November 30, 1999
Ref. No.: EOS/ETS-1130-C02

National Aeronautics and
Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

Attention: Mr. Willie Fuller
Code 581
Building 32, Room N212D

Subject: Contract No.: NAS9-98100
CSOC ETS Completion Form Task
EOSDIS Test System (ETS) Simulated CCSDS Telemetry Generator (SCTGEN) -- Delivery of the Patch Release 1.5.0a Software

Dear Mr. Fuller:

The CSOC contractor is pleased to deliver Patch Release 1.5.0a of the Simulated CCSDS Telemetry Generator (SCTGEN) of the ETS. Release 1.5.0a of SCTGEN provides solutions to three Discrepancy Reports (DRs). In addition, some of the GUI defaults have been modified to comply with workarounds provided for two other DRs.

Due to extenuating circumstances, DR ETS0336 could not be addressed in this patch.

The delivery package contains 5 attachments as listed below, describing the delivery contents, build instructions, resolved DRs, and release history. A completed Mission Systems Configuration Management (MSCM) form is included.

If you have any questions concerning this delivery, please call me at (301) 805-3010.

Sincerely yours,

James Kelly
SCTGEN Programming Lead

Delivery Package Reviewed by:

Estelle Noone
ETS CSOC SODA Task Leader

The following attachments contain the details of the SCTGEN software.

Attachment A - contains the instructions to build and install the software
Attachment B - contains a list of the resolved DRs
Attachment C - contains the release history summary matrix
Attachment D - contains a file name listing of the delivery contents
Attachment E - contains the Mission Systems Configuration Management (MSCM) form

Distribution: (* - Letter Only)

NASA	ATSC	Lockheed Martin	CSC
Harbaugh, R.*	Bradbury, T.*	Cordier, G.	Fernandes, V.*
Iona, G.*	Luo, C. *		Noone, E.
Johns, A.*			Parlock, W.
Kelly, A.			Polesel, A.
Ondrus, P.*			Swope, J.*
ESDIS Library	Unisys	Caelum	Walters, A.
			Task File
	Thompson, S.	Hettinger, C.	
		Holmes, D.	
		Kelly, J.	
	NYMA		
	Chomko, E.		

Attachment A — Release 1.5.0a Build Instructions

SCTGEN consists of two elements: (1) the SCTGEN Graphical User Interface, referred to as SCTGUI; and (2) the SCTGEN application software, referred to as SCTGEN. Instructions for building the complete system, SCTGEN Release 1.5.0a, step by step, are contained in the following sections.

A.1 Introduction

The patch release SCTGEN Release 1.5.0a consists of five source files, which are being delivered on tape media. The files "globals.tcl", "procREGION.tcl", and "winSCRIPT.tcl" will replace the files of the same name in the $HOME/sctgui1.5/source/tcl directory. The files "CCSDS_Unsegmented.hh" and "Unsegmented.cpp" will replace the files of the same name in the $HOME/sctgen1.5/CCSDS directory.

A.2 Build SCTGEN

1) Change to the $HOME/sctgen1.5/work directory.
2) For the SGI platform, type "source sgi_btiger.cmd", for all other platforms type "source btiger.cmd", to build the first portion of SCTGEN. This will take about 10 to 15 minutes and will generate warning messages.
3) For the SGI platform, type "source sgi_bsctgen.cmd", for all other platforms type "source bsctgen.cmd", to build the second portion of SCTGEN. This will also generate warning messages.
4) Change to the $HOME/sctgen1.5/work directory and type "cp sctgen ~/sctgui1.5/bin/*platform*.sctgen1.5" to rename the SCTGEN executable, where *platform* is sgi, hp, or sun.
5) Change to the $HOME/sctgui1.5/bin directory.
6) Type "rm sctgen" to remove the current executable.
7) Type "ln –s ./*platform*.sctgen1.5 sctgen" to create a link to the executable, where *platform* is sgi, hp, or sun.

*For the HP platform:
For steps 2 and 3, do not type the sgi prefix.
For steps 4 and 7, replace "hp" for "sgi", or something comparable to denote host platform.

*For the SUN platform:
For steps 2 and 3, do not type the sgi prefix.
For steps 4 and 7, replace "sun" for "sgi", or something comparable to denote host platform.

Note: The file names may not be exactly the same depending on the platform. For

example, different UNIX systems might have different header file extensions. Make sure that the correct files are replaced, otherwise, the changes will not take effect.

A.3 Supported platforms

Previous versions of SCTGEN have been built and tested using the environments listed below.

SUN platform:
- SunOS Generic Version 4.3 including C++ compiler for SUN UNIX.

HP platform:
- HP OS Version 9.0 including C++ compiler for HP UNIX.

SGI platform:
- IRIX Version 6.2 including standard CFRONT compatible C++ compiler.

Attachment B — Resolved Discrepancy Reports

This attachment reflects the DRs that were addressed with SCTGEN Release 1.5.0a. The DRs are listed in the table below by DR number, status, severity, subsystem name, short description, and related NCR number. A full description of each DR follows the summary table. Complete information on all DRs is maintained in the ESDIS Discrepancy Report Tracking Tool (DRTT), which can be accessed via the Internet at address http://iree.gsfc.nasa.gov/ddts/ (directly) or from the ESDIS Activities, Progress Reports and Schedules page at http://spsosun.gsfc.nasa.gov/ESDIShome.html.

