CLIDATA FORUM 2013

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Clidata Quality Control

Prague, May 2013

Capabilities

- By Formula
 - Quality control of Key Entered data → In Key Entry Form
 - Historical Climatological data → Batch Quality Control
- Predefined regular data controls
 - Difference between two consecutive values
 - Repeatable values
 - Limits

In Key Entry Form

- Control by Formula E.G. {TMI.XX:XX}>{TMA.XX:XX}
- One station more elements, one month

	4	<u>••</u>	<u>}</u>	E		Qc Ok valu
	STATION	01PORU0	1			
	T 07:00	T 14:00	T 21:00	TMA 21:00	TMI 21:00	
01	150	150	180	220	140	
02	150	150	180	220	140	🛓 Formula
03	155	150	180	220	140	
04	150	150	180	250	140	FoId 2 {TMA
05	150	150	190	220	140	2 {TMA
06	180	150	180	150	140	
07	150	150	180	220	140	
08	150	150	180	220	140	
09	150	150	180	220	140	
10	150	150	180	220	140	
11	150	150	180	220	140	

🛓 For	nula with Error	×
FoId		Setvalues
2	{TMA.21:00}<{T.21:00-1}	15.0< 19.0
	Ok Cance	el

Batch QC

N-Batc Para Date

- Control by Formula E.G. {TMI.XX:XX}>{TMA.XX:XX} •
- Define period, more stations, more elements •

		and the second sec										
-Batch QC												
Parameters \ Result \												
Date From	Date To		Select Stat	ions								
01.01.2013 00:00	31.12.2013 23:59		O1PO									
Regular			O1POLO01			O1PORU01 Ostra	iva					
			O1POPR01 O1PORUTT	Podlesí pod Prad Ostrava	ěde		1					
Qc Ok values					<							
QC												
					>			×				
			•		•		l					
			Select Elem	ients								
			ТМА									
			TMA36 max	. teplota		TMA Teplota max	x					
			TMAden Te	eplota max aximální TMA			1					
			TMAnoc Te									
								×				
					>>>>		l					
	N	-Batch QC										
	4	Paramete	rs Result \									
			Station ID	Element ID			Time		V Flag	Q Flag	{TMA.21:00}<{T.21:00-1}	
			D1PORU01		-16	04.04.2013		25			15.0< 19.0	
			D1PORU01 D1PORU01		2	06.04.2013		15			15.0< 19.0	
			511 01(001	TPRA	1	00.01.2015	21.00				Value 15 V Flag	
												SEC

More possibilities – OK VALUES

Error values can be marked as OK

They are not controlled anymore

- Example of usage:
- Formula {TMI.XX:XX}> {TMA.XX:XX}
- TMA=15
- TMI=16
- WE know that TMI is CORRECT, we mark TMI OK!!! → Flag 'O'
- In KEF only TMA is highlighted:

TMA 21:0	0 TMI 21:00	
220	140	
220	140	
220	140	
250	140	
220	140	
150	160	
220	140	
220	140	
220	1/0	

Regular data control

- Finding peaks, exceptional values, to many repeats of the same value
- Defined by administrator
- Defined regular job which is checking regular data
- Checking user periods, list of stations
- Offers interpolated value
- Mark exceptional value as OK

Fmax > 25 m/s

O1LYSA01 18.01.20... 27 > 25

	1	1	1	_								
Station ID 01CERV01	Date 18.01.20	Info 32.5 > 25	Ok	•	DT	Fmax XX:XX	25 CONSTANT	Fprum XX:XX	F XX:XX	D XX:XX		
O1CERV01	19.01.20	26.7 > 25		35	18.01.2007 09:30			3.4	6.3			
O1CERV01	19.01.20	27 > 25			18.01.2007 09:45	23		3.7	6.5	258		E.
O1CERV01	07.11.20	26.3 > 25			18.01.2007 10:00	22.1		3.6	6.7	257		
O1CERV01	07.11.20	25.9 > 25			18.01.2007 10:15	20.7		3.8	6.6	257		
O1CERV01	25.06.20	26.6 > 25			18.01.2007 10:30	21.5		3.3	6.2	260		
O1JAVO01	11.01.20	25.3 > 25			18.01.2007 10:45	21.9		3.8	6.8	251		00
O1JAVR01	15.12.20	25.3 > 25			18.01.2007 11:00	35.3	25	4.9	7.1	255		33
O1JAVR01	15.12.20	25.2 > 25			18.01.2007 11:15	24		5.1	7.3	254		
O1KRNO01	19.03.20	34.2 > 25			18.01.2007 11:30	20.5		4	7	257		
O1LUCI01	18.01.20	26.1 > 25			18.01.2007 11:45	19.8		5	7.3	247		
O1LUCI01	18.01.20	26.2 > 25			18.01.2007 12:00	24.1		5.2	7.2	241		
O1LYSA01	01.01.20	25.3 > 25			18.01.2007 12:15	22.9		3.6	6.8	248		-
O1LYSA01	01.01.20	27.9 > 25										
O1LYSA01	01.01.20	25.8 > 25					OK!	N S Int 2	23.53 E	С		
O1LYSA01	01.01.20	29.5 > 25										
O1LYSA01	11.01.20	26.7 > 25						11:00	·····		40 3	360
O1LYSA01	11.01.20	26.8 > 25						11.00			35.3	200
O1LYSA01	12.01.20	26.4 > 25									- 35 - 3	320
O1LYSA01	13.01.20	25.1 > 25						Λ				280
O1LYSA01	18.01.20	35.3 > 25						A A	••			240
O1LYSA01	18.01.20	25.5 > 25							N	1.0	25 · 25	
O1LYSA01	18.01.20	25.7 > 25						~ 100	$\wedge \wedge \wedge$	/ ~~	20	200
O1LYSA01	18.01.20	30.2 > 25				N	NN					160
O1LYSA01	18.01.20	30.8 > 25			$\sim \sim \sim$	$^{\vee}$					- 15	
O1LYSA01	18.01.20	26.9 > 25			/~							120
O1LYSA01	18.01.20	25.9 > 25				\wedge					· ¹⁰ 8	30
O1LYSA01	18.01.20	31.3 > 25			A						-5	40
O1LYSA01	18.01.20	30.7 > 25			\sim	~		~~~~```\	$\sim\sim\sim$	\sim		Ð
O1LYSA01	18.01.20	25.3 > 25									+ o + o	J

