

## INDIAN INSTITUTE OF TROPICAL METEOROLOGY PUNE 411 008

### TERMS & CONDITIONS

ENQUIRY NO: **PS/128/22/2009**

Tender Notice No. **PS/Tender/05/2009**

- 1) The Tenderers are requested to give detailed sealed tender in their own forms in two Bids i.e.  
Part – I Technical Bid.  
Part - II Commercial Bid, both the bids addressed to the Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL Post, Pashan, Pune – 411 008, INDIA.
- 2) This tender is not transferable.
- 3) If a request is made to IITM for Tender Documents a sum of **Rs.300 (Rs. Three Hundred only) (Non-refundable)** has to be paid in the form of Demand Draft drawn in favour of “The Director, Indian Institute of Tropical Meteorology, Pune” **preferably from Nationalized Bank**. In case the bidders download the Tender Documents from the website of the Institute, the document fee of Rs.300 (Rs. Three Hundred only) **is not required** to be enclosed while submitting the tender. Otherwise tender will not be considered.
- 4) Tenders addressed to the Director, Indian Institute of Tropical Meteorology, Pune 411008 are to be submitted for each item in duplicate in double cover, under two bids system. Superscribed with Tender No. **PS/128/22/2009** for purchase of “**Digital Display System (DDS)**” Qty - 01 System due on **7<sup>th</sup> October 2009**.
- 5) You have to submit two separate bids in two separate envelopes and you may keep both the bid envelopes in an envelope for sending to us.  
  
One envelope will contain only the TECHNICAL SPECIFICATIONS of the indented equipment.  
  
Another envelope will contain only the financial bid in which price and any other information, which has financial implications, will only be given.  
  
The main envelope, which will contain both the bids, should be super scribed with our tender enquiry No.**PS/128/22/2009** due on **7<sup>th</sup> October 2009**.
- 6) Please indicate page nos. on your quotation ex. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.
- 7) Cost of the items should be mentioned clearly in the Commercial Offer (Part-II) only.

- 8) Last date for the receipt of completed tender is up to 13:30 hrs. on **7<sup>th</sup> October 2009**. Tenders will be opened at 15:00 hrs. on **7<sup>th</sup> October 2009** in the presence of the representatives of the vendors present.
- 9) The tender must be valid for a period of at least **90** days from the date of opening.
- 10) The purpose of certain specific conditions is to get or procure best Equipment / service etc. for IITM. The opinion of Technical Committee shall be guiding factor for Technical short listing.
- 11) Supplier shall finally warrant that all the stores, equipment and components supplied under the SUPPLY ORDER shall be new and of the first Quality according to the specifications and shall be free from all the defects (even concealed fault, deficiency in the design material and workmanship).
- 12) Tender must clearly indicate the features offered unit price, VAT tax, transport, transit-insurance, installation charges. Institute cannot furnish any certificate for exemption or reduction in VAT tax or any other duty/tax. The vendor should mention the price of the equipment and the duties/taxes to be paid such as customs duty/excise duty/VAT taxes etc. separately.
- 13) The complete equipment including operational manuals should be supplied within stipulated period mentioned in the supply order and the vendor should install the equipment within **one month** after the delivery of the equipment.
- 14) As this Institute is exempted from payment of Custom Duty and Excise Duty, exemption certificate will be issued on request.
- 15) The Equipment must carry on-site warranty for **Two Years (See section 8 in specification sheet for more details)** from the date of taking over of the equipment after the acceptance tests. Warranty period will stand extended for a period of total downtime of the Digital Display system.
- 16) The vendor has to furnish a Bank Guarantee to the extent of 10% of the order value from a nationalized bank in the prescribed format valid for the entire period of warranty including extension if any.
- 17) No advance can be paid.
- 18) The **payment terms** shall be as follows:
  - i) 50% payment on receipt of stores in good condition.
  - ii) 40% payment after satisfactory installation, and successful completion of acceptance tests and training.

