



PROPOSAL

2022

PHASE3 PROPOSAL PREPARED FOR

BILLARO NIG LTD

ATTENTION: MR. MICHAEL MOMOH

FROM: PHASE 3 TELECOM LTD YEDSERAM STREET MAITAMA BUJA, F.C.T

REF: RFQ CONNECT/06/04/2022

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06 April 2022

Dear Sir/Madam

REF: RFQ_Connect/06/04/2022

Phase3 Telecom is honored to present this proposal in response to your request for quotation.

Phase3 Telecom in partnership with YahClick (powered by Hughes) is a Nigerian Company that offers cutting-edge broadband satellite services in Nigeria. Our differentiator is that we deliver reliable, high-speed Internet connectivity to rural underserved, and underserved businesses and homes, partnering with your community to instantly connect you to the Internet via a small satellite dish and modem from even the remotest places in Nigeria. Our Satellite Internet Solutions are completely independent of terrestrial infrastructure – enabling all our subscribers to enjoy uninterrupted and unlimited access to the Internet.

YahClick (powered by Hughes) is a joint venture between the UAE-based Al Yah Satellite Communications Company PJSC, which is a public company listed on the Abu Dhabi Securities Exchange (ADX) and a subsidiary of Mubadala Investment Company, and Hughes Network Systems, a subsidiary of EchoStar Corporation (NASDAQ: SATS).

The information contained in this document is confidential and exclusively relevant to PHASE3 and YAHCLICK and any disclosure to third parties is prohibited.

Best regards,



Muhammad Bashir Ibrahim
VP – Digital Transformation and Innovations

Mobile: 08022226234

Email: muhammadbashiribrahim@phase3telecom.com

1 EXECUTIVE SUMMARY

PHASE3 TELECOM Limited in partnership with YAHCLICK (powered by Hughes) provides commercial satellite broadband solutions to unserved and underserved communities across Africa, the Middle East, and Central and South West Asia.

Phase3 Telecom aims to unlock the socio-economic potential of the communities it serves by bringing the benefits of digital inclusion through its cost-effective and high-performance broadband solutions. Delivered through the latest generation of High Throughput Satellites (HTS), the service uses the efficiencies provided by the reusable Ka-band satellite frequency and is powered by multi-spot beam technology to make satellite broadband affordable and dependable in areas where there is limited or no terrestrial infrastructure.

1.1 PHASE 3 TELECOM SERVICES

Phase3 Telecom provides a bouquet of telecommunication services across all regions in Nigeria as well as African markets through strategic partnerships that allow us to connect to our clients. Our offerings include satellite internet broadband services in addition to dedicated internet services, MPLS-VPN connectivity, Fiber-To-The-Home (FTTH), collocation, managed services, and other ICT solutions such as IP telephony solutions, local area networks (LAN), etc.

The table below provides an overview of the services, solutions, and applications served by Phase3.

YahClick Broadband	VNO (Classic / Managed)	Dedicated Capacity	YahLink (High Speed Trunks)	Value Added Services
<ul style="list-style-type: none"> ➤ Satellite Broadband ➤ Best effort Shared IP Transit ➤ Services ➤ Service Partner ➤ Portal ➤ End User ➤ Portal ➤ CPE Delivery ➤ NOC ➤ Support ➤ Predefined Service Plans ➤ Marketing Support ➤ Easy to roll out and quick market reach 	<ul style="list-style-type: none"> ➤ Dedicated capacity for service partner ➤ Granular control defining service plans ➤ Management ➤ Monitoring ➤ Traffic Analysis ➤ Deep Packet Inspection ➤ NMS/SP portal access ➤ Auto/manual commissioning tool access 	<ul style="list-style-type: none"> ➤ Unmanaged Dedicated capacity for service partner ➤ Management, monitoring, service configuration, commissioning and troubleshooting taken care of by YahClick ➤ Monitoring portal can be extended to SP 	<ul style="list-style-type: none"> ➤ Point to Point or Point to Multipoint ➤ High-Capacity Trunk links ➤ Flexibility to offer whole dedicated beam or carrier of speeds reaching up to 250 Mbps ➤ Monitoring portal can be extended to SP ➤ Management, monitoring, service configuration, commissioning by YahClick 	<ul style="list-style-type: none"> ➤ 2G, 3G, 4G Cellular Backhaul ➤ Cloud Based Managed ➤ WiFi/Hotspot ➤ End to End VPN ➤ Banking ➤ VOIP ➤ IOT ➤ L-Band Backup ➤ Cloud based SNG Broadcast Content using auto deploy vehicular mount antenna ➤ E-Health ➤ E-Learning ➤ Maritime

Among the benefits generated to our customers, we can highlight an extensive portfolio of services and multiservice network solutions, fixed and mobile, customized and adapted to the specific needs of each customer.

