Student Essay Contest
Harnessing the Power of ICT for our New Initiatives

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Computer Society of India, Chennai Chapter, in association with the IEEE Computer Society, Madras and IEEE Professional Communication Society, Madras conducted an Essay Contest in two streams: Stream 1: Open to School Students (from 8th Standard to Plus 2); and Stream 2: Open to College/Polytechnic Students (UG/PG students of all disciplines).

The participants had the option of submitting an essay on "ICT for Digital India" or "ICT for Make in India" or "ICT for Clean India" by 31st Jan 2015.

Submitted essays were evaluated on criteria such as originality, novelty, applicability, potential value of the proposed idea(s) and clarity and style of presentation by a panel consisting of Mr. Ramesh Gopalaswamy (Author, Consultant and Guest Faculty, IIT Madras), Mr. Pramod Mooriath (President, Qatalys Software Tech & Chair, CSI Chennai), Ms. Latha Ramesh (VP-Academic Engagement & Service Delivery, Classle Knowledge Pvt Ltd & Past Chair, CSI Chennai) and Mr. K. Adhivarahan (ICT Consultant & Past Chair, CSI Chennai).

It was indeed very refreshing and encouraging to see the response of the students. More than 200 essays were received from various parts of India. In this article, we share some of the highlights of these essays. All the prize winning essays which are referred in this article are hosted at the website at http://goo.gl/FziCmK

On the topic of **Digital India**, some essays had sectorial focus. There were applications for travel planning [alag19940818], use of ICT for road safety [dany19930820], digitization to make sure

buses stop at designated bus stops [a real problem indeed!], use of Aadhaar numbers for an easy and foolproof way of getting birth / death certificates and other Government services [amar19941014] and also for "Smart Travel Card" systems [para19920912] an e-Attendance system to ensure students are not only physically but also mentally present in a class room. [Amit19940508]. The essay [jana19951127] presented an interesting concept of "Demat" for academic certificates. The essay [Manj19940611] covered a very wide variety of possibilities including politically sensitive areas like fisherman safety. Similarly the essay [saravana19930929] also covered a wide ground including healthcare, disaster management, e-Governance, etc. There was also an interesting system to connect common man to the Government called "Online Common Panchayats And Palikas Information System" [neel19941007]. [prin19950403] touches areas like digitization of elections and digitization of law and order. [sand19940508] brought out an innovative idea of "Biometric Voting Machines" to replace the current Electronic Voting Machines to minimize fraud and impersonation. The essay [srej19940727] went into the architectural details of various current success stories like e-Choupal. The essay [swet19950907] touched upon the important aspect of educating people about digital technologies. Very innovative methods of modernizing education using ICT were brought out in [vini19940901]

For "*Make in India*" initiative, there were some good suggestions too, belying the myth that students do not know much about manufacturing. An example was [chit19930531] which outlined the use of ICT for the entire product life cycle starting from investments through planning, product design, production, human resources and marketing. Some of the essays transcended just the technology borders in formulating solutions. For example, [dami19930930] proposed an application of the Crowd Funding model to secure investments for "Make in India". Another essay [resh19940913] focused on the importance of ICT for agriculture by discussing the application of robotics to agriculture like SLUGBOT, ACROBATS, etc. Realizing the importance of ICT in defense, [sind19960608] stresses the role of "Make in India" for Defense Manufacturing. The importance of promoting entrepreneurship for the success of "Make in India" initiative was brought out in [sona19940709]. The essay [mana19921126] brought out the importance of ICT for Make in India and its relevance to the common man, the *aam aadmi*.

In terms of "*Clean India*" too, there were several interesting essays. One of the essays [ashw19920604] made a very poignant and thought provoking observation that the number of mobile phones in India may exceed the number of toilets! This essay went on to propose novel methods of harnessing ICT to promote awareness and an attitudinal change in the minds of people about cleanliness. One of the most talked about technologies today is the use of drones. The essay [gaya19950228] suggested some innovative methods of using drones to address one of the most common problems we encounter – that of open pits and drains. Another essay [ram19871213] went beyond the traditional "ICT" to even take concepts from Chemistry to real life problems in areas in Chennai like Perungudi Dump Yard. The essay [shiv19950721] touched upon a very real problem for Chennaiites – namely cleaning of the Cooum River! The fact that there are already laudable initiatives like the m-bin initiative in Andhra Pradesh which significantly increased the productivity of the people working in sanitation was brought out in [ramv19990617]. The role of leveraging the appeal of film stars and cricketers through ICT media was brought out in [sona19940215]. The fact that "Clean India" transcends all religion was amply brought out by using quotations from Gita, Quran and Bible by [thaf19930429]. The use of ICT for the full cycle of waste management was discussed in [swat19930910].One of the essays [vipi19951120] went into a fair amount of implementation details of how to implement an important aspect of Clean Toilets. At the end of the day, cleanliness is a habit. This was nicely brought out by [gane19970607]. "Clean India" goes beyond just sanitation. It covers problems faced by the current generation like e-Waste. The essay [priy19950917] presents the importance of e-Waste management for Clean India.

