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KICTANet is a multi-stakeholder Think Tank for people and institutions interested and involved in ICT policy and regulation. The Think Tank is a catalyst for reform in the Information and Communication Technology sector. Its work is guided by four pillars of Policy Advocacy, Capacity Building, Research, and Stakeholder Engagement.

KICTANet community held a 4 day moderated discussion on it’s mailing list on the Licensing and Shared Spectrum Framework for Community Networks. The responses are archived online on this link <https://lists.kictanet.or.ke/pipermail/kictanet/2021-May/subject.html#start> under the subject [kictanet] Licensing and Shared Spectrum Framework for Community Networks for Kenya online discussion and [kictanet] Shared Spectrum Framework for Community Networks for Kenya online discussion. The discussion was moderated by Mwendwa Kivuva and Josephine Miliza.

The responses from the mailing list are compiled below.

Licensing

		Comments on the proposed framework	Name
	Community Network Service Provider (CNSP) License to be created within the Unified Licensing Framework	The framework is a positive step. Though Kenya has some of the best connectivity on the content, the CA has estimated that around 4% of the population do not have broadband network coverage and the business models of providing it in those areas are difficult (expensive to provide, few users, users have low incomes etc). Whether Community Networks are able to provide networks in those circumstances and at scale may be unclear but they should certainly be given a chance. I also want to commend the report for noting the critical issue of demand-side aspects of broadband usage (awareness, skills, access to devices, relevant local content etc). Addressing those issues are beyond the scope of the regulatory framework	Adam Lane

		<p>which is for licensing, but certainly it is good to note that Community Networks might be more willing to invest in those areas, and thus benefit from having more users.</p> <p>Should the purpose of the framework be to address affordability issues of broadband (i.e. if affordability is one barrier of broadband usage along with devices access, skills, awareness, content, power etc), then I believe a different regulatory strategy could be developed to address this. This framework for community networks should be limited to areas that are un-served only.</p>	
	<p>The community network should be fully controlled by a non-profit entity and carried on for non-profitable purposes, encouraging members of the community to participate in the governance, design, and operationalisation</p>	<p>This should be for any operator, whether a community network, ISP or MNO. Since currently it is difficult for community networks to register, then certainly it is a good idea to make it easier for them to register and try to build a viable network.</p>	Adam Lane
	<p>Geographical coverage of a CNSP will be a sub-county boundary</p>	<p>However it is strange that the suggested size is of "sub-county" rather than sub-location or ward; and strange that there is no limitation on location such as "no existing network coverage". I would recommend a limitation on the size to be much smaller than sub-county, and more importantly, I would recommend a limitation on the community network to operate in areas that are un-served by other network providers (these areas are now well known following the Access Gaps Study this year).</p>	Adam Lane
	<p>Spectrum Fee: Fee waiver for non-protected access to lightly-licensed and license-exempt frequency bands by wireless access systems</p>	<p>my suggestion would be that Community Networks should certainly be given a chance in those un-served areas, and in those areas (88 sub-locations with 0 coverage, 239 sub-locations with <50% coverage for example) the CA needs to provide some efforts to reduce the costs of providing</p>	Adam Lane

		networks, including lower licensing fees, and lower spectrum costs.	
	Community Network Service Provider (CNSP) License to be created within the Unified Licensing Framework	CNSP License created within the Unified Licensing Framework is an acceptable action plan that should be embraced by the industry stakeholders as this is inline with the existing regulations	Vitalis Olunga
	The community network should be fully controlled by a non-profit entity and carried on for non-profitable purposes, encouraging members of the community to participate in the governance, design, and operationalisation	The CNs should be fully controlled by a non-profit entity and carried on for no-profitable purposes,... however it is also important to seriously consider long-term sustainability from the inception.	Vitalis Olunga
	Two letters of support from Community Leaders as part of the application process for CNSP to ensure community ownership	However, this could also include community legally registered organisations such as SACCOs or recommendation from local administrations	Vitalis Olunga
	Geographical coverage of a CNSP will be a sub-county boundary	This should apply countywide for both rural and urban areas, considering that within counties such as Nairobi, Nakuru, Mombasa, Kisumu etc. pa, there are areas or sub-counties which are currently unserved or underserved, though there is coverage by MNOs, ISPs or Fixed Network operators. This is mainly due to challenges of affordability or some other reasons. Therefore CNSPs should not be restricted to rural areas.	Vitalis Olunga
	License period of 10years with License Application fee Ksh1000, Initial Operating License Fee Ksh 5000, and Annual Operating Fee Ksh5000.	However CA could consideration reviewing fees such as the Annual Operating fee downwards, based on the population of subcounty or the area to be served.	Vitalis Olunga
	Spectrum Fee: Fee waiver for non-protected access to lightly-licensed	is a good practice and welcome.	Vitalis Olunga

