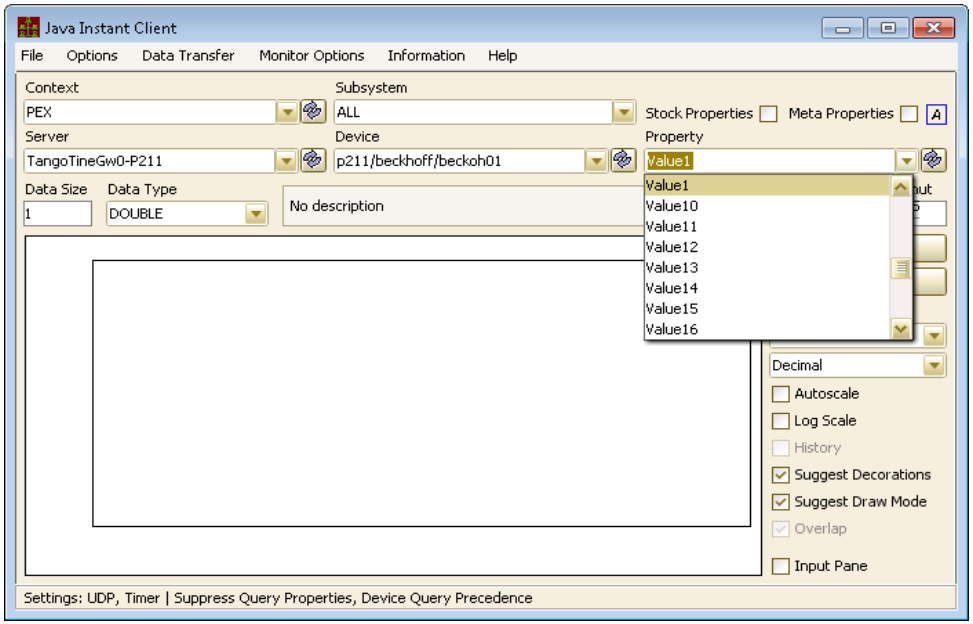
TINE Combobulator

A configurable middle layer …

Combobulator

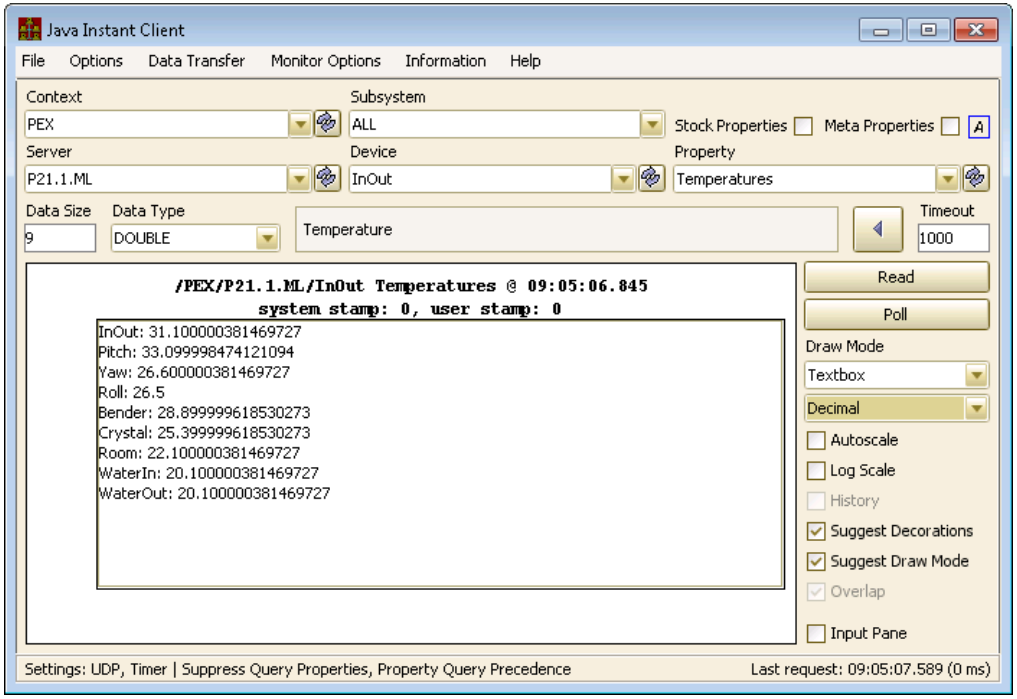
- The problem
  - due to whatever reasons (topology, established conventions, mindset, …) :
    - the exported property and device set and data are *sub-optimal* for systematic use
    - Need a middle layer to straighten things out



