Information Classification:
NOT CLASSIFIED
RE: PA Compression Test Beta 1.5.3
Jerome Sirois
to:
Nick.Lalic@rsa.rohde-schwarz.com
01/08/2016 08:20 AM
Cc:
"Greg.Bonaguide@rsa.rohde-schwarz.com", Korne Vennema, Michael Guyonnet, "Mike.Leffel@rsa.rohde-schwarz.com", "Wayde.Marshall@rsa.rohde-schwarz.com"
Hide Details
From: Jerome Sirois <jerome.sirois@macom.com> Sort List...
To: "Nick.Lalic@rsa.rohde-schwarz.com" <Nick.Lalic@rsa.rohde-schwarz.com>,
Cc: "Greg.Bonaguide@rsa.rohde-schwarz.com" <Greg.Bonaguide@rsa.rohde-schwarz.com>, Korne Vennema <korne.vennema@macom.com>, Michael Guyonnet <michael.guyonnet@macom.com>, "Mike.Leffel@rsa.rohde-schwarz.com" <Mike.Leffel@rsa.rohde-schwarz.com>, "Wayde.Marshall@rsa.rohde-schwarz.com" <Wayde.Marshall@rsa.rohde-schwarz.com>

3 Attachments
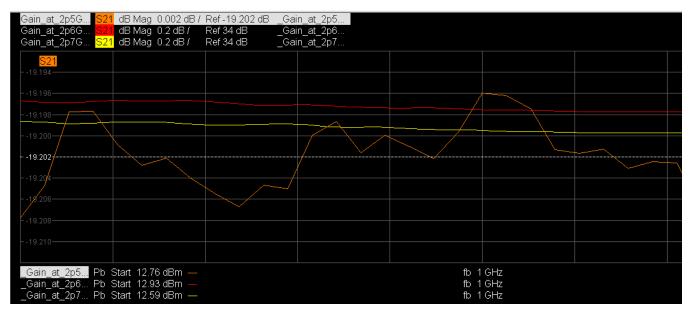
Bogus.png Bogus_Data.zip.txt

Hello Nick,

I hope you are making good progresses in improving the application. So yesterday, Greg was here and we managed to get everything going using Pulse CW, so that is good news.

However, we found an intermittent bug along the way. It was the first time I was observing the following, and I am wondering if it has something to do with going to Pulse CW or if it is just a pure coincidence.

When trying to plot the data (Gain over Pout in this case), it seems like sometimes the data that is sent to the curve is bogus. See the attached screen capture :

All three curves should be in the 34dB range for gain, but the one labeled Gain_at_2p5GHz is around -19dB. If I remove it and try to put it back, sometimes it comes back bogus again, and sometimes if comes up right, it is very random. If I export the Raw data file, it shows 34dB gain, so the VNA acquisition is right, but the data display is wrong.

Also, another strange behavior. If I try to change the plot from Pout X-axis to Frequency X-axis, when I click on plot, it first deletes the figure. I have to remeasure one more time and click plot one more time to get the instrument to display the curve.

Besides, we are somewhat progressing on the application, but it still has many bugs. We were hoping to get something more ready for December 31st. When do you think you can come up with a least something similar to version 1.5.4, but with most of the bugs resolved in the display?

I will put together a spreadsheet of all the improvements we discussed over the past month so it makes it easier to track the progress of the application.

Regards,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Wednesday, January 06, 2016 10:03 PM
To: Jerome Sirois
Cc: Greg.Bonaguide@rsa.rohde-schwarz.com; Korne Vennema; Michael Guyonnet; Mike.Leffel@rsa.rohde-schwarz.com; Wayde.Marshall@rsa.rohde-schwarz.com
Subject: Re: PA Compression Test Beta 1.5.3

Jerome,

It is the same version you have, version 1.5.4. I didn't have to make any changes, I merely confirmed that it works.

I will talk to Greg and make sure we are on the same page.

- Nick

Sent from my iPhone

On Jan 6, 2016, at 6:56 PM, Jerome Sirois <jerome.sirois@macom.com> wrote:

Hello Nick,

So just for my information, the version 1.5.4 is running in pulse, or did you come up with an even newer version?

I haven't yet set it up myself, but Greg is very experienced on that topic, and he will help us on that. He will be in our lab tomorrow morning to walk us through some of these topics. We would surely want to have some documentation at the end, for future reference. I'll also take notes from Greg's input tomorrow. Technically, the two of you should set up the instrument in pulse the same way.

We normally set the pulse from 10 to 20 us pulse width, 10% duty cycle.