	and license-exempt frequency bands by wireless access systems		
	CNSPs would be exempt from USF contributions, while the USF implementation framework may include a community ICT development and/or capacity building component. The authority shall further examine ways to ensure that community networks receive consideration under the future framework for the Universal Service Fund	This is quite in order	Vitalis Olunga
	Community Network Service Provider (CNSP) License to be created within the Unified Licensing Framework	This is a welcomed move,	Twahir Hussein Kassim <twahir@husssein.me.ke >
	The community network should be fully controlled by a non-profit entity and carried on for non-profitable purposes, encouraging members of the community to participate in the governance, design, and operationalisation	Forcing this to be solely for nonprofits is skewed on unfairness. Community Networks many a time have been looked upon ONLY as organisations that serve with no profits, however, I must say that this is what has been a cause for CNs not picking up as they fail to be sustainable. Additionally attaching it to community ownership especially in areas where the value of the net is yet to be appreciated might be a tall order. Suggestions:- a) should be open to both for profit and nonprofit. However, there should be attached the need to serve the community. Market forces will determine pricing. b) There are many individuals who set out to serve communities. At onset forcing that registration is only for community run projects might lead some areas to remain in	Twahir Hussein Kassim

		net-darkness. We are talking rural folks in most of these cases, many such setups are started by individuals and as kids benefit the adults start taking notice and interest comes on. Let this not be a blanket rule, let it be on a case basis.	
	Two letters of support from Community Leaders as part of the application process for CNSP to ensure community ownership	Unfortunately here we shall be killing a heifer before it grows into a cow to be milked. The sorry state of nepotism and corruption that exists within our borders will see a new avenue to make a quick buck. Let this be a peer review process, where CNs vouch for others; the CN space is a small community that can assist CA is vetting these.	Twahir Hussein Kassim
	Geographical coverage of a CNSP will be a sub-county boundary	Expand it to cover county other than sub county. County wide coverage would be make more sense. The reality is TELCOs only focus on areas where it makes financial sense which has seen town centres being the focus, moving out of CBDs in most "rural" counties would reveal no coverage beyond a 5-10km in many cases. I would suggest countywide coverage.	Twahir Hussein Kassim
	License period of 10years with License Application fee Ksh1000, Initial Operating License Fee Ksh 5000, and Annual Operating Fee Ksh5000.	Application fees of 1000 is very welcomed, however this should cover the initial operating license too. The annual fee should be set to 1000 per location. What we need to realise is that the CNs are basically trying to cover what USF SHOULD have covered by now. Most of these CNs would basically be serving Wanjiku and barely sustainable if we are to take example of many CNs which are mostly donor supported.	Twahir Hussein Kassim
	Spectrum Fee: Fee waiver for non-protected access to lightly-licensed and license-exempt frequency bands by wireless access systems	The CNs should be allowed to operate Radio, TV and ISP services within their jurisdiction areas.	Twahir Hussein Kassim
	CNSPs would be exempt from USF contributions, while the USF implementation framework may include a community ICT	Not only should CNs be exempted from USF Contributions; they should be funded by USF as essentially what CNs have setup to do is step in where USF is yet to reach.	Twahir Hussein Kassim

	development and/or capacity building component. The authority shall further examine ways to ensure that community networks receive consideration under the future framework for the Universal Service Fund		
	Community Network Service Provider (CNSP) License to be created within the Unified Licensing Framework	This is a welcome move. Reading the draft licensing framework i noted that previous , a license existed which was meant for resellers of Communication services which did not require payment of any fees. I noted that this license was withdrawn because there were no applicants for it. I would like to request for further clarity from the drafters on this issue and whether we could adopt or have adopted some of the provisions for Community Networks. Be that as it may the Community Network License is a welcome move.	Barrack Otieno <otieno.barrack@gmail.com>
	The community network should be fully controlled by a non-profit entity and carried on for non-profitable purposes, encouraging members of the community to participate in the governance, design, and operationalisation	This is a good proposal. However where possible, Community Networks should be allowed to establish subsidiaries to operate the networks if and when they scale. There is a very thin line between Community Radio and Community Networks and they require unique attention and expertise which may call for creation of Special purpose Vehicles. However the initiating organization should have a Community Centric outlook.	Barrack Otieno
	Two letters of support from Community Leaders as part of the application process for CNSP to ensure community ownership	this might not be necessary provided the organization is a duly registered not for profit entity serving the Community.	Barrack Otieno
	Geographical coverage of a CNSP will be a sub-county boundary	Counties and Sub Counties vary and overlap in some instances. I would want to understand the rationale behind the proposal for the county but would propose that we go for the county boundary.	Barrack Otieno