- iii) 10% payment after execution of Bank Guarantee from a Nationalized Bank and successful completion of acceptance test. The Bank Guarantee will remain valid until the expiry of warranty period including the extensions if any.
- 19) The prices quoted should be firm and irrevocable and not subject to any change whatsoever, even due to increase in cost of raw material components and fluctuation in the foreign exchange rates and excise duty.
- 20) Vendor should arrange appropriate training to the users free of charge, **if required**.
- 21) Indicate the names of the Indian reputed Organizations where you have supplied the similar equipment and may attach the satisfactory performance report of the equipment from user Organization.
- 22) a) If you have supplied identical or similar equipment to other Institutes under Ministry of Earth Sciences and Ministry of Science & Technology, the details of such supplies for the preceding three years should be given together with the prices eventually or finally paid.
- b) Based on the above information IITM will have its option to obtain details of the equipment, their performance, after sales services etc. for evaluation of the tender, directly from the concerned Labs. /Scientists etc.
- 23) The Institute is autonomous scientific research organization under the Ministry of Earth Sciences and is a recognized center for studies leading to M.Sc. and Ph.D. of the University of Pune and various other Universities. As such, all possible concessions / discounts / rebates applicable for educational Institutions may be given.
- 24) Any upgrade of OS and associated other software during the warranty period should be supplied free of charge.
- 25) The vendor should have appropriate facilities and trained personnel for supply, installation and warranty-maintenance of the equipment to be supplied. Detailed information in this regard may be furnished.
- 26) Kindly attach a copy of your latest DGS&D, New Delhi registration Certificate under the compulsory Scheme of Ministry of Finance regarding the registration of Indian Agent of foreign supplier wherever it is applicable.
- 27) The Tenderer is required to furnish the Permanent Account Number (PAN) Allotted by the Income Tax Department. If registered with the National Small Industries Corporation, the registration number, purpose of registration and the validity period of registration' etc. should also be provided in Technical Bid for Indian Agents.

28) Vendor should clearly mention the following:

- **Make and model of every item quoted.**
- Delivery period.
- Company profile with a list of those institutes/users should be attached where vendor has supplied the equipments in question in past.
- A letter of AUTHORISED REPRESENTATIVE from the Principal should invariably be attached with quotation
- A copy of latest Income Tax clearance Certificate from Income Tax Department (INDIA)

29) Discount offered should be mentioned clearly in the commercial bid only.

30) Octroi payment if any, the same may please be shown separately.

31) The Tenderers are requested to quote for Educational Institutional Price for equipment and Software, since we are eligible for the same.

32) Acceptance tests to be prescribed later will be carried out after installation and the items will be taken over only after successful completion of the acceptance tests.

33) **The Equipments are required to be supplied directly at IITM, New Delhi branch office under intimation to IITM, Pune.** It should be tested & installed in the given locations in and around NCR-Delhi within 50-80 km radius. Training is also to be provided to the concerned persons of the Institute.

34) The item should be supplied with manuals and the manuals including technical / Electronic drawings / circuit diagrams should be complete in all respects to operate the system without any problem.

35) The Tenderer has to state in detail the Electrical Power/UPS requirements, floor Space, head room, foundation needed and also to state whether Air-conditioned environment is needed to house the system and to run the tests. i.e. pre-installation facilities required for installation may please be intimated in the technical bid. \*

36) Goods should not be dispatched until the Vendor receives a firm order.

37) The Date and Time of opening for Part-II (Commercial Bid) will be intimated only to pre-qualified and technically acceptable Tenderers for the item at a later date.

38) **Earnest Money Deposit:**

- a) The Earnest Money Deposit of **Rs.3,00,000/- (Rs. Three Lakh only)** must be paid / sent along with your technical bid in the form of a Demand Draft, Banker cheque or Bank Guarantee **(from a Nationalized Bank only)** drawn in favour of The Director, Indian Institute of Tropical Meteorology, Pune payable at Pune, otherwise your technical & financial bids will not be considered at all. The

Earnest Money of successful bidder will be returned only after installation, satisfactory demonstration and on acceptance of the equipment by the user Scientist / HOD as per the terms of our purchase order. If the successful bidder fails to fulfill the contractual obligations before the due date, he will forfeit the EMD.

