Public wifi /Open Access models in developing countries (WS161)

Friday, 9 December in Workshop Room 3 from **11h30 - 13h00.**

Session Title	WS161: Public Wi-Fi/Open access/community models in developing countries- Access solution or supplementary model?
Date	09.12.2016
Time	11.30 am-13.00 pm
Session Organizer	Dr. Alison Gillwald, Executive Director, Research ICT Africa & University of Cape Town Graduate School of Development, Policy and Practice. Chenai Chair, Researcher, Research ICT Africa Organisation : Research ICT Africa, Cape Town South Africa
Chair/Moderator	Steve Song, Village Telco
Rapporteur/Notetaker	Joash Ntenga Moitui IDRC/Research ICT Africa IGF 2016 Fellow
List of Speakers and their institutional affiliations	Christopher Geerdts, - Wireless Access Providers' Association (WAPA) South Africa Carlos Rey-Moreno - Zenzeleni Networks Moctar Yedaly, –African Union Commission Heurta, Erick – Rhizomatica Dr. Alison Gillwald, Research ICT Africa (co-moderator)
Key Issues raised (1 sentence per issue):	What is the role of public Wi-Fi and how can we enable it? What are examples of public Wi-Fi projects across Africa? Are existing public Wi-Fi models feasible solutions to overcoming cost as a barrier to access? Is their coverage a limiting factor? Is reducing risk a good way of moving forward to establish public Wi-Fi especially through the Public-Private Partnership (PPP) model? What models can be complimentary to the GSM networks? Is the existing licensing and regulatory regime creating a non-level playing field between Telecommunications Service Providers (TSPs) and Over the Top Providers in competition for same service provision? What is the proxy between fibre networks, Public Wi-Fi projects and community networks? What other secondary spectrum access/community self provision models are contributing to affordable access to broadband.
If there were presentations during the session, please provide a 1-paragraph summary for each Presentation	**Presentation: Christopher Geerdts, - Building Smart Wi-fi in South Africa. Focused on two cases** Project Isizwe facilitates the rollout of public Wi-Fi networks that are the first step to becoming part of the global community and economy. Their model is founded on the principle that access to the internet is a human right and should be delivered with the support of the government. In South Africa, the commercial opportunities have been constrained by an ineffective policy and regulatory environment, and government has been slow to provide internet access through free Wi-Fi points at public buildings and facilities, although it's on paper in a number of

	municipalities and provinces. With over 784 sites across South Africa, the project is in the third year of implementation. The first site began in higher education services. The impact was great positively affecting students who used the internet. In addition, the project has built a portal that relates to jobs, employment, health, and local video content creation that lead to winning of an award for those who contribute. The project offers a good turn-key model with about 8.5 internet access. On a negative note, there is minimal community participation in network development and it is not open to other service provides shutting down competition in areas they operate. There is a high site introduction cost. Customers are allocated a daily bundle of 500megabytes and cannot access additional data. The project has been unable to be replicated in other parts of larger South Africa. The tenet of their launch was based on the idea of everything being free to access and use the internet; however, they are exploring other models, for instance, the internet.org initiative aimed at delivering internet from space through the space advanced by Facebook. This model is similar to one witnessed in the United States. The City of Tshwane scooped the FIRE Africa ward for Tshwi-Fi TV specifically at IGF 2016, which was acknowledged by the awards as an innovative collaboration between the City of Tshwane and Project Isizwe's content partner. **Presentation: Rey- Moreno Carlos-The Case of Zenzeleni Community Networks, South Africa** Communication is a priority because mobile communication is used by people in their daily activities at the farms and mines in rural parts of South Africa. Zenzeleni networks provide services to reduce the cost of communication through offering free voice calls. Solar energy has been used to create a mobile charging station that has been able to cover costs of communications. This has also been upgraded to provide local and international calls. Voice communications can be reduced if the roll-out? costs can be reduced and community spectrum provided. Due to lack of internet in the community, two computers have been provided to help community member's access to data. In addition, two computer rooms have served as a centre for ICT training. Community networks may provide a support to alleviate poverty and facilitating empowerment. The current model established for assigning spectrum doesn't allow community networks establishment in rural areas. **Presentation: Eric Heurta- Public Access in Mexico, Nicaragua and Columbia** In Mexico, connectivity is through satellite connectivity, through about 30, 000 antennas spread across the country. The antennae's are located through public amenities such as schools, which provide public Wi-Fi to locals. However, such public Wi-FI is poor and users can hardly download materials from the internet due to network congestion and limited bandwidth. In Columbia, municipalities are connected to Wi-Fi, which are then provided to the public. In Nicaragua, access to the internet is difficult especially in the blue-fields area. There is reliance on GSM networks with no access to submarine cables. There is need to explore social coverage in telecommunications. Statement: Moctar Yedaly of African Union, said governments were cautious about paying for free public WF as they had no control over what people went online for and did not want to sponsor their use of the Internet for

