

**REPORT ON
PROGRAMS AND ACTIVITES OF**

**Inter Islamic Network on
Information Technology**

(INIT)

(July 2011 - December 2014)

Inter Islamic Network on Information Technology

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Executive Summary

Inception & Secretariat

1. The Inter Islamic Network on Information Technology (INIT) was established pursuant to the resolution approved in the 10th General Assembly Meeting of the OIC Standing Committee on Scientific and Technological Cooperation (COMSTECH) held on February 16 -18, 2002, Islamabad, Pakistan. Government of Pakistan is the 'Government' and the COMSATS Institute of Information Technology, Islamabad is the 'Institution' host' to the INIT.

Objectives

2. The INIT is established for utilizing, directing and encouraging the use of Information Technology and associated systems in promoting collaboration and cooperation among member states. This is achieved through building human resources and institutional capacity through fostering dialogue, maintaining databanks, assisting in training, research and development, dissemination of information, automating the governmental and business processes through the mediation of ICTs and provides appropriate means therefor.

General Assembly Meeting

3. The general Assembly of the INIT was convened on Sept. 26, 2005. It was attended by the Coordinator General, COMSTECH, representatives of the [name of countries]. The Government of Pakistan was represented by nominee of the Ministry of Information Technology. *Inter alia*, the General Assembly approved a) Charter of the INIT (www.init.org.pk); b) its Programs; and ;c) its Budget for the Year 2005-06 and the preceding years.

Membership

4. The INIT offers two kind of memberships i.e. i) Country Membership to the countries in the Islamic World; and ii) Associate Membership to the organizations and institutions cooperating and collaborating with the INIT in implementing and furthering its different programs. Currently, the following countries (10 No.) are its member albeit not all regularly maintain their yearly membership subscription;
 - a) Kingdom of Saudi Arabia;
 - b) Republic of Azerbaijan;
 - c) Republic of Gambia, Republic of Sudan;
 - d) Republic of Yemen;
 - e) State of Qatar;
 - f) Islamic Republic of Pakistan;
 - g) Turkish Republic of Northern Cyprus;
 - h) Syrian Arab Republic; and
 - i) Republic of Iraq.
5. Moreover, following countries (9 No.) have expressed interest in different programs of the INIT and have shown their willingness to join the INIT;
 - a) Republic of Turkey,

- b) Hashemite Kingdom of Jordan,
 - c) Islamic Republic of Iran,
 - d) Kingdom of Morocco,
 - e) Republic of Mozambique,
 - f) Brunei Darussalam,
 - g) Peoples Republic of Bangladesh,
 - h) Republic of Indonesia,
 - i) Republic of Mali and Uzbekistan.
6. The organizations cooperating with INIT as co-organizers of its various activities and through nominating their representatives for attending its events constitute a collegial network with whom INIT continues to interact for future consultations and in working with them to implement and further its various programs.

Programs

7. To achieve its objectives, the INIT has devised multiple programs and have initiated, convened and supported a number of activities under their auspices. A detailed overview of its programs and different activities performed under these programs is presented in the report, in hand. The programs promoted cooperation, encouraged dialogue, facilitated dissemination of scholarly work and exchange of ideas under the aegis of following programs:
- a) Developing Institutional Linkages and Promoting Collaboration and Cooperation among OIC Members States;
 - b) Technical Assistance in Establishing I.T. Institutions in OIC Member States;
 - c) Promoting Diffusion of ICTs and Associated Systems in OIC Member States; and
 - d) Technical Human Resource Development and Institutional Capacity Building in OIC Member States
8. Besides above, other activities of the INIT include maintaining and continuously developing Information Portal (www.init.org.pk). The prominent features of the Information Portal include the following:
- a) Higher education institutions in the Islamic world offering undergraduate and graduate level programs in the fields of ICTs; and
 - b) Highly qualified manpower in the Islamic world having expertise in fields of ICTs.

Activities

9. Activities under different programs of INIT have so far been convened in 8 OIC Member States which include Jordan, Turkish Republic of Northern Cyprus, Pakistan, Sudan, Syria, Morocco Tunisia, and Yemen, and 1 non OIC member state Tanzania.

Most Recent Activities (Year 2014-15)

10. The INIT has convened, supported and organized several workshops and conferences on some of the contemporary and emerging issues including learning, utilization and diffusion of ICTs in academia, promotion of the use of ICTs in government, trade, industry, homes, agriculture, health and other sectors of economy, developing extensive pool of academically and technically skilled IT manpower in the OIC member states, and so forth. The events have had a broad and diverse representation from among academic disciplines, industry and from across different countries. Following major activities that were undertaken this year (Year 2014-15) include the following;
 - a) 5 Day International Workshop on 'Internet Security: Enhancing Information Exchange Safeguards' October 19 – 23 2014, Dar-es-Salaam, Tanzania. (The workshop participants came from 9 countries including Uganda, Iran, Tunisia, Senegal, Egypt, Nigeria, Jordan, Pakistan, and Kenya)
 - b) 2nd Consultative Workshop on 'National Innovation System and Intellectual Property (African Region). November 25-27, 2014, Rabat, Kingdom of Morocco (The workshop participants came from 15 countries, including Benin, Burkina Faso, Côte d'Ivoire, Gabon, Ghana, Guinea, Niger, Pakistan, Senegal, Tanzania, Togo and Uganda)
 - c) 2 Day International Workshop on 'Application of ICTs in Education, Healthcare and Agriculture' December 15 – 16, 2014 Islamabad, Pakistan (The workshop participants came from 10 countries including Morocco, Jordan, Bangladesh, Senegal, Iran, Tanzania, Sri Lanka, Egypt, Sudan and Pakistan).
 - d) Consultative Meeting to Discuss and Recommend Future Programs of INIT, Dec. 17, 2014, Hotel, Serena, Islamabad. *Select scholars attending the International Conference on Frontiers of Information Technology, Dec. 17-19, 2014 were invited for discussions after a detailed working paper was circulated in advance, apprising them of the programs and activities undertaken by the INIT during the preceding years. Brief excerpts of the proceedings are recorded in the succeeding pages.*

Historical Anecdote

11. Since inception, the activities of INIT have been undertaken under auspices of its different programs. Such activities were convened in 9 countries including 8 OIC Member States, as follows:
 - a) Hashemite Kingdom of Jordan,
 - b) Turkish Republic of Northern Cyprus,
 - c) Islamic Republic of Pakistan,
 - d) Republic of Sudan,
 - e) Syrian Arab Republic,
 - f) Kingdom of Morocco
 - g) Republic of Tunisia,

- h) Republic of Yemen, and
 - i) United Republic of Tanzania (non OIC state)
12. These activities were very warmly received and acknowledged. Delegates (including resource persons) from 45 countries representing over 200 institutions participated in these activities. These resource persons/participants came from Algeria, Azerbaijan, Austria, Bangladesh, Benin, Brunei, Burkina Faso, China, Comoros, Cote d'Ivoire, Egypt, Gabon, Gambia, Ghana, Guinea, Indonesia, Iran, Jordan, Kazakhstan, Kuwait, Malaysia, Maldives, Mauritania, Morocco, Nepal, Niger, Nigeria, Oman, Pakistan, Palestine, Senegal., South Korea, Sri Lanka, Saudi Arabia, Sudan, Sweden, Syria, Tanzania, Thailand, Turkey, Turkish Republic of Northern Cyprus, Uganda, United Arab Emirates, USA, and Qatar. List of organizations whose nominees attended the events during the period, under reference, appear in the succeeding pages.
13. Besides above, the technical assistance provided by the INIT in respect of the following studies had been much hailed by the host governments/host institutions:
- a) Study for Republic of Sudan
 - b) Study for Republic of Yemen
 - c) Study for Pakistan Embassy School, Syrian Arab Republic
14. Another high point w.r.t. an initiative of INIT relates to the project of establishing "Pan-Islamic Research & Education Network (PIREN)" being undertaken by ISESCO under its Annual Action Plan. The idea was conceived by INIT in Year 2006-07 to take benefit of the Pak-I Satellite launched by Pakistan in 2002-03. The concept was presented by Prof. Dr. Mukhtar Ahmed from Pakistan in an event organized by INIT viz. 3-Day International Workshop on 'Integration of IT in Science Education' held from January 16 – 18, 2007 at Gazimagusa, Turkish Republic of Northern Cyprus.
15. The report in hand, presents an overview of the activities of INIT performed during the period from July 2011 to December 2014.

