

ELECTRONIC COMMUNICATIONS  
(AMENDMENT) BILL, 2016

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ARRANGEMENT OF SECTIONS

*Section*

1. Section 20 of Act 775 amended
2. Section 73A inserted
3. Section 101 of Act 775 amended

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**BILL**

ENTITLED

ELECTRONIC COMMUNICATIONS (AMENDMENT)  
ACT, 2016

AN ACT to amend the Electronic Communications Act, 2008 (Act 775) to provide for clearing house services through the Interconnect Clearinghouse and to provide for related matters.

PASSED by Parliament and assented to by the President:

Section 20 of Act 775 amended

1. The Electronic Communications Act, 2008 (Act 775) referred to in this Act as the principal enactment is amended in section 20

(a) by the substitution for subsection (1) of

“(1) A network operator or service provider shall provide interconnection of its electronic communications network, service or application through the Interconnect Clearinghouse and shall comply with guidelines and standards established by the Authority to facilitate interconnection.”; and

(b) by the repeal of subsections (3) to (7).

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Section 73A inserted

2. The principal enactment is amended by the insertion after section 73 of a new section 73A

“ Termination of an international call

73A. A network operator or service provider who willfully or negligently fails to prevent the use of its subscriber identity module or user identity module for terminating an international call on any network in Ghana as a local call commits an offence and is liable on summary conviction to a fine of two thousand penalty units per day for each subscriber identity module or user identity module used in terminating the international call as a local call.”.

Section 101 of Act 775 amended

3. The principal enactment is amended in section 101 by the insertion after “harmful interference” of

“ “Interconnect Clearinghouse” means the interconnection system established pursuant to section 20 of this Act ;”.

Date of *Gazette* notification: 3rd February, 2016.

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MEMORANDUM

The purpose of this Bill is to amend the Electronic Communications Act, 2008 (Act 775) to provide, among others, for clearing house services through the establishment of an Interconnect Clearinghouse. Mandatory interconnection through an Interconnect Clearinghouse is a regulatory mechanism being deployed by the National Communications Authority to address some of the current regulatory, technical and financial challenges related to interconnection in the electronic communications industry. The primary objectives of the introduction of a clearinghouse are to assure cost effectiveness in interconnection, reduce the cost of interconnection and facilitate interconnection for emerging service and application providers and thereby make service delivery affordable to subscribers.

The existing interconnection scheme used by operators is the peer-to-peer interconnection system. Under this regime each service provider directly connects some of its switching centres to the switching centres of another service provider within the same geographic location. This links one electronic communications service to another to allow communication between them.

Under the peer-to-peer interconnect scheme, the number of independent links required to connect each operator with six operators interconnecting in Accra is fifteen. There are however thirty-two links between operators in Accra due to the multiple switch locations of some operators and therefore less efficient use of point of interconnects resulting in complexity in the network architecture. When the direct links between operators are broken or disrupted, the process of rerouting calls through alternative paths becomes complicated since alternative routes may not be able to carry all the traffic of the affected route.

Under the existing system, there is insufficient interconnection capacity. Some operators have had difficulties expanding their interconnect routes to other networks. This has led to severe congestion on those routes and networks and has also affected the quality of service of the calls made on them.

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Currently, service providers use several technologies and equipment types and in some instances this has led to stand-off among operators where one operator wants to interconnect on a certain scheme which is different from the one preferred by another, not to mention the associated increase in capital expenditure. This has led to situations that caused delays in expansion that affected the quality of calls to those networks. As the number of links required increases under the peer-to-peer scheme, so does the problem of interoperability of equipment types, which consequently delays expansions to improve quality of service.

Under the peer-to-peer system there are difficulties to reconcile call detail records under dispute. Coupled with the current complex interconnection architecture the difficulties of call data records reconciliation have led to some operators being burdened with high interconnect debt rates primarily because of the lack of a third party to facilitate accurate reconciliation where interconnection rates are disputed. Therefore there is a need for transparent unbiased reconciliation for the industry which the new system will provide.

The costs of interconnection under the peer-to-peer scheme have been rising and there are anti-competition practices. New operators or new expansions are delayed for as long as one of the operators may choose to delay in allowing access to connectivity. The new system will address these concerns.

Interconnection through an interconnect exchange operator will lead to network simplicity and will avoid the spaghetti network architecture and enhance efficiency. An Interconnect Clearinghouse system will drastically reduce the number of interconnects. This will save the operational funds required by existing and new operators to build a new link. The cost of monitoring, maintaining, and upgrading the interconnect links will also be saved when calls are routed through the interconnect exchange operators.