The Earnest Money of the unsuccessful bidder whose technical bid has not been found suitable will be returned within **One Month** after receipt of Technical Committee recommendations.

- b) Those who are registered with Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation or the concerned Ministry / Department need not to furnish EMD along with their bids.
- c) Though EMD has to be submitted by Demand Draft, Banker's Cheque or Bank Guarantee, we prefer to have Bank Guarantee for easy return to the bidders once a decision is taken by IITM. (Specimen of Bank Guarantee is enclosed at Annexure 'A').
- d) Tenders not accompanied with Demand Draft I Bank Guarantee towards "Earnest Money Deposit" will summarily be rejected.

39) Part and incomplete tenders are liable to be rejected.

40) Conditional Offers will not be considered.

41) The tenders must be clearly written or typed without any cancellations / corrections or overwriting.

**42) Fax / E-mail / Telegraphic / Telex tenders will not be considered.**

43) IITM will not be responsible:

- a) For delayed / late quotations submitted / sent by Post / Courier etc.
- b) For submission / delivery of quotations at wrong places other than the Office of Director, IITM, Pune – 411 008.

44) If the supplier fails to Supply and Install the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of one percent value of the Purchase Order awarded, per every week delay subject to a maximum of 10% for every week beyond the due date and such money will be deducted from any money due or which may become due to the supplier.

45) In case of any dispute regarding part-shipment, non-compliance of any feature etc., the Director, Indian Institute of Tropical Meteorology, Pune will be the final authority to decide the appropriate action and it will be binding on the vendor.

- 46) Last Date and Time for receipt of Tenders: **Upto 13:30 hrs. on 7<sup>th</sup> October 2009.**
- 47) Date and Time of opening of Tenders : **At 15:00 hrs. on 7<sup>th</sup> October 2009.** (Part - I Technical Bid only).
- 48) Director reserves the right to reject any or all tenders without assigning any reason.

(S. R. Nirgude)  
Senior Technical Officer-II  
for Director  
Email: [nirgude@tropmet.res.in](mailto:nirgude@tropmet.res.in)

Tel: **020-25904200 Ext.242**

**INDIAN INSTITUTE OF TROPICAL METEOROLOGY**  
**Pashan, Pune – 411 008**

(Enclosure to Enquiry No. PS/128/22/2009/ dated 25.08.2009)

<p><b>Specifications</b> <b>Digital Display System (DDS)</b> <b>of SAFAR for CWG-2010</b></p>
---

(Turnkey Job)

**SAFAR** (System of Air Pollution Forecasting and Research) is a project meant to produce the real time and forecasted (24 hour in advance) air quality data of minimum 6 parameters (pollutants) and display it at 14 different Locations (10 Out door + 4 Indoor) within a domain of 60 km x 60 km around the venues of Commonwealth Games-2010 at New Delhi.

Above data (called SAFAR data) will be collected by IITM at central location server in a particular format. The ***broad scope of the present DDS tender*** is to display this data in static and animated format along with required messages in given format on several indoor (4) and outdoor (10) locations within the SAFAR domain. Further details are outlined in subsequent sections of this tender document.

The Supplier of Digital Display System of SAFAR for CWG-2010 (DDS) should have high recognition of having enough field experience in designing such system to provide best possible true colour display of air quality parameters in static and video /animated forms. The System should be designed to minimise the time spent on maintenance. During establishing DDS, following criteria /features must be adopted and the manufacturers should comply the same in order to provide high quality results.

1. Since the system is to be operated & used for air pollution parameters during the period of Commonwealth Games 2010 at Delhi, it is highly desirable that the supplier must have enough expertise in operation and maintenance of such system.
2. Supplier should have track record of having serviced clients like government or reputed non-governmental organizations (e.g. State and Central Pollution Control Boards, BSNL, Indian Railways, Airport Authority of India, etc.).

