



BERMUDA
**REGULATORY
AUTHORITY**

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**ECA Section 78
Transitional Spectrum Investigation:
Telecommunications (Bermuda & West
Indies) Limited (“Digicel”)**

**Final Decision
and Order**

Final Decision and Order
Matter: SC-1222-2013
Date: 23 December 2014

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A. INTRODUCTION AND BACKGROUND

1 Scope of this Final Decision and Order

1. The Regulatory Authority (the “Authority” or “RA”) hereby issues its Final Decision and Order pursuant to Section 78 of the Electronic Communications Act 2011 (the “ECA”) concluding its investigation of the radio frequency spectrum provisionally licensed to Telecommunications (Bermuda & West Indies) Limited (“Digicel”) in association with the grant of Digicel’s Integrated Communications Operating Licence (“ICOL”) on 29 April 2013. This Final Decision and Order relates to the Authority’s investigation of Digicel’s High Demand Spectrum (“HDS”) assignments only. It addresses the evidence obtained during the Authority’s investigation and is made subsequent to the comprehensive (non-confidential) Draft Final Decision and Order (the “Draft Decision”)¹ that was published by the Authority on its website on 15 October 2014.
2. The relevant sections of the ECA that give rise to this investigation are set out in the Act’s Transitional Provisions (Part 12). They constitute one of a series of measures that the RA was required to undertake in order to implement the new regulatory framework for electronic communications established by the ECA. Pursuant to ECA Section 73(2)(c)(i), the spectrum licences awarded to ICOL holders at the time of the initial grant were required to reflect each licence holder’s spectrum assignments as at the date of commencement of the ECA. This same provision of the ECA specifies that each transitional spectrum licence should have a duration of 18 months, corresponding to the time period anticipated for the RA’s transitional investigation of spectrum efficiency pursuant to ECA Section 78.
3. In combination, these transitional provisions of the ECA were meant to give the Authority sufficient time to examine the radio frequencies that had been made available to licensees on an essentially *ad hoc* basis under the Telecommunications Act 1986, in order to ensure that the spectrum assigned prior to the commencement of the ECA is not being used inefficiently. The transitional spectrum licences granted by the Authority to each of the relevant ICOL holders pursuant to ECA Section 73(2)(c) mirror the requirements of the ECA in relation to the conduct of this spectrum investigation. For example, Condition 7.4 of the transitional spectrum licences requires the licensee to cooperate fully with the Authority in the ECA Section 78 investigation and to provide a detailed assessment of its spectrum usage in a format prescribed by the Authority no later than six months following grant of the spectrum licence.
4. As discussed in Section A.4 below, the “efficient use of spectrum” – which encompasses both economic and technical efficiency – is one of several objectives of spectrum management enumerated in Part 7 of the ECA (Section 37(1)(b)), which concerns the use of radio spectrum generally. “Efficient use” is a priority for spectrum policy makers and regulators not only in Bermuda but around the world for reasons that are highlighted in the ECA at Section 35(1). That provision recognizes “the importance of radio spectrum as a scarce national resource and a public good of social, cultural and economic value.”

¹ In order to provide an overview of the preliminary results of its investigation to all interested stakeholders, the Authority published on its website a non-confidential version of the Draft Decision covering the Authority’s investigation of all relevant ICOL holders. In addition to Digicel, these include: Bermuda Digital Communications Limited (“BDC”), Digital Broadband Limited (“BDB”) and Logic Communications Limited (“Logic”) which are the subject of separate decisions by the Authority following the conclusion of its investigation. The spectrum assigned to World on Wireless Ltd. (“WOW”) in the 700 MHz band is being dealt with in a separate proceeding to consider a proposal made by WOW to relinquish this spectrum. See: World on Wireless 700 MHz Spectrum Migration Proposal, Matter: SC-1501/2014, 31 January 2014.

