



SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)
Hyderabad | PIN: 500068

3.1.1. Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

3.1.1.1: Total Grants from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

SUMMARY REPORT

S.NO	ACADEMIC YEAR	Grant Received	
		Dept	Fund in INR
1	2018-2019	Civil	18,79,274/-
		ECE	2,82,000/-
		Mech	3,48,000/-
2	2017-2018	Mech	30,000/-
3	2016-2017	CSE	2,24,763/-
4	2015-2016	Mech	1,73,878/-
5	2014-2015	Mech	22,93,000/-

Asuresh
PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC
9-39, Sy.No: 107, Tattannaram (V),
GSI, Bandlaguda, Nagole, Hyd-68

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100

रु. 100



ONE
HUNDRED RUPEES

भारत INDIA
INDIA NON JUDICIAL

తెలంగాణ తెలంగాణ TELANGANA

శ్రీ. N. Devender Sagar
అధికారి N. Devender Sagar
సంఖ్య 203/EE/RJNR/11/52/GHMC/2018-19
తేదీ 04-08-2018

M. RAVI KUMAR

522619
Stamp Vendor Lic.No: 18-18493/2017
II.No: 15-1-1096/2014
93-5-41, Choudhary, Sarverampally (M.L.R.C. Hill) - 78
Call: 970847122

AGREEMENT No. 203/EE/RJNR/11/52/GHMC/2018-19, Dt:04-08-2018.

Amount of Estimate: Rs. 5,10,000=00

Amount of Contract: Rs. 3,05,722=00

Name of the Work : Laying of SWG 300mm dia pipe line from H.No. 6-11-28 to H.No. 6-10-26/1/B in Shivarampally in Ward No. 60 in Rajendranagar Circle, GHMC (Est. Amount Rs. 5.10 Lakhs)

< > < > < >

Agreement made at Hyderabad on this 4th August 2018 between SRI. N. DEVENDER SAGAR, Hyderabad, on one part and the Executive Engineer, GHMC RJNR circle another part. Where by the parties have agreed to the terms & conditions set on in L.S agreement. Agreement made for the work Laying of SWG 300mm dia pipe line from H.No. 6-11-28 to H.No. 6-10-26/1/B in Shivarampally in Ward No. 60 in Rajendranagar Circle, GHMC (Est. Amount Rs. 5.10 Lakhs) Rs. 3,05,722=00 (Rupees Three Lakhs Five Thousand Seven Hundred Twenty Two Only) Executed on this day.

Contractor

Executive Engineer,
Rajendranagar Circle-XI, GHMC

GREATER HYDERABAD MUNICIPAL CORPORATION
RAJENDRANAGAR CIRCLE

From

The Executive Engineer,
Rajendranagar Circle,
Greater Hyderabad Municipal Corporation,
Hyderabad.

To

MS.SREYAS ENGINEERING COLLEGE,
Beside Indu Aranya, GSI
Bandlaguda, Nagole,
Hyderabad,
Telangana - 500068
Phone : Rajesh : 8885218679
Achyuth : 8125660133
HOD-Satyanarayana : 9989991779
Mail Id. gqghmc@sreyas.ac.in

Lr. No./E/ /OC/RJNR/GHMC/2019-20 Dated: - -2019

Sr.

Sub:- GHMC-RJNR- Laying of SWG 300 mm dia pipe line from
Althaf Hotel to H.No. 2-20-83, Mahmoodnagar Haldon nagal
in W.No. 5T-Sulemanagar in RJNR Circle GHMC- water
order level - Reg

Ref:- W.O.No. /EE/ RJNR @ XI/GHMC/201 -1 .. Date:

- | | | | |
|----|--------------------|---|--------------------|
| 1. | Amount of Estimate | : | Rs. 6,00,000 Lakhs |
| 2. | Agency Name | : | MIR HYDER Ali Khan |
| 3. | Date of Mark Out | : | 24/12/18 |

With reference of the subject cited, it is to inform that the above work is completed.

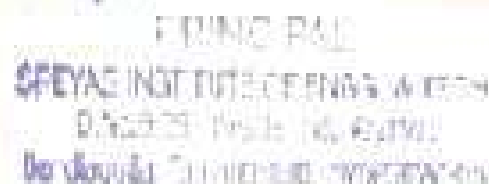
Hence it is requested to issue Quality Control report.

Completion Plan is herewith enclosed for Information and necessary action.

Yours Faithfully


Executive Engineer

Rajendranagar Circle @ XI, GHMC


SREYAS INSTITUTE OF ENGINEERING AND TECHNOLOGY
BANDLAGUDA, NAGOLE, HYDERABAD
TELANGANA

Encl: Plan () No's

Handwritten signature/initials in green ink



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
(Established by Govt. Act No. 30 of 2008)
Kukatpally, Hyderabad – 500 085, Telangana (India)

Dr. N. YADAJIAH

B.E (OUCE), M.Tech. (IIT KGP), Ph.D (JNTU)
SMIEEE, FIE, FIETE, MSSl, MISTE

Professor of EEE &
REGISTRAR

Project File No. JNTUH TEQIP-III/CRS/2019/MECH/08

Dated.22.07.2019

- To
1. The Principal,
Sreyas Institute of Engg Technology
 2. The Principal,
JNTUH College of Engineering and Technology.

Subject: Award of for the project titled " Development of mobile Air Conditioner with Eco Friendly refrigeriment 134a " under Collaborative Research Scheme, TEQIP III, JNTUH to

1. Principal Investigator: **Dr. Suresh Akella**
Department: Mech
Institution Name: **Sreyas Institute of Engg Technology**
2. Co-Principal Investigator-1: **Dr. AVS S K S Gupta,**
Department: Mech
Institution Name: **JNTUH College of Engineering and Technology**

Dear Sir/Madam,

This is to inform you that the project mentioned above is approved with sanction amount of 3,00,000/- (Rupees Three Lakhs only) under Collaborative Research Scheme, TEQIP-III, JNTUH with the following terms and conditions.

1. The institute where Principal Investigator is working becomes the lead institute
2. The grant from TEQIP-III will be transferred to Principals account of lead institute in three installments.
3. A separate account for the project may be created.
4. Principal is responsible for transfer of funds to the project account within one week after the release of funds from university. In case if principal fails to do so, it will be recovered from institute.
5. Principals should permit to use existing facilities for project implementation if requested.

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-67

6. In case if both PI and Co-PI-1 are from affiliated institute, a joint account is to be operated by PI, Co -PI-1 and Principal of lead institution.
7. In case of collaborative research project carried under twinning, PI and Principal of lead institute will jointly operate the account
8. In case either PI or Co-PI-1 withdraws from the project, Principals of the respective institution shall find the replacement and inform the same to the University for Approval.
9. A declaration form duly signed by Principal (Form H) abiding the rules listed above shall be submitted along with account details within 3 days after receiving the sanction letter for the transfer of research grant.
10. Any discrepancy with PI and Co- PI, while implementing the project, to be communicated with details, to the University.
11. After the completion of every project, Principals of lead institute should ensure that all non consumables procured for projects become the property of institution and to be labeled TEQIP-III/ (Number).
12. Principal of the lead institute should submit the list of all non consumables procured for all Projects at the end of collaborative research scheme through duly filled in Form I.
13. Principals will be informed if any directions from NPIU or changes in guidelines made by TEQIP-III JNTUH relevant to the Collaborative Research Scheme from time to time. Those guidelines should be followed in due course of time, till the completion of TEQIP-III Project
14. For any discrepancies and other relevant matters, decision of the University is final.
You are requested to acknowledge the receipt of this letter.

With Regards,


Registrar

Jawaharlal Nehru Technological University Hyderabad


Copy to:

PA to Hon'ble Vice Chancellor, JNTUH for kind information.

Office File

Copy to the concerned

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61



ఆంధ్రప్రదేశ్ రాష్ట్రం ANDHRA PRADESH

K. Vijaya Lakshmi
BE 43834

No. 1612 Dt. 14/2/14 Rs. 100/-

Smt. KANDALA VIJAYA LAKSHMI
LICENCED STAMP VENDOR
LN.No:15-28-007/2011 DI.No:15-28-0
MIG:C-58, Phase-I, Near Gundat, Ramade
Vasabhalapuram, R.R.Dist-000 (70, Coll:21

Dr. Suresh Akella

For the use of Late A.S.R. Murthy

Self / P/o Hyd

AGREEMENT BETWEEN HOST INSTITUTION/BUSINESS INCUBATOR AND INCUBATEE

Under scheme for "Support for Entrepreneurial and Management Development of SMEs through Incubators"

This agreement is made on this 28th day of February (Month) 2014.

