TechScout | Supplier RFI

gdmissionsystems.com/ISN

20-013 – Remote Terminal Validation Testing

	Information we need from your organization
Title	Remote Terminal Validation Testing
Description	General Dynamics Mission Systems is seeking a supplier to perform Remote Terminal (RT) Validation testing per MIL-HDBK-1553. The testing will be performed at a General Dynamics facility in Bloomington, MN in Q4, 2020.
Focus Area(s)	Testing will include the following MIL-HDBK-1553 sections: 5.1 Electrical Tests 5.1.1 Output Characteristics 5.1.1.1 Amplitude 5.1.1.2 Risetime/Falltime 5.1.1.3 Zero Crossing Stability 5.1.1.4 Distortion, Overshoot and Ringing 5.1.1.5 Output Symmetry 5.1.1.6 Output Noise 5.1.1.7 Output Isolation 5.1.1.8 Power On/Off 5.1.1.8.1 Power On/Off Noise 5.1.1.8.2 Power On Response 5.1.1.9 Terminal Response Time 5.1.1.10 Frequency Stability 5.1.2 Input Characteristics 5.1.2.1 Input Waveform Compatibility Y 5.1.2.1.1 Zero Crossing Distortion 5.1.2.1.2 Amplitude Variations 5.1.2.1.3 Rise and Fall Time 5.1.2.1.3.1 Trapezoidal 5.1.2.1.3.2 Sinusoidal 5.1.2.2 Common Mode Rejection 5.1.2.3 Input Impedance 5.2 Protocol Tests 5.2.1 Required Remote Terminal Operation 5.2.1.1 Response To Common Words 5.2.1.1.1 RT Response To Command Words 5.2.1.1.2 RT-RT Response To Command Words 5.2.1.2 Intermessage Gap 5.2.1.2.1 Minimum Time 5.2.1.2.2 Transmission Rate 5.2.1.3 Error Injection 5.2.1.3.1 Parity 5.2.1.3.1.1 Transmit Command Word 5.2.1.3.1.2 Receive Command Word 5.2.1.3.1.3 Receive Data Words 5.2.1.3.2 Word Length 5.2.1.3.2.1 Transmit Command Word 5.2.1.3.2.2 Receive Command Word 5.2.1.3.2.3 Receive Data Words 5.2.1.3.3 Bi-Phase Encoding 5.2.1.3.3.1 Transmit Command Word 5.2.1.3.3.2 Receive Command Word 5.2.1.3.3.3 Receive Data Words 5.2.1.3.4 Sync Encoding 5.2.1.3.4.1 Transmit Command Word 5.2.1.3.4.2 Receive Command Word 5.2.1.3.4.3 Data Word 5.2.1.3.5 Message Length 5.2.1.3.5.1 Transmit Command 5.2.1.3.5.2 Receive Command 5.2.1.3.5.3 Mode Command Word Count Error 5.2.1.3.5.4 RT to RT Word Count Error 5.2.1.3.6 Contiguous Data 5.2.1.3.7 Terminal Fail-Safe 5.2.1.4 Superseding Commands 5.2.1.5 Required Mode Commands 5.2.1.5.1 Transmit Status 5.2.1.5.2 Transmitter Shutdown and Override 5.2.1.5.3 Reset Remote Terminal 5.2.1.6 Data Wrap-Around 5.2.1.7 RT to RT Timeout 5.2.1.8 Bus Switching 5.2.1.9 Unique Address 5.2.2 Optional Operation 5.2.2.1 Optional Mode Commands 5.2.2.1.1 Dynamic Bus Control 5.2.2.1.2 Synchronize 5.2.2.1.2.1 Synchronize (without data word) 5.2.2.1.2.2 Synchronize (with data word) 5.2.2.1.3 Initiate Self-Test 5.2.2.1.4 Transmit BIT Word 5.2.2.1.5 Selective Transmitter Shutdown and Override 5.2.2.1.6 Terminal Flag Bit Inhibit and Override 5.2.2.1.7 Transmit Vector Word 5.2.2.1.8 Transmit Last Command 5.2.2.2 Status Word Bits 5.2.2.2.1 Service Request 5.2.2.2.2 Broadcast Command Received 5.2.2.2.3 Busy 5.2.2.2.4 Subsystem Flag 5.2.2.2.5 Terminal Flag 5.2.2.3 Illegal Command 5.2.2.4 Broadcast Mode Commands 5.2.2.4.1 Broadcast Synchronize (without data words) 5.2.2.4.2 Broadcast Synchronize (with data words) 5.2.2.4.3 Broadcast Initiate Self-Test 5.2.2.4.4 Broadcast Transmitter Shutdown and Override 5.2.2.4.5 Broadcast Selective Transmitter Shutdown And Override 5.2.2.4.6 Broadcast Terminal Flag Bit Inhibit and Override 5.2.2.4.7 Broadcast Reset Remote Terminal 5.2.2.4.8 Broadcast Dynamic Bus Control 5.2.2.5 Error Injection Broadcast Messages 5.2.2.5.1 Parity: Bus Controller (BC)-RT Broadcast 5.2.2.5.1.1 Command Word Error 5.2.2.5.1.2 Data Word Error 5.2.2.5.2 Message Length, BC to RT Broadcast 5.3 Noise Rejection Tests

Keyword(s)	RT, Remote Terminal Validation Testing, MIL-HDBK-1553
Response Instructions & Date	**Responses needed ASAP** General Dynamics Mission Systems Innovation Sourcing Network (ISN) is seeking respondents to the following TechScout request. This TechScout request does not contain U.S. export controlled technical data or proprietary information, and is approved by General Dynamics Mission Systems for public release and is in the public domain. **Send email response including a capability brief to techscout@gd-ms.com** **TechScout responses should not contain any export controlled technical data or proprietary information.** *In your response, please identify whether you or your company are located outside the U.S. If located outside the U.S., please identify any home country export controls that will apply to your response. If located in the U.S., please identify whether your company employs non-U.S. manufacturing or design facilities, or foreign nationals in your response.* Any subsequent interaction between General Dynamics Mission Systems and a non-U.S. based TechScout respondent, or a U.S. based TechScout Respondent with non-U.S. manufacturing, design or foreign national employees must be reviewed and approved in advance for U.S. Export Compliance requirements by the General Dynamics Mission Systems Office of Import/Export Compliance prior to any such interaction. General Dynamics Mission Systems will not be responsible for, nor will it pay for any expense which may be incurred by the supplier in preparation of its TechScout response. Supplier acknowledges and agrees that this TechScout request does not commit General Dynamics Mission Systems to any course of action, including but not limited to, any purchase of supplier's products or services or any future involvement with supplier. The issuance of this request does not bind General Dynamics Mission Systems to accept or review any response, in whole or in part. Subsequent pursuit or action on the part of General Dynamics Mission Systems or the TechScout respondent may require the respondent to comply with aspects of the U.S. International Traffic in Arms Regulations (ITAR) or the U.S. Export Administration Regulations (EAR) including a need to register, or apply for or execute licenses or other authorizations. Firms or individuals from countries subject to U.S. sanctions are not eligible to participate in this TechScout request. (U.S. Sanctions information may be found at: https://www.treasury.gov/resource center/sanctions/Programs/Pages/Programs.aspx). These sanctions apply comprehensively to Iran, Syria, Sudan, Cuba, and North Korea. In addition, Firms or individuals that appear on the U.S. Government's Consolidated Screening List (available at http://export.gov/ecr/eg_main_023148.asp) are not eligible to participate in this TechScout request."
Questions	Email the Innovation Sourcing Network with any questions or required clarification at techscout@gd-ms.com.