Annex 7 to the Contract - No. .... / .....

REPORT
COMMISSIONING, PUTTING INTO OPERATION AND SITE ACCEPTANCE TESTS

LOT 1 - AoIP transport equipment and accessories

Concluded today… /… / …… .., on the occasion of the commissioning works, commissioning/ putting into operation and on-site acceptance for the products: audio encoder, audio decoder, audio splitter, audio switch.

During the period of..... the acceptance tests were performed on the site .... of the above mentioned products by performing the tests in the attached form, for:
Annex A. Form about Commissioning and commissioning/ putting into operation
Annex B. Form about acceptance tests

Results of measurements and verifications in Annex A:
□ the measured parameters are within the values specified in the specifications books
□ the measured parameters do not fall within the values specified in the commissioning and putting into work form, with the following observations:
....
.....
the following actions will be taken:
.....

Results of measurements and verifications in Annex B:
□ the measured parameters are within the values specified in the specifications books
□ the measured parameters do not fall within the values specified in the form of acceptance tests, with the following observations:
....
.....
the following actions will be taken:
.....

List of participants:

S.N. Radiocommunications S.A.	(supplier name)
Name / signature	Name / signature
....	....
....	....
....	.....

Annex A. Commissioning and putting into operation form

Operation name	YES /NO	Notes
Check the installation of the equipment and the connections between them		
Configuration of all equipment for commissioning		
Checking the operation of the safety system: alarms, protections, switches		
Integration in NMS with SNMP protocol		

Annex B Form of site acceptance tests

Nr.Crt	Parameter / test name	Required value / imposed by specifications books		Observations
TECHNICAL REQUIREMENTS ENCODING EQUIPMENT				
1.1	ENCODER DIGITAL AES/EBU			
1.2	Hardware configuration - Type name - Interfaces			
1.3	Software configuration			
1.4	Installed licenses			
1.5	SFN (Single Frequency Network) integration			
1.6	Mountable in 19 inch type rack			
1.7	230V AC power supplies.			
1.8	Switch power supply.			
1.9	Operation on a single power supply			
1.10	Check operating temperature			
1.11	Number of XLR AES / EBU digital audio inputs			
1.12	Audio interface type, rack mounting			
1.13	Number of XLR connectors.			
1.14	Digital audio input level limits			
1.15	Electric ETH port number / type			
1.16	Minimum / max speed supported			
1.17	Configure ethernet interfaces.			
1.18	Check unicast / multicast signal.			
1.19	IP transport protocol check: - UDP - RTP			
1.20	Different output stream number (unicast / multicast) / Ethernet interface			
1.21	Number of output streams.			
1.22	Ethernet port management interface			
1.23	VLAN configuration			
1.24	Supported encoding algorithm:			

	- MPEG 1/2 Layer II - MPEG4: AAC-LD / ELD, HE-AAC v1 / v2 - MPEG2 / 4: AAC-LC - Enhanced apt-X (E-aptX) - Linear PCM			
1.25.	Sampling rates			
1.26	SNMP v2c management system			
1.27	User access levels			
1.28	Remote equipment configuration via GUI / WEB			
1.29	Configure the ETH interface: - IP address - Net mask - Gateway IP			
TECHNICAL REQUIREMENTS AUDIO SPLITTER				
2.1	Number of AES / EBU entries			
2.2	Number of AES / EBU male XLR connector outputs			
2.3	19 inch rack mountable equipment			
2.4	*Measurement* :Impedance, Insertion Loss, Impedance Match Output to Output Isolation Max Signal 10 V_{P-P}	110Ω < 0.1 dB +/- 2%, min 40dB,		
2.5	Attenuation			
2.6	SNMPv2C management integration			
TECHNICAL REQUIREMENTS DECODING EQUIPMENT				
3.1	DECODER DIGITAL AES/EBU.			
3.2	Hardware configuration -Type name -Interfaces			
3.3	Software configuration			
3.4	Installed licenses			
3.5	SFN network integration (*Single Frequency Network*)..			
3.6	Mountable in 19 inch type rack			
3.7	230V AC power supplies.			

3.8	Switch power supply.			
3.9	Operation on a single power supply			
3.10	Check operating temperature			
3.11	Number of digital audio outputs			
3.12	Audio interface type, rack mounting			
3.13	Number of digital connectors / outputs.			
3.14	Digital audio output level	13dBFS ÷ 0dBFS		
3.15	Number of electric Ethernet ports			
3.16	Minimum speed 10 / 100Mbps			
3.17	RJ-45 connector type			
3.18	Configure interfaces.	individual		
3.19	Unicast / multicast packet reception / interface			
3.20	IP transport protocol: - UDP - RTP			
3.21	Number of unicast / multicast / ETH interface streams			
3.22	Ethernet / interface management			
3.23	VLAN configuration			
3.24	Decoding algorithm: - MPEG 1/2 Layer II - MPEG4: AAC-LD/ELD , HE-AAC v1/v2 - MPEG2/4: AAC-LC - Enhanced apt-X (E-aptX) - Linear PCM			
3.25	MPX Ready			
3.26	Remote monitoring via SNMP v2c protocol			
3.27	User access levels			
3.28	Remote equipment configuration via GUI / WEB			
3.29	Configure ETH management interface parameters - IP address - Net mask - Gateway IP			
3.30	Download audio signal from the			

	Internet.			
3.31	Digital audio signal recovery from two input streams.			
TECHNICAL REQUIREMENTS AUDIO SWITCH EQUIPMENT				
4.1	Number of digital audio inputs AES / EBU female XLR connector			
4.2	Number of digital audio outputs AES / EBU male XLR connector			
4.3	Switching input sources (*silent detect*)			
4.4	Standby time configuration Step (in seconds) Min / max limits			
4.5	EE power switch			
4.6	Remote equipment configuration via GUI / WEB			
4.7	Rack mountable			
4.8	Power supply type	230V AC		
4.9	Check operating temperature	10 - 45 grade C		
4.11	Signal measurement / verification in / out			
4.12	User access levels:	read-only și full acces		
4.13	Monitoring configuration via SNMP v2c.			