Community Network Newsletter

01-12-2021
Vol 1. Issue VII

CITAD

POINT OF VIEW

Community networks provide communities with a wealth of benefits. The use of community networks strengthen community life, improves the democratic process, ensure residents' access to the "information superhighway", and aids local economic development.

DAWKWA COMMUNTY GETS LAND DONATION FOR COMMUNITY NETWORK

The Dakwa Community Development Association in the FCT, a micro-organization working with CITAD toward establishment of community network conducted a town hall meeting on December 31, 2021.

Major aim of the meeting is to create awareness on the need for a functional community network that will serve as a catalogue for bridging the digital gap in the community. Elders in the community which included the Village head, ward heads and other dignitaries attended the meeting.

At the end, the association received a donation of a land/plot to support the process. The land measured 50x25 was donated by the community leader.

INTERNAL SYSTEM STRENGTHENING: NOTICEABLE IMPORTANCE OF COMMUNITY NETWORK IN NIGERIA

As part of its weekly internal system strengthening, the Center for Information Technology and Development (CITAD) organized a one-day session to update its staff and other partners on the

Community Network project. The session which was facilitated by the project coordinator, Haruna Hadejia and supported by Harira Wakili emphasized on four areas of the project. These are; the inception stage which entails all the conceptualization of the project and all other preliminary activities at the take-off of the project, successes recorded from the commencement of the project to date, challenges faced both internally and externally and finally, the way forward for the project. At the end, suggestions and recommendations were received from participants on how to move the project forward.

Significant results achieved within the period included the allocation of land in Itas and Jama'are communities of Bauchi state by their local government councils, development of a five-year strategic plan for community network as well as two-year work plan (short term) for community network, etc all meant to support the establishment and replication of community networks across the country. Also, media skills on community network was strengthened, partnership/ collaboration with other partners such as the service providers, private sector, individuals, etc were identified as additional successes recorded.

Similarly, a curriculum for the school of community network has also been developed with a timetable to guide the school take-off of tutorials. The school is expected to commence physically and later migrate virtually. On one hand, the non-existence of policy framework to regulate the idea of community networks remain a challenge. Therefore, participants suggested for a sustained advocacy by both CITAD and its partners on the realization of the policy framework by NCC.
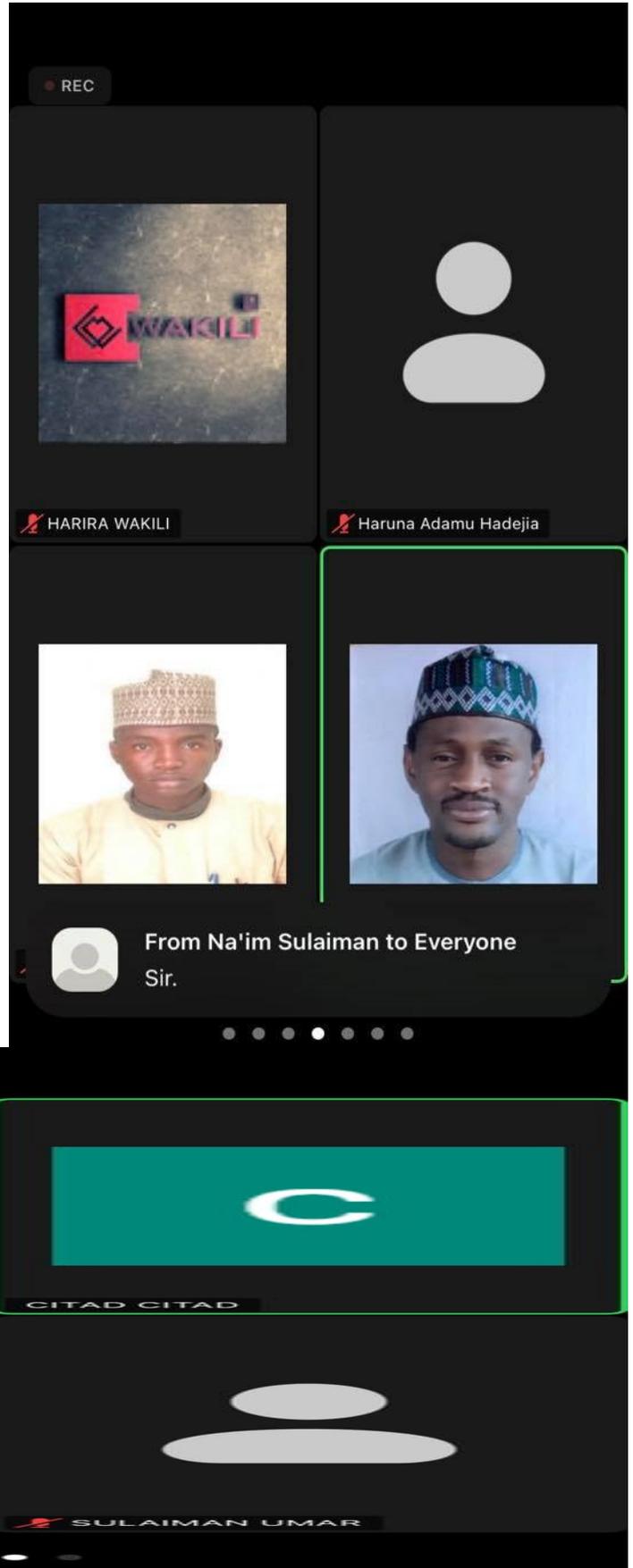
The Meeting was held on the launch of the community network school curriculum.