Keep us posted on your progresses.

Thanks,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Wednesday, January 06, 2016 6:41 PM
To: Jerome Sirois
Cc: Greg.Bonaguide@rsa.rohde-schwarz.com; Korne Vennema; Michael Guyonnet; Mike.Leffel@rsa.rohde-schwarz.com; Wayde.Marshall@rsa.rohde-schwarz.com
Subject: RE: PA Compression Test Beta 1.5.3

Jerome,

I have a pulsed power setup working now and, as anticipated, my utility was able to measure pulsed power. This capability is handled by the ZVA firmware transparently, which is very convenient from a programming perspective.

As far as setting up pulsed power and performing a power cal: there were some nuances that I was not aware of beforehand. I am curious: have you set this up with our instruments yet? And if not, would it help to have some specific documentation? I ask because I had to ask around for help to get this set up, and maybe you would benefit from the information I gathered.

Also: can you remind me what your pulse settings are? As with the frequency and power sweep settings, I want to use a setup that is representative of what you are doing, so my user experience is the same.

Now that pulsed power operation is verified, I will get back to the other items on our list.

Thanks!

Best Regards,
Nick Lalic

<image001.jpg>	**Nick Lalic** VNA Software Developer Mobile: +1 424-200-2846 E-Mail: Nick.Lalic@rsa.rohde-schwarz.com Website: http://www.rohde-schwarz.com/ R&S®ZNB and R&S®ZNC: General Purpose Network Analyzers

From: Jerome Sirois <jerome.sirois@macom.com>,
To: "Nick.Lalic@rsa.rohde-schwarz.com" <Nick.Lalic@rsa.rohde-schwarz.com>,
Cc: "Greg.Bonaguide@rsa.rohde-schwarz.com" <Greg.Bonaguide@rsa.rohde-schwarz.com>, Korne Vennema <korne.vennema@macom.com>, Michael Guyonnet <michael.guyonnet@macom.com>, "Mike.Leffel@rsa.rohde-schwarz.com" <Mike.Leffel@rsa.rohde-schwarz.com>, "Wayde.Marshall@rsa.rohde-schwarz.com" <Wayde.Marshall@rsa.rohde-schwarz.com>
Date: 01/05/2016 02:08 PM
Subject: RE: PA Compression Test Beta 1.5.3

Hello Nick,

Yes, I had a happy holiday, thanks. It was good to rest for a while.

Regarding the file export :

-      Using real commas in the file instead of space is more convenient. I allows to open the file in excel using a double click instead of reformatting data. So it would be nice to have commas.
-      Could we merge all three files (Settings, Fsweep and Psweep) together? From there, we will work our way through the data. Just provide one header line between sections to specify we've changed section in the file. In the end, I am mostly interested in the content of these files and not so much in the bundle of S2P files.
-      Could we add pulse definition in the settings.
-      Just to confirm, S12 and S22 are meaningless in one path two ports mode?
-      What is the exact definition of Pin?
o   Is it source power or power delivered to the DUT?
o   So are we measuring Transducer Gain or Power Gain?
-      Can we also add the Phase of Pout in a column next to Pout?

If you feel confused about all my comments and remarks, we can have a phone call tomorrow to discuss these points in details.

Thanks,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Monday, January 04, 2016 4:58 PM
To: Jerome Sirois
Cc: Greg.Bonaguide@rsa.rohde-schwarz.com; Korne Vennema; Michael Guyonnet; Mike.Leffel@rsa.rohde-schwarz.com; Wayde.Marshall@rsa.rohde-schwarz.com
Subject: RE: PA Compression Test Beta 1.5.3

Jerome,

Hope you had a happy holiday and got some well-needed rest. Back to work :-)

Yes, I have your comments. I also look forward to the result of your validation of the GCA-like CSV file.

The big difference in my version of the CSV file is that I am using space-delimitors rather than commas (and space). To be honest, this was easier for me to implement in C++\Qt with the existing libraries, but of course I can add the commas if necessary.

After I work through your feedback I will provide comments and another version. More to come, soon.