Activities of INIT (July 2011 to December 2014)

During the period from July 2011 to December 2014, a total of 17 activities were performed in 6 countries under different programs of INIT. These countries included 5 OIC Member States i.e. Hashemite Kingdom of Jordan, Kingdom of Morocco, Islamic Republic of Pakistan, Syrian Arab Republic, Tunisian Republic, and 1 non OIC member state i.e. Republic of Tanzania.

A brief description of these activities is as under:

**1. 5 – Day International Training Workshop on
Internet Security: Enhancing Information Exchange Safeguard,
July 23 – 27, 2011,
Damascus, Syrian Arab Republic**

INIT in collaboration with Commission on Science and Technology for Sustainable Development in the South (COMSATS), COMSATS Institute of Information Technology Islamabad, Pakistan Islamic Educational Scientific and Cultural Organization (ISESCO), Ministry of Higher Education, Syrian Arab Republic, Higher Institute for Applied Sciences and Technology (HIAST), Syrian Arab Republic. Syrian-COMSATS-COMSTECH IT Center (SCCITC), and Arab Society of Science and Technology (ASST), Syrian Arab Republic convened a 5 Day International Training Workshop on 'Internet security: Enhancing Information Exchange Safeguards' on July 23-27, 2011 at Damascus , Syrian Arab Republic.

The workshop was convened in cognizance of the ever increasing requirement of information security. The proliferation of IT transactions over different network systems has brought security concern to the unprecedented scale. This is the reason why most evolved field in computer networks in last twenty years is network security. The workshop was aimed at to teach basic principles of information security in the following areas:

- Network Vulnerabilities and Security Threats.
- Organizational Security
- Cryptographic Techniques for Network Security.
- Biometric and Cyber security.
- Web Security.

This workshop was attended by over 70 participants from different countries. It was a successful initiative towards educating the network driver with the importance of network security and finding the appropriate ways to mitigate any vulnerability over the period of time in operations. The course was delivered by renowned experts in the area of information security containing lectures, tutorials and practical exercises. Following was the outcome of the sessions.

- Understanding about the network protocols, models, topologies and related security threats.
- Wire shark and TCPdump introduction for packet sniffing.

- Understanding of latest cryptographic Algorithms and protocols.
- Usage of Full Disk Encryption (FDE) tools like TrueCrypt and MS BitLocker.
- Introduction of malwares and implementation of countermeasures like anti-virus, anti-spyware and firewalls.
- Organizational security understanding.
- Familiarizing security protocols and suits like IPSec, Kerberos and PGP.
- Introduction of contemporary biometric system.

Resource Persons

Total 5 speakers delivered lectures and demonstrations. The following were the resource persons of the Workshop:

- Dr. Nasro Min-Allah.
Assistant Professor/ HoD.
COMSATS Institute of Information Technology, Islamabad, Pakistan
- Dr. Malik Najamus Saqib
Assistant Professor.
COMSATS Institute of Information Technology, Islamabad, Pakistan
- Dr. Sheikh Ziauddin.
Assistant Professor.
COMSATS Institute of Information Technology, Islamabad, Pakistan.
- Dr. Abbas Haider
Cyber Security Officer & Asst. Prof,
National University of Science and Technology, Islamabad, Pakistan.
- Mr. Muhammad Mustafa Khattak
Assistant Professor.
COMSATS Institute of Information Technology, Islamabad, Pakistan

In the 5 days interactive sessions, the 5 resource persons trained representatives from 26 institutions arrived in the workshop from 6 countries. A list of institutions and countries is presented at Annex – I.

2. Five (5) Day International Training Workshop on Internet Security: Enhancing Information Exchange Safeguard, September, 16 – 20, 2012 Amman, Hashemite Kingdom of Jordan.

The INIT's initiative of convening international training workshop on Internet Security was very warmly received and appreciated by the IT circles in the OIC member states. Keeping in view the importance of the areas related to this workshop and its warm reception, the 2nd cycle of the 5 Day International Training Workshop on 'Internet Security: Enhancing Information Exchange Safeguard' was convened on September 16 - 20, 2012 at Amman, Hashemite Kingdom of Jordan.

The other collaborating partner institutions with INIT included Commission on Science and Technology for Sustainable Development in the South (COMSATS), Islamic

Educational, Scientific and Cultural Organization (ISESCO), COMSATS Institute of Information Technology Islamabad, Pakistan, El Hassan Science City (EHSC), Jordan, Royal Science Society (RSS), Princess Sumaya University of Science and Technology (PUST), Jordan. The workshop took cognizance of the ever increasing requirement of information security and was meant to teach basic principles of information security and its practical application in the networks. Following were some of the major focus areas of the Workshop:

- Network Vulnerabilities and Security Threats.
- Organizational Security
- Cryptographic Techniques for Network Security.
- Biometric and Cyber security.
- Web Security.

The workshop proved to a very a successful initiative towards educating the network driver with the importance of network security and finding the appropriate ways to mitigate any vulnerability over the period of time in operations. The course was delivered by renowned experts in the area of information security containing lectures, tutorials and practical exercises. Following was the outcome of the sessions.

- Understanding about the network protocols, models, topologies and related security threats.
- Wire shark and TCPdump introduction for packet sniffing.
- Understanding of latest cryptographic Algorithms and protocols.
- Usage of Full Disk Encryption (FDE).
- Introduction of malwares and implementation of countermeasures like anti-virus, anti-spyware and firewalls.
- Organizational security understanding.
- Familiarizing security protocols and suits like IPSec, Kerberos and PGP.
- Introduction of contemporary biometric system.
- Cyber security.
- Ethical Hacking.

Resource Persons

The following were the resource persons of the workshop.

- Dr. Malik Najamus Saqib
Assistant Professor, COMSATS Institute of Information Technology, Islamabad, Pakistan
- Dr. Sheikh Ziauddin.
Assistant Professor, COMSATS Institute of Information Technology, Islamabad, Pakistan.
- Dr. Abbas Haider
Cyber Security Officer & Asst. Prof, National University of Science & Technology, Islamabad, Pakistan.

- Mr. Muhammad Mustafa Khattak
Assistant Professor, COMSATS Institute of Information Technology, Islamabad,
Pakistan

This workshop was attended by over 50 participants representing 36 institutions from 10 countries. Total 4 subject specialists delivered lectures and demonstrations in the Workshop. A list of the participating countries and institutions is attached at Annex – II.

3. 2 Day International Training Workshop on Technological Innovation Governance for Sustainable Development, December 17 – 18, 2012, Islamabad, Pakistan.

The INIT in collaboration with COMSATS Institute of Information Technology Islamabad, Pakistan, National Testing Service, Pakistan and Ministry of Information Technology Pakistan convened a 2 Day Training Workshop on ‘Technological Innovation Governance for Sustainable Development’ on December 17-18, 2012 in Islamabad, Pakistan.

Workshop comprised of following main sessions:

- Technological Innovation Rationale.
- Technical Innovation Structure.
- Technological Innovation Framework.
- Technological Innovation Programs.
- Experiences
- Challenges
- Leadership for Technological Innovation.

The Workshop proved a great success in terms of participant’s satisfaction about the knowledge. Moreover it provided a vital opportunity to professionals and stakeholders from different organizations and countries to synchronize their thoughts. It also developed a new approach to advancing world’s challenges and preparations. It was a very high profile training having representation of 11 institutions from 6 countries.

Resource Person - Dr. M. Nawaz Sharif

Dr. M. Nawaz Sharif is a Principal Consultant in a knowledge-based enterprise, and teaches in a number of universities (as Adjunct Professor) in USA and Asia. Dr M Nawaz Sharif was a Chair Professor and a Vice President for Academic Affairs of the Asian Institute of Technology, Bangkok, Thailand; a Director of the United Nations ESCAP's Asian and Pacific Center for Transfer of Technology (APCTT), Bangalore, India; and a Doctoral Program Director of the Graduate School of Management and Technology, University of Maryland University College, Adelphi, Maryland, USA.

