



**Under the Patronage of the Lebanese Minister
of Telecommunication and the Presidency of
HE Dr. Talal Abu-Ghazaleh**

**e-AGE 2016, AROQA 2016,
and OSSCOM 2016 conferences
Convene in Beirut**

*Special
Edition*

December 2016 BEIRUT - Under the presidency of HE Dr. Talal Abu-Ghazaleh, HE Mr. Botrus Harb, the Lebanese Minister of Telecommunications, has inaugurated the 6th International Platform on Integrating Arab e-infrastructure in a Global Environment (e-AGE 2016), the 8th Annual Conference of the Arab Organization for Quality Assurance in Education (AROQA 2016) and the 2nd International Conference on Open Source Computing (OSSCOM 2016) at the American University of Beirut.

HE Mr. Harb expressed his strong interest in advancing the Lebanese network infrastructure to support not only the research and education communities, but also all the citizens of Lebanon



as motivated in the telecom vision 2020. He noted that Lebanon is acknowledged among the first three most dynamic countries in the ICT development and the second biggest mover in the year 2015 on the Network Readiness Index. These developments will of course strengthen innovation and entrepreneurship movement in the Lebanese mobile Internet ecosystem supported by high-speed networks and open source technologies. He declared his support for the Lebanese

Education and Research Network (LERN) by providing highly discounted connectivity prices.

Dr. Abu-Ghazaleh said “we witness today growing interests of Arab National Research and Education Networks (NRENs) in joining ASREN in addition to National Research and Education Networks in Jordan, Morocco, Sudan, Egypt, Tunisia, Somalia, Iraq and Palestine”. He noted “we are looking forward to active participation of Arab NRENs in ASREN to support and enhance the development of research and e-Infrastructure in the Arab region”. He pointed out that ASREN shall continue to serve the Arab region in developing best practice NREN models and to provide pan-Arab e-Infrastructure networking services at the regional level.

Dr. Abu-Ghazaleh further announced the establishment of the Arab Association of e-Universities under the umbrella of the League of Arab States. He also announced strong interests of partners to adopt open source software technologies as means for innovation and spread of technology at a wider scale in the framework of OSSCOM project, which supported by EC-Tempus in partnership with universities in Jordan, Lebanon, Germany, Spain and the UK.

It should be noted that e-AGE 2016, AROQA 2016, and OSSCOM 2016 conferences were attended by HE Mr. Yasser Abdel Moneim, Director of Education and Scientific Research at the League of Arab States in Egypt, HE Dr. Fuad Qasem, Secretary General of the Ministry of Higher Education in Iraq, and official representatives of international organizations, researchers, experts, and academics from across the Arab region and the world. The conferences attracted distinguished speakers from around the world to present topics related to research and education, ICT, e-Infrastructures, and networking.

It was decided that the next year’s conferences will be held in Egypt under the patronage of HE Ahmed Aboul-Gheit, Secretary General of the League of Arab States.

ASREN Holds Workshop on Identity Federation Infrastructure

December 2016 BEIRUT - Under the patronage of HE Dr. Talal Abu-Ghazaleh, the Arab States Research and Education Network (ASREN) held a specialized workshop on "Identity Federation Infrastructure" with attendance of representatives of scientific research networks and universities in Algeria, Egypt, Lebanon, Malawi, Morocco, Oman, Tunisia, and Jordan. The workshop took place at the American University of Beirut in Lebanon during December 3-4 2016. The main topics of the workshop include technologies and policies on federated access, eduroam, and eduGAIN.



During the workshop, participants learned how to build national federation and to install and configure Shibboleth v3 at their home organizations and connect to national federation infrastructures. These technologies allow their national identity federation to interconnect with eduGAIN. They also support a provisioning of research resources and applications and assist researchers to have access to classified databases and scientific research portals.

The workshop was held in cooperation with the EUMEDCONENCT, and the MAGIC (Middleware for Collaborative Applications and Global virtual Communities) projects that are funded by the European Commission.

ASREN Holds Workshop on Computer Security Incident Response Team (CSIRT)

December 2016 BEIRUT - Under the patronage of HE Dr. Talal Abu-Ghazaleh, the Arab States Research and Education Network (ASREN) held a specialized workshop on "Computer Security Incident Response Team (CSIRT)" with attendance of representatives of scientific research networks and universities in Algeria, Egypt, Lebanon, Malawi, Palestine, Somalia, Switzerland, Tunisia and Jordan.

The workshop took place at the American University of Beirut, Lebanon during November 29-30 2016. The topics of the workshop include incident handling and response for computer security.

The workshop offered CSIRT expertise in operational, organizational, legal and technical areas.

The workshop offered participants with a unique opportunity to interact with their peers and discuss security issues in a trusted environment with experts from the European CSIRT community. Participants

represented NREN, commercial, governmental, law enforcement organizations with CSIRT and network security interests.



Empowering Network Engineers around the World: GÉANT and NSRC Renew Partnership

October 2016 CAMBRIDGE – In the debate over what makes or breaks a successful NREN, the arguments of a sound business model and strong member engagement rank generally high. However, another key requirement for a sustainable networking organization is the availability of skilled technical staff able to set up and manage networks efficiently and with confidence. Securing such a pool of engineering expertise may prove challenging for novice NRENs, particularly in emerging regions, and calls for technical training support and sharing of best practice. Providing this very support lies at the heart of the strong relationship between GÉANT and the University of Oregon-based Network Startup Resource Center (NSRC) - two of the world's leading organizations responsible for developing and connecting NRENs around the world.

In 2013, GÉANT and NSRC signed a partnership agreement to formalize and further develop their longstanding working relationship in support of the many NRENs being set up in emerging regions. Since then, NSRC has run over 180 training events in Africa, Asia-Pacific, Latin America, the Caribbean and the Middle East – regions where GÉANT is supporting the development of research and education (R&E) networks. As a result, over 5,000 engineers have benefitted from the capacity building. The recent renewal of the partnership agreement is expected to lead to further expansion of joint GÉANT/NSRC activities.



“We are very excited to continue working with the NSRC team. They are truly global facilitators, not just of technologies, but also of people. Both GÉANT and NSRC are driven by a strong commitment to unlock potential and empower NREN engineers around the world to become the masters of their own networks. I look forward to continuing this inspiring team work in support of research and education in emerging world regions,” said Cathrin Stöver, chief collaboration officer, GÉANT.

