Ongoing R&D projects of E-Infrastructure division

1.

Project Title	Optical Wireless Access Network for Rural and Urban Communication
Executive Agency:	IIIT Delhi and ERNET India
Principal Investigator:	Prof.Anand Srivastava
Address:	Indraprastha Institute of Technology, Electronics & Communication Engineering Okhla, Phase III, New Delhi – 110020
Phone: Fax: Email:	anand@iiitd.ac.in
URL:	https://www.iiitd.ac.in
Project Objectives:	• The objectives of this project are to provide optical wireless (OW) connectivity for rural, urban communication scenarios. • In OW connectivity for rural communication as a prototype an end to end, bidirectional last mile access link for rural areas shall be demonstrated, which can support a downstream and upstream data rate upto 10 Mbps. • In OW connectivity for urban communication, the existing WiFi deployments will be complemented with LiFi for indoor communication and a hybrid LiFi-WiFi testbed shall be developed for evaluation.
Achievements/ Outcome	• Last mile bidirectional access upto 10 Mbps for rural areas. • Hybrid Li-Fi WiFi system with throughput more than standalone LiFi or WiFi system and link aggregation experimentation.
Start Date Duration (in months): Expected date of completion:	23.10.2019 (36 months + extension of 9 months) 31st July 2023
Status of Project:	Ongoing

2.

Project Title	Proposal for setting up Wi-Fi enabled campus network at Patna University, Patna
Executive Agency:	ERNET India
Principal Investigator:	Sh.Avanindra Singh
Address:	ERNET India, 5th Floor, Vol-I, Wing-A, DMRC, IT Park Road, Shastri Park, New Delhi - 110053

Phone: Fax: Email:	as@ernet.in
URL:	http://www.eis.ernet.in/
Project Objectives:	• The objective of the project is to setup a Model Wi-Fi Network at PU, Patna, Bihar. • To setup & create model Wi-Fi enabled campus network at Patna University with tier-3 architecture upgrade 10 Gigabit Fiber optic redundant backbone. • Wi-Fi LAN creation through powerful combination of wired & wireless Network technologies enable flexibility, resiliency, ease of access to information, data & services by any Wi-Fi enabled device. • Enabling high speed wireless access to Internet & Intranet resources to campus employees, staff, faculty, teachers, students, official visitors, guest on any-time anywhere basis across the campus. • Improvement of delivery of student-centric services, employee performance and efficiency and real-time access to information, learning material and data. Enable faster and more efficient decision-making at all levels.
Achievements/ Outcome	• Secure resilient and High Speed Model Wi-Fi enabled Campus Network at PU, Patna with redundant architecture. • Wi-Fi enabled Campus Network will cover around 35 Department/Building of PU in the campus. • Enabling high speed wireless access to internet/intranet resources to campus employees, staff, faculty, teachers, student, official visitors, guests on any-time anywhere basis in the campus with capability of its all users connecting. • Improved education and learning environment and may support dynamic interactive access to student and professors to digital learning content, sharing of online and stored practical information like laboratory experiments, reports and procedures, enabling students to interact with each other and to collaborate on projects etc.
Start Date Duration (in months): Expected date of completion:	31.03.2021 36 months 30th March 2024
Status of Project:	Ongoing

3.

Project Title	Strengthening of ICT Infrastructure (Wi-Fi system & Examination Evaluation System)" Himachal Pradesh University, Shimla
Executive Agency:	Himachal Pradesh University
Principal Investigator:	Dr.Jawahar Thakur

Address:	Himachal Pradesh University, Gyan Path, Summerhill, Shimla-171005-Himachal Pradesh
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URL:	www.hpuniv.ac.in
Project Objectives:	• To provide Wi-Fi connectivity to New Academic Buildings such as Multi Faculty Building Phase-II & Phase-III, HRDC Academic staff College, Boys Hostel, Girls Hostel, Faculty House VC Office, PRC Building and Health Centr4e in the University campus which needs to be made Wi-Fi enabled. • To develop efficient scheme for university evaluation system for speedy result declaration using Scanners, Cutters and Cloud Hosting. • To prepare a database of evaluators ready to evaluate the answer sheets in an online mode. • To develop an online system for evaluators and examiners to evaluate the answer sheets and automatic preparation of Awards Sheets.
Achievements/ Outcome	• Installation of Wi-Fi equipments and related accessories including LAN connectivity in Multi Faculty-II, HRDC Academic Staff College, Boys's Hostel, Girls's Hostel, PRC, Health Centre, VC Office & Faculty House. • An efficient scheme development for University Evaluation System for speedy result declaration using Scanners, Cutters and Cloud Hosting of answer sheets. • Implementation of On screen Evaluation and Advanced Examination Management System (OSES), an online system along with creation of database for evaluators and examiners to evaluate the answer sheets and automatically prepare Awards Sheets and then translate it into Result Preparation automatically.
Start Date Duration (in months): Expected date of completion:	05.07.2021 (12 months + extension of 18 months) 31st August 2023
Status of Project:	Ongoing