ARTICLE 19 West Africa and CODESRIA are launching a Call for Papers for the publication of a book on the issues and challenges of the transition to digital terrestrial television in Senegal and the rest of West Africa

Are you a researcher, media practitioner, information and communication technology (ICT) specialist, journalist, lecturer or engineer interested in the issue of the digital transition, its challenges and opportunities? Your thoughts and contributions may be of interest as you respond to this call for papers for the publication of a book on the issues and challenges of the digital transition in West Africa and Senegal in particular.

I. **Background**

With the development of digital technology, radio broadcast signal compression capabilities were significantly boosted. States and radio broadcasters could therefore no longer continue to ignore the immense opportunities that digital migration would offer in terms of broadening the spectrum, new interactive multimedia programmes and services. Since the migration process from analogue to digital television involved the reallocation of frequencies, it was the responsibility of the International Telecommunication Union (ITU) to set the general framework. The Regional Radiocommunication Conference of the ITU (RRC-06), held in Geneva in June 2006, adopted a plan for the transition from analogue to digital broadcasting for 116 countries (mainly located in Africa and Europe), in the 174-230 MHz frequency bands and 470-862 MHz (UHF frequency band). This plan, which provides for the allocation of a new frequency plan for digital terrestrial radio and television broadcasting (called GE06 Plan) was materialized by a treaty signed by the ITU Member States, setting 17 June, 2015 as the deadline by which they must stop all analogue broadcasts. For other countries operating certain frequency bands (VHF, for example), the deadline was set for 17 June 2020. The setting of the deadline by the Member States had become the main driving force behind the digital transition schedule in recent years. The transition from analogue to digital television is the migration process that begins with the implementation of digital technology in radio broadcasting and ends with the total extinction of analogue. This process

concerns all phases of the broadcast chain: content production, programme transmission and reception.

In addition to better frequency management, the transition to digital broadcasting should encourage the promotion of information society, offering new services and programmes in radio broadcasting and better television access by the population.

However, as at 17 June 2015, only 5 countries on the continent, all in the Eastern and Southern Africa regions, namely Malawi, Mauritius, Mozambique, Rwanda and Tanzania,[1]had actually switched to digital TV. A giant like South Africa had not even started the process, while the International Telecommunications Union did not even know the status of a country like Mauritania in this transition, for lack of data. The situation for West African countries was hardly any better, even though they had all begun the process. This is due essentially to the delay by those countries in implementing the digital migration.

For example, in Senegal, it was in the last quarter of 2010 that a body called the National Committee for Audiovisual Transition from Analogue to Digital in Senegal (*Comité national pour le Passage de l'Audiovisuel de l'Analogique au Numérique du Sénégal*, or CNN) was established. On 3 and 4 December 2012, the National Council for Audiovisual Regulation (*Conseil National de Régulation de l'Audiovisuel*, or CNRA) and the National Committee for Audiovisual Transition from Analogue to Digital in Senegal worked together to consolidate and finalize the policy paper on Senegal's transition to digital strategy. This strategic policy document mentioned some key priority areas in its recommendations:

1. updating the legislative and regulatory framework;
2. developing a communication plan targeting the actors and public;
3. identifying the measures to be implemented to assist broadcasters;
4. creating a fund to support national audiovisual production;
5. assessing the cost of the transition to digital;
6. creating a permanent body that will take over from the CNN to manage this transition; and
7. creating a second digital dividend.

Decree No. 2012-1433 of 12 November 2013 established the Analogue to Digital Transition Management Committee (*Comité de gestion de la transition de l'analogique vers le numérique*, or CONTAN) under the authority of the President of the Republic and chaired by the chairman of the CNRA. Less than a year later, on 27 August 2014, a decree endorsed CONTAN's selection of EXCAF, a local Telecom group that owns digital and satellite TV channels in addition to two private television channels and 4 private radio stations established in the capital.

[1] Information obtained from a graph produced by the ITU: http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Default.aspx (visited 19 August 2015)

At the community level, the Economic Community of West African States (ECOWAS) fully understood the issues involved as early as 2011. In Lomé (Togo) at the Consultative Meeting on the Development of the Telecommunications/ICT Sector in West Africa, the organization identified the implementation of new digital broadcasting technologies and the strengthening and harmonization of policy and regulatory frameworks for the integration of African Telecommunications/ICT markets among the five priority projects to be implemented during the period 2011-2016. On 28 and 29 July 2014, ECOWAS met in Praia (Cape Verde) in order to examine the status of implementation of the technical roadmap regarding the establishment of Digital Terrestrial Television (DTT) in the Member States. On 27 September 2014 in Banjul (The Gambia), a document on the common test procedure for the zone as well as the terms of reference for the identification of laboratories authorized to carry out DTT receiver compliance tests was validated.