BETWEEN

J.N.T.U.H. College of Engineering, J.N.T.U.H., Kukatpally, Hyderabad (hereinafter referred to as Host Institution/BUSINESS INCUBATOR, the expression which unless repugnant to context shall be deemed to include its successors, administrators and executors) of the first part

AND

Dr. Suresh Akella

(hereinafter referred to as INCUBATEE, the expression which unless repugnant to context shall be deemed to include its successors, administrators and executors) of the second part.

1.0 PREAMBLE

WHEREAS, the HOST INSTITUTION/BUSINESS INCUBATOR has been incorporated for nucleating and promoting business enterprises for the benefit of the society and has been entrusted the task of running various programs and the management of various supporting facilities/resources for the benefit of entrepreneurs/entrepreneurial ventures by the J.N.T.U.H. College of Engineering, J.N.T.U.H., Kukatpally, Hyderabad (hereinafter referred to as HOST INSTITUTION)

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

WHEREAS, the BUSINESS INCUBATOR has been approved by the Government for participation and funding support under the scheme for providing support for Entrepreneurial and Management Development of SMEs through Incubators (hereinafter referred to as the SCHEME)

WHEREAS, the INCUBATEE has applied for support for business advancement and its Commercialization (hereinafter referred to as the PROJECT) from the BUSINESS INCUBATOR under the SCHEME,

WHEREAS the BUSINESS INCUBATOR has reviewed the PROJECT proposal through its Managing Committee and approved the PROJECT for incubation under the SCHEME on such terms and conditions mentioned hereinafter

It is now agreed by and between the parties as follows:

2.0 RESPONSIBILITIES OF THE BUSINESS INCUBATOR

- 2.1 The BUSINESS INCUBATOR shall extend support to the INCUBATEE for the execution of the PROJECT to the extent agreed in the final PROJECT budget and financing sheet (Appendix - I to this agreement) approved by the Managing Committee.
- 2.2 The support extended to the INCUBATEE could include support towards one or more of the following - the technology fee, guidance fee for mentors/handholding persons (for technology, intellectual property planning and business planning), hiring or leasing cost of machinery/ equipment/instruments or related services, office facilities (like telephone, fax, computers etc), infrastructural facilities (accommodation charges, utilities, etc) and other project costs depending upon the needs of the INCUBATEE and those approved by the Managing Committee.

3.0 RESPONSIBILITIES OF THE INCUBATEE

- 3.1 The INCUBATEE shall maintain documented evidence (invoices and receipts) of all costs incurred in running the PROJECT and submit to the BUSINESS INCUBATOR on a timely basis.
- 3.2 The INCUBATEE shall contribute a minimum of 15% (for micro enterprises) or 25% (for small enterprises) of the total project cost. In the event of failure of the INCUBATEE meeting this requirement, the BUSINESS INCUBATOR shall be free to withdraw its support.

4.0 GENERAL

- 4.1 Both parties can terminate this agreement at any point by giving one month advanced notice of their termination to the other party after a period of 365 days from the date of this agreement.
- 4.2 Termination of this agreement subject to settlement of claims against each other will mean that both parties will be absolved of their responsibilities from the date of termination.

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattiannam (V)
GSI, Bandlaguda, Nagole, Hyd-61

- 4.3 The parties shall endeavor to resolve any dispute relating to the rights, duties, terms and conditions contained in this agreement by mutual negotiations in good faith. However the dispute remains unresolved, the arbitration of such disputes would be handled by the Managing Committee. The verdict of the Committee would be final and binding.
- 4.4 Neither party shall be held responsible for non-fulfillment of their respective obligation under this agreement due to the exigency of one or more of the force majeure even such as but not limited to acts of god, war, flood, earthquakes, strike, lockouts, epidemic riots, civil commotion, etc., provided on the occurrence and cessation of any such event the party affected thereby shall give a notice in writing to the other party within one month of such occurrence or cessation. If the force majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.

In witness thereof the parties have caused their authorized representatives to sign this agreement on the date mentioned hereinabove.

Signed on this 28th day of February (Month) 2014.

For & on behalf of the Host
Institution/BUSINESS INCUBATOR

Name: Dr. A. Vinaya Babu
Designation: Principal I/c & Chairman, MSMETBI
Postal Address: JNTUHCEH, Kukatpally
Phone number: 040-2305 7787
Email address: principal@jntuceh.ac.in

For & on behalf of the INCUBATEE

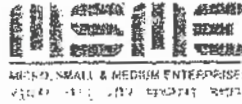
Name: Dr. Suresh Akella
Designation:
Postal Address: Villa # 118, Indu Aranya
villas, Haritha, Bandla Guda, Nagole,
Hyderabad - 500065
Phone Number: 09849628282
Email address: s4akella@gmail.com

Suresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

विकास आयुक्त का कार्यालय
(सूक्ष्म, लघु और मध्यम उद्यम)
सूक्ष्म लघु और मध्यम उद्यम मंत्रालय
(भारत सरकार)
निर्माण भवन, सातवें मंजिल, मौलाना आज़ाद रोड
नई दिल्ली-110 109



DEPARTMENT OF MICRO, SMALL & MEDIUM ENTERPRISES
MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES
GOVERNMENT OF INDIA
Nirman Bhawan, 7th Floor, Maulana Azad Road
New Delhi - 110 109

Ph:EPABX - 23062601, 23062602, 23063603 FAX: (011) 23062315, 23061728 E-mail: msme@nic.gov.in

No. 6(19)/NMCP/Inc./11th Meeting/ 2013-14

Dated: 30.1.2014

To

The Principal,
JNTUH College of Engineering Hyderabad
Kulkapally,
Hyderabad- 500085 (AP)

Subject: Approval of Ideas / proposals submitted by your Institute under the scheme "Support for Entrepreneurial and Managerial Development of SMEs through Incubators" for GoI assistance - reg.

Sir,

I am directed to inform you that 4 proposals were received from your Institute under the above scheme. The said proposals were considered by the 11th Selection Committee Meeting which was held on 16th January 2014. The Committee approved 1 proposals submitted by your Institute. The details of the proposals are as under:

Sl. No.	Name, qualification and details of Incubatee/Unit, address and Idea of innovation	Project Cost (Rs. in lakhs)	Amount sanctioned (Rs. in lakhs)
JNTUH, Hyderabad			
Total sanction: Rs. 4.25lakhs + Rs. 0.378lakh (Infrastructure & Training for two idea) i.e. 10 % of Rs. 3.78 lakhs. Total sanction Rs. 4.628lakhs			
1.	Dr. Sureh Akella, 56 years PhD (Mech. Engg), Sreyas Institute of Engg. & Tech Idea- Power Saver, Roll Bond Evaporator for Air conditioner	6.26	4.25

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

Name of the Proposal: Power Saver: Roll Bond Evaporator for Air Conditioner

Applicant Name: Dr. Suresh Akella

Mobile: 09849628282

Expenditure Details (Rs. In Lakhs).

Sl.No	Expenditure Details	Own Contribution	MSME Support	Total Project Cost
1	Technology Fee	Patent applied		Total Technology fee cost
2	Telephone, fax, computer internet facility etc., (consumables, refrigerants, power)	1.0		1.0
3	Machinery hiring or leasing from out side	To be bought & to be made to design		Total Machinery hiring or leasing from out side
4	Guidance fee per annum. Customer Interaction & Customer end testing		0.75	0.75
5	Rent & Office space/ electricity charges etc., (own: Build test room as per BIS IS1391, MSME: Test equipment)	1.01	1.0	2.0
6	5 split ACs Branded like Godrej.		1.5	1.5
7	Designed Roll Bond evaporators, 20 No's.		1.0	1.0
	Total	2.01	4.25	6.26

Asuresh
Signature of the Incubate

Signature of the Head of the Institution/Incubator Manager/

Member Secretary of Incubator

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-67



PROCEEDING OF THE
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by Govt. Act No. 30 of 2008)

Kukatpally, Hyderabad – 500 085, Telangana (India)

PRESENT Dr. N. YADIAH REGISTRAR

Proc No.JNTUH/TEQIP-III/CRS/2019/ECE/12

Date:22/07/2019

Subject: Award of the project titled “**Radiation Hardness Assurance Analysis of Radhard Architecture at Nano Scale using Visual TCAD Tool**” under Collaborative Research Scheme, TEQIP-III, JNTUH.

