NCC
NIGERIAN COMMUNICATIONS COMMISSION

VALUE ADDED SERVICES
AGGREGATOR FRAMEWORK

November, 2017

INDEX:

Introduction

INTRODUCTION

This framework for the control and regulation of the VAS industry in Nigeria is developed in pursuant of the Nigerian Communications Act, 2003 which empowers the Commission to make subsidiary laws as it deems fit for the purpose of achieving the objectives of the Act. The framework is not totally modelled after any country's regulatory style or practice, nor does it seek to re-invent the wheel. It was synthesized and adapted to the prevailing economic, social and regulatory conditions in Nigeria and recognized the international Best Practices in its formulation.

CHAPTER 1

STRUCTURAL FRAMEWORK FOR VALUE ADDED SERVICES (VAS)

1.1a **MARKET SEGMENTATION**:

The VAS subsector of the telecommunications industry employs horizontal segmentation in line with the value chain. These consist of four broad segments with the following corresponding market players:

Segment 1: Network operators

Segment 2: Aggregators

Segment 3: Content and application service providers

Segment 4: Developers of content, applications and platforms

1.1 b **EXPLANATORY NOTES ON STRUCTURE**

Network operators will provide final link to the subscriber for the purpose of delivering value added service to the end user. The operators will not be allowed to host or distribute VAS to its subscribers directly.

An aggregator will primarily provide a concentration point to limit the number of devices that will be directly connected to the operators. It will eliminate the need for a Content Service Provider to maintain multiple physical connections to each network operator. It will either not be allowed to host, or distribute contents and applications, nor have access to the information passing through it or perform any data level processing.

Content and applications service providers (present VAS licensees) are the only players that will be allowed to pool, host and distribute content and applications using their own in-house software and hardware platforms. They will have direct logical links to operators network. They will not be physically linked directly to the operators, but will have to go through aggregators.

Developers are unlicensed, freelance creators of content and applications or those who have franchise on such value added services. They are however not licensed to distribute such services. They also do not need a license from the Commission to market their products, other than simple registration.

1.2.   There will be no limit to the number of content and application service providers to be licensed by NCC. The number of active participants in this segment will be left to market forces.

1.3   Companies who presently hold a VAS license issued by the Commission will not need to apply for any new license but will operate in segment 3 above as content and application service providers. They will be required to upgrade their facilities to meet the technical specifications stipulated in the technical framework within twelve (12) months of the coming into effect of this framework. Also, they will no longer have direct physical connection to the network operators.

FUNCTIONS AND RESPONSIBILITIES OF MARKET PLAYERS

1.4   Network Operators

(a)   Provide termination service to Aggregators and transmit request for service from subscribers to content and application providers through aggregators. They must possess a Digital Mobile License, Unified Service Access Service License (UASL) or any other license issued by the Commission which enables the licensee to transmit VAS to end users.

(b)   Protection of subscribers from unwanted and unauthorised value added services in accordance with the Commission's directives and the provisions of this VAS framework.

(c) Provision of billing, revenue collection, publicity and e-marketing services to content and application providers who wish to outsource these administrative services to network operators.

1.5   AGGREGATORS

Core Functions

(a) Provide direct and secure connection to content and application providers for access to all network operators that have the capability to transmit value added services to end users. This service will be limited to multiplexing of signals from various VAS providers and distributing same to all network operators as requested by each content and application provider.

(b)   Provide direct link to the internet or International Data Access service providers for content and application providers who wish to market their services globally.

Auxiliary Services

(a) Provision of collocation services to those requiring it

(b) Provision of billing and revenue collection services to content and application providers especially on the international routes.

1.6 CONTENT AND APPLICATION PROVIDERS

(a) Installation of hardware and software platforms for hosting applications and content.

(b) Hosting and distribution of third party applications and contents.

(c) Installing software for processing, counting and logging request for VAS.

(d) Takes responsibility for billing the customer and revenue collection, either by installing an in-house billing platform or outsourcing it to third parties. The content and application provider may collect payment directly from the subscriber via VAS prepaid voucher or other electronic payment platforms. Revenue collection, branding and advertising can however be outsourced to third parties.

(e) Remission of revenue due to developers based on agreed sharing formula.

(f) Collaborate with developers in determining a reasonable price for VAS products.

