



GISFI News Letter

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Spot Light

- ITU-T Kaleidoscope 2010 conference , Pune
- GISFI standardisation Series Third meeting at Pune .
- Notes- Development of Standards.
- Report- Perspective of Indian ICT sector

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GISFI Welcomes delegates of Kaleidoscope 2010 and Third ICT Standardisation series meeting-STES, Pune

Pune is the seat of learning. The city has always nurtured higher education . In the serene settings of STES, Narhe Campus, Pune, **GISFI** welcomes the delegates of ITU-T Kaleidoscope-2010 and IPTV Interoperability Event to be held between Dec 13-15 and IPTV showcase on Dec 16-17.

Kaleidoscope is an ITU-T initiative to increase cooperation with academia and research institutions, The conference is Organized by ITU in partnership with **GISFI**, STES, CMAI and ITU-APT Foundation of India, with IEEE Com-Soc as Technical Co-Sponsor and Industries support. Kaleidoscope will highlight multidisciplinary

aspects of future ICTs, based on contributions from the world's universities, industry and academic institutions. The focus will be on innovative technologies and their impact on the evolution of Internet architectures, services and applications, as well as societal and economic challenges.

The theme of the conference is **Beyond the Internet? – Innovations for future networks and services** – is the third in a series



STES, Narhe Campus, Pune

ries of peer-reviewed academic conferences that bring

together a wide range of views from universities, industry and research. Institutions.

GISFI an organisation of ICT industries, academic institutions and professionals is dedicated for the development of standards in the ICT field, is holding its Third standardisation series meeting along with Kaleidoscope at Pune.

The first GISFI standardisation meeting was held during June 21-23 2010 at Delhi and the second one was conducted at Allahabad during Sep' 15-17 2010. Both the meetings laid the frame work and action plan for the development of around ten standards on various topics. The meeting at Pune will be a land mark on GISFI's roadmap in ICT standardisation.

We welcome the delegates for the Kaleidoscope-2010 conference and the 3rd GISFI standardisation meeting .

Chairman's Message

I extend my warm greetings to the delegates of ITU-T Kaleidoscope –STES 2010 and 3rd IPTV interoperability event and the GISFI members for the 3rd standardisation meeting, Pune.

GISFI has been a sector member of ITU-T. This ITU-T & STES initiative is being held in India for the first time when the internet revolution is poised for a new leap and India is entering into an era of information society.

The participants in the IPTV testing event above will showcase to the market the

interoperability of their IPTV products. The 3G spectrum has been allocated for the Indian mobile users and the services are geared to meet the launch of high speed broadband in the local area.

The current technology on fixed-mobile integration is evolving and the demand for services and applications have grown many fold. In this scenario **GISFI** has initiated its standardisation plans in the ICT sector. It will complement the efforts of world standardisation organizations



and bring India into reckoning. The third GISFI standardisation series meeting will also coincide with the conference. I wish all success for the proceedings of the conference & GISFI 3rd Standardisation meeting.

Prof. Ramjee Prasad,
Founder Chairman, **GISFI**

GISFI Special Interest Group (SIG)

Security, QoS and ICT & Food-Security

Chairman : Sh. Krishna Sirohi, CTO, VNL



Cyber security is analogous to a Digital lock to safe guard the information passing through the cyber highway.

Think twice before you Click the mouse. The Cyber Highway is full of bullies. Safety is the product of Security. Let us not be a prey to the cyber predators. Encryption, safety of passwords are some of the privacy practices you follow to secure your information.

Let us do our bit to Green the Globe. Plant saplings.



"ICT & Food security"

Among the many potential areas of ICT, E-Agriculture has been taken up as first area for study under this topic. Dr. G.N Pandey from IIIT Allahabad and Prof. Inamdar, Principal, SIT, Lonavala will be leading this study group. TCS and individual members will be assisting. This study is more relevant today when Government is proposing an Act on Food Security.

Security

Team from IIIT, Allahabad presented a new study topic on **Cyber Security for Children**. It was agreed to work further on this topic and make it part of the Security SIG. Apart from IIIT, NEC Corporation, TCS and I4CT will also work on this new topic. The work done in ITU and other standardisation bodies will be examined for a gap analysis on this topic.

Quality of Service (QoS)

The technical and service related aspects based on differentiated and measurable QoS of the Packet based networks will be examined for further study. It will lead to new definitions of differentiated services and applications based on QoS of underlying network depending on its network characteristics.