By providing network engineering assistance and hands-on technical training at campus and NREN levels, NSRC complements GÉANT’s expertise in procuring and implementing data-communications networks for the dedicated use by the R&E communities across the world: GÉANT provides the regional network infrastructure working with the regional organizations and NREN partners in each country, NSRC’s primary focus is to train campus and NREN engineers to get the best out of the dedicated network capabilities.

For nearly 25 years Steve Huter and his enthusiastic team at NSRC have helped train local technicians in the developing world to build and maintain well-structured networks, covering topics ranging from network design, routing and switching, installation of network monitoring and management tools, to implementing network security practices and deploying wireless networks. Rather than doing the required network work themselves, the NSRC team strives

to give local network engineers the technical know-how, tools and skills so they can do it themselves and then, in turn, reach out and train others in their local communities. In that way, NSRC has successfully contributed to developing a critical mass of savvy network engineers in scores of countries. In Sub-Saharan Africa alone such a train-the-trainer program conducted in conjunction with the UbuntuNet Alliance has resulted in empowering over a thousand engineers across the region to become the masters of their own networks.

“Technically skilled people working together all over the world is the heart of how we create, build and maintain the infrastructure of the internet. The operators who take care of their research and education networks cultivate the local expertise to enable continuous progress in their communities. We appreciate the visionary leadership and funding provided by the European Union to develop dedicated regional network infrastructure, which enables people to deliver relevant educational platforms and research output that ultimately enriches the whole internet ecosystem. The NSRC group is honoured to deepen our complementary working relationship with the wonderful team at GÉANT and continue growing the global R&E network fabric,” said Steve Huter, director of NSRC.

Under the new partnership agreement, over the next few months Steve and his colleagues will continue their long-standing commitment towards helping local NRENs expand Internet access in Africa, working closely with GÉANT, the UbuntuNet Alliance in Eastern & Southern Africa, WACREN in West & Central Africa and ASREN in North Africa to establish and fine-tune training needs in the framework of the AfricaConnect2 project.

In addition to Africa, GÉANT and NSRC are also exploring synergies and further collaboration opportunities with other EU-funded regional networking projects. Under the new agreement, they plan to identify needs and develop joint programs to support EUMEDCONNECT in the Eastern Mediterranean (in conjunction with ASREN), CAREN in Central Asia, the new Asiaconnect phase of TEIN in Asia-Pacific (in conjunction with TEIN*CC) as well as to further engage in Africa via AfricaConnect2 (in conjunction with the African regional partners).

“Thank you for giving us and our member institutions this valuable opportunity of providing a network engineering assistance program for LEARN. The NSRC team helped three of our universities fix bottlenecks caused by firewall, internal routing and IPv6 configuration issues. Guidance provided on selecting the right fibre transceivers will save millions of rupees out of future purchasing and sound technical advice received on network monitoring will help us optimize the performance of the internet access,” said Kirthi Walgama, CEO, LEARN, Sri Lanka.

Abu-Ghazaleh Highlights ASREN and GÉANT Commitment to Strengthen the Arab Connectivity Network

October 2016 AMMAN – Under the patronage of HE Dr. Talal Abu-Ghazaleh, chairman of the Arab States Research and Education Network (ASREN), the EUMEDCONNECT3 and AfricaCONNECT2 (AC2) project meetings were held with participants representing the national research and education networks from the Arab region and the European GÉANT network.



The meetings aimed to review progress and support the development of the pan-Arab research and education networks via the European Commission co-funding program. The framework for the cooperative work between ASREN and GÉANT includes e-Infrastructure development, operating regional PoPs, and peering of research and education traffic as well as providing seamless access to resources and repositories available at worldwide research and education networks.

Dr. Abu-Ghazaleh indicated, "ASREN is committed to supporting and enhancing Research and Education e-infrastructures in the Arab region. It has setup a high-speed linkage and provided services for the research communities building on its partnerships and EU funded projects".

He added, "I would like to develop an action plan to increase dedicated connectivity, enhance competitiveness in access, and develop interoperability platforms with our peers in Europe, the US, and elsewhere."

Mr. David West, the project manager of EUMEDCONNECT3 and AC2 projects indicated, "Over the past years, ASREN has inspired several cooperation projects in connectivity, services, and access. It has demonstrated great capabilities in developing the pan-Arab e-Infrastructures and establishing its first aggregation PoP in London for peering traffic for research and education with its counterparts at the regional level. We are proud of this cooperation and ASREN has demonstrated a great commitment for the establishment of the international links with Jordan, Lebanon, Algeria, Egypt, Tunis, Morocco, and Palestine".

ASREN has organized a specialized four-day workshop on Border Gateway Protocol of Networks and Management in cooperation with the US Network Startup Resource Center. Participants from nine countries worldwide attended this prestigious workshop.

ASREN is a partner in the EU-funded EUMEDCONNECT3 project, which supports high-speed connectivity to link with Europe the eastern Mediterranean countries: Jordan, Lebanon, Palestine, and Syria. It is also a partner in the EU-funded AC2 project, which supports high-speed connectivity to link with Europe the southern Mediterranean countries: Egypt, Tunisia, Algeria, and Morocco.

Abu-Ghazaleh: ASREN is accredited as a Partner Organization for the Group on Earth Observations

August 2016 AMMAN - The Arab States Research and Education Network (ASREN) has recently been approved as a Participating Organization in the Group on Earth Observations (GEO). GEO includes member governments of 102 nations, the European Commission, and 103 Participating Organizations (regional and international bodies with a commitment to advance Earth observations (EO)). GEO operates on a



global partnership basis to leverage and co-ordinate EO activities to help tackle major global environmental challenges. ASREN will contribute towards GEO's objectives by helping connect existing North African EO centers to the North African research and education networks, thus providing the e-Infrastructure essential for EO data acquisition, processing and distribution. ASREN will engage with the EO research community to assess and meet its data-communications needs and liaise with governments and other stakeholders in the Arab region.