Read: Note order of the Vice-Chancellor dated 22.07.2019

ORDERS:

The project titled “**Radiation Hardness Assurance Analysis of Radhard Architecture at Nano Scale using Visual TCAD Tool**” is awarded with sanctioned amount Rs. **2,82,000/-** (Rupees Two Lakh Eighty Two Thousand only) under Collaborative Research Scheme, TEQIP-III, JNTUH to the following investigators.

- | | |
|--------------------------------|--|
| 1. Principal Investigator | Dr. Ameet Chavan |
| Department Name | Electronics and Communication Engineering |
| Institute Name | Sreenidhi Institute of Science and Technology |
| 2. Co-Principal Investigator-1 | Mr. Chinnam SV Maruthi Rao |
| Department Name | Electronics and Communication Engineering |
| Institute Name | Sreyas Institute of Engineering Technology |

With the following terms and conditions to the Investigators:

1. The institute where Principal Investigator is working becomes the lead Institute.
2. An Initial grant of Rs.1,00,000/- will be released to the account of the principal of lead institute.
3. In case if both PI and Co-PI-1 are from affiliating institutions, a joint account should be operated by PI, Co-PI-1 and Principal of lead institute.
4. If Co-PI-1 is from the Constituent colleges of JNTUH (JNTUHCEH, JNTUHCEJ, JNTUHCEM, JNTUHCES), PI and Co-PI will operate a Joint account and fund will be transferred for lead institute Principal account.
5. In case, PI or Co-PI leave the institute for any reason or withdraw from the project (proper justification should be communicated to the University), he/she shall be treated as withdrawn from the project.
6. PI's and Co-PI's should fill the Forms A to F and submit to TEQIP-III JNTUH whenever required.
7. PI's and Co-PI's should submit Form A within 3 days after receiving the sanction letter.
8. PI's and Co-PI's should be present at the time of first Progress evaluation after 4 months and all other subsequent Progress Evaluations (once in 4 months) conducted at TEQIP-III JNTUH.
9. The Second Installment of Rs.1,00,000 of Research grant will be released on satisfactory performance in first Progress Evaluation and submission of Form B and Form D duly filled and signed.
10. The 3rd and final installment will be released upon submission of Form C and D and satisfactory Performance in the next Progress Evaluation.

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

11. The project should result in at least one publication in the relevant Journal national/international (Non Payment Journal).
12. PI's and Co-PI's will be informed if there are any directions from NPIU or changes made by TEQIP-III JNTUH relevant to Collaborative Research Scheme time to time and are to be followed in due course till the completion of TEQIP-III Project
13. All non-consumables procured for the research project will automatically become the property of the lead institution after completion of the project.
14. Any deviation in the expenditure as defined in the project proposal is not accepted. In such case prior permission is necessary from the university. After obtaining necessary permission, funds should be utilized as per the revised guidelines. No deviation is accepted.
15. Any interest incurred should be deposited back to the university JNTUH, TEQIP-III Account.
16. Unspent amount as per the proposal/ Guidelines of the TEQIP within the stipulated time should be deposited back to the university TEQIP account. (Along with Interest Incurred).
17. Any discrepancy with Co Investigator and principals while implementing the project to be brought to the notice of University authorities.
18. For any discrepancies and other relevant matters, decision of the University is final.
19. Upon the completion of the Project, PI should submit final report Form E, Final Financial Statement Form F, and utilization certificate Form G along with true copy of audit report of the Project. In case if principal fails to do so, it will be recovered from institute.

With the following terms conditions to the Principals:

1. The institute where Principal Investigator is working becomes the lead Institute.
2. The grant from TEQIP-III will be transferred to Principals account of lead institution three installments.
3. A separate account for the project may be created.
4. Principal is responsible for transfer of funds to the project account within one week after the release of funds from university. In case if principal fails to do so, it will be recovered from institute.
5. Principals should permit to use existing facilities for project Implementation if requested.
6. In case if both PI and Co-PI-1 are from affiliated institute, a joint account is to be operated by PI, Co -PI-1 and Principal of lead institution
7. In case of collaborative research project carried under twinning, PI and Principal of lead institute will jointly operate the account
8. In case either PI or Co-PI-1 withdraws from the project, Principals of the respective institution shall find the replacement and inform the same to the University for Approval.
9. A declaration form duly signed by Principal (Form H) abiding the rules listed above shall be submitted along with account details within 3 days after receiving the sanction letter for the transfer of research grant.
10. Any discrepancy with PI and Co- PI, while implementing the project, to be communicated with details, to the University.
11. After the completion of every project, Principals of lead institute should ensure that all non consumables procured for projects become the property of institution and to be labeled TEQIP-III/ (Number).
12. Principal of the lead institute should submit the list of all non consumables procured for all Projects at the end of collaborative research scheme through duly filled in Form I.
13. Principals will be informed if any directions from NPIU or changes in guidelines made by TEQIP-III JNTUH relevant to the Collaborative Research Scheme from time to time. Those guidelines should be followed in due course of time, till the completion of TEQIP-III Project
14. For any discrepancies and other relevant matters, decision of the University is final.

Under the circumstances as stated above, the Vice-Chancellor is pleased to accord permission to award the project under Collaborative Research Scheme TEQIP-III, JNTUH.

The expenditure shall be met from TEQIP-III funds.

[Handwritten Signature]

REGISTRAR

To
The Concerned Investigators
The Concerned Principals,
Copy to VC/Rector/Registrar.
Copy to Office of the TEQIP-III

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-67



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
KUKATPALLY - 500085

SUBMISSION OF PROPOSAL FOR COLLABORATIVE RESEARCH PROJECT
UNDER TEQIP-III

1. Faculty of Engineering/Technology: Electronics and Communication Engineering
2. Area of Research Proposal: Reliable VLSI Design , Device Modelling , Radhard
3. Duration: 18 months
4. Principal Investigator
 - a. Name: Dr. Ameet Chavan
 - b. Gender(Male/Female): Male
 - c. Date of Birth: 10th August 1976
 - d. Category: B C (B)
 - e. Qualification: B.E (Electronics), M.S (VLSI), Ph.D
 - f. Designation: Professor (ECE)
 - g. Address: Office: Sreenidhi Institute of Science and Technology
Yamnapet, Ghatkesar, Hyderabad - 501 301, Telangana

Residence: Flat - 518, Siddam Setty's Hima Sai Heights,
Jawahar nagar, Gandhinagar, Hyderabad - 500020, Telangana

Email & Phone: ameetchavan@sreenidhi.edu.in, Mb - 9390638524

5. Co - Investigator
 - a. Name: **Chinnam S V Maruthi Rao**
 - b. Gender(Male/Female): Male
 - c. Date of Birth: 12th April 1980
 - d. Category: B C(B)
 - e. Qualification: B.Tech (ECE), M.S(Univ. Essex U.K)
 - f. Designation: Associate Prof.
 - g. Address: Office: Sreyas Institute of Engineering and Technology,
ECE Department, Nagole, Hyderabad.
Residence: Flat No.304, Vinoothna Orchid, Padmavathi Colony, Kusaiguda,
Hyderabad - 65
E-Mail: maruthichinnam@gmail.com
Phone: 9177656868

6. Name of the Institution where the project will be undertaken:
Sreenidhi Institute of Science and Technology (SNIST)

- a. Department: Electronics and Communication Engineering
- b. College: SNIST
- c. Affiliating University: JNTUH
- d. Whether the institute is located in rural/backward area: Yes



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-65

7. Teaching and Research Experience of Principal Investigator

- a. Teaching Experience: UG 4 Years
PG 3 Years
- b. Research Experience: 10 years
- c. Publications:
- i. Papers Published: 24
Accepted: 24
Communicated: 18
- ii. Books Published:
Accepted: Two
Communicated: One

(Please enclose the list of papers and books published and/or accepted during last five years)

8. Teaching and Research Experience of Co - Investigator

- a. Teaching Experience: UG 8 Years
PG 4 Years
- b. Research Experience: 5 yrs
- c. Publications:
- i. Papers Published: 8
Accepted: 8
Communicated: 8
- ii. Books Published: Nil
Accepted:
Communicated:

(Please enclose the list of papers and books published and/or accepted during last five years)



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-68

9. One Page profile of Principal Investigator:

Ameet Chavan (Senior IEEE Member), received his Bachelor of Engineering degree in Electronics from Pune University, India in 1998. He received M.S. degree (ECE – VLSI Thesis) from the University of Texas at El Paso (UTEP) in 2003 and Ph.D. (ECE – Ultra Low Power Dissertation) 2010 from UTEP, USA. Dr. Chavan worked as faculty for the Department of Electrical and Computer Engineering, UTEP, USA. He has worked following industry Intel Corporation Inc. (Hillsboro USA), Advanced Micro Devices (AMD) Inc. (Austin, USA), Echostar Technologies Ltd. (Denver, USA) and Ethicon Endo (Cincinnati, USA). Dr. Chavan has a total of 16+ years of combined experience in industry and academia. Dr. Chavan has worked on a chip design research project sponsored by the Defense Advanced Research Projects Agency (DARPA), USA which was fabricated at MIT Lincoln Labs, USA. Dr. Chavan has presented and published his research at various international conference meetings of the Institute of Electrical and Electronics Engineers (IEEE) and NASA Symposium on VLSI Design. To further support his research, Dr. Chavan received research awards from NASA, DARPA, SPAWAR and The University of Texas at El Paso Graduate School. Additionally, he was awarded a Texas Instruments Foundation Scholarship, a Texas Public Education Scholarship, and a National Science Foundation (NSF) Distributed Computing Laboratory Scholarship. Dr. Chavan worked as a postdoctoral faculty researcher at the ASICs research lab UTEP. At present, Dr. Chavan is working as a Professor (ECE) and Dean (R&D) at the Sreenidhi Institute of Science and Technology, Hyderabad, India.