Request:
Archive ‘Value1’ -> ‘Value10’ as some set of keywords …

Combobulator

- But :
  - Property names not very descriptive
  - most of values to be archived describe a multi-channel array
    - Avoid entering N almost identical keywords in the archiver when 1 will do ! (and the archive requester wanted this anyway!)



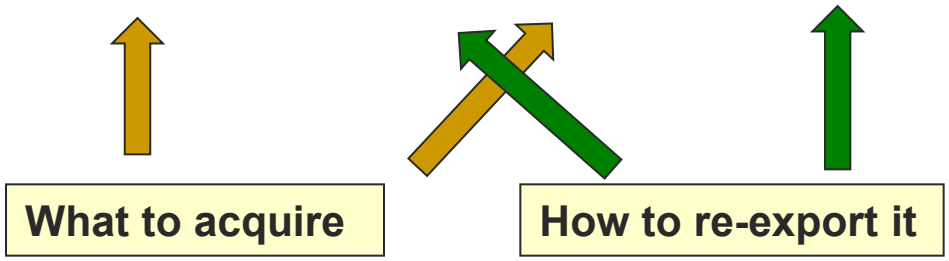
Easier to deal with in the archiver and other clients …

Combobulator

- Combulator reads a config database and does this!

  (sometimes a single .csv file)

