Ghana Academic and Research Network (GARNET)

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Background

Ghana Academic and Research Network (GARNET)

Launched in 2006 AAU Meeting

- Original idea to get VCG to act as governing board

Challenges

- VCG did not sign MoU
  - Collective purchase of bandwidth
  - Sharing of research findings
  - Collaboration between researchers from different institutions
- Minimum human network between “member” institutions

Recent Activities

- IT managers met at University of Legon to start the human network despite the fact that VCs had not signed the MoU
- Meeting to elect interim executives
- IP Presence
  - garnet.edu.gh
  - forum@garnet.edu.gh
- Network Startup Resource Center (NSRC) donate HP4000 managed switches

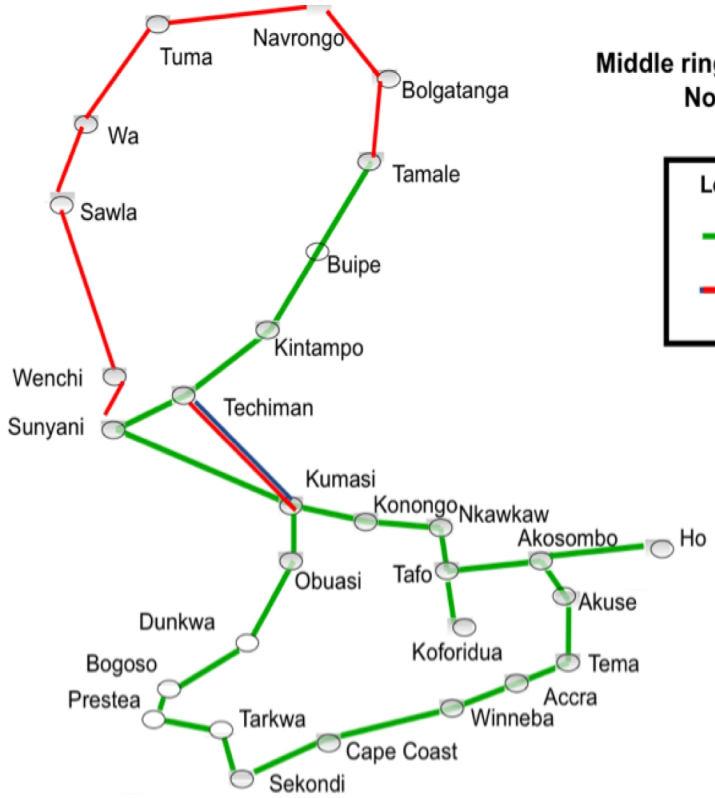
Planned Activities

- Establish the Governance Structures of GARNET
- Ensure the registration of GARNET as a legal entity in accordance with the Laws of Ghana
- Establish GARNET Secretariat to manage the day- to-day activities of the Ghanaian National Research and Education Network (NREN)
- Expand membership of GARNET to include all other tertiary and research institutions

Planned Activities

- Topology of the physical connections of the various institutions in GARNET
  - Initiate discussions with VODAPONE on how the National Backbone may be used for the purpose of creating the physical network
- GARNET to become a Local Internet Registry (LIR), or at least get all members to subscribe to AfriNIC IPs.
- Initiate and run at least one workshop for Campus Network Administrators in collaboration with the Network Startup Resource Center (nsrc.org)

State of National Backbone Infrastructure



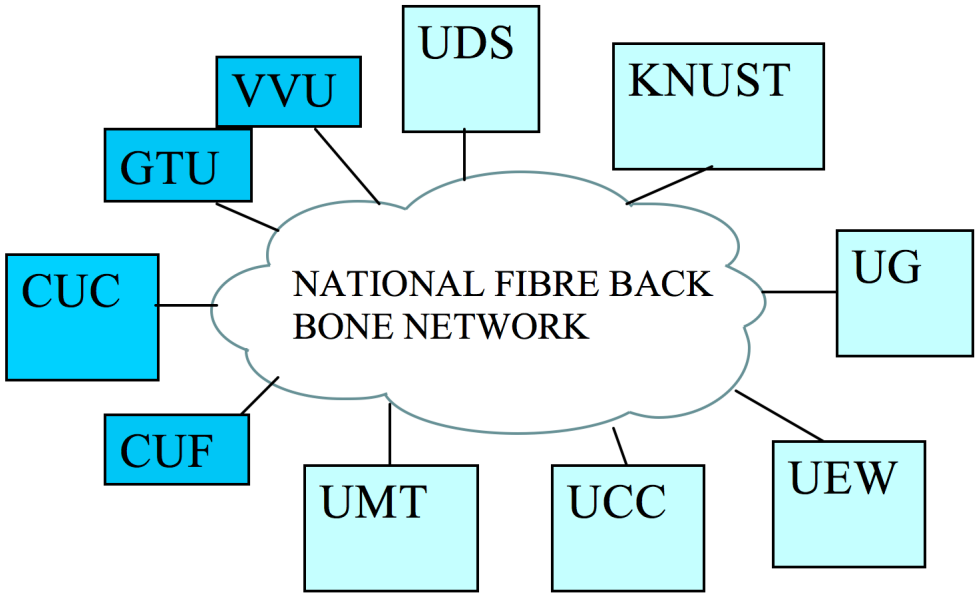
Middle ring planned for completion Q3 09
Northern ring for mid 2010