From Director General's desk

The innovations for future networks and the evolution of internet as a safe and robust medium of information exchange is gaining momentum. The global cooperation in finding technological solution for the unresolved questions will

be discussed by experts from various countries assembled at Pune for the Kaleidoscope-2010. These experts from Industry and the academia will sit together and find out the

socio economic impact of the innovations. GISFI will be part of the initiative by the ITU-T and wish the delegates a successful conference days.

K. Sridhara,
Hony. D.G,
GISFI



Spectrum Management

Chairman : Sh. P.K.Garg, Former Wireless advisor,

RF spectrum is a limited natural resource. It is a collection of a range of electromagnetic radiations of different wavelengths. In India, RF between 9kHz and 3000 GHz are being used for 40 different types of services like fixed communication, mobile communication, broadcast-

location, fixed and mobile satellite service, aeronautical satellite service, radio navigational satellite service etc. Some of the characteristics of the radio frequency spectrum are that it has no boundaries and cover a large terrestrial area. It is susceptible to interference and it must be used efficiently, optimally and eco-

nomically in conformity with the provisions of national and international laws.

The best allocation aspects for Indian scenario and the existing tools to frame policy on spectrum refarming and flexible optimum usage by future radio technologies will be examined by a team of experts from industry and academia.

Green ICT

Chairman : Dr. Anand Prasad, Senior Expert, NEC Corporation

The Green ICT activity of GISFI is working on energy efficiency aspects by making things green with ICT and also making ICT green. The concept of making things green with ICT is none other than reducing Green House Gas (GHG) emission. The sectors which mainly contribute to GHG are energy, transport, power generation,

electronic industry, construction, waste disposal, agriculture and ICT. In the Green ICT activity of GISFI the members are working on developing standards that fulfill Indian requirements while having a global impact. Currently initial draft version of two of the Green ICT deliverables are available; these deliverables are on making

ICT green and using ICT to make other sectors green. COAI, VNL, TCS, IIIT, Ericsson, NEC Corporation and several other members, including individual members, are actively working in this group. The Govt. Of India is also conscious of the urgent need to reduce carbon foot prints.

Service Oriented Network (SeON)

Chairman : Dr. Parag Pruthi, CEO, NIKSUN Inc. USA



Cross Digital divide to bring Services to rural India

The present day IN (Intelligent Networks) connected to PSTN and 2G/3G PLMN networks are Circuit Switched networks which will become a thing of the past if the services to subscribers are put through a Service Layer connected to IMS (IP Multimedia Subsystem) and other PS (Packet Switched) networks. The deployment through Service layer will be faster due to the

standardisation of network with the availability of more vendors in the IP-oriented architecture. The migration from the circuit switched networks to packet switched networks may take a longer time frame. The convergence in service layer independent of CS or PS network will make devices free from the access or switching technology. The user can have the same feel irrespective of the device being used Mobile, fixed, and IP phones.

GISFI is evolving a strategy in standardisation of Service Oriented Network (SeON) architecture for the convergence in service layer.

SeON means the same service layer infrastructure is connected to both the CS networks

based on SS7 signaling and PS networks based on IMS and all enabled devices connecting from either network to be part of the same services. This convergence helps in personalization, provisioning, and billing. It will have the benefits of Fixed-Mobile Convergence (FMC), Multimedia services integration, multiple device support, billing independent of services (voice, data, land line, mobile integrated payment), increased business groups access and social interactions.

This task is undertaken by Dr. Ashutosh Dutta, Niksun inc., USA.

The current topics of standardisation under progress at various discussion forums of GISFI and the Advances in ICT sector



Internet of Things (IoT)

Chairman : Dr. Debasis Bandyopadhyay, VP, TCS, Kolkatta

Internet of Things (IoT) can mean several things including Machine to Machine (M2M) communications. M2M refers to technologies that allow wireless and wired systems to communicate with other devices of the same ability. The IoT M2M wireless communications is an emerging technology that enables communication between machines, (devices,) where different devices establish communication and exchange information. We observe that several stan-

dardization activities are taking place worldwide in the field of M2M. GISFI's focus is on M2M relevant to Indian context on M2M over mobile networks. The applications considered (in order of priority for Indian scenario) are e-Agriculture, e-Education, e-Health, Connected Home, Smart Grid and other Utilities, Intelligent Transportation System, Security / Safety / Surveillance, Banking and Industrial Machines. M2M Connected Devices General Net-

work requirements are Authentication, Provisioning, Session management, Device interoperability testing & verification, Revenue assurance, Charging & billing, Coverage & capacity, Roaming & mobility, Customer care.