Research– Internet of Things, Ultra Low Power Digital System Design, Reconfigurable Computing, and Radiation Hardened System Design.

Research Grants & Industry Consultancy

- Texas Instrument Scholarship, USA , Rs. 1,70,000 (\$2,500 @Rs.68), M.S Program Scholarship (2001-2003)
- NASA – Jet Propulsion Laboratory, USA , Rs. 2,72,000 (\$4,000 @Rs.68, Project - Vowel Recognition and Reconfigurable DataPath Processor Project (2003)
- The National Science Foundation(NSF), USA Rs. 3,06,000 (\$4,500 @Rs.68), Distributed Computing Lab Project (2004 & 2005)
- University Research Institute , TX, USA , Rs. 3,06,500 (\$4,500 @Rs.68), May 2010 – Seed amount for Summer Post Doctoral research initiation
- DARPA – Defense Advanced Research Project Agency, USA , Amount - Undisclosed, Grant approved for chip fabrication at Massachusetts Institute of Technology, Lincoln Labs, Completed
- SPAWAR – Space and Naval Warfare Systems Command, USA , Rs. 6,46,500 (\$9,500 @Rs.68), \$8000 for Heavy Ion radiation testing at Texas A&M Cyclotron facility, \$1500 for Test preparation, TA, Misc. Completed
- SPAWAR – Space and Naval Warfare Systems Command, USA , Amount - Undisclosed, Chip fabrication at MOSIS, USA, Completed
- Nucleonix Systems, Hyderabad, Rs. 5,00,000, Consultancy project sanctioned for Upgrading Radiation Detector Instruments – IoT Augmentation, 2016-2018 Completed
- CAS , DRDO - Hyderabad, Rs. 9,74,000, Intelligent Robotic Arm for Connectors and Bolts Fastening, 2017-2019 Completed
- RCI, DRDO – Hyderabad , Rs. 9,86,000, Developing RadHard Electronics – Analysis and Characterization, 2017- 2019 Completed

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

10. One Page profile of Co-Investigator:

Overview

- Experience of 12 years 4 months in the field of Teaching after Master's Degree and Ratified by JNTUH as an Assistant Professor in June 2011
- Qualified for Lectureship through UGC – NET In July – 2018
- IEEE Member (M 94932810) and Student Branch Coordinator of S. I. E. T.
- SPOC for NPTEL Local Chapter of S. I. E. T.
- Coordinator for IIRS Local Chapter
- Proficiency in working with Cadence, real time operating systems VXWORKS with hands on experience in microcontroller programming.

Dec 2011 – Till Date– Sreyas Institute of Engineering and Technology

Designation: Associate Professor

Sept 2006 – Dec 2011– Bharat Institute of Engineering and Technology

Designation: Assistant Professor

Oct 2002 – June 2003- University of Essex

Designation: Research Assistant / Teaching Assistant

Educational Qualifications

2002-2004: **Master of Science(Embedded Systems & Robotics)**-University of Essex, UK –
CGPA – 2.6/4.0

1997-2001: **Bachelor of Technology(ECE)** under JNTU, Hyderabad – 68%

1995-1997: **Intermediate(MPC)**-Sree Venkateswara Junior College, Gudivada– 86%

1993-1995: **S.S.C**-Montessori English Medium High School, Gudivada– 83%

Professional Certifications / Industrial Training:

2001-2002: **Diploma in VLSI**, ECIL – ECIT, Hyderabad

2004-2005: **Advanced P.G.Diploma in Real Time Embedded Systems** from Cranes Software International, Bangalore

2005-2006: **Junior Research Trainee**, Apollo Microsystems, Hyderabad

2006: **Certification Course in Networking** – Zoom Technologies, Hyderabad

2018: **Online Certification Course in CISCO Cyber Security**

2018: **Online Certification Course in Advanced Image Analysis**, IIRS, Dehradun

Technical Skills

Modeling Languages (HDL / Hw/Sw Co-Design): Verilog, System-C

Programming Languages: C, C++, Assembly and Pascal

Operating Systems: Windows, Linux, and Unix

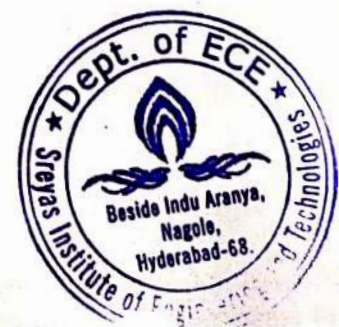
Developer Tools: Microsoft Visual Studio, Tornado

Simulators: Saphira, Veriwell, Kell Micro Vision

Micro Controllers / Processors: 8051, TN87C196KC, ARM7TDMI

Other EDA Tools: Cadence and Synopsis for synthesis, Xilinx

RTOS: vx-Works



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-68

I. Project Title:

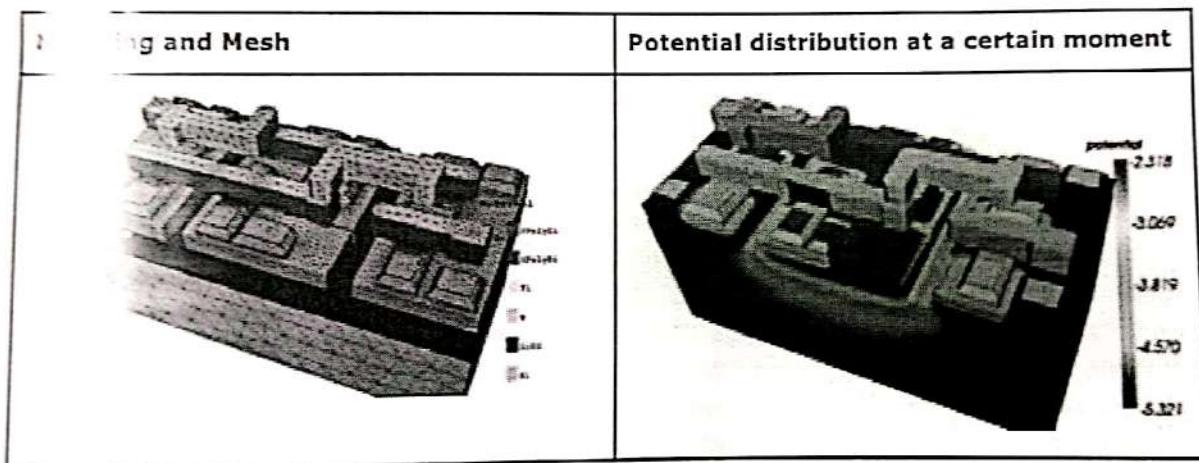
Radiation Hardness Assurance Analysis of Radhard Architecture at NanoScale using Visual TCAD Tool

II. Introduction:

For space electronics Radiation Hardness Assurance (RHA) ensures the functionality of the Space electronics under the effects of radiation. The key aspect to RHA is selection of components and design of subsystems that have higher levels of tolerance to radiation effects for their application to specific radiation environment. The typical tolerance levels for radiation effects are shown below in the table. Therefore a detailed analysis of the device structure and subsystem is mandatory for critical application like space electronics.

The charged particles in space radiation environment consist primarily of high-energy electrons, protons, alpha particles and heavy ions (cosmic rays). The radiation effects of these charged particles are dominated by ionization in electronic devices, and the resulting total ionizing dose (TID), single-event effects (SEE), and Enhanced Low Dose Rate Sensitivity (ELDRS) have to be evaluated and individual circuits analyzed.