(g) Take responsibility for user authentication, traffic management, security, service delivery.

(h) Monitor and manage end-to-end quality of service in conjunction with other market players and taking charge of customer complaints, service level agreements and customer code of practice.

(i) There is no restriction to the types of value added services they can offer except for those that are banned by the Commission. For tele-marketing and e-adverts, they must adhere to the modes of delivery specified by the Commission as stated in chapter 5 of this framework and other conditions.

(j) Must meet minimum technical specifications outlined in the technical framework attached as Annexe 1 to this framework.

1.9 VAS DEVELOPER

(a) A VAS developer must be able to provide valid proof of ownership of an application to be hosted and distributed if required by the content and application service provider.

(b) Take responsibility for obtaining necessary rights, licenses, consent and permissions for content or third –party applications to be hosted on his behalf when required.

(c) Be responsible for payment of all royalties and fees required by third-party owners of content and application. Also it shall be responsible for all fines and legal fees emanating from any litigations arising from a breach of third party copyrights and patents.

(d) Must be ready to indemnify the content and application provider against infringement of third party copy rights, intellectual property rights, patents in respect of VAS content or apps for which hosting is requested.

(e) Collaborate with content and application providers and other stakeholders as necessary in determining product price, taking into consideration development, hosting, distribution and overhead costs.

(f) Take responsibility for the accuracy and correctness of VAS product being distributed and rectify any errors or bugs found in the product.

CHAPTER 2

COMPETITION AND MARKET RULES

2.1   Prohibition of Network operators from Offering Value Added Services:

The Unified Access Service license clearly specifies the list of services the licensee is allowed to offer which does not include Value Added Services.

2.2   Following Clause 2.1 above, operators will not be entitled to common short codes assignment.

2.3   Content providers are free to develop in-house applications and content in addition to acquisition of franchise rights from third-party apps and content developers on condition that market rule 2.4 (b) below is strictly adhered to.

Content and apps providers must not discriminate or show preference in accepting application for hosting on the basis of the source of the product to be distributed. Both in-house products and third party products must be treated equally. VAS developers whose request for hosting has been rejected despite meeting the conditions stipulated in section 1.9 above will have the right to appeal to the Commission for redress. Rejection of hosting requests for flimsy excuses or deliberate restriction of access to third-party applications/content in order to give advantage to in-house content/ apps will attract sanctions.

2.4 (a) Network operators and content/application providers are barred from full or partial ownership of aggregator companies.

(b) The provision of the Nigerian Communications Act, 2003 (section 31.1) barring any company in Nigeria from offering any telecommunications service without appropriate license applies equally to value added services. These include location-based services, commercial ring tones and ring back tones, music downloads, mobile money e.t.c.

(c) Switch-generated ring tones or caller ring back tones and other features such as call forwarding, multi - party conference call etc which are offered to subscribers without extra charges will not be classified as value added services.

2.5a   COST RECOVERY FROM TRANSPORT COST

Network operators are allowed to recover all network resource costs associated with the conveyance of VAS from the channel occupancy fees, such as transport cost, paid by the subscriber. All services conveyed by SMS or voice shall be at the rate set by the Commission or not beyond the price cap fixed by the Commission.

(b)   All transport cost associated with the conveyance of VAS shall be paid directly to the network operator by the subscriber; either via SMS cost or data charges

(c)   Charges for transport and VAS product shall NOT be bundled together under a combined tariff plan.

(b)   The content and application provider can offer a VAS free of transport cost if there is a prior mutual agreement between it and the network operator.

(c)   The operator can also offer free SMS or data service to a subscriber for the purpose of accessing any VAS product or other services.

(d)   Where data, SMS and voice are offered as a bundle by the network operator, the two customer accounts must be credited separately with the equivalent value of each bearer service (number of sms messages + minutes of voice in one account and volume of data into the second account) or their monetary equivalents

(e)   Transmission link cost: The cost of transmission link from application and content provider to aggregator and from the aggregator to the Network provider's access point shall be regarded as part of the overhead cost. The subscriber must not be charged separately for the service.

