NATIONAL BROADBAND STRATEGIES FOR SRI LANKA

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Degree of Master of Science

Department of Electronics and Telecommunications Engineering

University of Moratuwa

Sri Lanka

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Thesis/Dissertation submitted in partial fulfilment of the requirements for the degree Master of Science

Department of Electronic and Telecommunications Engineering

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Declaration of the candidate & Supervisor

"I declare that this is my own work and this thesis/dissertation 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.

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Dedication

I dedicate my dissertation work to family. A special feeling of gratitude to my loving wife, Sandamali whose words of encouragement and push for tenacity ring in my ears. My Parents, M.A.Jayalath and W.Seelawathie and my sister, Priyanwada Jayalath have never left my side and are very special.

I also dedicate this dissertation to my mother and father in low, Heny Gunarathe and Leela Gunarathne who have supported me throughout the process.

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My thesis won't be successful without the feedback for the questionnaire which was administered among set of engineers. I take this moment to thank them.

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Abstract

Objective of this study was to propose a set of national broadband strategies that suits to Sri Lankan context. Strategic planning process is used as the model to build up national broadband strategies. Initial step of the model is to set some strategic objectives. Therefore, set of strategic objectives, goals, targets for broadband were proposed. It is required to conduct an environmental scanning process which can be used to identify internal and external factors of the broadband environment. Environmental scanning process was done by a questionnaire which was administered among industry personnel and also the face to face interviews were carried out with government body personnel which represented from TRCSL and ICTA. Interviews which were carried out, revealed about existing broadband strategies and also the national broadband policy which has been drafted by a committee of broadband experts. Then the set of broadband plans were formulated and proposed and output of literature was used a platform to build up broadband plans. Literature survey was carried as an analysis of approaches that leading countries have taken in expanding their broadband markets, with a focus on the Republic of Korea. In addition, case studies covered Finland, France, Japan and the United States. Another case study of broadband implementation of Nigeria was also discussed in literature survey. Then this study revealed some set of broadband initiatives and policies that can be aligned with broadband plans. Those initiatives and policies are validated by the outcome of the literature survey and the discussion which had with government body personnel.

Key words:
Broadband initiatives, broadband plans, broadband policies, environmental scanning, strategic objectives, strategic planning process

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List of Abbreviations

Abbreviation	Description
ITU	International Telecommunication Union
TRCSL	Telecommunications Regulatory Commission of Sri Lanka
ICTA	Information and Communication Technology Association
IPTV	Internet Protocol Television
OECD	Organization for Economic Co-operation and Development
ICT	Information and Communication Technology
GDP	Gross Domestic Product
LTE	Long Term Evolution
HSPA	High Speed Packet Access
FLAG	Fiber Link Around the Globe
SEA-ME-WE	South-East Asia, Middle East, Western Europe
SLT	Sri Lanka Telecom
FTTH	Fiber To The Home
FTTB	Fiber To The Building
ADSL	Asymmetric Digital Subscriber Loop
GSM	Global System for Mobile
CDMA	Code Division Multiple Access
LLU	Local loop unbundling
EU	European Union
ARCEP	Regulatory Authority for Electronic Communications and Postal Services
BWA	Broadband Wireless Access
DSL	Digital Subscriber Loop
FCC	Federal Communications Commission

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RoW	ROW Right of Way
S.M.A.R.T	Specific Measurable Achievable Realistic Time-bound
GIS	Geographic Information System
QoS	Quality of Service
NGN	Next Generation Networks
ROI	Return on Investment
LGN	Lanka Government Network
VPN	Virtual Private Network
IPSEC	Internet Protocol Security
ISP	Internet Service Provider
HTTPS	Hyper Text Transfer Protocol Secured
CAPEX	Capital Expenditure
OPEX	Operational Expenditure
GIC	Government Information Center
LGC	Lanka Government Cloud
WCDMA	Wideband Code Division Multiple Access

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