The management of the services is continuous and monitored 24/7 from Phase3 NOC. Our call center provides technical support services to customers 24 hours a day.

Customers can also access the Phase3 YAHCLICK Portal via the Internet, where reports are available to monitor calls and graphically visualize the performance of the links.

1.2 PHASE 3 TELECOM AND YAHCLICK HISTORY AND KEY MILESTONES

Phase3 Telecom Limited is a neutral National Long-Distance Telecommunications Operator (NLDO), our services are available across Nigeria and African markets West Africa on an aerial fibre network making it the most reliable in the industry.

Incorporated in 2003 and licensed in 2004, Phase3 entered into a concession agreement with Power Holding Company of Nigeria (PHCN) to design, build, manage and expand a reliable & effective optical fiber backbone on its High Voltage Transmission lines.

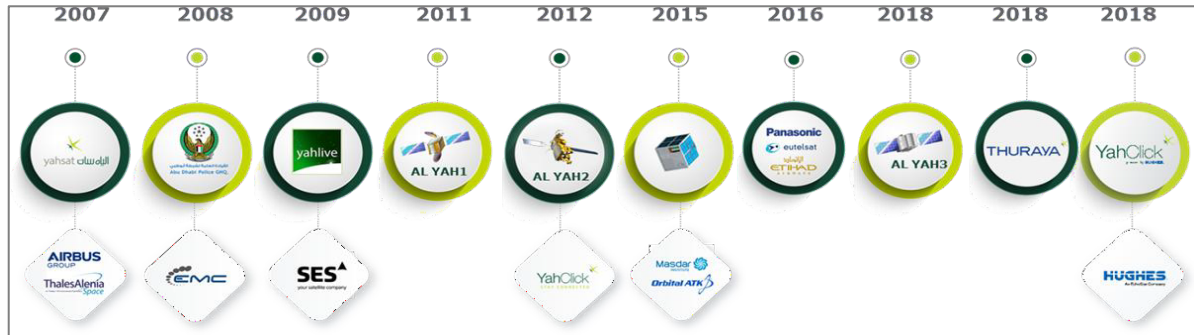
Our fibre optic network covers over 7,500km (and counting) and we have commissioned several points of presence at sites located in key cities with last-mile connectivity to clients on our network.

In partnership with YahClick, our network continues to evolve into other layered service streams including satellite internet broadband as our invaluable clients will continue to remain the core of every investment that we make; innovation that we create; and technology that we adopt during the 4th industrial revolution to position us as the network of the future.

Some of our esteem clients are:



YahClick:



2 TECHNICAL SUMMARY

2.1 SATELLITE CAPACITY

AY2 Satellite Ka-Band

- **AY2 Satellite Ka-Band**
- Orbital slot: 47.6° East
- **AY3 Satellite Ka-Band**
- Orbital slot: 20.0° West
- **HY4 Satellite Ka-Band**
- Orbital slot: 33.5° West

2.2 SATELLITE TELEPORTS

YAHCLICK satellite teleport comprises the gateway antenna plus the hub baseband and RF subsystem operating in hot standby mode. The baseband will be connected to an edge router (ASR) which will be integrated to the end customer's network node via dynamic routing through public internet. As scope of work, Phase3 in partnership with YAHCLICK will dimension and configure the hub baseband based not on the current capacity requirement scope but also addressing the future scalability as and when the network upgrade is required with additional satellite capacity. The hub equipment has been already installed, commissioned, and tested properly with existing satellite network applications throughout the world including desired regions.