2.7   Payment for additional commercial services provided by network operators:

In addition to transport cost, the network operator shall bill the content and app provider separately for any additional services provided or tasks perform in connection with the provision of value added services e.g. advertising, revenue collection, power supply or lease of space or equipment at access points e.t.c

2.8   **BARRING OF FIXED CHARGES**

No monthly or annual fixed charges for bearer, channel or access cost shall be imposed on any access partner in addition to usage-based charges. Charging model shall be usage-based or subscription type, but not a combination of the two.

2.9   If the aggregator collects VAS product charges from the user directly via VAS recharge card/voucher or other mobile payment methods, it must settle the network operator for additional services or other access partners within agreed time frame failing which the partner owed will be entitled to interest charges.

2.10   **UNDELIVERED VAS**

(a)   Where the subscriber's request for VAS is successfully delivered to the Content provider and it fails to deliver the VAS product to the subscriber, the content provider must pay for the transport cost. It will pay the operator the transport cost for the message already delivered while the operator refunds the transport cost already paid by the subscriber.

(b)   Where the VAS payload is successfully handed over to the network provider, and it is unable to deliver it to the subscriber, the operator must not charge the subscriber any transport cost.

(c)   The content and application provider must not charge the subscriber for VAS until there is a confirmation that the VAS payload has been successfully delivered to the subscriber.

In all circumstances the subscriber must not be charged for a service that was not rendered

2.11   **CONDITIONS FOR VAS ACTIVATION**

A request for hosting must be granted if the developer satisfies the following conditions:

(a)   If the developer provides a legally enforceable guarantee against infringement of third-party copyright, patents and intellectual property rights if required by the content service and app provider.

(b)   The VAS belongs to the class of VAS that the Commission defines as being qualified for short code allocation

2.12   **CONDITIONS FOR VAS DE-ACTIVATION**

A content and app service provider is allowed to de-activate a VAS being hosted if any of the conditions below is satisfied:

(a) If the developer so requests or if there is mutual agreement between the two parties.

(b) If the VAS does not generate any revenue for three months continuously

(c) If the revenue generated does not cover the cost of hosting for a period of 6 months

(d) If it is discovered that the developer has obtained access through false information or via a fraudulent process

(e) If there is a proven case of third –party intellectual property rights, copyrights or patent violation that is not resolved within 90 days

(f) If the VAS is found to contain errors or bugs and the VAS developer fails to make necessary correction within 14 days of a written notice being given.

2.13 DENIAL OF VAS ACTIVATION OR ILLEGAL DE-ACTIVATION

Where a request for access is denied or there is illegal de-activation of an already hosted VAS, the aggrieved party has the right to appeal to the Commission.

2.14   Adverts for VAS must indicate that transport cost will be charged as extra in addition to the VAS product cost.

CHAPTER 3

CONSUMER ISSUES

3.1a   Separation of customers' VOICE and VAS accounts:

Network operators are to maintain two separate pre-paid accounts for customers as follows:

ACCOUNT 1: Voice and SMS

ACCOUNT 2: Data and VAS

(b)   The subscriber should be given the option of loading credit into both accounts via a single recharge channel or via separate recharge channels

(c)   The subscriber should also be allowed to move credit between his two accounts.

(d)   Only the subscriber is allowed to move credit from one of his account to another

3.2(a)   No network operator is allowed to deduct money from a customer's Voice/SMS account to pay for a value added service or use credit balance from data/VAS account to pay for voice /SMS service.

(b)   No operator or aggregator is allowed to debit a customer's VAS account to pay for a value added service without a verifiable opt-in and subscription request from the subscriber.

(c)   Where an operator collects revenue on behalf of an aggregator, both the network operator and aggregator will be jointly liable for a breach of any of the above conditions.

3.3   **DO-NOT-DISTURB LIST:** Operators are to establish a central database into which subscribers can deposit/register their phone number for the purpose preventing the reception of any form of advertisement. Operators and aggregators are to ensure that no adverts are sent to any telephone number on the database.

3.4   **OPT-IN DATABASE**: Operators and content service providers are free to create opt-in database for registration of telephone numbers of subscribers who are not opposed to advertisements being sent to their telephones. This category of subscribers can be sent adverts by any mode of delivery that has not specifically banned by the Commission. There

will also be no limit to the number of adverts that can be delivered to such customers. The subscriber can opt in and opt out.

