

## Section V. Schedule of Requirements

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## List of Goods and Delivery Schedule

					Delivery Date		
Line Item No	Description of Goods	Quantity	Unit	(project side) Destination specified	Earliest Delivery Date	Latest Delivery Date	Offered delivery date (to be provided by the bidder)
1.	Supply, Installation, Commissioning of TV & Radio Monitoring system			DGI	3 MONTHS	4 MONTHS	

## 2. List of Related Services and Completion Schedule

[ This table shall be filled in by the Purchaser. The Required Completion Dates should be realistic, and consistent with the required Goods Delivery Dates]

Service	Description of Service	Quantity	Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1	Onsite Training	20 Nos		Department of Government Information	4 months after the Agreement Date
2	Warranty	3 Years			
3	After sale service Agreement. clauses of the service agreement may negotiate.	Five years of service agreement including suppling spare parts after the warranty period. Should sign a maintenance agreement with DGI providing call services 24*7.			

## TECHNICAL SPECIFICATION

### TECHNICAL SPECIFICATION AND COMPLIANCE SCHEDULE OF TENDER FOR Supply, Installation, Commissioning of Television and Radio Monitoring System

<b>TV Recording &amp; Monitoring System</b>			
<b>Introduction</b>	<b>Yes</b>	<b>No</b>	<b>Remarks</b>
Capable of supporting up to 32 expandable TV Channels recording			
The Software should be highly scalable to be able to take care of further expansions			
The recordings to be saved in H.264 MPEG-4 format			
The Monitoring of content should be possible on 24 x 365 basis			
The Monitoring should be possible on both live as well as recorded content			
Retention period should be able to be configured			
Capable to save the media in any bitrate and resolution as needed, up to HD/SD resolution			
Storage is done on FIFO basis			
The System should provide Instant-Real Time Access of the broadcast Content			
The system should allow to monitor channels in live and archived or any combination (some channels in Live, some channels from the archive)			
Ability to control all video channels one by one or all together buy the control panel			
System should be able to monitor multiple channels at the same time with 2 Nos of 61" or better multiviewers (16 channels each)			
System should be capable to support 20 number of concurrent users			
The System software should be able to interface seamlessly compliant to a TCP/IP network			
Users should be able to interact with the system from any PC, MAC, iPad, via a common high-speed IP network			
Users should be able to work with the system from any common browser			
The software should be able to cater multiple users logging and monitoring at same time			
The Monitoring System should continuously capture, encode, analyze and store live video streams in an			

automatically –maintained storage system containing 90 days of recorded audio/video			
System should support multiple audio tracks support, AC3 Audio			
Support for multiple-language subtitle recording, teletext, closed caption			
Quick access and retrieval of recorded content			
Quickly export clips to multiple destinations using a built-in transcoding engine with support for all industry standard file formats and frame sizes			
Powerful feed quality monitoring with logs			
Web application – no client software required.			
Access from any PC, Mac, iPad, tab, android and etc..			
System needs to show the Storyboard of the relevant content to navigate throughout the video content using a thumbnail storyboard; be able to adjust the interval of the thumbnails for in-depth scan			
System should allow to navigate using the video progress bar – Point your mouse to any place on the playback progress bar and receive an immediate thumbnail preview of that location and its timestamp; Clicking at any point will bring the video to that location			
<b><u>Inbuilt Clip Editor</u></b>			
The System Software should support cut to cut Editing			
The system should allow to start creating clips 15 seconds from live			
System should be able to create multiple segments clip			
System should have Zooming options while creating the clips			
Each segment of the clip should have the ability to include its own data and thumbnail			
The clips should have any metadata, including a thumbnail			
Ability to add a logo to the clip, anywhere on the clip			
Ability to blur any part (or multiple parts) of the clip, with different transparency options, for a defined time			
Ability to mute any part (or multiple parts) of the clip, for a defined time			
Ability to add an opening text screen at the beginning or end of the clip, for any defined duration			
Ability to add date and time stamp on the video			
Ability to add any text/image, anywhere on the clips			