ASREN's primary objective is to assist the implementation of GEO's African regional initiative AfriGEOSS, which held its first Symposium last April at Victoria Falls and sets out to focus current GEO activities across Africa. AfriGEOSS aims to engage at governmental and scientific levels, and concentrate initially on strengthening EO for food security, and agriculture and sustainable forest management areas. ASREN will work closely with GÉANT - the pan-European research and education network, which is already a GEO Partner, and with WACREN in Western and Central

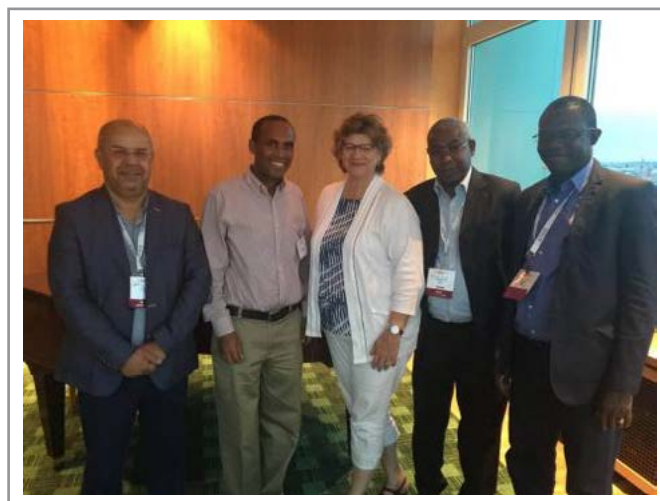
Africa and the UbuntuNet Alliance in Eastern and Southern Africa, to harness their efforts to promote pan-African R&E networking through their AfricaConnect2 project to support the implementation of AfriGEOSS.

H.E. Dr. Talal Abu-Ghazaleh, Chairman of ASREN said: "ASREN is now going beyond connectivity and service provision as we are now working with more global organizations such as Group on Earth Observations to promote collaboration and to enable joint research activities that can benefit from the e-Infrastructures we are establishing jointly with our partners, namely, the AfricaConenct2 Project".

Dr. Barbara J. Ryan, Secretariat Director said: "GEO welcomes ASREN into its global community as we envisage ASREN will advance GEO's coordination with the scientific community, especially in a region that is not yet fully engaged in GEO." She added, "As this decade of GEO calls for greater connection and support with global development issues, the work of the research networks in e-infrastructure will ensure better dissemination of information derived from Earth observations."

ASREN Participates in the 96th Internet Engineering Task Force

July 2016 BERLIN – The Arab States Research and Education Network (ASREN) participated in the 96th Meeting of the Internet Engineering Task Force (IETF). The meeting took place in Berlin, Germany during 17 – 22 July 2016. The Executive Director of ASREN Mr. Yousef Torman represented both ASREN and Talal Abu-Ghazaleh Organization (TAG-Org) in the meeting for promoting the Internet in terms of new technologies, operations, and governance.



ASREN's participation comes as a result of the cooperation between the Internet Society (ISOC) and the regional research and education networks of the African Continent: ASREN, WACREN and Ubunutnet Alliance. Venues of cooperation include capacity building of the national research and education networks in the region and IETF's training activities.

HE Dr. Talal Abu-Ghazaleh, Chairman of ASREN and TAG-Org, said: “We are proud that both ASREN and TAG-Org are leading the deployments of the latest internet technologies, as well as having an active role in Internet Governance in the Arab region and on a global scale.”

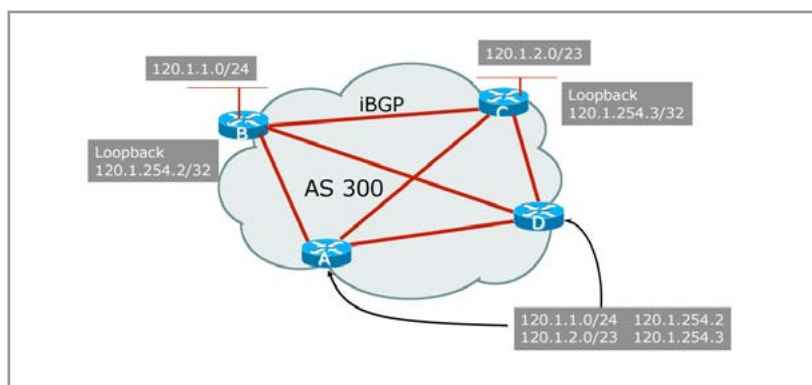
Experts and key representatives of major Internet Organizations met and discussed issues of connectivity and access as well as developments of Internet technologies, operations and governance in the region. All representatives committed to promote ISOC, IETF and other Internet-related activities for the research and education communities in the region and in working on enhancing participation for these activities.

ASREN held NREN BGP Workshop in Amman during 5-8 September 2016

July 2016 AMMAN – The Arab States Research and Education Network (ASREN) organized a specialized workshop on “NREN Border Gateway Protocol (BGP)” in cooperation with the Network Startup Resource Center (NSRC) at the University of Oregon in the USA. The workshop took place at Talal Abu-Ghazaleh University, during 5 - 8 September 2016.

The four-day workshop included variety of lectures and hands-on lab work that targets technical staff of organizations linked to the National Research and Education Networks (NRENs), or to building or operating a wide-area NREN infrastructure, with international or multi-provider connectivity.

The NREN BGP workshop is specifically designed to give workshop participants focused knowledge, aiming to empower them with BGP skills required for the configuration and operation of backbones of the Research and Education networks at the national or university levels.



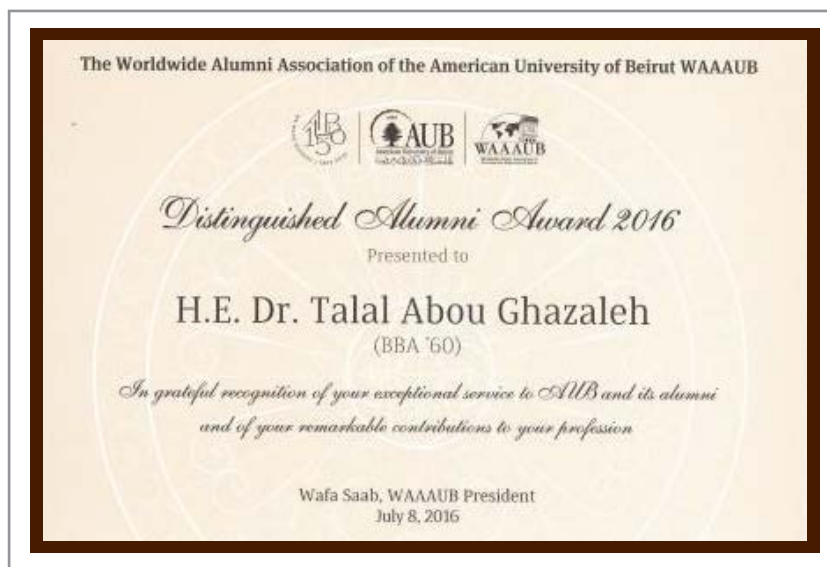
The American University of Beirut Honors HE Dr. Talal Abu-Ghazaleh During the Celebration of its 150th Anniversary

July 2016 BEIRUT – The Worldwide Alumni Association of the American University of Beirut (WAAAUB) Board of Directors honored HE Dr. Talal Abu-Ghazaleh, chairman of Talal Abu-Ghazaleh Organization with the prestigious WAAAUB Distinguished Alumnus Award for 2016 during the Association’s Reunion Honoring Ceremony held at AUB Assembly Hall.