Best Regards,
Nick Lalic

<image001.jpg>	**Nick Lalic** VNA Software Developer Mobile: +1 424-200-2846 E-Mail: Nick.Lalic@rsa.rohde-schwarz.com Website: http://www.rohde-schwarz.com/ R&S®ZNB and R&S®ZNC: General Purpose Network Analyzers

From: Jerome Sirois <jerome.sirois@macom.com>
To: "Wayde.Marshall@rsa.rohde-schwarz.com" <Wayde.Marshall@rsa.rohde-schwarz.com>,
Cc: "Greg.Bonaguide@rsa.rohde-schwarz.com" <Greg.Bonaguide@rsa.rohde-schwarz.com>, Korne Vennema <korne.vennema@macom.com>, Michael Guyonnet <michael.guyonnet@macom.com>, "Mike.Leffel@rsa.rohde-schwarz.com" <Mike.Leffel@rsa.rohde-schwarz.com>, "Nick.Lalic@rsa.rohde-schwarz.com" <Nick.Lalic@rsa.rohde-schwarz.com>
Date: 01/04/2016 11:52 AM
Subject: RE: PA Compression Test Beta 1.5.3

Hello Wayde,

Most of our comments were sent in a PDF file on 12/23/2015. They relate to version 1.5.3, but version 1.5.4 only improvement is the data export tool.
Nick probably has enough feedbacks to work with at this time, and I will follow up with comments on the data export tool shortly.

Regards,

Jerome

From: Wayde.Marshall@rsa.rohde-schwarz.com [mailto:Wayde.Marshall@rsa.rohde-schwarz.com]
Sent: Monday, January 04, 2016 2:36 PM
To: Jerome Sirois
Cc: Greg.Bonaguide@rsa.rohde-schwarz.com; Korne Vennema; Michael Guyonnet; Mike.Leffel@rsa.rohde-schwarz.com; Nick.Lalic@rsa.rohde-schwarz.com
Subject: RE: PA Compression Test Beta 1.5.3

Hi Jerome,

I believe Nick was waiting for your review and input on his latest version he sent a few weeks back (I believe its version 1.5.4 you referred to). I know you guys have been out of the office over the holiday period. Once you compile your teams comments, get them back to Nick and we can tweak the program further.

Nick can chime in if I've missed anything but I believe that is where we stand.

Wayde Marshall
Account Manager
Rohde & Schwarz USA, Inc.

,
Mobile: +1 508-789-6869
E-Mail: Wayde.Marshall@rsa.rohde-schwarz.com
Website: http://www.rohde-schwarz.com/

From: Jerome Sirois <jerome.sirois@macom.com>
To: "Nick.Lalic@rsa.rohde-schwarz.com" <Nick.Lalic@rsa.rohde-schwarz.com>,
Cc: Michael Guyonnet <michael.guyonnet@macom.com>, "Wayde.Marshall@rsa.rohde-schwarz.com" <Wayde.Marshall@rsa.rohde-schwarz.com>, "Greg.Bonaguide@rsa.rohde-schwarz.com" <Greg.Bonaguide@rsa.rohde-schwarz.com>, "Mike.Leffel@rsa.rohde-schwarz.com" <Mike.Leffel@rsa.rohde-schwarz.com>, Korne Vennema <korne.vennema@macom.com>
Date: 01/04/2016 02:18 PM
Subject: RE: PA Compression Test Beta 1.5.3

Hello Nick,

Happy new year! So how is the software coming along?

On my end, I just tested version 1.5.4 earlier today, and I passed along the output file formats to some colleagues. I'll compile the comments and pass them over to you when we get them.

Let us know about your progress.

Thanks,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Wednesday, December 23, 2015 5:11 PM
To: Jerome Sirois
Cc: Michael Guyonnet; Wayde.Marshall@rsa.rohde-schwarz.com; Greg.Bonaguide@rsa.rohde-schwarz.com; Mike.Leffel@rsa.rohde-schwarz.com; Korne Vennema
Subject: Re: PA Compression Test Beta 1.5.3

I got it this time. Thanks for the feedback Jerome!

- Nick

Sent from my iPhone

On Dec 23, 2015, at 12:17 PM, Jerome Sirois <jerome.sirois@macom.com> wrote:
Hello Nick,

Please find attached a copy in PDF this time. Let me know if this works.

If not, we will find another solution.

Regards,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Wednesday, December 23, 2015 2:09 PM
To: Jerome Sirois
Cc: Michael Guyonnet; Wayde.Marshall@rsa.rohde-schwarz.com; Greg.Bonaguide@rsa.rohde-schwarz.com; Mike.Leffel@rsa.rohde-schwarz.com; Korne Vennema
Subject: Re: PA Compression Test Beta 1.5.3 <R&S Watchdog Security Check: denied Attachment violation detected in a Mail sent to you>

... I think a PDF version of the ppt would also work.

