

NVNA Users' Forum December 3, 2003:

“Software: What do users want their LSNA (MTA, ...) control software to do?”

Moderated by Wendy Van Moer, notes by Kate Remley

Original question: What are limitations on existing software? As a user, what would you like your software to do that it doesn't do currently?

A short poll showed that 10 people in our discussion group use LSNA (NVNA), 3 use MTA, and 4 use oscilloscopes.

The first discussion point was on User Interface (U.I.):

Jan Verspecht proposed that there is no reason for a U.I. for researchers. Non-research people may need GUI (Graphic User Interface), though.

Steve Pepper said that he was frustrated by the difficult U.I. for the MTA. He would prefer having access to the guts of the hardware.

Don DeGroot commented that he repeatability can be difficult using the standard LSNA notebook format: The notebooks are easy to change, corrupting your original file. Would a change-tracker be possible?

Dylan Williams felt that the U.I. should make the state of the instrument as accessible as possible. Right now it is difficult to tell what your measurement looks like and what you need to do next.

Daan Rabijns asked whether people were comfortable having the software make decisions for them or not?

Jan Verspecht and Christopher Silva commented that the MTA software decides too much for you. For example, if you want to change the sampling rate, other parameters are affected. This is a negative.

Steve Pepper suggested a “power user” button on the instrument that would give users who so desired more access to settings, while allowing general users to rely more on the U.I. for set-up.

Doug Rytting concurred. He suggested a simple LSNA demo routine for taking a quick look at features, and then having the instrument ask you for each feature whether you would like to go deeper into details on that feature.

Gary Simpson agreed, commenting that sometimes researchers want to take a quick look at a feature too.

Marc Vanden Bossche agreed: provide basic U.I. for high level work, then connect with your tools through GPIB.

Steve Kenney pointed out that he doesn't want to have to use GPIB always, though.

The discussion then turned toward more general software topics:

Jeff Jargon mentioned that he would like to have more feedback from the instrument during calibrations.

Marc Vanden Bossche pointed out that there is a command available during cal to check the connection to the DUT that he could explain if desired.

Dominique Schreurs brought up the lack of adequate documentation for users of the LSNA.

Marc Vanden Bossche said it is coming soon.

Jan Verspecht mentioned that the Mathematica code used to control the LSNA was written for development purposes only, but in the end it was provided to the users. This was not intentional. He pointed out that Mathematica is very fast, however. One nice thing about Mathematica is that one can easily add extra routines like modulation.

Doug Rytting asked whether it was possible to make a better Mathematica code to address the issues mentioned above: tracking changes, recreating operating states, finding out about current state.

Don DeGroot said that the code used to control the LSNA from the VUB is nice since you track changes in a database containing the state of the instrument during each measurement.

Wendy Van Moer mentioned that the state of the instrument is recorded in the database and can be used later.

Chris Liu asked whether the Maury version of the LSNA would keep the Mathematica code?

Marc Vanden Bossche said that they would keep the fundamental base as Mathematica code and use API to the outside, for example, LabView.

Chris Liu asked whether it would support ActiveX?

Marc said: Yes and No. The interface is C-callable. This means that one could write a layer between ActiveX and the DLL library.

Wenhua Dai asked how many software versions were available.

Marc Vanden Bossche said really only one: the Mathematica code is used in the commercial version. But, he pointed out, the VUB uses their own software to control the instrument.