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5. Although ECA Section 37 identifies a number of spectrum management objectives, the focus of ECA Section 78 (a transitional provision set out in Part 12 of the ECA) is to ensure that appropriate measures are taken if the Authority concludes that spectrum awarded prior to the ECA's commencement is not being utilised inefficiently. The limited purpose of Section 78 is confirmed by ECA Section 72, which provides that the transitional provisions of Part 12 "apply notwithstanding any contrary provisions" in the ECA or the Regulatory Authority Act 2011 ("RAA").
6. In order to ensure the efficient use of spectrum that was assigned before the effective date of the ECA, Section 78 empowers the RA to decline to renew, or to modify, a spectrum licence if the RA concludes, following an investigation, that:
 - a) the licensee is "inefficiently utilizing" some or all of the radio frequencies provisionally assigned to it pursuant to ECA Section 73(c);
 - b) the licensee has failed to demonstrate a "reasonable need" for any frequencies that the RA has concluded are being used inefficiently; and
 - c) it is necessary for the licensee to vacate some or all of these frequencies in order to ensure the "efficient use" of spectrum.
7. If the Authority decides to reclaim any spectrum thus identified, the spectrum will become available for re-assignment to other ICOL holders providing new or competing services that require its use.
8. The transitional spectrum licences issued by the Authority to Digicel in association with its ICOL on 29 April 2013 were valid until 29 October 2014 in accordance with ECA Section 73(2)(c)(i). Upon the expiry of these licences, the Authority issued four new spectrum licences to Digicel, each of which became effective on 30 October 2014.² These licenses reflect the requirements of the Minister's Policy Statement dated 22 September 2014 ("Statement"),³ as well as the preliminary conclusions set out in the Authority's Draft Decision. They cover the Digicel spectrum assignments that have been the focus of the Authority's investigation over the past 14 months, and which are the subject of this Final Decision and Order. The four spectrum licences in question include the following:
 - A 10 year Spectrum Licence (expiry on 29 October 2024) for Commercial Mobile Radio Services (018-CMR-01). This Licence, which covers assigned spectrum for which there was no *prima facie* case for reclamation under ECA Section 78, reassigns 2 x 30 MHz of the 1900 MHz spectrum to Digicel (see Section B below).⁴

² These Licenses may be modified further as necessary to implement this Final Decision and Order.

³ Spectrum Policy Statement by Dr. the Hon. E. Grant Gibbons, JP, MP, Minister of Education and Economic Development, 22 September 2014 (the "Statement"); http://www.gov.bm/portal/server.pt/disclaimer.html/skin/ggambo62...n_hi_userid=2/gateway/PTARGS_0_2_6079_330_1813_43/http%3B/ptpublisher.gov.bm%3B7087/publishedcontent/publish/min_telecom_and_e_commerce/telecommunications/dept_telcom_press_releases/spectrum_policy_statement_0.pdf

⁴ Frequencies are normally assigned as paired spectrum for uplink and downlink transmission. The convention used to denote the amount of uplink and downlink spectrum is "2 x [the given amount of uplink/downlink bandwidth]".

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- A 10 year Spectrum Licence (expiry on 29 October 2024) for Fixed Wireless Access Services (018-FWA-01). This Licence reassigns to Digicel frequencies in a non-HDS band which were not the subject of the current proceeding (see Section A.3 below).
- A 10 year Spectrum Licence (expiry on 29 October 2024) for Microwave Point-to-Point Services (018-MPP-01). This Licence also reassigns to Digicel frequencies in a non-HDS band which were not the subject of the current proceeding (see Section A.3 below).
- A Transitional Spectrum Licence (expiry 28 January 2015) for Commercial Mobile Radio Services (018-CMR-01T). This Licence, which covers the assigned spectrum which the Authority preliminarily found to be unused or inefficiently used, and therefore potentially subject to recovery at the conclusion of its investigation, reassigns the 2 x 5 MHz of the 1900 MHz spectrum in the D Block to Digicel (see Section B below) for a temporary three-month period. This Transitional Spectrum Licence was issued:

for the sole and exclusive purpose of enabling the Licensee the ability to reorganize its network in an efficient manner and minimize the impact that the expiration of this transitional spectrum license may have on its operations.⁵

2 Summary of the Authority's Conclusions

9. The Authority has concluded that Digicel is not efficiently using 2 x 5 MHz of its spectrum assignment in the 1900 MHz band. The Authority considers that Digicel has failed to demonstrate a "reasonable need" for this spectrum, and that reclamation is a necessary measure to ensure the efficient use of spectrum pursuant to ECA Section 78.
10. The Authority has therefore concluded that, in order to ensure compliance with the spectrum band plan established under the Statement,⁶ Digicel should vacate the GSM D Block within the 1900 MHz band (the "D Block") following a reasonable migration period of 90 days.⁷
11. The Authority will extend Digicel's Transitional Spectrum Licence for Commercial Mobile Radio Services for an additional 90 days, and leave in place the 10-year Spectrum Licence for the GSM A and B Blocks (the "A and B Blocks") that was also issued by the Authority to Digicel, and that became effective on 30 October 2014.⁸