Visual TCAD will be used to generate 2D and 3D models of the device and circuit for radiation simulation. Circuit simulation of the generated structure is also available in this tool. Additionally the tool supports various models such as Drift-diffusion model; Lattice heating model; Energy balance model; DC, AC and transient simulation modes; Circuit/Device mixed simulation; A wide range of mobility models; Impact ionization model; Band-to-band tunneling model; Carrier trapping at defects; Hall effect; 3D Ray-tracing optics; 2D FEM Optics; Shockley model; device model generation from GDSII mask layout; data format conversion from other major TCAD tools. Shown below is the 3D model of a 6T SRAM cell extracted from GDSII.



The 3D model generated for a given circuit is utilized to produce high energy particle trajectories, carrier generation and then analyze SEE effects. CRad tool will be used to predict the behavior of the design with respect to Total Displacement Dose (TDD) and Total Ionizing Dose (TID) for different orbits in space simulating selected Radiation models (Galaxy cosmic rays, Solar Cosmic rays, Trapped radiation by geomagnetic field). The Crad tool provides SEE rate prediction for heavy ions (using IRPP model) and protons (using Jandel, PROFIT and JBarak2006 models)

Total Ionizing Dose (TID) in electronics is a cumulative, long term degradation mechanism due to ionizing radiation—mainly primary protons and electrons and secondary particles arising from interactions between the primary particles and spacecraft materials. It causes threshold shifts, leakage current and timing skews. The effect first appears as parametric degradation of the device and ultimately results in functional failure. TCAD tools can be utilized to understand the radiation to dose distribution – energetic particle transport by



Asuresh

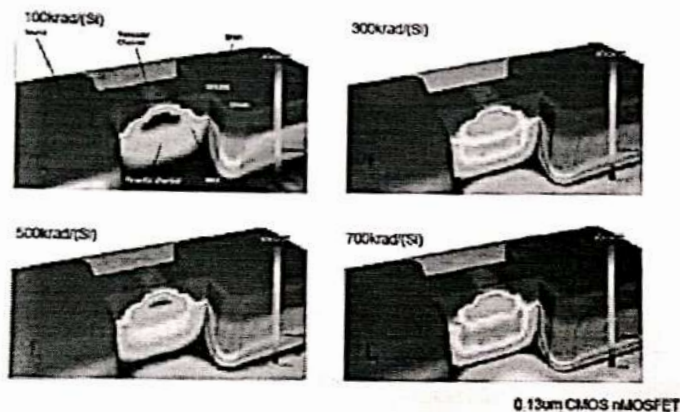
PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

Monte Carlo particle Simulation. The tool further assists in describing the dose distribution to trapped charge distribution inside insulators and semiconductors interfaces. As this emulation process is complicated and not possible by traditional E-CAD tools. In the next step the TCAD tool estimates the problem of charge carriers distribution for certain electric field and evaluates the relation of trapped charge distribution to leakage current increase. Parasitic transistors formed due to TID effect will be simulated to different dose rates.



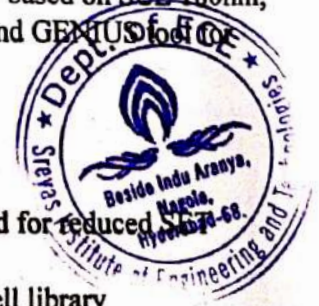
Parasitic Channel due to TID



Single Event Effects (SEE) are caused by a high energy single ion (heavy ion or energetic proton) passing through the device. SEE include single event upsets (SEU), single event latchup (SEL), single event burnout (SEB) and single event gate rupture (SEGR). While SEU are nondestructive and do not cause permanent damage to the device, the other single event effects can be destructive. SEU occur due to either the deposition or depletion of charge by a single ion at a circuit node, causing a change of state in the memory cell (bit upset). In very sensitive devices, a single ion hit can cause multiple bit upsets in adjacent memory cells. However, these SEU cause no permanent damage, and sometimes power recycling is all that is needed.

III. Objectives:

1. Application and utilization of various built-in tools of Visual TCAD for RHA analysis that include Gds2Mesh tool, GENIUS tool, CRad tool and Visual Particle Strike tool.
2. Analyze Radhard and Traditional standard cells library for radiation effects, based on SCL 180nm, by performing Monte Carlo Simulation of Ionizing Radiation through Geant4 and GENIUS tool for target specification as shown below -
 - TID (with radiation tolerance > 300kRad(Si))
 - SEL immune with threshold LET > 90 MEV-cm²/mg,
 - SEU rate < 10⁻⁹#bit/day in GEO orbit environment
 - Other specialized cells (TMR, DR and Clock Buffers) will be evaluated for reduced SEU sensitivity
3. Compare and analyze the RHA report of radhard and traditional standard cell library
4. Based on the results of the above analysis the standard cells circuit design and physical layout structure could undergo redesign to improve the tolerance to radiation effects



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

5. Finally, the improvised standard cells will be form the building blocks of a Radhard Test Architecture that will be further analyzed for Radiation Hardness Assurance for space application

IV. Methodology:

1. Develop understanding of the various tools offered by Visual TCAD for RHA analysis of Radhard and Traditional Standard Cells Library
2. Generating TID and SEE reports of the Standard Cell Library. Modifying the design cells to mitigate the effects of radiation
3. Utilize the improvised standard cells to build Radiation hardened Soc Test Architecture suitable for Space application

V. Quarterly/Year-wise plan of work and targets to be achieved

Milestone 1 (T0)

Online training on generation of advance level reports for Radiation Hardness Assurance using Visual TCAD tool

Milestone 2- (T0 + 3 months)

- a. Integration of Visual TCAD tool with Cadence based design
- b. Generating 2D and 3D grid structure from the GDSII of all Radhard and Traditional standard cells

Milestone 3- (T0 + 6 month)

- a. Perform TID and SEE analysis to identify vulnerable nodes in the design for both, Radhard and Traditional standard cells
- b. Modify the design of Radhard cells based on the analysis such that the effects of radiation is further minimized and design tolerance levels are increased

Milestone 4 -(T0 + 9 month)

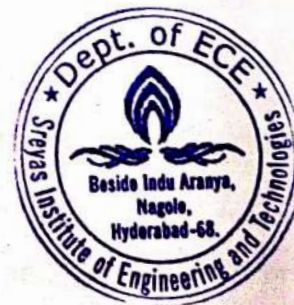
Perform TID and SEE analysis of the Test Architecture design based on radhard

Milestone 5 -(T0 + 12 month)

Modify the Test Architecture by rebuilding the design with upgraded Radhard cells

Final

- a. Preparation of RHA report for Radhard cells for specific Space application criteria
- b. Final step technology transfer and organizing FDP.



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-68

Financial Assistance required

Sl. No.	Item	Details	Budget (Rs.)
a	Manpower (<15%)	M.Tech Student Stipend Rs. 3,500/- per month	45,000
b	Conference Registration Fee (<5%)	The results obtained from the analysis will be published in reputed journals	12,000
c	Travel (<10%)	Travel for training programs, Conferences and Seminars	30,000
d	Collaborative meeting/ Workshops with Proposal title (<15%)	Training programs - 2D and 3D modeling of device and circuits with radiation simulation analysis.	40,000
e	Field Visit (<10%)	Trips to NIT Warangal where advance level of work presently carried on	25,000
f	Contingency (<30%)	Procurement of Items required effective sharing of the tool and extracting higher levels of performance and visual effect. <ul style="list-style-type: none"> • Books • Patent application fees • Visit to SCL Chandigarh for advance training on field training 	85,000
g	Others (<15%)	<ul style="list-style-type: none"> • Higher CPU (Intel xeon 4110) cores for performance with RAM • Graphics cards 	45,000
Grand Total			2,82,000

12. Whether the faculty has received support for the research project from the UGC under Major, Minor or from any other agency (Yes/No)? No

Only internal funding from the institute (SNIST) to procure and install the Visual CAD Tool - this process is completed as of May 2019.



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

13. Research Credentials

Dr. Ameet Chavan has completed four major projects with reputed agencies such as DARPA, PAWAR, MITLL at USA and RCI-DRDO Hyd, INDIA, related to the area of proposed project work.

Mr. Chinnam S V Maruthi Rao has years of working experience with the relevant tools such as Cadence ECAD and subject expertise in architecture design analysis.

