3dPLM Software

A Joint Venture of Geometric & Dassault Systèmes

Aakruti-2016

Organizing team

August, 2016

AAKRUTI2016

Shaping Imaginations

Aakruti – Nation Wide Design Contest for Engineering Students

Single point agenda –

"To encourage students to showcase their design skills & creativity".

** Such events & competitions help in bringing out the innate talent in students **

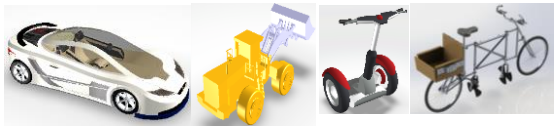
- **Aakruti was launched by 3DPLM in 2010 to reach out to the Engineering Colleges and Universities in India & the response has increased each year**
  - It has become a Brand in itself and every year students / professors look forward to Aakruti Competition.
  - From year 2015, SOLIDWORKS India is the official sponsor of this event.

Aakruti over the years

Year	Theme
2011	1. Design for Innovation 2. Design for Environment 3. Design for Architecture
2012	1. Futuristic Vehicles 2. Modern Architecture 3. Innovative Furniture 4. Engineering Machines and Mechanism
2013	1. Self Sustaining Village 2. Smart Public Transport for the future 3. Eco Friendly Smart Appliances 4. Smart Next Gen Toys 5. Futuristic Energy Efficient Equipment 6. Ultimate Bond Car
2014	1. 12 Industry Verticals 2. Participant's current curricular Project Work
2015	1. Smart Products for Smart Cities 2. Smart Products for Smart Villages

Years	Colleges	Students	Models
2011	108	276	115
2012	115	260	185
2013	120	283	155
2014	42+5*	125	81
2015	117	~1400	~150

* CAD-CAM Training Institutes



Click here to see Glimpse of Aakruti 2015

Theme of the event

- **Design SMART PRODUCTS for:**

1. **Conservation and Smart Usage of Natural Resources**
2. **Divyaang (Specially abled people) and Senior citizens**
3. **Futuristic Agriculture**

- **Scope:**
  - All the engineering colleges across India (All streams)
  - Design colleges & institutes

- **Team Size**
  - Team to consist of **two members** (Preferably from two different branches)
  - Teams will be provided with **limited time SOLIDWORKS license** to participate in this contest.

- **Key Dates**
  - Registration close
    31st August
  - Final date of submission
    18th September
  - Publishing list of Top ten shortlisted teams
    26th September
  - Final event
    3rd October

Prizes

- Total Prize money worth **INR 2 Lakhs.**
- Top two teams (4 members) will have **employment opportunity** at 3DPLM **
  - Students should be in the final year
  - Students will have to clear appropriate written test & interview at 3DPLM
- A **Trophy for College** with 'Most Qualified Entries'

Participants responsibilities

- **Timely Registration**
  - Participants to register with a synopsis of their idea about what they plan to create
- **Teams need to submit below mentioned 4 items on or before September 18, 2016.**
  - Presentation providing details of design/concept/mechanism behind the design
  - Details of the Design Calculations/Hand Calculations (if any)
  - SOLIDWORKS CAD Model and drawing of the Innovative Design
  - Simulation files/Rendering file
- **Final Day**
  - Prepare presentation for Final round
  - Top selected teams will be invited to 3DPLM R&D Centre in Pune to participate for final round

… So Go ahead and have the Registrations Done ….

http://www.3dplmsoftware.com/aakruti/

For any query please mail to:
contests@3dplmsoftware.com

We would like to urge all professors to motivate their students to register and participate in contest

For more details visit:

www.3dplmsoftware.com/aakruti

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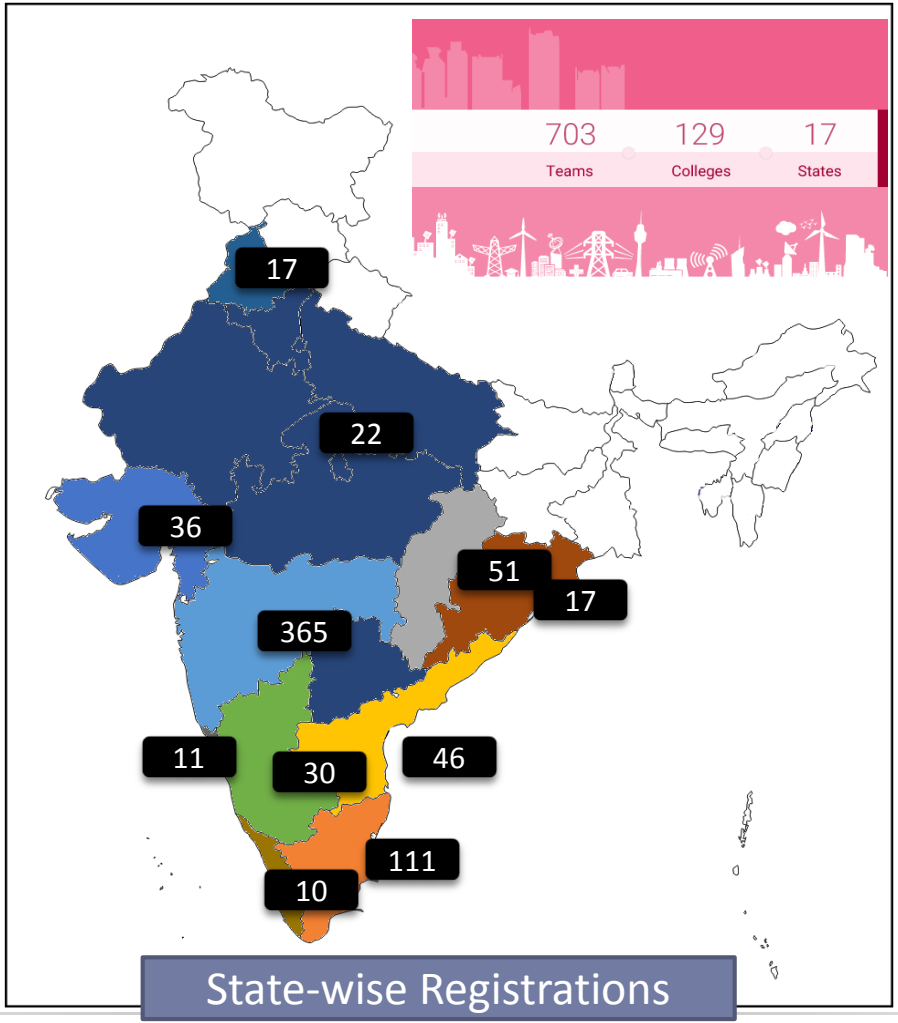
END OF PRESENTATION

Aakruti 2015 - Participation



State-wise Registrations

Prizes given the winners for Aakruti- 2015

Winners

iPad Air

First Runners-Up

iPhone 5C

Second Runners-Up

Galaxy Tab4

Winners – Professors category

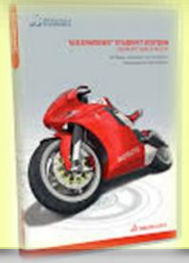
IPad Mini

Goodies for all Finalists

Certificate

Doodle Pad

Certified SolidWorks Associate Exam Voucher

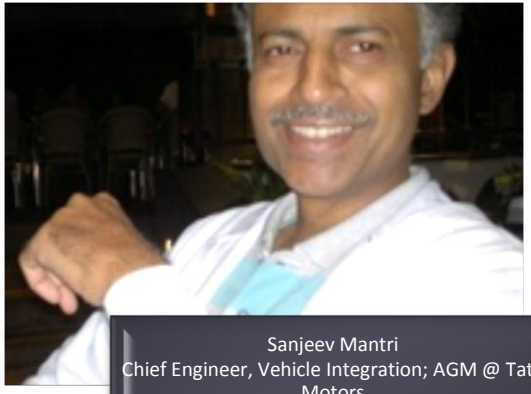


SOLIDWORKS 1 year student license

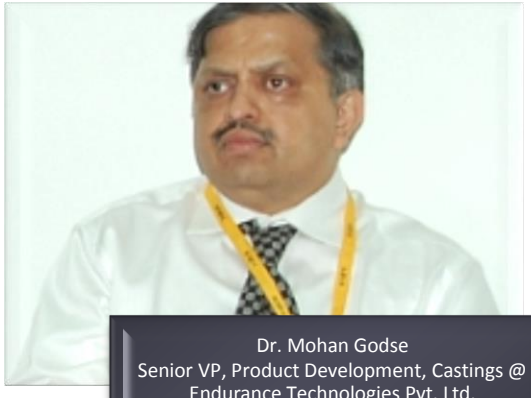
Esteemed Jury Panel for Aakruti - 2015

Dr. Aditya Abhyankar
Dean, Faculty of Technology & Professor, Department of Technology @ University of Pune