3 Overview of the Authority's Investigation

12. The Authority's investigation commenced in September 2013. As a first step, the RA retained LS Telcom, a well-regarded international consultancy based in the Europe with substantial expertise in spectrum management.⁹ LS Telcom was asked by the Authority to assist it in: (1) identifying the criteria that should be applied in determining whether spectrum is being used efficiently; and (2) carrying out a technical evaluation to determine whether any of the radio frequencies provisionally licensed to Digicel (and,

⁵ Digicel Transitional Spectrum Licence for Commercial Mobile Radio Services (018-CMR-01T), at paragraph ("par.") 1.

⁶ Statement, Section 3.2.3.

⁷ See Section B.4 below.

⁸ Spectrum in the A and B Blocks is assigned to Digicel under the Commercial Mobile Radio Services Licence (018-CMR-01).

⁹ <http://www.lstelcom.com/>

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likewise, to other ICOL holders) are being used inefficiently, and thus subject to reclamation for refarming to other licensees.¹⁰

13. A Final Report was submitted by LS Telcom to the Authority in March 2014 (“LS Telcom Report”), a confidential version of which is attached to this Final Decision and Order as Annex A.¹¹ The Authority requested LS Telcom to prepare a supplement to its initial report in December 2014 (“LS Telcom Supplementary Report”), which is attached to this Final Decision and Order as Annex B.¹²
14. The Authority determined, from the outset, that it would be reasonable and proportionate¹³ to focus its investigation on the “high value” frequencies or HDS bands, where the potential for demand to exceed supply is strong and there is a clear need to ensure efficient spectrum assignments.¹⁴ Accordingly, on 7 October 2013, the Authority issued a Notice and Information Request (“Notice”) requiring ICOL holders with associated Spectrum Licences for Wireless Cable Spectrum, Commercial Mobile Radio Service Spectrum, and/or Fixed Wireless Access Spectrum¹⁵ to submit:

*a report approved by the Licensee’s Board of the Directors containing a detailed analysis of spectrum usage by the Licensee, in the format prescribed by the Authority, in relation to services that were provided using the Assigned Frequencies for the Authorized Uses as at the date of the commencement of Part 12 of the ECA.*¹⁶

15. These submissions are referred to as Spectrum Efficiency and Usage Self-Assessments (“SEUSAs”).
16. On 29 October 2013, Digicel submitted its SEUSA analysis in accordance with the RA’s Notice.
17. On 14 April 2014, after having considered the evidence submitted by Digicel and the results of its own assessment, the Authority furnished Digicel with a confidential SEUSA report containing its efficiency analysis and identifying the frequencies earmarked for recovery.¹⁷ Digicel submitted comments on the Authority’s confidential SEUSA report on 13 May 2014. On 22 May 2014, representatives of the Authority and its consultants, including LS Telcom, met with Digicel to discuss the spectrum in the 1900 MHz band that had been identified for recovery.

¹⁰ LS Telcom was also requested to address migration planning for spectrum found to be inefficiently used.

¹¹ Final Report, Assessment of spectrum efficiency of wireless service providers in Bermuda, RAB Bermuda, LS Telcom, March 25 2014. The LS Telcom Report covered the spectrum efficiency of multiple ICOL holders. The information relevant to Digicel was made available to Digicel in the form of the confidential draft “SEUSA Analysis” issued to Digicel in April 2014, as discussed in A.3 below.

¹² Supplementary Report, Assessment of spectrum efficiency of wireless service providers in Bermuda, RAB Bermuda, LS Telcom, December 23 2014.

¹³ These principles are set out in Sections 2 and 16(d) of the RAA.

¹⁴ See par. 22 of ECA Section 78 Transitional Spectrum Investigation, Spectrum Efficiency and Self-Usage Assessments, Notice and Information Request, SC-1222/2013, dated 7 October 2013.

¹⁵ Excluded from the scope of this investigation were non-HDS spectrum assignments associated with Other Mobile Radio Service Spectrum Licences and Point-to-Point Microwave Spectrum Licences.