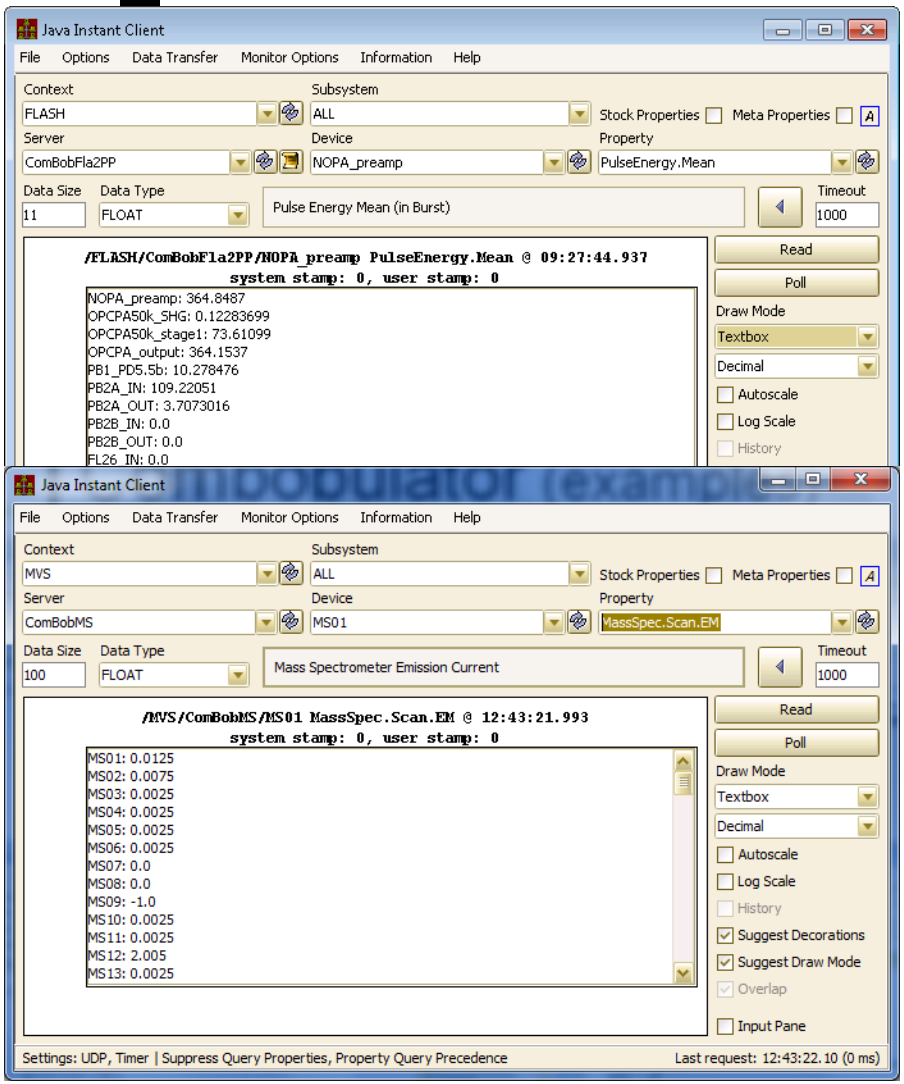
SERVER	PROPERTY	PROPERTY_ALIAS	DEVICE	DEVICE_ALIAS	FORMAT	CAPACITY	DESCRIPTION	SHIFT	SCALE	INTERVAL
/PEX/TangoTineGw0-P211	Value1	Temperatures	p211/beckhoff/beckoh01	InOut	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value2	Temperatures	p211/beckhoff/beckoh01	Pitch	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value3	Temperatures	p211/beckhoff/beckoh01	Yaw	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value4	Temperatures	p211/beckhoff/beckoh01	Roll	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value5	Temperatures	p211/beckhoff/beckoh01	Bender	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value7	Temperatures	p211/beckhoff/beckoh01	Crystal	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value8	Temperatures	p211/beckhoff/beckoh01	Room	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value9	Temperatures	p211/beckhoff/beckoh01	WaterIn	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value10	Temperatures	p211/beckhoff/beckoh01	WaterOut	double	1	[0:100 'C]Temperature	0	1	1000
/PEX/TangoTineGw0-P211	Value13	Flow	p211/beckhoff/beckoh01	Water	double	1	[0:100 l/s]Water Flow	0	1	1000

