



प्रसार भारती
PRASAR BHARATI
(Broadcasting Corporation of India)
दूरदर्शन महानिदेशालय
Directorate General: Doordarshan
दूरदर्शन भवन, कोपरनिकस मार्ग,
Doordarshan Bhawan, Copernicus Marg
नई दिल्ली - ११०००१
New Delhi - 110 001

File No. 19(2)2018-19E1 (P) TV

Dated: 30.05.2019

Subject: Draft Technical Specification for Procurement of High Definition Graphics & Character Generator System.

The Draft specification of the upcoming tenders is enclosed herewith to offer comments, if any and may also submit their budgetary quote by due date at e-mail address ddpurchase401@yahoo.co.in or on following Address:

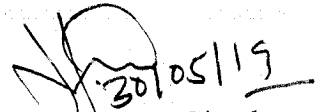
Assistant Engineer
Room No. 403,
Directorate General: Doordarshan,
Doordarshan Bhawan,
Copernicus Marg,
New Delhi - 110001 (India)
Telephone: 011- **2311 4401**

Specification For: Draft Technical Specification for Procurement of High Definition Graphics & Character Generator System.

Specification no: SD 07/ 2019 Dated: 29.05.2019

Due Date to offer Comments: 13.06.2019

Encl.: As above (09 Pages)


Prabhat Kumar Singh
Assistant Engineer
For DG: DD

PRASAR BHARTI
India's Public Service Broadcaster
DIRECTORATE GENERAL: DOORDARSHAN

**SPECIFICATIONS FOR PROCUREMENT OF HIGH DEFINITION GRAPHICS &
CHARACTER GENERATOR SYSTEM**

Specifications No.: SD 07/2019
Dated: 29.05.2019

1. SCOPE:

The specifications lay down the performance characteristics of a High Definition broadcast quality multilingual Graphics & Character Generator (CG) to be used in Studio/OB Van for transmission, production and post-production applications in Doordarshan network.

2. GENERAL:

- 2.1 **Offered product should be from an internationally reputed manufacturer and the quoted model should be field proven and in use by leading broadcasters. The bidder should essentially submit the list of the broadcasters to whom the quoted model has been supplied. The tenders without the proper user list shall liable to be rejected.**
- 2.2 The offered system should be capable of generating titles in English, Hindi and in other Indian languages including Urdu. The offered product should support open type unicode fonts for regional languages as detailed in **Appendix-I**. The required fonts will be part of the offer.
- 2.3 The High Definition Graphics & Character generator is required for the generation of graphics, animations, title captions etc. with different colour, texture and image background.
- 2.4 It should be possible to Genlock the character generator to an external reference sync so that it can be mixed, dissolved, cut and keyed in the production switcher.
- 2.5 The bill of material is given in **Appendix-II**.
- 2.6 The bidder is required to provide the complete list of items, software, accessories etc. offered to meet the specifications requirement in the following proforma:

*Specifications for Procurement of High Definition Graphics & Character Generator
System: SD 07/2019 Dt. 29.05.2019*



Sr. No.	Description/Name of the item	Make	Model	Part No., if any	Qty.
1.	2.	3.	4.	5.	6.

2.7 The equipment are being procured for various Doordarshan centres as per **Appendix-IV**.

3. ESSENTIAL FEATURES:

The offered character generator should have following features as mentioned below:

- 3.1 The High Definition character generator should be based upon user friendly drag and drop graphical user interface and should be easy to use in live environment.
- 3.2 It should be possible to create single line as well as multi-line text on a single page. It should also be possible to create multiple pages in a document.
- 3.3 It should be possible to create multiple layers in a page.
- 3.4 It should have multiple simultaneous crawls in right to left (RTL) and left to right directions (LTR), rolls, and tickers.
- 3.5 It should support various graphics file formats such as TGA, JPEG, BMP, TIFF etc., animation and video file formats.
- 3.6 It should have analogue as well digital clocks with variable size and positions. It should also have count up & count down time display.
- 3.7 The High Definition Graphics & Character Generator should have animation effects for text and logos including cut and paste tools.
- 3.8 The High Definition Character Generator should facilitate transition effects between pages as well as texts. It should be possible to provide some basic animation to these effects.
- 3.9 It should support 2D effects for graphics, objects, fonts etc.
- 3.10 It should have various character attributes like normal, bold, italic, underline, borders, shadows, highlight, expand, compress, tilt, rotate, transparencies etc.
- 3.11 It should have customizable Safe Title Area marking facility.
- 3.12 The system should have video & still frame grab facility and should also have a media store.