3.5   **NEUTRAL SUBSCRIBERS:** Subscribers whose number are neither in the do-not-disturb list nor the opt-in database can be sent adverts but only through the modes of delivery specified in section 5.1(a) to 5.1(d) below

3.6   All mobile adverts must be clear, simple   and unambiguous. They must also contain all information required by the subscriber in order to make informed decision about a purchase. The price quoted in a VAS advert must clearly state the quantity of content per unit cost or period of time covered by a subscription e.g. =N= 50 per download or =N= 50 per month/ per quarter/per annum for a ring back tone.

CHAPTER 4

REVENUE COLLECTION AND SHARING

SEPARATION OF TRANSPORT COST AND PRODUCT COST

4.1   A value added service is a distinct software-based service to which a monetary value can be attached; whether an application or content. A VAS will be classified as a commoditized product for the purpose of this framework. VAS as a product consists of a collection of bits representing coded instructions on how to perform a task or data/information in digital format. This collection of bits is also referred to as "payload" and the cost of the payload is referred to as Product Cost

4.2 (a)   Transport: A VAS product, being a collection of data bits, has to be transferred from a digital store in a remote location to the buyer's telephone set wherever it is. This transfer is done via a telecommunications network at a cost. The cost is referred to as transport cost or channel occupancy cost.

   (b)   Thus, transport cost is the channel occupancy or bearer cost associated with the forward delivery of subscriber request to VAS aggregator and the backward transfer of VAS payload to the subscriber in response to his request.

   (c)   Transport cost belong entirely to the network operator and must be paid directly to the operator by the subscriber.

4.4. (a)   For prepaid customers, transport cost should be debited to the voice/SMS account if the request is made by SMS to a short code or from the data account if it is an application.

   (b)   Cost of transporting the payload should be recovered from the Data/VAS account of the pre-paid customer

   (c)   All internet-based forward and backward transport cost should be recovered from the data/VAS account.

   (d)   A customer with no credit in his VOICE/SMS account must be prompted to load more credit before making request for VAS via SMS. A customer with no credit in his Data/Vas account should be prompted to load credit into Data/VAS account before VAS requested for can be paid for and transported.

UNBUNDLING OF PRODUCT COST

4.5 (a) Below is a breakdown of the components that make up the product cost, the price at which the VAS is sold to end users (direct and overhead costs). Included is the suggested weighting allocated to each cost component.

(i) Development cost: conceptualization, R&D, intellectual property,

Source code, third-party licences, upgrades e.t.c   50%

(ii) Hosting cost: servers, UPS, hosting platform software, firewalls,
      call logging etc   20%

(iii) Aggregation / Distribution cost: VPN, fibre cable, multiple
       transmission links from aggregator to operator networks   10%

(iv) Branding and advertising   10%

(v) Billing , revenue collection and accounting   10%

(b) Revenue from product sales can be shared according to the above formula depending on the specific functions performed by each stakeholder. The developer will normally outsource hosting, marketing, distribution and accounting to the content service provider, aggregator or network service provider as desired.

(c) The percentage allocated to each cost component can be adjusted as necessary since cost structure vary from product to product.

(d) Additional direct or overhead cost components can be captured and factored into the above sharing formula as mutually agreed by partners

(e) The above cost allocation weights are based on estimates and international benchmarks, final figures will be left as a commercial agreement between stakeholders. NCC does not intend to intervene in this determination unless prevailing conditions dictate otherwise.

4.6   REVENUE COLLECTION MECHANISMS

The content owner can engage the services of the aggregator or the network operator in collecting revenue for the service through the customer's prepaid/post-paid data/VAS account. The operator thereafter credits the developer or aggregator based on services rendered by each party in line with the revenue sharing formula and above guidelines.

The aggregator can collect the VAS product cost directly via credit /debit card, pay pal, VAS prepaid card, Mobile Wallet or other e-payment mechanisms. The aggregator will thereafter credit the developer its own share of the revenue. Also, the operator is paid for any additional service rendered, if any.

4.7 CHARGING PROCEDURE FOR VAS

The following charging models are approved by the Commission:

(a) **Subscription-based charge**: a fixed amount is paid to cover a period of time. The frequency at which the subscriber receives the information or alert will be clearly stated. The cost of transportation is charged as extra and goes to the operator while the subscription service revenue goes to developer/ the aggregator

(b) **Pay per Access**: The user pays a fixed amount each time he is given access by the owner or for each download. This is usually a pull service in which the subscriber initiates a request for service.