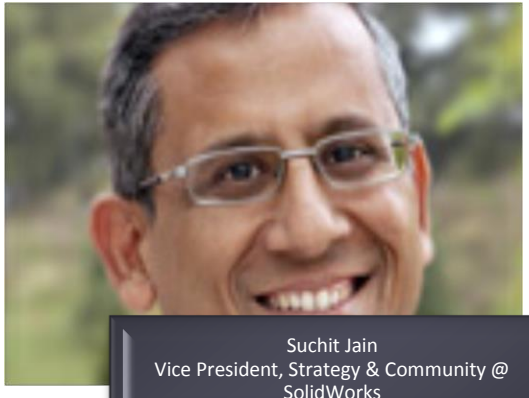
Prof. Anant Chakradeo
Dean @ MIT Institute of Design & Director, International Relations for MIT group institutes



Sanjeev Mantri
Chief Engineer, Vehicle Integration; AGM @ Tata Motors



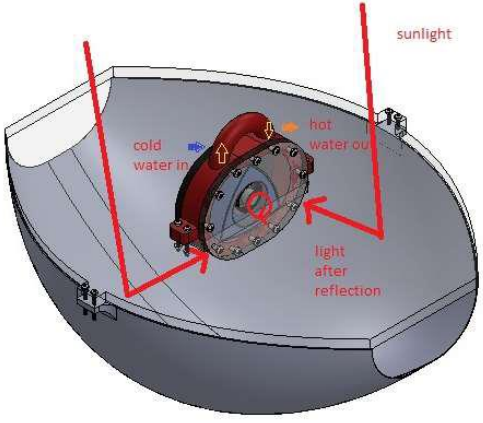
Dr. Mohan Godse
Senior VP, Product Development, Castings @ Endurance Technologies Pvt. Ltd.

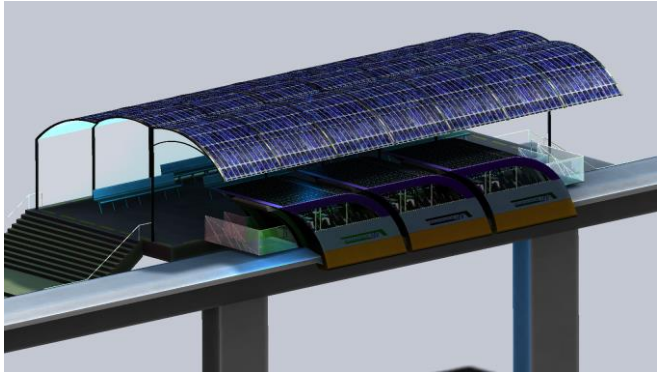


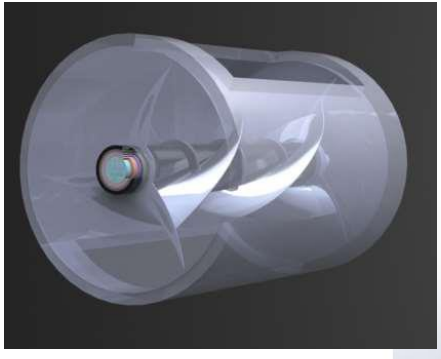
Suchit Jain
Vice President, Strategy & Community @ SolidWorks

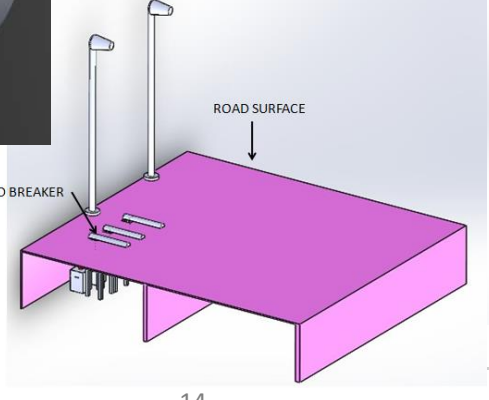
Sunderarajan Karaikurichi
Director, Product Development @ 3DPLM

