

# Webinar Q&A: How Moving Averages Can Help Enhance Quality Control

Question 01:	Can the Moving Average software be used in conjunction with
	other middleware like CentraLink?

Yes, if the middleware is connected to Instrument Manager. We have many customers that connect their Beckman Remisol, Siemens CentraLink, etc. through Instrument Manager and the instruments connected to the other middleware can be monitored with Moving Averages / Moving Medians.

If your other middleware is not currently interfaced through Instrument Manager and your other middleware system has the ability to transmit results through more than one port or interface, you can connect Instrument Manager and have Moving Averages / Moving Medians monitor the results and send notifications when you have a shift or drift in your results production.

Question 02:	What is the minimum [number of results] for each data point you
	could use? Your example you have five results equal one data
	point.

It is user-definable. It can be 1, it can be 437 – you define it within the protocol for that series of instruments, for that assay. You can even monitor the same assay via different protocols with different settings.

Question 03:	Can this be used along with the XBar-b (Bull's Algorithm) on
	hematology analyzer?

Yes. This module allows you to monitor all your hematology instruments simultaneously on one Levy-Jennings chart if you choose providing you a consolidated view of all your instruments performance across your enterprise.

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Question 04:	What is the minimum data points you need to use to calculate
	the moving average target limits for it to be valid?

The Moving Averages / Moving Medians module allows you to define how many data points you want to use for a particular assay. So the followup question that is often asked is how do I figure out what I should set N to be? Several of our customers have used Dr. Cembrowski's article - Assessment of "Average of Normals" Quality Control procedures and Guidelines for Implementation as a guide (citation below).

The other point to note is if you do not know what your initial target mean and standard deviation values should be, let Moving Averages module determine those values for you. Define the protocol with the desired filtering for specimens you want in the calculation, then use the 'Automatically Calculate Target Mean and Target SD" option to evaluate your patient population and calculate your initial values.

## Citation:

Assessment of "Average of Normals" Quality Control procedures and Guidelines for Implementation, Cembrowski, Chandler, and Westgard, The American Journal of Clinical Pathology 81:4 pp.492-497 (1984)

Question 05:	How do we register or find information regarding getting started
	sessions?

Go to imtraining.datainnovations.com and look for the section titled "Getting Started with Moving Averages". The dates are posted and there is a link to register for a free session. You can see how you can get started monitoring your laboratory's performance in under an hour.

Question 06:	Does a connection for Moving Averages show up on the status
	window like an instrument connection?

No, it is its own module. The moving averages / moving medians protocols that you defined are viewable in the Moving Averages Desktop.

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**Question 07:** How does a user get to moving average desktop?

Via the main menu in the drop down menu titled "MA". From that drop down menu you can select Moving Averages Desktop. You can also use a web browser to access the Moving Averages Desktop. For more information on how to access it by a browser, see the Moving Averages User Manual.

**Question 08:** *Is your software compatible with Roche middleware?* 

Yes, Roche is offering Moving Averages as part of their middleware solution. Contact your Roche account representation for more details.

**Question 09:** Can you use this with Bio Rad Unity program and with an existing DI?

Absolutely. Moving Averages / Moving Medians supplements your overall Quality Assurance program and can be used with Bio Rad Unity Real Time, Thermo LabLink XL or any of the other quality control systems Instrument Manager can integrate with.

**Question 10:** What is the cost?

The Moving Average module is \$3,000 to provide monitoring for all instruments connected to Instrument Manager, even for instruments connected to another middleware via Instrument Manager. You can also purchase supplemental algorithms to add to the compendium of algorithms to use. You do have to be on v8.10 or above to support Moving Averages and v8.12.20 or above to support supplemental algorithms.

**Question 11:** Many automation systems have a middleware that are used for autovalidation. Can DI work with moving averages between LIS and Manufacturers middleware?

Yes, if the other middleware is connected through Instrument Manager. When Moving Averages / Moving Medians detects a shift or drift in one of more instruments or assays, a notification can be sent to users identifying which instrument and which assay. In addition, some customers also monitor it in real-time via a large screen monitor (TV) in the different workareas.

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Question 12:	DI is the interface [engine] for Epic Beaker. [In order to
	interface] Centralink (Siemens middleware) to Epic Beaker it
	must be connected to DI. If autovalidation is done in CentraLink
	can DI hold results with patient moving averages failures?

You could. On those occasions when Moving Averages / Moving Medians in Instrument Manager detects a violation, Instrument Manager can notify users that it had a violation on a specific instrument and a specific assay and Instrument Manager can start holding any specimen from that specific instrument with that specific assay or start holding only that test from that specific instrument.

The user could resolve the analytical issue and then decide what do with the tests or specimens that had that violation.

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