¹⁶ ECA Section 78 Transitional Spectrum Investigation, Spectrum Efficiency and Self-Usage Assessments, Notice and Information Request, SC-1222/2013, dated 7 October 2013.

¹⁷ ECA Section 78 Transitional Spectrum Investigation - Digicel Confidential Draft SEUSA Analysis, Matter: SC-1222/2013, dated 14 April 2014.

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18. On 8 July 2014, the Authority provided Digicel with a confidential draft of a proposed final decision relating to Digicel's spectrum holdings. On 18 July 2014, Digicel provided comments on this confidential draft. On 11 September 2014, Digicel wrote to the Authority outlining the various issues regarding the investigation, and a meeting took place between both parties to discuss these concerns on 18 September 2014. On 1 October 2014, the Authority provided Digicel with a public disclosure review version of the Draft Decision. On 7 October 2014, the Authority received confirmation from Digicel that nothing in the public disclosure review version of the Draft Decision contained confidential information. Following similar exchanges with other ICOL holders, on 15 October 2014, the Authority published on its website a document entitled "ECA Section 78 Transitional Spectrum Investigation - Draft Final Decision and Order" (the Draft Decision referred to above). This non-confidential draft of the final decision addressed the spectrum assignments of all relevant ICOL holders and summarised the overall findings of the RA's investigation. The Authority invited comments from interested parties concerning the Draft Decision. Digicel did not submit any comments on the Draft Decision to date.

4 Spectrum characteristics and "efficient use"

19. Radio spectrum is a scarce national resource that is required for the provision of wireless electronic communications services, including mobile or cellular communications services. Mobile voice services have long since become an important convenience and a necessity for businesses and consumers alike. In today's digital world, consumers are increasingly relying on mobile devices to access the Internet and a vast range of mobile data and video applications. This trend will accelerate as technologies that enable superfast broadband access are deployed by mobile operators, thus improving the quality of service and customer experience.

20. As noted above, ECA Section 37 imposes a set of objectives for the management of spectrum. Among other things, spectrum must be managed in a manner that is both technically and economically efficient (Section 37(1)(b) ECA). These two aspects of efficiency are symbiotic insofar as the technically efficient use of spectrum is critical to ensuring the economically efficient use of this scarce resource. If a licensee is using spectrum that is in high demand in a technically inefficient way, there is a substantial opportunity cost if actual or potential competitors are, as a result, denied the ability to use this valuable resource to serve their own customers.

21. The inefficient use of spectrum can also impact a competitor's cost of providing mobile services by necessitating a more expensive network configuration than that used by a licensee that is inefficiently spreading its service across more frequencies, but using fewer base stations, than are reasonably required to provide the service. It also can impair the quality of service that competitors are able to offer consumers (slower speeds, dropped calls, etc.). The cost and quality of service issues associated with rivals' inability to access spectrum can therefore have a harmful impact on competition and, ultimately, on consumers.

22. Ensuring the technical and economic efficiency of spectrum is a priority of spectrum authorities and governments around the world.¹⁸ The efficiency requirement of ECA

¹⁸ For example, in the EU, the Framework and Authorisation Directives (Directives 2002/21/EC and 2002/20/EC respectively) require that spectrum is used "effectively" and "efficiently" and in pursuit of consumer benefits such as economies of scale and the interoperability of services. These Directives also establish specific principles aimed at ensuring that spectrum is used in a manner that is pro-competitive and prevents the hoarding of valuable spectrum by a single (or limited number of) network operator(s) under so-called "use it or lose it" principles (see: Articles ("Arts.") 9 and 5(6) of Framework

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Section 78, viewed from a technical perspective, has a well understood meaning in terms of spectrum management, and there are generally accepted ways of measuring the efficiency of spectrum utilisation, as discussed in greater detail in Section B below.