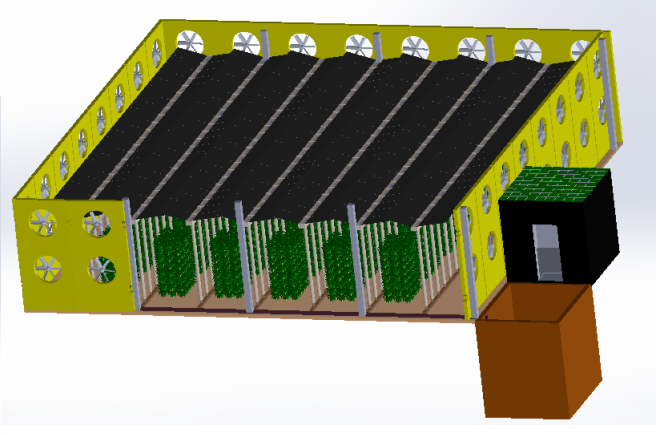
Aakruti – 2015 Models



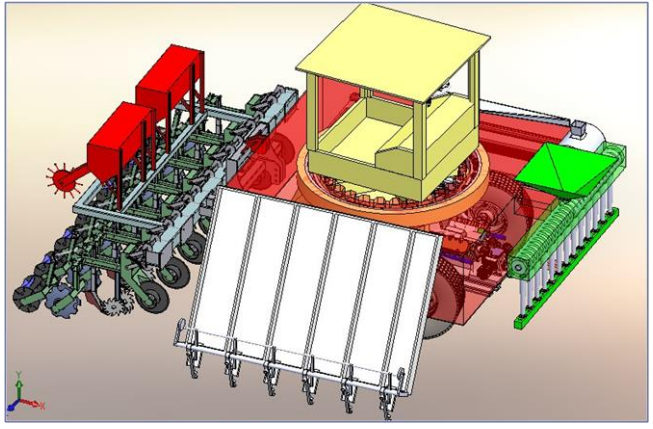


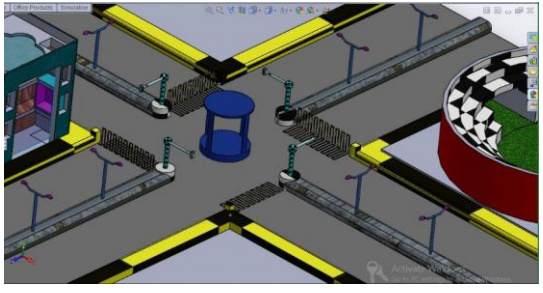


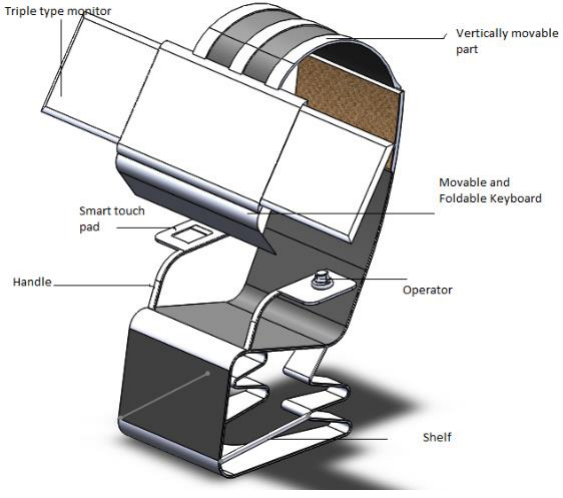


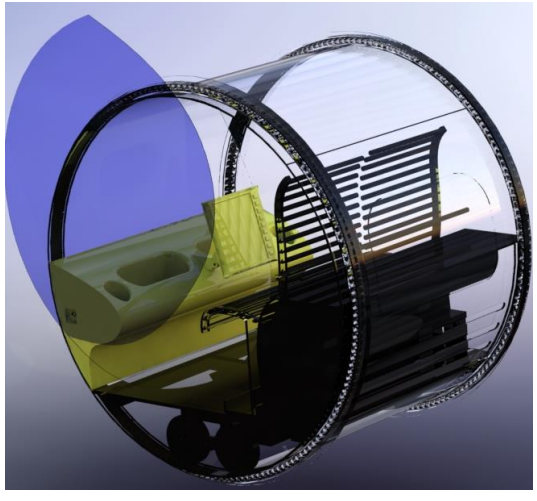


Aakruti – 2015 Models

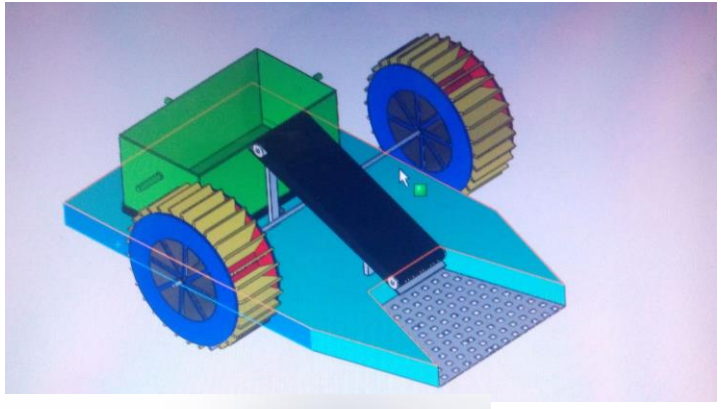


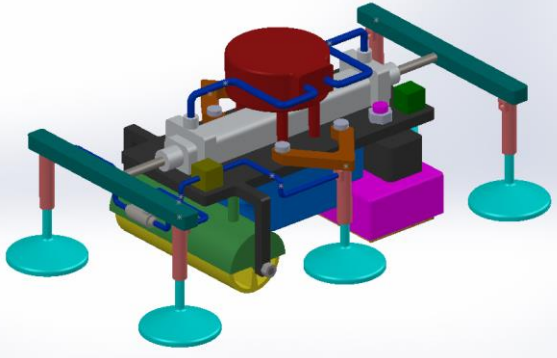






Aakruti – 2015 Models





Glimpse of Aakruti2015

Press release links - 2015

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http://epaperbeta.timesofindia.com/Article.aspx?eid=31814&articlexml=DESIGN-CONTEST-Engineering-students-bag-top-honours-09102015005070

http://www.dailycadcam.com/3dplms-design-contest-aakruti-draws-1400-students-from-17-states-in-india-winners-to-be-announced-on-oct-1-2015-in-pune/

http://www.dailycadcam.com/a-conversation-with-mr-hemant-gadgil-director-industry-solutions-group-3d-plm-on-akruti-2015-design-contest/

http://epaper.sakaaltimes.com/SakaalTimes/5Oct2015/Normal/Plus4/page3.htm

http://epaper.sakaaltimes.com/SakaalTimes/13Oct2015/Normal/Plus4/index.htm

Oct 09 2015 : The Times of India (Pune)

DESIGN CONTEST - Engineering students bag top honours

Tarini Puri

Pune:

Engineering students from city-based colleges bagged top prizes for their innovative ideas for smart cities and villages at a contest held in the city recently.

As many as 1,400 students took part in the contest `Aakruti 2015', organized by a citybased organization as, from 129 colleges in 17 states. The winning ideas were shortlisted from among 150 ideas.

The objective of the competition was to encourage students to showcase their design skills, creativity and talent using art designing softwares of Dassault Systèmes.

A device that can convert solar energy into mechanical energy and then convert the mechanical energy into electrical energy was adjudged the winning idea by a panel of industry-experts and academicians. The three-member team which created the design include Sooraj Kumar, Sudhanshu Sharma and Sonu Yadav. All three are final year mechanical enginee ring students of the Pune-based Army Institute of Technology .

The team was inspired by the solar panels being installed in their college and they wanted to develop a more efficient technique. The device consists of a curved focus parabolic reflector which concentrates the sun light at the base of a modified rotary engine whose spark plug has been removed. "Heat is generated at the base of the rotary engine. The exhaust of the rotary engine is connected to the inlet of the rotary engine which makes it a closed system. Helium gas inside the rotary engine makes the engine rotate which is connected to a power generator," Kumar said. The trio plans to commercially launch the product soon.