Summary of Closed Discrepancy Reports

Critical(1)	Urgent(2)	Routine(3)
1	**0**	**2**

Status Definitions

N - New	A - Assigned Analysis	R - Assigned Resolution
D - Delivered	V - Verified	C - Closed
W - Withdrawn	P - Postponed	X - Duplicate

DR/IDR #	Status	Severity	Subsystem	Description	Related NCR
ETS0327	A	1	SCTGEN	Incorrect Secondary Header Format for GIRD Instrument Packet	
ETS0346	A	3	SCTGEN	Need Jan58 field added to TcCUC GUI display	
ETS0352	N	3	SCTGEN	Space Craft Default Should Be Changed to 154	

*****Total number DRs addressed=3

ETS0327

According to EOS Common Spacecraft Program ICD between PM-1 spacecraft and the EGS, Dated June 12, 1999 Rev. A. Has the following secondary header format for GIRD Instrument Telemetry PAckets (includes AIRS, AMSR-E, AMSU-A1 and A2, HSB and MODIS for PM-1)

Secondary header length 72 bits (fields are listed in the order they should appear in the GIRD secondary header)

CCSDS Flag 1 bit
Quicklook Flag 1 bit
User Flags 6 bits
Time Stamp 64 bits.

The current format in SCTGEN for the Secondary Header is:

Secondary Header length 72 bits (Fields listed in order they appear in secondary header)

Time Stamp 64 bits
Quicklook flag 1 bit
User flags 7 bits

ETS0346

According to CCSDS 301.0-B-2, the TcCUC timecode allows the user to select a user defined epoch time. The SCTGEN 2HDR TcCUC display does not contain the option for user to select the jan 1958 or a user defined epoch.

The 2HDR TcCUC display needs the Jan1958Epoch field added. Similar to the field on the 2HDR TcDAY display.

Note: the jan58() field may be manually entered in the script by the user.

ETS0352

The Space Craft ID for PM-1 is 154. Currently SCTGEN has the default S/C ID of 42. In support of PM-1 data generation the default S/C ID should be updated to 154.

Attachment C — Release History Summary Matrix

The attached Release History Summary Matrix reflects the SCTGEN Release 1.5.0a Delivery.

Release History Summary Matrix

SYSTEM:	SCTGEN							PAGE	1 OF 1
RELEASE NUMBER		1.0	1.1.0	1.2.0	1.3.0	1.4.0	1.5.0	1.5.0a	
DELIVERY DATE		3/3/97	5/27/97	8/25/97	2/27/98	6/26/98	9/10/99	11/30/99	
CONFIGURATION ITEM	CI NO.								
SCTGEN GUI	5.1	1.0	1.1.0	1.2.0	1.3.0	1.4.0	1.5.0	1.5.0a	
SCTGEN Application Software	5.2	1.0	1.1.0	1.2.0	1.3.0	1.4.0	1.5.0	1.5.0a	

Attachment D- Listing of Delivery Contents

Delivery is on one 4 mm magnetic tape. The contents of the tar tape are listed below. Sections D.1 and D.2 contain the file name listings for the SCTGEN GUI and SCTGEN application software, respectively.

D.1 SCTGEN GUI Patch Release 1.5.0a
Globals.tcl
ProcREGION.tcl
WinSCRIPT.tcl

D.2 SCTGEN Patch Release 1.5.0a
CCSDS_Unsegmented.hh
Unsegmented.cpp

Attachment E — Mission Systems Configuration Management Form

This attachment contains the completed Mission Systems Configuration Management (MSCM) form.

Mission Systems Configuration Management Form

1. ORIGINATOR	2. ORGANIZATION	3. PHONE	4. E-MAIL ADDRESS
James Kelly	CSOC	(301) 805-3010	James.Kelly@csoconline.com

5. ELEMENT	6. INSTALLATION PRIORITY	7. TRACKING NUMBER (Assigned by CM Office)
Other ======> SCTGEN	Routine	

8. SOURCE CHANGE REQUEST(S):

ETS DRB approved SCTGEN release for SMO DR closure.

9. APPROVALS

Element Manager _____ / /

Flight Ops Director _____ / /

Operations Manager _____ / /

10. DELIVERED SYSTEM (Check all that apply)

	Name	Version	Media Identification	Identification Date
☐ Hardware				
☒ Software	SCTGEN	R1.5.0a	4 mm tape	11/30/99
☐ Database				
☒ Documentation:				
Delivery Package		n/a	Via email	11/30/99
☐ Other				

11. CHANGE DESCRIPTION

SCTGEN 1.5.0a addresses three DRs and provides workarounds for two other DRs.

12. ATTACHMENT(S): Check if YES ☒

Description: SCTGEN 1.5.0a delivery package (cover letter with attachments) dated 11/30/99.

13. CM OFFICE USE

	Location (Bldg/Room)	Slot location(s)
Hardware	/	
Media	/	
Documentation	/	

Installation date ____/____/____ CM Office Signature _____

Form MSCM (970327)