

## JUSTIFICATION FOR SOLE SOURCE/BRAND NAME SOLE SOURCE <\$150K

<b>PO Number:</b>		
The effort listed on this form is for: ( <u>please mark one</u> ):	<input checked="" type="checkbox"/> Supply	<input type="checkbox"/> Service
The material and/or service listed on this form is ( <u>please mark one</u> ):	<input type="checkbox"/> Sole Source	<input checked="" type="checkbox"/> Brand Name

**Restricted to the following source or manufacturer:**

- **Manufacturer/Source:**
  - Rohde & Schwarz; SMW200A, arbitrary waveform generator properly configured for two channel operation, hereafter referred to the "AWG".
  
- **POC and Phone Number:**  
 Steve Lizcano  
 Rohde and Schwartz USA, Inc.  
[steve.lizcano@rsa.rohde-schwarz.com](mailto:steve.lizcano@rsa.rohde-schwarz.com),  
 626.695.4868  
[www.rohde-schwarz.us](http://www.rohde-schwarz.us)

**Description of the item(s) or service(s) required and the estimated cost(s):**

**Table 1: Component List for Desired AWG**

Item Description	Quantity	Unit of Measurement
SMW200A	1	EACH
SMW-B103	1	EACH
SMW-B13XT	1	EACH
SMW-B9	2	EACH
SMW-K62	1	EACH
SMW-B20	1	EACH
SMW-K22	1	EACH
SMW-K23	1	EACH
SHIPPING	1	EACH

1. List the Required Delivery Date (RDD) or Period of Performance (POP):
  - a. RDD – As soon as possible
  - b. POP – current through Sep 30, 2017

2. Specify characteristics of the material or service that limit the availability to a sole source/brand product (unique features, function of the item, etc.). Describe in detail why only this source/brand can furnish the requirements to the exclusion of other sources/brands.
  - a. AWG should have prebuilt pulse radar modes and basic communication modulations schemes (i.e. QAM, QPSK, etc) that can be selected from the user interface. Additional programming in MATLAB and/or other software that is used to then load the radar and comms waveforms into the AWG is not desired. Similarly, the AWG should have the capability to add various forms of white noise to the combined RF output of the two arbitrary channels before providing the final RF output to our test receiver. This white noise addition should also be selectable from the user interface, again to reduce time in developing the RF output so our research team can focus on receiver design. Our desired signal flow path can be seen in Figure 1.

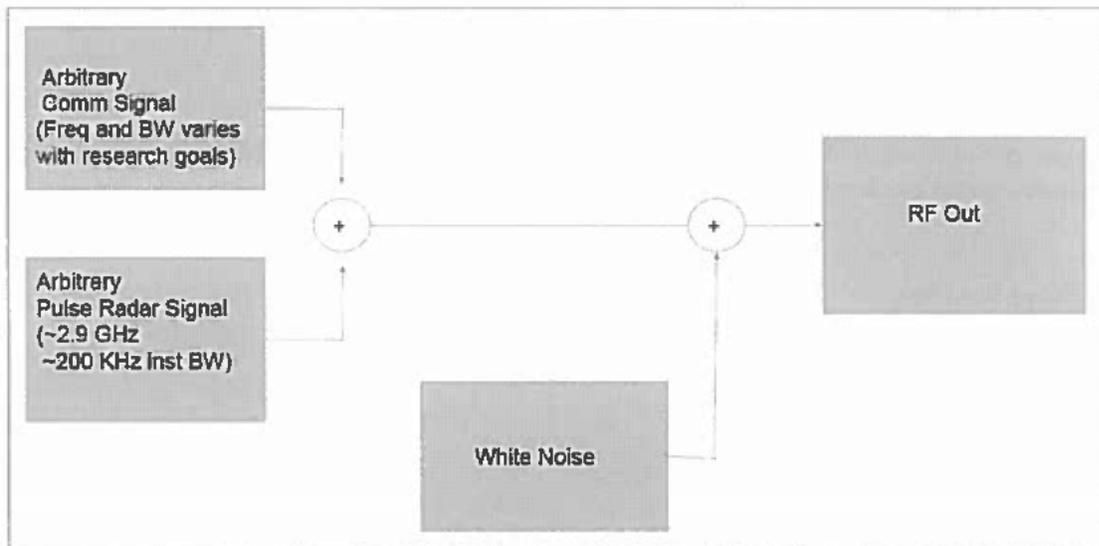


Figure 1: Desired Signal Flow in the AWG

- b. Only the Rohde & Schwartz SMW200A properly configured with the components from Table 1 provide the capabilities described in paragraph 2.a. Specifically, every other device found during extensive market research did not allow the creation of two signal paths for basic waveforms via the user interface. All other models required additional coding in other software that was then loaded into the AWG. Additionally, the capability of the SMW200A to add in various forms and levels of noise via the user interface without reprogramming the two primary waveforms is unique to the Rohde & Schwartz models.
3. Indicate if the requested material or service represents the minimum requirements of the Government.
  - a. The requested material is THE MINIMUM requirement of the government. By fulfilling this minimum requirement the NPS research team will be able to focus on the primary purpose of our proposal that designs a receiver for the RF output form this piece of test equipment.
4. Indicate if the material or service must be compatible in all aspects (form, fit, and function) with existing systems presently installed/performing. Describe the equipment/function you have now and how the new item/service must coordinate, connect or interface with the existing system.

- a. This brand name justification is NOT BASED ON EXISTING SYSTEMS. This is new research at NPS and does not rely on compatibility with existing systems.
5. Does a patent, copyright or proprietary data limit competition?
  - a. No.
6. Are the items "direct replacement" parts/components for existing equipment? If so, provide the information about the Next Higher Assembly (NHA)/equipment which the replacement parts are going into (e.g., description, model, part number, Original Equipment Manufacturer (OEM), etc.).
  - a. This brand name justification is NOT BASED ON EXISTING SYSTEMS. This is new research at NPS and does not rely on compatibility with existing systems.
7. Provide any additional information to support a sole source/brand name sole source procurement. The rationale must justify "either" substantial duplication of cost to the Government that is not recovered through competition or unacceptable delays in fulfilling the mission of the agency.
  - a. The NPS research will present our results to sponsors that also use the Rohde & Schwartz equipment. The continuity in test procedures will allow them to quickly verify and use our results.

**TECHNICAL OR REQUIREMENTS CERTIFICATION**

I CERTIFY THAT THE STATEMENTS CHECKED, AND INFORMATION PROVIDED ABOVE ARE COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THE PROCESSING OF THIS SOLE SOURCE/BRAND NAME SOLE SOURCE JUSTIFICATION PRECLUDES THE USE OF FULL AND OPEN COMPETITION.

**CONTRACTING OFFICER APPROVAL:**