23. Any stand-alone calculation of spectrum efficiency involves a ratio in which the amount of traffic (voice or data) that is being carried by a network is the key factor determining the value of the numerator, whereas the denominator reflects the amount of spectrum assigned for the particular use. There is a *prima facie* case for concluding that, for the purpose of ECA Section 78, scarce, high-demand spectrum that is not being used *at all* by an operator to which it is assigned is “inefficient”. In such cases, no traffic is being carried over the assigned spectrum, which means that the numerator of the spectrum efficiency ratio would be zero. The efficiency measure for spectrum that is unused would therefore also be zero. In addition to being technically inefficient, spectrum that is unused means that it is unavailable to other operators to use. There is thus a high opportunity cost to unused spectrum, making it both economically and technically inefficient.¹⁹
24. The efficiency measurement is not quite as simple in situations where a licensee is using the spectrum in question but has elected to spread the operation of its network over many more frequencies than a reasonably efficient operator would need in order to deliver the same services of the same quality to the same number of people. Where no fees are imposed for the use of spectrum (as has historically been the case in Bermuda), an operator has no incentive to utilise spectrum efficiently. The operator may, without financial penalty, spread its traffic over an unusually wide range of frequencies in order to save money on equipment costs (because fewer base stations are required). It may also do this as a way of keeping valuable spectrum out of the hands of its competitors (so-called “spectrum hoarding”).

B. DIGICEL’S SPECTRUM ASSIGNMENTS IN THE 1900 MHZ BAND

1 Digicel’s inefficient use of the 1900 MHz Band

1.1 Efficiency investigation process

25. As discussed above, the Authority commissioned LS Telcom to undertake an independent technical assessment of the efficiency of high-demand spectrum use in Bermuda. LS Telcom carried out its technical assessment of Digicel's spectrum holdings on the basis of the self-assessment (SEUSA Analysis) and supporting documentation submitted by Digicel in October 2013.
26. The LS Telcom Report addressed all of Digicel's spectrum assignment in the 1900 MHz band. The conclusions of the LS Telcom Report relating to Digicel's use of its spectrum assignments in the 1900 MHz band in general are reflected in the Authority’s assessment of this band as set out in Digicel's Confidential Draft SEUSA Analysis dated 14 April 2014, a confidential version of which is set out at Annex C.²⁰ A description of the technical assessment undertaken by LS Telcom, together with its conclusions, are set out below.

(a) Technical investigation

and Authorisation Directives, respectively and Recital (15) and Article (“Art.”) 5 of the EU Radio Spectrum Policy Programme Decision (Decision 243/2012/EU)).

¹⁹ The efficiency value of unused spectrum is also addressed in Section 3 of the LS Telcom Supplementary Report (Annex B).

²⁰ ECA Section 78 Transitional Spectrum Investigation, Digicel Confidential Draft SEUSA Analysis, SC-1222/2013, 14 April 2014.

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27. The measurement of spectrum efficiency can be undertaken in several different ways. Based on the recommendations of LS Telcom, the Authority has relied on the following metrics for the purpose of assessing whether Digicel is making “efficient use” of its spectrum assignments from a technical perspective:

- the extent to which the network design follows engineering best practice for an efficient operator; and
- a comparison of the relative reliance of a network on spectrum versus infrastructure in delivering the service.

28. These metrics are discussed in greater detail in the LS Telcom Report and the Confidential Draft SEUSA Analysis (the Authority provided the latter to Digicel on 14 April 2014).

(i) Engineering best practice

29. For a network operator using spectrum efficiently, certain engineering parameters should be evident. In particular, the use of the spectrum should be such that no frequency is used to excess whilst others are rarely (if ever) used. The distribution of cell sites should also closely follow the density of subscribers.

30. When evaluating spectrum efficiency, the design and dimensioning of the networks are taken into account. Accordingly, when undertaking its technical assessment of Digicel’s spectrum usage, LS Telcom sought to determine whether Digicel’s networks are:

- designed in a way that makes effective use of the spectrum available to them (i.e., that they are not wasteful in their use of spectrum); and
- correctly dimensioned to deal with traffic they carry (i.e., there is neither significant unused capacity, nor are the sites too heavily loaded which would reduce service quality).²¹

(ii) Infrastructure versus spectrum reuse

31. The degree to which each network operator is efficiently reusing its spectrum is an indicator of how efficiently it is using that spectrum in comparison with selected benchmark countries.

32. Generally speaking, additional capacity on a wireless network can be created in two ways: (1) by increasing the amount of spectrum used by the network (for a given number of cell sites); or (2) by increasing the number of cell sites (for a given assignment of spectrum). The latter approach is referred to as *spectrum reuse*. In practice, spectrum reuse is achieved by employing identical frequencies (or channels) in multiple cell locations, but ensuring that the cells using these identical frequencies are geographically separated in order to reduce (or eliminate) harmful interference between identical cells.

