



Center For Robotics & Intelligent Systems BITS Pilani

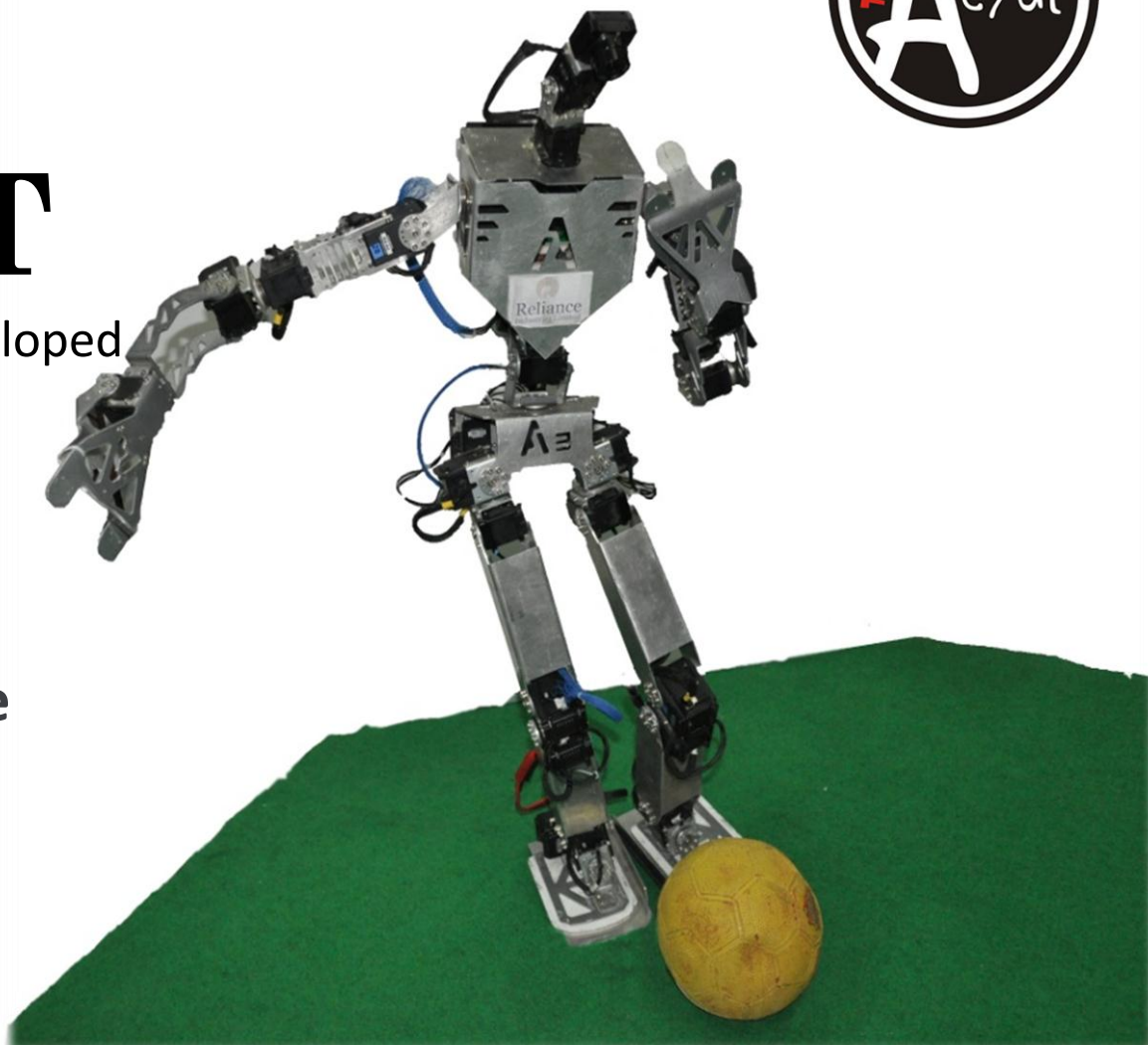


PRESENTS

AcYUT

India's First Indigenously Developed
Humanoids

Sponsorship Brochure



ABOUT BITS

- The Birla Institute of Technology & Science (BITS), Pilani is an all-India Institute for higher education. The primary motive of BITS is to train young men and women able and eager to create and put into action such ideas, methods, techniques and information
- Over the years, BITS has provided the highest quality technical education to students from all over India admitted on the basis of merit. Its graduates may be found throughout the world in all areas of engineering, science and commerce.
- BITS symbolizes the maturing of Indian technical ability and entrepreneurial spirit, especially as derived from the private sector. BITS is located in the Vidya Vihar campus adjacent to the town of Pilani in Rajasthan.