The Teleports support and maintenance will be equipped with the following features:

- Uplink facility hosted in our teleport facilities in Athens or Luxemburg (AY3), and in Lagos for HY4 depending on the Beam the service is provided.
- 7.3m / 13m Ka-Band dual-polarized circular feed antenna with 1:1 redundant BUC and LNB and 2:1 redundant HPA to support dual polarization.
- Highly secured temperature-controlled teleport with surveillance system, 24 hours power redundancy with UPS, and generator backup facility.
- 24/7/365 NOC monitoring and support
- In-house RF experts to manage the teleport.
- Remote monitoring and management from Phase3 and YahClick centralized NOC.
- Teleport uptime exceeding 99.5%.

2.3 BASEBAND HUB AND REMOTE TECHNOLOGY

Phase 3 Telecom in partnership with YahClick's proposal is based on the industry-proven Hughes J2 platform to enable data communication network. Some of the key features of the J2 for data communication networks are listed below.

- TCP Acceleration
- QoS and Traffic Shaping
- User traffic filtering (DPI, Classification and Firewall/QoS)

The J2 system gateways are architecture on powerful and scalable data center technologies including blade chassis and blade servers. The power of these devices enables a Satellite Modem Cluster (SMC) to be configured as a single blade server mated with a modulator and demodulator. One SMC, occupying two slots in a blade chassis, can support all the traffic— both forward and return—for a maximum of 235 Msp/s forward channel and 12 Msp/s return. There is no need for multiple devices to scale to the largest possible network.

Remote Site Equipment will be provisioned with the latest HT2000 remote satellite modems compatible with the respective platforms in the hub side.



Table 2.3.1 Phase3 Telecom Service Plans:

12 Months Contract Plans		Capped Plans - 12 Months	
	YahClick Unlimited 150 AY2/ AY3 & H4		YahClick Pro/4Gen 200GB
Priority Speed (Up to)	25 Mbps	Priority Speed (Up to)	20 Mbps
Priority Data (GB)	150	Data (GB)	200
Throttle 1	5 Mbps @ 150GB		
Throttle 2	1Mbps @ 200GB		
Customer Upfront Cost of CPE (NGN)	₦ 0	Customer Upfront Cost of CPE (NGN)	₦ 0
Customer Upfront Installation Charge (NGN)	₦ 35,000	Customer Upfront Installation Charge (NGN)	₦ 35,000
Retail Price + VAT (NGN)	₦ 49,000	Retail Price + VAT (NGN)	₦ 59,000

Note: The subscription contract is for 12 months and 6 months upfront subscription payment.

2.4 PROJECT SITES

The proposed 16 project sites are as follows:

S/N	STATE
1	EDO
2	BAYELSA
3	CROSS RIVER
4	ZAMFARA
5	RIVERS
6	ABIA
7	KEBBI
8	EBONYI
9	KOGI
10	ANAMBRA
11	ENUGU
12	NASARAWA
13	FCT
14	DELTA
15	GOMBE
16	BENUE

3 SOLUTION DESCRIPTION

3.1 SOLUTION REQUIREMENTS

Appointment of service providers for Ka-Band connectivity to 22 sites located across Nigeria.

3.2 PHASE3 TELECOM: PRICING

The solution that PHASE3 proposes to meet BILLARO NIG LTD requirements as per the above table in 2.3.1

Note:

The offer above includes free equipment for a contract period of 12 months

3.3 THE PROPOSED VSAT SOLUTION INCLUDES:

- Circular polarized Ka-Band satellite capacity on AY2, AY3 & HY4 satellites.
- Satellite teleport in Europe and Lagos.
- Fully redundant Internet breakout.
- Phase3 Telecom will provide a service with 99% availability on the satellite link
- Hub equipment:
 - Hughes Jupiter 2 baseband
- Remote Site equipment:
 - HT2000 modem
 - 74, 90 cm antenna
 - 1W or 2W BUC
 - Associated Cables / Connectors for the remote site
- Installation at hub side, link commissioning, monitoring, and support.

