

Ministry of Human Resource Development
Department of Higher Education

Committee on DTH

The DTH Committee, constituted by the MHRD under NME-ICT project and the Co-opt DTH members, held the 8th meeting at 11:00 Hrs, on October 25, 2012 at Room No.112 C-wing, Shastri Bhawan, New Delhi.

The following members attended the meeting –

- 1) Prof. S.V. Raghavan, Scientific Secretary, Office of the Principal Scientific Adviser to the Government of India. Chairman, DTH Committee
- 2) Mr. N.K. Sinha, Mission Director, NMEICT & Additional Secretary (TEL), MHRD, New Delhi.
- 3) Prof. Sandeep Sancheti, Director, National Institute of Technology – Delhi.
- 4) Dr. Tilak R Kem, Director, Consortium for Educational Communication, Aruna Asaf Ali Marg, New Delhi.
- 5) Dr. S. Mohan, Director, NITTTR, Chennai.
- 6) Dr. R. Vijayaraghavan, Professor & Head (Training) Tamil Nadu Agriculture University, Coimbatore-461003.
- 7) Dr. Ramanujan, Associate Director, C-DAC, Bangalore.
- 8) Shri Ravikanth, In-Charge Director, EMPC, IGNOU, Maidan Garhi, New Delhi.
- 9) Mr. Nageshwar Nath, Maintenance Engineer, CEC, New Delhi. (Invitee)
- 10) Mr. Vinod Mango, Engineer-In-Charge, EMPC, IGNOU, New Delhi (Invitee)
- 11) Prof. K. Mangala Sunder, Head Dept. of Chemistry, IIT Madras attended meeting partially on Phone.
- 12) Shri Pradeep Kaul, Sr. Consultant, NMEICT, MHRD, New Delhi, Convener, DTH Committee.

The remaining Committee members, due to their pre occupation, could not attend the meeting.

1. Prof. Raghavan, Chairman DTH Committee welcomed the members for attending 8th DTH Committee, especially the Heads of the Central Institutions as Co-opt DTH members who attended the DTH meeting for the first time.
2. It was noticed that the quorum for the meeting was falling short, the meeting was therefore adjourned for half an hour and thereafter the meeting started at 11:30 a.m.
3. After having circulated amongst the members, the minutes of the 7th DTH meeting in advance and having received no comments from any of the member, the minutes of the 7th DTH Committee were therefore conformed, unanimously.

4. Prof Raghavan, for the benefit of newly joined Co-opt DTH members, briefed them regarding methodology of generation of live content by each of the Head of the Central Institutes and concerning issues that were discussed on this, in the previous meetings.
5. Chairman, DTH Committee referred the interaction he in the past had with Prof. Mohan and the discussion on how to improve the Technical Teachers Training and integrate the training using the ICT methodology. Prof. Raghavan said he is glad that the day has come to work together in this direction.
6. Prof Raghavan brought an analogy, how with the NKN and NMEICT initiative, one can use Remote Locations and get connected with the learners, however, he expressed that the DTH system is more complex in operations. It was felt that the Teaching Ends need to be well designed and should be capable of operating in decentralized manner and at the same time it should be autonomous; however, certain activities in the DTH are required to be handled centrally. The activities that are common need to have compatibility in the system with each centre and we need to decide centrally what equipment to use. Further we need to create centrally common 'Operating Procedures', etc. In all such cases maintaining homogeneity is a must.
7. Prof Raghavan said that he is glad and thankful to Director, IIT Madras who has agreed to shoulder the responsibilities on deciding the equipment package for Teaching Ends and the IIT Madras shall be procuring the equipments on behalf of 150 Teaching Ends and shall be looking into other related issues on DTH.
8. The members reviewed 'A summary Proposal for creating 150 Teaching Ends (TEs) as online 24/7 feeds to 50 DTH Channels to be established under NME-ICT', received from Prof. Bhaskar Ramamurthi, Director, IIT Madras and Prof, K. Mangala Sunder, Dept. of Chemistry and NPTEL Coordinator, IIT Madras, both as PI's. Prof Mangala Sunder explained over phone the rationale behind budgeting the Manpower for five years in the proposal, as this way we can try to retain the trained manpower for a longer duration and this shall help in retaining manpower for longer period, which in turn will benefit the project.
9. Prof. Raghavan emphasized that during selection of the equipment for the Teaching End, we should keep in mind the absolute ease with which we expect the teacher to use the equipment while delivering a lecture, live. It is to be kept in mind that acquiring equipment with automation, which may initially cost more, shall improve system efficiency and we should look for it, at least in the Teaching Ends. As far as possible the equipment acquired should be of HD-SD format and at same time, end user's perception should be kept in mind, in deciding the type of equipment. It was further suggested that equipment selected for procurement should at the same time be affordable and should be within overall budget available with the NMEICT.

