Minutes of the Workshop

The workshop was held on 22-23 Oct. 2019 at ViMEET, Kumbhivali, Navi Mumbai. The theme of the workshop was "Standardisation in Education for Technology Research and Commercialisation".

Organizing chair : Dr. Sandeep Inamdar, Vice-President, Vishwaniketan, Mumbai.

Chief Patron :Ramjee Prasad, Chair GISFI and President CTIF Global Capsule, Aarhus University, Denmark.

Coordinator : Santosh Nemade, Prof, E&TC dept, ViMEET, Mumbai

Day 1: Tuesday, October 22, 2019

- After Indian Rituals Meeting started at 10:10 am
- Welcome message was given by Sandeep Inamdar, Vice-President, Vishwaniketan, Mumbai. He introduced the objective of the event.
- Opening message was given by Ramjee Prasad, Chair GISFI and President CTIF Global Capsule, Department of Business Development and Technology, Aarhus University, Herning Campus, Denmark
- Inaugural speech was given by Luis Jorge Romero, Director General, The European Telecommunications Standards Institute (ETSI)
- Keynote address was given by GISFI Alumni Kiritkumar Lathia, Belgium
- The guest of honour, Hemant Abhyankar, vice chairman VIT Pune spoke on topic "Expectations from CTIF global Capsule for Indian Academic/Research Institutions."
- 10th Anniversary of GISFI was celebrated by opening of the book on "GISFI Past, Present and Future", (The book is available in CGC vishwaniketan office).
- MoU was signed between ETSI and GISFI.
- Vote of Thanks was given by the Convener of the meeting Santosh Nemade
- **Session 1 : 'Case study on standardization Innovative research and Product Development'**
  Session Chair was Ashok Chandra, Former Wireless Advisor, Govt. of India and speakers were P.K. Panigrahi, Sr. Deputy Director General, Department of Telecom, Govt of India and Dr. J.W.Bakal, IETE President.
  Dr. Ashok Chandra focused on spectrum and standardisation of 5G spectrum band and also on Radio spectrum and IoT. He also emphasized to start diploma, degree and master certification courses with ITU certification.
  P.K. Panigrahi, emphasized the need of changing the education for practical research, R&D for creating start ups. He informed about the government support for technological development /start ups. He concluded that India needs big numbers of startups created in engineering colleges. He advised that all GISFI,CGC achievements should be informed to government to get support from them.
  Dr. J.W. Bakal spoke on standardization and education system
- **Session 2: 'Standardization in Education for Incubation '**
  Session Chair was Kishor K Thakur, Chief General Manager, BSNL, Ranchi, Jharkhand speakers of the session were M. Rajendiran, Mahindra Institute of Technology, Thiruchengode, C. S. Warnekar, Retg. Principal, Cummins college of Engineering, Pune. J. N. Swaminathan,

Professor, QIS College of Engineering Technology and Arun Golas, Retg. Sr. Deputy Director General, Department of Telecom, Govt of India

Kishor K Thakur Spoke on Education system in India, social media & telecom

M. Rajendiran suggested that MHRD should have Institute Innovation Council, internship program for 15 to 45 days like the UG Fellowship is absolutely essential. For moreStartups and Internship activities. He also said that standards to develop ethical and managerial skill of students are required.

C. S. Warnekar explained Numerical Sanskrit Algorithms with examples very interestingly.

Arun Golas spoke on standardization in education and suggested that India will be great if we provide great solution for great problem like education. He said education should give knowledge, skills, attitude and values to students and he praised the efforts of this network like UG Fellowship, PhD, etc.

J. N. Swaminathan specified human resource and innovation is our strength and quality of research is our weakness, GISFI should provide patent consultancy and should conduct competition like Hakathon. There should be project based learning implemented on large scale in India.

- **Session 3: 'My Experiences with GISFI PhD Programs'**.

Session Chair was Kiritkumar Lathia, Belgium. Speakers were Dnyaneshwar S. Mantri, Professor, SIT, Lonavala, Vandana M. Rohokale, Professor, SITS, PUNE, Sanjay Kumar, BIT Ranchi, India and Sriganesh Rao, Managing Director, Calligo Technologies Pvt Ltd.

Kiritkumar Lathia emphasized that standardisation is not just technical but strategic endeavour. He explained the importance of megatrends in wireless interconnectivity, intelligence, automation in creating significant global economic value.

He came to some conclusions (and a reason for education about standards):
1. Future digital world, both infrastructure and vertical industries, is very big business
2. (Human) mobile communication will be a very small part, perhaps< 10%
3. Standards play a very important role and are a revenue stream in their own right
4. Standards are not just technical matter but define vendor's product strategy
5. Huge investments are made by companies participating in standards
6. Where does *global ICT standardization for India* (GISFI) fit in?