3.4 WAN OPTIMIZATION

J2 WAN optimization provides TCP acceleration. TCPA mitigates TCP windows and traffic multiplexing of LAN TCP sessions into persistent WAN TCP sessions. This process greatly reduces "time to first byte", which means that the traffic starts flowing much faster than it would otherwise, and enables traffic to ramp up to levels that would not be otherwise

possible over long latency VSAT links. Header compression also plays a significant role in the reduction of overheads thus increasing throughput

3.5 NETWORK CUSTOMIZATION

In the case of dual data and internet usage, the network customization in terms of capping of bandwidth threshold for different applications, applying policies, IP-MAC

address filtering, and deep packet inspection for these individual links of the customer can be achieved through our bandwidth shaper device in our edge network before the traffic breaks out to the internet.

The filtering of applications like YouTube, snap chat, etc. can be done from source IP, if the internet is used.

3.6 NETWORK SCALABILITY

The current network can perform the data rates provided in the previous tables. The modifications required to scale the network to a higher bandwidth can be discussed as a future work scope as and when required.

3.7 SHIPPING CHARGES FOR EQUIPMENT TO THE CUSTOMER'S LOCATION

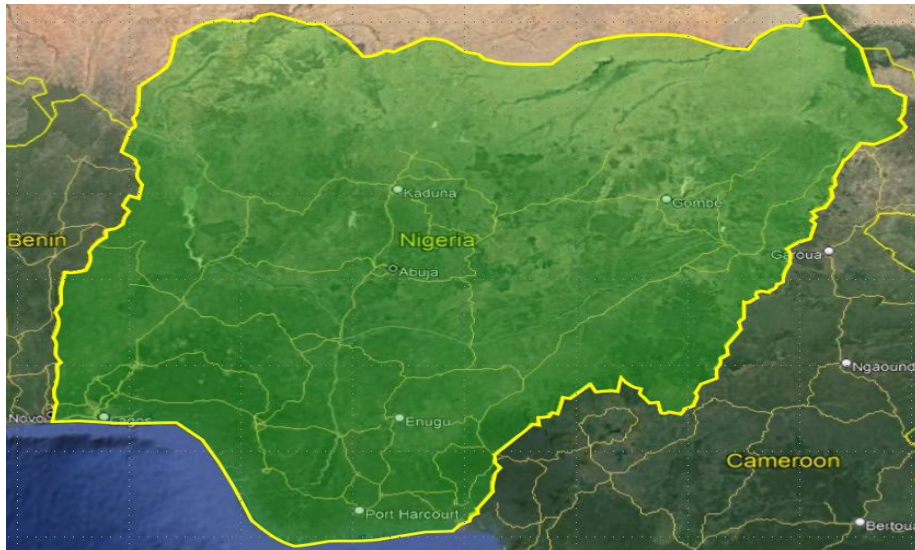
BILLARO NIG LTD will bear any logistics costs from Lagos, Nigeria Warehouse as well as any applicable taxes.

3.8 TELEPORT (HUB) LOCATION

- The Teleports are located in Europe where they break out to the internet through our PoP in Frankfurt.
- PoP address is:
- Interxion Deutschland GmbH, Hanauer Landstraße 298, 60314 Frankfurt am Main, Deutschland
- The Teleport is in Lagos and breaks out to the internet through our PoP in Lagos.
- Pop Address:
- FABAC Centre, 3b Ligali Ayorinde St, Victoria Island, Lagos, Nigeria

3.9 REMOTE SITE LOCATION

The remote sites are located across Nigeria.




3.10 REMOTE KIT DESCRIPTION

Remote Site equipment:

- HT2000 modem
- 74, 90 cm antenna
- 1W, 2W BUC
- Associated Cables / Connectors for the remote site

The remote VSAT modem options and the key features for every modem are presented as follows:

<ul style="list-style-type: none"> ▪ DVB S2X ACM –GSE up to 235Mps ▪ MF-TDMA Return Channel 256Ksps to 6144 Ksps ▪ Adaptive In route Selection(AIS) ▪ Unicast Max TX/Rx 50Mbps/15Mbps ▪ Max pps 10000 ▪ Conditional Key access support ▪ Dual stack IPV4/IPV6 ▪ Equipped with a single GigE LAN port ▪ Supports a single cable IFL for interface to the Outdoor Unit (ODU). ▪ Fair Access policy support 	
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HT2000

3.11 REMOTE KIT INSTALLATION SERVICES

PHASE3 will be responsible for the installation of the VSAT Kits at the remote site, including technical services, equipment shipping logistics, and the necessary infrastructure for the installation of the VSAT kit.