10. The members also offered their comments that proper attention should be given on door design, fire and other safety requirements in designing the studio at TEs, since a large number of students and manpower will be working inside a TE. It was further recommended that if need be the IIT Madras may engage experts or consultants for TE studio design.
11. It was also recommended that TE equipment may have 3 numbers of SD-HD Camera's, a Recorder, content being recorded at about 20-30 mbps, a vision Mixer of 6 video i/p, audio Mixer, Laptops/PC's, scan Converter, provision for Interactivity and return path. The size of the studio/Teaching End may be about 45x30 feet size with room height about 12 feet, Acoustic treatment to be provided, Cool lights, provision for Air-conditioning & UPS etc. There need to be smaller room 15X18 feet size next to the Teaching End to house the equipment and co-ordinate the activities of the Teaching End.
12. A discussion also took place whether the TEEC should choose equipment for Teaching End, keeping in mind the place of delivery of lectures at 'Actual Classrooms end' or at the 'Fixed Studio's'? The members after deliberation felt that the delivery of lectures at Actual Classroom will make technical operations and equipment package more complex than the lecture delivery at Fixed Studio. It was therefore decided that the Teaching Ends (TE) should therefore be only based on 'Fixed Studio' Mode.
13. The Members further deliberated on the size of a Teaching End, it was decided that while delivering a lecture, the teachers would very much like the presence of students in the TE. We may therefore keep two sizes of TE in mind, one to accommodate students numbering upto 45 and other size to accommodate smaller number of students, besides accommodating the equipments for the broadcast.
14. The TE equipment package should also include UPS/Inverter, provision for acoustics treatment in TE, provision for AC in TE and other technical areas. The system design should take care of link redundancy and supply chain redundancy, at the same time solutions have to be analysed for reliability as there is no scope for failures in DTH broadcasting.
15. At the same time, if a breakdown in any channel anywhere takes place, the teleport end should playback a recorded programme of the subject and topic close to the scheduled one. It was also suggested that at teaching end we may use Anchor in order to engage the teachers, which will help in case there is a need to fill up the time on the channel.
16. The Committee after going into details into the proposal received from Director, IIT Madras on establishment of Teaching Ends, approved on account, a budget of Rs.80 Crores (including budget for acoustics, AC and power backup) as per the proposal on purchase of TE equipment at 150 TE places.

17. The members recommended that besides engaging Technical and Production manpower, we may also engage one Academic Co-ordinator, to coordinate with the Subject Coordinator, Academic Experts etc., at each of the Teaching End and pay him/her the same emoluments as is to be paid to Technical & production personal at TE.
18. The Committee felt that number of personal that are required to be engaged at Teaching Ends should be decided by the TEEC keeping in mind the deliberations on this made by the DTH committees from time to time.
19. The Chairman, DTH requested the Member's, especially technical experts from CEC and IGNOU to provide their inputs on equipment package, Cost, model & Make (if any) to the Convener, DTH Committee, who in turn should compiled the TE equipment list along with the costing & Recurring and Non-Recurring budget required. The equipment package shall latter on be looked into by the Teaching End Expert Committee (TEEC) to be constituted by the Director, IIT Madras for finalizing the specification/RFP.
20. It was proposed that based on the inputs received from IGNOU, CEC, IIT Madras, etc., the TE equipment list along with Non-Recurring and Recurring budgetary, may be compiled by the Convener, DTH, which may be put up for approved of the Chairman, DTH. The approved proposal may then be put before the Project Approval Board, NMEICT, in its forthcoming meeting, for their kind approval, so that the funds, on account required for acquiring TE equipment at 150 Teaching Ends are soon made available to IIT Madras and such equipment are acquired, installed and the TE's are made operational at the earliest.
21. The Members recommended that based on the deliberations offered by the DTH Committee in the past and during present meeting, the Convener, DTH may co-ordinate with the PI's on modifying the "Proposal for creating 150 Teaching Ends....." received from Prof. Bhaskar Ramamurthi and Prof, K. Mangala Sunder, further Mr. Pradeep Kaul, Convener, DTH committee, may be included as one of the PI's and the PI's may resubmit the proposal to the DTH Committee.
22. The Members felt that it is appropriate that the Heads of Central Institutes together help in creating 'Standard Procedure' on operations and tolerance to sustain failures. Chairman, especially requested Prof. Sandeep Sancheti to kindly take initiative on this and compile such instructions in association with other Heads of Central Institutes and Convener, DTH.
23. The Committee deliberated on a Proposal received by Mission Director, NMEICT, from Prof. Radhavallabh Tripathi, VC, Rashtriya Sanskrit Sansthan, for setting up of 'Sanskrit DTH Channel. The members appreciated having received a proposal on setting up Sanskrit Channel. The Chairman, DTH Committee approved inclusion of the name of Prof. Radhavallabh Tripathi, VC, Rashtriya Sanskrit Sansthan as Co-opt Member, DTH. The Members further recommended that Prof. Tripathi, may initiate steps to co-ordinate with one of the two Heads of Central Institutes of Central Universities and decide the

subjects to be launched on DTH and other modalities on this. It was also suggested, to begin with one Sanskrit Channel may be initiated and the Channel should also include content being developed by the Vedic institutes in the country.

24. Since couple of members as Head Central Institute attended the DTH Meeting for the first time, the members were briefed by the Chairman, DTH that they should look after the Academics and Content generation of Subject(s) to be handled by them, to act as a hub and to engage a number of institutes, associated with it for generation and delivery of Contents over 50 Channels. The content may be for UG or PG courses and the title of subjects to be taken up for running channel(s) needs to be decided. The Members were provided with a copy of guidelines and summary of '**Action Items**' that the Head of the Central Institute need to take at their end and the Heads Central Institute were requested to take appropriate action and submit action taken report to Convener, DTH in two weeks time.
25. The Committee reviewed the issues raised in a letter dated October 16, 2012 received from Prof. Bhaskar Ramamurthi, Director, IIT Madras, seeking recommendations from MHRD to nominate two to three names of members to be included in the Teaching End Expert Committee (TEEC) being constituted by the Director, IIT Madras for finalizing the TE equipment specification/RFP. The members recommended the name of Mr. Pradeep Kaul and Mr. Ravi Sexena, both members of DTH Committee, as representatives from MHRD for inclusion to the TEEC.
26. It was felt that as on date, a number of Heads of the Central Institutes have not been able to attend the DTH meeting and in order to interact with them, allocate work, subjects and channels; individual meeting with such members may be held separately and at the earliest.

The meeting ended with vote of thanks to the Chair.

Pradeep Kaul
Convener, DTH Committee &
Senior Consultant (Tech.) NME-ICT