(c) **Time-Based Charging:** Price paid for the product by subscriber is proportional to time spent in using the application on line e.g. on-line games, chatting etc This is in addition to the air-time or data cost paid to the network operator for the duration of the on-line access.

Method used and revenue distribution among stakeholders will be left as a pure commercial agreement between stakeholders

(d) Revenue due to an operator for services rendered in respect of VAS product is in addition to revenue accruing from air time, SMS or data services associated with VAS services offered i.e transport cost.

4.8 REMITTANCE OF REVENUE TO OTHER PARTIES

Each access agreement between stakeholders should include time limit for settlement of revenue accruable to each party and interest payable where there is a breach.

CHAPTER 5

TELE-ADVERTISING AND E-MARKETING

5.1 Advertising will mean non-confidential promotional messages directed towards providing marketing information on products, goods and services. Network operators and aggregators have access to the content of such adverts since they are meant for public consumption.

   (a) Advertisement and e-marketing are allowed on the network. However Network operators and Aggregators must adhere to the following:

5.2 For those not in the list mentioned in 3.3 above, adverts can be conveyed to them only via the following non-intrusive delivery modes:

   (a)   In-call attachment in the form of audio or text messages during ringing or holding period.

   (b)   End-of-call attachment: SMS or graphic messages sent at the end of a call

   (c)   Video or text attachment during a multimedia or video messaging session, internet access or VAS access.

5.3 The above delivery methods mentioned in 5.2a - 5.2c do not require sending the caller's identity along with the advert. Since the operator is allowed access to the contents of the adverts, it will be liable for any indecent, subversive, obscene messages or any material that is not in accordance with the provision of the Law.

5.4 On-line yellow pages or directory

5.5 **BARRING OF ROBOT CALLS EXCEPT FOR THOSE IN OPT-IN DATABASE**

Audio push adverts that come in via audible alerts when the subscriber has not by himself initiated access to the network are hereby barred for those not in the opt-in database. These include robot calls and machine initiated audio calls.

5.6 New modes of advert delivery that may be developed in future can be allowed on the network but subject to approval by the Commission.

5.7   The condition on advert apply equally to advert messages originating from operators'
        networks for the purpose of advertising their own in-house products such as data bundles,
        promotions, offers including those accessed through USSD short codes.

5.8   All adverts on the network must comply with other government laws or regulations on the
        contents of advert messages.

CHAPTER 6

MESSAGING SERVICES

6.1   A message is defined as a confidential or personal information being sent through a telecommunications network. The mode of transfer can be any of the following:

(a) One-to-one or person-to-person

(b) Corporate messages, one-to-many such as alerts, emergency or operational information.

6.2 (a)   Operators are not expected to have access to the content of these category of messages, but they would normally have access to the source and destination numbers (I.D.) for routing and credit check purposes.

Personal one-to-one messages sent using a telephone handset must be accompanied by a valid sender's numeric MSISDN identity and duly registered SIM.

(b)   Any one-to-one SMS or MMS message not accompanied by numeric ID must not be accepted by the originating operator and must not be forwarded to the subscriber by the terminating network operator. These include messages coming through the internet, international gateways or local interconnect partners.

6.3   Operators and aggregators are not allowed to have access to the content of one-to-one or corporate messages, hence they shall not be liable for any infringement of laws/ regulations relating to obscene, subversive or illegal messages. Network operators are expected to inform their international carriers or roaming partners that messages arriving in Nigeria without valid sender's number will be blocked.

(a) **BULK SMS**: This is a special form of broadcast, one-to-many, which is targeted at a restricted audience, and usually contains non- confidential information. All bulk SMS messages must be accompanied by the registered MSISDN of the sender. The name of the sender or other alpha numeric ID can accompany the message in addition to the mandatory MSISDN number. Aggregators are allowed access into the content of bulk SMS messages being sent via their messaging platform, consequently they shall be liable to any messages sent without a valid sender's numeric identity. Terminating network operators must not allow any bulk SMS message without sender's ID to be delivered to the subscriber.

SMS information messages can be sent to all categories of subscribers as long as they are not marketing information. Marketing messages sent via SMS platform can only be delivered to those on the OPT-IN list.