3. To provide the effective maintenance during the games, it is essential that Boards are designed and manufactured in India. Supplier should also have good service support at Delhi. Also, the preference will be given to the manufacturer who has ISO9001 /ISO9000 Quality Accreditation. A certificate of an accredited authority must be enclosed.
4. The supplier's average turn over per year for the last 3 years should be substantial (say around 50 Crores or above) to establish the credibility and reliability of the company as the project is target oriented and related with the prestige of the institute and country being a part of CWG-2010.
5. All display boards must have technical sophistication to be connected remotely to Data Acquisition System for providing substantial advantages in communication.
6. Out door True Colour LED video display should be equipped with high-bright Nichia LEDs and electronics control, should deliver sharp and highly contrastable picture even in the broad daylight. Features like 16 bit processing per prime colour; at least 3600Hz refresh rate added should give resolution & stable video with perfect picture depth. Intensity should be perfectly controllable.
7. The indoor true colour display should be equipped with high-bright Tri-colour surface-mount Nichia, 3 in one Chip and electronics control, should deliver sharp and highly contrastable picture in different lighting situations of indoor environment with 12 bit data processing per prime colour. At least 700 Hz refresh rate added should give resolution & stable video with perfect picture depth. Automatic Intensity Control feature should be present to help the Display to deliver the picture adjusted to ambient light which provides strain-free viewing at all times.

**Note: Supplier should categorically provide detail feedback on compliance under each and every point mentioned above in chronicle order as well as their response and comments on each of the bullets of following sections.**



## **1. Scope of the DDS work**

**(In commercial bid, quote the cost against (A) and (B))**

**(A)** Design, manufacture, supply, installation, testing and commissioning of the following-

- **10** (TEN) Numbers: Outdoor true colour LED displays with a minimum display size 8.5'x6.3'
- **4** (FOUR) Numbers: Indoor true colour LED displays with a minimum display size 4'x3' (Optional: LED display of 60 inches)
- Supply of Main Display control PC with required customized software to capture data from SAFAR server and then to network all the displays, animate and plot of SAFAR (air quality) data in required format in true colour and other social messages.
- Remote data handling / delivery
- Centralised data delivery to all the LED displays
- Networking of all LED displays for data handling.
- Comprehensive Maintenance for 1 year after successful installation (warranty period) and Operational Contract (OC) for 2 months. CMC for additional period of 1 year after the expiry of warranty period.
- Operational Training of IITM personnel.

**(B) Fixing and installation of the display boards (Civil work):  
(Quote separately)**

Physically fixing and erecting all displays on the ground in Delhi at 10 locations (outdoor) and 4 locations (indoor) with a pole height of about 9 feet above the ground for outdoor and 5 feet for indoor. These installations should be done in such a way that if these boards are required to be shifted to IITM, Pune after the CWG, it can easily be dismantled and transported. Location area will be made available & defined by IITM within 60 km x 60 km SAFAR domain at Delhi.

Optional: As an optional item to 'B', vendor should quote separately the cost of dismantling and safe transporting all 14 displays along with all accessories of DDS from Delhi to IITM, Pune.

## **2. DDS work Details**

- Both Outdoor and Indoor displays to be networked with options for Single point remote Data handling, delivery & updating in real time.
- All 14 Display boards are required to be installed which are spread within a range of 60 Km x 60 km [falls under scope (B)].