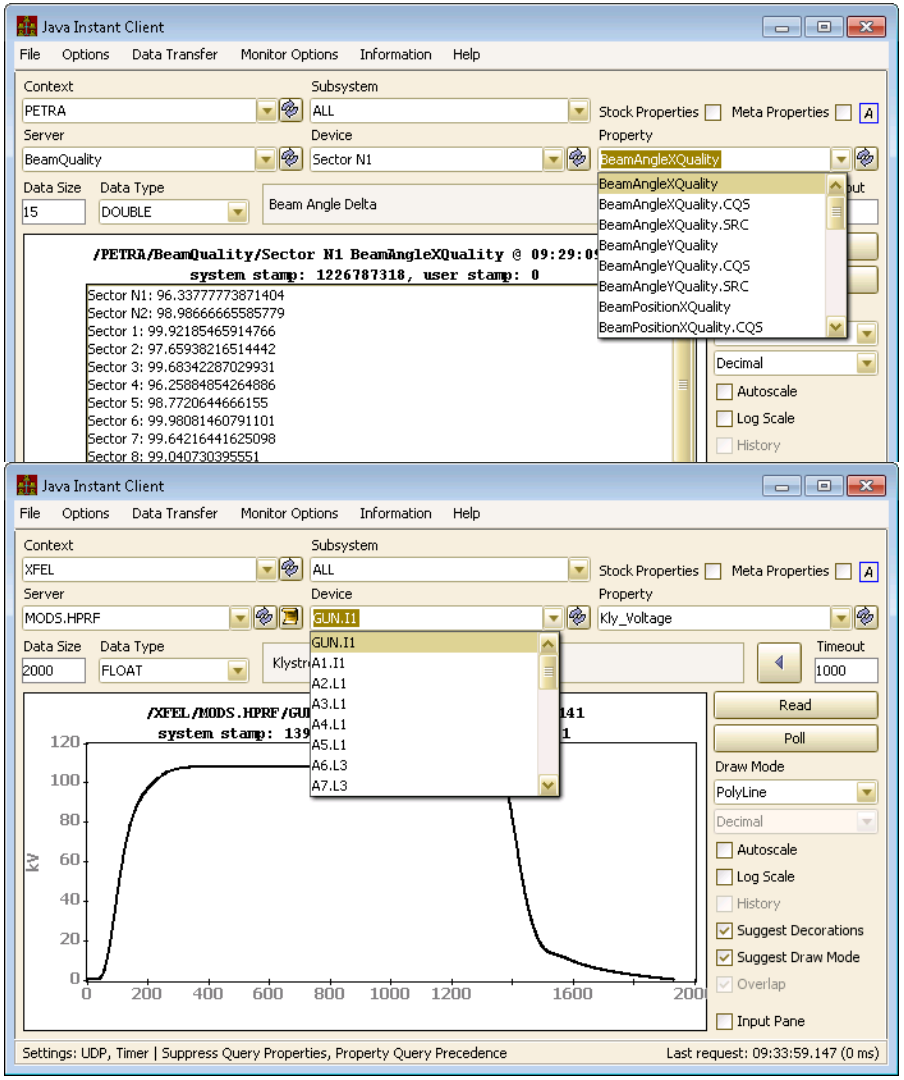


Combobulator

- A pre-built server !
- Another TINE tool (like the Repeater)
  - *but as yet:*
    - no config database manager
    - no documentation per se
      (but that is easily remedied)
  - Not limited to MCA combobulation !
  - Can also repeat/forward commands !
- > 20 combobulators now in service …

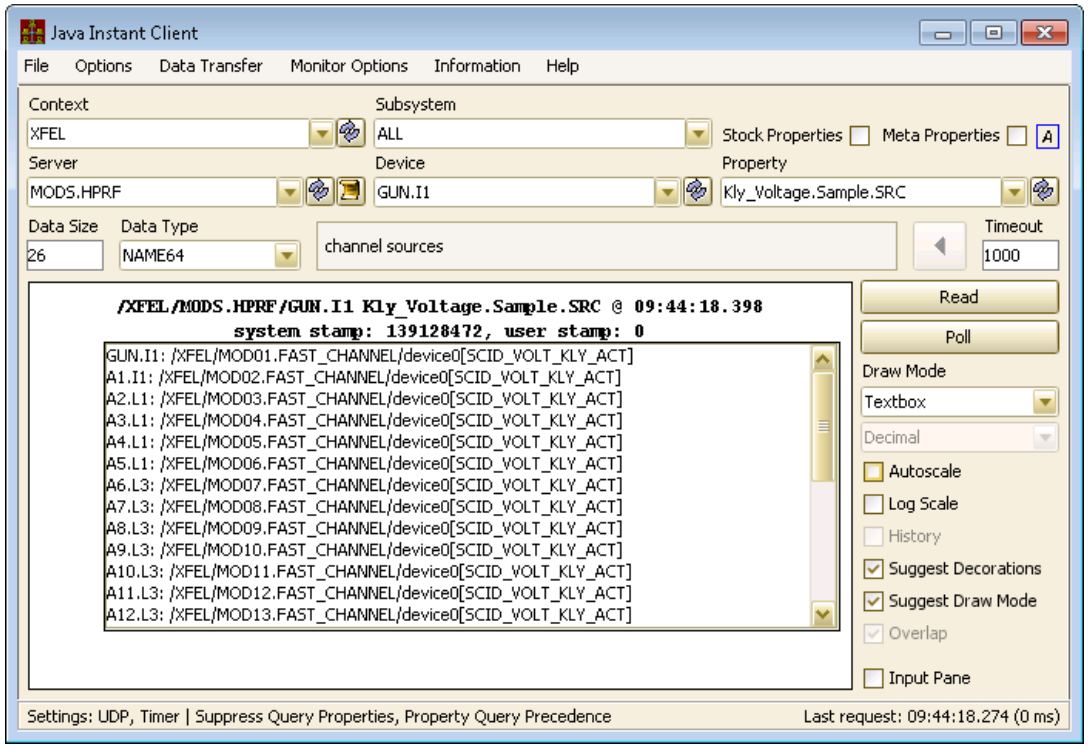
Combobulator (examples)





