

# The Research and Education Networking Marketplace

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# The Outline

- The Motivation
- The REN Marketplace and the OSS Community
- The Make-up of the Marketplace
- Potential 'commodities'
- Taking it a bit further: interacting with other markets
- Examples of the REN Market in action
- The Future of R & E Networking

# The Motivation

- Huge investments into infrastructure by the community actors (RRENs, NRENs, universities and research centers)
- The ultimate goal was and still is to **SHARE**
- A Duplication of facilities and e-resources across the region
- Leveraging the investments made by others
- For buyers, it is cheaper, for sellers it means a faster cost-recovery
- Cost-sharing allows us to do more with the limited budgets we have
- Enables the maximization of the donor contribution to the community
- It is good for the environment ;)

# The REN Marketplace and the OSS community

- Both leverage the power of community to meet the demands of a community
- Solutions are developed by the community and for the community
- Developers reuse the code written by others to build something different
- In the REN marketplace, infrastructure and services built by members of the community are reused by the others

# The Make-up of the Marketplace

- Market participants:
  - Regional Research and Education Networks (ASREN, UA, GEANT, etc)
  - National Research and Education Networks (Ankabout, SomaliREN, etc)
  - Universities and research centres
  - Individual professionals
- How it works
  - The REN marketplace is a peer to peer market, parties can be buyers and sellers at the same time
  - The rules of engagement in the market are within the framework of the R & E community

# Potential Commodities of the REN Marketplace

- ICT Infrastructure
  - Network infrastructure (dark fiber, leased capacity, etc)
  - IP transit services utilizing surplus capacity
  - Cloud infrastructure
- Research and Education Infrastructure
  - Research software
  - Digital library access
- Consulting services
  - Technical
  - Non-technical
- Applications, information systems, research facilities
  - Educational ERPs
  - Remote access to research access
- How it works
  - The REN marketplace is a peer to peer market, parties can be buyers and sellers at the same time

# Taking it a bit further: interacting with other markets

- The REN Marketplace interacts with other commercial markets and industries
  - Cloud services industry
  - IP transit services utilizing surplus capacity
  - Cloud infrastructure
- The modes of interaction:
  - Buying from the existing commercial providers
  - Bulk purchases on behalf of a consortium
  - Excess capacity or unused infrastructure can be sold back to the commercial operators
  - Infrastructure swapping with the commercial service providers and operators is a good potential

# Examples of the Market in Action

- Campus ERP developed by SIMAD University
  - Deployed and hosted within SomaliREN data centers for another university
- Potentially: a distributed cloud infrastructure for ASREN member institutions where each NREN participates in hosting a cloud node. Cost recovery and reimbursements follows a protocol very similar to that of operator interconnections in the mobile communications industry.



# What is Next

- Mapping research and educational resources and facilities in the R & E community
- Publishing a directory of these resources and terms of use (or trade)
- As we strive to keep our local traffic local, let us keep our business within the community

■ We are not connecting to the global R & E network,  
**we are coming to the R & E  
marketplace**

Questions?