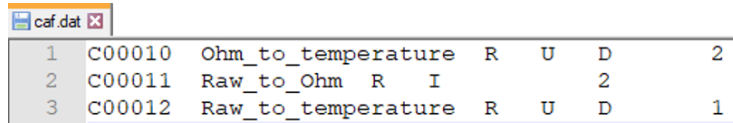


# 1 Appendix C: Export of the SimpleSAT SRDB data into MIB data exchange format

Once our SimpleSAT SRDB data is well defined, we aim here to illustrate how this data could be represented in a set of MIB-compliant files. For each important object we provide a snapshot of its representation in the MIB files. For the detail of each column, it is possible to refer to the SCOS-2000 ICD (<https://issues.cosmos.esa.int/solarorbiterwiki/download/attachments/23757668/MOC-applicable>)

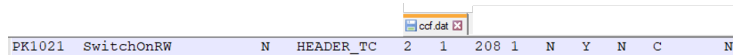
- Definition telemetry calibrations and their properties are depicted in Figure 1.



Line	ID	Parameter	Unit	Scale	Offset	Gain	Loss
1	C00010	Ohm_to_temperature	R	U	D	2	
2	C00011	Raw_to_Ohm	R	I		2	
3	C00012	Raw_to_temperature	R	U	D		1

Figure 1: Illustration of the content of the MIB **CAF** file

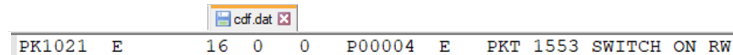
- Definition of the service 2 TC packet is depicted in Figure 2.



PKID	Service	Header	TC	2	1	208	1	N	Y	N	C	N
PK1021	SwitchOnRW	N	HEADER_TC	2	1	208	1	N	Y	N	C	N

Figure 2: Illustration of the content of the MIB **CCF** file

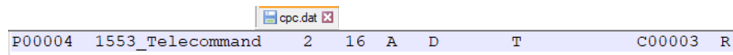
- Service 2 TC packet that references a parameter which embeds the instance of the Mil-Std-1553 TC encoded in hexadecimal is depicted in Figure 3.



PKID	Service	Header	TC	2	1	208	1	N	Y	N	C	N
PK1021	E	16	0	0	P00004	E	PKT_1553_SWITCH_ON_RW					

Figure 3: Illustration of the content of the MIB **CDF** file

- The parameter referenced by the service 2 TC packet and that embeds instances of Mil-Std-1553 TCs is depicted in Figure 4.



PKID	Service	Header	TC	2	1	208	1	N	Y	N	C	N
P00004	1553_Telecommand	2	16	A	D	T	C00003	R				

Figure 4: Illustration of the content of the MIB **CPC** file

- Definition of telemetry parameters along with their calibrations are depicted in Figure 5.

P00000	Filler	3	11		N	R		F	N						
P00001	RW_Temperature		degC	3	12			N	R		C00012	F	N	2	
P00002	RW_Status	1	0			S	R	C00002	F	N					
P00003	RW_Global_Status			3	14			N	R		F	N	N		
P00005	TC_PACKET_ID			3	12			N	R		F	N			
P00006	TC_PACKET_SEQ_CTRL			3	12			N	R		F	N			

- Definition of telemetry packets is depicted in Figure 6.

Figure 6: Illustration of the content of the MIB **TPCF** file