Legend:
- existing
- proposed

Source : National Communications Backbone Company 2008

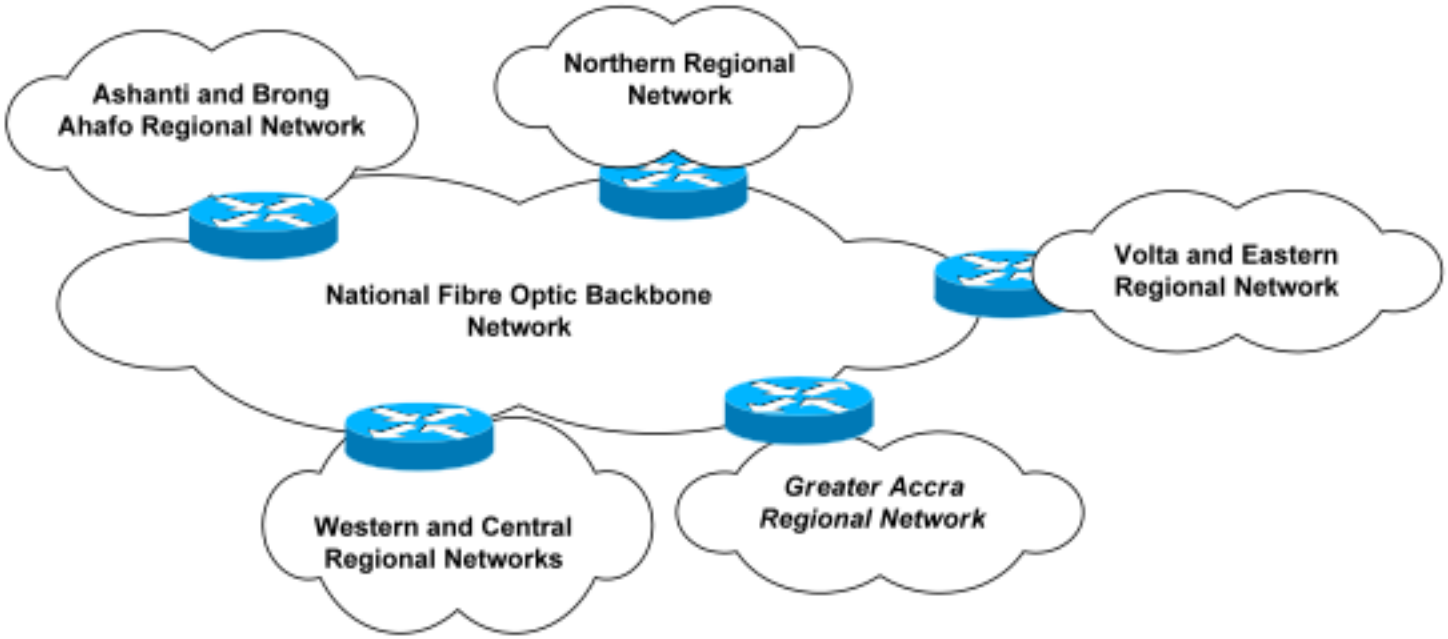
Network Proposal One

UNIVERSITIES AND RESEARCH INSTITUTION NETWORK - GHANA



GTU	GHANA TELCOMS UNIVERSITY	VVU	VALEY VIEW UNIVERSITY
CUC	CENTRAL UNIVERSITY COLLEGE	CUC	CATHOLIC UNIVERSITY FIAPRE
UMT	UNIVERSITY OF MINES TARKWA		

Network Proposal Two



Key Network features:

- The use of BGP implementation (with OSPF as the IGP) for optimum routing among the various campus communities for the necessary inter-routing information.
- IP addressing to cater for the right number of hosts and subnets required by each institution and groups.
- Sufficient interconnection information
  - Setting up of exchange points for internal traffic
  - Peering with other RREN's
- A clear defined routing policy will be enforced with the use of tagging and filtering at route redistribution points
- Additional Per-site filtering may be required for security on aggregator routers.
  - This will ensure only allowed specific routes or traffic is shared according to pre-arranged agreements with the participating institutions

Questions and Discussions

Thank You