Research and Education Networks in the Arab World

INDICATE Workshop on "Virtual Exhibitions"

Amman, Jordan

11 December 2011

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What are Research & Education Networks?

- Research and education networks are **dedicated** networks connecting the Universities, Schools, Research Centers, Hospitals, Museums and any other institution that may have research and education activities.

- National Research and Education Networks (NRENs) are established to provide connectivity and communications services for the research and education communities at the national level.

- Regional Research and Education Networks (RRENs) are connecting the NRENs to provide connectivity and services to researchers and educators across the boarders.
Main Drivers for Research Networks

- **Technological**: Satisfy high demand eScience initiatives, Multimedia Collaboration, Distributed High Performance Computing (HPC, GRIDs) for Earth Sciences, High Energy Physics (CERN, LHC...), Bioinformatics, Computational Chemistry, Radio-astronomy, Engineering Planning (computations, emulations & simulations), Cultural (archiving, collaborative digital access & processing) ...

- **Social**: Common culture of R&E community, Virtual Organizations VOs, collaborative research, tele-education, Smoothing the Digital Divides, affordable high bandwidth linkage to the Global R&E community

Major Objectives for R & E Networks

- Provide scientific research and education institutions with reliable means of communication in order to facilitate ease of cooperation and coordination.
- Strengthen the notion of partnership and encourage joint scientific research among communities.
- Minimize cost of research by using diversified academic and technical resources to be made available for use on the network with no need for duplicating investment.
- The fact that students, teaching staff, and researchers use such dedicated networks would eventually uplift efficiency and productivity and would boost the concept of creativity and innovation.
NRENs: Major Services

- Unified connectivity to all research and education
- Consolidated Internet services
- Connectivity to regional research networks.
- Access to content, common repositories, and library resources of all universities with a unified subscription.
- Video conferencing services, media streaming, IP telephony.
- Consolidated agreements with software vendors.
- Common caching, filtering and anti-spam and anti-virus protection services provided by NRENs to all connected institutions.
- NREN can be eligible to create and manage a national Internet Exchange, domain name services and networking consultancy.
National Efforts (Jordan)

• The Jordanian National Broadband Network NBN is a national program to use dark fiber to connect around 3200 schools, 10 Universities and around 110 Public Access Sites

• The Jordanian Universities Network (JUNet) is the official NREN of Jordan, currently connecting 15 University sites via optical fiber, with 1Gbps each

• 18 Community Colleges are also using this network at lower speeds using the operators circuits

• 14 Private Universities and 6 research institutes are planned to be connected to JUNet this year
JUNet Services and Activities

– Consolidation of Internet service
– License Consolidation through signing one agreement with software and services providers on behalf of all Universities
– Integrated Library Management system to serve all libraries in all Universities through one center and one unified system: the
– Consolidated Access to Journals and Periodicals by having one subscription for all Universities
– Video Conferencing Network and services
– Connection to the Pan European Network GEANT under the EUMEDCONNECT Project
– Unified email service for all Universities’ students
– Conducting specialized workshops, seminars and training sessions
– Promoting the use of technology in research and encourage research collaboration and joint research projects.
– Partnering with EC projects: EUMEDGRID, EPIKH, LinkSCEEM, CHAIN…
NRENs around the world

**Africa**
- D.R. Congo (Eb@le)
- KENET (Kenya)
- MAREN (Malawi)
- MoRENet (Mozambique)
- RwEdNet (Rwanda)
- South Africa (TENET)
- SUIN (Sudan)
- RENU (Uganda)
- ZAMREN (Zambia)

**East Asia & Pacific**
- Asia (APAN)
- South & East Asia (TEIN2)
- Australia (AARNet)
- China (CERNET, CSTNET, NSFCNET)
- Fiji (USP-SUVA)
- Hong Kong (HARNET)
- Indonesia (ITB)
- Japan (SINET, WIDE, JGN2)
- Korea (KOREN, KREONET2)
- Malaysia (MYREN)
- New Zealand (KAREN)
- Philippines (PREGINET)
- Singapore (SingAREN)
- Taiwan (TANet2, ASNet)
- Thailand (UNINET, ThaiSARN)
- Vietnam (VINAREN)

