

REVIEW

Management of the Myanmar spectrum frequency allocation plan

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This report will describe the development of a spectrum frequency allocation plan for Myanmar. As such, it includes a definition of what is meant by “frequency allocation plan,” a description of elements to be considered in frequency allocation planning, and recognition of factors that influence frequency allocation planning (also known as “spectrum planning”). Consideration of the unique circumstances of Myanmar, both technological and sociological, is taken into account with the development of this plan. The change of government in 2021 has been a significant factor.

Keywords: management, Myanmar, radio, Myanmar Radio and TV, spectrum frequency allocation plan

Introduction

Myanmar a country in transition, with modernization initiatives well underway. It is a country with one foot in the past, one foot in the present and arms reaching out to a promising future. Part of this modernization process will include developments in the mass media domain. This is particularly relevant given that mass media venues are means for the transmission of information internationally, nationally, regionally, within communities, and among individuals. Frequency allocation plan (FAP) is one consideration within this mass media landscape that is particularly relevant to radio.

Frequency allocation plan affirms goals that can be used for establishing objectives and the steps essential for meeting such objectives. It provides a framework to be used and facilitates coherent decision-making via basic themes. FAP should be flexible and open to change in relation to realities that evolve over time.

There are distinct elements that come together with the FAP process. These elements include (1) policies, rules, and regulations; (2) organizational structuring of systems and services; (3) a “national table of frequency allocations” that should be linked to the “International Table of Frequency

Allocations of the Radio Regulation”; (4) an inventory of spectrum entities regarding the number of spectrum users, radio station characteristics, and a geographical listing of radio stations; and (5) Contextual matters having to do with political/cultural circumstances that provide constraints, concerns, and boundaries of operation. Recognition of these elements should consider major spectrum shifts, emerging technologies, and new services that have no current allocations and projected crowding in specific bands.

Furthermore, there are four categories of factors that influence spectrum planning: (1) Policy and legal factors having to do with laws and governmental requirements, etc.; (2) Economic factors such as market forces, spectrum fees, and so on; (3) Sociological/Ecological factors such as changes in demand, radio frequency interference, and so on; and (4) as well as technical factors relating to signal processing and coding/modulation techniques.

The aforementioned FAP definition, elements, and factors of influence will be used to explain the Myanmar FAP. In doing so, consideration will be given to unique aspects of Myanmar culture, political frameworks, technological capabilities, and ongoing concerns. The result will be an understanding of how the Myanmar FAP accurately portrays present day frequency allocation as a foundation that can

be modified to meet the needs of an evolving Myanmar in a timely manner.

Myanmar Radio and Television (MRTV) is located in a very rural area, about 1 h's drive from the Myanmar capital of Nay Pyi Taw. It has basically been carved out of an isolated jungle area. The closest village of any size is Tekton, which is about a 15-min drive from MRTV. The MRTV headquarters sits on a flat piece of land and is composed of the personnel and equipment needed to address radio and television concerns for the country. All MRTV personnel live on the MRTV compound. The residential area sits on a nearby hillside that is within easy walking distance from the MRTV headquarters. The people who populate the MRTV employee positions also serve as neighbors to one another.

This type of arrangement, an isolated MRTV headquarters with corresponding residential living accommodations, provides a secure means to protect MRTV functions from unauthorized interference. It provides context for comprehensive control of variables due to the emphasis on a singular base of operations within which primary functions and secondary functions occur in a uniform manner. The current MRTV headquarters were moved to their present location in 2008. It had previously been located in Yangon, the most populated city in Myanmar. The transition from urban Yangon to today's extremely rural location occurred abruptly and with little advance notice.

Literature review

The following elements outline how the FAP is instituted and maintained. They provide guidance for how the various systems are to be managed and governed. Each of the elements is developed in such a way as to allow for amendment and modification.

Policies, rules, and regulations

The policies, rules, and regulations for the Myanmar FAP are described and delineated in three primary domains: (1) the "Broadcasting Law" document that was adopted in 2015; (2) the "Amendment Law for the Broadcasting Law" that was adopted in 2018; and (3) the "Bylaws for the Broadcasting Law" that was adopted in 2018.