	License period of 10years with License Application fee Ksh1000, Initial Operating License Fee Ksh 5000, and Annual Operating Fee Ksh5000.	I find the fee to reasonable provided it is unified	Barrack Otieno
	Spectrum Fee: Fee waiver for non-protected access to lightly-licensed and license-exempt frequency bands by wireless access systems	This is a good proposal. There are large areas of the country where frequency is unutilized or underutilized that could be of benefit to the Community. Provided CA Safeguards are respected, we should allocate more unutilized spectrum for Community Services. Usage of the same can be monitored to ensure that it is only used for intended purposes.	Barrack Otieno
	CNSPs would be exempt from USF contributions, while the USF implementation framework may include a community ICT development and/or capacity building component. The authority shall further examine ways to ensure that community networks receive consideration under the future framework for the Universal Service Fund	This is a good proposal. In any case Community Networks acquire bandwidth from providers at a cost which contributes to the USF kitty. The beauty of Community Networks is they spur innovation by relying on expertise found within the Community which contributes to fostering a culture of innovation across the country.	Barrack Otieno
	Community Network Service Provider (CNSP) License to be created within the Unified Licensing Framework	ISPs and MNOs have done a great job in connectivity. But they still lack in relevant local content. That's why Internet in the rural is still perceived as a luxury commodity. So an approach similar to community radios would be good to push this adoption mashinani, and maybe create competition for big players to step up. (Like Royal Media group and its vernacular stations)	Elizzabeth Orembo
	Community Network	The report is very commendable and will help	Nzambi

	Service Provider (CNSP) License to be created within the Unified Licensing Framework	<p>people in understanding community networks and their deployment which will help in bridging the divide and inclusion.</p> <p>Coming from a village with poor network and limited or no connectivity, Encouraging CN deployments in rural areas would be a great plan for areas like ours.</p>	Kakusu
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Spectrum

		Comments	Name
	Review the Guidelines on the use of Radiofrequency Spectrum by Short Range Devices to amend EIRP limits for 2.4 GHz & 5 GHz Wi-Fi for Point-to-Point and Point-to-Multipoint use.	Support	Barrack Otieno
	Expand the range of frequencies available for license-exempt use, especially in the 5 & 6 GHz range	I equally think there is need for more spectrum for wi-fi since it the preferred mode of access in the rural areas. I would prefer an evidence based approach to this issue.	Barrack Otieno
	To strengthen collaborations with service providers to foster standards and regulatory inclusion.	Support	Barrack Otieno
	Review spectrum fee framework recognising the need for	The problem is the lack of sufficient meaningful and affordable access despite the efforts made by mainstream operators. Some parts of the country are still unserved	Barrack Otieno

	significantly reduced fees for underserved/rural areas.	and others are underserved. Community Networks are an attempt at local solutions to local connectivity challenges. A good example that most of us relate to was shared by Michuki Mwangi during the Webinar where we pool resources to sink boreholes and build water networks in the rural areas with the goal of ensuring each home/household has a decent water supply. Before we sink boherholes permission is required from the relevant government authorities under the ministry of water. In the same case, community members can come together through CBOs or relevant special purpose vehicles and develop frameworks for ensuring they get meaningful and affordable connectivity.	
	Consider a spectrum fee reduction scheme for non-profit community networks.		
	Conduct a review of international approaches to the creation of more localised access to spectrum to inform the establishment of a more permanent mechanism for local spectrum access that is well adapted to the Kenyan context.	There is under-used spectrum that can be returned to CA after which CA can license someone else to use. I believe this is what this process is all about. A new license category is in the office that can take advantage of this unused or underused spectrum. I believe this is the way the likes of Kameme TV started which broke the glass ceiling on who could own a TV	Barrack Otieno
		Does CA in any way build the capacity of local players on best practices in spectrum utilization. Can this be extended to Community Networks	Barrack Otieno
	Review the Guidelines on the use of	Firstly, it would be helpful to clarify what the problem is before trying to identify the solution. For example, is it a lack of	Adam Lane - Huawei