The Advisory Committee on Community Network Services in Nigeria discussed with CITAD on the School of Community Network curriculum.

The meeting, which took place on Zoom, focused on how to assess and validate lessons in the school of community network curriculum for consistency in teaching.

Commenting on the issues discussed, Haruna Adamu commended the committee members for their contribution in making the program a reality.

Only 19 people were present during the discussion.

SPECTRUM CHART WITH THE POTENTIAL FOR INCREASING INTERNET ACCESS

Spectrum with the potential for increasing internet access

Frequencies	Current situation	Potential use
450 MHz	6.25 MHz available, proposed for assignment to commercial operators. It is unknown when the process will be adopted.	Fixed wireless connectivity for the rural market, mobile broadband (4G).
470-860 MHz	Migration to digital broadcasting in 2015 will free up frequencies within this spectrum.	Fixed wireless connectivity for the rural market, mobile broadband (4G).
700 MHz	Migration to digital broadcasting in 2015 will free up frequencies within this spectrum.	Potential application in wireless mobile broadband, mobile broadband (4G).
1.2-1.6 GHz	Migration to digital broadcasting in 2015 will free up frequencies within this spectrum.	Can be used by telecommunication operators and for mobile broadband.
2.4 GHz (WiFi spectrum)	Free for private use. Commercial operators require a licence.	WiFi, university/school LAN, public access, WiMAX, mass market potential.
2.5-2.7 GHz	1900 MHz available, proposed for assignment to commercial operators. It is unknown when the process will be adopted.	GSM mobile, mobile broadband (3G/4G/LTE), WiMAX.
2.7-2.9 GHz	Migration to digital broadcasting in 2015 will free up frequencies within this spectrum.	Can be used by telecommunication operators and for mobile broadband.
3.5 GHz	35 MHz spread spectrum available, proposed for assignment to commercial operators. It is unknown when the process will be adopted.	Rural market, GSM mobile, mobile broadband (3G/4G/LTE), WiMAX.
3.6-4.2 GHz	Migration to digital broadcasting in 2015 will free up frequencies within this spectrum.	Can be used by telecommunication operators and for mobile broadband.
4.4-5 GHz	Migration to digital broadcasting in 2015 will free up frequencies within this spectrum.	Can be used by telecommunication operators and for mobile broadband.
5 GHz, 5.8 GHz (WiFi spectrum)	Free for private use. Commercial operators require a licence.	WiFi, university/school LAN, public access, WiMAX, mass market potential
24 GHz	Free for private use. Commercial operators require a licence.	Broadband wireless access, mass market potential, public access.
26 GHz	100 MHz proposed for assignment to commercial operators. It is unknown when the process will be adopted.	Broadband wireless access, mass market potential, public access.