Bulk SMS can be used to deliver marketing messages only to those in the opt-in list, as long as the registered MSISDN number of the sender accompanies the message

Network operators must not allow any bulk SMS message without a valid MSISDN number to be delivered to the subscriber.

CHAPTER 7

PROVISION OF ACCESS

7.1   Each segment of the VAS value chain needs to interface with adjacent segments for a bi-directional exchange of information. The provision of access is necessary in order to provide an end-to-end service to the subscriber. The following are the guiding principles:

7.2   **Basic Requirement for Access:** All aggregators and network operators licensed by NCC have the right of access unto the VAS provisioning facility of other licensees in adjacent segments of the VAS value chain or licensees whose services are required in order to complete a service already initiated by another licensee. Denial of access is prohibited as long as basic requirements are met.

The categories of access referred to are as follows:

(a) VAS developers access to content and application service providers' hosting facilities.

(b) Content service and application providers' access to aggregators transmission facilities

(c) Aggregators' access to telecom operators network.

7.3   Only aggregators for now are allowed to have direct physical connection to local network operators.

7.4 `   Content service providers and network operators are required to capture the following data about every VAS transaction processed:

(a)   Telephone number or identity of the device making request for VAS

(b)   Identity of the VAS aggregator responding to subscriber's request

(c)   Type of service or identity of value added service (e.g. short code)

(d)   Date and time the request was made and when it was responded to.

7.5   The above records should be kept for a period of at least 3 months.

7.6   All market players granting access or exchanging access with other licensees must sign an agreement that clearly sets out the conditions for access for all access categories mentioned in paragraph 6.1.

7.7   A sample of the agreement should be submitted to the Commission for comments prior to it coming into effect. Note that it is not every agreement made with other licensees that would need to pass through the Commission before being executed, such agreement will be presented for filling and mediation purposes.

7.8   Any market player whose request for access is denied or delayed for more than Sixty (60) days has the right to appeal to the Commission for intervention.

7.9   The core function of aggregator:

   (a) Aggregator's primary service is to aggregate VAS payload from various Content and app service providers and to distribute such to any network service provider as may be requested by the access partner.

   . (b) Aggregators must connect to network operators through at least two independent transmission links or two independent data-center cloud environment to ensure resilience and reliability.

   (c)   Aggregators are not expected to perform any deep packet inspection or data-level processing when providing transmission services. Access to the signals should be limited to inspection of destination address for routing purposes only. The mux/demux equipment or routing procedure should be flexible enough to enable a VAS payload from a particular aggregator to be selectively directed to a specific operator or selected number of network operators based on VAS providers request.

7.10   Each Content and application service provider must connect to network operators through at least two aggregators to improve reliability.

7.11   Content providers are expected to connect to the aggregators via at least two independent transmission links to ensure that the 99.5% availability specified in the technical conditions are met.

7.12   Network operators and aggregators are not allowed to route traffic to and from illegal numbers or delivering content to such numbers, unless if such numbers are assigned by the Commission.

DEFINITION OF TERMINOLOGIES

Alpha caller ID: A string of letters indicating the source of an SMS message which cannot be recognised by the switch for routing a call back message.

Application services are interactive software platforms that receive, process and route messages sent to applications /content hosting platforms via short codes.

Caller ring back tone: Audible signal sent by the operator to the calling party when the called number's telephone is ringing. This is normally selected by the called party or the operator.

Filters: Software-based information snooping devices used to intercept illegal information, spam or for enforcing business rules in a telecom network mostly through key words.

GPS – Geographical positioning system: a satellite-based system for determining the position of any object on the surface of the earth using its latitude and longitude.

IVR -Interactive voice response.

IVRS- interactive voice recognition system

Location-based services:

(a) GPS-based: Location identification using satellite constellations based in space. E.g. European Galileo System
(b) Cell-ID based: Position determination based on the location of the mobile operator's cell site from which the caller is connected to the network

Market Player: Any company that is involved in providing service in any segment of the value added service value chain

Middleware: a software designed to mediate between two incompatible applications or to add supplementary functions such as billing, access authorisation, traffic flow control etc.

Mobile VAS modes: the various combinations of sources and destinations of VAS transactions. These include person-to-person, person- to- application, application-to-person and machine-to-machine.