Dr M Nawaz Sharif was engaged in many Science and Technology (S&T) for Economic Development related project consultancy work sponsored by the World Bank, ADB, IDB, UNDP, UNESCO and UNIDO. Dr. Nawaz Sharif is the originator of many practical technology management concepts related to technology-based international competition for socio-economic development: technological components, technological capacities,

technological infrastructure; and technological strategies. Dr. Nawaz Sharif has researched, taught and published many conceptual frameworks for managing technological innovation at the Enterprise level and governance of technological innovation at the National level.

This workshop was attended by over 50 participants representing 11 institutions from 6 countries. A list of the participating countries and institutions is attached at Annex – III.

4. Three (3) Day International Training Workshop on Use of Information Technology in Irrigation Management for Small Scale Farming Communities in Rural Areas, December 25 – 27, 2012 Islamabad, Pakistan.

The INIT in collaboration with COMSATS Institute of Information Technology Islamabad, Pakistan and Islamic Educational, Scientific and Cultural Organization (ISESCO) arranged a 3 Day International Workshop on 'Use of Information Technology' December 25 - 27, 2012 in COMSATS Institute of Information Technology, Islamabad, Pakistan.

The workshop was organized taking cognizance of the fact that access to information of the required quality holds the key for successful development and always has the potential of improving efficiency in all spheres of economy. Agriculture is one of the prospective areas in which IT can effectively be applied particularly for the socio-economic development of the agrarian communities in the developing world. Out of 57 OIC member states 24 are agrarian with at least 50% of labor employed in agricultural sector. Unfortunately in spite of this most under developed countries are also from OIC.

An understanding of the factors associated with IT adoption and use in agriculture enables the development of strategies to promote IT adoption and increase the effectiveness and efficiency of information used in agriculture. In the context of agriculture, the potential of IT can be assessed broadly under the following two heads:

- As a tool for direct contribution to agricultural productivity; and
- As an indirect tool for empowering farmers to take informed and quality decisions which will have positive impact on the way agriculture and allied activities are conducted

Feeling the need to train the stakeholders in agriculture sector the focus of the workshop was to provide a platform for capacity building, cooperation, and collaboration and sharing the best practices in use of IT in Irrigation Management for Small Scale Farming Communities in Rural Areas. The following were the focus areas of the Workshop:

- Water Efficiency of Irrigation Involving the Use of I.T.
- Financial Efficiency
- Technical Efficiency
- Organizational Efficiency
- Policy of Rational Management of Irrigation Water and use of Information Technology;
- Integrated Management of Water Resource for Agriculture;

- Use of Information Technology in Small Scale Farming Communities;
- Scientific Research around the theme of Water;
- Conversion of Gravity Irrigation Systems to Drip Irrigation; and
- The private sector involvement in the management of water resources.

Technical sessions were comprised of presentations and practical exercises thus providing an excellent opportunity for the following:

- Training and capacity building of the participants from different countries through demonstration of practical scientific ways to enhance agricultural productivity especially in small scale farms.
- Share the best practices adopted for efficient water use and harnessing the maximum potential of arid land.
- Encouraged to learn the best practices in water management and motivate to implement them in their respective countries accordingly.
- It literate the participants with hand on practice of IT tools available for agriculture and enable them to exploit the opportunities and resources to the optimum level.
- Fore see the possible collaborations and cooperation among the OIC states in agriculture sector.

In the 3 days interactive sessions, the 5 resource persons trained representatives from 17 institutions arrived in the workshop from 7 countries. A list of institutions and countries is presented at Annex – IV.

Resource Persons

The following were the resource persons of the Workshop:

- Dr. Mobashir Riaz Khan
Asst Professor
Department of Meteorology
COMSATS Institute of Information Technology, Islamabad, Pakistan.
- Dr. Ahsan Abdullah.
Assistant Professor,
King Abdulaziz University,
Kingdom of Saudi Arabia.
- Dr. Bahman Farhadi Bansouleh
Assistant Professor
Water Engineering Department,
Faculty of Agriculture, Razi University,
Kermanshah, Islamic Republic of Iran.
- Dr. Bashir Ahmed
Senior Scientific Officer
NARC, Park road, Islamabad, Pakistan.
- Dr. Athar Ashraf
Assistant Professor, Punjab University, Lahore, Pakistan.

5. Three (3) Day Regional Consultative Workshop on National Innovation System and Intellectual Property (Asian Region), October 7 – 9, 2013 Islamabad, Pakistan.

The INIT in collaboration with Commission on Science and Technology for Sustainable Development in the South (COMSATS), The Islamic Educational, Scientific and Cultural Organization (ISESCO), and COMSATS Institute of Information Technology Islamabad, Pakistan, convened a three Day Regional Consultative Workshop on 'National Innovation System and Intellectual Property (Asia Region)' on October 7-9, 2013 in Islamabad, Pakistan.

The Workshop was convened in view of the fact that in today's rapidly changing socio-economic environment, governments have to play a key role in creating enabling environment for innovation, by harnessing the creativity of their people and enterprises, developing good management practices (especially in small and medium size firms) and facilitating linkages among different stockholders. Also it is necessary to support the framework of intellectual property rights (IPR), comprising both traditional and relatively contemporary rights, such as patent for inventions, trade secrets, copyrights, trademarks, design rights, genetic sources, breeding rights, mask work rights and data base rights. Moreover, a new international understanding is also emerging to protect intangible cultural heritage and to bring traditional knowledge and folklore under the ambit of Intellectual Property Rights.

Workshop was comprised of the sessions addressing afore mentioned issues. Eminent resources persons from different counties conducted the sessions on National Innovation Systems, Role of Intellectual Property Rights in Innovation, Policy Issues related to innovation and IPR in developing countries, as well as the current status of NIS and IPR in participating countries.

Resource persons in the workshop were renowned experts on Innovation systems and Intellectual property. The Workshop was attended by 64 participants (including resource persons) representing 49 institutions from the 9 countries. A list of the countries and the institutions attending the Workshop is given at Annex – V.

Resource Persons

The following were the resource persons of the Workshop:

- Dr. Naubahar Sharif.
Assistant Professor,
Division of Social Sciences,
Hong Kong University of Science and Technology, Hong Kong, SAR China.
- Dr. S.T.K. Naim
Consultant,
OIC Standing Committee on Science and Technological Cooperation
(COMSTECH), Islamabad, Pakistan.
- Prof. Song Chen
Deputy Dean
School of Electronics and Management,
Tongji University, China.

- Mr. Umer Sheraz
Senior Policy Analyst
OIC Standing Committee on Science and Technological Cooperation
(COMSTECH),
Islamabad, Pakistan.
- Dr. Imtinan Elahi Qureshi
Executive Director
COMSATS Head Quarters,
Islamabad, Pakistan.
- Mr. Mussadiq Hussain
World Intellectual Property Organization (WIPO),
1211, Geneva, Switzerland.
- Mr. Hae Chan Park
Managing Director,
H.C Park & Associates, PLC,
Washington DC, Metro Area, USA.
- Mr. Muhammad Ismail
Deputy Director (PBR/SME),
Intellectual Property Organization of Pakistan,
Islamabad, Pakistan.
- Dr. Usman Ansar Khan
Patent Agent / Technology Advisor,
H.C Park & Associates, PLC,
Washington DC, Metro Area, USA.
- Mr. Ahmad Farooq Malik
JUS & REM,
Attorneys & Corporate Counselors,
Lahore, Pakistan.

**6. Five (5) Day International Training Workshop on
Internet Security: Enhancing Information Exchange Safeguards,
December 9 – 13, 2013
Nabeul- Tunisia.**

The INIT in collaboration with Commission on Science and Technology for Sustainable Development in the South (COMSATS), the Islamic Educational, Scientific and Cultural Organization (ISESCO), COMSATS Institute of Information Technology Islamabad, Pakistan, and Higher Institute of Technological Studies (ISET) conducted the 3rd cycle of 5 Day International Training Workshop on 'Internet Security: Enhancing Information Exchange Safeguard' on December 9-13 2013 at Nabeul, Tunisia.

The workshop has shaped into a regular program after very successfully convening its earlier two cycles one each a Syria, and Jordan. In continuation of the same, the third cycle of the workshop aimed to provide a forum to the young scientists/researchers from the developing counties to learn about the latest advancement in the field of internet

security and to impart the basic and structural network security concepts. The following were the major areas discussed and during the Workshop:

- Sophistications of attacks.
- Organizational Security
- Cryptographic Techniques for Network Security.
- Biometric and Cyber security.
- Web Security.
- Cloud computing Security.