The Technical working Group comprising of TCS, NEC, Ericsson, NIKSUN, SIT, I4CT, IIIT-A and LNMIIT are developing standards in the M2M area of IoT.



Internet of Things to make a smarter world



Future Radio Access Technology

Chairman : Sh. Rajiv Mehrotra, Chairman, VNL, INDIA

Research on future radio access systems, supporting up to 100 Mb/s with wide-area coverage and up to 1 Gb/s with local-area coverage is currently undertaken around the world. Spectrum flexibility is identified as one main requirement for future radio access systems to make it feasible for deployment in a wide range of spectrum allocations with Multihop relaying to help extend the data range for higher rates and multiple-antenna configurations. A

packet-centric data flow processing, optimization towards the transport of packets are some of the few research orientations in the technology used.

The packets are segmented in the existing cellular systems. But new protocols may be decided for the future radio access systems for scheduling mechanism and the retransmission to operate on complete packets instead of segments to support wide-area coverage of

data rates in the order of 100 Mb/s in a cost-efficient manner.

A Team guided by Sh. Rajiv Mehrotra, Chairman, VNL, India is working in this area of standardisation.

(Ref: IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, VOL. 24, NO. 3, MARCH 2006)



The future of internet will bring a Blitz Krieg on data explosion



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GISFI is for ICT Standardisation

GISFI is a non-profit body registered under the Indian laws. This forum has been recognised by the Department of Telecom., Govt. of India for ICT standardisation

GISFI was launched at a workshop held in Lonavala (India) during 29-30 May 2009 under the Chairmanship of Prof. Dr. Ramjee Prasad, Danish Knight of the Order of Dannebrog is an eminent scholar and Director, CTIF, Denmark.

GISFI's members include industries and academia. The Telecom Engineering Centre (TEC) an apex body of DoT on telecom standardisation is a strong supporter of GISFI.

GISFI is an effort to create a strong Global platform in India for the ICT standardisation.

GISFI standardisation topics include RF Spectrum management Future radio access technologies, Service Oriented Network (Convergence), Internet of things, Green ICT and Security & Quality of Service (SIG) .

Perspectives of Indian ICT sector

The information and communication technology (ICT) sector has emerged as the prime mover of Indian economy and it has catapulted the Nation on the world stage. It can be classified in three categories namely IT services and software; IT enabled services like (BPO) and Hardware segments comprising of IT, Electronics and Communication equipments. Although the growth is predominantly in IT services, the communication sector also grown by expansion of Mobile phones in the nook

and corner of the country. The telecom service sector with an investment of Rs. 200,660 crore (\$ 45.5 billion) in 2005-06 earned a revenue of Rs. 86,720 crore (\$ 19.7 billion) which is a rise of 21% than previous years.

The Telecommunication is the lifeline of the rapidly growing Information Technology industry and the Internet subscriber base which is more than 7.5 million. The key growth drivers in the Indian Telecommunications market are Foreign Direct Investment, Mobile Tariffs, Government

Initiatives, Handset Manufacturing, Value-added Services. The area of opportunity lying ahead are Value-added Services, IPTV Market, Network Infrastructure, 3G Infrastructure, WiMAX, Semiconductor Industry, Mobile Handset Market and Mobile Number Portability. The key players in Indian Telecom are Bharti Airtel Ltd., BSNL, Vodafone Essar Ltd., MTNL, Reliance Communications Ltd., Tata Teleservices Ltd. ,Idea Cellular Ltd., and Aircel. The Indian ICT sector is poised for development and opens up new opportunities.

GISFI'S IMPORTANT DATES & EVENTS

5th Std. meeting at Rajiv Gandhi Uty. of knowledge Technologies, Hyderabad (ytbc)	June 2011
Wireless Vitae-2011 & 4th standardisation meeting, Le Meridien, Chennai	Feb' 28 –Mar' 3 2011
ITU-kaleidoscope & Third Standardisation series meeting—STES , Pune	Dec' 13-15
Second Standardisation Series Meeting held at IIIT-Allahabad Campus	Sep' 15-17 2010
First Standardisation Series Meeting held at Hotel Ashoka (sponsor IIIT-A)	June 21-23 2010
Launching of GISFI PhD program with Aalborg University Denmark.	Nov 15th 2009
Formation of GISFI as a standardisation Forum	May 29-30 2009

Note: Global ICT Standardisation forum for India (GISFI) assumes no responsibility for the statements made and expressed by speaker (s) and contributors. Printed and published by Prof. D.K.Singh on behalf of GISFI Editorial Board.