MNO: Mobile Network Operator

Music Download: a full-track musical release downloadable from music streaming websites.

Pull service: user-initiated call or message for requesting the delivery of a value-added service.

Push service: operator-initiated delivery of a value added service whether unsolicited or in fulfilment of a subscription-based value added service.

Product cost: the sum total of various costs associated with the development of a software product such as intellectual property cost, development of algorithm, coding, testing, debugging, documentation marketing and other overhead costs.

Ring tone: an audible signal sent by the operator to a subscriber to alert the called subscriber of an incoming call. This can be selected by the receiving party.

Subscriber-related data: information peculiar to a specific customer relating to his or her usage habits, preferences, behavioural data, real-time data, location and historical information.

Short code is a number that is shorter than the average national telephone number, usually 6 digits or less. Unless otherwise indicated, reference to short code in this document connotes the same meaning as common short codes, i.e. short codes available across many mobile networks.

SMS – Short Message Service

Transport cost is the channel occupancy or bearer cost associated with the forward delivery of subscribers request to the VAS provider and backward transfer of VAS payload (down loading) from the content and apps service provider to the subscriber through the network.

Developers are creators of content and apps who own the intellectual property rights, copyrights or franchise on contents and applications being offered to the public.

Content and Application Service Providers: are owners of software platforms and hosting facilities capable of processing request for value added services and responding to such requests.

Product cost: the development cost (conceptualization, algorithm, coding, debugging, testing, documentation) and overhead cost (hosting, distribution, marketing) associated with an application or content being purchased over the mobile telecom network

VPN- Virtual private network: A transmission link leased from a public transmission network which is protected by password so that it can only be accessed by one entity.

WASP: Wireless Application Service Providers

Definition and Classification of VAS:

Value added Service (basic): any network-based service other than voice conversation that is provided in the form of text, video, graphics, picture, multimedia or data for the purpose of conveying information or executable content either downloaded or accessed on line and normally at extra cost

The following classes of services are recognised as value added services**;**

Information services/Content: news, updates, data, quiz, games, ringtones, video streaming, alerts, product information, call center, database access

Interactive services/ applications: charting, contest participation, e-voting, e-government, text –to-win, polls and surveys, coupons, on-line games, promotions, prepaid calling card service, call directory, location-based services

Commerce: e-banking, mobile money, e-health, telemarketing, e-ticketing

The list is not exhaustive as new value added services are being developed virtually everyday. However, in general, VAS are usually external third-party hosted functionalities which are physically and logically not part of the switching or signalling fabric of the telecommunications network.

ANNEX 1

TECHNICAL FRAMEWORK FOR VALUE ADDED SERVICES

INTRODUCTION

This framework addresses the various technical issues and specifications that must be adhered to by VAS Hosting Service providers. They refer to the performance characteristics of servers, memories and various subunits that are deployed to provide value added services.

1.0 ADHERENCE TO OTHER RELEVANT TECHNICAL SPECIFICATIONS PUBLISHED BY THE COMMISSION

The interconnection of VAS Hosting Service Providers to network operators should be guided by the other relevant regulations published by the Commission

2.0 ACTIVATION AND DE-ACTIVATION

Messages for activating and deactivating value added services must be clear and unambiguous.

TECHNICAL PERFORMANCE

3.1 Metering and call logging must be done by all the parties interconnected in order to simplify accounting and revenue sharing.

3.2 Adequate bandwidth must be provided between all interconnecting parties in order to ensure that Quality of Service parameters are met.

3.3 Interconnection: Unless where the two parties are physically located in the same premises or cloud computing environment, interconnection between any two parties must be done through at least two independent trunk service providers.

4.0 QUALITY OF SERVICE (QOS) STANDARD FOR VAS PROVISION

Players that provide content services must adhere to the following minimum operational standards.

- Bit Error Rate: The bit error introduced by the network or hosting platform must be such that will not introduce noticeable degradation in the quality of the message

being conveyed through it, especially for video streaming and mobile banking services

- Access Time/ log-in time   should be at most 5 seconds

- Download Speed: systems handling VAS should be dimensioned to ensure that the download speed is high enough to avoid subscriber apathy

- Processor loading: Processing units should not be loaded beyond 75% of their rated capacity

- Dropped Access: maximum of 10 in a million request messages.