- Nick

Sent from my iPhone

On Dec 23, 2015, at 8:43 AM, Jerome Sirois <jerome.sirois@macom.com> wrote:
R&S Watchdog Security Check has detected a **denied attachment**

in the following e-mail sent to you:

Subject: RE: PA Compression Test Beta 1.5.3
From: Jerome Sirois <jerome.sirois@macom.com>
Date: 12/23/2015 04:42:40 PM GMT
Jobname: RS - Denied Specific Attachments incoming **Server:** RSA12/RSA (for support purposes only)

Our Mail-Policy does not allow to send/receive executable attachments.
You still got the mail but without the executable attachments.

Please inform the author of the mail about the restriction and about the recommended alternative Secure File Transfer.
(see http://intranet.rsint.net/live/rs/intranet/rsdisplay,id,450,nodeid,450,_language,en.html for further details)

Thank you.

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Hello Nick,

So I tested version 1.5.3 of the software yesterday. Sorry I couldn't test the latest one, and I will be out of office until January 4th after that, so unable to run more tests.

Overall feelings are very positive, still a few bugs here and there that I highlighted in the attached document. Overall, the top priorities still are :

- File export (which I believe is already taken care of)
- Pulse CW measurement
- Speed
- Compact GUI

Bug fixing can come later as none of them really are preventing us from using the application.

Let me know if you have questions. I will still be available today, but then I will disappear for a week.

Regards,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Monday, December 21, 2015 2:51 PM
To: Jerome Sirois
Cc: Michael Guyonnet; Wayde.Marshall@rsa.rohde-schwarz.com; Greg.Bonaguide@rsa.rohde-schwarz.com; Mike.Leffel@rsa.rohde-schwarz.com
Subject: Re: PA Compression Test Beta 1.5.3

Hey Jerome,

You can run it without a power cal, just keep in mind that the Pin, Pout values may be off, particularly if you add any attenuation to the setup.

- Nick

Sent from my iPhone

On Dec 21, 2015, at 7:35 AM, Jerome Sirois <jerome.sirois@macom.com> wrote:

Hello Nick,

So if I read you well, I absolutely need a Power cal to run the application. I just realized all my power meters are gone to the other lab.

Let me know if it is the case, as I will try to move quick to the other site tomorrow in order to run the test.

Thanks,

Jerome

From: Nick.Lalic@rsa.rohde-schwarz.com [mailto:Nick.Lalic@rsa.rohde-schwarz.com]
Sent: Monday, December 21, 2015 8:56 AM
To: Jerome Sirois
Cc: Michael Guyonnet; Wayde.Marshall@rsa.rohde-schwarz.com; Greg.Bonaguide@rsa.rohde-schwarz.com; Mike.Leffel@rsa.rohde-schwarz.com
Subject: PA Compression Test Beta 1.5.3

Jerome,

As we discussed last week, here is another interim version of the PA Compression Test software.

It includes the following:
- Thorough testing of the plots feature(s)
- Plots vs Measured Pin (reinterpolated, as we discussed)
- Plots vs Pout (reinterpolated)

Because the application now uses the measured Pin value, a power cal of the port 1 source and the port 1 reference receiver (what AGC calls "R1") is required. Any attenuation or loss due to couplers must be embedded into this power cal. If you have any questions about how to perform this I can walk you through it over the phone.

At this point, you should be able to compare results from this application (at least on-screen) to Agilent GCA.

Here is a link to download the installer. Copy it onto the instrument and run to install. It should be straightforward. There is no need to uninstall the previous version; it will upgrade automatically. If a permissions screen pops up and asks you for a password, and you haven't set one yourself, it is probably the factory default ("894129").

https://cloud.rs-us.net/public.php?service=files&t=4e256918725334cff1e04eaf39298a2a

I still have the following software development tasks to complete:
- Export GCA-compatible CSV File
- Create less repetitive, compact version of the GUI for quick tests
- Improve speed:
* Upgrade the instrument connection from VXI-11 to High-Speed LAN Instrument Protocol (HiSLIP)
* Compress SCPI commands into as few writes as possible

Additionally, I am still working on setting up pulsed RF tests.

In the next couple days, I will send you another update with the following:
- Export GCA-Compatible CSV File
- Mockup of proposed "compact" GUI, for your approval

Best Regards,
Nick Lalic

<image001.jpg>   **Nick Lalic**

VNA Software Developer
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Website: http://www.rohde-schwarz.com/

R&S®ZNB and R&S®ZNC: General Purpose Network Analyzers

>>> ZVA-GCA_Evaluation.pptx: Attachments removed. <<<
<ZVA-GCA_Evaluation.pdf>