Open spectrum for development spectrum.apc.org

FREQUENCY MANAGEMENT POLICY

Radio frequency spectrum is one of Nigeria's key natural resources of great economic value as a result of its direct application in telecommunications, broadcasting, military operations, and scientific research in addition to a range of other socioeconomic activities such as social services, law enforcement, education, healthcare, transportation, etc. As a result, many industries depend heavily on the efficient utilization of radio frequency spectrum.
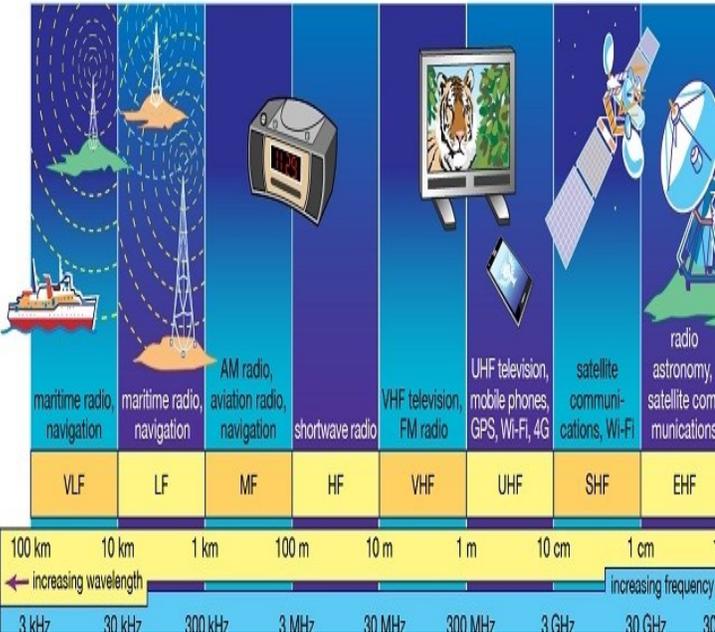
These crucial factors therefore, make it mandatory for the gov-

maritime radio, navigation | maritime radio, navigation | AM radio, aviation radio, navigation | shortwave radio | VHF television, FM radio | UHF television, mobile phones, GPS, Wi-Fi, 4G | satellite communications, Wi-Fi | radio astronomy, satellite communications

VLF | LF | MF | HF | VHF | UHF | SHF | EHF

100 km   10 km   1 km   100 m   10 m   1 m   10 cm   1 cm
← increasing wavelength   increasing frequency →
3 kHz   30 kHz   300 kHz   3 MHz   30 MHz   300 MHz   3 GHz   30 GHz   30

ernment to develop comprehensive and clear-cut policies that will ensure that spectrum resource is optimally utilised for the overall benefit of the nation. As an agency of Government, the NCC is charged with the responsibility to develop and adopt polices in accordance with the following policy objectives that will ensure that this scarce resource is well managed in its area of responsibility.
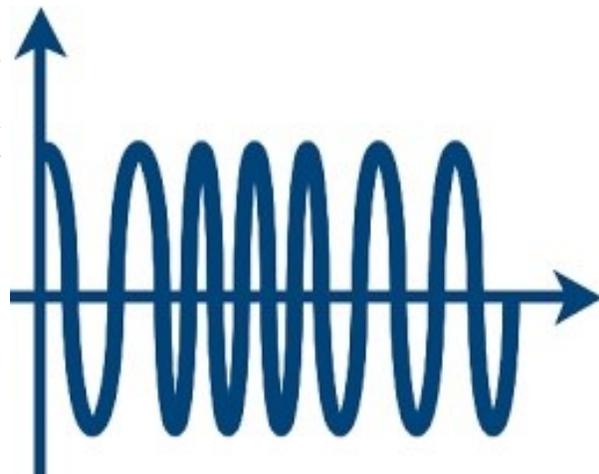
The NCC's Frequency Management Policy Objectives are as follows;

● To control and encourage the use of spectrum as an instrument for developing telecommunication (being) which is an essential infrastructure for stimulating the economic growth and social development of the nation.