The WAAAUB Committee for Awards granted Dr. Abu-Ghazaleh the Award for his outstanding worldwide stature and professional attainment in the field of “Business and Entrepreneurship” and for his many contributions to professional and education services, corporate and social responsibility, and patronage of many valuable civil initiatives.

During the ceremony, AUB President Dr. Fadlo Khuri said: “HE Dr. Abu-Ghazaleh has typified the AUB tradition of excellence and brought credit to the University by his professional achievement, personal accomplishment and philanthropic service.”

Upon receiving the Award, Dr. Abu-Ghazaleh expressed his pride in receiving the Award saying: “I am greatly humbled and honored to be receiving this award. I would like to offer my sincerest gratitude to the Board and Committee for this acknowledgement; the AUB has always been a powerhouse in driving the change in the world of education and as a graduate from this great institution which I owe a lot to its futuristic and dedication to education, I say ‘thank you.’”



Dr. Abu-Ghazaleh’s pioneering work has been recognized by the United Nations. He became chairman of 14 UN boards and initiatives including: Digital Technologies for Sustainable Urbanization Network, Global Alliance for ICT and Development, UN Global Compact, UN Information and Communication Technologies Task Force, Advisory Committee on Internet Governance, and UN Committee of Experts on Professional Qualifications Standards, as well as boards of all international accounting bodies.

His many personal honors include 'Chevalier de la Légion d'Honneur', Decoration of Independence of Jordan, and 40 other decorations and awards, as well as five Honorary Doctorate Degrees. Member of the WTO Panel on Defining the Future of Trade, Senator at the Jordanian Upper House, and most recently the Order of Independence of the First Order from Jordan's King Abdullah II.

He is a Patron for Walid Gholmieh Symphonies, Lebanese National Symphony Orchestra, and Chair of Jordanian National Orchestra Association; Chair of the globally leading Intellectual Property Rights company, as well as over 30 other chairmanships.

Research and Education Connectivity Project in Central Asia Rebooted



July 2016 CAMBRIDGE – Over 500,000 researchers, academics and students across Central Asia stand to benefit from the launch of the 3rd phase of the EU-funded Central Asia Research and Education Network (CAREN) project, which resumes regional connectivity after the previous project phase ended in August 2015.

With 4.5M Euro initial EU co-funding (through its Development Co-operation budgets),

the project will run up to 2019. CAREN3 will initially reconnect Kyrgyzstan and Tajikistan where the governments have signed bilateral financing agreements with the EC. Kazakhstan, Turkmenistan and Uzbekistan; and are also eligible to join the project subject to EC approval and similar government financing agreements.

Building on the previous two project phases, a new tender is already underway to re-

establish a high-capacity regional network in Central Asia and to maintain and further develop advanced connectivity for R&E communities with counterparts in Europe and in other parts of the world. Existing and future collaborative projects span areas such as environmental monitoring, solar energy, telemedicine, the digitalization of cultural heritage and e-Learning, which are to be re-started and further developed.

“CAREN3 opens the door to re-establish R&E collaborations between Central Asia and Europe. I believe the financing commitments secured with the Central Asian governments should strengthen the prospects for long-term project sustainability. Awarding the contract for the third phase of CAREN to GÉANT also reaffirms its role as the EC’s trusted manager of R&E networking projects in this strategically important region,” said Mr. David West, CAREN Project Manager of GÉANT.



ASREN Connection Opens Door to Global High-Speed Connectivity for Middle East Science Hub*

July 2016 AMMAN – Via its dedicated link from Amman to its PoP in London, the Arab States Research and Education Network (ASREN) has recently connected SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) in Jordan to GÉANT and, by extension, to the global R&E networking infrastructure, thus preparing the ground for tackling the data deluge in the years to come.

Setting up on the CERN model and going live in 2017, this first synchrotron radiation facility in the Middle East is destined to become a major scientific hub in the region with unrivalled opportunities for international collaborative research.

HE Dr. Talal Abu-Ghazaleh, chairman of ASREN, indicated, “SESAME creates a motivating scientific environment that encourages the region’s best minds to stay in the region, whilst tackling global challenges. ASREN welcomes this connection as it prepares the ground for SESAME to become a major player on the global scientific scene.”

General Director of SESAME, Dr. Khaled Toukan said, “Advanced connectivity is essential for regional and international inter-disciplinary research and for scientists to fully reap the benefits of SESAME. In particular, we look forward to collaborating with our partners in the Vi-SEEM project to support scientific communities of Life Sciences, Climatology and Digital Cultural Heritage.”

SESAME will provide a vital resource for a wide variety of physics applications, both in the region and further afield: developing new materials, probing the structure of DNA, penetrating the secrets of chemical compounds, designing pharmaceuticals, performing disease infrared imaging, assessing archaeological artefacts, measuring soil pollution and much else besides.

Once the facility will reach full working capacity, it will produce thousands of gigabytes every day, which will be transferred to HPC centers in and outside the region for analysis, including partners in the EU-funded Virtual Research Environment Vi-SEEM project.

Initially at 50 Mbps, the link is the first step in providing an advanced international connectivity set-up for this endeavor to succeed and is anticipated to act as proof of concept for significantly higher capacity in the future.

ASREN is partner in the EU-funded EUMEDCONNECT3 project, which supports R&E networking for the Eastern Mediterranean (Jordan, Lebanon, and Palestine). SESAME is expected to be a major regional driver of connectivity to GÉANT for the region.

Synchrotron partner laboratories from Germany, France, Italy, UK, Sweden and Spain are supplying expertise, equipment and technical support, and the EC has contributed over €10 million including for the magnet system for its main storage ring.



ASREN Envisions Sustainable Pan-Arab Network Infrastructure in IST – Africa 2016

June 2016 AMMAN – The Arab States Research and Education Network (ASREN) together with international research and education network partners participate in IST – Africa 2016, which was held in Durban - South Africa. State of the art of research and education networking infrastructure in the North Africa region was presented during AfricaConnect2 workshop.