THE ACYUT STORY

- The AcYut story is the story of how AcYut, once a humble dream conceived by an ambitious and capable group of students quite far from being a reality became a success. It all started when the team built a prototype biped with just scrape aluminium and some old motors lying in the Robotics lab (Centre for Robotics and Intelligent Systems aka CRIS) at BITS-Pilani.
- With this, they proved their potential to the outside world. Now they set their eyes on bigger and better things: Design and construction of a fully **functional humanoid capable of almost all the activities a human being can perform.**
- The rookie team went on to participate in RoboGames-2008, the world's largest open robot competition certified by the Guinness Books of World Records and secured 6th position in the entire competition, wherein more than 250 teams came from around 26 countries throughout the world.
- And finally in 2010, a dream was fulfilled. AcYut won India's First ever gold medal in RoboGames, San Fransisco, USA. Along with this, 2 more silver and a bronze in the same year.
- Dreaming even bigger, the team set out for the next challenge, a fully Autonomous Humanoid Robot.



OUR AIM

- We, at Team AcYut , have a firm belief that investment in humanoid research is a unique opportunity for any company to avail as it is a field which is sure to have far reaching implications in almost every area of human interest. Humanoids will open for us new prospects of scientific prowess and broaden our vistas of knowledge.
- Our Ultimate aim is to make a **series of autonomous humanoids which are capable of taking decisions and work accordingly in a dynamic day to day environment.**
- For this aim, We have started participating in an International competition **RoboCup** with the challenge of **Autonomous Humanoid Soccer**



ROBOCUP



- **Worlds largest** autonomous robotics competition.
- Aim: “By 2050: To develop a Humanoid Soccer Team that plays the Human Soccer world champions and **Wins**”
- Present challenge:
 - 2-vs-2 Autonomous Humanoid Robot Soccer on a scaled down field. (10-10 minute halves)
 - 2 robots: One is the player and the other, the goalkeeper. Automatic detection and appropriate reactions to score goal against opponents before they do. Finally, higher scoring team wins.
 - Detection, reaction, control, balance to be directly autonomous and dynamic.



ROBOCUP-2011, ISTANBUL, TURKEY



TECHNICAL OVERVIEW

Parameter	Description
Height/Weight/DOF	105 cms / 8.5 kgs / 28 DOF
Actuators	Robotis' Dual-EX-106+ (106 X 2 Kg-cm), RX-64 (64Kgcm), RX-28 (28 Kgcm)
Sensors	9 Axis IMU, Pointgrey Firefly MV USB Camera
Processor Board	Intel Atom D525 (1.8GHz, Dual- core processor)
Operating System	Linux- Ubuntu
Interfaces	TTL, RS485, USB 2.0
Power	5 cell Lipo battery pack – 3.7/4.2V per cell X 2



LATEST ACHIEVEMENTS – 2010-'11



FIRA 2010, India

Autonomous Weight-Lifting,
World Record, Max Weight
Lifted by a large robot-40 CD's
September, 2010

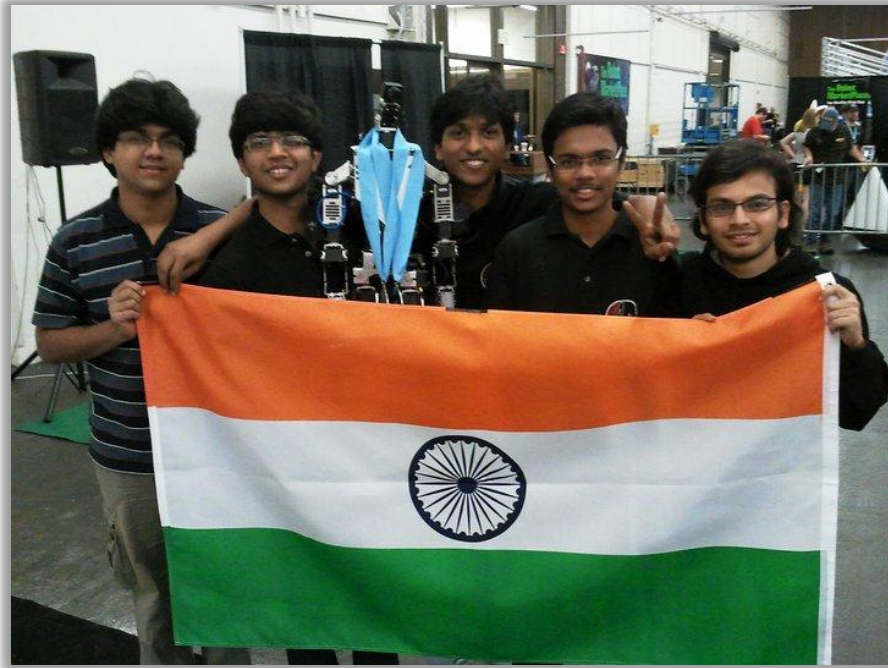
RoboCup IranOpen 2011, Iran

Special Award - Best Performance in
Technical Challenge

April, 2011



LATEST ACHIEVEMENTS – 2010-'11



RoboGames 2011, USA

2 Silver Medals- Demonstration,
Autonomous Weightlifting
April, 2011

Robotics Symposium, R&DE, DRDO

Demonstration at Pune, India
May, 2011



LATEST ACHIEVEMENTS – 2010-'11

RoboCup 2011, Turkey

3rd Place- Autonomous TeenSize
Soccer July, 2011



PAST ACHIEVEMENTS – 2008-'10

- RoboGames 2008: 6th Position
- RoboGames 2009: 1 Bronze medal
- IDEEN expo 2009, Germany: Best Project.
- **RoboGames 2010: 1 Gold, 2 Silver and 1 Bronze medals**