The System shall support exporting selected clips/ to external storage (e.g. hard disk of user's PC, DVD, flash drive, etc.), or to FTP, Network share, social media, or send the clip via mail			
Created clips can be shared or private			
Allow for export of entire programs as media files in a range of formats/bitrate and resolution. Ability to add any other format when needed, even not in the list.			
While export (extract), the user should be given an option to export with overlay or without, option to export with or without a thumbnail picture (still photo) and/or for any segment of the clip and with or without metadata or with a date and time stamp, without the subtitles, with or without the Loudness values			
Ability to pre-define export profiles: bitrate, frame size, format, destination (like FTP, You tube, Network, etc.)			
Allow exported programs or clips to optionally include subtitles/audio tracks			
Allow sending a clip by mail, save as file, or sent directly to FTP, YouTube/other			
Allow to create clips that are frame accurate, so no frames will be lost in the exported clip			
System should allow to customize the metadata			
System should allow automatic clips creation			
<b><u>Front-End User Interface</u></b>			
The System should provide the most user friendly and intuitive user interface which is easy to understand and can be used by both Technical and Non-technical staff			
The System shall be fully web-based such that its front-end user interface is accessible using common Internet browsers			
No client software has to be installed on the client's machine			
<b><u>Playback of Recordings</u></b>			
TV channels can be played back with no more than 30 seconds of delay in comparison with the real-time broadcasts			
The System shall support displaying the recording date and time on the screen during playback of the recording			
System should allow to monitor the live feed, go back a few seconds/minutes from live, and jump back to Live			

The System shall include intuitive playback controls for smooth fast forward and backward playback of the recordings			
The system will allow to move in fast forward in any speed rate, such as x 2, x 4, x8, or in 0.5 speed or to move frame by frame			
The System shall support the viewing selected subtitles			
<b><u>Content detection</u></b>			
The System Software should have capability to fingerprint and track content on audio signature (fingerprinting)			
The System Software should have capability to fingerprint and track content on video signature (fingerprinting)			
System should be able to scan back archived content for ads detection			
Ability to detect repetitive video/audio clips: ads, promos, election campaigns.			
Ability to detect shorter version of the same content, like same advertisement, shorter version			
Content detection accuracy must be above 90%			
The system should be able and display new ads automatically, ads that have not been marked before			
Ability to provide any report – the user can build any report needed from the UI			
<b><u>EPG/As run log file integration</u></b>			
The software should automatically import as-run logs/EPG			
The system should present the EPG/As run log data			
The system should allow searching on the EPG/As run log file			
The system should allow to play a program directly from the As Run Log or EPG file			
The system should be able to use the EPG/As run log files information for automatic clipping and able to delete manually.			
<b><u>Scalability:</u></b>			
The system software should be Extremely Scalable keeping in view of future expansion of system setup for monitoring			

The system should be expandable to add additional channels without major downtime or re-engineering.			
<b><u>System Health Monitoring:</u></b>			
The System Software should have the ability to monitor, log and automatically send real time alerts for any of the following signal quality irregularities immediately			
1. Loss of video, static video, or black video			
2. Loss of audio or audio level below acceptable audio level range			
3. Mobile alert system for loss of audio/video			
<b><u>System administration</u></b>			
Administrator shall be defining rights for accessing software, creating user accounts, groups of users, etc.			
System to support integration to Active Directory			
<b><u>Specification</u></b>			
Networked Server based Digital Audio and Video logger system with PAL [B,G] De-modulators to record and monitor receiving signals for 32 off-air TV channels	Yes		
Supplier should provide antennas to receive 32 Channels	Yes		
To fulfill TV Broadcasting law obligations	Yes		
TV Channel Archiving	Yes		
Real time monitoring of all channels live or recorded	Yes		
TV channel name, date and time superimposed on each channel whether it is live or recorded	Yes		
Compare programming to competition	Yes		
Continuous recording (24/7) for 90Days or scheduled recording(TV and Radio)	Yes		
19" rack mountable system	Yes		
Video Input	Analogue Composite		
	1Vp-p, 75Ω, Sync negative BNC or RCA		
Audio Input	Mono/ Stereo		