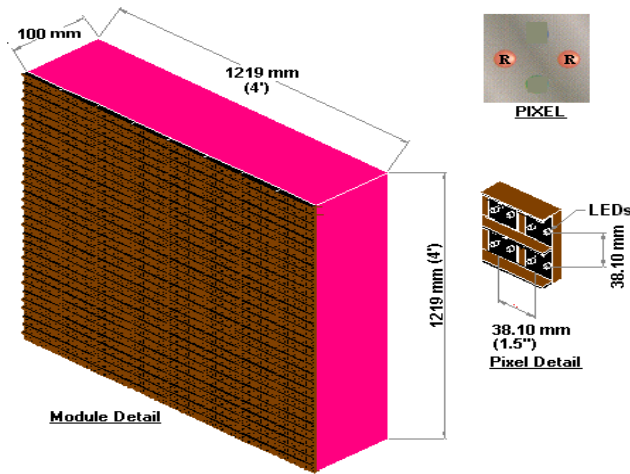
- Required to be connected to main control room PC through GSM/GPRS
- Main Display control PC should be connected /interfaced to SAFAR server through LAN/wired mode to collect real time data.
- Your data handling Software should be installed at control room PC
- Control room SAFAR data server will be provided by IITM
- Optional: VPN-GSM connection cost for all locations should be quoted separately by supplier on actuals (one time cost + rent on per month basis). IITM will extend all possible help to facilitate this job. There is a remote possibility that IITM can make its own arrangement for the same hence vendor should account for this cost and quote.

### **3. DDS Operations- key feature ( required )**

The DDS will project the following information in Graphic colour slide format-

- Air Quality –Now (Real Time)
- Air Quality –Tomorrow (24 hour advance Forecast)
- Any social message or other customised, messages relevant to pollution control (both stationary & video forms)
- Message of data required to be shown using bar graph/images /videos in colour to make it interesting for the common public.
- Option should be there to display the messages and any other text in English and Hindi.
- Data has to be shown in real time – Auto mode
- All display data should be seen/mirror image in the control room PC
- **Activation:** The display should be activated automatically when the power is supplied. The activation sequence starts with a self test. If a major fault is detected, during activation or during normal operation, the display should be blanked. The total activation time to come into normal operation should not be more than 7 seconds. All Displays are interfaced with the central PC thru' GSM Modem. Upon configuration of communication and display parameters (i.e. Screens) in software, it should start establishing connection with each display board to send data.

## 4. Outdoor LED Display Specification



1.	Resolution	Pitch	Visual	10.16 mm
			Physical	20.32 mm
		Pixel Density	Visual	128x 96 = 12288 Pix / Tile
			Physical	64 x 48 = 3072 Pix / Tile
			Visual	9688 Pix/ Sq-Mtr
Physical	2422 Pix /Sq-Mtr			
2.	Pixel Information	Pixel Configuration	2Red+1Green+1Blue (5mm oval)	
		LED life and make	~100000 Hours; Nichia, Japan	
		Brightness	9000 NITs ( Cd / M <sup>2</sup> )	
3.	Viewing	Horizontal Viewing Angle	~110°	
		Vertical Viewing Angle	~40°	
		Recommended minimum viewing	10 Mtrs from screen for Text	
4.	Power supply	Input Voltage	100-240V AC, 50/60Hz	
		Power Consumption-Max.	Lowest feasible and Economic	
6.	Tile Engineering	Tile casing Rear Case Material	Powder Coated Aluminium Alloy For light weight and rust free life.	
		Module Access	Rear Access	
		Louvers / Shades	Replaceable	

7.	Environmental Conditions	Temperature Range	Operating -0 to 50°C
		Humidity	Operating 0 to 90% RH
		Water Proof	IP 65 and full protection from lightning, corrupt resistant and water
8.	Processing	Data Processing	16 Bit
		Colour Shades	~281 Trillion
		Refresh Rate	At least 3600 Hz

### 5. Indoor LED Display Specifications

1	Resolution	Pitch( Physical / Visual )	9.525 mm
		Pixel Density	128 x 96 = 12288 Pix / Tile
			11022 Pix / Sq-Mtr
		LED Density	12288 LEDs / Tile
			11022 LEDs/Sq- Mtr
2	Pixel Information	Pixel Configuration	3-In-One (RGB Chip-type)
		LED life and make	100000 Hours; Nichia, Japan.
		Brightness	2000 NIT ( cd / Sq-Mtr )
3	Viewing	Horizontal Viewing Angle	115°
		Vertical Viewing Angle	115°
		Recommended minimum viewing	7 Mtrs from screen for Text
4	Power	Input Voltage	100-240V AC, 60 / 50 Hz
		Connected Load	Lowest feasible and Economical
6	Tile Engineering	Tile casing Rear Case Material	Powder Coated Aluminium Alloy for light weight and rust free life.
		Module Access	Rear Access
		Louvers / Shades	Replaceable
7	Environmental Conditions	Temperature Range	Operating 0 to 50°C
		Humidity	Operating 0 to 90% RH
8	Processing	Data Processing	12 Bit
		Colours	~64 Billion
		Refresh Rate	Around 720 Hz