	<p>Radiofrequency Spectrum by Short Range Devices to amend EIRP limits for 2.4 GHz & 5 GHz Wi-Fi for Point-to-Point and Point-to-Multipoint use.</p>	<p>spectrum or is it the cost of spectrum or is it something else? Actually there is quite a lot of spectrum available in Kenya that is completely un-used (for example, in 700 Mhz band that is good for rural areas) and some that is so under-used (by some ISPs and some government users) that the best thing to do would be to return it to the CA and let the CA license it to someone else to use.</p>	
	<p>Review options for lowering the barrier to use of other license-exempt bands for PtP and PtMP use, including 24 GHz and 60 GHz.</p>	<p>It is clear that in Kenya the majority of people use mobile for their access (from a base station that is using either microwave or fiber) or they are using wi-fi for their access (from a mobile router or a home fiber router). Most ISPs that provide wi-fi networks also use fiber as their backhaul. In the future more and more people may be able to use both mobile routers (5G capacity) or home fiber routers (fiber). In fact there is need for more spectrum for mobile, as more and more people will use 4G and 5G mobile routers to give them wi-fi at home especially in rural or less dense places where fiber may be expensive. In these cases there is no need for more spectrum for wi-fi. Wi-fi provides only short-range internet and is easily blocked by walls, and with 7+ Gbps capacity that is more than enough for the small number of users for each access point (It can get 7Gbps because it already has 560 Mhz of spectrum, way more than mobile) whereas each mobile base station will support thousands of users. Mobile base stations cannot work with unlicensed spectrum.</p>	<p>Adam Lane - Huawei</p>
	<p>Expand the range of frequencies available for license-exempt use, especially in the 5 & 6 GHz range</p>	<p>once it is in use in the market then it cannot be taken out of the market and new equipment brought in. With licensed spectrum it is easier to manage. So for example as countries weight up spectrum for wi-fi vs 5G, if later there is more demand for 5G, it will not be possible to remove wi-fi equipment since there is no record of who owns it.</p>	
	<p>To strengthen collaborations with</p>		

	service providers to foster standards and regulatory inclusion.		
	To expedite the commercial availability of geolocation database service and implement required mechanisms to make the TVWS spectrum available immediately to operators.	TV White Space regulations have been available in some countries (e.g. US, UK) for many years but have had very little adoption. Meanwhile some of those frequencies have been used for regular mobile use, e.g. 600 Mhz network in the US and achieved wide scale and are particularly useful for rural coverage. What if equipment is deployed to use TVWS in this frequency but gets little adoption so the CA wants to change to mobile use; what to do with the existing equipment? How to avoid interference with the new equipment?	Adam Lane - Huawei
	To establish an incubatory period for TVWS technologies.		
	To evaluate with regional regulators the feasibility of a common approach implementation of geolocation databases	Since there is plenty of spectrum available in Kenya, just some is not well used and could be taken back/re-distributed and some is too expensive, there may not be a huge need for TVWS, but if ISPs can get it to work with the geolocation databases, and if they can get good enough Quality and Speeds, they could try.	Adam Lane - Huawei
	Review spectrum fee framework recognising the need for significantly reduced fees for underserved/rural areas.	Certainly the cost of that spectrum is a challenge for many, and it is very commendable that the CA proposes to Review spectrum fee framework recognising the need for significantly reduced fees for underserved/rural areas. I fully support this and it should be applicable to ALL spectrum license holders to encourage as many as possible to connect more unconnected areas. Fees can help work out who to allocate spectrum to that is serious about using it, but it also adds major costs. There are multiple fees at the moment, not just for spectrum licenses but also per base station using it, and even for using spectrum for backhaul to base stations.	Adam Lane - Huawei
	Consider a spectrum	The report is very commendable and will	Nzambi

	fee reduction scheme for non-profit community networks.	help people in understanding community networks and their deployment which will help in bridging the divide and inclusion. Coming from a village with poor network and limited or no connectivity, Encouraging CN deployments in rural areas would be a great plan for areas like ours.	Kakusu
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