=0 Time.min=0 Time.hour=0 Time.date=1 Time.month=2 Time.year=2012 Time.day=wed
		06	Time.ms=99 Time.sec=59 Time.min=59 Time.hour=23 Time.date=31 Time.month=12 Time.year=2012 Time.day=mon	Time.ms=0 Time.sec=0 Time.min=0 Time.hour=1 Time.date=1 Time.month=1 Time.year=2013 Time.day=tue

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Title	Identifier		Input	Output
2.2 Time Flow Process	DWS.UTC.02	07	Time.ms=99 Time.sec=59 Time.min=59 Time.hour=23 Time.date=28 Time.month=2 Time.year=2012 Time.day=tue	Time.ms=0 Time.sec=0 Time.min=0 Time.hour=0 Time.date=29 Time.month=2 Time.year=2012 Time.day=wed
2.3 TimeSetting Controller	*DWS.UTC.03*	00	*N/A*	
2.3 Stopwatch Controller	DWS.UTC.04	00	Stop / Single_input = A Time.s_min=59 Time.s_sec=59 Time.s_ms = 99	Time.s_min == 0 Time.s_sec == 0 Time.s_ms == 0
		01	Stop / Single_input = B	bStopFlow = enable s_state = flow
		02	Flow / Single_input = A	s_state = labtime
		03	Flow / Single_input = B	bStopFlow = disable s_state = stop
		04	LabTime / Single_input = A Time.s_min = 12 Time.s_sec = 34 Time.s_ms = 56	Time.lap_min = 12 Time.lap_sec = 34 Time.lap_ms = 56
		05	LabTime / Single_input = B	s_state = flow
2.4 Back Light	DWS.UTC.05	00	Enable	Light On
		01	Enable during Back light On	Light On
2.5 Unit Change	DWS.UTC.06	00	Selected unit=m_sec	Selected unit=m_hour
		01	Selected unit=m_hour	Selected unit=m_min
		02	Selected unit=m_min	Selected unit=m_year
		03	Selected unit=m_year	Selected unit=m_month
		04	Selected unit=m_month	Selected unit=m_day
		05	Selected unit=m_day	Selected unit=m_sec

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Title	Identifier		Input	Output
2.6 Value Chage	DWS.UTC.07	00	unit=m_sec/time.sec=0	Time.sec=1
		01	unit=m_min/time.min=0	Time.min=1
		02	unit=m_hour/time.hour=0	Time.hour=1
		03	unit=m_day/time.date=1	Time.date=2
		04	unit=m_month/time.month=1	Time.month=2
		05	unit=m_year/time.year=2012	Time.year=2013
		06	unit=m_sec/time.sec=59	Time.sec=0
		07	unit=m_min/time.min=59	Time.min=0
		08	unit=m_hour/time.hour=23	Time.hour=0
		09	unit=m_day/time.month=1/time.year=2012,time.date=31	Time.date=1
		10	unit=m_day/time.month=2/time.year=2012,time.date=29	Time.date=1
		11	unit=m_day/time.month=4/time.year=2012,time.date=30	Time.date=1
		12	unit=m_month/time.month=12	Time.month=1
		13	unit=m_year/time.year=2099	Time.year=2012
2.7 Stopwatch Flow	DWS.UTC.08	00	Time.ms=0	Time.ms=10
		01	Time.ms=99	Time.ms=0,Time.sec=1
		02	Time.ms=99,Time.sec=59	Time.ms=0,Time.sec=0,Time.min=1
2.8 Laptime Save	DWS.UTC.09	00	Stopwatch Time Time.ms=0 Time.sec=0 Time.min=0	Laptime Time.ms=0 Time.sec=0 Time.min=0
		01	Stopwatch Time Time.ms=99 Time.sec=59 Time.min=59	Laptime Time.ms=99 Time.sec=59 Time.min=59
2.9 Stopwatch Reset	DWS.UTC.10	00	Stopwatch Time Time.ms=0 Time.sec=0 Time.min=0	Stopwatch Time Time.ms=0 Time.sec=0 Time.min=0

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Title	Identifier		Input	Output
2.9 Stopwatch Reset	DWS.UTC.10	01	Stopwatch Time Time.ms=99 Time.sec=59 Time.min=59	Stopwatch Time Time.ms=0 Time.sec=0 Time.min=0
3.1 DisplayController	DWS.UTC.11	00	Time Keeping / state = TK / single_input = C	Stop Watch Trigger stopwatch display
		01	Time Keeping / state = TK / single_input = A	Time Setting Trigger time setting display
		02	Stopwatch / state = SW / single_input = C	Time Show Trigger time keeping display
		03	Time Setting / state = TS / single_input = A	Time Show Trigger time keeping display