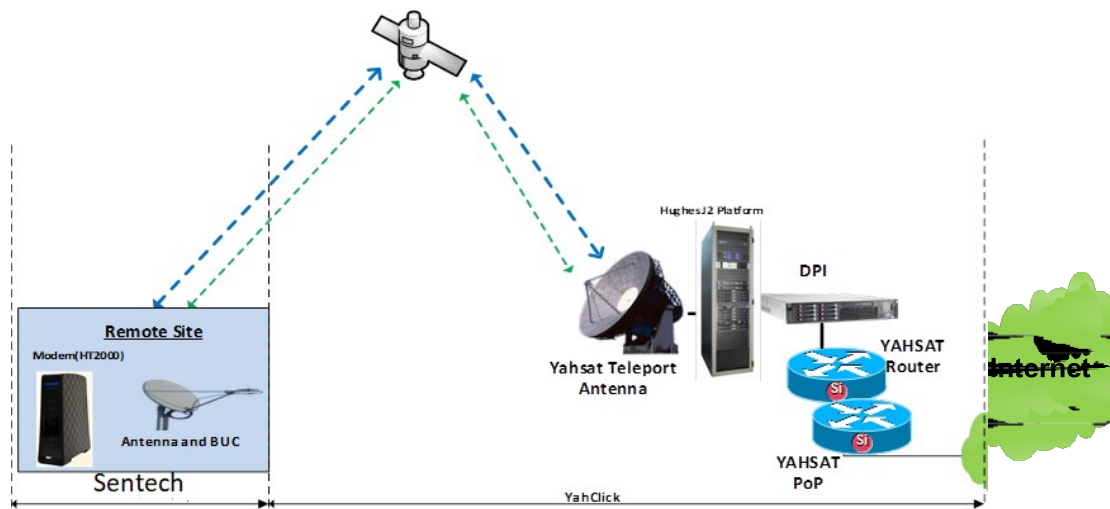
In addition, other aspects must be considered:

- Grounding and electrical supply for the VSAT Kit are the responsibility of BILLARO NIG LTD
- There will be a cost per location for the installation of N35,000, this does not include any additional extra's should a specific site require this to enable the VSAT to be installed (i.e.: Pole mounted)

4 TOPOLOGY AND NETWORK DIAGRAM

The illustration below is a graphical representation of the network design after the installation and configuration of the equipment.

4.1 TECHNICAL DIAGRAM OF THE PROPOSED SOLUTION



5 SLA (SERVICE LEVEL AGREEMENT)

Phase3 Telecom will offer the service with the following SLA:

SL No.	Parameter Description	Values
1	Satellite Link Availability	98%

5.1 SLA EXCLUSIONS

Phase3 Telecom will offer SLA within any given operational year, with the exception of the following exclusions:

- Scheduled maintenance;
- Planned remote site movement or any other changes in remote site;
- Remote site equipment outside Phase3 YAHCLICK VSAT services scope (cellular equipment, power supply equipment, router, switch, etc.).
- Remote site obstructed blockage to the satellite in whatever way.
- Remote site outage (loss of site power, internal network change, etc.);
- Remote site inappropriate installation affecting the link performance;
- Link interference (external jamming) not attributable to Phase3 YAHCLICK and/or with cause or origin unknown;
- Atmospheric or extra-atmospheric conditions including solar storms or flares, meteorites or solar conjunctions causing earth station outages and sun outages;
- Force majeure (flood, war, earthquake, etc.) that might impact Phase3 YAHCLICK services.

5.2 ACKNOWLEDGEMENT AND RESPONSE TIMES

Phase3 Telecom would like to offer the following times for incident acknowledgment and response times:

Case Priority	Severity	Acknowledgement Time	Response Time
Priority1	Critical	15 minutes	1 hour
Priority2	Major	30 minutes	2 hours
Priority3	Minor	1 hour	4 hours

Whereas.

“Priority 1” means that the service is down, all sites/defined service links are not

connected/offline and the issue is affecting the whole network.