33. From an efficiency perspective, spectrum reuse is an important consideration because it enables a wireless network operator to significantly increase the number of customers that can be served, and the amount of information that can be transmitted using a fixed amount of spectrum. Therefore, the greater the spectrum reuse that can be observed for

²¹ LS Telcom Report, pp. 4 – 5.

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a particular wireless network and spectrum assignment, the more efficiently the wireless network operator is using the spectrum in question.

- (iii) Results of the technical investigation

34. [X]

- (b) Benchmarking study

- (i) Choice of benchmark countries

35. To provide an independent check on its assessment, LS Telcom also undertook a benchmarking study to compare the efficiency of the network design of Digicel's GSM and UMTS networks with those of operators in reasonably comparable countries.²²

36. Bermuda's small size, small population and high GDP establish a relatively unusual profile for benchmarking purposes. The table below provides examples of possible benchmarks that were considered by LS Telcom.

Table 1: Possible benchmark countries for Bermuda when considering spectrum efficiency

Country	Area (km ²)	Population	GDP per Capita (US\$)
Aruba	180	103000	25000
Bermuda	53	65000	84000
Cayman	259	58000	30000
Guernsey	78	65000	45000
Jersey	119	98000	57000
Liechtenstein	160	35000	135000
San Marino	62	32000	36000

37. The closest benchmark to Bermuda is Guernsey, which has a similar population but a slightly larger area. The next closest is Jersey. Although the other countries cited in the table above could also be used as benchmarks, the significant differences in area, population or gross domestic product ("GDP") (together, in the case of Lichtenstein and San Marino with the fact that they are not island nations)²³ means that additional correction factors would need to be introduced making the results less reliable. There are also other issues such as topography (the undulation of the terrain, e.g., flat versus hilly) and morphology (type of terrain, e.g., urban versus forested area) that would need to be considered if accuracy was critical, however, for the purposes of benchmarking, population, area and GDP are usually the key factors.

38. LS Telcom discusses in detail the reasons for its choice of benchmark countries in Section 2.2 of the Supplementary LS Telcom Report.

- (ii) Results of benchmarking study

²² See Section 2 of the LS Telcom Supplementary Report (Annex B) for a discussion on benchmarking spectrum efficiency.

²³ Spectrum efficiency on an island is not affected by adjustments that may otherwise be required to deal with interference from bordering countries.

39. [REDACTED]

1.2 Conclusions of the Authority's Efficiency Investigation

40. [REDACTED]

2 Digicel's failure to demonstrate a "reasonable need" for the spectrum identified for recovery within the 1900 MHz band

41. [REDACTED]

3 Necessity to recover a portion of Digicel's 1900 MHz spectrum to ensure its efficient use

42. [REDACTED]

4 Vacation of the D Block

43. [REDACTED]

C. COMPATIBILITY OF ECA SECTION 78 INVESTIGATION RESULTS WITH THE MINISTER'S SPECTRUM POLICY STATEMENT

44. Section 35 of the ECA requires the Minister responsible for telecommunication to make general policies and, as necessary, regulations for the electronic communications sector with respect to the management and allocation of spectrum and procedure to be followed by the Authority when assigning spectrum.

45. On 22 September 2014, the Minister for Education and Economic Development published a Policy Statement that sets out the spectrum management policies to be implemented by the Authority with respect to spectrum allocations, spectrum assignments, and spectrum related fees. The effective date of the policies contained in the Statement is 22 September 2014.

46. The Statement addresses a number of fundamental spectrum management issues, including those set out below.

- a) The definition of the HDS bands.²⁴ These frequencies are those whose propagation characteristics make them particularly valuable for mobile voice and broadband services and, as a result, the potential for which is likely to exceed supply. For these frequencies, the policy set out in the Statement is designed to ensure efficient use in keeping with the ECA's objectives, and in consideration of the importance of radio spectrum as a scarce national resource and a public good.
- b) The establishment of a spectrum cap on all HDS assignments such that no firm, or affiliates (as defined in the ECA or the RAA can be permitted to hold more than 50 percent of any HDS band, subject to the limited exceptions described by the Minister.²⁵

²⁴ Statement, Section 3.1.