Sakal Times
www.sakaaltimes.com
MONDAY OCTOBER 5, 2015
3

Podium finish for Maha students at design contest

ST CORRESPONDENT
reporters@sakaaltimes.com

Pune: College students of the State outshone all their counterparts in the country to take the first three positions of a recently concluded design competition,'Aakruti'.

The team from the Army Institute of Techonolgy (AIT) were adjudged as winners of this year's competition that was organised by 3DPLM Software Solutions – a Dassault Systèmes R&D Lab. The second and third prize winners were Mumbai-based Viva Institute of Technology and Pune Vidyarthi Griha College of Engineering and Technology, respectively.

The students of AIT had designed a solar mechanical electricity generation mechanism that can be used in smart cities and villages. The Mumbai team, on the other hand, had the novel idea of power generation from sewage flowing alongside the water treatment meant for other purposes.

With an objective of helping farmers, the third prize winners had displayed a design of a quadcopter that could be used for agricultural pesticide spraying.

This was the fifth year of this national competition meant for engineering students, who got a platform to display their talents and innovations.

This year, the theme was 'Smart Products for Smart City' and 'Smart Products for Smart Village', where each team had to design products that could suit these set-ups.

Over 13 teams from over 129 colleges participated in the final leg of the competition that was held on October 1. Among the other designs presented were effective means of transportation, effective and efficient agricultural machinery and indegineous means of protection of agricultural farms from vagaries of nature, etc.

Managing Director of Dassault Systèmesb (India) Chandan Chowdhury was the chief guest for the day, who also presented the prizes to the winners.

HANGOUT

Powering the nation

A team of three students from Army Institute of Technology, Pune, took away top honours at Aakruti 2015 for making an efficient, less bulky and affordable Solar Mechanical Heat Generator

Ketaki Kalgaonkar
Second Year, Masters in Journalism and Media, Indira School of Communication

Installation of solar panels in our college gave us the idea of designing Solar Mechanical Electricity Generator," says Sooraj Kumar. He, along with his friends and classmates Sonu Yadav and Sudharshu Sharma, formed a team named "Devil", which went to win Aakruti 2015, a national designing competition jointly hosted by DS SOLIDWORKS and 3DPLM. The event encourages engineering students to showcase their design skills, creativity and talent.

Aakruti was launched in 2010. This year, more than 700 teams comprising 1400 students from 129 colleges and 17 states registered for the competition, which revolved around the theme 'Smart Products for Smart City' and 'Smart Products for Smart Villages'.

Kumar proudly beams, "This is the first competition we took part in and our hard work has paid off."

On being asked whether the project is ready for commercial use, he says, "We have completed the designing stage and we are in talks with our teachers on how to go about developing it."

He adds, "Being a solar electricity generator, the design is environment friendly. Also it is cheaper than solar panels. If a solar panel system costs Rs 1,00,000, our machine will cost Rs 70, 000. Also it is small, the area of the machine is only 1 square meter."

Hemant Gadgil, founder of Aakruti 2015, says, "Since the Government of India is promoting Smart cities and villages, we came up with the theme. This event is a great platform for engineering students to showcase their innovations and also contribute their bit to society."

How did the trio do it?

The 2015 winning trio, who are final year Mechanical Engineering students of Army Institute of Technology, Pune, decided to design a more efficient, less bulky and pocket-friendly Solar Mechanical Heat Generator. Basically, solar energy, which also happens to be a free form of energy available everywhere, is converted into electrical energy via mechanical energy. "We have modified and used parabolic mirror. Solar energy is focused on the plate of the rotary engine. The Helium gas present in the rotary engine expands drastically and pressure is produced. This pressure helps rotate the shaft of the rotor. The shaft is connected to a power generator and thus electricity is produced," says Kumar.

He adds, "We have designed a modern rotary system. We have eliminated power plug with just a metal piece and have also combined inlet and exhaust. We have basically designed a closed system. This design can be implemented in all the households and can generate electricity up to 200 units a month."

THE WINNERS: (L-r) Sonu Yadav, Sudhanshu Sharma and Sooraj Kumar of the Team Devil