	unbalanced, -10dBu, Greater than 47KΩ,RCA.			
Recording	Suitable format			
Compression	H.264 - MPEG 4			
Video Compression Bit Rates required	Auto/256kbps /384kbps/512kbps / 768kbps / 1MB / 2Mbps /or better.			
Video Storage	32 Channels @ 512kbps, 24/7 for 90 Days			
Backup Storage	Raid Protected 128TB working space, Expandable			
Playback & Export	Resolution (PAL)			
<b><u>Radio Recording and Monitoring System</u></b>				
<b><u>Features</u></b>				
Selectable audio compression rates ranging from 80kbps to lossless compression.				
Adjustable number of logging days on each input.				
Balanced inputs and outputs with XLR breakout cables supplied.				
Optional skimming control inputs.				
Live input monitoring on logger unit.				
Selectable audio failure alarms.				
Supplier should provide antennas to receive 64 FM Channels.				
<b><u>FM Radio Capture</u></b>				
64 FM stations, expandable.				
Adjustable number of logging days on each station.				
All FM logging in stereo.				
Received signal strength, FM stereo pilot and RDS indicators.				
Live monitoring on logger unit.				
FM RDS radio text logging.				
Selectable carrier & audio failure alarms.				
<b><u>Platform</u></b>				
Industrial 4U rack mount case.				

Inbuilt color LCD screen with slide-out keyboard and mouse pad.				
Dual redundant hot-swappable power supplies.				
Hardware RAID-1 or RAID-5 swappable SATA hard discs with optional hot-standby disc.				
Inbuilt DVD R/W drive for easy archiving.				
Recording time of up to three months, settable on each channel or ensemble (subject to available disc space and dependent on the number of channels and audio compression rate used).				
64-bit quad-core processor.				
64-bit Windows 7 Professional operating system				
Network playback using free application				
SNMP monitoring and alarms, including RDS / DLS text.				
<b>Technical Specification</b>				
Recording Time:	180 days,(individually selectable on each channel or assemble)			
FM Capture:	87.5 – 108.5MHz tuning range (50kHz steps). BNC antenna connection. 48kHz sampling. 64kbps compression.			
No of FM Channels	64+			
Internet Streams:	Shoutcast,Icecast & RTMP protocols			
SNMP:	Input audio / carrier / DAB status/RDS-DLS text monitoring. Selectable trap generation.			
Storage:	Hardware RAID-5 (striping) or RAID-1 (mirroring). DVD R/W drive (+/- formats supported).1TB x 4 with advance backup system.			
Processor:	64-bit Pentium quad-core 32GB RAM.			
Operating System:	Windows 10 Professional or better			
<b>Specification for Touch Panel</b>				

65-inch 1080p touch display with smooth-touch anti-glare coating				
Multi-point capacitive touchscreen with sleek bezel-less design and effortless gestures -- just like smart phone or tablet				
Easily access HDMI and USB ports in the front panel of the display.				
Display a PC, Mac or Chromebook via HDMI and enable touch via USB				
Compatible with PC's interactive whiteboard software				
<b>Size</b>	65" Diagonal			
<b>Resolution</b>	1080p HD (1920 x 1080)			
<b>Mounting Orientation</b>	Landscape			
<b>Display Technology</b>	Direct LED backlight			
<b>Pixel Pitch</b>	0.40mm			
<b>Response Time</b>	8ms			
<b>Contrast Ratio</b>	4,000:1			
<b>Brightness</b>	300cd/m2			
<b>Input Connections</b>	HDMI x 5, VGA, USB x 4 (2 for hub, 1 for optional on-board PC, 1 for touch), 3.5mm line-in audio (mono), component, composite, RS232			
<b>Wireless Connectivity</b>	wireless display capability for multiple computers at the same time			
<b>Output Connections</b>	RCA stereo audio out, 3.5mm stereo out			
<b>Touch Technology</b>	Projected Capacitive			
<b>Touch Points</b>	10+			
<b>Speakers</b>	Front-facing 10W x 2			
<b>Mount</b>	Vesa standard 400x400mm M6 screws			
<b>Accessories Included</b>	GA cable, USB cable, Trolley, Touch pen, power cord, remote control, quick setup guide			
<b><u>Supply, Installation, Commissioning &amp; Training</u></b>				
Bidder shall provide all necessary equipment for TV reception including TV & FM antenna system, RF demodulators and system racks				