14. Need of present Research

The global radiation hardened electronics market was estimated to be approximately \$1.45 billion in 2018. The radiation hardened electronics industry is currently at the cusp of a major revolution. Radiation hardened electronics are employed in satellite switching regulators, system power supply, and microprocessors in military and space applications. Therefore, they require extensive testing and development for their production. The radiation hardened electronics market has witnessed a high growth rate owing to the extensive demand for radiation hardened components for their applications in space, medical, and nuclear power plants. To provide complete solution ranging from theoretical investigation to risk assessment and to propose radiation-tolerance design.

15. Societal Relevance

The research proposal has many tangible and intangible benefits to society such as indigenization of reliable models and radhard cell design.

16. Industrial Relevance

Many commercial Space electronics embedded IC design are dependent on Radhard VLSI standard cell libraries, the IPs of which are not indogenous. Therefore, with the high demand in this sector the proposed research serves to make big contribution and paves path to undertake high level projects with OEMs, DRDO and SCL. Innovations, such as the development of cost-effective and reliable components and services, are anticipated to enable the radiation hardened electronics market to reach a wider segment of consumers in the industry

17. Expected Outcomes

- Radiation Hardness Assurance analysis report for designed Radhard and Traditional Standard Cells Library
- Improved designs of standard cells that can be utilized to build robust SoC for Space application

18. Development of Innovative Product/Process

The outcome of the research will be innovative design of device and memory cell structure which will be patented design- IP.



Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-68



Apex Technology Systems, Inc

One Stop IT Solution

Apex Technology Systems, Inc.
50 Cragwood Road, Suite 214
Roads,
South Plainfield, NJ 07080
Ph: 908-818-8147/732-701-7052
Email: paralegal@apex-tech.com
Fax: 908-444-8536/206-203-3403

Apex Technology Systems, Inc
Sheshadri Heights, Nagole 'X'

Hyderabad 500027, A.P, India
Ph: 040-65864630
Fax: 206-424-4745
URL: www.apex-tech.com
Version: 1.1

From:

Jiten Patel,

Managing Director,

Apex Technology Systems, Inc.

50 Cragwood Road, Suite 214

South Plainfield, NJ 07080

March 17th 2016

To:

K.Rohit Kumar,

Sreyas Institute of Engineering and Technology,

Bandlaguda, Nagole-68.

Dear Mr.K.Rohit Kumar,

Re: Project Acceptance on Multi Resolution Tool (Portlet)

On behalf of Apex Technology Systems Inc, I am pleased to inform you that the management has studied through your proposed project of Multi Resolution tool

We feel that your proposal is very workable with the proposed cost and applications. Hence, Apex Technology Systems Inc is accepting your proposed project. We are agreeable to the terms and conditions stated in your proposal with no amendments.

The project commenced in March 2016 and to complete, as proposed in your project proposal, in April 2017. Payment will be progressive in accordance with the project implementation, as per the stated and agreed on terms and conditions.

Thank you for engaging Apex Technology Systems Inc.

50 Cragwood Road, Suite 214, South Plainfield, NJ - 07080

Phone: 908-818-8147, Fax: 908-444-8536/206-424-4745

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-68



One Stop IT Solution

Apex Technology Systems, Inc.
50 Cragwood Road, Suite 214
Roads,
South Plainfield, NJ 07080
Ph: 908-818-8147/732-701-7052
Email: paralegal@apex-tech.com
Fax: 908-444-8536/206-203-3403

Apex Technology Systems, Inc
Sheshadri Heights, Nagole 'X'
Hyderabad 500027, A.P, India
Ph: 040-65864630
Fax: 206-424-4745
URL: www.apex-tech.com
Version: 1.1

Memorandum of Understanding (MOU)

MEMORANDUM OF UNDERSTANDING (MOU)

Between

**SREYAS INSTITUTE OF ENGINEERING
AND TECHNOLOGY**

&

APEX TECHNOLOGY SYSTEMS INC

This document constitutes an agreement between **Multi resolution Tool** project promoting economic development in *Apex technology system Inc*, a private, business company, with k.Rohit kumar Assistant professor at SIET BANDLAGUDA, NAGOLE.

1. Objective

The objective of this MOU is to express the willingness of both parties to engage in an effort to promote the competitiveness of APEX TECHNOLOGY SYSTEM INC COMPANY as well as it's activities to develop and expand relationships with producers of herbs and spices that they source from (these producers are also referred to an micro, small and medium scale enterprises or "MSMEs").

Specific activities under this MOU will be identified through consultation between the two parties.

K.ROHIT Kumar agrees to provide technical assistance to assist APEX TECHNOLOGY SYSTEM INC Company to carry out activities that will improve or expand the support they provide to herby and spice producers they source from and improve its competitiveness. As a preliminary activity, AFE will conduct a strategic planning exercise with MULTI RESOLUTION TOOL to review their outgrowing operations. The results of this exercise will assist with the implementation of its operations and will help identify areas where it can provide capacity building support. After finalizing the strategic planning session, technical and financial support agreements for specific activities will be developed through a participatory process. These agreements will be detailed in subsequent Addendums to this MOU.

APEX TECHNOLOGY SYTEMS INC Company agrees to work with and coordinate with K.ROHIT Kumar in the development of their initiatives to improve and expand support to the MULTI RESOLUTION TOOL they transact with. They also agree to allow K.Rohit Kumar to carry out monitoring and evaluation activities to assess the impact of these activities on participating producers.

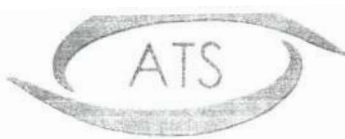
50 Cragwood Road, Suite 214, South Plainfield, NJ – 07080

Phone: 908-818-8147, Fax: 908-444-8536/206-424-4745

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61



One Stop IT Solution

Apex Technology Systems, Inc.
50 Cragwood Road, Suite 214
Roads,
South Plainfield, NJ 07080
Ph: 908-818-8147/732-701-7052
Email: paralegal@apex-tech.com
Fax: 908-444-8536/206-203-3403

Apex Technology Systems, Inc
Sheshadri Heights, Nagole 'X'
Hyderabad 500027, A.P, India
Ph: 040-65864630
Fax: 206-424-4745
URL: www.apex-tech.com
Version: 1.1

2. General Terms of MOU

2.1 Duration of MOU: This MOU shall be operational upon signing and will have an initial duration of one year. All activities conducted before this date within the vision of the joint collaboration will be deemed to fall under this MOU.

2.2 Coordination: In order to carry out and fulfill the aims of this agreement, each party will appoint an appropriate person(s) to represent its organization and to coordinate the implementation of activities. APEX TECHNOLOGY INC Company and K.RohitKumar staff will meet regularly (preferably with two days' notice) to discuss progress and plan activities.

2.3 Technical and Financial Support: Addendums to this MOU will be developed for specific technical and financial support activities. These Addendums will provide a detailed description of the role, responsibility, and financial contribution of each party. Work plans and reporting requirements will be clearly outlined in the Addendums.

2.4 Confidentiality: Each party agrees that it shall not, at any time, after executing the activities of this MOU, disclose any information in relation to these activities or the affairs of business or method of carrying on the business of the other without consent of both parties.

2.5 Termination of MOU: The partnership covered by this MOU shall terminate upon completion of the agreed upon period. The agreement may also be terminated with a written one month notice from either side. In the event of non-compliance or breach by one of the parties of the obligations binding upon it, the other party may terminate the agreement with immediate effect.

2.6 Insurance: It is the responsibility of APEX TECHNOLOGY SYSTEM INC Company to insure themselves against any casualties.
K.ROHIT Kumar will not bear any responsibility for costs of sickness, accidents or any other liability.

50 Cragwood Road, Suite 214, South Plainfield, NJ – 07080

Phone: 908-818-8147, Fax: 908-444-8536/206-424-4745

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-61



Apex Technology Systems, Inc

One Stop IT Solution

Apex Technology Systems, Inc.
50 Cragwood Road, Suite 214
Roads,
South Plainfield, NJ 07080
Ph: 908-818-8147/732-701-7052
Email: paralegal@apex-tech.com
Fax: 908-444-8536/206-203-3403

Apex Technology Systems, Inc
Sheshadri Heights, Nagole 'X'
Hyderabad 500027, A.P, India
Ph: 040-65864630
Fax: 206-424-4745
URL: www.apex-tech.com
Version: 1.1

3.1 APEX TECHNOLOGY SYSTEMS INC Company is reminded that U.S. Executive Orders and U.S law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of APEX TECHNOLOGY SYSTEMS INC Company to ensure compliance with these Executive Orders and Laws.