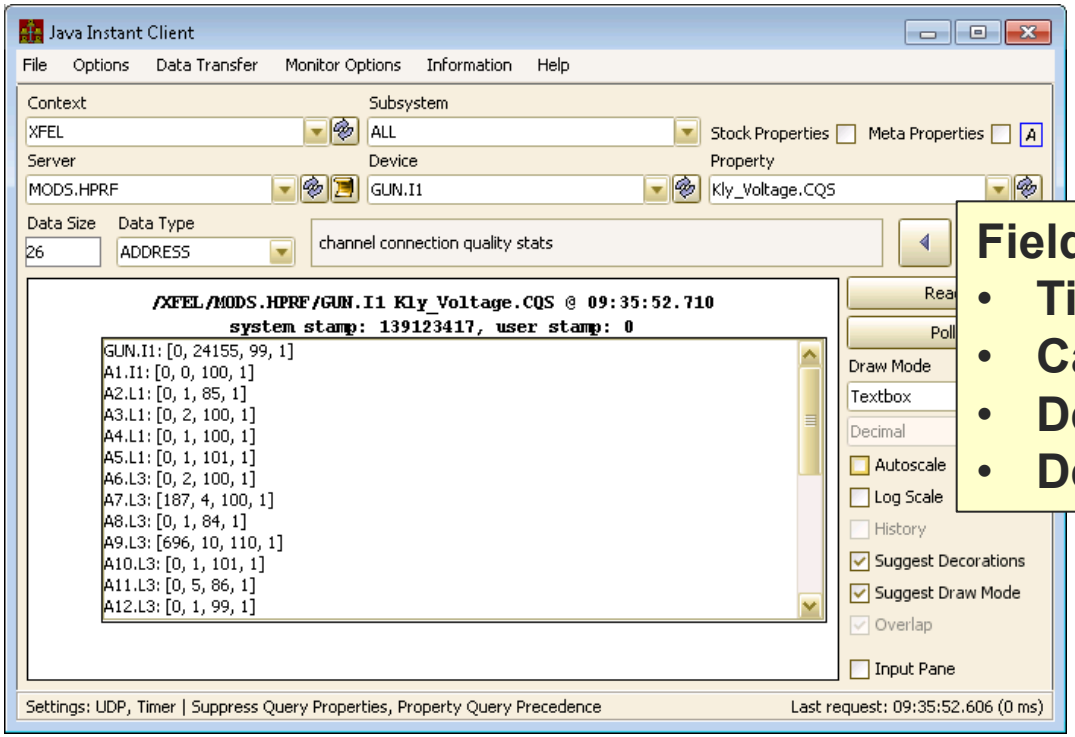
Combobulator

- Source information :



Combobulator

- Connection Quality statistics :



Fields in the Int-4-tuple:

- **Timeouts**
- **Callback misses/skips**
- **Delta timestamp**
- **Delta systemstamp**

Combobulator.csv (example)

