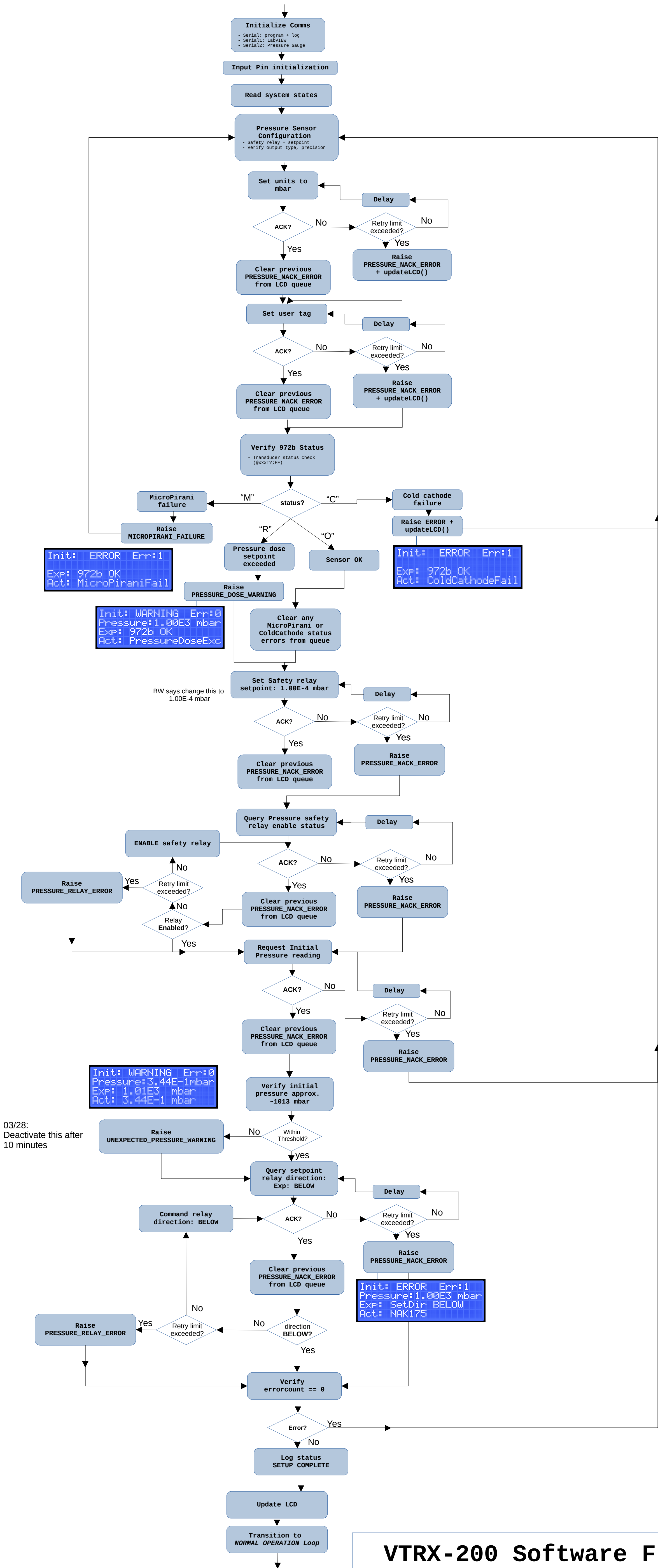


setup()