II. The challenges of the digital transition

The debate among experts and public expectation have shown that the digital transition process is not just a matter of technology. In order for the migration to digital terrestrial television to be performed properly, a number of regulatory and administrative issues should first be settled. Regulators must therefore examine the conditions for issuing licenses, including the spectrum and broadcasting rights, and determine various possible technological options such as transmission technology, television format, compression techniques and simulcast policies. For their part, operators must choose between different network planning options (multifrequency network (MFN) or single frequency network (SFN)) and identify key applications. As for viewers, they must use decoders or replace their current analogue equipment (TVs and VCRs) with digital receivers. Regulators can attach more or less importance to rights, which is why the framework for granting digital terrestrial television licenses tends to vary from country to country taking different forms and meanings. In developing a licensing framework, it is advisable to take into account the objectives of the spectrum management, the rules and objectives relating to competition, market structure and cultural and environmental objectives, media rules and convergence trends.

ARTICLE 19, whose mandate is to protect freedom of expression and access to information, the essential components of which are pluralism and independence, has for years been studying the issue of the digital transition and has published a number of documents to guide the development of public broadcasting policies.[2]

Following the exchange workshop organized on 30 September 2014 which brought together all stakeholders involved in the digital transition process (Ministry of Posts and Telecommunications, CNRA, CONTAN, ARTP, Academics, CSOs, Media). One of the main

[2] ARTICLE 19, Broadcasting Pluralism and Diversity Training Manual for African Regulators, November 2008. Available online: https://www.article19.org/data/files/pdfs/tools/broadcasting-manual.pdf

recommendations of this workshop was to produce a reference tool on the issues and challenges of broadcasting in the digital era in Senegal and Africa.

In partnership with the Council for the Development of Social Science Research in Africa (CODESRIA), this call for papers is for the production of a collective work in order to have a better grasp of this important process which the public does not seem to understand, despite the fact that it is bound to irreversibly affect the way Africans obtain information and use television.

III. Objectives of the call for papers

Digital technology provides more opportunities than analogue: access to new services, increasing the transmission capacity of television networks, facilitating the compatibility and interconnection of services offered to users, improving the reception quality of reproduced images and sounds and the development of interactive television applications.

But beyond the new uses that will develop, this is primarily about the advent of a new economy in which the convergence of media and telecommunications will accelerate. A new economy with new markets, with very high growth potential, will emerge once migration from analogue to digital television is completed. This new situation calls for a profound, inclusive and forward-looking brainstorming on the balances and regulation methods that are needed.

While on 17 June 2015, ceremonies were held everywhere to formally launch digital terrestrial television, the debate that continued among different experts who expressed doubts about the transition suggest that all this might only be symbolic and requires further reflection in terms of what this migration from analogue to digital television really means for our countries. For the moment, we do not know exactly what this means or even the implications that it will have for the broadcasting landscape of our countries. It is therefore important not only for researchers and specialists to examine the matter and enlighten the wider public, but also to contribute to the global debate on the issue by providing a perspective based on their own experiences and questions.

IV. Points for reflection

The broadcasting sector is specific in that it consists of three streams that flow into one another: film, television and video.

In Senegal, and in many other countries, the world of television is more or less organized around a number of principles. Programming is guided by audience segmentation: television products are designed and delivered with a specific segment of the population in mind; the objective of programmes is to fix almost ritual appointments with different socio-demographic segments. These stable and qualified audiences can then be sold as effectively as possible to advertisers interested in targeting them. Correspondingly, as shown in

reception studies,[3] rich and varied forms of sociability are created around these appointment rituals and specific television subcultures diffuse within the various socio-demographic segments.

The transition from analogue to digital TV will generate, with convergence, new channels for broadcasting productions (double screen on the web, mobile, IPTV, VOD, etc.). This transformation will also encourage the emergence of new formats, new actors and new modes of distribution of existing products. Digital television will transform the very nature of the viewing experience, by freeing the viewer from the rigidity of programming. Catch-up TV, the multiplicity of screens, p2p piracy or piracy on major video sharing platforms, provide viewers with the opportunity to make choices and adjust television programmes to suit their tastes and schedules. Therefore, it is important to rethink, in the light of the digital issues, some of the paradigms that used to govern analogue TV in order to take into account the changes that may result from this transition to digital TV.

Six priority areas of research have been identified and broken down as follows:

- **Focus area 1: TV standards and value chain**

  The broadcasting value chain is dominated by integrated operators involved at several levels (production − editing − distribution − exploitation). In the initial analogue television model, radio frequencies were a scarce and strategic resource. They were, in principle, issued by legal regulatory bodies. When the cable or satellite broadcasting resource emerged, it made the problem of the scarcity of frequencies less knotty. It became easier to establish TV channels; a new type of actors appeared on the scene − distributors marketing channel packages. What will the new digital television value chain actually look like?