Some of the essays also showed creativity and ingenuity in the presentation styles which augur well for the long term future. For example, [chan19931008] coined nice and catchy acronyms for several initiatives – like DIC for Digital India Classrooms, a model for hybrid learning, combining MOOCs with traditional class rooms. The essay [jaya19951003] also used relevant quotes from Mahatma Gandhi "Sanitation is more important than independence" to drive home the point of cleanliness. One student [MONI19940808] even coined a nice poem to bring out the importance of Clean India! After all, in the modern world, style is as importance as substance!

This spark of creativity and humour is aptly brought out in the conclusion of the essay [shub19930629]. "To conclude this article in a lighter vein, in one of the famous cartoons of Dennis the Menace, the irrepressible boy tells his father with logic beyond his years: "Dad, if everything is made in China, then God must be living in China". When the Prime Minister's vision of "Come, Make in India" is realised, and India becomes an enviable manufacturing hub of the world, Dennis may perhaps find God shifting his residence to India!"

It is proposed that the enthusiasm of the students be recognized appropriately and some of their well thought out suggestions and ideas presented in these prize winning essays will be taken up for exploring the feasibility of implementation through governmental agencies.

The essay contest was sponsored by Dynamic Group, Anjana Software Solutions Pvt. Ltd, HP Networking, Cognitive Platform Solutions (CPS) Pvt Ltd, Orbit Innovations and CloudReign Technologies. Prof. San Murugesan (Adjunct Professor, University of Western Sydney, Australia) and Mr. S. Ramasamy (GM, Great Lakes Institute of Management & Past RVP-VII and Past Chair, CSI Chennai) extended support in the successful conduct of this essay contest. Mr. H.R. Mohan (Former Associate Vice President (Systems), The Hindu and President, CSI) was the convener of this contest.

On 30th March 2015, in a function organized at the CSI Education Directorate at Chennai, the Chennai based contest winners in each stream were awarded the following prizes & certificates:

- One 1st Prize: Rs. 10000/-
- Two 2nd Prizes: Rs. 5000/- of each
- Four 3rd Prizes: Rs. 2500/- of each
- Consolation Prizes: Rs. 1000/- each
- Certificate of appreciation: For short listed essays based on a certain cut-off score over and the above prize winning essays.

Mr. S. Arjun, a student of class 9 from Chennai, who had received the 'National Child Award for Exceptional Achievements (for Computer Technology) 2014" from the President of India was also felicitated and awarded a cash prize of Rs. 5000/- and a certificate of appreciation.

Mr. S. Mahalingam, Past President of CSI and Director and Former Executive Vice President & CFO, TCS was the chief guest at this felicitation function. Mr. Prakash Damodaran IAS, first IT Secretary to the Government of Tamil Nadu and Director, UTI Infrastructure Tech Services Ltd was the guest of honour. Both of them wished and encouraged the prize winners and highlighted the opportunities in the areas of information and communication technologies which are playing a major role in or day to day life.

Mr. H.R. Mohan, President, CSI & Chairman, IEEE CS & PCS welcomed the prize winners and the parents and teachers accompanied the winners. He then outlined the genesis of this essay contest and explained the process adopted for the evaluation. Mr. Mohan briefly explained about

the Computer Society of India and its services to the student community and elaborated the various benefits of the membership in CSI. He also highlighted about the recently launched initiative of CSI which offers institutional membership to the schools facilities a host of benefits including the computer clubs in the school, mentoring the students by the senior CSI members, faculty development programmes for the teachers, sensitizing the students on cyber security and e-Waste, career counselling, contests in programming, applications & websites development, project expos etc., and urged the schools to join CSI as institutional members and requested the parents and teacher to publicize this initiative among their contacts.

The judges, Ms. Latha Ramesh and Mr. K. Adhivarahan shared their views and appreciated the contest participants for their ideas presented in the essays. Mr. Pramod Mooriath, the chairman of CSI Chennai Chapter thanked the sponsors of the contest, the parents, teachers and the students for making this contest a meaningful and useful exercise.

For the details of the prize winners and the pictures taken at the prize distribution function, pl. visit the website at http://goo.gl/FziCmK