- Content service providers must make 24- hour customer helpline available via toll-free telephone lines, SMS or e-mail

4.1 RESPONSIBILITY FOR QUALITY OF SERVICE

Each service provider in the VAS value chain is responsible for quality of service in its own segment of the network, i.e. Mobile Network Operator, Aggregator and Content service provider, is to monitor network performance data at the interface points. Disparity in quality of service can be easily detected and necessary corrective measures taken

5   SYSTEM CAPABILITY

5.1 The server must be able to count the number of access/downloads received by each content loaded into the server**.**

5.2 The licensee's hosting platform must be capable of generating separate bills for a group of content/apps that are accessed through the same short code. This is to make it unnecessary to assign short codes to multiple or similar contents belonging to a VAS developer. For example, 40 song titles belonging to the same Musician should be accessible through a single short code assigned to the musician. Thereafter, each song can be differentiated by using internally generated codes.

5.3 Aborted content download: where a download was started and aborted midway by VAS provider or operator, either deliberately or not, the consumer must not be charged for the service.

6.0 ACKNOWLEDGEMENT OF MESSAGE DELIVERY

Handshaking procedures must be established between the VAS providers and the Mobile Network Operator through the Aggregator. There must be an acknowledgement of messages sent in either direction across the interconnecting interface.

7.0 REFUND

When there is need to grant a refund to the subscriber, it should be done via the same medium that the subscriber used in paying for the service and the subscriber must be notified.

8.0 MINIMUM PERFORMANCE SPECIFICATIONS FOR THE CONTENT/VAS HOSTING AND DELIVERY FACILITIES OF HOSTING SERVICE PROVIDERS

(a) Hardware Platform; Server/memory bank and associated database management system with the following capacities; Content and application service providers   30 Gbytes

(b) Total transmission bandwidth for connection to multiple operators; Aggregator at least 1 GBits/sec

(c) Performance criteria/traffic handing capacities for Content providers responding to customer requests:

(i)   No of concurrent users

5,000 for normal VAS

20,000 for lottery, sports betting

(ii)   On-line transaction processing;

100 transaction per second for normal VAS

500 transaction per second for lottery and sports betting

(d)   Users and system support facilities;

Aggregator service provider shall provide the following services to the subscribers.

i.   Access via SMS, IVR, downloadable app and portal
ii.   Account management
iii.   Credit Balance enquiry

iv.   SMS log report

(e)   95% availability of service

The capacity of the transmission links and access facilities with network operators or aggregators must be upgraded as traffic volume increases in such a way that the overall network quality of service does not deteriorate with time due to increasing traffic.

ANNEX 2

FOOTNOTES ON VAS FRAMEWORK

(a) The provisions of these framework, especially as it relates to structure, shall not for now apply to Mobile banking services. The providers of these services are directly licensed by the Central Bank of Nigeria, hence present operational status is maintained.

(b) Large VAS providers, such as e-commerce sites that generate a preset level of traffic may be granted content service license that will enable them connect directly to network service providers for the transfer of their own in-house traffic alone.

(c) The implementation of these guidelines will be spread over a period of six(6) months to ensure seamless transition. Those offering services that they are not licensed for must wind down within this period. Application for new licenses, setting up subsidiaries, installing new infrastructure, technical and procedural alignment of access will also take place during this transition period.

 (d) Self-regulation: The 'Industry Code of Practice' being developed by the Industry working group on VAS will form an addendum to the framework. The report will address outstanding issues such as Short codes plan, the management of short codes, advertising ethics, use of long codes/premium numbers for VAS, Vanity numbers etc. However, pending harmonization, the provision of the framework shall take precedence.

(f) Telecommunications is a fast-changing and technology-driven industry where new issues arise at regular intervals. It is therefore impracticable and unrealistic to establish future-proof regulations that will be applicable to log-term industry dynamics. The Commission will constantly monitor the market and address new technical, commercial and competition issues as they arise including disruptive technology-enabled services like OTT and other such matters. Industry players are also encouraged to bring emerging issues to the attention of the Commission for regulatory intervention and also to seek clarification on ambiguous issues or matters on which the framework is silent, rather than risk regulatory infraction by taking things for granted or making assumptions.