Partners of research and education networks in Africa agreed to report regularly on the status of national research and education networks and their international connectivity. They have presented best practices and shared technical experiences in an effort to accelerate progress and development of high-speed networks that can provide researchers and students in Africa with seamless access to varieties of services, repositories, and applications.



On this occasion, HE Dr. Talal Abu-Ghazaleh, chairman of ASREN, indicated, “National research and education networks are essential sources of development and can provide advanced networking services to the research and education communities in many countries around the world,” adding, “Many of these networks have been established for decades as in Europe and America, but they are being established in the Arab countries.”

Regional research and education networks in Africa work together to establish a specialized African research and education Network through the AfricaConnect2 project that is co-funded by the European Commission. The network interconnects the Arab NRENs in North Africa and the NRENs in Eastern and Southern, and Western Africa.

ASREN was established in 2011 as a non-profit organization that links the national scientific research networks in the Arab states to each other and with the international research and education networks. It runs, operates and represents the network in the similar global communities and institutions. This aims to facilitate the connection and interaction between the educational institutions, universities and the scientific researches centers.

ASREN Participates in Symposium in Victoria Falls

Abu-Ghazaleh: ASREN is Building an Arab World Infrastructure for Research and Education Infrastructure

June 2016 VICTORIA FALLS – The first Symposium of the AfriGEOSS Initiative was hosted by the Research Council of Zimbabwe (RCZ). African nations presented their readiness to commit to mobilizing the Earth observation community to contribute to the implementation of the Africa Space Policy and Strategy. The African Heads of State at the 26th African Union Summit, which was held in January 2016, adopted the strategy.

Representing ten Arab countries in the African continent, the Arab States Research and Education Network (ASREN), chaired by HE Dr. Talal Abu-Ghazaleh, participated in this symposium to extend the collaboration between researchers and research organization that work on Earth observation in these countries with the rest of the groups by providing them with necessary e-Infrastructures.

AfriGEOSS, an initiative of the intergovernmental Group on Earth Observations (GEO), was formed in 2014 to coordinate access and use of Earth observations from satellites, airborne and ground- and marine-based systems across the African continent. The 27 AfriGEOSS members are focusing their efforts on data access and dissemination, forest management, food security, urban planning and water resources management, as well as contributing to achieving the 2030 Sustainable Development Agenda in Africa.

The AfriGEOSS Symposium, “Earth Observations for the Africa We Want”, concentrated on ensuring that AfriGEOSS activities respond to the broader African agendas and objectives, including the African Union (AU) Agenda 2063. Minister Ambassador HE Mr. S.K. Moyo of Zimbabwe opened the proceedings stating: “Earth Observation

and Geo-Information Science provide ample tools to tackle issues to do with the prediction and response to natural disasters such as droughts and floods.” HE Mr. Moyo cited the Intergovernmental Panel on Climate Change (IPCC) assessments: “Earth Observation is of critical value to the planet and Africa is rated as most vulnerable to changes in climate.”

Additional outcomes of the symposium include a commitment to establish national GEO mechanisms in the AfriGEOSS nations to leverage existing Earth observations investments, as well as improve the use of Earth observations for evidence-based policy formulation and decision-making. The participants also pledged to improve communication and outreach to the broader society about the value and benefits of Earth observations to the daily lives of people across the continent.



GEO Director Ms. Barbara J. Ryan urged all of the national and regional institutions to contribute their data resources to GEO's global data infrastructure in order to broaden African access to, and dissemination of, critical Earth observation data.

In closing remarks, Dr. Philemon Mjwara, Director General of the South African Department of Science and Technology, indicated: "As Africans we have demonstrated that passion, as shown in the last three days, even without financial

resources, can make things happen," and pledged that the AfriGEOSS leadership "shall go out and secure the financial resources so that the ideas coming out of the symposium are realized and AfriGEOSS is implemented."



ASREN Supports Pan Islamic Research and Education Network Developments

June 2016 RABAT – The Islamic Educational, Scientific and Cultural Organization (ISESCO) decided to establish the Pan Islamic Research and Education Network (PIREN). PIREN will be comprised of the National Research and Education Networks (NRENs) of the 57 Islamic member states.

PIREN will be responsible to create and maintain collaboration between the research and education communities in the Islamic member states by providing necessary state-of-the-art e-Services to help in boosting the innovation and enable R&E communities to collaborate with researchers in other member states and with the rest of the world.

For this purpose, ISESCO requested a technical taskforce meeting to set the objectives, vision, strategic goals and strategic plan for this network. The taskforce included members from Arab States Research and Education Network (ASREN), chaired by HE Dr. Talal Abu-Ghazaleh, and the NRENs of Pakistan, Egypt and Morocco, in addition to the participation of ISESCO.



The meeting was inaugurated by HE Dr. Amina Alhajiri, Deputy Director General of ISESCO and in the presence of directors and experts from ISESCO. Dr. Alhajiri highlighted the importance of PIREN in boosting research and education developments in the Islamic countries. PIREN is more than a regional network as Islamic countries are present in all over the world. It cooperates with regional and international research and education networks.

Mr. Yousef Torman, managing director of ASREN, said: "PIREN should work as a platform for collaboration rather than building a physical network like other regional research and education networks do".

Abu-Ghazaleh Releases a Report on the Fifth Anniversary of ASREN

June 2016 AMMAN – HE Dr. Talal Abu-Ghazaleh, Chairman of the Arab States Research and Education Network (ASREN), launched ASREN's 5-years report, emphasizing its efforts to connect Arab technical research and education networks with their international counterparts and enable effective collaboration and communication between research communities worldwide.

Dr. Abu-Ghazaleh indicated: "ASREN provides high-speed networks for research and education to interlink Arab national research and education networks with the European networks through ASREN's Point of Presence in London and other exchange points being established by ASREN throughout the Arab region."

The report emphasized the significance of research and education networks at the national, Arab and international levels, and ASREN's role in establishing such networks. It also emphasized the nature of research, education, and technology services that are provided by ASREN as well as the main activities and projects ASREN has carried out since its establishment as a non-profit organization in 2011 under the patronage of the League of Arab States. These projects include the EUMDECONNECT, AfricaConnect, CHAIN and CHAIRES, and MAGIC.

The report sheds light on the status of national research and education networks in the Arab countries and the Arab e-Infrastructure being established in cooperation with the national networks.

The Euro-Mediterranean Interconnection Project Director, Mr. David West of the GÉANT research and education organization in Europe, which contributed to the founding of the Arab connectivity for research and education, indicated, "The dedicated technical connectivity for research and education is very important, especially to link with the Research and Education Networks in Europe in order to create more opportunities for researchers and students to engage in cooperation international research with their peers in Europe and the world, and access to advanced research and educational resources."