This workshop was attended by participants from more than 10 countries. It was 3rd cycle of this successful initiative towards educating the network driver with the importance of network security and finding the appropriate ways to mitigate any vulnerability over the period of time in operations.

The course was delivered by renowned experts in the area of information security containing lectures, tutorials and practical exercises. Following was the outcome of the sessions.

- Understanding about the network protocols, models, topologies and related security threats.
- Understanding of latest cryptographic Algorithms and protocols.
- Usage of Full Disk Encryption (FDE).
- Organizational security understanding.
- Familiarizing security protocols and suits like IPSec, Kerberos and PGP.
- Introduction of contemporary biometric system.
- Cyber security.
- Ethical Hacking.
- Cloud Security concept.

Four experts conducted the workshop in which a good number of participants from local and from around 16 institutions from 10 countries participated in the Workshop. A list of the countries and participating institutions is presented at Annex – VI.

Resource Persons

- Dr Malik Najmus Saqib
Assistant Professor,
Department of Computer Sciences,
COMSATS Institute of Information Technology, Islamabad, Pakistan.
- Mr. Zafar Mir
Regional Manager,
Information Security Risk, MENA- HSBC, Dubai, UAE.
- Dr. Abbas Haider
Cyber Security Officer & Asst. Prof, National University of Science & Technology,
Islamabad, Pakistan.

- Mr. Assad Raza
Lecturer Information Technology (Networking & Security)
Majan University College,
Sultanate of Oman.

7. Five (5) Day International Training Workshop on Internet Security: Enhancing Information Exchange Safeguards, October 19 – 23, 2014 Dar es Salam, Tanzania.

The INIT in joint collaboration with the Islamic Educational, Scientific and Cultural Organization (ISESCO), Commission on Science and Technology for Sustainable Development in the South (COMSATS), and COMSATS Institute of Information Technology (CIIT), and the Tanzania Commission for Science & Technology (COSTECH), Tanzania, convened the 4th 5 – Day International Training Workshop on Internet Security: Enhancing Information Exchange Safeguards October 19 – 23, 2014 Dar es Salam – Tanzania. The event was fourth of the series of workshops on the theme held to train IT professionals of developing countries, enabling them to collectively address issues and challenges related to information and Internet security.

The Workshop provided a forum to the participating researchers and professionals to learn about the latest advancements in the field of Internet security; the use of state-of-the-art technologies for protection of network and network accessible resources from different types of software attacks; and working out effective Internet/information security solutions for general public, governmental organizations and commercial enterprises through rigorous risk analyses and security management approaches.

The training modules pertained to various important subjects relating to organizational security; cryptography and network security; ethical hacking; cyber security and information security design principles; and security information and event management systems.

The specific topics covered during the workshop included: Organizational Security and Industry Standards; Information Security Policies, Objectives and Procedures; ISO 27001 ISMS Standard and related Security Controls; ISMS Policy/Procedures Writing; Information Assets Identifications; Risk Assessment; Risk Treatment; Statement of Applicability; Business Continuity Planning; Cloud Computing; Security Risks and Threats of Cloud Computing; Organization's Cloud Security Concerns; Symmetric Key vs. Asymmetric Key Cryptography; Block Ciphers vs. Stream Ciphers; Hash Functions; Digital Signatures; Kerberos; Secure Electronic Transaction; Introduction to Ethical Hacking and Penetration Testing; Information Gathering; System Hacking; Breaking Wireless Security; Introduction to Information Security Design Principles; Emerging Cyber Threats and their Significance; Dissecting a Cyber Attack; Various Phases in Planning a Cyber Attack; Recent Distributed Denial of Service Attacks; Possible Mitigation Solutions to Service Attacks; Password Attacks; Introduction to SIEM (OSSIM); Integration of OSSIM with other tools; and Prevention Methods

Four experts conducted the workshop in which a good number of participants from local and from around 42 institutions from 9 countries participated in the Workshop. A list of the countries and participating institutions is presented at Annex – VII.

Resource Persons

- Dr Malik Najmus Saqib
Assistant Professor,
Department of Computer Sciences,
COMSATS Institute of Information Technology, Islamabad, Pakistan.
- Mr. Zafar Mir
Regional Manager,
Information Security Risk,
MENA- HSBC, Dubai, UAE.
- Mr. Assad Raza
Lecturer Information Technology (Networking & Security)
Majan University College,
Sultanate of Oman.
- Dr. Abbas Haider
Cyber Security Officer & Asst. Prof, National University of Science & Technology,
Islamabad, Pakistan.

8. Three (3) Day Regional Consultative Workshop on National Innovation System and Intellectual Property (African Region), Nov 25 – 27, 2014, Rabat, Kingdom of Morocco.

The INIT in joint collaboration with the Islamic Educational, Scientific and Cultural Organization (ISESCO), and Commission on Science and Technology for Sustainable Development in the South (COMSATS) convened the 2nd Regional Consultative Workshop on National Innovation System and Intellectual Property (African Region) in Rabat, Morocco, from November 25-27, 2014. It was the second Workshop of the series. The first workshop of the series was held in Islamabad (October 7-9, 2013) focused on Asian Region.

This series of workshop is aimed at strengthening the capability of senior academicians and planners from the common Member States of OIC and COMSATS to understand and possibly help develop national policies for improving innovation and IP frameworks, as well as enable them to respond effectively to the challenges of building competitive economies during rapid globalization and technological change.

The inaugural session of the event was held on November 25, 2014 and was presided over by the Deputy Director General of ISESCO, Dr. Amina Al Hajri. The Coordinator INIT, Mr. Tahir Naeem; and Advisor-Programmes COMSATS, Mr. Tajammul Hussain, also attended the ceremony. The technical proceedings of the event spread over six sessions of the workshop comprising of talks and presentations that introduced innovation; highlighted the impact and effect of innovation on national economies, particularly those of Africa; and presented intellectual property as a means to securing the future of smaller economies. Several models of African innovation systems and frameworks of intellectual property, and their role in making an economy knowledge-driven with strong linkages among universities, industries and R&D institutions were discussed. Key issues relating to patent filing, indigenous knowledge and need for greater awareness of IP rights were also highlighted.

It was agreed that a holistic and open economic policy for building a national innovation system, technology policies, relevant education are desirable. Each country should try and develop strategies to develop relevant skills required to instill a culture of learning. ISESCO and COMSATS were urged to encourage the parliaments of the Member States to establish Commissions on National Innovation System to better ensure advocacy on ST&I in all member countries. A need for greater awareness regarding IP was called for and it was recommended to include modules on IP in the curricula of middle and high schools. An insight into the innovation policies of developing countries was also provided during the event through the country-specific presentations made by participants from China, Pakistan, Senegal, Tanzania, Burkina Faso, Niger, Uganda and Ghana. Finally, a round table discussion touched upon various aspects of the themes and discussions of the event.

Around 40 subject specialists and participants from Benin, Burkina Faso, China, Côte d'Ivoire, Gabon, Ghana, Guinea, Morocco, Niger, Pakistan, Senegal, Tanzania, Togo and Uganda participated in the inaugural function. In the 3 days sessions, the representatives from 17 institutions arrived in the workshop from 13 countries. A list of institutions and countries is presented at Annex – VIII.

**9. 2 Day International Workshop on
Applications of ICTs in Education, Healthcare and Agriculture
December 15 – 16, 2014
Islamabad – Pakistan**

The INIT in joint collaboration with the Islamic Educational, Scientific and Cultural Organization (ISESCO), Commission on Science and Technology for Sustainable Development in the South (COMSATS), and COMSATS Institute of Information Technology (CIIT), convened the 2 Day International Workshop on 'Applications of ICTs in Education, Healthcare and Agriculture', in Islamabad, on December 15 – 16, 2014 Islamabad – Pakistan. The venue of the Workshop was COMSATS Institute of Information Technology, Islamabad.

The inaugural session of the event was held on December 15, 2014. Over 50 scholars, researchers, subject-experts and academicians from Bangladesh, Egypt, Iran, Jordan, Morocco, Pakistan, Senegal, Sudan, and Tanzania participated in the workshop that was aimed at highlighting the potential of ICTs in revolutionizing various sectors of the economy.