	activities that were not worthwhile, such as pornography. There was therefore not much support for Free Public Wi-Fi (FPWF) as an alternative policy and regulatory strategy. Dr Gillwald responded by saying that while she disagreed with limitations on the use in general, the datacaps that generally applied meant there was not a lot of surplus bandwidth available to people to undertake discretionary activities. Vox pops done at various wi-fi points indicated that people use the available bandwidth either to access free government sites if the was a specific activate or information they wanted from them and mostly use the bandwidth for software upgrades and video on YouTube. She said although there appeared to be generalised dissent with the AU view, certainly among panellists, she urged the tech community and community connectivity and IGF more generally to engage more actively with the AU and other African governments, to ensure that the smart solutions proposed by them did not stall at conception or piloting because their was no buy-in from policy makers and regulators and therefore no scale up of initiatives to that could innovatively contribution to meeting national objectives.
Please describe the Discussions that took place during the workshop session: (3 paragraphs)	The wave of success of Free public Wi-Fi (FPWF) was riding on the back on fibre rollout taking place through out the work. In many parts of the world, although international fibre prices had decreased national transmission remained high and local access fibre prohibitive. Getting backbone prices down and in many countries communities, barely kilometre from the national backbone or undersea cable connected was a priority. Universal service funds should be used to support access and USE at these various levels were bottlenecks existed. FPWF addresses the problem of not only access but affordability of services, which affects the intensity of use, which itself may be used as a proxy for utility of the internet for citizens. South African case provides natural experiment of municipally funded FPWF in Gauteng and various public-private-community interplay models projects in Western Cape. Though the former may most successful now, the latter may be more sustainable in longer term. Wi-Fi network operators supply data at a much cheaper margin when compared to local mobile network operators. They can do that because usually the backhaul infrastructure is subsidised by a government organisation and access network roll-out costs are low. However, their coverage is limited to selected public buildings and public spaces, leaving almost all households uncovered. In addition, although the quality of the connection seems sufficiently good when the hotspot works, one of the main barriers to access public WiFi is that the network is unreliable. Public WiFi models may thus be a solution to overcoming cost as a barrier to access, but their coverage is still limited. This undermines the low-cost competition that public WiFi poses to high mobile data costs and should be the target of future policies and research. Claims of OTT services are bypassing the existing licensing and regulatory regime thus creating a non-level playing field between TSPs and OTT providers both competing for the same service provision. This has the potential of disrupting existing telecom revenue models and telecom infrastructure necessary to increase broadband reach, speeds and bandwidth capacity.. OTT providers make use of the TSPs' infrastructure to

	reach their customers and offer products/services that not only make money for them but also compete with the traditional services offered by TSPs. But this was disputed by RIA, they referred to their paper on zero rated services to argue that it was only operators hanging onto old voice models of communications where OTT were providing affordable substitutes that making claims that loss of revenues meant they could not invest in new networks. Leading operators on the African content, had embraced the opportunities that data provided. They accepted that social networking was driving Internet take up and demand for bandwidth. They were seeing an exponential rise in data revenues and were existing millions of dollars to compete to meet the demand and still enjoying high-level of profitability. It is the possibilities of regulatory arbitrage in addition to the pricing arbitrage that makes viable many services but this adds a degree of complexity that requires a nuanced and calibrated public policy response to bring about a level playing field. Anti competition issues need to be examined on a case by case basis at each level of the value chain. Free government Wi-Fi is a synonymous of ubiquitous internet access strategies in highly connected countries such as Hong Kong and South Korea, providing at least limited public access for those who cannot access commercial networks, but also generally stimulating demand or supplementing data plans purchased by people who need always-on connectivity. Public Wi-Fi has provided access to communication to a large number of populations across Africa. Rwanda, Dakar, Togo, Kenya and Dares Salam in Tanzania are examples of countries that have initiated free Wi-Fi projects in certain cities hotspots, townships, petrol stations and airports. In Rwanda and Zimbabwe Wi-Fi hotspots are also developing rapidly. Community networks and fibre projects are also springing up in South Africa to build their own access. Enabling the deployment of unused or underused GSM spectrum by operators in rural areas by communities should be enabled in order for communities to self provide low costs services. Giving up this spectrum together with roll out obligations to particular communities connected as part of national scaling up, in exchange for high demand spectrum they cannot access, may be tactical way of overcoming property claims by existing licensees. Zero rated, slow Internet, restricted use free public Wi-Fi access and the like should all be understood as complementary mechanisms to get and keep people in the developing world online. The application of narrow net neutrality limitations which equate negative price discrimination in relation to quality in mature markets with positive prices discrimination to enable access and use (key public policy issues in developing countries) should be avoided and all interventions considered on a case by case basis.
Please describe any Participant suggestions regarding the way forward/ potential next	1) Reducing risk is a good way of moving forward in establishing public Wi-Fi. Public Private Partnership (PPP) model allows for faster deployment and uptake of pubic Wi-Fi and there is marginal benefit for the private sector. There is need for a model that allows the government to be a whole Wi-Fi operator.

steps /key takeaways: (3 paragraphs)	2) Adoption of evidence-based policies to support policy and regulations. Most of the countries in Africa develop policies without support of evidence and data leading to poorly institutional and policy failures, uncompetitive markets and as a result poor access, high mobile and data costs. The absence of local data and context with developing countries context results in imposition of models underpinned by assumptions from mature markets about the institutional capacity of regulators, the competitiveness of markets and the rights and income of users to access services. This can result in unintended outcomes that can be hard to fix. 3) With the dramatic growth of data on mobile networks, operators in other parts of the world regard feeding their traffic off to Wi-Fi networks as a significant way of relieving the pressure on their networks. Thus, in these countries public Wi-Fi is complimentary to mobile networks. In addition, there is positive link between fibre networks roll-out with public Wi-Fi and community networks project expansion. As such, fibre networks and undersea cable should continue to be developed especially within Africa. 4) It was critical that for the mulitstakeholder process to function significant stakeholders, such as governments, between and within different participant categories were not absent from discussions or met in parallel fora such as the IGF and ITU without ever engaging each other. If the people with innovative tech solutions to problems of affordable access only spoke to each other and were constantly reaffirming each others views but not engaging policy makers and regulators whose buy-in was necessary to implement them and scale them up, then their endeavours were futile. For this reason more panels that more actively brought stakeholders into discussion should be prioritised.