Bidder shall provide onsite operational and maintenance training			
<b><u>TERMS &amp; Conditions</u></b>			
Audio, Video, Power and control cables, connectors and accessories as required for complete installation shall be supplied, Installed, commissioning and 2 weeks training for selected staff in groups of 20. (Details about training attached on page 47)			
Supplier must have 10 years' experience of Professional Audio-Visual broadcasting Industry and minimum have 5 years' experience for TV & Radio monitoring implementation Purchase orders should be attached.			
Supplier must have minimum 100 million revenue and should submitted the last 3 years (2015, 2016, 2017) audited finance reports			
Any component or accessory required for complete and successful operation of each system, either specified in detail or not, shall be supplied and installed, as necessary and should be quoted separately as optional items			
Shall develop shop drawings for the system indicating the specific Yes/No design and installation details, interconnection diagrams, etc., and complete system should be display on relevant area.			
Exclusive agent for the equipment offered and shall be responsible for after sales / service support.			
Shall have necessary test equipment and experienced manpower in similar works to carry out necessary installation, testing and commissioning. Documents necessary to prove the organizational capability and man power availability of the Bidder shall be submitted with the Bid.			
Shall provide power line surge protection at all the main power supply points to protect equipment by high voltage surges or from lightning or otherwise.			
All brackets, and accessories for mounting and wiring shall be provided for proper installation			
Equipment specified for rack mounting shall suitable for mounting on 19" EIA standard racks, and complete with necessary brackets, etc.			
Shall provide UPS system with Ability of supply power to the whole system for at least 30 minutes, with 80% full load			
Full HD 1080p 65" Multi system TV Monitor with wall bracket and stand. 02 no's			

**Supply, Installation, Commissioning of Television and Radio Monitoring System**  
DEPARTMENT OF GOVERNMENT INFORMATION

Shall Provide 2 Nos of Full HD CCTV Camera and DVR with 30 days recoding storage for System room monitoring			
Maintenance, Warranty period shall be of 3 years from the date of commissioning of all the complete system provided under this contract. on call services 24*7, response time would be 2 hours and the problem must be solve within 24 hours, should sign a agreement with DGI			
5 years of service agreement including suppling spare parts after the warranty period.			
Local supplier or agent should submit an accredited authorization from the manufacturer. Partial or for the whole system.			

## TRAINING

### Conclusion of the System

This Broadcasting recording platform is a very powerful and best of breed solution for broadcasting digital recording, media monitoring and content verification. The ability to record TV and Radio channels monitor live or archived broadcast content, retrieve and share the relevant content immediately is essential. Web based media intelligence platform answers all these requirements. Such as data rating analysis, Ads detection, media research facilities, Audio/Video Quality Assurance and etc...

Department of Government Information should necessary monitoring and analyzing broadcast media is an essential part of daily activity. Most of the information that decision makers need is often found is the broadcast channels. This system has the ability to record, access and monitor broadcast content, share with other intuitions and search and retrieve immediately and accurately.

### Training Goals

Twenty trainers are following contents:, such as

System configuration and maintains – selected areas only because some technical areas need to professional level engineering skills and knowledge and these areas recovery by warranty agreement.

Tracking – Data, Information, Ads, Audio and video levels

Subscribes - Development activities to the Nation

Training of Analyzing and Media Rating report prepare – (Technical and IT)

Media alert system training and etc...

## **5. Inspections and Tests**

The inspections and tests shall be carried out by the officer/s nominated by the purchaser before payment made. Relevant diagrams, user manual, password, and drawing should be handed over to the purchaser before the inspection.

Sample Document