He also said that GISFI has two branches one is Education and another is Standards.
He mentioned the characteristics of Education branch of GISFI:
1. GISFI formalised as a collaborative umbrella platform
2. Use GISFI for better networking, mentoring and leveraging innovation/technologies to create enterprises...

Mr. Lathia made important announcement that Alumni Association has been established from today with 70 GISFI PhD researchers and 900 UG Fellowship students. This alumni association will work on joint research, incubation startups and other GISFI vision activities.
He added that Alumni can create trust-based long term relationships.

He also spoke about standardization strategies:
1. Standardisation is a strategic discipline – not just a technical domain – for managers, scientists, researchers, technologists, ...
2. Note: Heavy investments by Asian Governments as a strategic tool in future digital world for sustainable growth and high-value-added employment

3. Provide market success through co-operation and pooling of sovereign knowledge (pre-standardisation strategies, direct standardisation under GISFI)
4. Carl Bildt (former PM of Sweden) produced "ETSI Report" recommending global leadership for standardisation by European Union => https://bit.ly/2MNDmcK

Speakers of the session mentioned following key points:
-There should be core research also with applied research
-There should be research groups like 5G standardization, etc
-There should be consultancy formation for solution to industry problem through academia
-GISFI in last 10 years has nurtured, inspired and next 10 years, it will transform educational Institutions.
-Suggested Layered Architecture of GISFI

> Layer 1: Senior GISPI people like Ashokchandra sir, dua Sir, Inamdar Sir, Kirit Sir, Panighahi sir, Golas sir
> Layer 2: PhD students, Scholars
> Layer 3: PhD and MS aspirants

Session 4: 'Experiences of UG fellowship Students'.

Session Chair was Janhavi Inamdar, Director, Vishwaniketan, Mumbai and speakers were Shubham Verma, Shreemay Narvekar, Simran Wani and Parth Vaghani
The UG Fellowship Students spoke about projects which they completed there, about excellent accommodation, transportation and visa facility provided by Vishwaniketan. They also shared about the cultural exposure they received at all places they visited during UG Fellowship

Day 2: Wednesday October 23, 2019

- **Session 1: 'GISFI Outcome, Expectations for future and Need of Global Innovative Research Collaborations for India'.**

  Session ChairwasArunGolas, Retd. Sr. DDD DoT, Govt of India. Speakers were Sandeep Inamdar, Vice-President, Vishwaniketan , Mumbai, Ramjee Prasad, Chair GISFI and President CTIF Global Capsule, Department of Business Development and Technology, Aarhus University, Herning Campus, Denmark, Rajeev Prasad, Aalborg, Denmark and Navin Kumar, Amrita School of Engineering, Bangalore

- **Session 2: 'GISFI imperative Session: Experiences to support incubation from global collaborations'**
  Session Chair was Damodar Acharya, Chairman Adviser Board at Siksha O Anusandhan University, Khorda, Orissa. Speakers were Jaffer Mhapara, Pranav Chavare (GOD), Anand Khandekar
  Jaffer Mhapara informed his journey from UG Fellowship to successful startup. Pranav Chavare spoke about his product 'Guruji on Demend(GOD). The audience was willing to collaborate with these startups. Anand Khandekar demonstrated how a teacher with exposure abroad could create his own startup working in machine learning applications in insudtry.
- **CGC Collaboration Expectation Session: '**Expectation of CTIF Global Capsule (CGC) Collaboration for India' by Hemant Abhyankar, Vice-Chairman VIT, Pune.

Prof. Abhyankar with his wide experience explained the story of engineering education in India. He pointed out the disadvantage of root learning. He emphasised that students and teachers should start working on change to a better teaching learning practice. He appreciated the efforts of PBL initiatives and promised that he can help CGC-Vishwaniketan network to reach out to government statutory bodies for their support to all these activities. The remaining points of his lecture have been included in his report as moderator of next session.

- **Session 3: GISFI Think Tank session on 'Future Proposal of CTIF Global Capsule(CGC) for India'** by Peter Lindgren, Vice President, CTIF Global Capsule, Arhaus University, Herning, Denmark.

Peter Lindgren informed that CGC is a nonprofit making research and development centre registered under European law.