In all 17 presentations were made in the three thematic sessions of the workshop spread over two days, which focused on the applications of ICTs in Education, Healthcare and Agriculture. Deliberations focused on the different ways of building competitiveness amid growing challenges of globalization and rapid technological advancements. The presenters shared their experiences and expertise in the light of their successful projects and initiatives in their respective countries.

The presentations made during the first technical session 'ICTs in Education' focused on ICTs for modern skill acquisition; diffusion of ICTs in early schooling; digital watermarking system for e-Education; monitoring and learning education scenarios in Senegal; and persuasive techniques for effective education. Deliberations on the use of mobile phone technology for healthcare; COMSATS Tele-health project; Tanzanian Tele-health case study; Dengue monitoring in Pakistan; as well as psychotherapy through digitization, were made during the second technical session titled 'ICTs in Healthcare'. While on the second day, the participant of the workshop benefited from

technical deliberations focusing on decision support system for agriculture; digital soil mapping of newly reclaimed areas for agricultural uses in Egypt; irrigation optimization for improving crop production; use of agriculture research management information system in Bangladesh, as well as the various ICT applications in agriculture in Sudan.

The event concluded on December 16, 2014, on the note of commitment to exploit the full potential of ICTs for improving the day-to-day life of a common man in the developing world.

Resource Persons

- Dr. Arshad Bashir Mirza
Assistant Professor
COMSATS Institute of Information Technology
Virtual Campus, Islamabad - Pakistan
- Mr. Oussama Abdellah Benhmida
General Manager
Lab 4 Net, Kingdom of Morocco
- Dr. Mahmoud Farfoura
Senior System Analyst
RSS, IT Centre, Hashmite Kingdom of Jordan
- Dr. Alassane Diop
Teacher - Researcher
University Alioune,
Senegal
- Dr. Hamid Mukhtar
Assistant Professor
NUST-SEECS, Islamabad-Pakistan
- Dr. Shervin Amiri
Associate Professor
Head of Electrical and Information Institute of IROST, Iran
- Dr. George S. Oreku
Director
ICT Technology Development
Tanzania
- Dr. Mobushir Riaz Khan
Director UIIT
PMAS Arid Agriculture University
Rawalpindi-Pakistan
- Dr. Sajjad Mohsin
Dean
Faculty of Information Sciences and Technology
COMSATS Institute of Information Technology, Islamabad - Pakistan
- Mr. Yassin Boughaba
Entrepreneur
IT Entrepreneur,
Rabat, Morocco

- Prof. Dr. Mostafa Kotb Khedr
Professor Researcher
National Research Centre, Cairo, Egypt
- Dr. Ahashan Habib
Senior Scientific Officer
BCSIR, Bangladesh
- Mr. Abdeen Alsiddig
Researcher
IRCC, Khartoum, Sudan
- Dr. Bashir Ahmed
Program Leader
Climate Change & Geo-Informatics Programme Leader
National Agricultural Research Center (NARC)
Islamabad, Pakistan

In the 2 days session, the representatives from 28 institutions arrived in the workshop from 9 countries. A list of institutions and countries is presented at Annex – IX.

**10. Consultative Meeting with ICT Experts on Programs, Activities and Future Plans of INIT
December 17, 2014
Serena Hotel, Islamabad – Pakistan**

The INIT convened a consultative meeting on Dec. 17, 2014, Serena Hotel, Islamabad with participation of a select group of ICT experts who had gathered at Islamabad for the said meeting and for another two events, stated below:

- a) International Workshop on ‘Applications of ICTs in Education, Healthcare, and Agriculture’, Dec 15-16, 2014 - *an event convened by the INIT, Islamabad.*
- b) International Conference on Frontiers of Information Technology, Dec. 17-19, 2014 – *an event convened by the CIIT, Islamabad.*

The meeting was chaired by Dr. S.M. Junaid Zaidi, President INIT. It was aimed at inviting suggestions to enhance the role and outreach of different programs of INIT. List of participants of the consultative meeting is attached at Annex - X.

The President INIT welcomed the participants and briefed about the background and perspective of the meeting. Engr. Tahir Naeem, Coordinator/Executive Director INIT, gave a detailed presentation and briefed the participants about the programs and activities of INIT.

The participants appreciated the efforts of INIT in capacity building and in sensitizing the integration and diffusion of ICTs in the Islamic World. Several suggestions for new interventions and engagements by the INIT were brought forth.

**11. Six (6) Day International Conference on Topology and its Applications,
July 4 - 10, 2011, Islamabad – Pakistan**

The INIT supported/collaboration with the Department of Mathematics, COMSATS Institute of Information Technology for convening a six (6) day International Conference

on Topology and its Applications (ICTA 2011) on July 4 - 10, 2011 at Islamabad, Pakistan. ICTA 2011 was the first conference of this kind held at Islamabad. The aim of the conference was to gather topologists from around the world to explore some of the recent achievements in topology with the hope to promote scientific exchange among them.

The conference featured keynote lectures, invited and contributed talks by participants, and thus provided an opportunity for informal contacts between Pakistani research students and experts in their areas of interest.

**12. 4th South Asian International Conference – SAICON 2012,
December 5 – 7, 2012 ,
Murree – Pakistan**

The INIT also supported/collaborated with the Department of Business Administration, COMSATS Institute of Information Technology, Islamabad and few other collaborating partner institutions in convening 4th South Asian International Conference SAICON 2012 on December 5 – 7, 2012 at Murree, Pakistan.

The Conference was organized under the theme of 'Emerging Knowledge Economy in the 21st Century: Opportunities and Challenges'. The Conference was host to as many as 18 foreign delegates and 205 local delegates. The Conference covered, *interalia*, the latest developments in the areas of information and communication technologies and its popularization w.r.t. changing issues and scenarios of emerging economies of the 21st century.

**13. Showcasing Programs and Activities in
Vice Chancellors Forum 2012
June 11 – 12, 2012 –
Islamabad, Pakistan**

The INIT participated in the 1st Vice Chancellors Forum 2012 held on June 11 – 12, 2012 at Islamabad Pakistan. The 2-Day Vice Chancellor's Forum was convened on the theme of "Higher Education in the Islamic World: Challenges and Opportunities". The event was jointly organized by the COMSATS Institute of Information Technology; the Islamic Educational, Scientific and Cultural Organization (ISESCO); Higher Education Commission, Pakistan and the Ministry of Science and Technology, Government of Pakistan.

A part of the event included a special exhibition of programs and activities of higher education institutions, S&T/R&D organizations in Pakistan. The INIT participated in the two day event and presented / briefed about its programs and activities to the VC Forum participants arrived from over 150 higher education institutions in the Islamic world. A dedicated exhibition stall maintained by the INIT provided an excellent opportunity to showcase the activities it performed during the preceding years as well as also briefed the participants about the opportunities available under its different programs.

**14. Showcasing Programs and Activities in
Vice Chancellors Forum 2013
September 23 – 24, 2013 –
Islamabad, Pakistan**

The INIT also participated in the 2nd Vice Chancellors Forum 2013 held on September 23 – 24, 2013 at Islamabad Pakistan. The 2-Day Vice Chancellor's Forum was

convened on the theme of “Universities in the Islamic World: Challenges of Internationalization”. The event was jointly organized by the COMSATS Institute of Information Technology; the Islamic Educational, Scientific and Cultural Organization (ISESCO); Higher Education Commission, Pakistan and the Ministry of Science and Technology, Government of Pakistan.

Taking cognizance of the interest of the participants of the 1st VC Forum held in 2012, the INIT actively participated in the special exhibition of VC Forum 2013 wherein programs and activities of higher education institutions, S&T/R&D organizations in Pakistan were presented. The INIT participated in the two day event and presented / briefed about its programs and activities to the VC Forum participants arrived from over 300 higher education institutions in the Islamic world. A dedicated exhibition stall maintained by the INIT provided an excellent opportunity to showcase the activities it performed during the preceding years as well as also briefed the participants about the opportunities available under its different programs.

**15. 5th South Asian International Conference – SAICON 2013,
December 4 - 6, 2013,
Murree – Pakistan**

The INIT supported/collaborated with the Department of Business Administration, COMSATS Institute of Information Technology, Abbottabad and a few other collaborating partner institutions in convening 5th South Asian International Conference SAICON 2013 on December 4 – 6, 2013.