**Europe & Central Asia**
- Europe (GEANT2)
- Armenia (ARENA)
- Austria (ACOnet)
- Belgium (BELNET)
- Croatia (CARNet)
- Czech Rep. (CESNET)
- Cyprus (CYNET)
- Denmark (Forskningsnettet)
- Estonia (EENet)
- Finland (Funic)
- France (Renater)
- Georgia (GRENA)
- Germany (G-WIN)
- Greece (GRNET)
- Hungary (HUNGARNET)
- Iceland (RHnet)
- Ireland (HEAnet)
- Italy (GARR)
- Kazakhstan (KAZRENA)
- Latvia (LATNET)
- Lithuania (LITNET)
- Luxembourg (RESTENA)
- Malta (Univ. Malta)
- Netherlands (SURFnet)
- Norway (UNINET)
- Poland (PIONIER)
- Portugal (RCTS2)
- Romania (RoEduNet)
- Russia (RNet, RUNNET)
- Slovakia (SANET)
- Slovenia (ARNES)
- Spain (RedIRIS)
- Sweden (SUNET)
- Switzerland (SWITCH)
- United Kingdom (JANET)
- Tajikistan (TARENA)
- Turkey (ULAKBIM)
- Uzbekistan (UZSCI)

**Mid-East & N. Africa**
- Algeria (ARN)
- Egypt (EUN/ENSTINET)
- Jordan (JUNET)

**Americas**
- Latin America (redCLARA)
- Argentina (RETINA)
- Bolivia (ADSIB)
- Brazil (RNP2/ANSP)
- Canada (CA*net)
- Chile (REUNA)
- Colombia (RENATA)
- Costa Rica (CR2Net)
- Ecuador (CEDIA)
- El Salvador (RAICES)
- Guatemala (RAGIE)
- Honduras (UNITEC)
- Mexico (Red-CUDI)
- Nicaragua (RENIA)
- Panama (RedCyT)
- Paraguay (ARANDU)
- Peru (RAAP)
- Uruguay (RAU2)
- Venezuela (REACCIUN2)

**South Asia**
- India (ERNET)
- Nepal (NREN)
- Pakistan (PERN)
- Sri Lanka (LEARN)
The only regional network in the Arab Mediterranean Countries

A Euro-Med success story

Connects ~2m users at ~700 institutions among each other and with their peers in Europe and beyond

Directly connecting Algeria, Egypt, Jordan, Morocco, Palestine, Syria and Tunisia

Linking Mediterranean and European partners via GÉANT

Jointly funded by the EC and the MED partners to reduce the digital divide

EUMEDConnect3 Will be further (Partially) funded by the EC for additional 3 years
The EUMEDGRID Support Project

Coordination and Harmonization of Advanced e-Infrastructures

Exchange Programme to advance e-Infrastructure Know-How

Linking Scientific Computing in Europe and the Eastern Mediterranean
Arab States Research and Education Network (ASREN)

ASREN is the association of the Arab region NRENs and strategic partners.

Promoting world-class Pan-Arab e-Infrastructures and E-services for the Research and Education communities to boost Scientific Research and regional Cooperation
“The ASREN initiative will connect our researchers and scholars allowing them to share knowledge and to collaborate. It is a unifying network for the Arab region, and I commend it.”

H.E. Amro Moussa

Secretary General of the Arab League

“Investing in e-Infrastructures will advance inter-Arab research and education and promote cooperation with Europe and the World”

H.E. Talal Abu-Ghazaleh, Chair of UN Global Alliance for ICT and Development (GAID)
ASREN: Vision and Mission

• **Vision Statement**: Pan-Arab collaborative research and education projects and activities, contribute to boost the scientific research, innovation and education levels in the Arab countries by uplifting efficiency and productivity of research and education communities.

• **Mission statement**: To implement, manage and extend sustainable Pan-Arab e-Infrastructures dedicated for the Research and Education communities and to boost scientific research and cooperation in member countries through the provision of world-class e-Infrastructures and E-services.
Objectives

Regional network that interconnects the NRENs of the Arab Countries
Harmonization of policies and standards
Advocating at the regional level amongst decision makers and stakeholders
Knowledge resources, exchanges Arabic contents
Usage of e-Infrastructure services and solutions

To build, maintain and consolidate regional e-Infrastructures dedicated to e-Science and education across the Arab Countries.

To contribute to create and sustain National Research and Education Networks (NRENs).

To facilitate the collaboration and cooperation among the researchers and academicians in the Arab region.

Supporting NRENs to implementing technological solutions
Exchange of expertise and best practices
ASREN is now an official legal entity

ASREN now is officially registered in Dusseldorf, Germany as non-profit company with 3 Shareholders:

Jordanian Universities Network, JUNet
Moroccan Research and Education Network, MARWAN
Abu-Ghazaleh & Co. Consulting GmbH

HE Amre Moussa, Secretary General of the League of Arab States was elected as Honorary Chairman

HE Talal Abu Ghazaleh was elected as ASREN Chairman
ASREN Website www.ASRENOrg.net
Under the Patronage of His Majesty King Abdullah II bin Al Hussein

Integrating Arab e-infrastructure
12-14 December 2011, Amman, Jordan

Event 4 on Euro-Mediterranean e-Infrastructure
US Internet2 SIG meeting
ASREN first annual meeting

Register Now

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Thank You

More on the event website

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