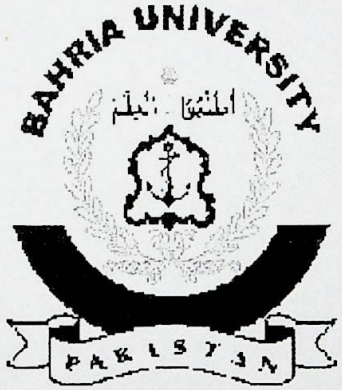
WIRELESS LOCAL LOOP; AN ALTERNATIVE SOLUTION IN ACCESS NETWORKS

By

Kiran Atzaz



Supervised by

Dr. M.A. Khan

This report is submitted to the Department of Computer Science,
Bahria Institute of Management and Computer Sciences Islamabad
in partial fulfillment of requirement of degree of MCS

Department of Computer Science

Bahria Institute of Management & Computer Sciences Islamabad

Bahria University

Dedication

I want to dedicate this to my family and friends and most of all to my mother who always exhibited unflinching faith in me, through all the highs and lows of my life.

Kiran Atzaz

Acknowledgements

We would like to thank Almighty Allah whose blessing are always with us and without His blessings this work would not have been completed. Furthermore a very special note of thanks goes to our parents whose heart-felt prayers, appreciation, and support has always been a valuable asset and a great source of inspiration for us.

We owe a special thanks to our supervisor Mr. M.A. Khan whose valuable suggestions helped us working on this project. We are indebted to our project coordinator and all teachers for their co-operation and encouragement to attain our goal.

The acknowledgement will remain incomplete without special thanks to our friends for their excellent cooperation and their nice companionship. We are thankful to all of our class fellows for their love and good feelings about us.

Kiran Atzaz & Zubair Aziz

Abstract

Telecommunications is the key underlying technology for the evolution of the global economy into the current Millennium. The link between economic growth and good telecommunications is now well established. In both developed and developing economies, the deployment of national backbone telecom networks is not the issue. The real bottleneck in the provision of telecom services is the local loop or access network. To connect hundreds and thousands of individual subscribers using traditional wireline technology would require massive investment and would take many years of effort. The answer is to utilize wireless technology to bridge the final mile to the subscriber – the Wireless Local Loop (WLL) solution.

For countries seeking to improve their economies, like Pakistan, telecom infrastructure is basic requirement. Wireless in the local loop is a cost effective alternative that gives the telephone operator a quicker return on investment and enables communication over sparsely populated rural areas and inhospitable terrain. WLL is a system that connects subscribers to the public switched telephone network (PSTN) using radio signals as a substitute for copper for all or part of the connection between subscriber and the switch. WLL provides an ability to rapidly and cost-effectively introduce local access in a variety of service environments ranging from dense urban to dispersed rural areas. WLL capital costs can allow service price points to be at a level competitive with wireline operators. Pent-up demand, the need to quickly deliver reliable service, and the need for new operators to be "first to market" have combined to make wireless technologies a much sought-after infrastructure solution. Different Technologies can be used for Deployment of WLL system, the right choice is based on subscriber densities, traffic conditions, and data support requirements.

By adopting the WLL as an Alternative Solution for Access Networks, the long pending waiting lists of telephone connection to be provided to millions of subscribers in Pakistan can be overcome.

Certificate

We accept the work contained in this report as confirming to the required standard for the partial fulfillment of degree of MCS.

Head of Department
(Mr. Fazal Wahab)

Supervisor
(Dr. M.A. Khan)

Internal Examiner

External Examiner

Project in Brief

Project Name:	Wireless Local Loop; An Alternative Solution in Access Networks
Researched by:	Kiran Atzaz Zubair Aziz
Supervised by:	Dr. M.A. Khan
Degree:	MCS (Communication & Networks)
Institute Name:	Bahria Institute of Management & Computer Sciences, Islamabad.

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