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MTU Aero Engines

COM INTERFACE CONTROL DOCUMENT FOR

proDAS Test Procedure Remote Control

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1. INTRODUCTION

1.1 Purpose

1.1.1 The proDAS Test Procedure Remote Control (TP RC hereafter) COM Interface allows launching Test Procedure scripts from a VB Script or from any Windows application.

1.2 Scope

1.2.1 This document is intended for programmers of the proDAS VB scripts and applications using the COM interface(s) specified herein.

1.3 Applicable Documents

DB78060.5600	proDAS Test Procedures Components

1.4 Codes and Standards

ES78001.2620	Functional Requirements Document for ProDAS

1.5 Abbreviations and Definitions

COM	Component Object Model
DCOM	Distributed Component Object Model
DLL	Dynamic Link Library
GUI	Graphical User Interface
ICD	Interface Control Document
IDL	Interface Definition Language
MTA	Multithreaded Apartment
proDAS	Professional Data Acquisition System
RTE	Real Time Engine
STA	Single-Threaded Apartment
TP	Test Procedure
TP RC	Test Procedure Remote Control

VBS	Visual Basic Script

2. DESIGN

2.1 Introduction

2.1.1 The TP RC is a .NET based class library.

2.1.2 The TP RC is an In-process COM Server exposing the Dispatch Interface.

2.1.3 The TP RC COM Server uses the MTA threading model.

2.1.4 There can only be one instance of the TP RC for any client. Any attempt to create another instance of the control will fail.

2.1.5 The TP RC is not thread-safe.

2.1.6 The TP RC can be disabled via the RemoteControlEnabled parameter in the TP.config configuration file.

2.2 Interface `IRemoteClient`

2.2.1 General

2.2.1.1 The ProgID of this interface is proDASTp.RemoteClient.

2.2.1.2 Definition in IDL

```
[
  odl,
  uuid(F6DAE631-EA88-30DF-9D62-B49873B12F41),
  hidden,
  dual,
  oleautomation,
  custom(0F21F359-AB84-41E8-9A78-36D110E6D2F9,
    "proDASTp.RemoteClient")
]

interface _RemoteClient : IDispatch {
};
```

2.2.2 Design

2.2.2.1 This is a Dual and Automation interface.

2.2.3 Methods and Properties

2.2.3.1 Method RunTp

```
long RunTp([in] BSTR strTpName);
```

Argument Name	Description
strTpName	Registered Test Procedure name, as defined in the Macro Editor (case insensitive).
Return value	TP Remote Control status value: 0 – Succeeded, otherwise failed 1 – Invalid TP name 2 – TP is disabled 3 – Host is busy

2.2.3.1.1 Launches a proDAS Test Procedure. proDAS must be configured and scanning. The MgtGUI application must be running and have the Test Engine page opened. The target TP should be registered in the Macro Editor, otherwise error code 1 will be returned. The target TP should be enabled in the TP List, otherwise error code 2 will be returned. No other Test Procedures should be running at the moment, otherwise error code 3 will be returned. If the TP is started successfully the method will return when the TP is finished executing.

2.2.4 Method RunTp_Async

```
long RunTp_Async([in] BSTR strTpName);
```

Argument Name	Description
strTpName	Registered Test Procedure name, as defined in the Macro Editor (case insensitive).
Return value	TP Remote Control status value: 0 – Succeeded, otherwise failed 1 – Invalid TP name 2 – TP is disabled 3 – Host is busy

2.2.4.1.1 Launches a proDAS Test Procedure. proDAS must be configured and scanning. The MgtGUI application must be running and have the Test Engine page opened. The target TP should be registered in the Macro Editor, otherwise error code 1 will be returned. The target TP should be enabled in the TP List, otherwise error code 2 will be returned. No other Test Procedures should be running at the moment, otherwise error code 3 will be returned. The method will return immediately after the request has been processed in the server without waiting for the TP to finish.

2.2.5 Events Fired

2.2.5.1 This interface has no events.

2.2.6 Usage Conditions and Restrictions

2.2.6.1 The Management GUI application needs to be running and the Test Engine page of the Management GUI needs to be open in order for the TP RC COM server to be active and accepting client connections. If this is not the case, then a COM error will be reported when trying to create the TP RC object.

2.2.7 Persistent Data

2.2.7.1 The TP RC does not store any information about proDAS and/or the TP RC client application.

2.2.8 Example

2.2.8.1 VBS code launching a proDAS TP:

```
Option Explicit

Dim rc
Set rc = CreateObject("proDASTp.RemoteClient") ' COM error if
‘ proDAS ManagementGUI is not running or has not opened Test
‘ Engine page

Dim rcode
rcode = rc.RunTp_Async("Tesla Experiment")

Wscript.Echo "RetCode=" & rcode
```