²⁵ *Ibid*, Section 3.3.1.3.

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- c) The establishment, for the HDS frequencies, of a Bermuda frequency allocation table (“FAT”) and a Bermuda band plan (“BBP”) based on the frequency allocations and band plans adopted by the US Federal Communications Commission (“FCC”).²⁶
 - d) The establishment of a hybrid first-come-first-served (“FCFS”)-Comparative Selection assignment process for all HDS frequencies.²⁷
 - e) The establishment of an administered incentive pricing (“AIP”) scheme with the goal of incentivising efficient use of spectrum for all HDS bands.²⁸
47. The Statement establishes a spectrum cap on all HDS assignments such that no firm, or affiliate (as defined in the ECA or RAA) is permitted to hold more than 50 percent of any HDS band, subject to the limited exceptions described by the Minister.²⁹ The Minister considered that the establishment of a 50 percent cap in this manner is sufficient to permit at least two licensees to operate network in each band, and that the cap is consistent with the spectrum management objectives set out under ECA Section 37.³⁰
48. Digicel is currently assigned 70 MHz of spectrum out of a possible 120 MHz in the 1900 MHz band. By reclaiming 2 x 5 MHz of this spectrum, currently assigned in the D Block, the Authority's action will therefore reduce Digicel's current assignments in the 1900 MHz band to 50 percent of the available spectrum in this band. The Authority's decision following its ECA Section 78 investigation is therefore compatible with the policy set by the Minister.

D. FINAL DECISION AND ORDERING CLAUSES

1. Based on the results of the investigation undertaken pursuant to ECA Section 78, the Authority concludes that Digicel is not currently making efficient use of 2 x 5 MHz of spectrum in the 1900 MHz band currently assigned to it and, further, that Digicel has not demonstrated a reasonable need for this spectrum.
2. The Authority has determined, in conformity with ECA Section 78, that in order to ensure the efficient use of this spectrum, it is necessary to reclaim this spectrum so that it can be made available for use by other licensees.
3. Therefore, Digicel's Transitional Spectrum License for Commercial Radio Services (018-CMR-01T), covering the D Block, will not be renewed following a reasonable extension of the existing expiry date of 28 January 2015 to permit an orderly migration. Digicel's Transitional Spectrum Licence will be extended by two months, until 31 March 2015, to allow 90 days for it to vacate 2 x 5 MHz of bandwidth currently being used in the D Block in the 1900 MHz band.

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4. The Authority has issued and hereby confirms the continued validity of the following Spectrum Licences to Digicel (effective on 30 October 2014) for a ten year term with expiry dates of 29 October 2024: a Spectrum Licence for Commercial Mobile Radio

²⁶ *Ibid*, Section 3.2.

²⁷ *Ibid*, Section 3.3.

²⁸ *Ibid*, Section 3.4.

²⁹ *Ibid*, Section 3.3.1.3.

³⁰ *Ibid*, par. 143.

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Services (018-CMR-01), a Spectrum Licence for Fixed Wireless Access Services (018-FWA-01); and a Spectrum Licence for Microwave Point-to-Point Services (018-MPP-01).

5. Pursuant to ECA Section 78, Digicel's Transitional Spectrum Licence for Commercial Radio Services (018-CMR-01T), which covers only the 2 x 5 MHz of the 1900 MHz spectrum that Digicel is currently not efficiently using (Mobile to Base Station frequencies 1865.0 MHz – 1870.0 MHz and Base Station to Mobile frequencies 1945.0 MHz – 1950.0), shall be extended from 28 January 2015 until 31 March 2015. Thereafter, this licence shall not be renewed, extended or re-issued.
6. Digicel shall vacate all frequencies currently in use in the D Block (Mobile to Base Station frequencies 1865.0 MHz – 1870.0 MHz and Base Station to Mobile frequencies 1945.0 MHz – 1950.0) no later than 31 March 2015.
7. Digicel shall inform the Authority of the planned date and time of its migration of service from the D Block and cooperate with the Authority in ensuring that customers are informed of the migration date at least 15 days in advance in a manner to be approved by the Authority.

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Annex A

LS Telcom Report (25 March 2014)



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Annex B

LS Telcom Supplementary Report (23 December 2014)



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Annex C

Digicel's Confidential Draft SEUSA Analysis (14 April 2014)