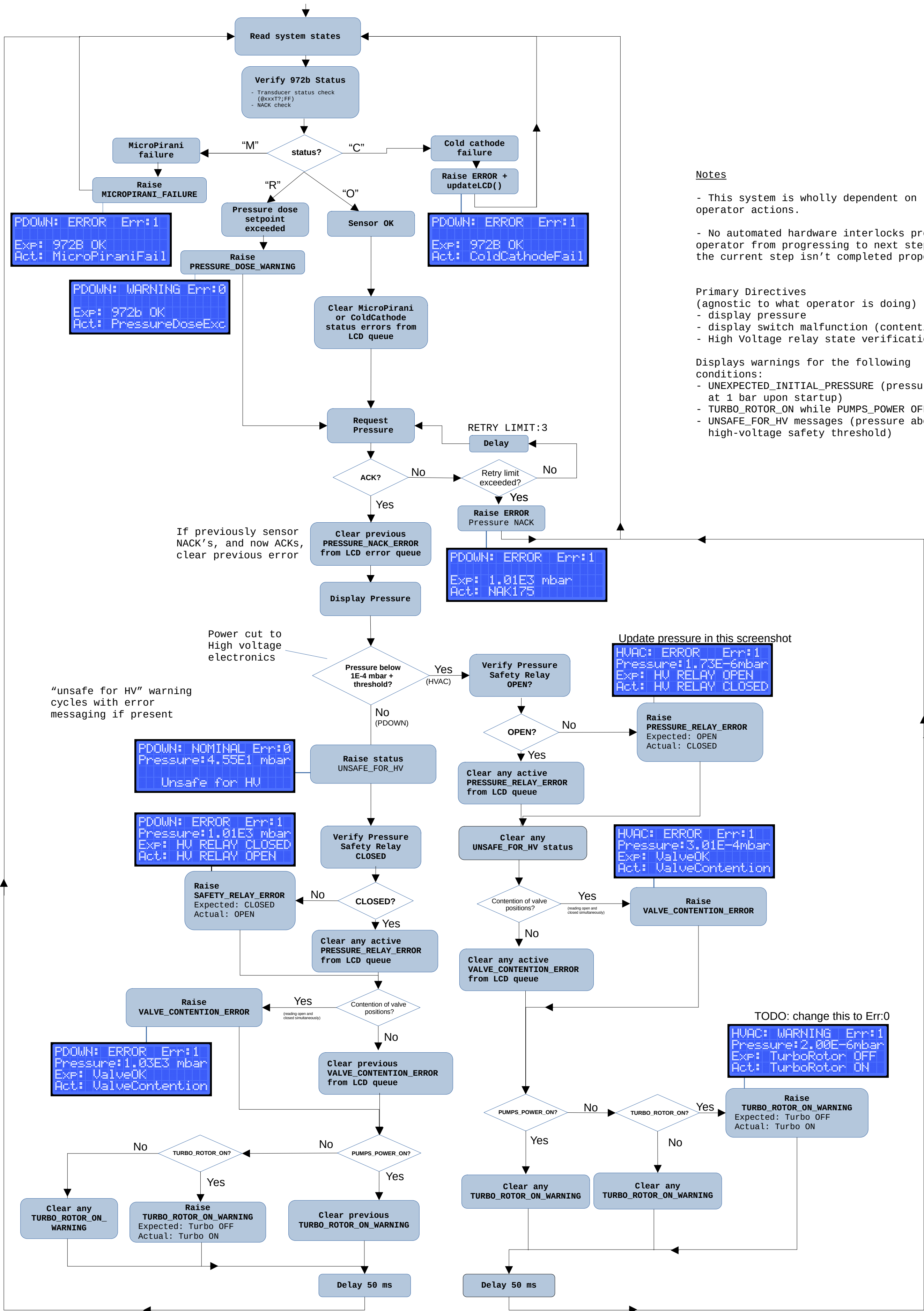
VTRX-200 Software Flow

Setup (standard/argon pump-down)

04-06-2024

Michael Laffin
Brandon Walker

loop()



Factory default

The transducer is per factory default delivered with parameters and setup as listed below. If the transducer is delivered with customer preconfigured parameters the values are different than listed below and the parameters will be locked per default.

Communication parameters:

Description	Command	Parameter	FDI	FDI/ALL
Address:	AD!	253	-	x
Baud rate:	BR!	9600	-	x
Communication delay:	RSD!	ON	-	x