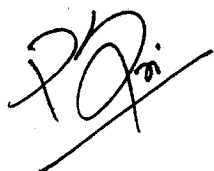
Specifications for Procurement of High Definition Graphics & Character Generator System: SD 07/2019 Dt.29.05.2019

- 3.13 The High Definition character generator should have anti-aliased fonts.
- 3.14 It should be possible to edit ON AIR (Program output) page without disturbing Program (PGM) output until edit is executed. It should also be possible to edit on a page while the other page is on air.
- 3.15 It should have Gigabit Ethernet and USB interface ports.
- 3.16 It should have broadcast quality latest generation Video I/O card supporting HD -SDI video.
- 3.17 The system should have appropriate GPU support to the application software running on the system so that full utility and smooth flawless operation of the offered software is realized.
- 3.18 The system should support easy creation of customized templates.
- 3.19 System should provide functional support to access and import data directly from third party database, text files, spread sheets, data from RSS feeds and should have provision to display and generate line/ bar graph and pie charts etc.
- 3.20 The offered system should have facility to integrate sources from social media like Facebook, YouTube and twitter.
- 3.21 **System should provide dedicated HD-SDI video preview output independent of the main program HD-SDI output.**
- 3.22 System should provide a separate key out for Program output.
- 3.23 Necessary breakout box/cables should also be offered for easy access and to and from connectivity to the I/O card of the system.

4. **TECHNICAL SPECIFICATIONS:**

4.1 **I/O Card:**

Sr. No.	Description	Parameter
(I)	Video Input:	
(a)	Number of Input	: One or more conforming to SMPTE 292M, HD-SDI, 1485 Mbps, with 800mV, 75 Ω , BNC
(b)	Video Resolution	: 1920x1080/ 50/I
(II)	Video Output:	
(a)	Number of outputs	: (i) Program (Fill and Key separately):



conforming to SMPTE SMPTE 292M, HD-SDI 1485 Mbps, with 800mV, 75 Ω , on BNC

(ii) Preview:

conforming to SMPTE 292M, HD-SDI 1485 Mbps, with 800mV, 75 Ω , BNC

- (b) Video Resolution : 1920x1080/50/I
- (III) Genlock Reference input : Black burst or Trilevel Sync, 75 Ω , BNC
- (V) Colour Processing : 1.07 billion colour palette
- (V) Power supply : 230 \pm 5% V AC, 50 Hz

4.2 Hardware Configuration:

The minimum hardware configuration of the envisaged system is as below. However, the bidder can offer a superior hardware configuration, if required, by the system & application software to ensure full performance of the offered product. The bidder must enclose a certificate from the application software vendor that the offered hardware configuration will ensure full performance of all the features available in the offered software.

Sr. Nos.	Description	Parameter
(a)	Processor	: Dual Intel Xeon processor or similar
(b)	Operating System	: Latest Microsoft Windows environment or similar
(c)	Memory	: 12 GB or Higher
(d)	System Hard Disk	: 500 GB enterprise class HDD or Higher Capacity
(e)	Separate Media Storage	: 2TB enterprise class HDD or Higher Capacity
(f)	Optical drive	: DVD Writer



- (g) **Network controller** : Integrated 10/100/1000 LAN
- (h) **GPU** : Recommended Graphics card /onboard Graphics to support full feature and smooth flawless operation of the installed software of the offered system
- (i) **I/O interfaces** : USB ports, RJ45 ports
- (j) **Peripherals** : Mouse, Keyboard and good quality speakers
- (k) **Monitor** : 21.5" or higher viewable, LED backlit TFT active matrix LCD with protective shield, Resolution Full HD 1920x1080 or better, Brightness 250 cd/m² typical or better, , Viewing Angle Horizontal & Vertical 178° each and 5 ms response time.
- (l) **Power Requirement** : 230±5% V AC, 50 Hz

5. SOFTWARE:

- (a) All the necessary & essential software including OS required for proper working of the system is to be supplied in original and should be licensed to Doordarshan with perpetual validity.
- (b) The bidder will provide up gradation of all the offered software free of charge during the guarantee period. **The bidder will be required to give undertaking to this effect along with the bid.**

6. ACCESSORIES:

All the essential Hardware and software accessories, such as breakout cable/box, power cords, software Plug in/patches/applications etc. are required to be quoted essentially. The firm has to ensure the completeness of the offer.

All the Optional items may be quoted separately. The firm must provide enough details about optional items to decide its utility.

7. COMPLIANCE:

- a) **A point by point full compliance statement laid down in the specifications from the principal manufacturer is to be enclosed**

along with the offer in the format given below. Mere signature on the copy of DD specifications shall not be accepted as a compliance statement.