G7 ICT Ministers' Meeting Highlights Importance of NRENs and GÉANT

CAMBRIDGE – June 6, 2016 – At the recent G7 ICT Ministers' meeting held in Kagawa, Japan, strong and clear recognition was made of the importance of national research and education networks (NRENs) and of the global networking of the research and education community. The ministers addressed the themes of:

- Innovation and economic growth
- Unrestricted flow of information, and ensuring the safety and security in cyberspace



- Contributing to the resolution of global issues
- International understanding and international cooperation in the future

The outcome of the meeting was the issuing of a Joint Declaration signed by Vice President Ansip for the Digital Single Market on the European Commission that focused on three main areas: recognition of a digitally connected world; commitment to mutual goals; and the reaffirming of a multi-stakeholder model for governance issues facing the deployment, development and evolution of the global internet.

In particular, the Joint Declaration states: "We recognize the importance of development, interconnection and utilization of national research and education networks as providing an open infrastructure for education, research and development purposes that also serve to enhance connectivity around the world."

A separate document was attached to the Joint Declaration, "Opportunities for Collaboration", which aims to "strengthen international cooperation and collaboration" to help achieve those actions mentioned in the Joint Declaration. It states: "The European Union welcomes continued collaboration on GÉANT, which aims to network the research and education community globally via extensive global partnership."

This recognition of the importance of NRENs and of the central role of GÉANT is welcomed. Together, GÉANT and our 38 NREN partners interconnect over 50 million users across 10,000 institutions throughout Europe, and connect Europe to an additional 60-plus countries worldwide.

This networking of the community is vital to accelerating science, enriching education and driving innovation, and the GÉANT community is extremely proud to be part of this.

His Majesty King Abdullah II Awards Abu-Ghazaleh the Order of Independence of the First Class

May 2016 AMMAN – His Majesty King Abdullah II bestowed on HE Dr. Talal Abu-Ghazaleh the Order of Independence of the First Class for his distinguished achievements and contributions to the economy, education and technical fields.

This Royal honoring acknowledges Dr. Abu-Ghazaleh's prominent role in highlighting Jordan's modern image at the Arab and international levels, in addition to his initiatives in developing local communities as part of his social responsibility.



Dr. Abu-Ghazaleh expressed his thanks and gratitude to His Majesty King Abdullah II for this Royal recognition and valuable trust, adding that such an award will motivate him to fulfil His Majesty's directives.

Dr. Abu-Ghazaleh was honored during the official national celebration marking the 70th Independence Day held at Raghdan Palace, with the presence of Her Majesty Queen Rania Al Abdullah and HRH Crown Prince Hussein bin Abdullah II, as well as a host of distinguished guests including royalty members and other senior officials and representatives from the civil, military, and governmental parties. During the celebration, a number of pioneers were recognized for their accomplishments and contributions in building the country and enhancing its progress.

Major Boost for EU-Algerian Science Collaborations through First AfricaConnect2 Connection

May 2016 ALGIERS – International connectivity available to Algeria's scientists, academics and students has recently been upgraded from 622Mbps to 2.5Gbps by networking organization GÉANT and its regional partner the Arab States Research and Education Network (ASREN). The fourfold capacity increase is an early result of AfricaConnect2, the EU-funded pan-African connectivity project which supports the establishment of research and

education (R&E) Internet networks across Africa.

"Algeria has been connected continuously to Europe since 2004 - the longest of any partner country in the regional networking projects GÉANT manages", commented Steve Cotter, CEO GÉANT. "The capacity boost clearly reflects the long-term commitment to facilitating collaborations between Algeria and the global R&E community."

CERIST (Research Centre on Scientific and Technical Information), the organization that manages Algeria's national R&E network, ARN, has been at the forefront of meeting the networking needs of its growing user base since its inception in 1994.

Aouaouche El-Maouhab, ARN Manager at CERIST, underlines the importance of being part of the AfricaConnect2 project and, by extension, of the global R&E community: "Over the last decade the connectivity needs of academic and research institutions in Algeria have increased significantly. As a result, we have seen our international networking capacity increase by a factor of 50 – from an initial circuit of 45Mbps in 2004 to the current 2.5Gbps. Within AfricaConnect2 and in conjunction with ASREN and our partners in Europe our focus is now on providing value-added services on top of connectivity such as eduroam and eduGAIN."

ARN currently interconnects over 800,000 users at 124 research and academic institutions across Algeria. Through its interconnection to the pan-European GÉANT network, ARN enables researchers, academics and students in the country to participate in world-class international research and educational activities in areas such as high-energy physics and earth observation.

"The connectivity boost opens up exciting possibilities for Algerian scientists to participate in the Large Hadron Collider experiments", commented Prof. Abdelhafid Aouragh, Director General at the General Directorate for Scientific Research and Technological Development (DGRSDT) in Algeria. "We are in the process of setting up a Tier 2 and Tier 3 cluster of computational centers connected to the ARN network, which will be part of the CERN infrastructure and will allow our physicists to



contribute to specific analysis tasks within the ATLAS program".

Prof. Mohamed Hamoudi at USTHB in Algiers also welcomed the benefits of the link upgrade for the Algerian earth observation user community: "Our work focuses on high-resolution regional gravity field modelling, combining images from GOCE and GRACE satellites with terrestrial data. This involves a considerable numerical workload, good international connectivity is a must! We can now fully exploit the power of distributed computing for accurate rather than approximate analysis," he concluded.

Algeria joined the AfricaConnect2 project in June 2015 as part of the North African regional project cluster, alongside Egypt, Morocco and Tunisia, with ASREN acting as GÉANT's regional AfricaConnect2 partner in North Africa.

Yousef Torman, co-Managing Director of ASREN commented: "We welcome the Algerian connectivity upgrade as important step in our mission to connect Arab national research and education networks (NRENs) across North Africa, the Middle East and the wider Arab region and are expecting further AfricaConnect2 connectivity announcements ahead."

International Circuit Linked to GEANT Research and Education Network



April 2016 AMMAN - HE Dr. Talal Abu-Ghazaleh, Chairman of the Arab States Research and Education (ASREN), announced the development of an international circuit with a capacity of 155 Mbps from Jordan to connect to GEANT Research and Education Network in the context of the EUMEDCONNECT3 project. The circuit serves as a backbone to connect the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) as well as educational and research institutions in Jordan.