SERVER	PROPERTY	DEVICE	DEVICE_ALIAS	DESCRIPTION	FORMAT	CAPACITY	OPTIONS
/XFEL/MOD01.DUMMIES	Mod-Dummies.csv	device0	GUN.I1	Mod for Kryo	single	30	
/XFEL/MOD02.DUMMIES	Mod-Dummies.csv	device0	A1.I1				
/XFEL/MOD03.DUMMIES	Mod-Dummies.csv	device0	A2.L1				
/XFEL/MOD04.DUMMIES	Mod-Dummies.csv	device0	A3.L1				
/XFEL/MOD05.DUMMIES	Mod-Dummies.csv	device0	A4.L1	Mod for Kryo	single	30	
/XFEL/MOD06.DUMMIES	Mod-Dummies.csv	device0	A5.L1	Mod for Kryo	single	30	
/XFEL/MOD07.DUMMIES	Mod-Dummies.csv	device0	A6.L3	Mod for Kryo	single	30	
/XFEL/MOD08.DUMMIES	Mod-Dummies.csv	device0	A7.L3	Mod for Kryo	single	30	
/XFEL/MOD09.DUMMIES	Mod-Dummies.csv	device0	A8.L3	Mod for Kryo	single	30	
/XFEL/MOD10.DUMMIES	Mod-Dummies.csv	device0	A9.L3	Mod for Kryo	single	30	
/XFEL/MOD11.DUMMIES	Mod-Dummies.csv	device0	A10.L3	Mod for Kryo	single	30	
/XFEL/MOD12.DUMMIES	Mod-Dummies.csv	device0	A11.L3	Mod for Kryo	single	30	
/XFEL/MOD13.DUMMIES	Mod-Dummies.csv	device0	A12.L3	Mod for Kryo	single	30	
/XFEL/MOD14.DUMMIES	Mod-Dummies.csv	device0	A13.L3	Mod for Kryo	single		
/XFEL/MOD15.DUMMIES	Mod-Dummies.csv	device0	A14.L3	Mod for Kryo	single		
/XFEL/MOD16.DUMMIES	Mod-Dummies.csv	device0	A15.L3	Mod for Kryo	single		
/XFEL/MOD17.DUMMIES	Mod-Dummies.csv	device0	A16.L3	Mod for Kryo	single		
/XFEL/MOD18.DUMMIES	Mod-Dummies.csv	device0	A17.L3	Mod for Kryo	single		
/XFEL/MOD19.DUMMIES	Mod-Dummies.csv	device0	A18.L3	Mod for Kryo	single	30	
/XFEL/MOD20.DUMMIES	Mod-Dummies.csv	device0	A19.L3	Mod for Kryo	single	30	
/XFEL/MOD21.DUMMIES	Mod-Dummies.csv	device0	A20.L3	Mod for Kryo	single	30	
/XFEL/MOD22.DUMMIES	Mod-Dummies.csv	device0	A21.L3	Mod for Kryo	single	30	
/XFEL/MOD23.DUMMIES	Mod-Dummies.csv	device0	A22.L3	Mod for Kryo	single	30	
/XFEL/MOD24.DUMMIES	Mod-Dummies.csv	device0	A23.L3	Mod for Kryo	single	30	
/XFEL/MOD25.DUMMIES	Mod-Dummies.csv	device0	A24.L3	Mod for Kryo	single	30	
/XFEL/MOD26.DUMMIES	Mod-Dummies.csv	device0	A25.L3	Mod for Kryo	single	30	
/XFEL/MOD01.FAST_CHANNEL	Mod-FastChannelTr	device0	GUN.I1	Mod for Kryo	single.SPECTRUM	2000	SCHEDULE|MONOTONIC
/XFEL/MOD02.FAST_CHANNEL	Mod-FastChannelTr	device0	A1.I1	Mod for Kryo	single.SPECTRUM	2000	SCHEDULE|MONOTONIC
/XFEL/MOD03.FAST_CHANNEL	Mod-FastChannelTr	device0	A2.L1	Mod for Kryo	single.SPECTRUM	2000	SCHEDULE|MONOTONIC
/XFEL/MOD04.FAST_CHANNEL	Mod-FastChannelTr	device0	A3.L1	Mod for Kryo	single.SPECTRUM	2000	SCHEDULE|MONOTONIC

Can supply a property list !

SPECTRUM array type => not an MCA

Specific options

Combobulat

- Demo …