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Spectrum Management Policy Framework For Digital Dividend in Sri Lanka

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Abstract

Digital terrestrial television enables the transmission of multiple channels in the same spectrum used for the transmission of a single analog channel. Thus the switchover from analog to digital terrestrial television known as the analogue shut off, releases the spectrum for the use of other services. This is known as the Digital Dividend. Although Sri Lanka is the first to introduce most of the latest cellular technologies in South Asia, the allocation of the spectrum for these technologies are adhoc operator request based instead of with clear objectives and spectrum management plans. The objectives of this thesis are to analyse the procedures followed by other countries for analog to digital TV switchover and to propose a spectrum policy framework for the digital dividend in Sri Lanka.

In this paper, spectrum policy changes in other countries are analyzed, especially the movement from an administrative approach to a market driven approach. Furthermore, the analog shut off implemented in other countries and the impact to the key stakeholders (subscribers, broadcasters and government) are assessed, along with the benefits of digital dividend for Sri Lanka.

A key finding of the analysis is the success of the analog shut off is achieved from a push pull strategy; push from the government and authorities by providing concessions, imposing rules and regulations and pull from the customer by enticing them with new content on free to air basis. The timing of the implementation has a major impact on the technology to be selected and it is recommended to form a independent consortium with both state and private sector companies (three to four companies) to facilitate the digital TV infrastructure to make optimal use of the spectrum and to reduce the cost. "Auction" is identified as the optimal method for spectrum allocation and the released spectrum can be used to increase the cellular communications (VoLTE, VoNR) and internet penetration, especially in the rural areas.

Keywords:

Digital Dividend, Spectrum Management, Digital Television, Analog Shut Off, Auction.

Declaration

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Signature

Date

The above candidate has carried out research for the Masters thesis under my supervision.

Signature of the supervisor

Date

Acknowledgement

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