NRENs Enabling STI Development

1st EAC STI Conference & APPP Forum 2019
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Presentation Outline

• What are NRENs?
• RENU
• NREN Challenges
• The Future
Research & Education Networks (RENs)

UbuntuNet Alliance
IUCEA
GEANT, Europe
Rest of the World
University
KENET (Kenya)
RwEdNet (Rwanda)
RENU (Uganda)
TERNET (Tanzania)
BERNET (Burundi)
EB@le (DRC)
TENET (S. Africa)
University
Understanding NRENs
“Technology as a Catalyst or Accelerator”

Facilitate R&E collaboration

- High-speed Connectivity
- Capacity Building
- Collaboration Support Services
- Advanced Network Services

- Member institutions’ focus
  - Research, cooperation and resource sharing
- NRENs support R&E transformation
  - We are very late to the party 😊
Enabling Research and Education Collaboration
RENU

• Founded in 2006

• Challenges at the time
  – High cost of bandwidth
  – Prohibitive last-mile cost
  – Inability to share resources

Vision (2019)

“A national research and education environment in which Uganda’s researchers and scholars effectively contribute to knowledge creation, dissemination and application in solving society’s problems through local and international collaboration.”

Mission (2019)

“To facilitate collaboration among Uganda’s Research and Education institutions for knowledge creation, sharing and utilisation, through the provision of advanced networking and other advanced technical services.”
RENU - Stakeholders

Universities
&
Research Institutions

RENU (Uganda)

UCC
UNCST

Schools
MoES
Tertiary Institutions

MoES
RENU – Services

• Connectivity
• Technical capacity building
• eduVPN
• Identity Federation & eduGAIN
• Cloud
• Cybersecurity
• Collocation
• eduroam
• ...

7/15
## RENU - Connectivity

<table>
<thead>
<tr>
<th>Member institutions</th>
<th>66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connected campuses</td>
<td>112</td>
</tr>
<tr>
<td>University campuses</td>
<td>55</td>
</tr>
<tr>
<td>Research sites</td>
<td>31</td>
</tr>
<tr>
<td>Tertiary campuses</td>
<td>12</td>
</tr>
<tr>
<td>Affiliate sites</td>
<td>6</td>
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<tr>
<td>Schools</td>
<td>5</td>
</tr>
<tr>
<td>Hospitals</td>
<td>3</td>
</tr>
</tbody>
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(As at 31st December 2018)
RENU – Capacity Building
RENU – More Services

• High-performance computing
• Grants
• Conferences
• Collaboration
• Access to publications
• Anti-plagiarism
• ...

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Today, Kyabirwa Surgical Centre, a member of RENU successfully carried out their first remotely-guided-surgical procedure with support from surgeons in the USA.

For more on the Kyabirwa Project ➡️ bit.ly/2IT0Jlw
RENU – Regional Peers

Mon Jan 14 23:35:00 2019 Bits/s any protocol

Bits/s any protocol

Aug 2018  Sep 2018  Oct 2018  Nov 2018  Dec 2018

ZAMREN_TRAFFIC  KENET_TRAFFIC  TERNET_TRAFFIC  RwEdNet  RENU_TRAFFIC

😊
NREN Challenges

• NRENs misunderstood
  – The NREN Secretariats
  – Member institutions
  – The connectivity industry

• Government recognition
  – Role played by bodies like IUCEA

• Awareness

• End-user engagement
The Future

• NRENs
  – Long-term sustainability of NRENs!

• RENU
  – End user engagement!
  – Content hosting
  – Shared education support services
  – Content development
  – High performance computing
“Together we can achieve a lot”

THANK YOU !!!

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