Precoder Memory Module(Transmission) for Indigenous 5G Testbed

A Project Report

submitted by

V M RISHIKESH

in partial fulfilment of the requirements
for the award of the degree of

DUAL DEGREE

DEPARTMENT OF ELECTRICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY MADRAS.

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THESIS CERTIFICATE

This is to certify that the project report titled **Precoder Memory Module (Transmission) for Indigenous 5G Testbed**, submitted by **V M Rishikesh**, to the Indian Institute of Technology, Madras, for the award of the degree of **DUAL DEGREE IN ELECTRICAL ENGINEERING**, is a bona fide record of the research work done by him under my supervision. The contents of this project report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

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ABSTRACT

Precoder Memory is a module that takes in I/Q values from O-RAN in the form of data packets and stores it in the form of group of matrices. Based on the control inputs fed in by the O-RAN, this module also allocates resources of different users by filling in appropriately a matrix of size 273x14 called Resource Grid Matrix. Now using this Resource Grid Matrix, the precoder memory module sends out corresponding I/Q values of allocated resources to the next module named Multiplier module.

Regarding Project Report Details

This work performed at the Indigenous 5G Testbed at IIT Madras is confidential. The original document with complete details is with Prof.Radhakrishna Ganti and can be made available on request.