Mr. Lindgren introduced the team of CGC and its organization structure. He informed that CGC has 12 vertical Reasearch Thematic Areas for 2025 like Conasense, Multimedia Application and Services, Future Wireless Technology, Knowledge Home, Secure Digitalization and Business Model Innovation, Standardization, Security-Trust & Privacy, Chitta Kaya Nivesh Sthaan, Personalised Medicine, Network Without Boarders, Holographic Telepresence Systems and CGC 4 horizontal Thematic Areas for 2025 like Multi Business Innovation Technology, Entre-/Intra- and interpreneurial Program, Fundraising & Projects, Event & Conference. He elaborated CGC value propositions and its membership benefits for Indian Institutes like

-opportunity for joint research

-MS program

-Student & staff exchange program

-PhD program

-Journals and Book Publications

-Business opportunity that can support CGC Vision

He shared that he has good experience with Indian students who went for UG Fellowship last summer i.e June 2019. He also shared details of CGC funded projects whose details are as follows:

4Projects in 2018

- Digibusiness – 0.1 mio Euro
- Drone – 0,1 mio Dkr
- CENTRAL Project - Horisont 2020 (Thailand, India, Pakistan,
- Motor5G– Marie Curie EU – 15 PhD 2019 – 2021 (Apl. now) – 4 mio. Euro

8 new projects in 2019 – (3 accepted)

- RECOMBINE - "Research Collaboration and Mobility for Beyond 5G Wireless Networks"
(RISE) - Accepted
- 2 Eramus+ Project accepted
- SET – 4,5 mio. Euro – Accepted
- DELIVERY – 4,5 Mio. Euro – submitted – 12-09-2019
- GREENWALL – 4,0 Mio Euro – submitted – 10-09-2019
- GREENBIZZ – 4,6 Mio. Euro – submitted – 13-09-2019
- FEAST – 7,5 Mio Euro – in pipeline Nov. 2019
- DIGIBUSINESS – 1 Mio Euro – in pipeline Jan 2020
- COE – 10 Mio Euro – in pipeline Jan. 2020
- Bridge – 4 Mio Euro – in pipeline spring 2020
- 2020 RIA (Fraunhofer, B&O, …) January 2020
- SMARTAVATAR – Spring 2020

He also explained few case studies. First is Biochar. In this he explained How can **Biochar** be a financially profitable Business Model for the business FRICHS? Which Business Model Ecosystems should Biochar focus in India and/or Pakistan? He also explained how Bagasse WASTE (the dry pulpy residue left after the extraction of juice from sugar cane) and Molasses(thick, dark brown juice obtained from raw sugar during the refining process) can helped in generating energy. Another case study was GREENWALL(GReen Energy Envelope Wireless smArt Longlife buiLdings). It was about how to make existing home a 'smart home'. Another interesting case study was GREENBIZZ. GREENBIZZ objective is to increase the use of Green Energy by 10% in Startups and SME´s in KASK region by engaging businesses actively in the development of their business models embedded with renewable energy. GREENBIZZ focus on the business models in the entire supplychain – or network of business models.

Mr. Lindgren mentioned 6 types of CGC membership and there costs

1. CGC Steering Committee Membership EUR 5000 per annuam
2. CGC Institutional Membership EUR 3000 per annuam
3. CGC Individual Fellow Membership EUR 250 per annuam
4. CGC Large Business Membership EUR 5000 per annuam
5. CGC SME Membership EUR 3000 per annuam
6. CGC Startup Membership EUR 100 per annuam

He concluded his session by mentioning the CGC benefits:

- Global Platform for Cross interdiciplinairy research, learning, teaching, challenge solving, meetings
- Continuous research, teaching, learning
- From problem based learning to startup – SME´s – Global Scale up
- A global scaleup platform that bridge technologies to business
- A platform that is born global and act local
  Advanced and world class Technology and Multi Business Model research and Innovation
- Access to a research, knowledge, teaching and learning platform independent of place and time
- Research platform that takes up strategic thematics of the future, past and present
- CGC brings the universities research, teaching and students to the businesses and the business to the universities
- CGC builds on a common language enabling participants independent of background to speak together
  CGC creates "rooms" spread out globally that are interconnected
- Open hard, open mind, open office
- Will to continuous improve, innovate and learn
- Will to learn
- Will to collaborate in an global cross interdisciplinary research, teaching and business nonprofit organization.

He assured that ViMEET will be pilot launch for Business Lab in India and Business Lab will be set as early as possible.

- **Session 4: 'Innovation and Entrepreneurship'**
  Moderator was Vikas Shinde and speakers were N. K. Srivastava, Former Sr. DDG, DOT, India, Rajat Das, Neelam Kamthe, Business Modelling, and Muneender E., Career Forum