## **6. Indoor LCD Display Specifications (Optional)**

**(Quote Separately cost for each LCD display)**

(Note: It may be considered as a substitute of above mentioned indoor LED display (no. 5) depending on location and favourable light conditions and hence should support all other interfaces for softwares for indoor display of DDS.)

- **Display Size: 60 Inches or more**
- **Dynamic Contrast Ratio:** 10,000:1 with Enhanced Picture Contrast Technology
- **Response time:** 4ms
- **Resolution:** 1920 x 1080 pixels
- **Display Technology:** TFT active matrix /Multi-pixel
- **Image Aspect Ratio:** 16:9
- **HDTV Compatible:** Yes
- **Speakers:** 2 speakers
- **Brightness:** 450 cd/m<sup>2</sup>
- **Connectivity:** RS-232C Input for control and Computer connectivity, preferably a USB input as well)

## **7. Main Display control PC Specifications**

P.S: It should have capability to host the required software of DDS and interfacing with SAFAR data server for data input.

Intel(R) Core(TM) 2 Duo Processor E8400 (3.0GHz /1333FSB /6M L2 cache) or Higher with Intel vPro Technology and remote management option, Minimum 2GB (1 x 2GB) NECC Dual Channel DDR2 SDRAM Memory, Minimum 320 GB SATA Hard Drive 7200 RPM, Genuine Windows XP Professional licensed, minimum 19" LCD Monitor with HD resolution, USB Keyboard, Optical USB Mouse, Gigabit Ethernet LAN controller (10/100/1000), Integrated Intel(R) Q45 Express Chipset mother board, Integrated Intel(R) Graphics Media Accelerator 4500 graphic card, Integrated High Definition Audio.

## **8. Comprehensive Maintenance Contract (CMC) and Operational contract (OC)**

It is understood that as per the practice, there should be a total Comprehensive Maintenance Contract (CMC) for initial one year free of cost. This should include all consumable; spare parts; regular maintenance for uninterrupted operation. In addition, supplier should depute one or more trained technical person /engineer (as they deemed fit for the required job) on site on permanent basis for a period of 2 months (1 month after the

complete functional installation of displays and one month around commonwealth games i.e. from 21<sup>st</sup> September - 20<sup>th</sup> October 2009) called Operational Contract (OC). This /these engineer /s will maintain analysers, manage all consumable, keep it up to date and carry out the complete operational analysis at all 14 different stations (spread around 50 km radius within Delhi and surrounding areas near CWG village) on regular basis. Quote separately for this additional service of OC. Any display should not be out of order for more than 2 hours during the above mentioned crucial 2 month OC period and not more than 2 days for the remaining period. Display should remain operational at least 90% of the total time in a year. In case of non-compliance penalty will be charged which may include 10% of OC amount per day or as decided by IITM. The instrument should be commissioned, regularized and operational after the order is executed without any additional facility and cost to IITM excepting the infrastructure facility which includes space for erecting displays, furnished laboratory space in control room and 230V standard Indian power supply.

Supplier should also quote for the comprehensive maintenance contract (CMC) for an additional period of one year after the expiry of the above mentioned warranty period.

