ICT Committee Report to IQAC

Prepared by:

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ICT Committee Report for the Academic Year of 2015-16

The information and communication technology (ICT) committee of DA-IICT here with submits to the Chairman and Director of IQAC the details about the various important equipment that have been acquired in the academic year of 2015-16. The report also compares % of new equipment created and % of obsolescence removal against the year of 2014.15. The report also mentions the overall outlay for spending on ICT related operations of the institute for the academic year of 2016-17. The report was prepared by Prof. Laxminarayana Pillutla, in his capacity as the ICT Committee convenor.

- **Academic related equipment:**
  (1) Hardware:
    a) **High performance computing (HPC) cluster:** To meet the computing requirements of the B.Tech (ICT)-CS program the institute has acquired an HPC at a cost of Rs. 23.8 Lakhs.
    b) **Computing servers:** To meet the high end computing requirements of research scholars (includes M.Tech and PhD students) the institute has acquired four servers with the following configuration: ***A dual processor (Intel Haswell E5-2620V3) six core machine with 2 X 1 TB Enterprise hard disks with RAID 1 capability and 32GB memory which is expandable upto 1 TB. The approximate total cost in acquiring these servers is around Rs. 10,00,000/-.*** These servers are named as follows: ***shannon.daiict.ac.in; fourier.daiict.ac.in; bellman.daiict.ac.in; abel.daiict.ac.in***. All the four servers are fully operational and are used by the various research scholars on campus. To facilitate efficient use of these servers we have made provisions for off-campus access initially for faculty members via VPN. We are planning to extend the same for the benefit of research scholars as well. (**Note:** At the time of compilation of this report another computing server namely: ***raman.daiict.ac.in***, also has been acquired and is fully operational)
    c) **Network attached storage (NAS):** The institute has acquired a NAS of EMC make to provide storage space for PG (with 5 GB capacity) and faculty members (with 10 GB capacity). The total storage capacity of NAS is around 2.5 TB. It is through the NAS access to the five computing servers is provided. The NAS was acquired at a cost of Rs. 6 Lakhs. We intend to create similar facilities in the future for our UG students as well.
    d) **Laboratory equipment:** The institute has invested Rs. 5.83 Lakhs towards purchase of new equipment of which Rs. 4.72 Lakhs were spent to acquire NI USRP boards which are useful for creating SDR based applications as part of the M.Tech courses on communications and signal processing.
  (2) Software:
    a) **MATLAB campus wide license (CWL):** The institute has subscribed to a 3 year CWL of the popular scientific software MATLAB at a cost of Rs. 21.0 Lakhs. As part of the CWL the institute is entitled to usage of 30 toolboxes of MATLAB.
    b) **Upgradation of LABVIEW software:** The institute has also upgraded its existing LABVIEW software license by spending Rs. 7.1 Lakhs. This was important since most of the virtual instruments (VIs) have gone through major changes.
    c) **Cadence Electronic Design Automation (EDA) suite:** The Cadence EDA suite license was renewed and upgraded at a cost of Rs. 22 Lakhs.
    d) **Adobe CCT license:** To facilitate the design activities of our M.Des students the institute has subscribed for 30 licenses of Adobe CCT at a cost of Rs. 6.32 Lakhs.
    e) **Turnitin License:** The institute has invested Rs. 3.36 Lakhs towards the annual renewal of the anti-plagiarism software "Turnitin".

- **Institute operations related equipment:**
  (1) **Networking equipment:** The institute has invested Rs. 27.81 Lakhs towards (a) upgradation of the core and backup L3 switches and (b) installation of wireless access points.
  (2) **Desktops:** The institute has invested a total of Rs. 26.08 Lakhs for the following purposes: (a) Upgradation of desktops at VLSI lab, (b) Upgradation of desktops in the reading room of resource centre and (c) Upgradation of desktops for faculty and staff.
  (3) **Server upgradations:** The institute has invested Rs. 5.91 Lakhs towards upgradation of e-mail server and blade server.
  (4) **Software renewals:** The instute has invested Rs. 3.21 Lakhs towards renewal of Microsoft windows license renewal.
  (5) **IT FMC contract renewal:** The institute delegates IT management aspect at its place to a third party organization. Accordingly the institute invested Rs. 16.00 Lakhs to renew its FMC with M/S. Silvertouch Technologies.
  (6) **Classroom multimedia equipment:**
     a) **AV equipment at CEP-102:** The institute has invested Rs. 4.82 Lakhs on the audio-visual equipment towards the creation of a state-of-the art mini auditorium. The equipment installed include a brand new projector and an audio system based on Bose speakers
     b) **AV equipment at LT-1:** The institute has invested Rs. 21.00 Lakhs towards installation of brand new AV equipment at LT-1. The newly installed equipment include a full-HD projector, audio system comprising of Bose make speakers and amplifier and an interactive lectern with touchscreen, document projector, etc.
     c) **Installation/upgradation of projectors:** The institute has invested Rs. 1.05 Lakhs towards installation of new projectors at the meeting room of Faculty Block-4 and CEP-210. Further Rs. 2.02 Lakhs have been invested in upgradation of projectors at LT-2 and LT-3.
     d) **Installation of AV equipment at CEP-207 and CEP-209:** The institute has invested Rs. 1.57 Lakhs towards installation of new AV set up in CEP-207 and CEP-209. The equipment installed include new projectors, Ahuja make wall speakers, wireless microphone system, VGA switcher and audio amplifier.
     e) **Upgradation of audio system at LT-2 and LT-3:** The institute has invested Rs. 0.80 Lakhs towards installation of Ahuja make speakers at LT-2 and LT-3 to improve the audio quality.
     f) **Upgradation of printers:** The institute has invested Rs. 0.91 Lakhs towards purchase of new or replacement of old printers at various places on the campus.
     g) **Miscellaneous items:** The institute has invested Rs. 0.62 Lakhs towards purchase of various miscellaneous items like Gooseneck mics, wireless microphone and amplifier system and audio mixers. Another Rs. 0.12 Lakhs towards upgradation of somes of these items.

- **Quality assurance:** In this item we shall describe the quality assurance aspect in terms of the following parameters of interest: (1) % of new equipment (hardware/software) created against the academic year of 2014-15 and (2) % of obsolescence removal against the academic year of 2014-15.
  (1) **% of new equipment created compared to 2014-15:** The institute has invested Rs. 95.69 Lakhs towards acquisition of new hardware and software covering academics to institute operations. In contrast in the year of 2014-15 the institute invested Rs. 10.82 Lakhs. This implies an increase of more than 700% in terms of creation of new equipment on the campus.

(2) **% of obsolescence removal compared to 2014-15:** The institute has invested Rs. 70.75 Lakhs towards upgradation of existing facilities. Major chunk of this amount went into upgradation of networking equipment and desktops. In contrast in the year of 2014-15 the institute invested Rs. 30.25 towards obsolescence removal. In monetary terms obsolescence has come down by about 133% in this year compared to 2014-15.

- **ICT Budget for the year of 2016-17:**

S. No.	Budget Head	Amount in INR (April 2016 – September 2016)	Amount in INR (October 2016 - March 2017)
1	Lab – Capital expenditure	44.79,362	42,57,962
2	Lab - Operating Expenditure	10,00,000	-
3	IT – Capital Expenditure	3,05,32,000	35,00,000
4	IT – Operating Expenditure	46,80,000	32,40,000
		Sub-total 1: 4,06,91,362	**Sub-total 2: 1,09,97,962**
Total funds approved for the year 2016-17: sub-total 1 + sub-total 2= 5,16,89,324			