The Conference was organized under the theme of Management, Innovation, Leadership, Economics, and Strategies. It was host to 28 foreign and 276 local delegates. The Conference had 161 research papers including papers relating to application of ICTs. The discussion at such an international level helped delegates from OIC Member States to better identify the upcoming problems and propose solutions and identify the areas of common interest.

16. Information Portal

The INIT Information Portal was launched by H.E. Prof. Dr. Atta ur Rahman, FRS, N.I., H.I., S.I., T.I., Coordinator General, COMSTECH & Federal Minister/Chairman, Higher Education Commission, Government of Pakistan on July 27, 2005. The Information Portal is in the process of continual development. The INIT is also working on development of the following two databases to build a compendium of IT professionals in the Islamic world.

- Database of higher education institutions in the Islamic world offering undergraduate and graduate level programs in the fields of information and communication technologies.
- Database of highly qualified manpower in the Islamic world having expertise in fields of information & communication technologies.

17. Membership Campaign

In its pursuit to increase the outreach of its programs, the INIT encourages and invites OIC members states to join hands in harnessing the potential of IT and contribute

towards bridging the widening gap between the Muslim and developed world. For this, the INIT runs membership campaigns offering two kinds of memberships as outlined below:

- **Country Membership**

Under the country membership campaign, the INIT encourages and invites OIC member states to join the Network and contribute towards bridging the widening gap between the Muslim and developed world. The INIT understands that with the association of OIC member states, the Network would be able to come up to the expectations of the Ummah. The INIT has constituted a system of mandatory annual membership fee for the OIC member states which opt to be members of the Network. The campaign has evoked a lot of interest. At present, besides active members of INIT, a number of other Islamic countries have also shown their interest to join the Network. Until now, following countries have become its members:

- i. Islamic Republic of Pakistan,
- ii. Kingdom of Saudi Arabia,
- iii. Republic of Azerbaijan,
- iv. Republic of Gambia,
- v. Republic of Sudan
- vi. Republic of Yemen
- vii. State of Qatar,
- viii. Turkish Republic of Northern Cyprus.

In addition to the above, a good number of countries have expressed interest in the activities of the INIT and are expected to join the Network which include Arabic Republic of Egypt, Hashemite Kingdom of Jordan, Islamic Republic of Iran, Kingdom of Morocco, Peoples Republic of Bangladesh, Republic of Indonesia, Republic of Mali and Syrian Arab Republic.

- **Associate Membership**

The INIT invites the research and development organizations/institutions in the field of information technology from OIC member states to avail the opportunity to become 'Associate Members' of the Network. All universities, institutions of higher learning/training, R&D institutions, accreditation bodies, quality and standardization institutions, etc. are eligible to apply. The 'Associate Membership' will be offered to the interested organizations/institutions without payment of any fee for the initial two years. The Associate Membership is renewable after each 2 years upon payment of the renewal fee (US\$ 100/-). The Associate Members are eligible to apply for participation/funding in/from the programs of the INIT. The Associate Membership campaign of INIT is one of its efforts to not only form a central grid of the institutions of higher learning in the fields of information and communication technologies from the Muslim world but also to provide a forum for the researchers and practitioners from these institutions to get into joint collaboration and research activities and benefit from the expertise of the qualified human resource available in the Islamic world.

List of Participating Countries and Institutions

in
**5 Day International Training Workshop on
Internet Security: Enhancing Information Exchange Safeguard
July 23-27, 2011
Damascus, Syrian Arab Republic**

A. Countries

The workshop was participated by Resource Persons and participants from the following 6 countries:

1. Hashemite Kingdom of Jordan
2. Islamic Republic of Pakistan
3. Republic of Bangladesh
4. Republic of Indonesia
5. Republic of Sudan
6. Syrian Arab Republic

B. Participating Institutions

The Resource Persons and participants from the following 26 institutions from above given 6 countries participated in the Workshop:

1. COMSATS Institute of Information Technology (CIIT), Islamabad, Islamic Republic of Pakistan
2. Government Post Graduate *College Mardan* KPK, Islamic Republic of Pakistan
3. Bangladesh Council of Scientific and Industrial Research, (BCSIR), Republic of Bangladesh
4. State University, Jakarta, Republic of Indonesia
5. Royal Scientific Society (RSS), Hashemite Kingdom of Jordan
6. Industrial Research and Consultancy Center (IRCC), Republic of Sudan
7. Ministry of Health Damascus, Syrian Arab Republic
8. National Institute of General Administration Damascus, Syrian Arab Republic
9. Damascus Governance Damascus, Syrian Arab Republic
10. Ministry of Communication Damascus, Syrian Arab Republic
11. Assad Hospital Damascus, Syrian Arab Republic
12. Ministry of Higher Education Damascus, Syrian Arab Republic
13. ITC Damascus, Syrian Arab Republic
14. Bayroni Hospital Damascus, Syrian Arab Republic

15. Children Hospital Damascus, Syrian Arab Republic
16. Institute of Business Administration Damascus, Syrian Arab Republic
17. Central Syrian Bank Damascus, Syrian Arab Republic
18. Ministry of Education Damascus, Syrian Arab Republic
19. Private Arab University Damascus, Syrian Arab Republic
20. Ministry of Building Damascus, Syrian Arab Republic
21. Ministry of Culture Damascus, Syrian Arab Republic
22. Ministry of Economy Damascus, Syrian Arab Republic
23. Ministry of Transport Damascus, Syrian Arab Republic
24. Damascus University Damascus, Syrian Arab Republic
25. Syrian Television Network Commission Damascus, Syrian Arab Republic
26. Ministry of Administration Damascus, Syrian Arab Republic

List of Participating Countries and Institutions

in
**5 Day International Training Workshop on
Internet Security: Enhancing Information Exchange Safeguard
September, 16-20, 2012
Amman, Hashemite Kingdom of Jordan.**

A. Countries

The workshop was participated by Resource Persons and participants from the following 10 countries:

1. Arab Republic of Egypt
2. Brunei-Darussalam
3. Federal Republic of Nigeria
4. Hashemite Kingdom of Jordan
5. Islamic Republic of Pakistan
6. Republic of Sudan
7. Islamic Republic of Iran
8. Kingdom of Saudi Arabia
9. People Republic of Bangladesh
10. Tunisian Republic

B. Participating Institutions:

The Resource Persons and participants from the following 36 institutions from above given 10 countries participated in the Workshop:

1. COMSATS Institute of Information Technology (CIIT), Sahiwal Campus Pakistan
2. COMSATS Institute of Information Technology (CIIT), Lahore Campus Pakistan
3. COMSATS Institute of Information Technology (CIIT), Islamabad Campus Pakistan
4. Federal Investigation Agency (FIA) Pakistan
5. Higher Education Commission Pakistan
6. H.E. J. Research Institute of Chemistry (HEJ) Pakistan
7. Al-Azhari University, Khartoum, Republic of Sudan
8. Institute of Technology, Brunei-Darussalam
9. National Mathematical Centre, Abuja, Federal Republic of Nigeria
10. Assuit University, Arab Republic of Egypt
11. National Center of Technologies in Education, Tunisia.