PAST ACHIEVEMENTS – 2008-'10

- Also India's **only** entry to the
 - ROBO ONE, Japan 2008
 - IDEEN Expo, Germany 2009
 - Korea Robot Games Festival 2010
 - International Robot Contest, Korea 2010
- Highly appreciated by the former President of India, Dr. A.P.J. Abdul Kalam on 7th February 2008 at Quark, BITS Pilani, Goa Campus.
 - Carnegie Mellon University at Pittsburg, USA.
 - Stanford University, San Fransisco, USA.
 - University of Lousiana, Laffeyette, USA
 - New York Polytechnic College, New York.
 - Indian Institute of Technology(IIT), Bombay, India.
 - Indian Institute of Technology(IIT), Kanpur, India.
 - Indian Institute of Science (IISc), Bangalore, India.
 - Delhi Public School, R.K. Puram, New Delhi. **And many more..**



WHY SPONSOR ACYUT ?

- AcYut is India's one of the most technologically advanced projects with far reaching applications like defense and space exploration.
- We have a strong vision to be India's answer to Honda's Asimo. But as of now, AcYut's most important requirement is funds. Humanoid research is a pretty expensive field of study and as such requires considerable investment which can only be done when we perceive the future in a way different than the mediocre.
- We at Team AcYut, believe that your involvement with the project will be a fruitful endeavour on the part of both, the team and your esteemed organization
- Investment in a project of this magnitude shall multiply the positive image your organization already enjoys. It will be a clear indicator to the world that your company is one that believes in moving with the latest technology and is an avid supporter of indigenous research in fields still unexplored.



SPONSORSHIP OPPORTUNITIES

○ **RoboCup-2012, Mexico:** for 10 team members

- Registration(Silver Sponsors): INR 4,00,000
- Travel & Accommodation
(Gold Sponsors) INR 6,00,000
- Total(Platinum Sponsors): INR 10,00,000

○ **Sponsor privileges:**

• **Silver Sponsors:**

- Small Company logo and name on the robot during the competetion.
- Company logo and posters on all AcYut social networks.

• **Gold Sponsors:**

- Medium sized Company logo and name on the robot's chest for the entire event.
- Company logo and posters on all AcYut social networks and presentations relating to the event.

• **Platinum Sponsors:**

- Large company logo and name on the robot's chest and back for entire event.
- Company logo, posters and link to company site on all AcYut social networks. Information about company in all presentations relating to the event. Company banner and description at event stall, during entire event. Mention of company in all official interviews anf press releases about the event.



SPONSORSHIP OPPORTUNITIES

- Regular Research at AcYut is an ongoing process for realizing the dream of making India one of the technologically most advanced nations in Humanoid Robotics.
- Research Sponsorships:
 - Platinum Sponsors: > INR 6,00,000
 - Gold Sponsors: INR 2,00,000 - 6,00,000
 - Silver Sponsors: < INR 2,00,000
- Also, We would glad to discuss any other support form.



SPONSOR PRIVILEGES

○ Silver Sponsors:

- Small **Company logo and name** on the robot during demonstrations/presentations.
- Company logo and posters on all AcYut social networks.

○ Gold Sponsors:

- Medium sized **Company logo and name** on the robot's chest for demonstrations / presentations.
- Company logo and posters on all AcYut social networks and presentations relating to the event.

○ Platinum Sponsors:

- Large **company logo and name** on the robot's chest and back for all demonstrations and presentations.
- Company logo, posters and link to company site on **all AcYut social networks and team T-shirts** (worn by every member in all international and national events).
- Specific slides dedicated to company information in every presentation and Company banner and description at all demonstrations and presentations.
- Specific mention of the company in **official interviews and press releases.**



SOME VIDEOS AND LINKS:

1. RoboCup-2012 Qualification Video:
<http://www.youtube.com/watch?v=8neQe2Pu4TE>
2. RoboCup-2011 Qualification Video:
www.youtube.com/watch?v=sr6LG6uLuT0
3. Journey Of AcYut: www.youtube.com/watch?v=0O1weKDs1G8
4. Tele-Operated Control:
www.youtube.com/watch?v=jB93mOdE41I

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