● To promote competition in the assignment of frequency in order to ensure innovative and efficient use of the radio spectrum (as a scarce resource).

● To achieve optimum pricing of spectrum in order to discourage wastage or speculative acquisition of the scarce resource.

● To generate moderate revenue for government.

To ensure equitable and fair allocation of spectrum to benefit the maximum number of users.

To achieve this goal, the NCC establishes policies inline with its mandate, which govern the following key frequency management functions;

● **Spectrum Planning:** Plan the spectrum under NCC's control

in order to make adequate provision for various services based on their relative importance to Nigeria's socio-economic goals and also make forecast for future requirements.

● **Frequency Assignment:** Evolve fair, equitable and transparent procedures and conditions for the allocation and assignment of spectrum.

● **Spectrum Farming:** Continually and systematically phase out ageing technologies in order to free up new spectrum space for allocation to emerging technologies and new services.

● **Licensing:** Develop effective rules, operational procedures/ guidelines for the purpose of regulating the use of spectrum in order to encourage sharing and ensure minimum interference with other users.

● **Technical Specifications:** Define technical utilization rules and specifications for radio frequency equipment and also administer equipment type approval and authorizations.

● **Enforcement:** Impose fines, penalties and sanctions for any violation of spectrum rules in order to maintain discipline in the use of spectrum.

● **Monitoring:** Monitor the use of spectrum for interference and occupancy levels in order to take corrective actions when necessary and to provide 3 information feedback for planning, management control and decision-making.

● **Consultation:** Hold regular consultation with experts in the industry including consultants and members of the academia in order to draw from their wealth of field experience and research findings in the area of spectrum management.

● **Liaison:** Maintain close liaison with all stakeholders in the industry including operators, other regulating bodies, Manufacturers, MOC, ITU, Professional Groups, security agencies and the general public in the spirit of participatory regulation.

Tariff and Pricing: Determine fees payable for spectrum and evolve effective machinery for its collection.

EXPERIENCES FROM THE NOVEMBER 2021 APC CONVENING SESSIONS @ AMA-WATERFALLS: NOVEMBER 7, 2021 (16:00) BY HARUNA ADAMU HADEJIA

The APC week-long convening that took place (on-line) from November 000-000) attracted a lot of sessions where participants joined various activities to share experiences and learn new things for possible replication.

Many sessions provided opportunities for making and generating input on (Governance, ICTS, Media, Poetry, Inclusion, etc). It was indeed, a gathering of intellectuals where ideas were show-cased not only restricted to one sector but all human angles. Each session in any day had an anchor, presenter(s) and other partici-pants.

On November 17, CITAD's representative and Coordinator of the SCN, Haruna Adamu Hadejia served as a discussant during a session that lasted for 1.55mins. Three persons were part of the panel:

> Haruna AdamuHadejia, (CITAD, Nigeria).
> Florencia Roveri (NodoTau, Argentina).
> Paulo Lima (PSA, Brasil).
> Co-authors.

Theme for the discussion was the presentation of a 95page guide titled *"Technological autonomy as a constellation of experienc-es"*.Discussant responded to key questions in not more than three minutes. The following (ticked bold questions) were re-sponded by CITAD's representative during the session:

Why is it important to talk about training/capacity building to move towards technological autonomy in communities?
Technological autonomy:

*Response:*First, we have to understand what is "Technological Autonomy". In our understanding, Technological autonomy is a way in which decisions about technological matters or issues rather, are taken by the people who use them, based on their de-mands, capabilities and dreams and not by outsiders who decide on the tools they will use to communicate".

This concept aligned with CITAD's approach to issues which is, "people around their problems". Meaning, people should always be involved in planning, design and implementation of pro-grammes/projects which directly affects them. This is one logical way of identifying the extent to which technologicalautonomy can be real or not.

Second, some of the importance of training/capacity buildings include but not limited to the following -

Capacity building helps to introduce new technologies to trainees which can further, be used (stepped down) to neutralize inequali-ties in communities especially on ICTs.