The figures so mentioned should be supported by record of these in the technical literature enclosed with the tender and reference to the page number of enclosed literature for all features and technical specifications should be mentioned in the relevant column. Offers without the compliance statement or with incomplete compliance statement will liable to be rejected with the sole responsibility of the bidder. **Any deviation from the specification detailed in the compliance statement is to be highlighted separately.**

Sr. No of DD specs.	DD specs.	Compliance (Yes/No)	Performance Fig. of equipment Offered	Reference to the Page Number of enclosed literature	Deviations, in case of non-compliance	Optional items if any reqd. to make the sys. Compliant to	Features in the offered Product which exceeds DD specs.
1	2	3	4	5	6	7	8

- b) In addition to above, a separate point by point compliance statement duly signed by the bidder in respect of all the points laid down in the specifications should also be submitted along with the bid by the bidder in the above mentioned proforma.

8. TECHNICAL LITERATURE:

One set of technical manuals/brochures of the offered equipment are required to be provided along with the tender to facilitate the technical evaluation, otherwise the tender is liable to be ignored. The successful bidder will have to supply a set of technical, user and installation manuals.

9. DEMONSTRATION:

If necessary, the bidder may be asked for demonstration of the offered system as part of the technical evaluation. In such case the bidder will have to make suitable arrangement for the demonstration of the offered

system at Doordarshan Bhawan, New Delhi, on notice of 15 days. Accordingly the bidder should be in readiness for demonstration.

10. GUARANTEE:

- a) With reference to the clause no.8.2 of the "General Terms And Conditions (GTC)" under ANNEXURE-II of tender document, the complete system including all items/equipment should be guaranteed for **three years** of trouble free operation from the date of commissioning. In case of any item or equipment failure including software and hardware within this period shall be rectified or replaced free of cost to Doordarshan.
- b) The guarantee should cover all hardware, software and modules of the complete system.

11. DELIVERY PERIOD:

The delivery period will be 03 months.

12. TRAINING:

The bidder should offer 03 days operation and maintenance training on the offered equipment for Doordarshan Engineers. The bidder has to provide the comprehensive training material in the form of hard copies, as well as soft copies to the trainees during the training session.

The training will be conducted at one Doordarshan Centre in each concerned Zone as indicated in **Appendix-III**.

13. INSPECTION:

The equipment shall be subjected to inspection by Doordarshan officials at New Delhi.

14. ENCLOSURES:

The bidder must necessarily upload the following documents along with the technical bid:

- a) An undertaking as required vide clause 5(b).
- b) Compliance statement with respect to all the points of the specifications duly signed by the OEM should be submitted for offered equipment/item(s) in the proforma mentioned in clause no. 7.(a). The reference to the page number of enclosed literature for all features and



technical specifications should be essentially mentioned in the relevant column of the compliance statement.

- c) A separate point by point compliance statement duly signed by the bidder in respect of all the points laid down in the specifications for the offered equipment/item(s) in the proforma mentioned in clause no. 7.(b).
- d) Technical manuals/detailed technical literature/catalogues for the offered equipment/item(s) for substantiating the model no. and technical specifications.
- e) Model specific user list of the offered product(s).
- f) Any other document mentioned elsewhere in the tender document.

The tender is liable to be rejected in the absence of the above enclosures with the sole responsibility of the bidder.

A handwritten signature in black ink, appearing to be 'P. G. Si' or similar, with a horizontal line drawn through it.

Appendix-I

**DETAILS OF FONTS FOR THE VARIOUS LANGUAGES TO BE PROVIDED
AT VARIOUS DOORDARSHAN CENTRES**

Sl. No.	Zone	Location of Doordarshan Centre	FonTS of the various languages to be provided
1.	North Zone (NZ)	CPC, Delhi	Hindi, English and Urdu

Appendix-II

INDICATIVE BILL OF MATERIAL REQUIRED

Sl. Nos.	Details of Items	Qty.
1.	Graphics & Character Generator System complete with all hardware and software modules including Indian Regional language fonts as described in Appendix-I .	1 Set
2.	Breakout Box/ cable & other accessories	1 Set
3.	Original Media of all the installed Software pertaining to complete functionality of the offered system	1Set
4.	Operation manual/User Guide/ Technical Manual/ Installation Manual etc.	1 Set
5.	03 days comprehensive operation and maintenance training on the offered equipment for Doordarshan personnel as detailed in Appendix-III .	1 Job

Appendix-III

The training will be conducted at only one location at CPC, Delhi in North Zone.

Appendix-IV

**EQUIPMENT ARE BEING PROCURED FOR THE FOLLOWING
DOORDARSHAN CENTRES**

Sl. No.	Zone	Location of Doordarshan Centre	Qty.
1.	North Zone (NZ)	CPC New Delhi	1 Set

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