FEASIBILITY OF IMPLEMENTING ACTIVE NETWORK SHARING IN SRI LANKAN TELECOMMUNICATION INDUSTRY

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FEASIBILITY OF IMPLEMENTING ACTIVE NETWORK SHARING IN SRI LANKAN TELECOMMUNICATION INDUSTRY

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The Dissertation was submitted to the Department of Management of Technology of the University of Moratuwa in partial fulfillment of the requirement for the Degree of Master of Business Administration.

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December 2011

DECLARATION

I declare that this is my own work and this 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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ABSTRACT

Key words: Active sharing, Benefits, Drivers, Barriers, Policies, Business model

The landscape of the telecommunication industry in Sri Lanka has changed significantly since in early 1990s and number of service providers has been increased from one to nine as at now. With this revolution the competition among operators has been boosted. Consequently all the operators are suffering from significant financial losses. Therefore in the current scenario all are in the process of searching for a novel solution to evacuate from this situation. Active infrastructure sharing was not found feasible in the past due to technological limitations. Now, the scenario has changed in the global context and large scale technological up gradations have taken place, which are both cost effective and technologically advanced.

In that context, this study investigates the feasibility of implementing Active network sharing in Sri Lankan telecommunication industry to drive the industry forward. The broader objectives of the study are, (1) Identifying the drivers, barriers and benefits to be considered (2) Proposing appropriate regulatory policies and (3) Formulating the best Active network sharing business model for Sri Lanka.

The development of this dissertation is mainly based on the information gathered through interviews and questionnaire survey from main stake holders of the industry namely, Telecommunication operators, Telecommunication equipment vendors and Regulatory commission. Middle managers and senior managers in nine telecommunication operators, experts in vendor organizations and regulatory officers were surveyed. The obtained raw data were analysed in a structured way.

Both quantitative and qualitative methods have been employed in the analysis and several broad conclusions could be drawn. It has identified three main drivers, six main barriers and four main benefits related to Active network sharing. It also proposes appropriate regulatory policies to encourage Active network sharing in Sri Lanka. Ultimately the study comes up with a suitable business model for implementation of Active infrastructure sharing in Sri Lanka by engaging the STOF model as the base model. The model will guide all stakeholders in the industry for better preparation and effectively handling the industry barriers.

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LIST OF ABBREVIATIONS

2G	-	Second Generation
3G	-	Third Generation
AIP	-	Applicant Information Package
ART	-	Autorité de Régulation des Télécommunications
BEREC	-	Body of European Regulators for Electronic Communications
BNetzA	-	German regulatory office for electricity, gas, telecommunications, post and railway markets
BSC	-	Base Station Controller
BTS	-	Base Terminal Station
CDMA	-	Code Division Multiple Access
CEB	-	Ceylon Electricity Board
CPE	-	Customer Premises Equipment
DSL	-	Digital Subscriber Loop
EDGE	-	Enhanced Data for GSM Evolution
EMF	-	Electro Magnetic Field
GPRS	-	General Packet Radio Service
GSM	-	Global System for Mobiles
HRM	-	Human Resource Management

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HSPA	-	High Speed Packet Access
ICNIRP	-	International Commission on Non-Ionizing Radiation Protection
IMS	-	IP Multimedia Subsystem
JWG	-	Joint Working Groups
LEC	-	Incumbent local exchange carriers
LTE	-	Long Term Evolution
MCMC	-	Malaysian Communications and Multimedia Commission
MNO	-	Mobile network operators
MSC	-	Master Switching Center
NMA	-	Netherlands Competition Authority.
NRA	-	National regulatory authority
O & M	-	Operation and Maintenance
OPTA	-	Independent Post and Telecommunications Authority
PCA	-	Principal component analysis
RAN	-	Radio Access Network
RNC	-	Radio Network Controller
RSPG	-	Radio Spectrum Policy Group
SGSN	-	Serving GPRS Support Node

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SLA	-	Service Level Agreement
SLR	-	Sri Lanka Railway
SLT	-	Sri Lanka Telecom
SPSS	-	Statistical Package for Social Sciences
TCO	-	Total Cost of Ownership
TRAI	-	Telecom Regulatory Authority of India
TRC	-	Telecommunication Regulatory Commission
UMTS	-	Universal Mobile Telecommunication System

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