Capacity Building: "essentially, for digital gap to be bridged, there is need for basic literacy and numeracy skills on the part of community members". This is one of the importance of having capacity building towards enhancing technological independence in our variouscommunities. CITAD conducted a series of train-ings to its micro-organizations under the CN and have been in-volved in other trainings for community trainings such as "Learn and Teach Others (LATO)". This is CITAD's over decade initia-tive for providing basic skills to rural communities where a bene-ficiary of ICT training is expected to trickle down to others.

In some instances, knowledge is adequately transferred through the use of different pedagogical (instructive) materials which are more available during capacity building/training sessions. This is quite important on trainings around technology which requires more "practical than theories". During trainings for instance, CITAD demonstrate with the use of teaching Aids (instructive materials) such as mother board, hard disk, floppy disk, etcespe-cially for beginners to see for themselves. Through this, new learnings can effectively take place. Hence, the importance of capacity buildings towards technology autonomy.

Additionally, CITAD isworking with micro-organizationsunder the CN project and media on advocacy for the implementation of citizen driven regulatory framework. This is one of the ways so-cieties can attain technological autonomy. It is however worthy to mention that, absence of regulatory framework is a serious block-

age and unless the blockage is removed, technological autonomy may not be realized.

During the last quarter, CITAD organized 4 different capacity building sessions for both its staff and micro-organizations/communities, advisory members and other interest groups on various areas of CN such as (networking, spectrum allocation, 5G, etc) aimed at providing basic technological skills and pro-moting awareness.

Recommendation: Technology must be brought closer to the digi-tally disadvantaged communitiesbefore autonomybecome a reali-ty and this can be possible with the support of key stakeholders such as service providers, MESOs, donors, Media, etc

Which of the contents (from the guide) resonate with your own experiences, what things or elements of the guide do you think are key to designing or implementing training process-es?

*Response:*Reference to section 1.2 (TECHIO COMUNITARIO) of the guidewhich depicts a survey outcome between 2012 and 2016; researchers were able to identify 5issues among which 2 were earlier considered by CITAD in the design of its curriculum for the SCN. These are; dependency and gender issues.
To address these issues, the already developed curriculum for the SCN under CN project has separate section that deals with expos-ing trainees to identify and partner with local (resource) techni-cians on how to leverage on their skills to carry out minor repairs and maintenance at community level without depending on out-side support. There is also, a section that focus onhow to advo-cate and work with various service providers and also, marketing strategies.
To ensure independence rather than dependency, two communi-ties of Itas and Jama'are of Bauchi state (for instance) were able to acquire lands from their local councils for the establishment of community networks in their respective areas. We considered this as a milestone and signaled that, they can equally leverage on utilizing local resources to reduce dependency.
But, important to mention is, most of our micro-organizations are at interest level, they are yet to have functional CNs in their com-munities.
On the other hand, inclusionis an issue that must be addressed too. Specific topics/subjects were included in the curriculum that will address women, youth and persons with disability issues.
In reference to Section 2.4.2 of the guide (Design of THE CUR-RICULUM STRUCTURE OF THE PROGRAM), using the 8 steps from – Graduate's profile to forms of evaluation.
Here, CITAD extensively generated ideas or rather, suggestions from various stakeholders which include(the micro-organizations, communication experts, academics, etc) before development of curriculum that will be used for training at the NSCN. The es-sence is to make it community-based approach. They also partici-pated in the validation of the document.
In line with this, CITAD is preparinga pre, during and after train-ing evaluation forms which will be used to identify areas of im-provement and lesson learning. Therefore, the last step of the section resonates with CITAD's thinking".

FIRST NIGERIAN SCHOOL OF COMMUNITY NETWORK

In its development efforts to facilitate effective network coverage especially in the areas not covered by networks, CITAD is set to kick start the training of seven organizations on different areas of Community Network. This school will be the first-of-its-kind school where trainees will be equipped with skills on community networks.

The center, in collaboration with the APC supported by the FCDO is expected to commence the training of micro-organizations from the seven selected locations in Nigeria. The training commences on December 6-10, 2021 in Kaduna, Northern Nigeria.

https://us02web.zoom.us/j/85702762791?pwd=ajllYmpSMTFibWxjUExqVFBLbnFhQT09

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