On 14 April, 2016, an agreement has been signed between HE Dr. Khaled Toukan, Director General of the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME); HE Dr. Talal Abu-Ghazaleh, Chairman of ASREN and HE Mr. Jérôme Hénique, Orange Jordan CEO. The purpose of the agreement is to provide an

international connectivity service between the new SESAME center in Allan and the European Network for Research and Education in London; with the goal of sharing global research and computational resources.

HE Toukan stated, "Specialized connectivity for research and education networks in Jordan strongly supports national researchers, and facilitates the process of sending data to and from international research centers. Providing research centers such as SESAME, which will be launched in 2017, with integrated technical communication services is an important step, as it enables researchers to more efficiently share the data that they obtain from their research."

HE Dr. Abu-Ghazaleh highlighted the importance of connectivity on both the local and global levels in the fields of research

and education, as it enables seamless access to resources and repositories as well as communication between researchers in the Middle East and the rest of the world.

Dr. Abu-Ghazaleh added: "This agreement comes as part of the European Union's support of the link between the Euro-Mediterranean and African projects, in which the organization works on providing specialized communication for academic research and education between Arab countries and European and international networks."

HE Hénique, expressed his pride in this strategic partnership, as it will lead to great strides in the fields of research and learning. Hénique reaffirmed Orange Jordan's dedication to supporting all segments of the economy in order to enhance its business and company position, which, through modern technology, will contribute to the development of and transformation to a knowledge-based economy supported by Orange's strong local and international networks. Initial ideas for the partnership came from one of the main drivers of Essentials 2020, which is accompanying the transformation of Orange Jordan's enterprise customers, further connecting them to all that is essential to them using well-studied enterprise solutions and applying years of experience in responding to its corporate customers.

Chief Enterprise Officer of Orange Jordan, Sami Smeirat, added that Orange Jordan will be providing a high-capacity STM1 connection line at a speed of 155 Megabytes that will reach from Talal Abu-Ghazaleh's office in Amman to ASREN in London. This line will facilitate communication among European, American, and other international networks. The high-capacity connection is one of the most recent technologies available, and Orange Jordan will be exercising its expertise in providing this technology to SESAME.

David West, Project Manager of the Euro-Mediterranean connectivity project from GÉANT, the Institute for European Research and Education Network which is supporting ASREN in this initiative, said, "We realize that specialized technical connectivity for SESAME is crucial, as it serves to connect European research and education networks with other networks worldwide. A more connected world of research will provide more opportunities for students and researchers alike to engage with their peers around the world and to reach advanced research and educational resources."

This international connectivity serves as an opportunity for regional research and educational institutions to benefit from specialized networks without the use of traditional commercial Internet networks.

In The Field a Blog Showcasing the Global Impact of Research and Education Networks

April 2016 – Research and education networking infrastructure traverses the globe, enabling access to content, tools and resources, connecting people, delivering new experiences, fostering collaboration and cultivating interdisciplinary communities striving to make a difference.

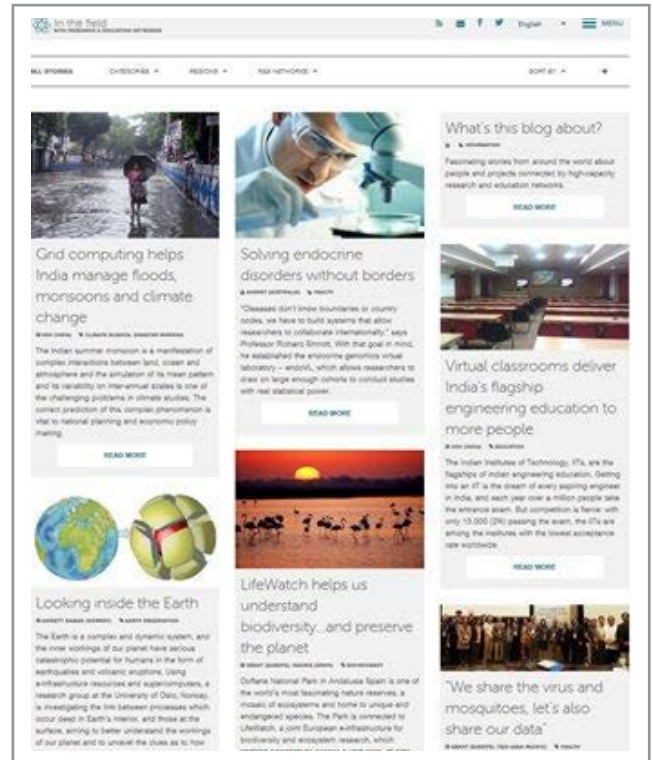
The In The Field blog (<http://www.intothefieldstories.net/>), developed by AARNet and launched as a Global NREN PR Network initiative in October 2015, embodies that very spirit, bringing the R&E network community together in a global collaboration with users and beneficiaries to showcase and share inspiring stories and achievements.

More than 50 stories involving 40 NRENs and RRENs across six continents have been contributed and published since the blog was launched last year. These stories cover a diverse range of topics, including climate science, education, food security, disaster management, arts and culture, astronomy, health and more.

For example, articles are published on people and projects involved in decoding the diversity of rice to improve yields for farmers in Asia, telemedicine changing the reality of health in Brazil, transitioning to digital exams in Norway and France, tracking Kyrgyzstan's melting glaciers, supercomputing for archaeology in Denmark, and connecting students to scientists in the jungles of Panama and remote robot museum tours in Australia.

Articles are also published on making the Internet a bit safer and about what happens inside our heads when we listen to music, how astronomers look back in time, new technologies bringing cultural heritage to life and sensor networks helping to predict natural disasters.

The blog is a truly global collaboration tool and welcomes real stories that illustrate how R&E networks around the world are utilized to solve problems and make a difference to the everyday lives of people. Stories can involve one or several networks. The focus of the stories needs to be on the impact rather than all about the infrastructure.



MAGIC Outreach

March 2016 MAGIC – Middleware for collaborative Applications and Global virtual Communities – involves 19 Research and Education Network (REN) partners from all over the world, who have been actively cooperating towards building interoperable services for research and education communities.

One of the project objectives is to establish a small set of relevant user communities working on areas/topics that are of high interest in a significant number of world regions. So far four Global Science Communities (GSC) have been raised in e-Health, Biodiversity, Environment and Remote Instrumentation. Each one of these GSC had its first virtual meeting during February, introducing actions to all interested scientists, worldwide.