Organizational structuring of systems and services

A division of Myanmar's Ministry of Information is responsible for MRTV. The Ministry of Information exists to provide the public with information, education, and entertainment. The percentage breakdown among these three purposes is 45% entertainment programming,

20% educational programming, and 35% informational programming. The Ministry of Information is composed of the following ministries: News and Periodical Enterprise, Film Corporation, MRTV (Myanmar Radio and Television), Information and Public Relations, and Printing and Publishing Ministries.

A Director General oversees MRTV. Two Deputy Generals support the Director General. One of these Deputy Generals handles content/programming and the other Deputy General is in charge of finance/administration. Within MRTV, there are seven functions that are supported: finance, engineering, radio, international issues, music, television, and administration. These seven functions are managed with varying degrees of prioritization.

National table of frequency allocation

The National Table of Frequency Allocation should be in concert with the International Table of Frequency Allocations and Radio Regulations. The Policies, Rules, and Regulations section of this report notes the "Bylaws for the Broadcasting Law" that were adopted in 2018. Technical standardization is dealt with in Chapter Eight of these bylaws. Within Chapter Eight is a section that covers DVB-T2 transmitter specifications. Within this DVB-T2 transmitter specifications section are the assigned frequencies for the stations of 16 coded domains within the Myanmar system.

Chapter Eight is composed of appendices that cover various issues related to technical standardization. Each appendix addresses a relevant function. These issues include encoder technical specifications, multiplexer technical data and specifications, DVB-S2 receiver information, medium wave transmitter specification, digital radio Mondiale (DRM) transmitter and receiver information, channel allocation data, digital audio broadcasting (DAB) transmitter and receiver specification, and related/supporting information. The organization of the appendices is laid out in a sequential manner.

Inventory of spectrum entities

This inventory includes the number of spectrum users, radio station characteristics, and a geographical listing of the radio stations. The categorization scheme described in the previous section addresses this inventory function. It lists 258 stations with regard to names, coordinates, and type of station. This inventory is continually subject to modification. It is a living document and intended to reflect current realities. As such, it provides useful data that can be used in decision-making.

Methodology

Contextual matters (political/cultural circumstances)

The information conveyed thus far in this report provides details having to do with the development of the Myanmar's FAP. This FAP is part of Myanmar's larger social order. The rest of this report will focus on contextual matters that serve to create the Myanmar social landscape. The FAP impacts that social order and is, in turn, impacted by it. The evolution associated with the new communication technologies is part of that framework.

"Communication and information services in the developing world have experienced explosive growth. Between 1980 and 2005 the number of phones (fixed and mobile) multiplied 30-fold" [(1), p.3]. This expansion has affected every part of the planet in different ways.

"Within the last 4 years, Myanmar's media landscape has undergone significant changes. Prior to 2013, prepublication censorship and the existence of very few independent media made access to reliable information difficult and for the main part people had to rely on state propaganda" [(2), p.5]. These changes represent a step in Myanmar's direction of universal service. Universal service is "a policy to ensure that all people have access and are able to use telecommunications services. . . in particular for people living in rural and remote parts of the country and poorer households" [(3), p.37].

"Today approximately 34 percent of the Myanmar population has access to the Internet (up from 26 percent in 2017) and are active social media users" (4). Facebook figures prominent in this equation. "Facebook is by far the most popular social media in Myanmar—and for many Facebook is the Internet" (5). Similar distinctive characteristics may be found across Myanmar. "In the midst of rapid socio-political transition, Myanmar is building its telecommunications infrastructure by opening its market to international mobile companies and engaging in national regulatory reform. With one of the lowest internet and mobile subscriber rates in the world, Myanmar faces multiple challenges in building connectivity from both an infrastructural and a policy perspective" [(6), p.1].