12. Jordan University of Science and Technology Jordan
13. Al-Albaysat University Jordan
14. Jordan University Jordan
15. Mu'tah University Jordan
16. Jerash Public University Jordan
17. Applied Science University Jordan
18. Philadelphia University Jordan
19. Al-Zaytoonah University Jordan
20. Hashemite University Jordan
21. Amman Private University Jordan
22. Zarqa Private University Jordan
23. Irbid National University Jordan
24. Al-Balqa Applied University Jordan
25. Al-Hussein Bin Talal University Jordan
26. Middle East University for High Studies Jordan
27. Al-Ahlyya Amman University Jordan
28. Amman Arab University Jordan
29. German Jordanian University Jordan
30. Arab Open University Jordan
31. Jadara University Jordan
32. Yarmouk University Jordan
33. Tafila Technical University Jordan
34. Ajloun National University Jordan
35. Bangladesh Council of Scientific & Industrial Research(BCSIR),
36. King Saud University, Saudi Arabia

List of Participating Countries and Institutions

in
**2 Day International Training Workshop on
Technological Innovation Governance for Sustainable Development
December 17-18, 2012
Islamabad, Pakistan.**

A. Countries

The workshop was participated by Resource Persons and participants from the following 6 countries:

1. Islamic Republic of Pakistan
2. Republic of Sudan
3. Republic of Uzbekistan
4. State of Kuwait
5. State of Qatar
6. The Sultanate of *Oman*

B. Participating Institutions:

The Resource Persons and participants from the following 11 institutions from above given 6 countries participated in the Workshop:

1. COMSATS Institute of Information Technology (CIIT), Islamabad, Islamic Republic of Pakistan
2. National University of Computer and Emerging Sciences, Islamabad, Islamic Republic of Pakistan
3. Bahrain University, Islamabad, Islamic Republic of Pakistan.
4. International Islamic University, Islamabad, Islamabad, Islamic Republic of Pakistan
5. Mirpur University of Science and Technology, Azad Jammu and Kashmir.
6. Research Center for Training and Development (RCTD). Islamabad, Islamic Republic of Pakistan.
7. Embassy of State of Qatar, Islamabad, Pakistan.
8. Embassy of Sudan, Islamabad, Pakistan
9. Embassy of Kuwait, Islamabad, Pakistan
10. Embassy of the Sultanate of *Oman, Islamabad, Pakistan*
11. Embassy of Uzbekistan, Islamabad, Pakistan

List of Participating Countries and Institutions

in

**3 Day International Training Workshop on
Use of Information Technology in Irrigation Management
for Small Scale Farming Communities in Rural Areas
December 25-27, 2012
Islamabad, Pakistan**

A. Countries

The workshop was participated by Resource Persons and participants from the following 7 countries:

1. Arab Republic of Egypt
2. Islamic Republic of Iran
3. Islamic Republic of Pakistan
4. People Republic of Bangladesh
5. Republic of Senegal
6. Republic of Sudan
7. State of Palestine

B. Participating Institutions:

The Resource Persons and participants from the following 17 institutions from above given 7 countries participated in the Workshop:

1. COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan
2. Pakistan Army.
3. Fatima Jinnah Women University, Rawalpindi, Pakistan.
4. AJK Forest Department, Muzaffarabad (AJKr), Pakistan.
5. Pir Mehar Ali Shah Arid Agriculture University, Rawalpindi, Pakistan.
6. Soil and Water Conservation Research Institution, Chakwal, Pakistan.
7. National Agriculture Research Center, Islamabad, Pakistan.
8. FAST SMS Solution, Islamabad, Pakistan.
9. Federal Urdu University of Arts Science and Technology, Islamabad, Pakistan.
10. Cotton Research Institute, Ayub Agriculture Research Institute, Faisalabad, Pakistan.
11. Gedaref Digital City Organization, Khartoum, Sudan.
12. New Halfa Agricultural Corporation, Dep't. Of Agricultural Engineering, Irrigation and Water Management Section, Khartoum, Sudan
13. Agricultural information Center, Agriculture Research Council, Farmgate, Dhaka, Bangladesh
14. Razi University, Kermanshah, Iran
15. An Najah University, Tulkarm, Palestine
16. Assiut University, Assiut, Egypt
17. Geographical Information System, Disaster Risk Management, Republic of Senegal.

List of Participating Countries and Institutions

in
**3 Day Regional Consultative Workshop on
National Innovation System and Intellectual Property (Asia Region)
October 7-9, 2013
Islamabad, Pakistan.**

A. Countries

The workshop was participated by Resource Persons and participants from the following 9 countries:

1. Federal Democratic Republic of Nepal
2. Hong Kong
3. Islamic Republic of Iran
4. Islamic Republic of Pakistan
5. People Republic of Bangladesh
6. People Republic of China
7. Sri Lanka
8. Switzerland
9. United States of America

B. Participating Institutions:

The Resource Persons and participants from the following 49 institutions from above given 9 countries participated in the Workshop

1. Ministry of Science and Technology, Islamabad, Pakistan.
2. Planning Commission of Pakistan.
3. Pakistan National Commission for UNESCO Economic Affairs Division (EAD) Govt. of Pakistan.
4. Pakistan Standard and Quality Control Authority (PSQCA), Karachi, Pakistan.
5. Pakistan Scientific & Technological Information Center (PASTIC), Islamabad, Pakistan.
6. Punjab Information Technology Board, Lahore, Pakistan.
7. Small and Medium Enterprise Development Authority (SAMEDA), Lahore, Pakistan.
8. Council for Works and Housing Research, Karachi, Pakistan.
9. Center of Applied Molecular Biology, Lahore, Pakistan.
10. National Institute of Electronics, Islamabad, Pakistan.
11. National Institute of Oceanography, Karachi, Pakistan.
12. Pakistan Council of Renewable Energy Technologies, (PCRET), Islamabad, Pakistan.
13. National University of Science and Technology, Islamabad, Pakistan.
14. Pakistan Council for Science and technology, Islamabad, Pakistan.
15. Pakistan Council of Research in Water Resources, Islamabad.

16. Pakistan Council of Scientific and Industrial Research (PCSIR), Islamabad, Pakistan.
17. Pakistan Engineering Council, Islamabad, Pakistan.
18. Pakistan National Accreditation Council, Islamabad, Pakistan.
19. Pakistan Science Foundation, Islamabad, Pakistan.
20. Pakistan Institute of Engineering and Applied Sciences, Islamabad, Pakistan.
21. Pakistan Atomic Energy Commission, Islamabad, Pakistan.
22. National Engineering and Scientific Commission (NESCOM), Islamabad, Pakistan.
23. Kahuta Research Laboratories (KRL), Rawalpindi, Pakistan.
24. Institute of Research Promotion (IRP), Lahore, Pakistan.
25. Punjab Education Assessment System (PEAS), Lahore, Pakistan.
26. Trade Development Authority of Pakistan, Karachi, Pakistan.
27. Higher education Commission of Pakistan.
28. Pakistan Power Infrastructure Board, Islamabad, Pakistan.
29. Pakistan Telecommunication Company Limited, Pakistan.
30. Pakistan Innovation Foundation, Islamabad, Pakistan.
31. Quaid e Azam University, Islamabad, Pakistan.
32. International Islamic University, Islamabad, Pakistan.
33. National University of Computer and Emerging Sciences (FAST), Islamabad, Pakistan.
34. Bahria University, Islamabad, Pakistan.
35. COMSATS Institute of Information Technology, Pakistan.
36. Sukkar Institute of Business Administration (IBA), Sukkar, Pakistan.
37. Agha Khan University, Karachi, Pakistan.
38. COMSATS, Islamabad, Pakistan.
39. JUS &REM, Lahore, Pakistan.
40. University of Sindh, Pakistan.
41. Sindh Agriculture University, Tandojam, Pakistan
42. Tongji University, China
43. World Intellectual Property Organization (WIPO), Geneva, Switzerland
44. The Coordinating Secretariat for Science, Technology and Innovation (COSTI), Sri Lanka
45. Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
46. *Iranian* Research Organization for Science and Technology IROST, Iran
47. Tribhuvan University, Nepal
48. H.C. Park & Associates, PLC, Washington D.C. USA
49. Hong Kong University of Science and Technology, Hong Kong SAR, China

List of Participating Countries and Institutions

in
**Five (5) Day International Training Workshop on
Internet Security: Enhancing Information Exchange Safeguards,
December 9 – 13, 2013
Nabeul – Tunisian Republic**

A. Countries

The workshop was participated by Resource Persons and participants from the following ten (10) countries:

1. Arab Republic of Egypt
2. Islamic Republic of Pakistan
3. Kingdom of Saudi Arabia
4. Kingdom of Morocco
5. People's Democratic Republic of Algeria
6. Sultanate of Oman
7. Islamic Republic of Iran
8. Tunisian Republic
9. Turkish Republic of Northern Cyprus (TRNC), Turkey
10. United Arab Emirates

B. Participating Institutions:

The Resource Persons and participants from the following sixteen (16) institutions from above given ten (10) countries participated in the Workshop:

1. Majan Univirsity College, Oman
2. Iranian Research Organizaiton for Scie3nce and Technology (IROST), Iran
3. Industrial Research and Consultancy Centre (IRCC), Sudan
4. Research and Development Orgabnization, TRNC, Turkey
5. Directorate of associe a Novancy Consulting Casablanca Morocco
6. GIE Galileo Morroco
7. Egyptian University Network
8. Institute Superieur des Etudes Technologiques de Nabuel ISET, Tunisia
9. Institute Superieur des Etudes Technologiques de Rades, Tunisia
10. Institute Superieur des Etudes Technologiques de Sousse, Tunisia
11. Institute Superieur des Gestian Industrielle Sfax, Tunisia
12. National University of Science and Technology (NUST), Islamabad – Pakistan