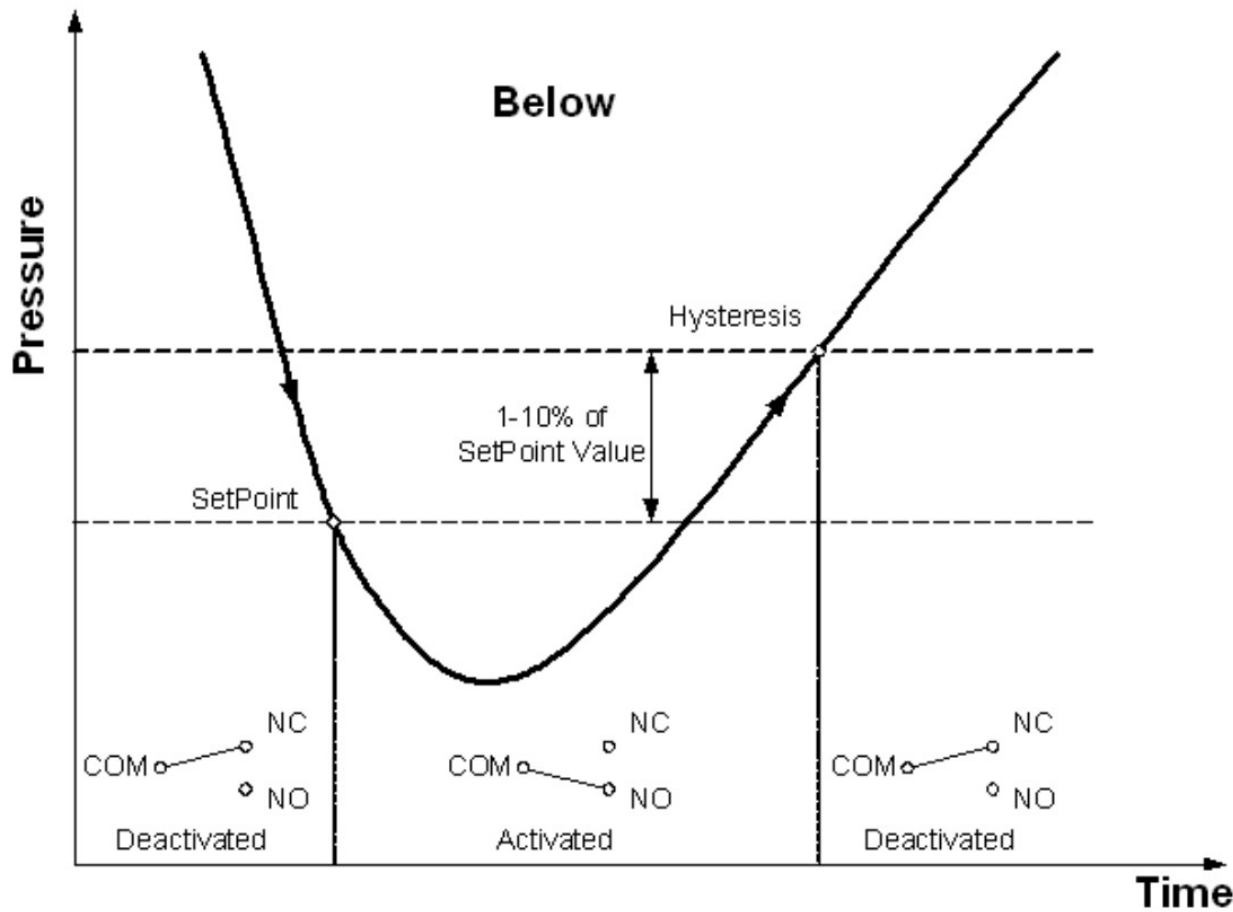
Transducer parameters:

Description	Command	Parameter	FDI	FDI/ALL
Test mode (LED flash):	TST!	OFF	x	x
User tag:	UT!	MKS	-	x
Setpoint 1 value:	SP1!	1.00E0	-	x
Setpoint 1 hysteresis value:	SH1!	1.10E0	-	x
Setpoint 1 direction:	SD1!	BELOW	-	x
Setpoint 1 enable:	EN1!	OFF	-	x
Setpoint 2 value:	SP1!	1.00E0	-	x
Setpoint 2 hysteresis value:	SH1!	1.10E0	-	x
Setpoint 2 direction:	SD1!	BELOW	-	x
Setpoint 2 enable:	EN1!	OFF	-	x
Setpoint 3 value:	SP1!	1.00E0	-	x
Setpoint 3 hysteresis value:	SH1!	1.10E0	-	x
Setpoint 3 direction:	SD1!	BELOW	-	x
Setpoint 3 enable:	EN1!	OFF	-	x
Switch enable:	SW!	ON	-	x
Analog out 1:	AO1!	30 ⁽¹⁾	-	x
Analog out 2:	AO2!	30	-	x
Cold Cathode turn on setpoint	SLC!	5.00E-4	-	x
Cold Cathode turn off setpoint	SHC!	8.00E-4	-	x
Cold Cathode control setpoint	ENC!	ON	-	x
Cold Cathode protect setpoint	PRO!	OFF	-	x
MP/CC Smoothing low limit	SLP!	1.00E-4	-	x
MP/CC Smoothing high limit	SLP!	4.00E-4	-	x
MicroPirani auto Zero limit	MZL!	1.00E-4	x	x

(1) If the transducer is delivered with other analog output than standardKJLC (part number specified), then the factory default value will be specified by the specials part number.

