

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

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His Majesty King Abdullah II bestowed on HE Dr. Talal Abu-Ghazaleh, Chairman of Arab States Research and Education Network 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 70<sup>th</sup> 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



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



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

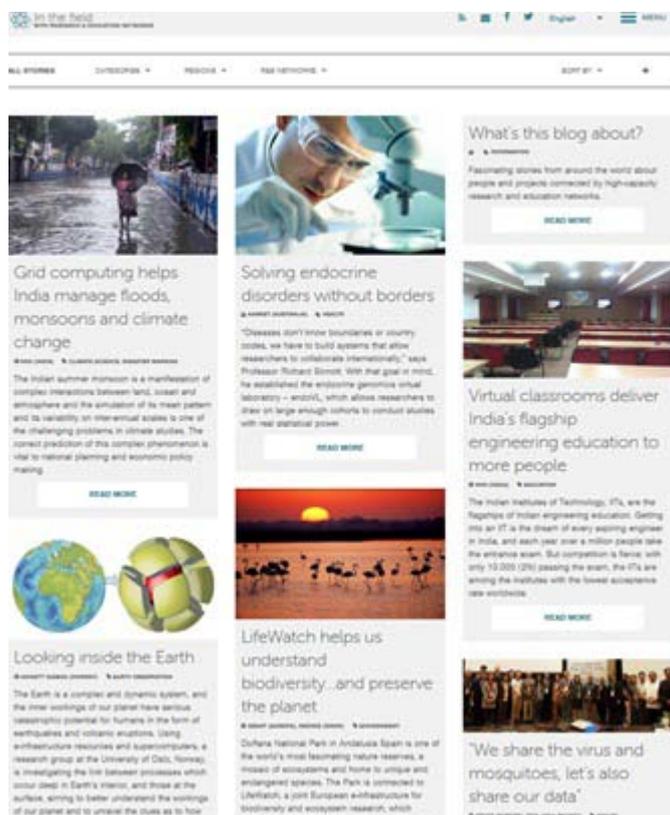
essential to them using well-studied enterprise solutions and applying years of experience in responding to its corporate customers.

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



The screenshot shows the homepage of the 'In The Field' blog. The header includes the site name 'In The Field' and navigation options like 'ALL STORIES', 'CATEGORIES', 'PERSONS', and 'TAG NETWORKS'. The main content area features several article cards with images and titles:

- Grid computing helps India manage floods, monsoons and climate change**: The Indian summer monsoon is a manifestation of complex interactions between land, ocean and atmosphere and the simulation of its onset pattern and its variability on interannual scales is one of the challenging problems in climate studies. The correct prediction of this complex phenomenon is vital to regional planning and economic policy making.
- Solving endocrine disorders without borders**: "Diseases don't know boundaries or country codes, we have to build systems that allow researchers to collaborate internationally," says Professor Richard Bonnet. With that goal in mind, he established the endocrine genomics virtual laboratory – endoVIL, which allows researchers to share (or large enough) cohorts to conduct studies with real statistical power.
- Virtual classrooms deliver India's flagship engineering education to more people**: The Indian Institutes of Technology (IITs) are the temples of Indian engineering education. Getting into an IIT is the dream of every aspiring engineer in India, and each year over a million people take the entrance exam. But competition is fierce: with only 10,000 (2%) passing the exam, the IITs are among the institutes with the lowest acceptance rate worldwide.
- Looking inside the Earth**: The Earth is a complex and dynamic system, and the inner workings of our planet have serious implications for humans in the form of earthquakes and volcanic eruptions. Using sophisticated resources and supercomputers, a research group at the University of Oslo, Norway, is investigating the link between processes which occur deep in Earth's interior, and those at the surface, aiming to better understand the workings of our planet and to untangle the clues as to how
- LifeWatch helps us understand biodiversity...and preserve the planet**: Doñana National Park in Andalusia Spain is one of the world's most fascinating nature reserves, a mosaic of ecosystems and home to unique and endangered species. The Park is connected to LifeWatch, a joint European infrastructure for biodiversity and ecosystem research, which
- What's this blog about?**: Facilitating stories from around the world about people and projects connected by high-capacity research and education networks.
- We share the virus and mosquitoes, let's also share our data**

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.inthefieldstories.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.

### **Arab States Research and Education Network**

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