00:00 02:00 04:00 06:00 08:00 10:00 12:00 14:00 16:00 18:00 20:00 22:00 m/s °C

SRA 10 min > 15 mm

Limity	-	SRA10M > 15 mm	-	fanually	Ok All						
<u> </u>											
Station ID 01BOHU01	Date	Info 18.8 neni [0,15]	Ok		SRA10M	0	15	Н	SSV10M	Т	
O1FREN01				DT 16.07.2012 11:30	XX:XX	CONSTANT	CONSTANT	XX:XX 83	XX:XX	XX:XX	
		20.1 neni [0,15]		16.07.2012 11:40	0			84	0	16.9	^
O1JESE01		15.4 neni [0,15]		16.07.2012 11:50	0			82	0	16.6	
O1LYSA01		18.6 neni [0,15]		16.07.2012 12:00	0			82	0	10.0	
		15.9 neni [0,15]		16.07.2012 12:00	0.1			91	0	14.4	
010S0B01		17.4 neni [0,15]		16.07.2012 12:10	0.1			91	0	13.6	
		21.9 neni [0,15]			_	0	15				333
O2PAPR01		20.9 neni [0,15]		16.07.2012 12:30	18.8	0	15	91	0	14.3	
O2SLAM01	19.07.201	. 16.9 neni [0,15]		16.07.2012 12:40	0			90	0	15	
				16.07.2012 12:50	0			86	0	15.6	
				16.07.2012 13:00	0			85	87	16	
				16.07.2012 13:10	0			85	74	16.4	
				16.07.2012 13:20	0			79	600	17.7	•
						<u>ok</u> n		1 E C		100 ± 40	0 + 600 + 20
						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	12:30			- 35 ^{- 90} - 30 ^{- 80}	- 525
						MA	1.14			- 70	
						·····/	+ $/$ $+$ $/$ $+$ $/$			25 80	- 375
						$\sim /      $				18.8 - 20 - 50	
					/	- V	+++++			18.8 - 20 - 50	300 - 15
					$\wedge$			$\wedge \vee \vee$		15 40	- 225
					~ ~		$\sim$	~   N	~	- 30	
									$\sim$	- 10	- 150 - <b>12,5</b>
										-5 -10	
											- 0 - 1 <b>0</b>
				02:00 04:00	ດດ ດດ ລາ	10.00 12.0	00 14:00 16:0	18 [.] 00 2	n nn 22 nn n	oʻoo mm %	s °C