- The Session started with the address by the Session Moderator Dr Vikas Shinde , (Director PBL Center of Excellence, Vishwaniketan) In his address he stressed upon the implementation of Project Based Learning and its desired outcomes. He also spoke about how PBL can be used to complement curriculum and contribute to idea generation, innovation, IPR's, Startups etc. he also expressed Vishwaniketan's willingness to consult and help other institutes build the complete PBL ecosystem.
- The first speaker in this session was the founders of FRESCON ACADEMY OF SCIENCE Rajat Das and his team, They are a startup working to create the path for a new education system in INDIA and attempting to innovate new ways to educate children and youth of INDIA with the help of internet ,edu-videos, AI ,VR etc. FRESCON ACADEMY is started with a vision of changing the teaching pattern in india ,wants to bring the practical methodology of teaching and make subjects more interesting and appealing
- Rajat Das and his team gave a live demonstration of their product. They appealed to GISFI on international exposure in terms of market and investments and how such collaborations will be possible.
- The second speaker of the session was Mrs Neelam Kamthe Director Vishwaniketan Incubation Centre. She spoke about her Business Modeling training and internship learning's at Aarhus University Denmark. She also spoke about the pivotal role incubation centers can play during the students business formative stages. She explained how VIC is planning the students transformation to entrepreneurs' in the form of development phases going on concurrently across their academic associating with the institute. She also displayed work done by her students during the boot camps held at VIC and work done by VIC as an industry consultant.
- The last speaker of the session was Dr. Muneender E. founder Vishwa, Smart Edge and its journey as a startup. SMART EDGE provides an innovative solution for colleges/ universities to assess their student's competence levels & guide them properly to the right path based on their performance in the tests. He elaborated on how universities, colleges and students can make use of their solution. The solution is pitched at a very low cost in the market to facilitate its use bystudents from lower economic classes too.

  Via GISFI, VISHWA is looking forward to collaborate with Universities / colleges / Training Institutes / Publishers acro

- **Session 5: 'Expectations from Participants'**
  Moderator was Hemant Abhyankar and speakers were KVN Shrinivasa Rao, BVRIT, Hyderabad. (panel member), Ms.Neeba E.A., RSE&T,Kochi. (panel member), Mr.Sachin Bojewar,VIT, Wadala, Mumbai. (panel member), Mr.Milind Shah Fr Agnel, Navi Mumbai, Mr.Vivek Shinde, Mr.M. Chaudhari. Ms.Neelam Kamthe
  Dr. Abhyankar summarised the discussion as below:

  a) India is a highly populated country with a large pool of talented young students and faculty. They are found to be very dedicated and result oriented people. European & U.S. Universities can use this pool of human resource for working on the solutions conceived by the academia and industry together with them. A lot of opportunity, for the progress and prosperity, on the either side.

b) Around 60% of the Indian population belongs to, so called "middle class", in terms of financial potential and they consider educational & research opportunity to their wards as an investment. This is to be noted while preparing the model for collaborations.

c) A large number of Indian Institutions can become members of CGC, if the membership fees are moderate/ affordable. CGC was requested to consider institutional membership fee for developing countries(Peter Lindgren and Ramjee Prasad responded positively and the matter is under consideration.)

d) A lot of effort is required to create awareness amongst students and faculty about forty five days of PBL based UG Fellowship offered by various European & U.S. Universities. There may be a need to support the efforts taken by Mr.Sandip Inamdar, of senior academician, who has adequate international exposure and acceptability in the academic sector.

e) Members are interested to find out if CGC can offer the PBL fellowship opportunity to PG students / teachers working in technical Institutes. This may lead to creation of interest in them, either in pursuing Doctoral fellowship program or in start-ups.(Additional training in Business modelling may be quite useful)

f) Can CGC/ GISFI think of fellowship programs for post Doctoral research?

g) Is it possible for GISFI/ CGC to come out with a peer reviewed bi-monthly research journal publication, for Indian teachers, which will have Scopus Indexing? (Mr. Rajiv Prasad, River Publications promised to think about it, in the earlier session.)

h) Although most of the Indian technical Institutions do not have research facilities and modern sophisticated equipment/ instruments with them, currently, as ninety percent of them are privately run (financially self supported on fees fixed by the Government and paid by the students) by charitable Institutes, on no-profit basis. Is it possible for GISFI/ CGC to train select teachers of some the teachers from these institutions (on low cost fellowship program) to offer "PBL", so that they can run such internship programs in their Institutes, at an affordable cost? And that too under the supervision of CGC?

i) Is it possible for CGC to offer some social (either local or global) problems to the Indian technical students for organizing a national competition? Students participating in offering good model solutions could be evaluated and sent on "PBL-fellowship" program with some schlorship?

j) Any mandatory requirement set by the apex regulating Government Bodies in India are taken seriously by the Technical Institutes in India, but they quickly find a way to dilute them and do it as a mere compliance. Can GISFI/ CGC help us to propose a better model for enhancement of quality of technical education in India?

The panel noted that the Ph.D. degrees received under GISFI program by Indian teachers have been appreciated by Indian Universities and are accepted for their career advancements.

The moderator and panel members thanked organisers and Vishwaniketan for giving them the opportunity to deliberate over this important issue and the session was concluded.