The wider political range in Myanmar frames this technical advancement. "Since the 2015 election of the government led by Aung San Suu Kyi, a Nobel laureate whose international reputation has suffered irreparable damage over her failure to speak out over the military's ethnic cleansing of the beleaguered Rohingya minority, the international press remains under attack. A Reuters investigation into a Rohingya mass grave led to the jailing of two of their local reporters in late 2017"

[(7), p.11]. The Rohingya situation in Rakhine is still in the public eye on a worldwide scale. "The conflict in Rakhine has further highlighted the lack of knowledge of people's media habits and their ability to critically reflect on digital content, with large amounts of disinformation and hate speech dominating Facebook feeds and spilling into the mainstream media's narratives" [(8), p.6]. The change of Myanmar government in 2021 has further altered the context.

Concerns about technological progress affect other aspects of life in Myanmar. For instance, "Myanmar is one of the few states worldwide that has not yet signed the major human rights treaties, but is still obligated under international customary law to follow such standards" [(9), p.3]. Therefore, it cannot be presumed that human rights are relevant in Myanmar. "Democracy requires an independent media to enable the free flow of information and ideas to the public so that individuals can make better decisions that affect their own lives, and the authorities can be held to account" [(9), p. 2].

Findings

Today's Myanmar is seen as lacking in support for free expression. "Quantitative studies on media habits in Myanmar produce inconclusive results due to participants being unwilling or hesitant to provide opinions" (10). The function that journalists are expected to play in society is a consideration here. "If people living in Myanmar—including those affected by conflict—do not understand the role of independent media and are afraid to speak to journalists, their voices and stories will not be heard and they will not be empowered to participate in the peace process. Journalists must work to break down these barriers" [(11), pp. 15–16].

There is a vivid stress given to ethical standards within the "Broadcasting Law" regulations at MRTV. The Code of Conduct area gives emphasis to stipulations that focus on morals and ethics, the importance of being impartial, protecting children, promoting boundaries regarding taste and dealing with religious issues, ethnic minorities, and disadvantaged people.

The "Broadcasting Code of Ethics" regulations are augmented by the MRTV "Broadcasting Law" manual. It deals with all areas of the broadcasting process that exist at MRTV. This manual covers issues such as politics, accuracy, religion, children, discrimination, privacy, elections, legal issues, and advertising. The manual addresses all of these domains in a thorough manner.

Focus on politics addresses attention to the avoidance of broadcasting reports that can needlessly destabilize the country or impact safety in negative terms. Accuracy seeks to ensure balanced reporting that is impartial and avoids being deceptive. Discrimination addresses policies having to do with minorities, age, gender,

physical condition, and race. Religion stresses caution with faith-based beliefs, especially circumstances related to nationality. Children's matters have to do with classifying programs, subliminal images, and emphasis on parental rights regarding what children see and hear. Privacy matters are inherent within these "Broadcasting Code of Ethics" areas.

There are unique values and boundaries related to the circumstances in Myanmar. Thus, there are corresponding constraints having to do with the portrayal of violence, sexual conduct, antisocial actions, and usage of abusive language. Reporting of legal developments is monitored insofar as it is not to interfere with trial proceedings and is to stress that a suspect is innocent until guilt is proven.

Matters having to do with elections are to be treated objectively, with each candidate being covered in a fair manner, and there should be appropriate respect for electoral procedures.

The large variety of topics covered by general ethical requirements pertains to all major facets of broadcasting. These regulations emphasize that archival documents must be kept for a minimum of 3 months. There won't be any plagiarism, and there won't be any reporting that encourages immorality, vulgarity, false defamation, indecency, or false assertions.

Broadcast rectification is stressed in all matters. This includes a requirement that any serious factual errors be rectified within 24 h. The aforementioned topics include a variety of broadcast procedures and express the organization's overall ethical philosophy.

Conclusion

In conclusion, this report is intended to describe the details associated with the development of the FAP in Myanmar. As such, it is recognized that an understanding of the larger Myanmar social order is helpful in fully grasping the interplay of these FAP details. That is, the FAP does not exist in a vacuum. It functions within a moving constellation of variables, of which the FAP is but one variable. Hence, a well-grounded FAP can enhance the functioning of the larger Myanmar social order.

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