## **9. Functional Features of Air Quality Parameters of DDS**

- 1 True colour DDS of pixel matrix 128x96 for indoor and 64x98 for outdoor to be installed at each of the proposed locations within the area of 60 km x 60 km around CWG venues in Delhi.
- 2 Each board can be associated with an embedded control box in addition to the Display Electronics for LED display board.
- 3 Control box is envisaged to be equipped with **GSM/GPRS modem** to have either **Dial-Up** data connectivity, **SMS** connectivity or broadband based **VPN** connectivity based on the field requirements. The inherent communication network from central node to all the fourteen nodes hereafter referred as "Data Communication Network"(**DCN**).
- 4 A high end "**Desktop Computer**" (latest dual core processor and with 21" LCD screen) co-located at the Central Air Quality Monitoring System, connected to the SAFAR server over LAN connectivity collects regularly [user configurable polling intervals] the required data.
- 5 Vendor **customized software** for the collection of the Air Quality Data (referred further as AQ data) should be hosted on the computer. This

- computer to be compatible with **GSM/GPRS** modem to have **data /sms** or **VPN** over broadband connectivity with other 14 nodes.
- 6 The collected **AQ data** may be processed further to make it in the user presentable form and then transfer it over "Data Communication Network" to the respective nodes.
  - 7 **Software** should convert the received DATA into Displayable content and show the content on the target display with pre-set frame stay times & inter-frame delays.
  - 8 **Software** can be configured from to display the latest data received AQ data or to display pre-defined play-list slogans / messages useful to the public.
  - 9 IITM-configurable parameters at **Network Operation Centre (NOC)**:
    - **Poll interval** (for every **X** seconds, Control PC collects the data from SAFAR server)
    - **Push interval** (for every **Y** seconds, Control PC pushes the data to the respective Display Nodes)
    - **Business logic** for the conversion of standard data into user-presentable format (additional parameters, change in units of parameter measures, Min & Max limits of the parameters, the levels of Normal, Medium, Danger for parameter values )
    - Parameter **display template and map** for **bar graph, line graph, Pi-chart** or **tabular** information template or animated / video option.
    - Centralized **Diagnostics, Configuration & Alarm** handling for the displays
    - Spontaneous user fed Text Message Display
  - 10 User-configurable parameters of the Display board:
    - Display **Frame stay-time, Inter-frame delay**
    - Frame **transition effects**
    - Manual, time based or photo sensor based **Intensity control**
    - Configurable **play-list** (interrupt or non-interrupt mode)
    - Self **health check & monitoring** system and spontaneous information to central station in charge.
    - Support for **English** and **Hindi** fonts
  11. Software feature should include the following:
    - Displays will show environment data of several parameters for today, captured from 10 locations, in one-after-the other-screen pattern on all locations in map of CWG-area /Delhi, with the time duration of around 10 seconds between each screen.

- Next, data of above step will be shown in graphical manner using bar and /line graph/pi-chart, etc.
- It will repeat above step for the next day's forecast.
- Parameter values going beyond threshold limit (to be provided by IITM) to be shown blinking, to attract the attention.
- Display should have options for several lines at top and several lines at the bottom to show text data. The First two lines of Display will show title, real date and time (there should be provision for the same)
- The Date and Time will be of current day in case of air quality-now, whereas in case of air quality-tomorrow, it will show the date of next day
- The last one / two lines to be used to display general messages and explanation of the data /abbreviation / units etc. being displayed in the Display
- Data will be refreshed every hour, till that time, it will keep on showing the same data using above mentioned pattern

=====

(S. R. Nirgude)  
Senior Technical Officer-II  
for Director



**BID SECURITY FORM**

Whereas 1 (hereinafter called " the Bidder") has submitted its bid dated (date of submission of bid) for the supply of \_\_\_\_\_ (name and/or description of the goods)(hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE \_\_\_\_\_ (name of bank) of (name of the country), having our registered office at (address of bank)(hereinafter called "the Bank"), are bound unto (name of Purchaser) (hereinafter called "the Purchaser") in the sum of \_\_\_\_\_ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with .the Common Seal of the said Bank this \_\_\_ day of 20\_\_\_THE CONDITIONS of this obligation are:

1. If the Bidder withdraws it's bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of it's bid by the Purchaser during the period of bid validity:
  - a) fails or refuses to execute the; Contract Form if required; or
  - b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, Without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it , owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to one year after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)  
Name of Bidder.