3.2 This agreement will be administered in accordance with prevailing standard provisions and certifications for K.ROHIT Kumar including those contained in ADS Chapter 303, "Grants and Cooperative Agreements to non- governmental organizations" and within the terms of the USAID standard provisions applicable to non-US, non-governmental recipients. Information on these provisions can be accessed through the USAID external website at www.info.usaid.gov "Business & Procurement" section.

The terms and provisions in this MOU also apply to any subsequent Addendum to this agreement.

IN WITNESS WHEREOF, the parties hereto have executed this MOU on the 18th day of March 2016 [Date].

Name
K.Rohit Kumar
ASSISTANT
PROFESSOR ,SIET
Signature and date:

K. Rohit Kumar
18/3/16

Name
JITEN PATEL
Managing Director
APEXTECHNOLGY
SYSTEMS INC


One Stop IT Solution
Company
Signature and date:

Jiten Patel
18/3/16

50 Cragwood Road, Suite 214, South Plainfield, NJ – 07080

Phone: 908-818-8147, Fax: 908-444-8536/206-424-4745

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61



SREYAS INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUHH)
Thatti Annaram(v), Bandlaguda, Nagole, Hyderabad - 500068.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LETTER FOR PROPOSAL

Date:- 06-03-2016

To,
Managing Director,
Apex Technology System Inc.
50 Crag wood Road, suite 214
South plain field, NJ 07080
Email:paralegal@apex-tech.com

Sub: Request to grant me permission to carry out project work
Respected Sir / Madam,

I , K.Rohit Kumar (Assistant Professor), Department of CSE ,SREYAS INSTITUTE OF ENGINEERING AND TECHNOLOGY BANDLAGUDA,NAGOLE, would request you to grant me permission to carry out project work in Php Domain on the topic of Multi Resolution Tool Project duration is for 1 year i.e. 1st April 2016 to 30th April 2017.

Kindly do let me know that may take place in Multi Resolution Tool and what are the other requirements I need to comply with. Forwarding my details for your immediate response and your co-operation &oblige.

Thanking You

Yours truly, *K.Rohit Kumar*
K. Rohit Kumar (B.Tech,M.Tech)
Assistant Prof.
Department of CSE

Official Email:Rohit.k@sreyas.ac.in
Personal Email: :krk542@gmail.com

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-68

ABSTRACT

The Aim of this project is to check the resolution and displays of any websites on different types of hand handled devices and store the log information. This new system will provide feasibility to check whether provided website is responsive or not without any help of hand handled devices and to store the logs of visited URLs through Portlet tool to the database. This system is used to track users and visited URLs.

This new system is completely user friendly and allows users to check the website is responsive or not without any mobile, tablet, television etc. Tool should be displayed in 4 sized, (320 x 480(smart phone/I phone), 640 x 480 (tablet), 1024 x 768 (desktop), 1280 x 800 (Laptop/TV) sizes). Global URL should load data in each resolution window as per their resolution/sizes. Each Resolution should be independently browsable. Each portlets should have functionality for close/restore. User level security need to be developed with the system which will maintain the system's confidentiality. The new system will provide feasibility to check whether provided website is responsive or not without any help of hand handled devices which will reduces company's expenses.

GUI to view portlets logs by default logs should be displayed in descending order of last visit. Global URL and individual visited URL through portlet tool should be store the log data in database. Portlet_log need to store details of each devices/portlets separately along with start_time, end_time, load_time and page_size. Functionality to show duration time for status e.g. "status ON 2days 3hrs 20 mins". Ajax validation for status duration i.e. timer should update without reload the page. Functionality to turn on/off portlet logs. Feature to view/delete portlet logs (Users who have the permission they can only view/delete the portlet's logs entry). Only Users have delete portlet logs permission should be able turn on/off portlet logs. URL view page needs filter and count for month, year, user, portlets (default current year and month).This newsystem will track users and visited URLs through portlets.

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61



SREYAS INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUH)
Thatti Annaram(v), Bandlaguda, Nagole, Hyderabad - 500068.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Proposal for project

On

Multi Resolution Tool

Web design encompasses many different skills and disciplines in the production and maintenance of websites. The different areas of web design include web graphic design interface design authoring, including standardized code and proprietary software user experience design and search engine optimization. Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all. The term web design is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up. Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and their role involves creating mark up then they are also expected to be up to date with web accessibility guidelines.

Over the past year, responsive design has become quite the hot topic in the web design community. If all the buzz has you feeling like Rip Van Winkle waking up in the 21st century, this summary will help you catch up with the times.

It's not just small screens, either. Large, high-resolution displays are starting to become much more common than they used to be, and it would be a waste for web designers to not take advantage of this. In summary, the spectrum of screen sizes and resolutions is widening every day, and creating a different version of a website that targets each individual device is not a practical way forward. This is the problem that responsive web design addresses head on. Responsive web design is not a single piece of technology, but rather, a collection of techniques and ideas. Now that we have a better idea of the problem space we're addressing, let's take a

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-68

look at each part of the solution.

Fluid Grids

The first key idea behind responsive design is the usage of what's known as a fluid grid. In recent memory, creating a 'liquid layout' that expands with the page hasn't been quite as popular as creating fixed width layouts page designs that are a fixed number of pixels across, and then centred on the page.

1.1 Overview:

This project is all about Responsive web design tool.

For instance:

- The iPhone is 320 pixels wide by 480 pixels high.
- Many Nokia N-Series devices are 240 pixels wide by 320 pixels high.
- Newer devices often support a landscape mode where the width and height are spontaneously reversed up to 352x416 pixels.
- Blackberry screen resolutions range anywhere from 160 x 160 pixels all the way up to 324 x 352 pixel.

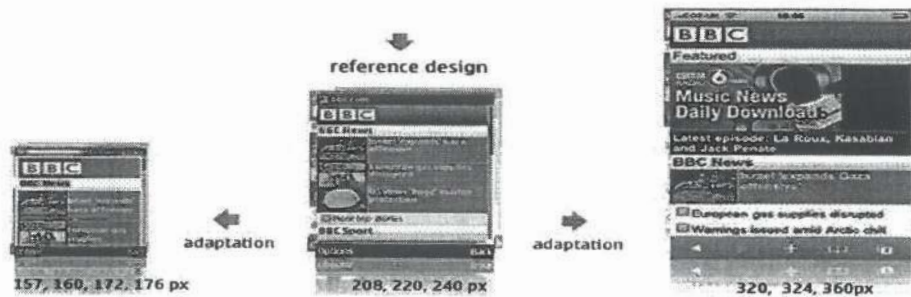


Fig:1.1.1: Handheld devices

Asured

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

1.2 Motivation:

The main motivation for the development of the Multi Resolution Tool is that for the developers to design the websites in a more effective manner. It has been a hectic task for the developers to make websites that are compatible to different device resolutions. It in turn results in the higher cost of development and also more time taking for the development.

This Multi Resolution Tool helps the users to view the same web site in different Resolutions at the same time. Developer is also benefitted by the way that he can view his website into different resolutions at the same time. This helps him to make changes in the resolution that is to be modified. Using this tool also reduces the cost in terms that there is no need to get devices of different resolutions.

1.3 Objective of project:

So, what is responsive design exactly? Actually, a better question to ask might be, what problem does responsive web design solve? Well, as we know, computers aren't the only piece of hardware with a web browser anymore. I might get myself in trouble by saying this, but the iPhone was one of the first mobile devices to feature a really great web browser, and it really put the spotlight on upgrading the experience of the mobile web. Many other devices followed suit and, seemingly overnight, the face of the mobile web had changed.

The changing landscape of web browsers meant that users expectations also changed people expected to be able to browse the web on their phones just as easily as they browse the web on a desktop computer. So, in response to this the web design community started creating mobile versions of their websites. Understanding the situation this wasn't really the way forward, but at the time it seemed like a reasonable idea. Every website would have their normal 'desktop' version of their site, and as a bonus, a 'mobile' version.

Technology never stops marching forward, so not long after the phone hardware market had been revolutionized, other form factors surged in popularity. In addition to phones and

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattianaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

personal computers, devices like touchscreen tablets and small notebook computers (netbooks, if you prefer the term) started appearing everywhere.

It's not just small screens, either. Large, high-resolution displays are starting to become much more common than they used to be, and it would be a waste for web designers to not take advantage of this. In summary, the spectrum of screen sizes and resolutions is widening every day, and creating a different version of a website that targets each individual device is not a practical way forward. This is the problem that responsive web design addresses head on. Previously, I mentioned that responsive web design is not a single piece of technology, but rather, a collection of techniques and ideas. Now that we have a better idea of the problem space we're addressing, let's take a look at each part of the solution.