Calibration setup:

Description	Command	Parameter	FDI	FDI/ALL
Gas calibration:	GT!	NITROGEN	x	x
MP Vacuum adjustment:	VAC!	Factory adjustment value	x	x
MP Span atmospheric adjustment:	ATM!	Factory adjustment value	x	x
CC Vacuum adjustment:	VAC3!	Factory adjustment value	x	x
CC full scale adjustment:	CFS!	Factory adjustment value	x	x
Pressure unit:	U!	TORR	-	x



- Sequence of venting actions to ATM (for operator)

1. turbo rotor off
2. PUMPS_POWER_OFF
3. Vent valve switch open (wait for turbomolecular pump to decelerate)
4. Gate valves closed (Argon and Turbo)
5. Once completed, verify pressure within 1 atm threshold

VTRX-200 Software Flow

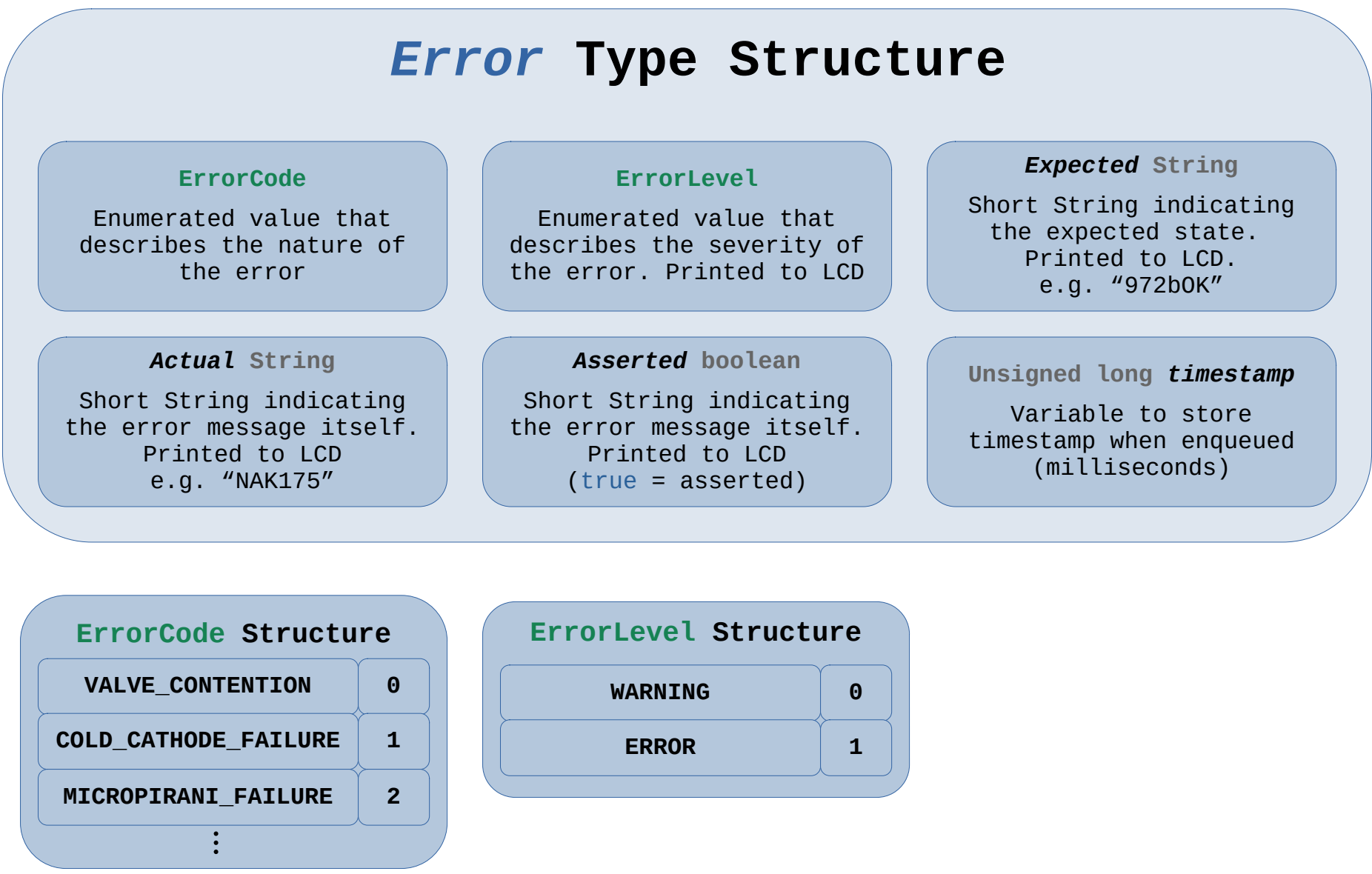
04-06-2024

Main loop (standard/argon pump-down)

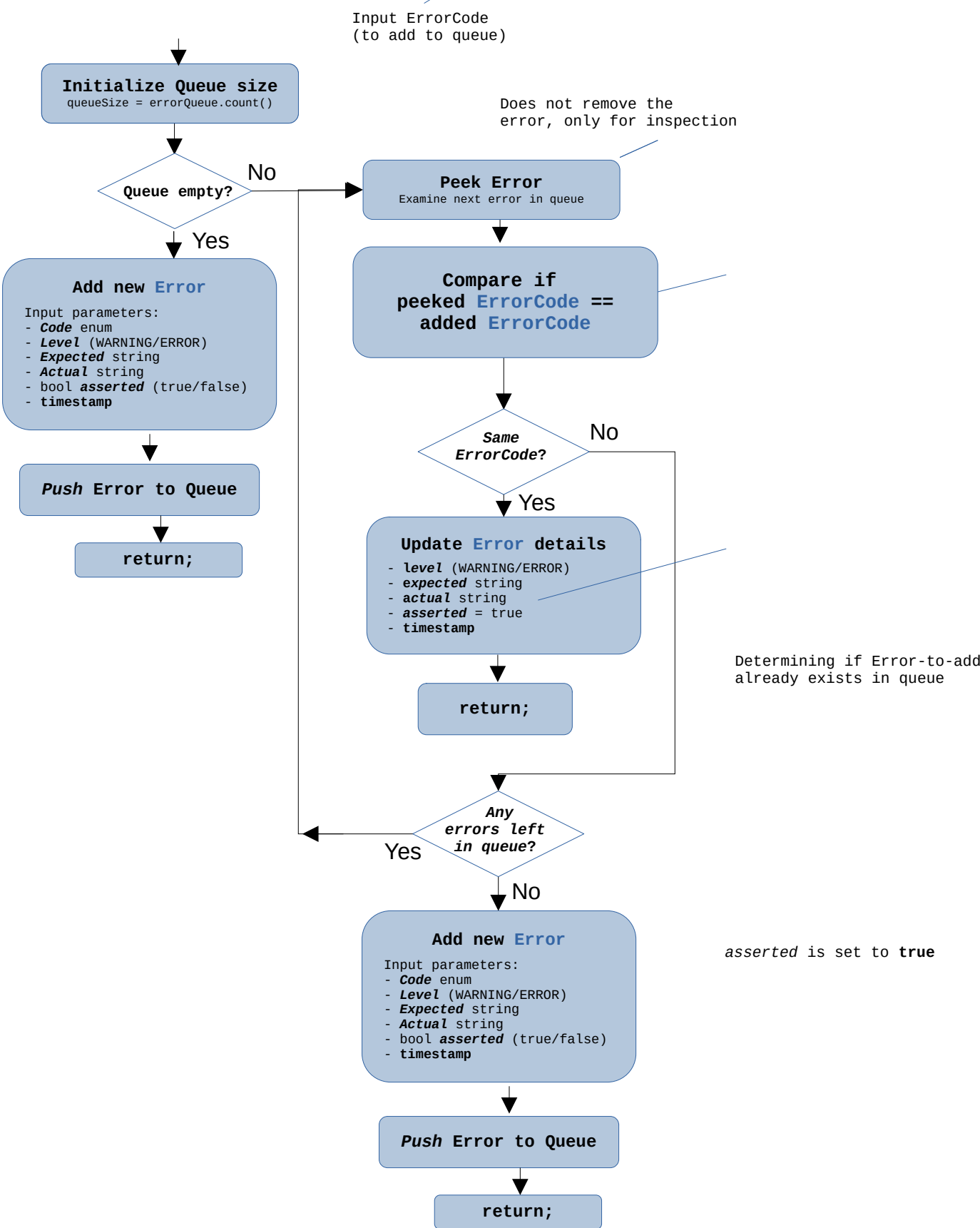
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Brandon Walker