“Priority 2” mean that more than one site/service link is not connected/offline and/or intermittent services.

“Priority 3” means service performance degradation. Single site/service link not connected/offline or general customer inquiry.

The acknowledgement and response times time count starts when Phase3 YAHCLICK has received a ticket from VANU TOWERS and acknowledged it positively and assigned a relevant priority to the ticket

5.3 MANAGEMENT AND MONITORING

Phase3 Telecom in partnership with YahClick has different GUI portals for site management and monitoring to be extended to VANU for first level service support. There will be one integrated platform called BIP (Broadband Interactive Platform) will provide:

- APIs to support straightforward Integration with their own OSS
- A unified Partner Portal gathering all the functionalities from terminal provisioning, subscription management, marketing materials to the creation of invoices.

The aim of BIP is to help Partners to deliver Proposed satellite Ka services in the most effortless way by giving them access to a completely revamped platform, fully automatized, digitized with always the customer in mind.

There will be two different portals for supporting the operation:

- Partner Portal
- End Customer Portal

The Partner portal supports distributors in their business:

- Order management & provisioning capabilities
- Customer management tools
- Access to various resources including product catalogue and rich documentation

Customer Portal to support end-users through the entire customer journey. The Customer portal allows to:

- View current Plans/ options / Add-ons

- Follow data consumption with real time information
- Access equipment information & performs a speed test
- Create tickets to request for assistance

There will be different kinds of monitoring portals to support our enterprise customer:

- EM7 monitoring dashboard with bandwidth per beam monitoring
- Business Analytics portal access for site analytics Support

5.4 SERVICE LEVEL SUPPORT

Service Level Support supplied is based on existing Phase3 Telecom case escalation guidelines with technical operations assistance for L2/L3 (Level 2/Level 3) support mechanism.

CUSTOMER is fully responsible for any troubleshooting related to L1 (Level 1) issues.

Level 1 issues are any issues related to LAN (Local Area Network) of remote site and/or any issues related to remote site link - remote site modem (CPE - Customer Premises Equipment), outdoor unit (BUC - Block Up Converter and LNB - Low Noise Block), antenna or anything else related to remote site.

5.5 AFTER SALES SUPPORT

During the term of the contract, CUSTOMER will have the support of a Project Manager appointed by Phase3 Telecom. The Project Manager will be CUSTOMER interface with Phase3 Telecom and will be responsible for all after-sales activities involving from the installation of the network to the periodic assessment of the service quality levels agreed upon in the contract.

5.6 FIELD MAINTENANCE SERVICE AND TECHNICAL SUPPORT

The services will be available 24 hours a day, 7 days a week (24x7).

The Phase3 Telecom Help Desk will be the 2nd & 3rd level (L2/L3) support of CUSTOMER and will be available through our call center.

That is, the end users of the service shall contact PHASE3's Call Center, which will be the 1st level (L1) of support and will direct the call to the YAHCLICK Help Desk if all procedures for recovering communication with the business unit have not worked.

Help Desk will register the occurrence, execute a checklist and, if necessary, can direct the occurrence internally to the engineering team, characterized by the 3rd level support.

The HELP DESK receives calls from the CALL CENTER on a 24 x 7 basis; however, it only triggers the field service according to the contracted SLA, that is, according to the contracted period.

5.7 SUPPORT PORTAL

Phase3 Telecom will provide CUSTOMER with a support portal that will be used to direct all of its requests during the term of the contract.

Through the portal, PHASE3 may request installation activities, relocations, cancellations, speed changes, among others.

All requests will be processed electronically generating standardization, avoiding the need to exchange roles and improving the efficiency of the relationship between the two companies.

6 BUSINESS CONDITIONS

6.1 COMMERCIAL CONDITIONS OF THE SERVICE

- Prices are valid for a 12 (twelve) months contract.
- 6 months payment in advance

6.2 GENERAL CONDITIONS

- Prices are valid for the scope described in this proposal.
- Prices are subject to confirmation of contractual terms and conditions.
- All applicable taxes are excluded in the prices shown.
- Bandwidth offered in this proposal is subject to availability at the time of purchase order received from customer.

6.3 VALIDITY OF THE PROPOSAL

- This proposal is valid for 30 (thirty) days