1.4 Problem formulation:

This tool is for everyone who needs a quick and easy way to test their website design in multiple screen widths. Change the default URL variable at the top of the responsive.php file to your own site and navigate your website from within the frames.

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-61



SREYAS INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to JNTUHH)
Thatti Annaram(v), Bandlaguda, Nagole, Hyderabad - 500068.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

MULTI RESOLUTION TOOL

By

Vempalla Ramya

Tadiparthi Abhigna

Nandhigani Nayan Kumar Reddy

Under the Guidance of

K.Rohit Kumar

(Asst.Professor)

Asuresh

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TEC.
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-61

1. INTRODUCTION

Web design encompasses many different skills and disciplines in the production and maintenance of websites. The different areas of web design include web graphic design interface design authoring, including standardized code and proprietary software user experience design and search engine optimization. Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all. The term web design is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up. Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and if their role involves creating mark up then they are also expected to be up to date with web accessibility guidelines.

Over the past year, responsive design has become quite the hot topic in the web design community. If all the buzz has you feeling like Rip Van Winkle waking up in the 21st century, this summary will help you catch up with the times.

It's not just small screens, either. Large, high-resolution displays are starting to become much more common than they used to be, and it would be a waste for web designers to not take advantage of this. In summary, the spectrum of screen sizes and resolutions is widening every day, and creating a different version of a website that targets each individual device is not a practical way forward. This is the problem that responsive web design addresses head on. Responsive web design is not a single piece of technology, but rather, a collection of techniques and ideas. Now that we have a better idea of the problem space we're addressing, let's take a look at each part of the solution.

Fluid Grids

The first key idea behind responsive design is the usage of what's known as a fluid grid. In recent memory, creating a 'liquid layout' that expands with the page hasn't been quite as popular as creating fixed width layouts page designs that are a fixed number of pixels across, and then centred on the page.

1.1 Overview:

This project is all about Responsive web design tool.

For instance:

- The iPhone is 320 pixels wide by 480 pixels high.
- Many Nokia N-Series devices are 240 pixels wide by 320 pixels high.
- Newer devices often support a landscape mode where the width and height are spontaneously reversed up to 352x416 pixels.
- Blackberry screen resolutions range anywhere from 160 x 160 pixels all the way up to 324 x 352 pixel.



Fig:1.1.1: Handheld devices

1.2 Motivation:

The main motivation for the development of the Multi Resolution Tool is that for the developers to design the websites in a more effective manner. It has been a hectic task for the developers to make websites that are compatible to different device resolutions. It in turn results in the higher cost of development and also more time taking for the development.

This Multi Resolution Tool helps the users to view the same web site in different Resolutions at the same time. Developer is also benefitted by the way that he can view his website into different resolutions at the same time. This helps him to make changes in the resolution that is to be modified. Using this tool also reduces the cost in terms that there is no need to get devices of different resolutions.

1.3 Objective of project:

So, what is responsive design exactly? Actually, a better question to ask might be, what problem does responsive web design solve? Well, as we know, computers aren't the only piece of hardware with a web browser anymore. I might get myself in trouble by saying this, but the iPhone was one of the first mobile devices to feature a really great web browser, and it really put the spotlight on upgrading the experience of the mobile web. Many other devices followed suit and, seemingly overnight, the face of the mobile web had changed.

The changing landscape of web browsers meant that users expectations also changed people expected to be able to browse the web on their phones just as easily as they browse the web on a desktop computer. So, in response to this the web design community started creating mobile versions of their websites. Understanding the situation this wasn't really the way forward, but at the time it seemed like a reasonable idea. Every website would have their normal 'desktop' version of their site, and as a bonus, a 'mobile' version.

Technology never stops marching forward, so not long after the phone hardware market had been revolutionized, other form factors surged in popularity. In addition to phones and personal computers, devices like touchscreen tablets and small notebook computers (netbooks, if you prefer the term) started appearing everywhere.

It's not just small screens, either. Large, high-resolution displays are starting to become much more common than they used to be, and it would be a waste for web designers to not take advantage of this.

In summary, the spectrum of screen sizes and resolutions is widening every day, and creating a different version of a website that targets each individual device is not a practical way forward. This is the problem that responsive web design addresses head on.

Previously, I mentioned that responsive web design is not a single piece of technology, but rather, a collection of techniques and ideas. Now that we have a better

idea of the problem space we're addressing, let's take a look at each part of the solution.

1.4 Problem formulation:

This tool is for everyone who needs a quick and easy way to test their website design in multiple screen widths. Change the default URL variable at the top of the responsive.php file to your own site and navigate your website from within the frames.

1.5 System Requirements:

1.5.1 Software Requirements:

Operating System	:	Windows 7
Web Server	:	Apache
Server side Technology	:	PHP
Client side Technology	:	HTML, JavaScript , CSS
Database	:	MySQL
Tools	:	NetBeans , MySQL WorkBench

1.5.2 Hardware Requirements:

Processor	:	Pentium 4
RAM	:	1 GB
Hard Disk	:	80 GB

2. LITERATURE SURVEY

2.1 Brief about domain:

Literature survey is the most important step in software development process. Before developing the tool it is necessary to determine the time factor, economy company strength. Once these things are satisfied, then next steps are to determine which operating system and language can be used for developing the tool. Once the programmers start building the tool the programmers need lot of external support. This support can be obtained from senior programmers, from book or from websites. Before building the system the above consideration are taken into account for developing the proposed system.

2.2 Existing system

In the existing System, there comes a situation where any website that is browsed that need to be adaptable with different devices of different resolutions have to be developed and tested individually.

This involves in higher costs of Development and also time consuming.

2.3 Problems in Existing system:

This approach isn't without its limitations. Because content must be altered on the client-side with JavaScript, only minimal content changes are encouraged. In general, things can get very hairy very quickly if you are trying to code two separate sets of JavaScript to work with the same DOM. This is a big reason why web applications tend not to adopt this approach.

Giving your existing site a responsive design also involves a rewrite of your styles if you are not sporting a flexible layout already. Though making a site's layout responsive could be a good opportunity to modernize and clean up your site's CSS.

Since we are adding code to your scripts and styles, performance may be worse than the Separate Sites approach. There is not really any way around this,

बचत बैंक खाता सं./ S.B. Account No. 8850210001554....

यूको बैंक/UCO Bank

दिनांक Date	विवरण Particulars	चेक संख्या Cheque No.	चेक की तारीख Cheque Date	निकाली गयी रकम Withdrawals	जमा की गयी रकम Deposits	शेष Balances	अधिकारी के हस्ताक्षर Officers Initials
	SB OPENING BALANCE					0.00	
	FED BALANCE					0.00	
28/06/2016	BY CASH				5000.00	5000.00Cr	
25/07/2016	Chg For 19-06-2016 T			104.00		4896.00Cr	
29/09/2016	SMS CHARGES APR16-JU			1.08		4894.92Cr	
28/10/2016	NEFT/ TATA CONSULTAN				34104.00	38998.92Cr	
08/11/2016	NEFT/ TATA CONSULTAN				67522.00	106520.92Cr	
22/11/2016	NEFT/ TATA CONSULTAN				33810.00	140330.92Cr	
29/11/2016	NEFT/ APE TECH				224763.00	365093.92Cr	
14/12/2016	CASH/Self	842703	10/12/2016	50000.00		315093.92Cr	
15/12/2016	BY CASH				50000.00	365093.92Cr	
27/12/2016	NEFT/ TATA CONSULTAN				38931.00	404024.92Cr	
27/01/2017	NEFT/ INDIAN INSTITU				19675.00	755699.92Cr	
03/02/2017	TAF TO SREYAS INST.O	842704	03/02/2017	750000.00		3649.92Cr	
03/02/2017	NEFT/ TATA CONSULTAN				43.00	297342.92Cr	
03/02/2017	NEFT/ TATA CONSULTAN				29.00	390621.92Cr	
03/02/2017	NEFT/ TATA CONSULTAN				102.00	273211.92Cr	
03/02/2017	NEFT/ INDIAN INSTITU				10.00	261111.92Cr	
03/02/2017	NEFT/ TATA CONSULTAN				10.00	250111.92Cr	
	FED CHARGES						
	SB CLOSING BALANCE						

Asured

PRINCIPAL

SREYAS INSTITUTE OF ENGG.&TECH
9-39, Sy.No: 107, Tattiannaram (V)
GSI, Bandlaguda, Nagole, Hyd-61