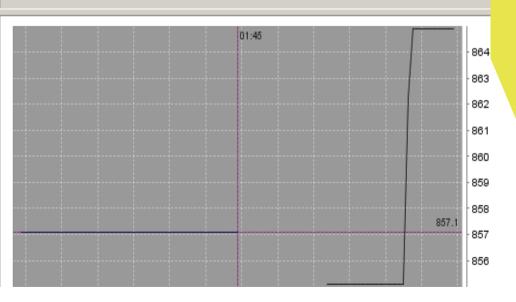
### abs(F - Fmax)>15 m/s

Mezitermínov	á rozdů 🖉	F a Fmax>15	-	Manually	7	Ok All						
Mezicerminov	e rozuliy 👻	F a FIIIdX>15			Y							
Station ID	Date	Info	Ok			Fmax	F	15	Fprum	D		
		17.6= 23.8 - 6			DT	XX:XX	XX:XX	CONSTANT	XX:XX	XX:XX		
		20.2= 32.5 - 12	0000	25.0	6.2008 18:45	4.2	2.4		2.5	222		-
		15.1= 27 - 11.9		25.0	6.2008 19:00	3.3	2.2		2.5	215		
O1CERV01	03.10.20	16= 19.3 - 3.3		25.0	6.2008 19:15	3.1	2.1		2.1	207		
O1CERV01	03.11.20	19.2= 22.5 - 3		25.0	6.2008 19:30	2.6	1.4		1.5	235		
O1CERV01	07.11.20	16.7= 23.6 - 6		25.0	6.2008 19:45	2.3	1.5		1.6	228		
O1CERV01	07.11.20	16.3= 26.3 - 10		25.0	6.2008 20:00	2.1	1.4		1.4	189		33
O1CERV01	07.11.20	18.3= 25.9 - 7		25.0	6.2008 20:15	23.8	6.2	15	3.7	291		
O1CERV01	25.06.20	15.2= 19.8 - 4		25.0	6.2008 20:30	17.2	3.3		4	220		
O1CERV01	25.06.20	17.4= 26.6 - 9		25.0	6.2008 20:45	4.9	2.3		2.3	193		
O1JAVO01	11.01.20	16.6= 25.3 - 8		25.0	6.2008 21:00	6.5	2.2		1.8	119		
O1JAVO01	11.01.20	18.3= 23.7 - 5		25.0	6.2008 21:15	8.6	6.5		4	162		
O1JAVO01	18.01.20	19.1= 24.5 - 5		25.0	6.2008 21:30	8	4.5		4.4	141		•
O1JAVO01	18.01.20	15.1= 21.5 - 6								-		
O1JAVO01	19.01.20	16.6= 23.2 - 6					<u>OK</u>	N S Int	11.04 E	C		
O1JAVO01	01.03.20	18.7= 23 - 4.3										
O1JAVO01	30.10.20	15.9= 24.9 - 9						20:15				<mark>30</mark>   360
O1JAVR01	14.12.20	15.3= 21.5 - 6						20.15				
O1JAVR01	14.12.20	15.3= 23.3 - 8									23.8	- 320
O1JAVR01	14.12.20	17= 24.7 - 7.7			•				•.			- 280
O1JAVR01	15.12.20	16.7= 25.3 - 8						Λ		••• •		- 20 - 240
O1JAVR01	15.12.20	15.6= 23.2 - 7						A		• •	· · · · · ·	
O1JAVR01	15.12.20	15.8= 25.2 - 9			•					•		200
O1JESE01	11.01.20	18.1= 21.9 - 3							•			- 15 - 160
O1JESE01	05.01.20	15.4= 19.8 - 4						\ ·				
O1JESE01	01.03.20	15.2= 19.4 - 4			•							- 10 - 120
O1JESE01	04.08.20	15.3= 16.5 - 1			•	$\sim$			$\backslash$ , $\land$ (	1 .		- 80
O1JESE01	20.11.20	15.1= 16.5 - 1			$\sim \sim$		m	$\sim   \Lambda' \rangle$	$M_{\Lambda}$	V _		-5
O1KRNO01	12.12.20	16.3= 18.5 - 2		-	- Josed	Y~~~~	~		My M	$\sim$	Vanne	- 40
O1KRNO01	14.12.20	15.4= 19 - 3.6			~							-0 -0
011 YSA01	01.01.20	15.2=125.3 - 10		08:00	0 10:00 1	2:00 14:00	16:00 18:	00 20:00 :	22:00 00:00	02:00 04	4:00 06:00 08:00	m/s °C

# P is not changing

Opakující se hodnot	ty ▼ P > 24x Date	Info	Ok		-
O1SERA01	19.05.2008 04:15	P hodnota 855.1 se opakuje 61x	UN	DT	P XX:XX
O1SERA01	19.05.2008 09:15	P hodnota 855.1 se opakuje 81x		25.05.2008 00:15	85/.1
O1SERA01	19.05.2008 11:00	P hodnota 855.1 se opakuje 26x		25.05.2008 00:30	857.1
O1SERA01	25.05.2008 01:45	P hodnota 857.1 se opakuje 538x		25.05.2008 00:45	857.1
O1SERA01	26.05.2008 15:30	P hodnota 864.9 se opakuje 113x		25.05.2008 01:00	857.1
O1SERA01	27.05.2008 14:15	P hodnota 855.1 se opakuje 82x		25.05.2008 01:15	857.1
O1SERA01	30.05.2008 00:00	P hodnota 855.1 se opakuje 229x		25.05.2008 01:30	857.1
O1SERA01	01.06.2008 03:00	P hodnota 855.1 se opakuje 229x		25.05.2008 01:45	857.1
O1SERA01	04.06.2008 09:00	P hodnota 855.1 se opakuje 304x		25.05.2008 02:00	
O1SERA01	06.06.2008 23:00	P hodnota 855.1 se opakuje 246x		25.05.2008 02:15	
O1SERA01	10.06.2008 17:00	P hodnota 855.1 se opakuje 356x		25.05.2008 02:30	
				25.05.2008 02:45	
				25.05.2008 03:00	





#### More real examples

 If connection is available, we can see more examples, or use local DB with some not real definitions