Face-to-face training sessions on Authorization and Authentication Infrastructures, eduroam and NRENum.net have been carried out in Latin America, the Caribbean and the Arab States. In addition an on-line course on NRENum.net and DNS Configuration has been set on-line to all those who are interested in NRENum. The purpose is to allow REN member institutions the possibility to register their voice over IP identities in a global directory.

These projects started in El Salvador, Ecuador, Mexico, Uruguay, Chile, Sri Lanka, Argentina, Ethiopia and Moldova as members of NRENum.net (an end-user ENUM service run by the GÉANT Association).



Lebanon Joins Global Research and Education Networking Community

February 2016 – Building on an on-going dialogue among the Lebanese Ministry of Education and the Lebanese National Council for Scientific Research CNRST, GÉANT Association, and the Arab States Research and Education Network (ASREN), the American University of Beirut (AUB) has signed a cooperation agreement to link its ICT infrastructure to the European GÉANT, the US Internet2, and other world advanced research and education networks. With support from GÉANT and ASREN, AUB has allocated 10 Mbps of its existing Internet bandwidth to a dedicated link to interconnect with GÉANT via ASREN PoP in London. The link allows AUB to integrate seamlessly with advanced computing facilities, resources, and repositories available in many advanced research institutions across the globe.

“With AUB linkage, the cornerstone of developing the Lebanese National Research and Education Network connecting all Lebanese Universities through a dedicated network



at the national level in between them and to the Arab, European, American and the world research and education networks. This will support advancing research, improve education, accelerate progress, provide hope, and enable better opportunities for the young scientists in Lebanon’ Said Dr. Talal Abu-Ghazaleh, Chairman of ASREN.

The setup of AUB link will serve as a nexus for the development of a Lebanese Research and Education Network based on the European best practice NREN model and on the examples of the National Research and Education Networks already implemented in many Euro-Mediterranean countries.

In welcoming the connection to GÉANT, Steve Cotter, CEO GÉANT, commented:

“The American University of Beirut and other Lebanese institutions have a long history of academic and scientific excellence. The connection to GÉANT will open up further opportunities for their researchers and students to engage in exciting international collaborations with their peers in Europe, and allow Lebanon to be an active partner in the EUMEDCONNECT3 project in the Eastern Mediterranean.”

This step accelerated efforts to set up an NREN in Lebanon. Discussions are underway between AUB and 10 universities and research centers across Lebanon to formally establish LERN (Lebanese Education and Research Network).

Value-added services like eduroam, the secure, world-

wide roaming access service, have been a key in the benefit debate about LERN.

"It can be challenging to convince institutions in Lebanon about the value of an NREN, especially when the infrastructure, tariffs and political climate are all but favorable," explained Yousif Asfour, CIO at AUB.

"But by moving the NREN discussion away from how can we build a fast and cheap network," he continued, "it opens the doors to putting the focus on providing shared services to build a community and then using this community as leverage to build the high bandwidth. The implementation of eduroam at AUB has delivered a key

argument to secure a critical mass of support."

To accelerate the process of formalizing LERN, AUB intends to open the current connection to other Lebanese institutions and to jointly take up additional services such as eduGAIN (interfederation). The current link capacity is therefore expected to be increased in the near future.

GÉANT Partners up with Union for the Mediterranean (UfM) to Support the Digital Economy in the Mediterranean



January 2016 – GÉANT has recently been given official recognition by the Union for the Mediterranean (UfM) of its role in research and education networking. It was invited to use its expertise to help UfM implement its digital economy agenda in the Southern Mediterranean.

GÉANT's role was confirmed in Barcelona to implement the recommendations of the 2014 UfM Summit of Digital Economy Ministers to accelerate the development of the digital economy for Euro-Mediterranean citizens, consumers and businesses. As well as regulatory and commercial

initiatives, the importance of high-speed connectivity for all Southern Mediterranean countries with GÉANT was expressly recognized and this is to be built upon through DEWoG's activities.

GÉANT is now formally granted the status for research and education promotion activities. This clearly reflects GÉANT's active support of the development of high-speed networks in the Southern Mediterranean in the context of the EUMEDCONNECT and AfricaConnect2 projects.

David West, GÉANT's project manager for this activity welcomed UfM's recognition: "This is a great endorsement of GEANT's work in the region. The agreed priorities for our involvement are to connect all Southern Mediterranean countries to GEANT, secure additional EU funding for Eastern Mediterranean countries beyond 2016 and to promote the use of GEANT connectivity to the user communities in the region. These efforts are very complementary to GEANT's core activities and it is hoped that UFM's endorsement will bring additional political support to achieving them."

The UfM is an intergovernmental institution bringing together the 28 EU member states, the European Commission and 15 Southern Mediterranean countries to promote cooperation in the Euro-Mediterranean region.

The Internet Society Pledges Support to African Research and Education Networks

January 2016 – As part of a new agreement with the West and Central African Research and Education Network (WACREN), the Internet Society has announced today that it will contribute USD 120,000 to support activities targeting African Research and Education Networks (NREN), under the AfREN capacity building project.

The AfREN capacity building project is dedicated to increasing technical skills and improving Internet infrastructure for regional research and education institutions. The Internet Society's support for this project will focus on three major areas:

- Working with WACREN to expand existing programs using e-learning tools to provide training to more African NREN members;



- Increasing participation of African NRENs in Internet Engineering Task Force (IETF) activities, offering regional hubs for IETF meetings at various African universities, and organizing training conferences, webinars and hackathons; and
- Supporting the participation of African universities in Internet development conferences to become catalysts in building the African Internet economy and encouraging Internet entrepreneurship and innovation.

Commenting on the agreement, Dawit Bekele, Director of the Internet Society’s African Regional Bureau, declared that, “The Internet Society is proud to make this contribution to WACREN to support African Research and Education Networks. This agreement demonstrates the Internet Society’s strong belief that the Internet can be a significant tool in transforming education and research in Africa, which will in turn serve as major pillars of building the Internet economy in Africa.”

Dr. Boubakar Barry, CEO of the West and Central African Research and Education Network and AfREN Convener also pointed out that, “Research and education networks use more and more advanced technologies that require specialized skills for their design and operation. The ISOC-AfREN initiative will greatly contribute to building the needed capacity in African academic and research institutions, while promoting and supporting African participation in IETF activities.”



Arab States Research and Education Network

Talal Abu-Ghazaleh University, Bldg, No.45, Abdle Raheem Al-Waked Street
Shmeisani, Amman
Tel: +962 6 5100 250

Email: info@asrenorg.net |  ASREN

asrenorg.net



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