13. MAROC, Morocco
14. Inter Islamic Network on Information Technology, (INIT) Pakistan.
14. Commission on Science and Technology for Sustainable Development in the South (COMSATS), Pakistan
15. Islamic Educational, Scientific and Cultural Organization (ISESCO), Morocco
16. COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan

List of Participating Countries and Institutions

in
**4th 5 – Day Int’l Training Workshop on
‘Internet Security: Enhancing Information Exchange Safeguards’
October 19 – 23, 2014 Dar es Salaam – Tanzania**

A. Countries

The workshop was participated by Resource Persons and participants from the following Nine (9) countries:

1. Arab Republic of Egypt
2. Federal Republic of Nigeria
3. Islamic Republic of Pakistan
4. Islamic Republic of Iran
5. Republic of Kenya
6. Republic of Tunisia
7. Republic of Uganda
8. Republic of Senegal
9. United Republic of Tanzania

B. Participating Institutions:

The Resource Persons and participants from the following Forty Two (42) institutions from above given Nine (9) countries participated in the Workshop:

1. Ministry of ICT Uganda
2. Ministry of Information and Communications Technology (ICT), Uganda
3. National Information Technology Development Agency (NITDA), Nigeria
4. Federal Ministry of Sciences Technology, Nigeria
5. WRTC Water Recheities and Technologies Centre, Tunisia
6. Egyptian NTRA, Egypt
7. Iranian Research Organization for Science & Technology, Iran
8. Software Dynamics Limited, Kenya
9. Computer Society of Kenya,
10. University of cheirh Anta Diop, Senegal
11. Tanzania Online Academic Centre, (TOAC) Tanzania
12. University of Dodoma, Tanzania
13. SUMA-JKT-KILIMO KWANZA PROJECT, Tanzania

14. Institute of Accountancy Arusha, Tanzania
15. Tanzaia Investment Centre, Tanzania
16. TERNET, Tanzania
17. University of Dar es salaam, Tanzania
18. Mzumbe University, Tanzania
19. Tanzict Project (COSTECH), Tanzania
20. State Mining Corporation, Tanzania
21. DTBI, Tanzania
22. Shule Direct Ltd, Tanzania
23. Commission for Science and Technology, Tanzania
24. TAFIRI, Tanzania
25. Mbeya University of Science & Technology, Tanzania
26. TIRDO, Tanzania
27. Computer System Analyst – ICT Security & Standards, e-Government Agency, Tanzania
28. Shuledirect, Tanzania
29. Tanzania Revenue Authority, Tanzania
30. TERNET, Tanzania
31. DIT/Electronic Media Enterprise, Tanzania
32. Tanzania Investment Centre, Tanzania
33. Kibaha Edication Centre, Tanzania
34. Arusha Technical College, Tanzania
35. Tanzania Automotive Technology Centre (TATC), Tanzania
36. SMMUCO, Tanzania
37. Government Procurement Services Agency (GPSA), Tanzania
38. Tanzania Airports Authority-TAA, Tanzania
39. Inter Islamic Network on Information Technology, (INIT) Pakistan.
40. Commission on Science and Technology for Sustainable Development in the South (COMSATS), Pakistan
41. Islamic Educational, Scientific and Cultural Organization (ISESCO), Morocco
42. COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan

List of Participating Countries and Institutions

in
**2nd Regional Consultative Workshop on
National Innovation System and Intellectual Property (African Region)
November 25 – 27, 2014
Rabat – Kingdom of Morocco**

A. Countries

The workshop was participated by Resource Persons and participants from the following Thirteen (13) countries:

1. Burkina- Faso
2. Islamic Republic of Pakistan
3. Kingdom of Morocco
4. People’s Republic of China
5. Republic of Togo
6. Republic of Guinea
7. Republic of Benin
8. Republic of Cote d’ Ivoire
9. Republic of Senegal
10. Republic of Niger
11. Republic of Uganda
12. Republic of Ghana
13. United Republic of Tanzania

B. Participating Institutions:

The Resource Persons and participants from the following Seventeen (17) institutions from above given Thirteen (13) countries participated in the Workshop:

1. OIC Standing Committee on Scientific and Technological Coperation, Islamabad Pakistan
2. Tongji University, China
3. Intellectual Property Management, OMPIC, Morocco
4. University of Lome, Togo
5. COGuiplast, Guinea
6. MAROC, Morocco
7. National Agency of Industrial Property, Benin
8. Chef de la Division SHS, Senegal

9. Innovation, entrepreneurship and competitiveness, COSTECH, Tanzania
10. Research Institute of Health Science, IRSS, Burkina Faso
11. Research and Innovation, Niger
12. Uganda National Council for Science and Technology, Uganda
13. Chairman IP Committee, Ghana
14. Inter Islamic Network on Information Technology, (INIT) Pakistan.
15. Commission on Science and Technology for Sustainable Development in the South (COMSATS), Pakistan
16. Islamic Educational, Scientific and Cultural Organization (ISESCO), Morocco
17. COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan

List of Participating Countries and Institutions

in

**2 Day International Workshop on
Applications of ICTs in Education, Healthcare and Agriculture
December 15-16 2014
Islamabad – Pakistan**

A. Countries

The workshop was participated by Resource Persons and participants from the following 9 countries:

1. Arab Republic of Egypt
2. Islamic Republic of Iran
3. Islamic Republic of Pakistan
4. Hashemite Kingdom of Jordan
5. Kingdom of Morocco
6. People's Republic of Bangladesh
7. Republic of Senegal
8. Republic of the Sudan
9. United Republic of Tanzania

B. Participating Institutions:

The Resource Persons and participants from the following 28 institutions from above given 9 countries participated in the Workshop:

1. Royal Scientific Society (RSS), Jordan
2. Lab 4 Net, Rabat, Kingdom of Morocco
3. University Alioune, Senegal
4. Iranian Research Organization for Science and Technology (IROST), Iran
5. ICT Technology Development, Tanzania
6. National Research Centre, Egypt
7. Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
8. Industrial Research and Consultancy Centre (IRCC), Sudan
9. Commission on Science and Technology for Sustainable Development in the South, (COMSATS Headquarters), Islamabad, Pakistan
10. COMSATS Institute of Information Technology, Islamabad, Pakistan
11. COMSATS Institute of Information Technology, Virtual Campus, Islamabad, Pakistan

12. COMSATS Institute of Information Technology, Wah, Pakistan
13. COMSATS Institute of Information Technology, Abbottabad, Pakistan
14. National University of Science and Technology (NUST), Islamabad, Pakistan
15. PMAS Arid Agriculture University, Rawalpindi, Pakistan
16. National Agricultural Research Center (NARC), Islamabad, Pakistan
17. University of Veterinary and Animal Sciences, Jhang, Pakistan
18. University of Engineering and Technology, Peshawar, Pakistan
19. Centre of Advance Research in Engineering, Pakistan
20. G.C University, Faisalabad, Pakistan
21. International Islamic University, Islamabad, Pakistan
22. Pakistan Council for Science and Technology (PCST), Islamabad, Pakistan
23. Pakistan Council of Research in Water Resources (PCRWR), Islamabad, Pakistan
24. Pakistan Institute of Development Economics (PIDE), Islamabad, Pakistan
25. Agriculture Policy Institute, Faisalabad, Pakistan
26. Soil Fertility Survey & Soil Testing Institute, Rawalpindi, Pakistan
27. Pakistan Science Foundation, Islamabad, Pakistan
28. Pakistan Council for Scientific and Industrial Research (PCSIR), Islamabad, Pakistan

LIST OF PARTICIPANTS

**Consultative Meeting with the ICT Experts
on
Programs, Activities and Future Plans of INIT
December 17, 2014
Serena Hotel,
Islamabad – Pakistan**

1. Dr. S.M. Junaid Zaidi, *H.I S.I.*, In Chair
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3. Dr. Ahmed E. Kamal
Iowa State University, United State of America
4. Dr. Abdullah GANI
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