- **Focus area 2: Developing the digital culture**

  It would be interesting to take a look at the digital television culture in Senegal and West Africa from both a prospective and comparative angle. While information circulation is the hallmark of digital technology, it still remains a challenge for the information that is circulating to truly become a source of knowledge for the greater majority. Television, in its public service mission, should help train the public. How should the digital television scheme support this public training mission? What regulatory framework should be put in place? Premium channels vs generalist channels, recreational programmes vs cultural programmes, frontiers and realities for the public.

[3] Didier Courbet et Marie-Pierre Fourquet (dir.), La télévision et ses influences, De Boeck Université, Bruxelles, 2003.

- **Focus area 3: Content regulation and access to digital TV**

  Media regulation - usually intended to strike a balance between ensuring freedom of expression and protecting other fundamental rights, preventing the concentration and monopolies of information by trusts that would hinder pluralism, diversity and equal communication opportunities- will experience a major upheaval with the advent of digital terrestrial TV. This will lead to the building of a number of new gateways such as the electronic programme guide or the application programme interface, with technical challenges relating to the gradual opening of proprietary standards and the way services are marketed. How do we address these challenges in the existing regulation and/or adapt the latter to digital television regulation?

- **Focus area 4: The issue of local content**

  The accessibility of amateur digital production and distribution tools sparked a tremendous explosion of amateur and pro-am production, but it remains confined to the Web, (except in few countries in the region) on the boundaries of the broadcasting industry and is struggling to find viable alternative economic models; the boundary between video distribution platforms (YouTube, Dailymotion, etc.), with WebTV on one side and film and television on the other, remains sealed. Within the broadcasting sector, digital tools are everywhere, in both creation and distribution, but their development does not necessarily lead to a radical change in terms of costs and accessibility of techniques, and even less to a radical questioning of the production and distribution models. It is therefore necessary to think about making local content production part of the development of digital television, in terms of competition with foreign content and also in terms of its role in the promotion of national culture and regional cohesion.

  While the South African model of audiovisual production is cited as an example, the main obstacle preventing it from flourishing has to do with economics and image education.[4] What should be the place of initial and continuous training of broadcasters in the digital era? Most African producers and directors are aware of their responsibility in terms of conforming or not to a production standard in an environment largely influenced by westernized or even globalized audiovisual imagery. On the eve of the transition from analogue to digital television, Senegal, like many African countries, is at a crossroads between, on the one hand, a purely market and advertisement-driven approach and, on the other hand, the need to produce local content that is more representative of the diversity of cultures and peoples of the country and Africa.

- **Focus area 5: Management and archiving of audiovisual content**

[4] Cluzel Jean, *Du modèle canadien à l'appel sud-africain, Regards sur l'audiovisuel*. Volume 8, LGDJ 1996.

The question of archiving is central to the digital transition. In the words of the physicist Michel Blay: "*No science without memory. A science without memory is destined to die or turn in circles*". According to the UNESCO definition published in *Legal Issues for Audiovisual Archives (*1991), audiovisual archives are "*visual recordings (with or without soundtrack) irrespective of their physical medium and the recording process used (...)"*

The technical conditions induced by the development of digital technology prompt users to consider not only the transmission of documents through the medium of exchange they use in their social and economic activities, but also the sustainability over time of the transmission of such content. The time element has become an issue in the daily life of digital users, whether amateur, professional or specialist, and raises several questions: what to do with their old videos? What new format should be adopted? Can the new media be trusted? How to make sure that nothing is lost?

- **Focus area 6: New intermediation positions, new business models**

  The development of high-speed Internet via the web has generated new means of broadcasting (streaming). Some of these services are offered by TV channels, in the form of catch-up TV services, allowing access to programmes on demand from the channel website, for a specified period after broadcast. Others are offered by video sharing platforms (YouTube, Dailymotion), which host a variety of content, professional or amateur. While it is still difficult to measure the economic changes induced by these new uses of audiovisual content, it is necessary to reflect on the potential implications for unfinished technical infrastructure environments like ours.

These lines of thought are not restrictive and all other ideas that can further clarify the issue from a multidisciplinary and comparative perspective are welcome.

V. Deadline

If you are interested in answering this call, please send an abstract of approximately 500 characters (200 words) to digitaltv@orange.sn, sanches@article19.org copied to mamadou.drame@codesria.sn latest by **30 October 2015**.

Authors of the selected abstracts will be contacted between 1 November 2015 and 30 November 2015 about the drafting of the final papers which should reach the scientific committee latest **by 9 January, 2016**.

The final articles must meet the following criteria:

- Between 15,000 and 40,000 characters, including spaces;
- font size 12;
- Times New Roman, regular margins, continuous spaced.

Scientific Committee

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