

Intern Requirement

No. of students required	1
Preferred Discipline	<ul style="list-style-type: none">Electrical Engineering/Computer Engineering
Prerequisites/ Skills Required	<ul style="list-style-type: none">C/C++ programmingKnowledge on digital communication system preferred

Project Details

Title	Optimizing Bandwidth Usage in Time Division Multiplexing (TDM)
Overview/Background	<p>In circuit-switched communication network, time-division multiplexing (TDM) scheme is commonly used to transmit multiple subscribers' calls along the same transmission media. As TDM allows creation of channels with fixed bandwidth (known as tributaries), a variety of traffic such as voice, packet data and video conferencing can also be transported simultaneously. Hence, bandwidth requirements will vary according to subscriber demand and the types of traffic transported. The project seeks to explore ways to intelligently allocate and manage bandwidth/channel requirement to ensure that QOS (Quality of Service) remains maintained especially during the period of traffic congestion.</p> <p>Upon completion of this project, the intern will acquire good knowledge on communication transmission as well as hands-on experience in development using C/C++ and code design and optimization.</p>
Objectives/Scope/ Deliverables	<ul style="list-style-type: none">Explore different bandwidth/channel allocation, association and de-association schemes to dynamically allocate bandwidth on demands.Develop a module to perform channel association and de-association at the transmitter and receiver respectively.Optimize the developed module in both speed and accuracy.
Project Duration	6 months