Detailed Flow: Error Handling

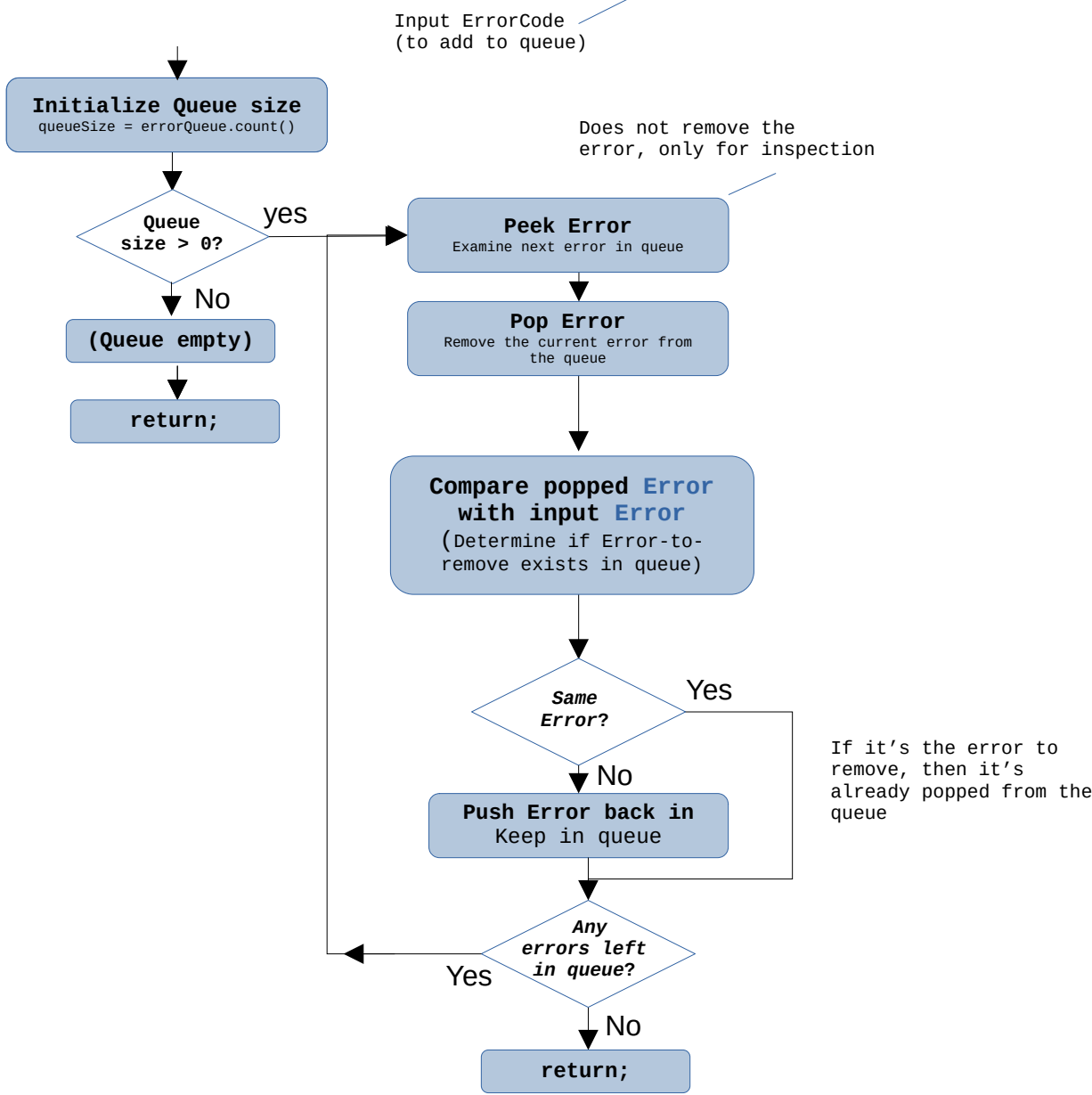
Error Type Structure



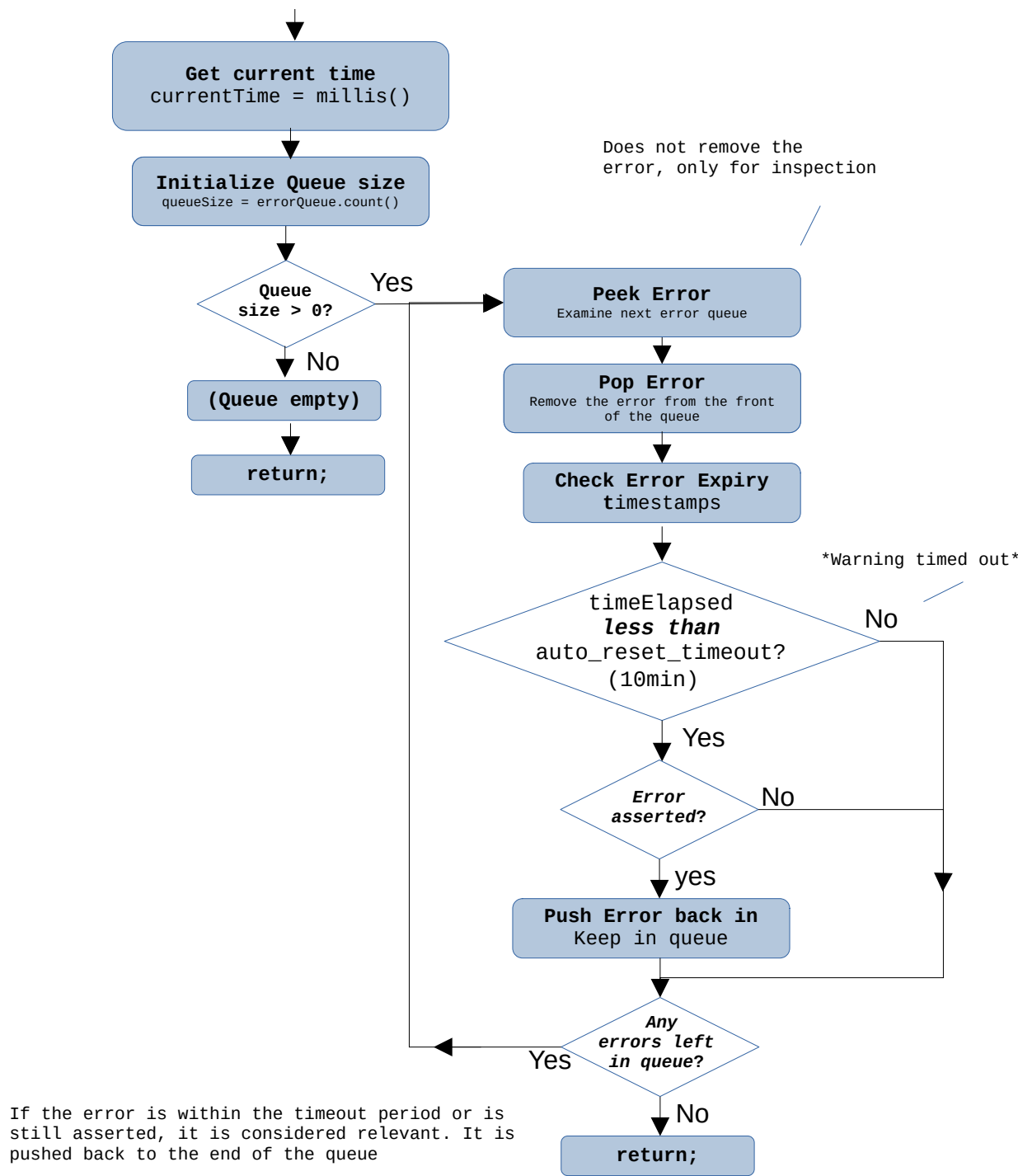
addErrorToQueue(Error);



removeErrorFromQueue(Error);



cleanExpiredErrors();



bool isErrorPresent(Error);