Under the new system, the exchanges of a service operator will only be responsible for analyzing and routing calls within their network. This will simplify their operational and co-ordination problems. The inter-

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connect exchange will take over the load of digit analysis for every inter-operator call and inter-circle call from the exchanges connected to it. This will lead to the faster switching of calls and will guarantee higher levels of quality of service. There will be simple, cost-effective and reliable points of interconnection and as the peak traffic period of different services is not identical, an interconnect exchange will help to create more efficient usage of the point of interconnects. The rationalisation of hardware and software used with the new system will be more cost effective, efficient and uniform for the service providers.

Interconnect exchange service awareness will enable support of services such as Voice over Internet Protocol, video, rich multimedia content, messaging applications, mobile video messaging and various data services with an increasing higher quality and reliable level of service.

The Interconnect Clearinghouse system seeks to address the challenges faced with the existing interconnection scheme and take advantage of the opportunities of a centralised national platform to address other industry challenges such as the lack of technical redress to the issues of stolen phones, uncertain subscriber identity and to facilitate connectivity with other platforms.

When fully implemented, the Interconnect Clearinghouse operator will among others provide an efficient billing, and payment settlement process with a verifiable call detail record. It will provide a reliable, efficient and scalable network that will lead to the reduction of cases that require mediation by the National Communications Authority. It will provide cheaper service delivery to subscribers as a result of the gains made when the cost of doing business is passed on to a subscriber in the form of lower tariffs. It will provide full interoperability of various technologies and classes of service by various service providers.

The Interconnect Clearinghouse will operate a common platform to monitor traffic volumes in the country, operate the Centralised Subscriber Identity Registry and provide a common infrastructure for government agencies to host information communications technology systems and applications and store confidential data securely.

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The use of the Interconnect Clearinghouse will generate much needed revenue for the Government through a number of ways. The Interconnect Clearinghouse will for instance contribute to reducing significantly the diversion of revenue through simboxing. The Interconnect Clearinghouse infrastructure, among its functions, will ensure effective active detection of simbox fraud, which has plagued the communications industry and resulted in huge losses of revenue to the Government. The infrastructure to be deployed by the Interconnect Clearinghouse will also ensure that there is accurate record of all off-net (interconnect traffic) calls such that the actual volume of traffic passed between the telecom operators will be properly ascertained leading to an accurate declaration of revenue by telecom operators to Government. The Interconnect Clearinghouse will further prevent loss of revenue to Government.

Telecom operators in Ghana currently depend on international clearinghouses for the settlement of all roaming and international traffic. With the establishment of the Interconnect Clearinghouse this service will now be provided locally in Ghana to create local employment and lead to the development of ICT expertise. Value added services will also be localised. Currently this is not happening because some of the services are being provided to local operators by interconnect exchanges outside the country.

The introduction of the Interconnect Clearinghouse will improve the third party value added service provision, mobile aggregation and reduce the issue of non-transparent revenue share agreements which exist between content providers and mobile network operators. Content providers will have a single point of connection to the other service providers for service delivery. It will positively impact the issuance and allocation of short code numbers and other numbering resources that are being developed.

As regards local content, the Interconnect Clearinghouse will help to build this. This is because local originated or generated content by application service providers will be offered directly to subscribers or in partnership with service providers which is currently not the case with the peer-to-peer system.

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Mandatory interconnection is required under the new system especially to facilitate dynamic asymmetric interconnection rates across the industry on a monthly basis. This will avert the rising cost of interconnection between service providers because of the high capital expenditure of connecting six operators with multiple switch locations in different cities as well as the high operating cost of this low utilisation between service providers. The mandatory interconnection will save Government the current cost of investing and operating revenue assurance systems on national and international interconnect traffic.

The proposed amendment in the Bill replaces the obligation of a network operator to provide interconnection of its electronic communications network with the network of another operator under the peer-to-peer-system in section 20 (1) of Act 775. A network operator by virtue of the amendment is mandated to provide interconnection of its electronic communication, service or application through the Interconnect Clearinghouse. The details of the interconnection system will be provided by guidelines issued by the National Communications Authority.

The Bill also repeals subsections (3) to (7) of section 20 of Act 775 because these provisions together with other new provisions will be part of the proposed Interconnect Clearinghouse Regulations.

*Clause 2* of the Bill introduces a new provision that seeks through the imposition of fines to prevent service and network operators from willfully or negligently failing to prevent their physical network from being used to terminate international calls as local calls.

The final amendment to the Bill introduces in section 101 a definition of “Interconnect Clearinghouse”.

DR. EDWARD KOFI OMANE BOAMAH  
*Minister for Communications*

Date: 27th January, 2016.